Chapter XIV

Tourism

CHAPTER XIV

Tourism

I. INTRODUCTION

The tourism industry was accorded high priority by the Government during the latter half of the Fourth Malaysia Plan period in view of its potential in playing a vital role of redressing the adverse balance of payments position of the country. It had over the years developed to be an important foreign exchange earner, and a source of growth and employment generation for the country.

During the Fifth Malaysia Plan period, the industry will continue to be geared and developed to enable it to make further contributions to the economy. In the development of the industry, foreign and domestic markets will be given a balanced emphasis. The private sector is expected to play an increasingly active role in the development of the industry, while the public sector will be mainly responsible for providing the basic infrastructure and incentives, promoting the country as a holiday destination, and making funds available for investments in the industry.

II. PROGRESS, 1981-85

The tourism industry progressed at a satisfactory pace during the Fourth Plan period. The number of tourist arrivals[1] into Malaysia increased from 2.25 million in 1980 to 3.22 million in 1985, growing at 7.5 per cent per annum, higher than the Fourth Plan target of 6.6 per cent. Tourist arrivals into the region of the Association of Southeast Asian Nations (ASEAN) over the same period grew at 6.0 per cent per annum. Peninsular Malaysia accounted for more than 90 per cent of total tourist arrivals into Malaysia. On account of their proximity to Malaysia, the other ASEAN countries were the largest source of tourist arrivals, accounting for 76.7 per cent of total arrivals in 1985, as shown in Table 14-1.

Within the ASEAN region, Singapore and Thailand accounted for the highest number of tourist arrivals into Malaysia, contributing to 86.0 per cent and 11.9 per cent of all arrivals from the region in 1985, respectively. During the period, arrivals from Singapure grew at 9.4 per cent per annum from 1,331,400 in

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[1] Refer to visitors who make at least a single overnight stay and whose purpose for the journey includes leisure, business, family mission, and attending meetings and conferences.

TABLE 14-1

MALAYSIA: TOURIST ARRIVALS BY COUNTRY OF RESIDENCE, 1980 AND 1985

	1980				1985			
Country	*Peninsular Malaysia*	*Sabah*	*Sarawak*	*Malaysia*	*Peninsular Malaysia*	*Sabah*	*Sarawak*	*Malaysia*
ASEAN	1,531,163	35,628	15,051	1,581,842	2,418,100	37,819	17,530	2,473,449
Australia and New Zealand	80,460	2,137	2,718	85,315	78,500	2,243	2,168	82,911
Canada	7,378	441	1,098	8,917	9,813	463	1,165	11,441
Continental Europe	73,378	2,872	8,000	84,250	81,587	3,015	8,492	93,094
Hong Kong	43,957	1,619	634	46,210	41,300	1,699	666	43,665
India	34,576	4,099	510	39,185	59,400	1,100	595	61,095
Japan	78,609	5,043	3,384	87,036	115,184	5,295	4,419	124,898
Taiwan	19,688	977	710	21,375	13,100	1,025	753	14,878
United Kingdom	44,837	4,962	8,272	58,071	68,600	5,210	8,135	81,945
United States of America	36,883	2,509	4,347	43,739	37,300	2,634	2,493	42,427
Others	116,991	15,715	62,324	195,030	110,301	13,507	69,733	193,541
Total	2,067,920	76,002	107,048	2,250,970	3,033,185	74,010	116,149	3,223,344

Source : Tourist Development Corporation.

1980 to 2,080,400 in 1985. Outside the ASEAN region, Japan represented the largest tourist generating market which recorded a growth of 7.5 per cent per annum. Other important international markets were Continental Europe, Australia and New Zealand, the United Kingdom (UK), Hong Kong, and the United States of America (USA).

Domestic tourism grew at a slower pace during the Fourth Plan period. Using the number of domestic guests in local hotels as a measure of domestic tourism, it registered an increase of 2.9 per cent per annum from 2.6 million in 1980 to 3.0 million in 1985. These domestic guests accounted for a declining share in the total number of hotel guests from 64.5 per cent in 1980 and 61.7 per cent in 1985. In 1984, the west coast towns of Peninsular Malaysia, other than Kuala Lumpur and Pulau Pinang, registered the highest proportion of domestic guests to total guests of 81.7 per cent, followed by the east coast towns 77.1 per cent, Kuching 76.8 per cent, and Kota Kinabalu 72.9 per cent.

Foreign exchange earnings from tourism registered a growth of 19.4 per cent per annum during the Fourth Plan period from $713.4 million in 1980 to $1,730.6 million in 1985 compared with the Fourth Plan target of 18.9 per cent. The share of the industry in total invisible earnings of the country increased from 16.1 per cent in 1980 to 18.8 per cent in 1985. After taking into account the inflow of foreign tourists and the outflow of local residents travelling abroad, the net contribution made by tourism to the balance of payments varied from year to year, recording a deficit of $115 million in 1980, a surplus of $127 million in 1983, and a deficit of $113 million in 1984.

Expenditure pattern of foreign tourists in Malaysia indicated that lodging expenses accounted for the highest share of total expenditure, accounting for 45.5 per cent, followed by food and beverages, and shopping, 36.5 per cent. This expenditure pattern was also typical in other countries. The Japanese tourists emerged as having the highest propensity to spend, recording a *per capita* expenditure of $1,267 in 1985, followed by tourists from Australia and New Zealand $1,199, and UK $1,135, as shown in Table 14-2. In respect of the domestic tourist expenditure, transport expenses accounted for the major share, followed by food and beverages, and shopping. Generally, lodging expenses accounted for a very small portion of total expenditure due to the low usage of rentable accommodations.

The average length of stay of tourists in Malaysia in 1985 was about 4.8 nights. Sabah and Sarawak, however, recorded longer stays averaging 10.6 and 8.4 nights, respectively, compared with Peninsular Malaysia which recorded 4.5 nights. Leisure accounted for the highest share in terms of purpose of visit. In terms of travel arrangement, the non-group tour overwhelmingly predominated over the group tour type.

TABLE 14-2

MALAYSIA: PER CAPITA TOURIST EXPENDITURE BY COUNTRY OF RESIDENCE, 1980 AND 1985

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Country	1980 Peninsular Malaysia	1980 Sabah	1980 Sarawak	1980 Malaysia	1985 Peninsular Malaysia	1985 Sabah	1985 Sarawak	1985 Malaysia
ASEAN	233.88	719.05	328.88	245.71	375.51	858.60	683.59	385.08
Australia and New Zealand	540.25	529.60	735.40	546.20	1,214.00	930.34	950.00	1,199.42
Canada	446.00	529.60	546.60	462.52	826.98	1,602.00	672.70	842.63
Continental Europe	541.00	546.70	735.40	559.65	972.00	732.63	874.00	955.31
Hong Kong	575.00	621.00	389.14	585.46	1,006.00	699.35	650.25	988.64
India	259.00	374.80	389.14	272.81	777.00	363.30	834.00	770.11
Japan	554.00	1,176.00	599.40	591.80	1,290.00	1,274.11	650.00	1,266.68
Taiwan	444.04	621.00	430.90	451.69	1,063.00	685.63	669.00	1.017.06
United Kingdom	480.00	594.20	439.70	484.02	1,184.44	1,202.25	672.70	1,134.77
United States of America	480.00	529.60	546.60	489.46	1,014.00	1,650.06	672.70	1,033.43
Others	419.73	374.80	389.14	406.33	1,293.49	1,090.00	650.25	1.047.53
Weighted average	*299.42*	*628.93*	*433.45*	316.93	*528.39*	*960.86*	*489.03*	536.90

Source : Tourist Development Corporation.

