

Country Study for Development Assistance  
to Malaysia

MARCH 1983

Country Study Group  
for Development Assistance to Malaysia  
Japan International Cooperation Agency

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This paper is based on the discussions and findings of the Study Group for Development Assistance to Malaysia organized by the Japan International Cooperation Agency (JICA). The views expressed in the report are those of the members of the Study Group and do not necessarily reflect those of JICA.

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## Preface

The development record of Malaysia has been particularly good in recent years amongst the ASEAN countries, and in the second half of the 1980's manufactured products exceeded primary products in both GDP and exports. This growth has been rapid, and as a result, bottlenecks have increasingly emerged in such areas as human resources, infrastructure, and collaboration among enterprises.

Malaysia is now in a transitional stage in its economic and industrial structure, which will see these bottlenecks eliminated. The target is for high growth to turn Malaysia into an advanced industrial country by the year 2020. Malaysia has a development policy to steer it onto the track to becoming an advanced industrial nation by moving beyond the Bumiputera policy, in which the maintenance of racial harmony was sought as the national goal, towards development-orientated structures based on principles of efficiency. The development targets Malaysia is aiming at and the policies by which they are to be achieved are sufficiently clear, and in principle it would be appropriate for Japan to use them as a basis for its support.

Malaysia, an assistance-receiving country, has shown excellent results in its development record and it is anticipated that in the very near future it will have reached the status of a middle income country. Cooperation extended by Malaysia itself toward other developing countries can already be seen.

In that context, it was thought inappropriate to apply to Malaysia the same basic approaches to and concepts of cooperation that are applied to other more typical developing countries. We have looked at models of how assistance should be implemented for countries at this transitional stage of development and have considered how best to assist the economies of these countries to take off. We hope and we expect that other countries will follow Malaysia's lead. This is the first distinctive feature of this study.

Another major feature of this study, has been to analyze selected development issues currently recognized in Malaysia as vital, based on preliminary considerations, rather than taking the general approach of studying the prevailing situation in all sectors exhaustively. Three development issues were identified for analysis in this study: "promotion of industrialization and alleviation of structural distortions," "the promotion of rural development," and "conservation and measures for the environment." Problems were then discussed by breaking them down further.

The targets for assistance which this study finally focused on were four: "the promotion of sustainable industrialization" (including pollution as a problem associated with sustainable industrialization), "the promotion of rural sector development," "improvement of the urban environment," and "the conservation and promotion of the sustainable use of natural resources." Among the development issues discussed in the first instance, the issue of "conservation and measures for the environment" was approached by further subdividing it into three categories: "industrial pollution," "the urban environment," and "natural resources." For each of the targets, the Group looked as far as possible at assistance strategies, priority areas, project examples, and recommended improvements and considerations necessary for their implementation that are consistent with the actual circumstances.

Malaysia is a country of the highest importance to Japan on a number of levels: diplomacy, investment, resources and human exchanges. It is hoped that this report will contribute to effective Japanese assistance policies and enhance Malaysian development and the growth of a relationship of friendship between our two countries.

March 1993

Atsushi MURAKAMI

Chairperson

Country Study Group

for Development Assistance to Malaysia

## Contents

|       |  |    |
|-------|--|----|
| 1.    | Basic Direction of Development in Malaysia .....   | 1  |
| 1.1   | Basic Overview of Circumstances Surrounding Malaysia .....   | 1  |
| 1.1.1 | Geography .....  | 2  |
| 1.1.2 | Economy .....  | 3  |
| 1.1.3 | Politics, Society .....  | 7  |
| 1.1.4 | International Circumstances .....  | 9  |
| 1.1.5 | Trends in Development Assistance .....   | 10 |
| 1.2   | Development Issues of Malaysia .....   | 12 |
| 1.2.1 | Promotion of Industrialization and Alleviation of Structural Distortions .....                       | 13 |
| (1)   | Progress and bottlenecks in foreign enterprise-led industrialization .....                           | 13 |
| (2)   | Weaknesses associated with industrial linkages .....   | 14 |
| (3)   | A shortage of skills .....   | 14 |
| (4)   | Inadequacies in infrastructure .....   | 15 |
| (5)   | Directions of development: the promotion of industrialization and the correction of imbalances ..... | 15 |
| 1.2.2 | Promotion of Rural Sector Development .....  | 16 |
| (1)   | The existence of regional disparities .....  | 16 |
| (2)   | The situation in underdeveloped regions .....  | 17 |
| (3)   | Conditions in mountainous areas .....  | 19 |
| (4)   | Directions of development: the promotion of rural development ..                                     | 19 |
| 1.2.3 | Conservation and Measures for the Environment .....  | 21 |
| (1)   | Deteriorating trends in environmental pollution .....  | 21 |
| (2)   | Major pollutants and current control measures .....  | 21 |
| (3)   | The urban environment: conditions and responses .....  | 23 |
| (4)   | The utilization and conservation of natural resources .....  | 23 |
| (5)   | Directions of development: measures to protect the environment .....                                 | 24 |

|       |   |    |
|-------|---|----|
| 2.    | Framework for Japan's Assistance to Malaysia .....  | 26 |
| 2.1   | Basic Viewpoints on Japan's Assistance to Malaysia .....  | 26 |
| 2.1.1 | Cooperation with Malaysia as a model for other developing nations .....   | 26 |
| 2.1.2 | Focusing on priority areas for aid to Malaysia and continuously reviewing them in accordance with its stage of socio-economic development ..... | 27 |
| (1)   | Selecting priority areas and regions for aid according to need ...  | 27 |
| (2)   | Shifting aid priorities as a result of staged reviews .....   | 28 |
| 2.1.3 | Cooperation based on equal partnership .....  | 29 |
| 2.1.4 | Provision of ODA in accordance with private sector involvement .....  | 30 |
| 2.1.5 | Cooperation to increase Malaysia's ability to provide aid .....   | 31 |
| 2.1.6 | Cooperation towards Malaysia's privatization policy .....   | 32 |
| 2.2   | Basic Direction of Japan's Assistance to Malaysia .....   | 34 |
| 2.2.1 | Promotion of Sustainable Industrialization .....  | 34 |
| (1)   | Strengthening of inter-industrial linkages and focus on the promotion of small- and medium-scale enterprises .....                              | 35 |
| (2)   | Improvement in the efficiency of existing industrial infrastructure .....   | 38 |
| (3)   | Promotion of industrial pollution control measures in keeping with Malaysia's industrialization policy .....                                    | 39 |
| (4)   | Support for a long-term strategy for the transition of the industrial structure .....   | 40 |
| 2.2.2 | Promotion of Rural Sector Development .....   | 41 |
| (1)   | Promotion of sustainable agriculture .....  | 42 |
| (2)   | Promotion of rural industry .....   | 45 |
| (3)   | Establishment of infrastructure .....   | 46 |
| 2.2.3 | Improvement of the Urban Environment .....  | 48 |
| (1)   | Improvement of urban residential environment .....  | 48 |
| (2)   | Alleviation of traffic congestion problems .....  | 49 |

|          |  |    |
|----------|--|----|
| 2.2.4    | Conservation and the Promotion of the Sustainable Exploitation<br>of Natural Resources .....                             | 50 |
| (1)      | Conservation and use of forest resources .....   | 50 |
| 2.3      | Recommended Improvements and Issues concerned with<br>the Implementation Methods and Systems of Japan's Assistance ..... | 52 |
| 2.3.1    | Issues to be noted for the Implementation of Assistance .....  | 52 |
| (1)      | Aid recipient agencies .....   | 52 |
| (2)      | The importance of PR activities and considerations on the<br>public release of information .....                         | 54 |
| (3)      | The value of the "Look East" policy and background<br>considerations .....   | 55 |
| (4)      | Critical Malaysian attitudes to linguistic ability .....   | 56 |
| (5)      | Categories under which technical experts should be selectively<br>assigned .....   | 57 |
| (6)      | Environmental impact assessment and environmental<br>considerations .....  | 57 |
| (7)      | Coordination of technical cooperation and yen loans .....  | 58 |
| 2.3.2    | Improvements of Methods and Systems of Japan's Assistance ...  | 59 |
| (1)      | Better support for privatization policies .....  | 59 |
| (2)      | Better implementation system for South-South cooperation .....   | 60 |
| (3)      | Better cooperation with local authorities in Japan .....   | 61 |
| (4)      | Assignment of experts to better meet Malaysian needs .....   | 62 |
| (5)      | Upgrading local offices of JICA, OECF, and other<br>organizations .....  | 63 |
| <br>     |  |    |
| Annex 1: | Framework for Japan's Assistance to Malaysia   |    |
| 1-1.     | Promotion of Sustainable Industrialization .....   | 64 |
| 1-2.     | Promotion of Rural Sector Development .....  | 65 |
| 1-3.     | Improvement of the Urban Environment .....   | 66 |
| 1-4.     | Conservation and Effective Exploitation<br>of Natural Resources .....  | 66 |
| Annex 2: | The Members of The Study Group .....   | 67 |
| Annex 3: | The Members of The Task Force .....  | 68 |



## Acronyms and Abbreviations

|          |   |
|----------|---|
| ARE:     | Asian Rare Earths   |
| ASEAN:   | Association of Southeast Asian Nations                        |
| BERNAMA: | Malaysian National News Agency                                |
| BHN:     | Basic Human Needs   |
| BO:      | Build-Operate   |
| BOT:     | Build-Operate-Transfer  |
| CIAST:   | Center for Instructor and Advanced Skill Training             |
| DID:     | Drainage and Irrigation Department                            |
| DOE:     | Department of Environment                                     |
| EAEC:    | East Asian Economic Caucus                                    |
| EAEG:    | East Asian Economic Grouping                                  |
| EIA:     | Environmental Impact Assessment                               |
| EPU:     | Economic Planning Unit  |
| FAMA:    | Federal Agricultural Marketing Authority                      |
| FELDA:   | Federal Land Development Authority                            |
| FELCRA:  | Federal Land Consolidation and Rehabilitation Authority       |
| FOA:     | Farmers Organization Authority                                |
| FTZ:     | Free Trade Zone   |
| GDP:     | Gross Domestic Product  |
| GNP:     | Gross National Product  |
| IMP:     | Industrial Master Plan  |
| JACTIM:  | Japan Association of Commerce, Trade and Industry of Malaysia |
| JETRO:   | Japan External Trade Organization                             |
| JICA:    | Japan International Cooperation Agency                        |
| JOCV:    | Japan Overseas Cooperation Volunteers                         |
| LRT:     | Light Rail Transit  |
| MITI:    | Ministry of International Trade and Industry                  |
| MTCP:    | Malaysian Technical Cooperation Programme                     |

|        |   |
|--------|---|
| NDP:   | National Development Policy                             |
| NDPC:  | National Development Planning Committee                 |
| NEP:   | New Economic Policy.                                    |
| NGOs:  | Non-governmental Organizations                          |
| NIEs:  | Newly Industrialized Economies                          |
| NPC:   | National Productivity Center                            |
| ODA:   | Official Development Assistance                         |
| OECF:  | Overseas Economic Cooperation Fund                      |
| OPP:   | Outline Perspective Plan                                |
| OSA:   | Official Secrets Act                                    |
| PSD:   | Public Service Department                               |
| PWD:   | Public Works Department                                 |
| R&D:   | Research and Development                                |
| SIRIM: | Standards and Industrial Research Institute of Malaysia |
| SIMs:  | Small- and Medium-Scale Industries                      |
| TNB:   | Tenaga National Berhad (Power Authority)                |
| UNHCR: | United Nations High Commission of Refugees              |

# **1. Basic Direction of Development in Malaysia**

## **1.1 Basic Overview of Circumstances Surrounding Malaysia**

Malaysia has displayed excellent economic performance in recent years, with high growth in the manufacturing industry induced by an influx of foreign investment. While growth has resulted in regional and structural imbalances, Malaysia is, along with Thailand, on course to join the ranks of the NIEs during the 1990s. In some ways, Malaysia represents an antithesis to the other ASEAN countries, with an economic system characterized by a small population, a restricted domestic market, a reliance on overseas markets, and a Malay-controlled government within a multiracial nation.

Malaysia's per capital GNP in 1990 was over US\$2,300, surpassing that of other ASEAN countries. It is pursuing the NIEs energetically and is on the way to becoming an industrial nation. As in other ASEAN countries, this has resulted from development away from a colonial-style economy centered around primary industry towards import substitution industrialization from the 1960s. However, a significant feature is that Malaysia is the only rubber- and tin-based plantation country to have achieved successful industrialization. ("Economic Growth in Monsoon Asia", Harry Oshima, 1987.)

Malaysia is a small nation with a population of 18 million. Compared with Thailand and Indonesia, which have economies which can depend on domestic markets of some scale, Malaysia is characterized by an economy dependent on overseas markets, with the value of both exports and imports exceeding 50% of GNP. It is also a pluralist state with Malays, Chinese, Indians, and other ethnic groups, and the economic policies adopted since the 1970s have been government-mediated policies such as the setting up of public corporations and public organizations and the expansion of public investment to give priority to Malays. The prominent features of this type of political and economic policy is that it integrates economics and politics, has been successful in boosting the poorer Malay element, and has contributed to the development of the Malaysian economy.

### 1.1.1 Geography

#### Natural environmental conditions — a broad land with a sparse population

Malaysia is made up of eleven states in Peninsular Malaysia, plus two states in East Malaysia (Sabah and Sarawak) making thirteen states, together with the Federal Territories of Kuala Lumpur and Labuan. It is about 90% of the area of Japan, the greater part of which is virgin tropical forest or swamp-land. Peninsular Malaysia accounts for 39.4% of the total area, Sarawak for 37.3%, and Sabah 22.3%. A rather small population of about 18 million, around 15% of that of Japan, together with income differentials limit the scale of its domestic market.

#### Regional imbalances

Peninsular Malaysia is characterized by a comparatively low central mountainous region running north and south, with numerous short rivers flowing down to the sea on the east and west. The main rice-growing belts are concentrated in the northeast and northwest, but rubber and palm plantations have been developed throughout the country on both hill and plain.

The eastern seaboard is affected by a strong northeastern monsoon whose stormy seas create sand dunes and form numerous lagoons. As a result, it is not rich in natural harbors, and this has hindered development of maritime transport and commercial fishing.

The west coast, however, has extensive mangrove forests, with harbors having formed mainly at the mouths of rivers. A transport network has developed and this area has become the pivot of Malaysian economic activity. The Malays were originally engaged in subsistence rice culture and had little taste for urban living, so the east coast and mountain regions of Peninsular Malaysia and East Malaysia have been slow to urbanize.

Sabah in East Malaysia is also divided in two by a central mountain range. Its plains are narrow, but the many rivers create fertile basins with good soil. The influence of the monsoon means that there are two distinct seasons, wet and dry, and as a result, water resources are unfortunately not available to be used year round. State finances rely heavily on income associated with forests, but many years of felling and the resultant soil erosion make

forest regeneration difficult.

In Sarawak, the mountain range running along the southern inland border creates a watershed with plains along the coast and in the river basins. However, because virgin tropical and swampland forests hinder transport, rivers constitute inland waterways which are a vital means of transport. The region is fortunate in having oil as an additional source of income, and its forests are relatively well preserved. Rain is plentiful throughout the year and there appear to be good possibilities for the development of marine resources.

### **1.1.2 Economy**

#### Transition in Malaysian economic and development policies

With its abundant natural resources, good location, and a classic monoculture economic structure as an inheritance from the colonial economy, policy in the 1960s placed emphasis on the encouragement of agriculture, and was aimed at improving the standard of living of Malays engaged in agriculture in their native farming villages. By contrast, manufacturing industry and commerce were largely in the hands of the Chinese or foreign interests, and productivity differentials against agriculture created major inter-racial disparities in economic power and income.

Racial violence which broke out against this background (the May 13 Incident, 1969) triggered a shift of emphasis away from existing policies of racial integration towards the Bumiputera policy of positive discrimination in favor of the Malays. The First Outline Perspective Plan (OPP1: 1971-90) embodied the New Economic Policy (NEP), which sought to eliminate poverty and remake society in response to this change in policy, and following this the second to fifth five-year plans were implemented.

The initial stage of industrialization for import substitution of mainly consumer goods in the 1960s was generally completed by the end of the decade. As a result, during the 1970s, a dual industrialization strategy was pursued involving continued import substitution in light industries and the setting up of export processing zones to foster, initially, export-orientated manufacturing. The manufacturing industry expanded as a result.

However, as the limit of import substitution in light industrial fields was reached due to the narrow domestic market, Malaysia moved to the next step, the import substitution of some major intermediate and capital goods with the heavy chemical industry as the target. However, given the scale of capital required and the length of time needed to produce earnings, and a tendency towards sophistication in production methods, the results were not always positive.

Economic vulnerability was revealed when Malaysia was confronted with the major downturn in export income which emerged over the years 1985–86. It was clear that there was excessive dependence on exports of primary products and certain manufactured products such as electronics and textiles. Collaboration was weak between domestic enterprises and foreign-owned and export manufacturing industries, and there was a lack of local small- and medium-scale enterprises which were technologically mature or possessed the power to compete overseas.

As a result of financial problems caused by the blow to exports, the government-led investment of previous times became difficult to sustain, and the way was thrown open for the influx of foreign capital, private investment, and privatization.

#### Economic prospects for the 1990s — issues remaining from the 1980s

Malaysia's remarkable economic growth in the second half of the 1980s was supported by exports, particularly exports of manufactured products. Behind this was an aggressive policy to attract foreign capital, plus large-scale and rapid moves to relocate production centers to the Asian region and Malaysia by Japanese enterprises, and following them enterprises from the NIEs.

This process saw the emergence of pressures on the labor market and rising wages, a shortage of technicians and skilled workers, bottlenecks in local procurement of raw materials and components due to immature support industries and inadequacies in infrastructures as a result of the concentration of manufacturing in the major cities. Further problems were downward trends in both trade and current balances, caused by a higher level of imports of capital and consumer goods, higher deficits in service imports, a deterioration of the comparatively better sectors in existing labor-intensive industries and lags in R & D. However, in contrast to this rapidly progressing manufacturing-driven

industrialization concentrated on the cities of the West Coast, the agriculture and the farming regions have been slow to develop while remaining the largest employing sectors. Here the source of activity is small-scale farmers and small-scale fishermen, and the bulk of the poorer strata are still concentrated in these areas. A change is needed towards industrial structures and policies orientated towards the future development of technology-intensive industries.

Further, the urban growth and over-population which have accompanied the rapid development of the economy, especially the industrial sector, have brought about a deterioration in the urban environment and the quality of life in the cities, in particular. At the same time, the focus has had to be shifted quickly to industrial toxic wastes, air pollution, water pollution, and the treatment of wastes generated in daily life.

#### Economic prospects for the 1990s — development policies for the 1990s

This was the situation against which the National Development Policy (NDP: 1991 – 2000) was released in 1991 to replace the NEP. The basic development concept, which was clearly expressed in the Second Outline Perspective Plan (OPP2: 1991 – 2000), was sustainable, and balanced economic growth. The strategy was to rectify income and economic imbalances between regions and within as well as between racial groups, foster the rapid growth of Bumiputera industrial society, expand the private sector role in development, strengthen the development of human resources, and give some consideration to the environment.

#### Privatization policy

Thus, the central element in the NDP is to stimulate Bumiputera companies on the basis of principles of efficiency and competitiveness, and to restructure the overall development system accordingly. Malaysia is promoting privatization policies strongly so that public enterprise, which has ballooned in recent years, will be more efficient and better managed.

The concept of “privatization” in Malaysia is a little different from the Japanese idea. It is a broad concept encompassing a spectrum of activities, extending up to using the strength of the private sector in the provision of public services. According to the 1991 Privatization Master Plan, “privatiza-

tion" applies to the following four categories of action: (1) partial or complete disposal of assets and shares; (2) the leasing of assets; (3) subcontracting out of business privately and (4) Build-Operate-Transfer (BOT) and Build-Operate (BO).

The activities described in (1) to (3) above are aimed at improving the management of public enterprises, fostering greater efficiency, and cutting public expenditures. Those in (4) are schemes to privately subcontract new projects which have a high public service component, such as road, water supply, and sewerage projects, on the granting of licenses and other concessions for operations which previously were required to be implemented by public agencies.

The problem of privatizing the Centre for Instructor and Advanced Skill Training (CIAST) \* is a situation where the government's organizational management capabilities are called into question when it is judged that it will not be possible to meet private needs. Questions are raised about management skills even in public vocational training operations (e.g., CIAST) or R&D sectors (e.g., SIRIM, the Standards and Industrial Research Institute of Malaysia).

Another possibility in making the public sector more efficient is a process known as corporatization in which vocational training and R&D operations are handled in part under private contract, with the original public functions unchanged.

This series of privatization measures will see the end of attempts by the government to meet social and economic targets through direct intervention in manufacturing and the market. In the future, and government will place the emphasis on providing an environment conducive to business and infrastructure development, and extending a legislative, regulatory, and institutional framework which is in harmony with development plans and strategies.

\*) A concern over the privatization of CIAST arose from an enquiry made in 1992 to Japan from the Malaysian side about the possibility of privatizing the agency, which was established with a Japanese grant and to which project-type technical cooperation has been provided over a long time. The Malaysian government has not to date given any specific indications on methods or categories of privatization for the agency, but is believed to be considering organizational restructuring through corporatization.