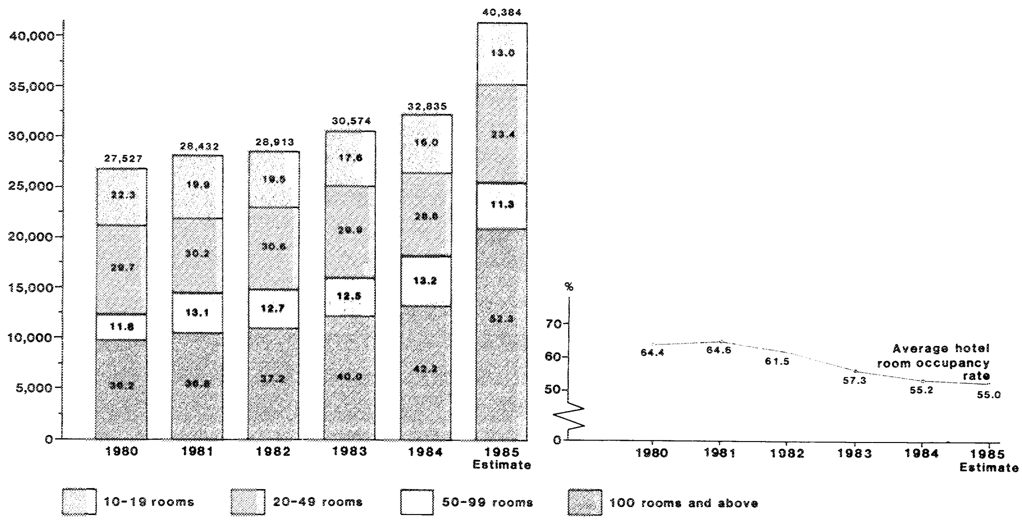
During the period 1981-85, as shown in Chart 14-1, the number of hotel rooms in the country increased substantially from 27,500 in 1980 to 40,400 in 1985, involving a total investment of $2,913 million. This increase was the consequence of the very apparent shortage of rooms, a factor which accounted for the high room rates prior to this period. A major portion of the new hotels belonged to the international class and to the category having more than 100 rooms. With the rapid growth in the number of hotels and the slower growth of tourist arrivals and domestic tourists, the average occupancy rate registered a falling trend from 64.4 per cent in 1980 to 55.0 per cent in 1985. This phenomenon also prevailed in other countries of this region.

Tourism employment increased appreciably during the Fourth Plan period, largely attributed to the new hotels which came into operation during the period. Direct hotel employment alone increased from 17,600 in 1980 to 30,300 in 1985. Licences issued to tour coaches, limousine taxis, and car rental companies totalled 4,420 during the period. The number of tour agencies increased from 574 in 1980 to 1,290 by 1985. With the introduction of the Tourist Development Corporation of Malaysia (Tour Operating Business and Travel Agency Business) Regulations, 1985, all tour and travel agency operators had to register with the Corporation beginning June, 1985. These regulations were introduced with a view to ensuring the healthy growth of the industry. By the end of 1985, a total of 700 agency operators were registered.

CHART 14-1

MALAYSIA: DISTRIBUTION OF ROOMS BY HOTEL SIZE AND AVERAGE HOTEL OCCUPANCY, 1980-85

(%)



Despite the progress made in the past, as a tourist destination, Malaysia was relatively unknown. The reasons for this general lack of awareness were many, the most important of which was the lack of publicity Malaysia received through the mass media. In addition, the level of awareness of local residents with regard to the tourist resources and facilities available within the country was low.

The bulk of the promotional efforts for the country was undertaken by the public sector, specifically the Tourist Development Corporation (TDC) and the Malaysian Airline System (MAS). The efforts of these two agencies, however, had been limited owing, in part, to the low priority extended to the industry in the past. In addition, several State Governments were active in promoting the country as a holiday destination, with emphasis given to each individual state. Efforts of the private sector in complementing the public sector in this area were minimal.

During the Fourth Plan period, TDC expended $58.4 million on promotion. The yearly budget for promotion increased sharply during the period from $11.1 million in 1981 to $21.1 million in 1985. The promotional tools included write-ups and advertisements in the travel trade and business magazines, advertisements over television, exhibitions, documentary films on attractions in Malaysia, workshops, seminars, and hosting the stay of travel trade journalists, film crews, and retail agents. Of the total promotional expenditure during the Fourth Plan period, 29.0 per cent was directed at the European market, 22.9 per cent at the Japanese market, and 17.7 per cent at the ASEAN market. The impact of these promotional efforts was partially reflected in the high growth rates of tourist arrivals, particularly from the Japanese and the ASEAN markets, which registered an increase of 9.4 per cent and 7.5 per cent per annum, respectively, over the Fourth Plan period.

Recognizing the interdependent relationship between air transportation and the tourism industry, MAS complemented its promotion for the airline with promotion of Malaysia as a holiday destination. During the Fourth Plan period, MAS spent $71.0 million on advertising and promotion, of which 22.4 per cent was accounted for by efforts in promoting Malaysia. In addition, MAS also undertook joint-promotional efforts with TDC.

In the past, promotional efforts were concentrated more on the foreign markets rather than the domestic market. This lack of attention given to domestic tourists had partially resulted in an increasing number of local residents travelling abroad. Foreign exchange outflow on account of overseas travel by local residents increased from $807 million in 1980 to $1,525 million in 1984.

The promotion of the country as a holiday destination through the hosting of international sports competitions, conventions, and exhibitions was limited due to the shortage of suitable facilities. Nevertheless, during the Fourth Plan period, Malaysia managed to host 165 international sports and games involving badminton, soccer, basketball, tennis, and others which were participated by over 12,000 participants, while a total of 200 international conventions and exhibitions were held involving a total of 150,000 participants.

Accessibility is a vital element in the development of the tourism industry. Compared with other airports in the region, the Kuala Lumpur International Airport had lagged in establishing itself as a major traffic centre, owing principally to geographical and historical reasons. This resulted in a smaller air traffic base between Malaysia and overseas countries in contrast with a larger concentration of international air traffic at the three neighbouring traffic centres of Singapore, Bangkok, and Hong Kong. In addition, direct access to existing holiday destinations within the country from overseas points was constrained by the limited capacity and frequency of direct flights from these points to the other domestic airports.

Another shortcoming faced by the industry was the shortage of qualified personnel, particularly at the supervisory and skilled levels. This shortage was largely due to the rapid expansion of the hotel industry, resulting in very rapid turnover of employees. The Government training programmes, mainly offered by the National Productivity Centre (NPC) and the MARA Institute of Technology (ITM), could only partially fill the needs of the industry. During the period, these two institutions trained a total of 5,190 personnel at the operative and supervisory levels. Practical training provided by NPC was facilitated by its own training hotel at Petaling Jaya, which was completed in 1983. Apart from training for the hotel industry, the Government, through TDC, also provided short-term courses for 829 tourist guides during the period. In addition to these Federal Government agencies, a School of Hotel and Catering was established at Tenom by the State Government of Sabah. The training undertaken by the private sector was mainly in-house. The majority of the 12,700 new hotel employees, particularly at the operative level, received some form of in-house training.