### **1.1.3 Politics, Society**

#### The polity and the federal system

Malaysia is a constitutional monarchy, with the King (Supreme Sovereign) as the head of state. However, there is no dynasty which reigns over the nation as a whole, and the Supreme Sovereign is chosen by the sultans of nine states from among themselves: there are no sultans for Penang, Melaka, Sabah or Sarawak. The Supreme Sovereign appoints a Prime Minister who has the confidence of a majority of the (lower) House of Representatives. The sultans are said to have a substantial involvement in the development process.

The state governments have authority in the areas of land, agriculture, forestry, and local administration, but the intervention of the Federal Government is permitted in certain circumstances. The two states of Sabah and Sarawak, however, were permitted a greater degree of autonomy than the states of Peninsular Malaysia in discussions on their accession to the Federation in 1963, which complicates the governing of the country.

#### A multi-racial nation

Since Malaysia was founded, racial problems have been the major elements making for instability in government. Since the racial violence which broke out between Malays and Chinese in 1969, the issue for successive administrations has been to bring about an improvement in the economic position of the poor Malays relative to the non-Malays (the main indicators being ratios in capital asset holdings, income, and employment) and achieve a social and national balance while maintaining racial harmony.

The government seeks to maintain Islam as the national faith but at the same time guarantee individual freedom of belief: religion is deeply involved in life and thinking as a whole, with each race having its own religion. The racial profile of the way Malaysian society is structured is reflected in the situation that while the Malays are the most numerous of the races, real economic power is held by the Chinese and Indians who dominate the urban areas.

The government has sought to eliminate economic disparities between races, urban and agricultural regions, and between Malays and non-Malays. In recent years, however, the problem of economic imbalances within indi-

vidual regions or races has emerged as a policy problem, which makes the issue more complex.

Given this general situation, the National Development Plan released in 1991 shifts policy qualitatively in the direction of introducing principles of competition into Bumiputera society, reducing and eliminating Bumiputera dependence on the government, and improving the management abilities of the Bumiputeras themselves. The issue is now the restructuring of the development system in response to this.

#### The state of social services

In general, the effort to drag the Malays out of poverty since the 1970s through the Bumiputera policy has led to a rather high average standard in the fulfillment of basic human needs (BHN), the level to which demand for educational and medical services is met.

In education, the significance of education in English and of primary and secondary education emphasizing subjects of reading, writing, and arithmetic is increasing, reflecting the medium- and long-term human resource needs of the manufacturing industry. The treatment and prevention of disease is very much the province of government medical institutions, but in the cities, in particular, the provision of medical services by private institutions is on the increase.

However, there continue to be major regional disparities in absolute numbers of doctors and nurses. In Peninsular Malaysia, virtually the entire population is covered by medical services, but conditions of geography in Sabah and Sarawak make the extension of medical services difficult, and emergency transport is by helicopter.

The participation of women in the development process has been actively encouraged since the mid-1970s, for example, by the holding of national councils. While there is no sense of inequality in the social system, it will be necessary in the future to make qualitative improvements such as upgrading the skill levels of female workers.

#### **1.1.4 International Circumstances**

The basic principles of Malaysia's foreign relations are to strengthen ASEAN co-operation, to cooperate with Islamic nations, to maintain non-alignment and neutrality and an equal distance from major powers, and to cooperate with democratic countries.

Since the accession of Prime Minister Mahathir in 1981, Malaysia has moved away from its former orientation to the West, and now has closer ties with Japan and Korea. In order to fashion a stable and harmonious multiracial nation, Malaysia emphasizes the development of human resources. The satisfactory relationship overall with Japan is reflected in the "Look East" policy instituted in 1982, which was aimed at learning from the work ethic and business philosophies of Japan and Korea. Malaysia maintains close economic relations with Japan, which is the country's major trading partner and source of capital.

Malaysia also maintains close relationships with neighboring countries, and the ASEAN nations in particular, at a range of levels including ASEAN conferences and visits by ministers.

With regard to Indo-China, Malaysia has sought a political resolution of the Cambodian problem while maintaining that it will not abandon ongoing discussions with Vietnam. There is an active economic exchange between the two countries: at the beginning of 1991, an economic delegation from Vietnam visited Malaysia, and in April of the same year the Malaysian government sent a team of economic experts to Vietnam. The Malaysian government has made a commitment to restart economic activities directed towards Vietnam which had been suspended since 1978, and in fact there is now active Malaysian investment in Vietnam.

Internationally, as can be seen from the following examples, Malaysia is now embarking on initiatives of its own. At the end of 1990, Malaysia devised the East Asian Economic Grouping (EAEG), so that East Asia in particular could display a political strength commensurate with its economic power, and to react to the formation of economic blocs in Europe and North America.

For various reasons, the idea was subsequently changed, and in October 1991 an "East Asian Economic Caucus" (EAEC) was proposed with the agree-

ment of the ASEAN nations as a whole. Malaysia also supports the "Growth Triangle" concept proposed by Singapore. It has further decided to go ahead with the idea of a "Northern Triangle" made up of Southern Thailand, Sumatra, and the north of Peninsular Malaysia, and toward this end it is engaging in discussions with Indonesia.

Technical cooperation with other developing countries in general is based on the Malaysian Technical Cooperation Programme (MTCP). Malaysia is now cooperating with its near neighbors and with Islamic nations. With respect to Cambodia, Malaysia is testing new modalities of cooperation such as joint cooperation with Japan and the other ASEAN countries through the United Nations High Commission for Refugees (UNHCR).

### **1.1.5 Trends in Development Assistance**

There has been a steady expansion in the amount of assistance accepted by Malaysia since 1970, which averaged US\$49 million over the years 1969-71, US\$218 million over 1979-81 and US\$352 million over 1989-90. However, when shares of assistance provided by donor countries and international agencies are considered, it is found that, in 1990, 81% of gross ODA received by Malaysia, US\$312 million, was assistance from Japan.

In recent years, there has been a tendency for donor countries to look at Malaysia's rapid economic development and cut assistance. Japan, on the other hand, has continued to increase its ODA to Malaysia further, and Malaysia's share in the total amount of bilateral ODA from Japan is high, ranking with Indonesia, Thailand, and the Philippines.

Shares of Japanese assistance to Malaysia by category of the total amount disbursed up until fiscal 1990 were capital grant aid, 2.2% (Malaysia is not now eligible, in principle, for this type of assistance), and technical cooperation, 16.8%. By contrast, yen loans accounted for 81% of the total.

A look at assistance disbursed from Japan since 1980 in terms of the number of projects in all categories reveals that close to half of the total was associated with the promotion of industrialization. About 25% involved the promotion of regional development centering around the agricultural sector.

There has been a noticeable tendency for projects associated with environmental problems to increase in recent years, to a little under 10% of the total. Because projects involving the promotion of industrialization include infrastructure development projects such as dam building, the proportion accounted for by this category of assistance is even greater in monetary terms.

The range of actual assistance projects is very broad, with some form of cooperation having been extended to all areas in which Malaysia currently requires a response. However, the approaches to cooperation go no further than individual responses to individual requests.

Further, in only a very small 2% of cases does a JICA development study lead to the provision of a yen loan. While the high rate of implementation of projects based upon JICA development studies using domestic Malaysian capital is to be commended, it is going to become increasingly important to provide technical cooperation to continue to identify good projects leading to yen loans.

Issues in assistance for the future include finding responses to more advanced and diverse technical needs as industrialization reaches new levels, establishing frameworks for systems of assistance in which different categories of assistance support each other, and elaborating the role of ODA to countries approaching middle income country status.

## 1.2 Development Issues of Malaysia

The springboard for Malaysia in the 1970s was the export of primary products and the expansion of public investment. It then rapidly developed a manufacturing and export-orientated industry in the latter half of the 1980s through foreign direct investment. However, significant limitations affecting Malaysia's future targets of further industrialization and joining the ranks of the advanced countries fully by the year 2020 have emerged.

These include the problem of the immaturity and inefficiency of Bumiputera's commercial and industrial community, shortages of labor and inadequacies in the industrial infrastructure resulting from the move into manufacturing, the immaturity of supporting industries for export-orientated industry, and a deterioration in the environment.

The National Development Policy (NDP: 1991–2000) and the Second Outline Perspective Plan (OPP2: 1991–2000) released in response to this situation aim for sustainable and balanced economic growth. As a consequence, current development strategies embrace an expansion of the capacity of the private sector to take the initiative, the introduction of principles of competition into Bumiputera society, and the reorganization of the social structure for development.

The emphasis is being placed primarily on improving the capacity of sectors of the economy to complement each other and on strengthening local and regional economies, which are essential for sustainable growth. Also emphasized are policies on the environment and for the efficient exploitation and conservation of natural resources, the fostering and improvement of human resources and capabilities to provide a basis of support for this, and the further elaboration of systems.

There are matters which are closely interrelated with these strategies, as well as elements and factors which may inhibit the realization of sustainable and balanced economic growth but are not emphasized in the NDP and OPP2 mentioned above. It is felt that there are other measures which need to be considered with regard to future directions.

Thus, there are three vital elements in the development framework as Malaysia confronts development issues: (1) the promotion of industrialization with the focus on small- and medium-scale industries; (2) the promotion of rural development; and (3) the conservation of the environment.

It would be desirable to restructure the direction of future development by looking at the sequence of "causal factor — problem — counter-measure." Or, in other words, the framework presented here represents the broadest framework for the direction of development. In the following chapter, this will be re-analyzed in terms of targets for assistance and refined via Japan's basic viewpoints on assistance.

### **1.2.1 Promotion of Industrialization and Alleviation of Structural Distortions**

#### **(1) Progress and bottlenecks in foreign enterprise-led industrialization**

In the second half of the 1980s, Malaysia joined the ranks of the world's largest exporters of semiconductor products and other products. This was a result of an active policy to bring foreign capital into Malaysia's free trade zones (FTZ), and because of the relocation to Malaysia of the production base of enterprises from advanced countries such as Japan and from the NIEs.

However, there are bottlenecks in the industrial sector: currently, industrial linkages are weak and local technological capacities are inadequate for the task of absorbing introduced technology and combining it with independent technological development. There are also shortages of skills and inadequacies in the industrial infrastructure. These problems are now having a negative effect and prejudicing the comparative advantage which has, to date, been the attraction for foreign capital in labor-intensive manufacturing. There is now an element of concern that the foreign firms which have been the force behind economic growth may be forced to pull out of Malaysia, as well as concern about the weakness of the production base outside the FTZs.

## **(2) Weaknesses associated with industrial linkages**

The foreign-owned enterprises, which are the driving force behind the development of industrialization, import the bulk of their required components or rely on affiliates for local production of components. The products of local enterprises lag behind when it comes to the suitability of product quality or the reliability of delivery schedules, and as a result, local firms are outside the mainstream of industrialization.

This is a reflection of the situation in which small- and medium-scale industries in Malaysia find themselves, namely, as having insufficient indigenous technological strength as well as inadequate capital strength and business skills. As a result, they lag well behind the level demanded by foreign enterprises.

The causes are seen when one turns to the situation with the fostering of small- and medium-scale industries as supporting industries. Until recently, no comprehensive support policy had been adopted to provide technological assistance or to help with funding and the development of human resources because of the division of responsibilities among the ministries involved.

## **(3) A shortage of skills**

One of Malaysia's comparative advantages in attracting labor-intensive industry, principally electronics and electrical goods, has been cheapness of labor. However, this superiority is now gradually being eroded due to the labor shortages created by the rapid growth of foreign enterprises and the consequent rise in wages. As a result of this, foreign enterprises are now looking to Indonesia, Vietnam, etc., as locations for new production centers.

This is evidence of the fact that Malaysia's system of skills and vocational training does not always closely reflect the needs of business. There is a shortage of the necessary labor force, including skilled workers. Another reason is that Malaysia's population is small, and with the spread of foreign-owned enterprises, there is simply a shortage of unskilled workers in absolute terms.

The shortage of skilled workers and engineers manifests itself in the problem of "job hopping." Because mobility is high, the effects of training by

companies are diluted, creating the situation that foreign-owned enterprises are entirely dependent on their parent companies for technological development. It must be conceded that this does not result in improvements in skills training and technical capacity on the Malaysian side.

#### **(4) Inadequacies in infrastructure**

Industrialization in Malaysia has been basically centered in the west coast area of Peninsular Malaysia, and has developed out from the industrial region around the Klang Valley south into Selangor and Johor, and in the north from Penang state into Kedah state. Labor-intensive manufacturing is now also shifting to the east coast region in search of cheaper labor. This situation requires the rapid organization of new industrial parks as production bases.

Malaysia's Industrial Master Plan (IMP: 1986-1995) proposed decentralized locations for industrial sites throughout the seven states on the west coast, which have a comparatively well-organized network of harbors, highways, and railways. Its ideas for the east coast were for the limited distribution of industry in the mini-corridor linking Kota Bharu, Terengganu, and Kuantan. The aim was to exploit existing or planned infrastructure facilities for maximum production. Under the sixth five-year plan (1991-1995), progress is to be made in the setting up of an industrial and transport infrastructure in the underdeveloped states. Private enterprise is being encouraged to set up industrial parks on the west coast.

#### **(5) Directions of development: the promotion of industrialization and the correction of imbalances**

The first necessity in the further development of industrialization is to develop supporting industries to rectify weaknesses associated with industrial linkages. Malaysia's MITI has adopted a package support policy for the promotion of mainly small- and medium-scale industries. It intends in the future to extend this type of support system.

The capacity of foreign-owned companies to transfer management experi-

ence and technology to affiliated local subcontracting companies must be exploited, and it will be vital to develop small- and medium-scale supporting industries and materials industries that are able to supply raw materials and components to foreign-owned firms.

It will also be of vital importance to educate technicians to handle more effectively technology transfers associated with the introduction of foreign capital. The Malaysian Government recognizes the importance of this and is taking action through the setting up of a human resource development fund in which all companies allocate the equivalent of 1% of total payroll.

For the long term, it is essential to formulate and implement comprehensive industrial policies in consideration of future export strategies. Initially, in the short and medium term, development will be towards fostering local industries that target both the import substitution and the export of manufactured items for daily use. In addition, in order to develop a comparative advantage over the long term, it will be necessary to take initiatives to move away from labor-intensive production towards technology-intensive production.

An approach to the development of high-tech production in microelectronics, new materials, biotechnology, etc., will create the need for long-term human resource development programs. The issues in this sphere are the acquisition and strengthening of advanced policy-making capacities involving the identification of industries which have the capacity to become export industries, coordination with industrial policy, and the allocation of limited resources.

It is readily apparent that there is a vital need to develop human resources in this way in both administrative operations and at the technician level in companies.

## **1.2.2 Promotion of Rural Sector Development**

### **(1) The existence of regional disparities**

The Bumiputera policy of the 1970s did contribute to raising income levels for poor Malays through measures to provide subsidies and increase employment. The rapid economic growth from the latter half of the 1980s, also, has expanded the economic pie as a whole, and it has proven possible to raise the

average BHN level (the level of satisfaction of basic demand for health and educational services, etc.).

However, industrialization through the introduction of foreign capital, which has been the motive force behind economic growth, is unevenly distributed by region, and is concentrated principally along the west coast of Peninsular Malaysia. In infrastructure development and social and economic services, and also in income levels, there are expanding regional disparities between this Peninsular west coast region, which is the principal location of industrialization, and other regions.

If economic growth is to continue in Malaysia in this way, it will be essential that development proceed on the basis of this regional situation, with sustained resource development, promotion of the agricultural sector, and promotion of industrialization, all the while maintaining a balance in regional growth.

This section mainly describes issues concerning the promotion of local agricultural sectors and rural industrialization in underdeveloped regions. The problem of forest resources will be dealt with in the following section on the environment.

## **(2) The situation in underdeveloped regions**

The eastern part of Peninsular Malaysia has fallen behind the west coast in both income levels and the availability of social and economic services. Because of low incomes and low productivity in primary production in the traditional farming and fishing villages, the population drift to the cities continues, and the problems are now the aging of the farming and fishing population and a shortage of workers. Despite the fundamentally abundant natural environment, agricultural products, including rice, are being imported, and this has led to a vicious circle in which agriculture stagnates because it is hardly possible to compete with cheap imported products.

The causes of these problems are the small scale of cultivation, the low level of commercial and cultivation technology, poor drainage capacities due to inadequate terminal irrigation infrastructure, and so on. These problems create further problems, such as low productivity and the abandonment of cultivation.

In fishing, also, smallness of scale and the lack of loading facilities is the cause of low incomes and poverty. There has been an attempt to make some progress in organizing farming and fishing as well as product marketing and sales, but little credible leadership or entrepreneurial spirit has emerged. It must also be conceded that subsidization policies such as the free supply of fertilizers, seeds, etc., inhibits efforts towards positive commercial improvement.

The situation at present is that if no industry other than agriculture emerges in the farming and fishing villages, villagers who cannot provide themselves with a livelihood solely through fishing or farming naturally gravitate to the cities in search of work, and in so doing, contribute towards rapid urban expansion.

As a response to the situation, the Malaysian government has opened up new lands for settlement through projects organized by the Federal Land Development Authority (FELDA) and the Federal Land Consolidation and Rehabilitation Authority (FELCRA), and has made an effort to have poor farmers absorbed into these new agricultural lands. In the new estates, economies of scale in the cultivation of commercial crops are being pursued through cooperative management policies, and it is claimed that this has made a great contribution to the economic salvation of the poor.

On the other hand, there is now conflict between the development of agricultural land and the development of land for industrial and residential purposes. New schemes are now emerging in which the development of new agricultural land is principally suspended so that it is balanced with the need to preserve the forests. For this reason, the emphasis is changing to "in situ" development which plans for the more intensive exploitation of existing land.

Attempts at commercialization of agriculture in the traditional farming villages are seen in the promotion of high value-added commercial crops such as vegetables and flowering plants, and in the encouragement of farmers to set up organizations for the marketing of these products.

One major reason that progress towards industrialization has been much slower in the eastern part of Peninsular Malaysia than on the west coast is that the east coast has no natural harbors which can serve as ports. There has been no adequate development of industrial infrastructure, which is the one

thing that attracts foreign capital.

In recent years, all states have developed industrial parks, where infrastructure facilities are concentrated, and the states in the east are now trying to attract foreign companies. However, industrialization, and manufacturing industry in particular, has not penetrated the eastern regions to any great extent so far.

In Sabah and Sarawak, there is a relative development lag which directly reflects geographical conditions, and the development of the necessary infrastructure is well behind. Because the economic base is dependent on primary products, principally crude oil and lumber, regional earnings are readily susceptible to changes in world prices.

The other problem now surfacing in Sabah and Sarawak is resource depletion and the disorderly exploitation of forestry resources. Because the population is small, farming villages have been slow to emerge in agricultural areas. A further need is the extension of both economic and social services.

### **(3) Conditions in mountainous areas**

The mountain regions are home to small indigenous ethnic groups who practice the traditional slash-and-burn agricultural lifestyle. These "mountain people" operate a closed economy far removed from modern society, but moves in recent years to divert forest land to agricultural development or dam projects have put pressure on their living space. Lifestyles are also undergoing change as a result of the penetration of the commodity economy from outside.

International NGOs are supporting activities to oppose development, particularly in Sarawak. The preservation of the right of indigenous people to live their lives, in a way that is antithetical to development is becoming a problem internationally.

### **(4) Directions of development: the promotion of rural development**

In finding ways to solve these problems, the first necessity is to increase incomes by modernizing primary production, namely agriculture and fishing,

the lack of which is holding back the villagers of the farming and fishing areas. However, this will in turn necessitate comprehensive regional development plans to promote agro-industry and commerce as a basis for primary production. There will also be a need to develop strategic rural growth centers which can supply the economic and social services needed.

It is felt that putting an effort into technological development and the setting up of infrastructures to foster the growth of agro-industry using local products, rather than aiming at the rapid development of industrialization, bears directly on the sustained promotion of primary production itself, and will contribute to the emergence of rural towns which will form the basis of industrialization.

In Sabah and Sarawak, it is necessary to reduce the export of unprocessed resources, improve the relatively backward social and economic level, and ensure that there are stable revenues. This can be achieved by encouraging the setting up of a social and economic infrastructure and the promotion of resource-based industry.

To look at the log trade in particular, log exports were banned in Sabah in January 1993. In Sarawak, also, there are now restrictions on large-scale logging in order to conserve resources. The promotion of timber processing industries as one element in the planned exploitation of forest resources may well turn them into key industries.

Apart from this, the promotion of materials industries exploiting the abundant mineral resources, and the tourist industry, are also crucial in expanding the economic base. The initial need here is for an expansion of government budgetary allocations to enhance social and economic infrastructures and services.

In general, protection policies for the smaller ethnic groups living in the mountains involve the provision of minimal social services in their reserves, such as the establishment of primary schools and construction of waterworks. Basically, slash and burn agriculture continues to be permitted. A problem for the future is how commercial logging is to be controlled so that it does not threaten the dwelling places of the indigenes.

### **1.2.3 Conservation and Measures for the Environment**

#### **(1) Deteriorating trends in environmental pollution**

With recent progress in industrialization, problems of pollution have emerged: the issue of toxic waste disposal, pollution of the rivers and seas, and air pollution. It is now recognized that a cautious approach is needed to the introduction of further foreign capital and the initiation of new projects; it is now obligatory to carry out environmental impact assessments.

Further problems are associated with the growing concentration of people in the cities. There is now traffic congestion and a deterioration in the living environment in major cities such as Kuala Lumpur and Johor Bahru, where sewerage and sanitation facilities, etc., are inadequate.