Apart from undertaking promotional activities and training programmes, the public sector was also involved in the construction and operation of hotels. During the Fourth Plan period, several public sector agencies, including the state economic development corporations (SEDCs), TDC, the Urban Development Authority (UDA), and the Johore Tenggara Development Authority (KEJORA), undertook to develop and expand a number of hotels. Together, they added a total of 3,440 new rooms of which 85 per cent was of international standard.

The low level of interest in Malaysia as a holiday destination, particularly among budget-conscious tourists, was partly due to the shortage of medium standard hotels. In the past, concentration was placed on the construction of international standard hotels due to higher returns accruing from room rates. Of the total new rooms that were constructed by the public and private sectors during the period, 96 per cent was of international standard.

The nature of the incentives that were designed for the tourism industry was also biased towards international standard hotels, to the neglect of accommodations catering particularly for the domestic and the budget-conscious foreign tourists. During the period, 77 hotel projects, with an average capital expenditure of about $40 million per hotel, were granted the Hotel Incentives.

The development of the tourism industry calls for the collaboration of a number of public sector agencies. In 1985, a Cabinet Committee on Tourism was established to look into the problems faced by the industry, formulate proper guidelines and directions for its development, and improve co-ordination between agencies.

Recognizing the vital role of the tourism industry, the Government provided the sector with a further boost in 1985 through the implementation of two further measures. First, the electricity tariff rates for hotels were reduced to enable hotels to charge lower room rates. Second, a financing scheme, the New Investment Fund, totalling $1,000 million was launched in September, 1985, to finance productive investments in three priority sectors including the tourism industry. The impact of these measures will be largely felt during the Fifth Plan period.

Apart from these measures, the public sector undertook continuing evaluation and improvement of services provided for the tourists including the public. Complementing these established services, a Tourist Police Unit was formed by the Royal Malaysian Police to serve tourists by way of ensuring their welfare, safety and security.

III. PROSPECTS, 1986-90.

Malaysia has potential in developing the industry further in view of the wide variety of tourism resources that are available. These resources need to be developed selectively, taking into cognizance the interests and preferences of potential tourists. In addition, the country enjoys a very stable government. The strategic location of the country itself at the crossroads between the East and West as well as between Australia and New Zealand, and Europe presents an advantage that can be exploited for tourism purposes.

With the promotional efforts currently undertaken,and taking into consideration the impact of the world recession, tourist arrivals into Malaysia are expected to grow at 6.1 per cent per annum during the period 1986-90, from 3.22 million in 1985 to 4.32 million in 1990. The Pacific Area Travel Association (PATA) Conference, to be held at Kuala Lumpur in 1986, is expected to provide at boost to the tourism industry by enhancing the level of awareness of Malaysia as a tourist destination.

On the basis of these expected arrivals, foreign exchange earnings from tourism are envisaged to grow from $1,730 million in 1985 to $3,264 million in 1990. A total of 8,700 hotel rooms will be added, with the completion of several hotels now under construction. Kuala Lumpur will account for the highest share of these new hotels followed by Pulau Pinang. About 96 per cent will be in the international standard category. A large share of the hotels under construction has been granted the Hotel Incentives. These additional rooms will generate about 10,400 new employment.

IV. POLICY OBJECTIVES FOR THE FIFTH MALAYSIA PLAN

The tourism industry will be further promoted in order to exploit its growth and job-generating potentials. Being dependent on a variety of services, the industry exerts a considerably high multiplier effect on the economy not only in terms of income, but also employment. The industry can also act as a catalyst for regional development due to the location of tourism resources that are available within the country. The industry also helps to create a better understanding of the various cultures and lifestyles of the population, and thereby becoming an effective agent for national integration and unity.

The industry will also be entrusted to play an important role in reducing the deficits in the services account of the balance of payments. This objective will be met by way of promoting further foreign tourist inflow into the country to increase foreign exchange earnings. In addition, local residents will be encouraged to travel internally rather than overseas in order to reduce foreign exchange outflow.

In order to meet the policy objectives, a total commitment will be needed not only from the public sector, but also the private sector and the general public. The efforts of all related Government agencies and the private sector will be properly co-ordinated. In the process of promoting the tourism industry, the religous, moral, and cultural values of the country as well as the environment will be fully respected, protected, and utilized as assets for the development of the industry.

V. STRATEGIES FOR THE DEVELOPMENT OF THE TOURISM INDUSTRY

Promotion

Promotional efforts will be intensified during the Fifth Plan period. The public sector will play a leading role in promoting the country as a holiday destination. Towards this end, TDC will be allocated an increased promotional budget and will place a balanced emphasis on overseas and domestic markets. In the short term, emphasis will continue to be made on the domestic, ASEAN, Japanese, Australian, Hong Kong, and Taiwanese markets as well as transient visitors into Bangkok and Singapore, while in the medium and long term, new markets will be identified through the conduct of intensive market research. Marketing efforts will be made less generalized but will, on the other hand, take into account the tastes and preferences of the potential, and more definitive market segments that will be identified. Emphasis will be given to markets which are adequately served by the national and other airlines. The country will also be promoted as a destination within a package of destinations within the ASEAN region.

Promotional campaigns will be launched focusing on four themes, namely, conventions, vacations, sightseeing, and special interests. With the completion of the Putra World Trade Centre in Kuala Lumpur, the convention campaign will be intensified to make Kuala Lumpur the principal convention destination, while other destinations will be promoted as secondary destinations, catering for smaller forums and exhibitions. The vacation campaign will promote several existing resorts, without neglecting secondary destinations, while the sight-seeing campaign will focus on the major cities, particularly Kuala Lumpur, Georgetown, and Melaka. The special interests campaign will concentrate on the natural parks, caves, and hills, particularly the National Park in Peninsular Malaysia, Kinabalu National Park in Sabah, and the Niah National Park in Sarawak. The promotion of the various tourist destinations in the country will be further facilitated by the production of concise and informative state and city maps as well as guide books by TDC. These publications are aimed at facilitating and assisting both domestic and international tourists in exploring the tourist potentials of the country.

Tax incentives

Recognizing the inadequacy of incentives provided for the tourism industry under the Hotel Incentives of the Investment Incentives Act, 1968, revisions to the incentive system were made recently with a view to accelerating the growth of the industry. These changes, which became effective beginning 1986, will be made available during the Fifth Plan period. The earlier incentives merely catered for hotels while the development of the industry calls for the provision of other facilities as well. The incentives were, therefore, extended to cover a wider scope of investment, incorporating both accommodation and non-accommodation projects. With regard to the non-accommodation category of projects, investments in safari parks, zoos, recreation centres, and children playgrounds are eligible for these incentives. Although the range of incentives offered under the revision had been reduced in number for ease of understanding and application, the incentives were made much more attractive than they were ealier.

Accommodation is an important prerequisite for further growth of the tourism industry. While there is an abundance of international standard hotels in the country, there is a shortage of medium standard accommodations to cater for the budget-conscious travellers. Under the new set of incentives for the tourism industry, two additional types of economy-priced accommodations, namely, lodging houses and rest houses, were covered. In order to be eligible for these incentives, such accommodations need to provide several basic facilities and amenities which need to be maintained at certain minimum standards. In addition, investors are encouraged to incorporate the Malaysian character in the architecture, design, and decor of hotels and other facilities constructed for the tourism industry.

Among the revised incentives are the granting of Pioneer Status for a period of up to five years and Investment Tax Credit of up to 100 per cent on capital expenditure. The incentives are available to companies incorporated under the Companies Act, 1965 and registered with TDC. The relevant dividend income are exempted from tax. In addition to incentives provided under the Investment Incentives Act, 1968, the service tax on hotels and restaurants has been reduced from 10 per cent to 5 per cent with a view to lowering costs to tourists. In order to further promote foreign tourist inflow, an incentive in the form of abatement of adjusted income is available to tour operators, registered with TDC.

Access

Efforts will be aggressively undertaken to promote access into the country. The Government will intensify its efforts in obtaining additional and new landing rights for the national airline to operate more frequencies and capacities to overseas destinations. In order to promote greater tourist inflow, the Government will continue to encourage tourist charter flights from foreign countries to Malaysia. In addition, MAS will continue its efforts in working towards joint-venture operations with other airlines to develop air traffic with Malaysia. In order to tap specific holiday markets, promotional fares will be reviewed for each market from time to time and, where appropriate, will be introduced in conjunction with international sectors.

In order to encourage inflow of tourists by land from Singapore and Thailand, regulations on entry of foreign vehicles will be eased. At the same time, the viability of providing short-haul train service along the Singapore-Johor Bahru route will be studied.

A ferry linkage between Singapore and the south-east coast of Johor will be implemented to complement transportation by road and rail. In addition, the ferry service by *Feri Malaysia Sendirian Berhad,* a subsidiary of Perbadanan Nasional Shipping Line (PNSL), linking Peninsular Malaysia, Sabah, and Sarawak will begin operation in 1986 with the objective of further boosting domestic tourism, apart from promoting greater integration among Malaysians by way of enhancing their appreciation and exposure of the various cultures.

In order to promote speedy access to the popular holiday resorts, particularly hills and island resorts, the construction of landing strips serving these resorts will be undertaken. The completion of the Langkawi Airport capable of receiving bigger aircrafts will further promote Langkawi as a tourist resort. The Kuantan Airport will also be expanded to receive charter flights directly from overseas to support the tourist facilities that have been established within its vicinity such as Club Mediterranee, Tanjong Jara Beach Hotel, and the Rantau Abang Visitor Centre.

Domestic travel will be further encouraged through the improvement of the existing highways by way of widening and resurfacing certain stretches of major trunk roads, installing proper road signs, and better lightings for busy roads and junctions for night driving. In order to facilitate long-distance driving, the development of several rest areas fully equipped with petrol service stations, toilets, and food bazaars will be initiated during the Fifth Plan period.

Development and promotion of selected tourist destinations and resources

In the development of tourist areas, a selective approach will be undertaken to ensure maximum benefits from the allocation provided. Priority will be given to the enhancement of existing destinations. Kuala Lumpur and Pulau Pinang have become the primary tourist destinations for the country, accounting for about 69 per cent of total tourist arrivals. In order to complement Kuala Lumpur and Pulau Pinang, Kota Kinabalu and Kuching will also be designated as primary destinations. The Government, through the various agencies, will undertake several programmes to improve further the images of these destinations. The private sector will be encouraged to complement the efforts of the Government to achieve this objective. In particular, beautification programmes will be expanded, while pollution control projects will be implemented, particularly for the Pulau Pinang beaches. The private sector will be expected to play a role in establishing new shopping complexes, restaurants and other types of eating places, and recreational facilities besides upgrading existing ones.

Similar programmes will also be carried out for existing secondary tourist destinations such as the south-east coasts of Johore and Terengganu, Langkawi, Melaka, Port Dickson, and Pulau Tioman. The Tanjong Rhu tourist resort in Langkawi Island will be one of the foremost tourist attractions in the country capable of supporting 4,000 tourists at any one time. Presently, works on the construction of a condominium and a hotel by the private sector have already commenced. The public sector will supplement the private sector in providing the necessary infrastructure. The private sector will also be active in the development of new tourism facilities in the other areas.

In order to further improve the tourist attractions of the country, emphasis will be given to the upgrading and promotion of attractions based on historical, cultural, and handicraft aspects of the country. The Government, with the support of the private sector, will undertake the restoration and preservation works of historical sites and buildings, while the state authorities will look into reviving and encouraging the development of the culture and handicrafts of the states in order to provide tourists with a variety of attractions.

In the development of new areas, the south-east coast areas of Peninsular Malaysia will receive special attention, specifically the areas around Endau, Mersing, and Rompin, by virtue of their proximity to Singapore which is a major market for Malaysia. In addition, the natural tourist resources, particularly the national parks, will be aggressively promoted as tourist destinations by providing better access and accommodation facilities in these areas. Apart from the National Park in Peninsular Malaysia, the Kinabalu National Park in Sabah and the Niah National Park in Sarawak will be promoted. In addition, the Endau-Rompin area will be designated as a national park. Efforts will also be made to promote the country as a popular tourist destination through packaging existing and new products in a much more appealing way, taking into account different market segments. The packaging of these products will be reviewed and revised to suit the continually changing tastes of tourists. These efforts will be largely undertaken by the private sector with the assistance of TDC.

Privatization and the role of the public sector

During the Fifth Plan period, the privatization policy will be more actively pursued. In this regard, the development of the Tanjong Rhu tourist complex in Langkawi has already been privatized, while steps have already been taken to privatize the projects of TDC and KEJORA. In addition, a review of existing Government rest houses will be carried out with a view to privatizing them.

In order to enhance the role of the private sector in the development of the industry, the New Investment Fund of $1,000 million launched by the Government in late 1985 to finance productive investment in priority sectors of the economy, including tourism, will continue to be made available during the Fifth

Plan period. In financing tourism projects, banks are expected to lay emphasis on the construction of low and medium-priced hotels and other facilities that would promote domestic tourism as well as cater for budget-conscious travellers from abroad.

The public sector will concentrate more of its efforts in the development of basic infrastructural facilities, pollution control, and minor tourism facilities. The development of tourism-related facilities will be largely left to the private sector. During the period 1986-90, infrastructural and public facilities designed for the promotion of the tourism industry will be developed for the Mersing-Endau-Rompin area in Johore and Pahang, Pulau Tioman and Tasek Chini, in Pahang, and the Damai Beach in Sarawak. Among the minor projects that will be undertaken by the public sector to improve the attraction of several existing holiday destinations include a visitor centre at Kota Kinabalu, an open muzeum at Kuching, and a recreational complex at Gunong Jerai, Kedah.

Services provided by the public sector to tourists will be continually reviewed and upgraded. Efforts will be intensified to enhance public safety and security while the geographical coverage of the Tourist Police Unit will be expanded during the Fifth Plan period.

Tourism manpower development

The rapid development and expansion of the hotel industry in the country have created a need for trained and experienced manpower at the managerial and supervisory levels as well as skilled and semi-skilled workers. This shortcoming will be partly overcome by the training programmes which will continue to be provided by NPC and ITM. During the period 1986-90, about 9,100 persons are expected to undergo training in the hotel and catering industry at these two institutions. The private sector will be encouraged to intensify their efforts in providing in-service training to complement the efforts undertaken by the Government.