Malaysia's forests, which ought to have been an abundant natural resource, are suffering from overcutting, leading to the degeneration of the biosphere. As a result, the need is now for sustainable development and protection of the forests as a vital export resource.

#### **(2) Major pollutants and current control measures**

In recent years, there has been a closer focus in industrial pollution on the treatment of new metal-bearing toxic wastes generated by progress in the electronics and electrical goods sectors, and particularly in semiconductors. The Malaysian government has directed that these must be stored on-site by companies until a central treatment plant is built. However, there are already difficulties with storage in this manner, with storage periods already exceeding five to ten years.

A central treatment plant was planned to be built and running by 1995, through subcontracting to private enterprise. However, this plan has run into problems at the site selection stage, having provoked opposition from local residents.

In 1992, one of the High Courts granted a provisional injunction halting operations to dispose of radioactive wastes by the Japanese-affiliated Asian Rare Earths (ARE) (this provisional injunction was subsequently withdrawn by

the Supreme Court). Public opposition movements have led to the recognition that there is a need for social assessments. In addition, there are risks inherent in the privatization of the central treatment facility mentioned above with regard to its commercial sustainability with respect to the setting of fee structures and securing waste matter which will exclusively be the concern of the responsible company.

Whatever the results, ensuring prompt toxic waste treatment and the provision of storage sites remains a major problem involved in the way foreign companies operate.

The background to this industrial waste problem is the industrial policy of the Malaysian government, which emphasizes industrialization, pursuant to which there is no hesitation to accept enterprises which produce toxic emissions. Other background factors are the selection of central processing systems and the tendency of society to rate less highly the efforts needed to reduce the volume of emissions from enterprises in general.

With regard to water pollution, progress had already been made with technical, administrative, and institutional measures to process organic drainage from rubber and palm oil production. Although Malaysia has accumulated experience in environmental administration in this field, it is behind in measures relating to the processing of wastewater containing metallic elements: identifying polluting business entities and developing mitigating technologies and monitoring systems.

Malaysia is not yet regularly collecting data on the water quality of lakes and marshes, and subterranean water in particular, and there is a risk of the development of latent contamination of subterranean water, etc. The major source of air pollution is the rapidly increasing number of automobiles.

Environmental standards and regulations are very well organized, as is the system for environmental countermeasures. The responsible agency, the Department of the Environment (DOE) in the Ministry of Science, Technology, and Environment, has set up eight regional offices. However, manpower and financial issues are still to be solved in order to take action in response to the changes in pollutants and sources of environmental pollution resulting from the rapid industrialization and urbanization of recent years.

### **(3) The urban environment: conditions and responses**

The rapid rise in the urban population and in automobile ownership has created a new need to improve the urban living environment, particularly in the major cities along the west coast of Peninsular Malaysia. Increases in the population of the industrial sector have led to shortages in urban housing and sewerage facilities, and improved water supply and urban waste processing facilities are required.

Traffic congestion in these major cities has emerged as a matter for improvement in recent years. Policies are now in place for traffic planning and the improvement of transport facilities, through the extension of public bus routes and the setting up of light rail systems (LRT).

One of the bottlenecks in re-organizing the residential environment results from local financial stringencies as well as from manpower shortages, for example, in engineers and planners. For this reason, the Federal Government has in the sixth five-year plan, for example, adopted measures that include the provision of subsidies for sewerage facilities. There are also moves to privatize sewerage and water supply.

### **(4) The utilization and conservation of natural resources**

Malaysia's abundant forestry resources are a vital export resource. However, accumulated years of logging have depleted the forests, which are currently disappearing at the rate of 1% per year. This leads to an increase in flood damage and the deterioration of water quality resulting from the effects of soil erosion and soil runoff. Not only this, but the reduction in log exports has led to a fall in the proportion of revenues gained from logging in Sabah and Sarawak, where more than 60% of earnings are derived from timber. This is a vital problem for states which rely on forestry resources.

This is having a profound effect on the indigenes of Sarawak and elsewhere. The subdivision of the forests in ways which are incompatible with traditional rights of entry is eliminating the basis of traditional life. The problem is now that changes in the ecosystems of plants and wild animals resulting from the qualitative decline of the forests is leading to the depletion of traditional foodstuffs.

The cause of forest depletion is logging over and beyond the capacity for regeneration. Apart from increasing commercial logging, seen in the rapid growth of exports to Japan from Sabah and Sarawak, forests are also being converted to for industrial sites, residential sites, and plantations. The effect of population increases and other developments of this nature on the indigenes can be seen in the shortening of slash and burn cultivation cycles.

In response to this situation, policies have been effected to manage forests by zoning forest areas into state forests susceptible to conversion and into permanent forests for production and protection. Moves are also being made to rehabilitate logged forests through replanting projects.

However, even stronger forestry management capacities are needed, since illegal logging for example, has not yet been eradicated. The promotion of timber processing industries is also recommended in order to utilize timber efficiently.

#### **(5) Directions of development: measures to protect the environment**

It will be necessary in the future to harmonize the management of the environment with balanced industrialization policies in order to plan for sustained industrialization and to devise measures to counteract industrial pollution, which might hinder further industrialization. Comprehensive environmental policies must be formulated and implemented to achieve this.

To this end, the DOE in the Ministry of Science, Technology, and Environment obliges environmental impacts to be assessed, has formulated environmental standards and regulations, and operates a monitoring system. However, the forms of pollution have diversified and become more acute in recent years and now require the treatment of industrial wastes, effluents, and emissions stemming from expanding manufacturing industries. In order to find a response to this, it will be necessary to invest more funds and to upgrade administrative efforts over and above what has already been done.

One impact of industrialization has been the surfacing of a need to enhance manpower training and funding procurement for the purpose of planned progress in the provision of an agreeable urban environment by the responsible

local authorities. This applies to the improved local traffic systems, urban redevelopment, expansion of water and sewerage services, and management of solid wastes that is now required in response to the urbanization that has emerged on the west coast of Peninsular Malaysia in particular.

Specifically, improving solid waste management requires planning for the extension of sanitary landfills; improving sewerage requires a realistic review of the existing master plans; improving water supplies requires an understanding of the actual circumstances of water loss; and improving urban traffic requires a planned traffic policy through master planning, etc.

In the preservation and exploitation of natural resources, the crucial problem is the sustainable exploitation and conservation of forest resources, which are a particularly vital export resource. An improvement is needed in the capacity to operate and manage the forests in order to stop illegal logging and to develop the technology which will permit the encouragement of timber processing. This, together with the promotion of reforestation projects through agro-forestry with permanently settled nomadic cultivators, will represent an efficient utilization of resources.

## **2. Framework for Japan's Assistance to Malaysia**

The previous chapter analyzed the major development issues for Malaysia focusing on three areas: 1) promotion of industrialization and alleviation of distortions, 2) promotion of rural sector development, and 3) conservation and measures for the environment. The previous chapter also examined the direction in which Malaysia's development is heading. Based on that analysis, this chapter discusses Japan's approach to its development assistance in three stages: 1) the philosophy behind Japan's assistance to Malaysia, 2) the basic direction of Japan's assistance (priority areas, aid strategies, and programs), and 3) points for consideration and improvements in delivery of assistance.

### **2.1 Basic Viewpoints on Japan's Assistance to Malaysia**

#### **2.1.1 Cooperation with Malaysia as a model for other developing nations**

Malaysia has achieved rapid economic growth, but it now faces serious problems in areas such as distortions in industrial structure, regional inequity, and urban pollution. These problems represent tasks that other countries such as those of ASEAN, which are likely to achieve similar development in the future, will have to face sooner or later. For Japan to offer cooperation based on its experience in these areas means to assist Malaysia in developing appropriate technologies and techniques relevant to its current situation. In turn, this may provide other ASEAN members and other countries with a model for solving problems of a similar nature. Malaysia is believed to have the administrative capability to identify needs for cooperation and to submit aid requests in a speedy and timely manner, as well as to have counterpart professionals of a sufficiently high technical level. Malaysia is also suitable for running a model project of appropriate scale. Therefore, it is possible to give Malaysia aid that can be regarded as a precedent for other nations.

In addition, this sort of project should, as far as possible, take account of a broad regional spread across ASEAN, and the project function should be open enough to allow third country training to be carried out. Malaysia is regarded as a nation that has the administrative and financial resources for becoming such a model.

### **2.1.2 Focusing priority areas for aid to Malaysia and continuously reviewing them in accordance with its stage of socio-economic development**

Malaysia's per capita GNP exceeds \$2,000, and it is no longer on the list of countries which are eligible for grant aid from Japan. Decisions on the quantity and quality of aid are not mechanically linked to the level of per capita GNP. Rather, such aspects as regional equalities and social justice should be taken into account.

Nevertheless, if Malaysia is to enter the ranks of industrially advanced nations by the year 2020 as Prime Minister Mahathir advocates, then Malaysia may soon cease to be a recipient of regular-type yen loans. If we, therefore, take 2020 as the year in which Malaysia becomes our equal partner, we should then narrow down the areas and items targeted for aid so that limited aid resources can be used efficiently before then. It is also necessary to review on a continuous basis the quality and quantity of Japan's ODA, as the process of Malaysia's conversion towards an advanced industrial nation unfolds.

#### **(1) Selecting priority areas and regions for aid according to need**

Rapid economic growth in the 1980s and the Bumiputera policy of alleviating poverty since the 1970s has greatly improved Malaysia's overall levels of income and the degree of satisfaction of basic human needs. The developed western corridor of the Malay Peninsula has certain advantageous conditions for utilizing private sector vitality, based on its experience in bringing in foreign capital and technology, mainly in the export-oriented manufacturing industry. The pool of relatively skilled government administrators throughout Malaysia, combined with the country's existing economic power and its ability to attract foreign capital will fulfill, at least in the Peninsula, the minimum requirements for expanding socio-economic services in the years to come.

Malaysia's overall economic index, social index, and pool of human and financial resources therefore exhibit a high level of potentiality. However, before Malaysia can finally take off as an advanced nation, it still has to overcome a number of structural and regional imbalances.

For example, the economic growth due to the rapid injection of foreign

capital with a limited regional spread has brought structural and regional distortions to the fore. Thus, some issues, such as a decline in comparative advantage in labor intensive industries, economic stagnation in the eastern part of the Peninsula, Sabah, and Sarawak, as well as the deterioration of the environment, still remain unsolved.

To overcome these problems and sustain balanced growth requires measures that can respond to the needs of such a period of conversion of industrial structure. Such measures cannot possibly be swiftly undertaken by Malaysia on its own, based only on its experience gained hereto. In particular, technical cooperation in such areas as management skills is needed in order to deal with issues for promoting industrialization and an improving urban environment.