VI. ALLOCATION

The development allocation and estimated expenditure during the period 1981-85 and the allocation for the period 1986-90 for tourism are as shown in Table 14-3

VII. CONCLUSION

In the face of uncertainties in the world economy, tourist arrivals are expected to grow at a satisfactory rate of 6.1 per cent per annum during the Fifth Plan period. On the basis of strategies to be undertaken, the major tourist markets for the country will continue to be the ASEAN countries, Japan, Australia, Hong Kong, and Taiwan. Foreign exchange inflow on account of tourism is projected to increase at 13.5 per cent per annum.

During the Fifth Plan period, the tourism industry is expected to play a more challenging role in reducing the deficits in the invisible accounts as well as generating growth of income and employment. The growth of the tourism industry is expected to be contributed largely by the private sector with the public sector providing the necessary support in terms of promotion, incentives, infrastructure, and funding. A balanded emphasis will be placed on the objectives of attracting foreign tourists into the country and encouraging local residents to travel more within the country rather than abroad.

TABLE 14-3

MALAYSIA: PUBLIC DEVELOPMENT EXPENDITURE FOR TOURISM, 1981-90
($ million)

Agency	*Fourth plan allocation, 1981-85*	*Estimated expenditure, 1981-85*	*Fifth plan allocation, 1986-90*[1]
TDC	40.16	37.95	16.99
PERNAS	52.81	52.81	342.00
SEDCs			
Kedah	2.30	2.06	1.24
Kelantan	15.00	7.80	33.90
Melaka	1.90	—	6.09
Pahang	—	—	29.65
Sabah	1.70	—	7.79
Sarawak	2.81	2.81	29.15
Terengganu	14.00	5.70	20.00
FIMA	2.40	2.40	28.00
Department of Wildlife and National Parks	1.55	0.62	7.67
KEJORA	9.13	9.10	0.80
DARA	—	—	1.00
National Zoo	4.75	4.25	7.33
Perbadanan Kemajuan Kraftangan Malaysia	—	—	4.04
PNSL	—	—	36.00
Total	148.51	125.50	571.65

Note: [1] Under the Fifth Plan, the public sector has been redefined to include the non-financial public enterprises (NFPEs) which previously were treated as belonging to the private sector.

Chapter XV

Mining

CHAPTER XV

Mining

I. INTRODUCTION

The mining sector, which includes the production of petroleum, tin , copper, bauxite, iron ore, and other minerals, though not expected to contribute substantially towards the growth of the economy during the Fifth Malaysia Plan period due to the weak demand for these minerals will, nevertheless, continue to play its role in the development of the country. During the Fourth Malaysia Plan period, the growth of the sector was largely contributed by the petroleum industry while the tin mining industry experienced a severe decline and copper, marginal growth.

During the Fifth Plan period, the thrust for the development of the sector will be directed towards encouraging more intensive prospecting. The exploitation of base metals as well as other minerals discovered during the Fourth Plan period in the Central Belt of Peninsular Malaysia, and the Bau region of Sarawak, will be initiated during the period 1986-90, in line with the objective of diversifying the sector. Encouragement will be given to the private sector, both foreign and local, to step up its exploration activities to augment the depleting petroleum resources of the country.The growth of the sector during the period 1986-90 will still be largely attributable to the production of petroleum. The contribution of the sector to foreign exchange earnings of the country is expected to remain substantial during the Plan period while its contribution to employment generation will be very minimal.

II. PROGRESS, 1981-85

The sector recorded a growth rate of 6.0 per cent per annum in real terms during the Fourth Plan period, 1.0 percentage point below the targetted rate for the sector. Its share in Gross Domestic Product (GDP) increased marginally from 10.0 per cent in 1980 to 10.1 per cent in 1985. The sector was largely dominated by crude oil which accounted for 79.7 per cent of the value added of the sector. This was followed by tin, accounting for 15.4 per cent, and quarrying, 3.7 per cent.

Production

Crude oil. Production of crude oil, as shown in Table 15-1, increased significantly during the period, from 275,800 barrels per day (bpd) in 1980 peaking at 446,800 bpd in 1984. In 1985, production was reduced slightly to 446,100 bpd in view of the glut in the international crude oil market. The overall increase in production was made possible by the coming onstream of 13 new fields during the period, bringing the total number of producing fields to 27 compared to 14 in 1980. About 51 per cent of crude oil produced in 1985 was from the fields located offshore Terenggnu, 18.0 per cent offshore Sabah, and 31.5 per cent offshore Sarawak. In 1980, about 13 per cent of the crude oil was refined locally, while the remaining was exported. In 1985, the share that was refined locally increased to about 23 per cent due to the coming onstream of the refinery at Kerteh in 1983 and the move by the other local refineries at Port Dickson to refine more local crude.

Gas. Production of gas, both associated and non-associated, grew at a rate of 38.7 per cent per annum from 258 million standard cubic feet per day (mmscfd) in 1980 to 1,324 mmscfd in 1985. A portion of the output was utilized by gas-based projects and in petroleum operations, while the balance was either flared or reinjected into the ground. Production of non-associated gas, however, began only in 1982 from the E11 field to cater for the liquefied natural gas (LNG) project at Bintulu, Sarawak and by 1985, its share to total gas production increased to 64.2 per cent.

In addition to the LNG project, gas was sold to the power station at Paka, a steel billet producing plant at Telok Kalong, and a housing area at Kerteh, in Terengganu. Other projects included the gas-based industries at the Federal Territory of Labuan, and the ASEAN ammonia-urea plant at Bintulu. The delivery of gas onshore to the first three projects represented the successful completion of Phase I of the Peninsular Gas Utilization (PGU) project. The largest consumer of gas was the LNG project which utilized 683 mmscfd or 74 per cent of total sales in 1985, followed by PGU Phase I, 16 per cent, and the gas-based industries at the Federal Territory of Labuan, 6 per cent. The volume flared remained constant at about 166 mmscfd. The share of gas flared, however, as a percentage of total gas production, declined from 69 per cent in 1980 to only 13 per cent in 1985. The remaining output of gas was either utilized in petroleum operations or reinjected into the ground.

Tin. Output of tin continued to decline during the Fourth Plan period. It registered a rate of decline of 10.9 per cent per annum from 61,400 tonnes in 1980 to 36,300 tonnes in 1985. The reduction during the period was mainly due to the surplus prevailing in the international market and the consequent quarterly export control imposed by the International Tin Council (ITC). The level of cutback was initially fixed at 15 per cent of total exports in the second quarter of 1982, rising to 39.6 per cent in the second half of 1983. The quota since then, remained at this level. Trading in the metal at the London Metal Exchange (LME) was

TABLE 15-1

MALAYSIA: PRODUCTION AND EXPORT OF MAJOR MINERALS, 1980-85
('000)