Less-developed regions which have lagged behind in development because of their particular natural or social conditions still require a large amount of input from the public sector in a variety of areas such as the establishment of infrastructure, the commencement of resource-based industry, the conservation of forest resources, and so forth, in order to promote investment, distribution, and technology transfer. This indicates that such regions would find it difficult to achieve satisfactory socio-economic development on their own in a short time.

Thus the need for development aid differs from region to region and sector to sector, according to the degree of this socio-economic development. A low priority is accorded to the areas such as basic human needs and the establishment of new infrastructure on the western corridor of the Peninsula. Instead, Japan would provide technical cooperation in response to the needs for further industrial development, while providing both capital assistance and technical cooperation to the regions with a weak economic base. Therefore, it will be useful to be selective in determining priority areas and regions for receiving assistance from Japan.

## **(2) Shifting aid priorities as a result of staged reviews**

It will be necessary to periodically review aid priorities for Japan's assistance to Malaysia according to the latter's stage of socio-economic development. The priority in the first stage will be given to the urgent elimination of bottlenecks that hinder the further industrialization of Malaysia. Thus assist-

ance would center around consolidating a base for sustainable growth and addressing the consequent environmental issues. For example, the promotion of industry on the western corridor of the Peninsula may be given priority for the moment. At the same time, Japan should be able to concentrate on the development of the less-developed regions such as the eastern part of the Peninsula, Sabah, and Sarawak by reinforcing and extending the base for sustainable growth as well as by addressing environmental issues such as urban problems or the preservation and effective use of natural resources.

In the second stage, as the outcome from the industrial promotion unfolds, emphasis may be placed on rural development, which was given a secondary place in the first stage, and increasing emphasis may be placed on environmental issues. In the third stage, when Malaysia achieves advanced nation status (Malaysia aims to achieve this by the year 2020), cooperation will focus on solving environmental issues on a global scale.

With the shift in aid priorities and Malaysia's socio-economic development, it is inevitable that the total amount of assistance will be gradually reduced. As for technical cooperation in the areas of promoting industrialization and rural development, the potential demand for cooperation will diversify. However, as the country's development needs become more technologically advanced and more specific, they will increasingly be met by the private sector. As for yen loans, the focus of development (or issues) will shift from those for infrastructure building to the extension of socio-economic services and consequently the role of and the need for assistance will gradually decrease. In summary, with the shift and change in aid priority areas, it is natural that the total amount of aid will decrease.

### **2.1.3 Cooperation based on equal partnership**

Malaysia has achieved a fairly high level of capabilities in studying and planning for the identification and solution of problems. For this reason, it is often the case that the mere transfer of "hard" technology of an average level is not enough to satisfy the needs on the Malaysian side. It would therefore be better for Japan to take an approach of searching for solutions to the problems facing Malaysia through a collaborative framework, as one form of assistance,

rather than maintaining the aid offerer/recipient relationship. For example, based on Malaysia's existing basic policies, an expert dialogue could be held in the form of a "Japan-Malaysia joint forum" in certain specific fields with participation from business/academic/government sectors for jointly discussing and formulating action plans towards the achievement of their policies. It may also be useful to conduct joint research in areas of tropical agriculture or forestry, based on Malaysia's experience in plantation agriculture.

#### **2.1.4 Provision of ODA in accordance with private sector involvement**

It is foreign private investment that has been the driving force behind Malaysia's economic growth. Much of the future needs for further promotion of industrialization are also expected to be met by the private sector. Industrial growth since the late 1980s is largely due to the establishment of infrastructure through yen loans, as experienced in the power industry. However, yen loans constitute only a small portion of the huge capital inflow to Malaysia. In this sense, ODA produces only a catalytic impact on the progress of industrialization, encompassing as it does, the development of trade and investment.

For example, enhancing research and development (R&D) and staff training are fundamentally company-based issues. The public sector supports the exercise, but it plays a relatively small part. The private sector requires technology and adaptability which are in pace with a fast-moving international market. Such needs cannot be fully met with only ODA being injected into the public sector.

Therefore, in determining aid priorities for the purpose of promoting industrialization, it is important to select areas and modalities for which the anticipated impact will be more vital. In other words, Japan's assistance should be focused on specific targets so as to produce a multiplier effect on the outcome of economic cooperation on a private commercial basis.

A large amount of aid from Japan has gone towards promoting industry in Malaysia in many different forms. In new areas of requests, it is anticipated that the level of technology to be sought would be higher and that the needs to be satisfied would be changing more dramatically.

Therefore, it is no longer adequate to provide aid in a single form of assistance to meet those requests respectively; rather, through study teams and the above-mentioned forums, Japan's assistance should elaborate the schemes for creating institutions and systems for supporting the private sector as well as strengthening human resource development by taking into account commercial needs and the private sector's actual responses to these needs.

For example, existing assistance schemes such as Japanese language training or scholarships to attend Japanese universities foster people with potential to work for Japanese companies. These are examples of cooperation which will produce a significant impact. The multiplier effect on the contribution of the private sector is therefore an important factor in the effective giving of aid.

### **2.1.5 Cooperation to increase Malaysia's ability to provide aid**

Since its independence, Malaysia has been a recipient of overseas aid. However, the country is also active in enhancing its international prestige in its efforts to attain advanced industrial nation status, as advocated by Prime Minister Mahathir. Malaysia has recently embarked on a program of technical cooperation with other developing countries under the Malaysian Technical Cooperation Programme (MTCP).

Japan's cooperation with Malaysia should come in such a way as to help Malaysia accumulate know-how for giving aid to other developing countries, and thus should be deliberately selected in such fields that will allow Malaysia to be better equipped to eventually provide aid on its own. For example, by extending third-country training in Malaysia, Japan can most effectively redirect aid to third parties where possible. The use of local consultants in development studies will also be effective as a means of employing Malaysia's own human resources in Japan's aid to Malaysia.

At the same time, it is important to support Malaysia in its technical transfers to third parties in the fields in which Malaysia excels. For example, Malaysia has accumulated a pool of knowledge on management techniques in plantation agriculture and the linking of foreign capital to industrialization. Malaysia has already attempted some transfer of technology by accepting

trainees. If Malaysia is to establish an aid system or structure and train specialists to expand its overseas aid in the future, it is advised that Japan consider assisting in such areas.

In addition, when offering aid to countries where Malaysia has experience but where Japan is relatively inexperienced, it would make more sense for Malaysian experts to be used in a form of collaborative cooperation in Japan's development programs.

### **2.1.6 Cooperation towards Malaysia's privatization policy**

Malaysia's privatization policies have been formulated based on the country's socio-economic and political background. However, as discussed earlier, the central aim of these policies is to achieve economic efficiency. Japan should therefore support Malaysia's privatization policies in this respect.

Privatization in Malaysia is a comprehensive term inclusive of various forms and processes of activities leading to complete privatization. It does not consist solely of negative aspects, such as the public sector abandoning its public service functions and turning into private enterprise in pursuit of individual interests, to which no more foreign assistance can be introduced. Nor does it always mean an increase in the cost of services as the private sector takes over public services that ought to be undertaken by government.

As long as Japan focuses on the positive aspects, such as overcoming inefficiencies in the public sector, "red-ink" management, and so on, then improving the management of the public sector and public enterprise as part of the process of privatization will be an important area where Japan can offer assistance for supporting Malaysia towards sustainable economic growth.

Offering assistance to improve management in public enterprises that still retain public service functions will lead to improving efficiency in service delivery and a strengthening of the capacity of the public sector to respond to outside needs. It will also lead to the creation of a model that prevents the damaging pursuit of short-term interests.

Even after certain services are privatized, evaluation, planning, and administration functions are often maintained by a public organization, and so

Japan will be able to offer continuous support in the areas where Japan has experience. In accordance with the characteristics of the function involved, Japan can provide effective support by selectively applying various schemes of dispatching Japanese personnel. For instance, experts from the private sector, "senior experts," and JOCVs might be assigned to particular shop floors for improving management, and technical experts in general might be assigned to the planning and management sectors.

Japan's aid, therefore, does not need to be excessively sensitive towards Malaysia's privatization policy, but should remain flexible so as to support the smooth transition of the Malaysian economy with respect to the sustainability of various public functions.

## **2.2 Basic Direction of Japan's Assistance to Malaysia**

There are a number of development issues to be addressed before Malaysia can achieve a balanced form of sustainable economic growth. Aid priorities that may assist Malaysia in achieving its objectives can be roughly categorized as follows: 1) promotion of sustainable industrialization, 2) promotion of rural sector development, 3) improvement of the urban environment, and 4) conservation and promotion of sustainable exploitation of natural resources. One of the development issues — environmental conservation — is important and wide-ranging in terms of its content. We therefore included industrial pollution in category 1), as it relates to the promotion of sustainable industrialization. We then classified the issues related to urban pollution in category 3), and the issues related to natural resources in category 4).

Scenarios for the provision of assistance are illustrated in this section by examining the above issues in relation to Malaysia's development and the principal viewpoints of Japan's assistance discussed so far. Each scenario consists of four elements: priority areas, aid strategies, examples of aid programs and details, and notes to be considered in offering assistance. Aid priorities and strategies of each issue are also listed at the end of this paper.

### **2.2.1 Promotion of Sustainable Industrialization**

Such shortcomings as weak inter-industrial linkages, lack of human resources, and insufficient infrastructure have surfaced as a result of the rapid economic growth seen during the latter half of the 1980s. To reach a balanced form of sustainable industrialization in the future, it would be advisable to offer assistance in the following priority areas: 1) strengthening of inter-industrial linkages that focus on the promotion of small- and medium-scale industries, 2) improvement of the efficiency of the existing industrial infrastructure, 3) promotion of measures for industrial pollution control that are in balance with the measures to promote industrialization, and 4) support for a long-term strategy for the transition of industrial structure with a long-term perspective.

One of the objectives common to all of these issues is human resource development that will enable the achievement of each of these objectives.

Training human resources will be a major consideration in implementing various aid programs to promote industrialization.

**(1) Strengthening of inter-industrial linkages that focus on the promotion of small- and medium-scale enterprises**

Since the later half of the 1980s, companies mainly from Japan and the NIEs have started to invest in Malaysia by bringing in their manufacturing base from their own countries. As a result, the availability of local materials and parts has come to be vital for Malaysia's industrialization. However, a large proportion of Malaysian companies from a range of small- and medium-scale industries (SMIs) have technical standards and international competitiveness that are still inadequate. In addition, the lack of linkages between such companies and foreign companies has hindered any improvement in the former's quality and competitiveness.

To reinforce inter-industrial linkages by fostering SMIs is a key issue in achieving sustainable industrialization. It is one of the most important areas in which Japan can offer its cooperation. Firstly, Japan can assist nurturing such supporting industries, which consist of small- and medium-sized subcontracting companies. They will be able to supply parts that meet the quantity and quality requirements of the export-oriented assembly-processing industry, which plays a key role in economic growth in Malaysia. Secondly, Japan can assist nurturing local industries that supply end products to the domestic market, some of which may seek to export their products in the future.