Mineral	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*Average annual growth rate (%) 1981-85*
Crude oil (bpd)							
Production	275.8	258.3	303.3	383.2	446.8	446.1	*10.1*
Exports	234.3	211.2	249.3	296.2	343.5	354.5	*8.7*
Liquefied natural gas (tonnes)							
Production	-	-	-	1,830	3,700	4,500	-
Exports	-	-	-	1,830	3,700	4,500	-
Other natural gas[1] (mmscfd)							
Production	6.2	8.0	7.9	10.6	33.76	237.5	*107.3*
Exports	-	-	-	-	-	-	-
Tin-in-concentrates (tonnes)							
Production	61.4	59.9	52.3	41.4	41.3	36.3	*−10.0*
Exports	69.5	66.4	48.6	57.1	39.6	54.5	*−4.7*
Copper concentrates (tonnes)							
Production	114.0	120.3	128.8	123.4	122.8	125.0	*1.9*
Exports	107.4	129.3	121.1	121.9	135.5	126.2	*3.3*

Sources : Department of Statistics, Malaysia:*Preliminary Figures of External Trade, 1981, 1982 and 1983*, and various Government agencies.
Note:
[1] Gas utilized by the gas-based industries in the Federal Territory of Labuan, the ASEAN ammonia-urea project at Bintulu, Sarawak, the PGU Phase I Project, and other consumers in Sarawak. The figures exclude gas that was flared or reinjected into the ground and gas that was utilized in petroleum operations.

suspended on 24th October, 1985 as a result of the depletion of the financial resources of the ITC to enable it to operate in the Exchange in order to defend its floor price of $29.15 per kilogramme. The metal was subsequently traded in secondary markets at prices much lower than the floor price, thus resulting in a substantial reduction in output. Arising from these developments, coupled with the increased output from non-ITC countries, the share of Malaysia in world output declined from 30.8 per cent in 1980 to 20.8 per cent in 1985. Of the total output in 1985, gravel pump mines accounted for 50.8 per cent, dredges 30.1 per cent, and others 19.1 per cent. The number of operating mines declined from 852 in 1980 to 235 in 1985.

Domestic tin consumption continued to remain at a low level, with very few new tin-based projects implemented during the period. In 1980, only 434 tonnes were utilized domestically, mainly for the production of pewter ware and soldering purposes undertaken largely by small-scale industries. In 1985, local industries used about 1,600 tonnes or 4.4 per cent of total production. The main local users were a newly established soldering plant at Ipoh, the tin-plating plant at Pasir Gudang and pewter ware manufacturers.

Other minerals. Other minerals produced during the period accounted for a very small share of the output of the mining sector. The more important ones include copper, bauxite, iron ore, and industrial minerals. Copper output from the mine at Mamut, Sabah increased gradually from 114,000 tonnes in 1980 to 128,800 tonnes in 1982, but declined to 125,000 tonnes in 1985. Bauxite production from the sole mine in Johor declined from 920,000 tonnes in 1980 to about 540,000 tonnes in 1985. Output of iron ore mined in the States of Johor, Kedah, Pahang, and Perak recorded a decrease from 371,200 tonnes in 1980 to 230,000 tonnes in 1985. The more important industrial minerals mined were kaolin, clays, limestone, granite, marble, calcium, calcium carbonate powder, silica, sand, constructional sand, and barite.

Exports

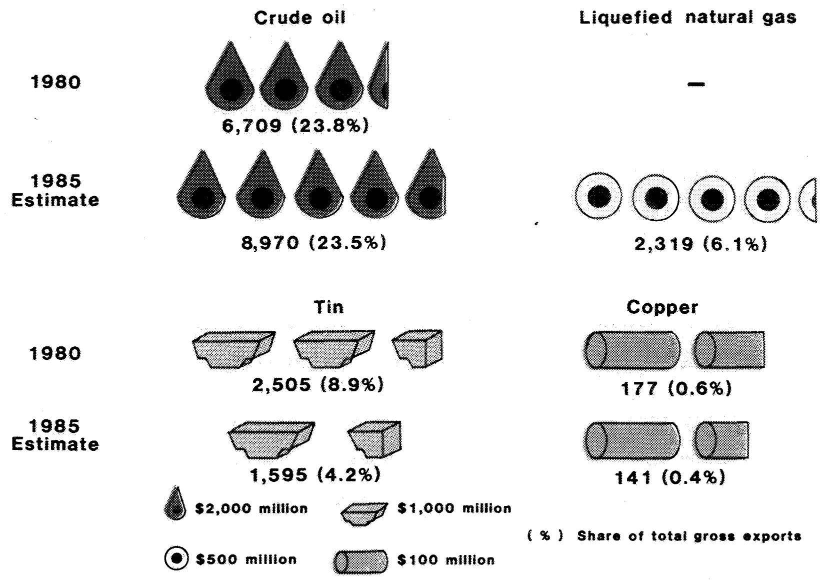
Exports of the more important minerals, such as crude oil, tin, gas, and copper, increased at a rate of 6.8 per cent per annum in current terms from $9,392 million in 1980 to $13,025 million in 1985, as shown in Chart 15-1. The share of these export proceeds in gross merchandise exports consequently increased from 33.5 per cent in 1980 to 34.2 per cent in 1985. This rising share was mainly attributed to the relatively high growth of crude oil exports and the commencement of LNG exports during the period.

Crude oil. The value of crude oil exports increased at a rate of 6.0 per cent per annum, despite the softening of its average price from $36.50 per barrel in 1980 to $28.00 per barrel in 1985. The major markets were Singapore, Japan, and South Korea which accounted for 35.7 per cent, 27.4 per cent, and 11.9 per cent,

CHART 15-1

MALAYSIA: EXPORT EARNINGS OF MAJOR MINERALS, 1980 AND 1985

($ million)



respectively, of total crude oil exports in 1984. Exports of petroleum products increased at a rate of 48.6 per cent per annum from $189.2 million in 1980 to $923.4 million in 1984, largely serving the Japanese market.

Gas. Gas was exported in the form of LNG beginning 1983 from Bintulu solely to Japan under a long-term contract. Export volume of LNG which constituted total output increased from 1,830,000 tonnes in 1983 to 4,500,000 tonnes in 1985. The price of LNG increased from $466.70 per tonne in 1983 to $515.30 per tonne in 1985.

Tin and copper. Tin exports experienced a decline of 4.7 per cent per annum in volume and 8.6 per cent in value. This was due to the export control imposed by the ITC as a result of the large surplus in the world market estimated to be in the region of 95,000 tonnes in 1985. Although copper exports registered a slight growth of 3.3 per cent per annum in terms of volume, it experienced a decline in total value due to falling price.

Investment

Investment in the mining sector during the period 1981-85 was dominated by the petroleum industry. The industry invested about $13,000 million in exploration and production activities of which the major portion was accounted for by the private sector. In terms of exploration activities, a total of 73,300 kilometres of seismic line was shot, 137 exploration wells were drilled, and 16 new discoveries made. With the export control, hardly any substantial investment was made in the tin mining sector. About $30 million were invested by the Malaysia Mining Corporation (MMC) in prospecting for other minerals in Kelantan and Pahang. With regard to industrial minerals, sizeable investments were made, particularly in the extraction of limestone for the cement projects, in Kedah and Perak. In addition, the Government spent about $21 million in initial explorations in the States of Kedah, Kelantan, Pahang, Perak, Sabah, and Sarawak, partly assisted by international organizations and donor countries.

Employment

Mining employment declined from 80,100 in 1980 to 60,500 in 1985, primarily due to the closure of tin mines following the export control imposed by ITC, rising cost of production, and the suspension of tin trading at the LME. During the Fourth Plan period, a total of 617 tin mines were closed, thereby reducing direct employment from 39,000 in 1980 to 18,300 in 1985. In the upstream petroleum sector, the total number of new employment generated was not substantial. Employment generation in the other subsectors was also minimal.

Programmes and projects

Mining-related activities undertaken by the Government were confined to exploration and evaluation at the initial stage, and research and development. In addition, several public sector-owned corporations were also involved in the mining of minerals commercially. These were the National Oil Corporation (PETRONAS), several state economic development corporations (SEDCs), PERNAS Mining Sendirian Berhad, and MMC.

In the petroleum sector, PETRONAS *Carigali Sendirian Berhad* continued to be actively involved in exploration and development activities. It expended about $1,066 million during the period for the development of the Duyong Gas Project and exploration activities. The first phase of the Duyong Gas Project undertaken by the PETRONAS subsidiary together with the gas gathering facilities developed by the private sector was completed in 1984, supplying 145 mmscfd of gas in 1985 to the gas processing plant to be processed for onward supply to the power station at Paka, the steel billet plant, and a housing area in Terengganu. The exploration activities of PETRONAS *Carigali* resulted in the discovery of the Dulang field in 1982, the Malong field in 1983, and three other offshore locations in Terengganu and one in Sabah.

Being technologically sophisticated, the upstream petroleum industry requires professionals and highly technically trained personnel. In line with this requirement, PETRONAS and the production-sharing contractors carried out comprehensive training programmes at various technical levels to meet the manpower demand in the upstream activities. Transfer of technology was reflected in the increasing number of Malaysians replacing foreigners in the expatriate posts. The share of expatriates in total employment in the upstream petroleum sector declined from 17 per cent in 1980 to 9 per cent in 1985.

The SEDCs of Perak and Selangor, MMC, and PERNAS Mining Sendirian Berhad continued their mining activities, especially for tin, during the period. These corporations were operating 30 mines at the beginning of the period. With the imposition of the tin export control, however, four mines had to be closed. Tin output from mines belonging to these corporations declined from 19,920 tonnes in 1980 to 8,790 tonnes in 1985.

During the period 1981-85, the Geological Survey Department expended about $21.5 million, of which 91.3 per cent was spent on exploration. Exploration of the Central Belt of Peninsular Malaysia, spanning an area of 31,000 square kilometres, was continued. About 13 per cent of the total sampled area, or 3,251 square kilometres, were found to be high potential mineral areas. The project had, thus far, delineated two areas, namely, Sok in Kelantan and Bukit Goh in Pahang, with encouraging mineral potential, and for which detailed exploration was initiated by the respective State Governments jointly with MMC.

Exploration works were also undertaken in Klian Intan and Gunung Jerai, Kedah. Exploration activities indicated that these areas had potential for tin and uranium. In addition, exploration of Gunung Ledang, Johore, for primary and placer gold was initiated in 1985. The Department also conducted mineral clearance surveys over 400 square kilometres of the south-eastern part of Terengganu to delineate areas with mineral potential for further exploration and to release the rest for other development. Some of the areas surveyed had potential for tin and uranium.

In Sabah, about 9,800 square kilometres of ground was investigated by the Department, resulting in the discovery of copper and gold deposits and several other important geochemical anomalies. The confirmation of extensive alluvial gold occurrences by the Department in Ulu Lembah Segama revived the interests of several mining companies in the mineral. In Sarawak, the Coal Resource Evaluation Project undertaken by the Department identified between 30 to 50 million tonnes of coal deposit in the Merit-Tebulan, part of the Merit-Pila basin in the Seventh Division. Through the Mineral Exploration Project in the Lundu-Semantan and Bau areas, potentials for porphyry copper type mineralization were discovered.

The Department of Mines, through the Mining Research Institute at Ipoh, spent $4.1 million for research and development during the period 1981-85. Among the major research activities undertaken included research into the mining of minerals other than tin, new techniques of drilling for prospecting purposes, and use of geophysical methods and soil analysis for geotechnical studies related to ground stability and mining safety.

III. PROSPECTS, 1986-90

The growth of the mining sector is expected to decelerate further during the period 1986-90 to 3.1 per cent per annum compared with 6.0 per cent per annum during the Fourth Plan period, due to the slower growth of petroleum production and the declining output of tin and other minor minerals. Although the growth of the sector during the Plan period is expected to be largely attributable to crude oil and gas, the need to prolong the life of these resources will impose a constraint on accelerating growth. With this declining growth rate, the share of the sector in GDP will fall to 9.2 per cent in 1990 compared with 10.1 per cent in 1985.

Production

Crude oil and gas. Crude oil production is projected to increase moderately during the Plan period, while gas production is expected to increase significantly arising from the strategy of the Government to diversify and expand the usage of gas in the country, both as feed stock as well as fuel. The increase will be mainly attributable to the coming onstream of the PGU Phase II project and of the third process train of the LNG plant, increase in capacity utilization of the ASEAN ammonia-urea plant at Bintulu, and the steel billet plant in Terengganu and the implementation of several gas-based projects that are being planned for. The PGU Phase II project, which will supply gas from offshore Terengganu to the western and southern part of Peninsular Malaysia as well as Singapore, is expected to be completed by early 1989. The project will be assured of a demand of no less than 266 mmscfd of gas. The share of gas sales in total production is expected to rise to about 76 per cent, while the percentage of gas that will be flared will be reduced to 5 per cent by 1990, compared with 13 per cent in 1985.

Tin. With the failure of the ITC to support the floor price of tin at $29.15 per kilogramme on 24th October, 1985 and the expected sharp decline in price due to the large surplus in the international market, many domestic mines will be rendered uneconomic, thereby forcing production to be reduced substantially in 1986. Price, however, is expected to increase as the international surplus is gradually being depleted, thereby stimulating domestic production to increase gradually to 28,000 tonnes by 1990.

Other minerals. The annual output of the less important minerals is not expected to vary much from the 1985 level due to weak demand and depleting resources. The annual output of copper is expected to remain at 125,000 tonnes, iron-ore 200,000 tonnes, and bauxite 500,000 tonnes. Output of industrial minerals which will be affected by the slackening of the construction sector, is expected to register a slower growth during the 1986-90 period compared with the Fourth Plan period.

Exports

Exports of crude oil, gas, tin, and copper are expected to register a decline of 1.9 per cent per annum, falling to a level of $10,790 in 1990. Their share in total merchandise exports is expected to decline further to 25.5 per cent in 1990, attributable primarily to falling prices.

Crude oil and gas. The volume of crude oil that will be exported is projected to register a moderate growth in view of the international glut in the commodity which is expected to remain during the Fifth Plan period. Consistent with the long-term sales contract to Japan, export of LNG is expected to increase to its maximum of 6,890,000 tonnes in 1990 from a level of about 4,500,000 tonnes in 1985. With the decline in the average price of crude oil, the price of LNG is expected to decline at a rate of 8.7 per cent per annum. Gas will also be exported to Singapore beginning 1989 from the Phase II PGU project, solely for electricity generation.

Tin and copper. Tin exports are projected to decline sharply to 21,000 tonnes in 1986 due to the projected fall in price from $29,240 per tonne to $18,000 per tonne, following the suspension of support buying by the ITC at the LME. With the cut back in production by uneconomic mines all over the world arising from the drastic decline in price, supply is expected to emanate largely from existing stocks and countries with low cost of production. Price is expected to increase gradually to $25,000 in 1989 as a result of the reduction in new output and the depletion of stocks. Against this anticipated price scenario, tin exports of the country are expected to steadily increase to 30,500 tonnes by 1990. While the annual volume of copper exports is expected to remain stable at about 125,000 tonnes during the period, its value is projected to increase at a rate of 2.0 per cent per annum.