The programs to achieve these objectives of promoting the support of industries focus on areas of technical cooperation. Such programs are desirable in the following areas: a) support for creating institutions and systems for industrial promotion, and business support by b) development and dissemination of enterprise management know-how, c) reinforcement of R&D, and d) human resource development.

Specifically, a) may require advisory activities of experts geared towards the consolidation of promotional policies (selecting industries, incentives, financial support, etc.) and the granting of yen loans for the modernization of production facilities or the starting of new enterprises. It is preferable that *technical cooperation and capital assistance provided to SMIs be offered in*

tandem. Support for technical and market information services will be necessary to enhance the link between foreign companies and local SMIs. Advice and guidance from experts on the information services promoted by Malaysia's MITI (Ministry of International Trade and Industry) will be useful in this respect.

With b), technical consultation services through guidance from experts will be effective in bringing in immediate results in the areas of production control, quality control, and other facets of management technology. Individual training programs may also be useful.

With c), in order to meet the demand for new products from large assembly-processing companies, assistance should be focused on the provision of project-type technical cooperation on industrial standardization, for instance, through public R&D organizations such as SIRIM (Standards and Industrial Research Institute of Malaysia).

With regard to d), assistance through the vocational training institutes represented by CIAST (Center for Instructor and Advanced Skill Training) may be included in order to strengthen the ability to absorb and adapt techniques transferred, including the following: training of instructors, advisory support to improve the basic scholastic abilities of the students involved, and development of training modules for vocational training institutes to respond to the needs of the private sector through the assignment of Japanese experts and training programs. In addition, support for study in Japan may continue through the provision of yen loans.

The needs of the private sector can thus be reflected in cooperation with public R&D organizations or vocational training institutes by targeting support to SMIs as the main beneficiaries of the service functions mentioned above. It is expected that such assistance would satisfactorily complement the requirements of the private sector.

As regards the lack of skilled labor, shortages are being experienced at the technician level rather than at the university graduate level. There is a particular shortage of native Malay instructors. The areas in demand are computers, mechanical engineering, and electronics, rather than civil engineering. The training of human resources must therefore address these technical needs. Enhancing basic scholastic abilities in the areas of mathematics and

science will also contribute to the improved quality of workers and technicians as demanded by the business community.

Programs that nurture local industry may be similar to the above. However, since it is important to respond to the domestic and overseas markets with originality, the promotion of special products in conjunction with programs for promoting rural sector development may be included in Japan's assistance. For this purpose, the setting-up of an information system, developing marketing and entrepreneurial skills, and the formulation of distribution systems should also be incorporated.

Some of the important points to be considered in the implementation of aid programs are reflected in our experience of technical cooperation with SIRIM. Firstly, if a program is a project-type cooperation mainly involving advising companies, e.g., with regard to metal processing technology, there can be problems if the technological needs rapidly become more sophisticated, as happened in Malaysia. This occurred because hardware and software technologies to be provided in the program could not keep up with such change with enough flexibility. Therefore, the program should consider from the start ways to transform the company's services to the private sector after the completion of the project.

Secondly, if a program consists of technical cooperation where institutions and systems are established and extension services are provided to the private sector through assistance to a public organization, for example, in the field of national standards or a meteorological system, it is necessary to regularly update the range and levels of measurement to meet the changing needs of the private sector and, in the long term, to restructure the system itself to sustain its effectiveness. This program should also allow a transfer of the ever-increasing day-to-day extension service functions to another organization or to the private sector after a certain period so that the original body can concentrate on key research functions such as the construction of standardized systems. Transfer of certain functions to another organization or private sector suggested in both programs will present a new type of cooperation as a model.

Thirdly, if a program is a joint study, e.g., one focused on fine ceramics, the actual needs of relevant industries will not have emerged yet; therefore, the nature of research of this sort tends to be uncertain. If Japan is to provide

continuous support, the key issue will be how to utilize the skills of staff trained in the particular field. Therefore, such a program should be run in parallel with the support of policies intended to nurture, for example, the ceramics industry itself.

## **(2) Improvement of the efficiency of existing industrial infrastructure**

The rapid increase in foreign investment since the latter half of the 1980s has revealed deficiencies in the provision and maintenance of industrial infrastructure. As a result, the Malaysian government is considering transferring the initiative for key infrastructure development to the private sector as soon and as much as possible. Such basic infrastructure building includes roads, port facilities, communications, and power generation, items that were traditionally undertaken by the public sector.

In considering Japan's assistance to the western part of the Malay Peninsula, Japan should leave key infrastructure construction to the Malaysian side because the private sector is firmly involved in attracting foreign capital to that area of the country. On the east part of the Peninsular and in Sabah and Sarawak, however, Japan should consider assisting with projects that reflect relatively strong public interest or which have low profitability. Such projects should be carefully defined and selected.

In order to achieve sustainability in the country's industrialization, it would be better to make existing industrial infrastructure more efficient, rather than merely rely on expansion (establishment of new key industrial infrastructure), given Malaysia's limited financial resources. The existing industrial infrastructure, which is currently the cause of bottlenecks in industrialization, can be made to contribute more to the economy, if its quality and efficiency is improved.

Among a wide range of possible areas of cooperation, freight and transportation, distribution, industrial water supply, power supply, and port facilities should be given consideration. Programs covering these areas could incorporate advice on how to improve their efficiency. Evaluation of the industrial infrastructure existing in each area could be performed by experts, and devel-

opment studies could include the formation of master plans for improvement. The central pivot would be technical cooperation to expand the functions of existing systems to match the future forward march of industrialization. Where necessary, physical construction may be considered. If so, the application of yen loans may be considered (based on the master plan) in the areas where the Malaysian government decides to seek financial assistance.

### **(3) Promotion of industrial pollution control measures in keeping with Malaysia's industrialization policy**

Given the rapid industrialization along the west coast of the Malay Peninsula, environmental degradation has become an urgent issue. The Malaysian government aims to use its National Conservation Strategy to achieve sustainable economic development, taking environmental issues into account. In order to improve the administrative ability to cope with traditional organic pollutants and to respond to the new situation with adequate preventive measures, the objective of Japan's assistance will be centered on brushing up the practical and administrative skills of personnel responsible for the environment to enable an accurate understanding of the status of the environment. Japan's assistance should also focus on helping improve legislative and environmental standards to enable Malaysia to formulate appropriate environmental policies.

Japan's priority in this area should be to improve Malaysia's legislative and analytical abilities by strengthening the functions of not only the Department of the Environment (DOE), but also of local authorities. By supporting the ability to create regulations and standards based on the environmental situation and industrial needs at the time, Japan will enhance the ability of official departments responsible for the environment to perform regulatory tasks, and thereby promote a cooperative approach between central government ministries and agencies and local governments. Aid should take the form of mainly technical cooperation, but the need for yen loans should also be examined if funds are needed for the business community, especially SMIs, to combat pollution. Technical forums may also be useful for establishing long-term forecasts on the pollution problem and how to prevent it.

The focus of an environmental assistance program could include techni-

cal cooperation for the development of technology for improved monitoring of the current situation, the creation of systems for monitoring and data analysis, or the development and dissemination of analytical technology. It could also involve technical cooperation for improving environmental standards to ensure better implementation of by-laws, or technical cooperation for reviewing legislation and the financial system for the private sector. The provision of yen loans will be considered for financing SMIs with close tie-ups with technical cooperation.

With regard to the issue of industrial waste disposal, plans are under way for the construction and operation of a centralized treatment plant by the private sector. Japan must approach the issue carefully when considering direct support for it because of the move towards privatization in Malaysia and the centralized system which is different from Japan's processing system. If such a request arises, it would be possible for Japan to provide a yen loan for facilities such as central storage facilities in industrial parks.

The actual implementation of the above-mentioned type of program would require liaison with Japanese local governments because Japan's knowledge relies heavily on their experience when offering training and assisting the creation of systems for pollution control. It is important to train personnel of local authorities to strengthen local abilities in Malaysia. However, DOE is directly in charge of general environmental administration, especially of air and water quality, and industrial waste. Therefore, any program should involve DOE in order to reinforce the national environmental administrative network.

#### **(4) Support for a long-term strategy for the transition of the industrial structure**

To help Malaysia overcome impediments to its industrialization, achieve sustainable industrialization, and become an industrially advanced nation by the year 2020 as mentioned above, Japan should use the combined resources of the government/business/academic sectors. Japan should involve its own experience as part of this joint approach to identify certain priority sectors or industries and to formulate specific strategic actions in accordance with the industrial policies of the Malaysian government.

Areas for studies include: i) industrialization strategies, ii) a process for privatization, and iii) policies for the development of human resources.

A program for i) could seek to offer cooperation in setting up some form of development study when Malaysia's industrial master plan (1986 to 1995) is reviewed in 1995, based on policies existing at the time. To ensure adequate coordination between the public, private, and academic sectors, a joint forum could be formed to look into such a study, with the results being incorporated into a policy decision. With regards to ii), a joint forum of the public, private (including privatized organizations), and academic sectors could be convened to study the experiences of Japan and Malaysia vis-a-vis privatization and examine its impact on industrialization in both cases. The results could be incorporated into a policy decision. With regard to iii), a joint forum could be convened to examine such issues as how to systematize the development of human resources in a way that responds to the needs of the business community.

### **2.2.2 Promotion of Rural Sector Development**

With the exception of primary industry, the industrial base in the less-developed states is very frail; even primary industry itself is now stagnating. Agricultural development is generally regarded as the focal point of rural development. However, it is anticipated that the systematic promotion of agro-related rural industries and commerce to generate value-added in each local economy would produce a quicker and more vital impact in the rural sector. Such industries could then be expected to provide employment opportunities for local inhabitants who are not directly involved in agricultural production as well as side-line job opportunities.

Thus, in order to make available the raw materials for this, Japan must put thought into developing agriculture and helping with the establishment of stable food supply systems. Basically, when it comes to a national urbanization policy, the Malaysian government advocates establishing small towns as the mainstay of local communities (such small towns being the center for commerce, the processing industry, distribution, and social and cultural facilities). Together with this Malaysian policy, it is necessary that Japan's assistance include promoting a variety of high-yielding agriculture and the creation of a

local community where the farming and non-farming populations can coexist and where welfare systems are improved. In other words, it is important to recognize that rural development involves both economic and social development, and that the two must go hand in hand.

Japan's assistance to the less-developed areas in Malaysia should be based on such recognition, with emphasis on: (i) the promotion of sustainable agriculture, (ii) the promotion of rural industry, and (iii) the establishment of related infrastructure. It is necessary to arouse and activate the potential that Malaysia's underdeveloped states originally possessed.