Investment

Investment in the petroleum sector by petroleum companies is expected to total $15,900 million during the period. A substantial proportion of this investment will be undertaken by private sector companies. About 50 exploration wells are expected to be drilled, with 20 in Peninsular Malaysia, 10 in Sabah, and 20 in Sarawak. Further exploration activities in other areas such as the Straits of Melaka will depend on the results of the seismic survey undertaken during the Fourth Plan period. In addition, about 400 development and production wells will be drilled, with 266 in Peninsular Malaysia, 69 in Sabah, and 65 in Sarawak. Ten new oil fields are expected to be brought onstream including two major fields, Dulang and Seligi in Terengganu by 1988. Two fields in Sarawak, Fairley Baram and Bakau are expected to cease production towards the later part of the 1990s.

The future international tin market is expected to continue to face structural imbalance between supply and demand, resulting in the closure of more un-economic mines. In view of the decline of the tin industry, investments in prospecting for new minerals will continue to be made by both the private sector and the Government in the Central Belt of Peninsular Malaysia; Lubuk and Segama Valleys, and the Kinabalu area in Sabah; and the Merit-Pila Silantek, Mukah Belingan, Bau, Lundu-Semantan, Marup, Bukit Buri, and Bukit Niwong areas in Sarawak.

Employment

Mining employment is expected to deteriorate further during the Fifth Plan period. Total mining employment is forecast to decline from 60,500 in 1985 to 40,500 in 1990. The decline is anticipated to originate mainly from the tin mining industry due to the closure of uneconomic mines. The labour released is expected to find employment in other productive sectors of the economy such as construction and agriculture. New job opportunities generated by the petroleum mining industry are not expected to be significant.

IV. POLICIES AND PROGRAMMES

Petroleum subsector

Measures will be undertaken to encourage more intensive exploration activities in view of the depleting known resources of crude oil. The original production-sharing contract terms were considered stringent, particularly for new contract areas. Together with the falling crude oil prices and the global economic recession, exploration activities in Malaysia slackened. Given the very capital intensive and technologically sophisticated nature of petroleum exploration and exploitation, coupled with the inadequate capacity of PETRONAS in undertaking a wide range of programmes, the terms and conditions of the production-sharing contract have been revised to further encourage the private sector, both local and foreign, to invest in these activities. Local expertise in petroleum-related activities, however, is still relatively undeveloped. Foreign participation will, therefore, be promoted concomitant with measures to ensure that the required technology is transferred locally.

In view of the vast gas resources the country is endowed with, policies and projects are being formulated to intensify its use as fuel, especially as a substitute for fuel oil, in electricity generation and in the transport sector. The contribution of gas to total electricity generation is expected to increase from 13.1 per cent in 1985 to 30.9 per cent in 1990. In addition, its use as feedstock in heavy industries and for domestic purposes will be further promoted.

PETRONAS Carigali will spend about $1,000 million during the Fifth Plan period in the development of the Dulang field, Duyong Phase II Project, and on exploration drilling. The Dulang oil field is expected to come onstream by 1988.

Non-petroleum subsector

In respect of non-petroleum resources, the Government will continue to undertake initial exploration with the objective of identifying and locating mineral deposits within the country. Subsequent detailed explorations and mining operations will be left to the private sector. Apart from exploration, the Government will also continue to undertake various research activities, including mine safety and production.

The Geological Survey Department will continue its efforts in the exploration of minerals other than tin with the objective of diversifying the mining sector. During the Plan period, the areas that will be explored include the Central Belt of Peninsular Malaysia, Bakri in Johor, Sintok in Kedah, Kinabalu in Sabah, and Bau and Lundu-Semantan in Sarawak. Mineral clearance surveys will be conducted in the south-eastern and western part of Terengganu and in Sarawak.

Industrial minerals are identified as viable minerals. In order to regulate and ensure the orderly growth of the industry, and to minimize possible land use conflicts between resource exploitation and other physical development, the Geological Survey Department and the Mines Department will work together to formulate a national policy on the exploitation of these minerals. A survey will be carried out, covering ball clay in Kedah, Perak, Pahang, and Perlis, kaolin in Johor and Perak, and limestone in Kelantan, Perak, Pahang, and Sarawak.

An activity of major importance that will continue to be undertaken by the Department of Mines will be research into mine safety. Apart from providing geotechnical testing services for its Enforcement Division, the Department will set up a data bank on mine accidents, and study the stability of tailings and inundated mine pits, rock geomechanics as well as safety procedures in mines.

In view of future uncertainties in the international tin market, the industry will inevitably have to undergo structural changes by confining production to the most economic mines only. At the same time, research and development efforts will continue to be directed towards maximizing the use of tin and improving production efficiency. Towards this end, the International Tin Research Institute (ITRI) in the United Kingdom will continue to concentrate on consumption research to widen the scope of tin usage, while the South East Asian Tin Research and Development (SEATRAD) Centre will continue research on production to enable the tin industry to meet the challenges of the future. The Association of Tin Producing Countries (ATPC), established in 1983, has chosen ITRI as the vehicle for achieving the objective of increasing the consumption of tin. In this connection, the ATPC will provide ITRI with policy guidelines for its research and development programme.

Vast tracts of land that have been economically mined out exist, particularly in the mining States of Perak and Selangor, and in most cases are left idle. Several studies have been carried out on the utilization of ex-mining lands for economic purposes. During the Fifth Plan, a geotechnical study will be carried out with the objective of bringing ex-mining lands into economic use, such as for buildings and agricultural activities.

V. ALLOCATION

The development allocation and estimated expenditure during the period 1981-85 and the allocation for the period 1986-90 for mining are as shown in Table 15-2.

VI. CONCLUSION

The mining sector of the country will face uncertainties in the future, particularly in respect of world demand and price. The setbacks faced by the tin industry call for structural adjustments and rationalization with the objective of maintaining its cost efficiency. In the petroleum subsector, attractive terms will continue to be provided to the private sector in order to encourage it to intensify its exploration activities. In order to tap the potential of the vast resources of gas, its use as fuel and feedstock will be further promoted. The mining sector has been, thus far, heavily dependent on a few minerals, thereby subjecting it to very high risks in times of low demand and price and depleting reserves. Efforts will be actively pursued by the Government to reduce these risks and diversify the sector away from traditional minerals.

TABLE 15-2

MALAYSIA: PUBLIC DEVELOPMENT EXPENDITURE FOR MINERAL RESOURCES PROGRAMMES, 1981-90
($ million)

Agency	*Fourth Plan allocation, 1981-85*	*Estimated expenditure, 1981-85*	*Fifth Plan allocation, 1986-90*[1]
PETRONAS	-	-	1,008.66
Geological Survey Department	21.51	20.63	37.89
Department of Mines	7.01	6.11	10.66
Total	28.52	26.74	1,057.21

Note:
[1] Under the Fifth Plan, the public sector has been redefined to include the non-financial public enterprises (NFPEs) which previously were treated as belonging to the private sector.