In other words, the assistance would center around upgrading the existing rural infrastructure, promoting organized production, and disseminating appropriate technology to farmers to enable them to come to terms with commercialization and increased efficiency. Certain schemes of Japan's cooperation (for example, JOCV) may focus in particular on the least-developed states and districts. Additionally, when promoting local industry, assistance should be extended so that each state or village can concentrate on producing different products across the various categories of industry.

One unfortunate limitation in this respect is in the impact of implementation and the reverberating effects it would have due to the fact that knowledge exchange (both technological and experiential) between villages would not be easy. It would be most beneficial for Japan to encourage the sort of integrated regional development approach that combines the three aspects listed above, targeting specific underdeveloped areas.

#### **(1) Promotion of sustainable agriculture**

The main areas for cooperation are: (i) modernization of farm management and productivity improvement, (ii) strengthening of systems for organized farming, and (iii) measures for activating the fishing industry.

The challenge for Malaysia to modernize its farm management and improve its productivity is linked to the need for balanced growth in the participation of the private sector and the commercialization of agriculture. Behind this challenge are various limitations: the dual structure of agriculture involving plantations and small holders; the segmented nature of land ownership; a

low level of technology; the short supply of laborers; and insufficient irrigation facilities (that is, inadequate drainage and so on). Japan's assistance therefore needs to contribute to alleviating these constraints to make agricultural development in Malaysia more sustainable. In particular, the native Malays constitute the majority of small farmers in poverty. By helping to improve the productivity of petty farming, Japan will make a significant contribution towards alleviating poverty and rectifying earning differentials in general.

The program to achieve this should be one of providing yen loans and technical cooperation as follows: (a) technical cooperation to create blueprints for growing suitable crops on suitable land and to promote crop diversification and intensive production of fruit, vegetables, flowers, livestock, and so on, or conversion to high-yielding crops through demonstration farms; (b) technical cooperation to help establish appropriate management skills; and (c) establishment of agriculture-related infrastructure (such as farm roads, terminal irrigation, and drainage facilities). As far as the above is concerned, there is also value in looking into providing model cooperation for specific regions. A medium-term means of handling (a) above will be to introduce yen loans (two-step loans) to support agricultural cooperatives in spreading knowledge on crop diversification, intensive agriculture, and conversion to high-yielding crops.

Strengthening systems for organized farming provides support towards modernizing management, improving productivity, and increasing the income of agricultural households. At the same time, Japan should contribute towards expanding the functions of local government and affiliated bodies in this area, in order to form an effective channel for Malaysia to receive cooperation.

The program to achieve this will be one of providing technical cooperation to: (a) expand the functions of agricultural cooperatives and train their executives; (b) strengthen the administrative function (improve the accuracy of agricultural statistics); (c) expand R&D facilities, especially as regards technology for cultivating high-yielding species and biotechnology at local agricultural training centers, institutions of higher education, and research institutes; and (d) make improvements at the level of the Federal Agricultural Marketing Authority (FAMA) in terms of distribution and marketing of agricultural products.

One noteworthy example of a commercial approach to agricultural management and systemization and the strengthening of organized farming systems is the production of vegetables and arts and crafts by settlers on land newly developed by the Federal Land Development Authority (FELDA) in the southeast of Pahang state. In addition to the traditional products, rubber and palm oil, this was an attempt to diversify into other products. There are already retail shops in Kuala Lumpur selling these products. Japan is experienced enough in the field of distribution to be able to offer cooperation. Further, in the same region, after the JOCV had wound up its involvement with FELDA in cultivating vegetables, the local inhabitants inherited the task and are now scheduled to add fish farming to their activities. This is an example of diversification in products and activities, and suggests that there is an ongoing process to gradually commercialize the economic activities of agricultural regions.

Promotion of organized farming will require some care and attention in that Malaysia received its training from Korea and Taiwan. Although Korea and Taiwan themselves originally learned through Japan's experience, it is natural that some differences in systems have already surfaced. Despite this, technical cooperation geared towards strengthening systems within groups such as the Farmers Organization Authority (FOA) and FAMA is necessary to reinforce the coordination of marketing and the stable production and supply of products.

The third main area for cooperation is the fishing industry. Measures in this sector would be two-dimensional. The first would be promoting modernization of commercial fishing, and the second would be supporting the local small-scale fishing population. The latter's main emphasis would be placed on improving the fragmented scale of operations of the Malay petty fishing population, improving their antiquated fishing tools and methods, and especially in addressing the decline in the quantity of fish landed — a problem caused by indiscriminate fishing along the coastal areas of the eastern seaboard.

The program to achieve the first objective — the modernization of commercial fishing — will be one of providing the following: (a) technical cooperation and grant aid for fisheries to promote deep-sea fishing (that is, cooperation to assist in the conversion from coastal fishing, which has reached saturation point, to deep-sea fishing, as well as improvements in fishing boats, landing facilities such as jetties, and storage facilities; also, popularization of and tech-

nical training for developing transportation, storage, and processing), and (b) assistance with breeding programs (salt-water and fresh-water breeding — mainly of prawns and lobster — and the construction of artificial gathering places for fish along the coast) and technical cooperation to prevent disease in fish. It should also be feasible to devise a model breeding program. Yen loans (two-step loans) could be applied to encourage the move to deep-sea fishing to support both the fishing population and organizations related to the fishing industry.

The program to achieve the second objective — supporting the local small-scale fishing population — will be one of providing the following: (a) technical cooperation to develop and distribute fishing tools and methods, and (b) the assignment of experts to assist in devising plans for advancing the fishing industry.

In addition to support from public institutions to actually implement these programs, the Malaysian government is encouraging the injection of private capital into the marine products processing industry, as well as the participation of fishery cooperatives in marketing. These moves should be kept in view at the time actual assistance is provided.

## **(2) Promotion of rural industry**

Malaysia originally inherited its economic structure as a result of its colonization. Because the precursor to modern industry — local industry — is not yet thriving, the infrastructure underpinning industrial development in local villages is indeed fragile. The processing industry is particularly undeveloped, and it would be difficult to embark on any form of industrial diversification because of limited technology, information, distribution, and capital. In addition, markets can hardly be described as vigorous. The emergence of the processing industry, in particular resource-based industry (mainly processing of agricultural products and timber, as well as arts and crafts, light industry, ceramics, textiles, leather, etc.) is presently much sought after in and around rural growth centers.

Assistance from Japan should therefore be used to maximize the potential for development in rural villages. This should be begun by first strengthen-

ing small-scale resource-based industry without over-taxing existing capabilities. The necessary technology should be developed and disseminated, high value-added goods should be given priority, and employment and new business opportunities should be increased.

Areas in which Japan should concentrate its cooperation include: (i) development and dissemination of processing technology for agricultural products together with training; (ii) R&D for timber processing technology; (iii) promotion of indigenous special products, such as through the promotion of "one product, one village" (based on selection of a model site); and (iv) amplification of the financial system for small-scale industries.

Programs to achieve the objectives above will be the following: (a) technical cooperation for institutions of higher education and research institutions for the development of the processing industry; (b) technical cooperation for R&D and technical training at forestry research institutions; (c) support for the promotion of "one product, one village" by investment and financing schemes that provide technology and funding (especially for timber processing); and (d) the provision of yen loans through development banks and the dispatch of experts to expand the finance system for small-scale industries.

As far as actually implementing such a program is concerned, promotion of indigenous products (the promotion of "one product, one village") should involve Japanese local governments as supportive bodies. The feasibility of providing yen loans to support the corporative finance system should be examined. The possibility of tie-ups between rural industrialization and the system of agricultural cooperatives, as well as the possibility of informational cooperation (on technology, markets, and products) with state governments, local chambers of commerce and industry, etc., also need to be explored.

### **(3) Establishment of infrastructure**

There are two components in this area: the establishment of socio-economic infrastructure in each region, in particular, in less-developed states, and the establishment of infrastructure to promote the agricultural products processing industry.

The establishment of socio-economic infrastructure implies promoting the

establishment of infrastructure other than that for farm land development which aims at modernization of farm management and productivity improvement. In less-developed states, in particular, geographic factors and the small, sparse population point to the undeveloped formation of villages and result in a basically backward infrastructure. Japan's assistance should be directed towards arousing and activating the potential that these regions originally possessed, which can be done by establishing a proper socio-economic infrastructure. By contributing towards the simultaneous and comprehensive promotion of economic and social development, Japan will encourage the participation of the private sector and ultimately make way for the construction of the basis towards a more open economy.

The establishment of infrastructure to promote the agro-based processing industry should stress the need to furnish information systems that relate to the markets, products, and technology that support the economic activities of industry and commerce in rural areas.

The program to achieve the first objective should be one of providing services essential to establishing a proper socio-economic infrastructure (such as electric power generation and transmission, water supply and drainage, and communications — items that are very necessary in less-developed states). Development studies should also be performed to devise a framework for developing potential areas for tourism as part of rural development.

The program to achieve the second objective should be one of making the best use of existing systems and organizations to set up information centers that provide information on markets, products, and technology. Such centers would handle marketing surveys for the commercialization of agriculture and rural industrialization, as well as sales promotion and information supply. This would require the involvement of experts from Japan.

As far as actually implementing such programs is concerned, it would be best to examine the possibility of using yen loans to apply the results of development studies in the first case. In the second case, some form of model project could be set up, based on liaison between ministries and agencies affiliated with the Malaysian government and local chambers of commerce and industry and the active use of information systems through the United Nations Regional Development Center.

In addition, some forms of model cooperation linked to the establishment of infrastructure could be explored. For example, experience in providing the basic design for small-scale thermal power generation facilities in Sabah implies a type of cooperation to be sought in which construction work is undertaken by Malaysia on her own. Road construction that incorporates conservation of tropical forests also points to a sort of model cooperation.

### **2.2.3 Improvement of the Urban Environment**

Improvement of the urban residential environment should take the form of yen loans and technical cooperation for improvements in systems and technology, in order to meet the increasing demands for social infrastructure placed by progressive industrialization and the growth of urban populations, mainly on the west coast of the Malay Peninsula. Any strategy for support should focus on such things as promoting increased provision of sewerage facilities, improving water supply and solid waste management, promoting flood control measures, and devising plans for urban redevelopment. Measures to alleviate the complex traffic problems should include technical advice aimed at improving the abilities of the sectors responsible for the formulation and design of an integrated traffic system for the purpose of expanding and improving public transport facilities.

#### **(1) Improvement of urban residential environment**

Aid programs to improve the urban environment may take the following form. While water supply extends to a comparatively high 93% of urban population and 58% of rural population, a situation exists whereby an average of about 40% of water is lost or wasted. Development studies and the assignment of experts are necessary to track the cause and devise solutions. There should also be more tangible forms of cooperation, for example, cooperation focused on rehabilitating old and damaged water pipes. As rivers become progressively more contaminated, the development of new water purification technology through technical cooperation and yen loans will be required.

Malaysia's sixth Five-year Plan sees the need to install more extensive