

THE GOVERNMENT OF MALAYSIA

DESARU SOUTH EAST COAST

THE STUDY ON A COMPREHENSIVE
NATIONAL TOURISM DEVELOPMENT IN MALAYSIA

INTRODUCTION OF
NEW TOURISM PRODUCTS

JANUARY 1989

JAPAN INTERNATIONAL COOPERATION AGENCY

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PREFACE

In response to a request from the Government of Malaysia, the Government of Japan decided to conduct a study on A Comprehensive National Tourism Development Plan in Malaysia and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Malaysia a study team, headed by Mr. Nobuhiro KOYAMA, comprising experts from Pacific Consultants International and JCP Inc. five times from June 1987 to December 1988.

The team held discussions with the officials concerned of the Government of Malaysia and conducted field surveys.

After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the development of the Project and to the promotion of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of Malaysia for their close cooperation extended to the team.

January 1989



Kensuke Yanagiya
President
Japan International Cooperation Agency

DESARU /
South East Coast

**THE STUDY ON A COMPREHENSIVE
NATIONAL TOURISM DEVELOPMENT IN MALAYSIA**

SUMMARY

**INTRODUCTION
OF NEW TOURISM PRODUCTS**

1. Introduction

The conclusion of Part 1 Study indicates that South PTR, particularly the South East Coast of the Peninsular Malaysia, is best suited for the tourism development with a view to luring more international tourists to the country in the short or medium term.

The South East Coast has the advantages of good accessibility to international tourist market through the international hub airport of Singapore, a well-developed infrastructure, and a variety of potential tourism resources such as beautiful shorelines, offshore islands, and tropical rain forest distributed all over the area. At the moment, however, it has only a limited cumulation of tourism facilities as well as tourism supporting industries.

Part 2 discusses mainly on the concept and scheme of the tourism development of the South East Coast, especially Desaru New Tourism Core which is to be a tourism development centre in the coast area.

2. Tourism Development of the South East Coast

2.1 Tourism Resources

The South East Coast of the peninsula includes the eastern half of the State of Johor and the southern border of the State of Pahang including Tioman Island. The South East Coast is in the proximity of Johor Bahru which are main gateways to the Coast and the Republic of Singapore.

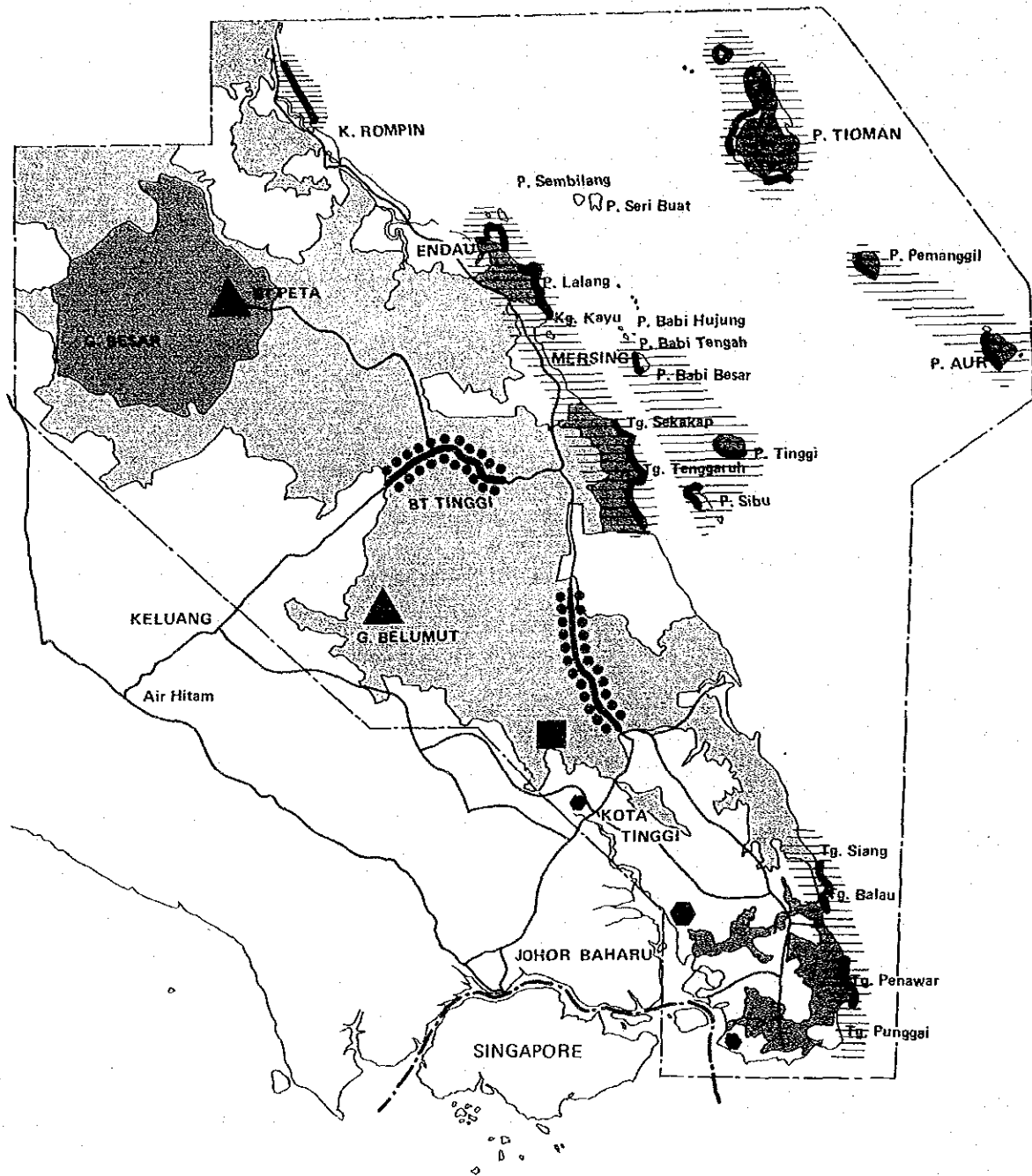
The South East Coast is blessed with tourist attractions of coastal beaches, offshore islands and a natural rain forest. At the moment, however, Desaru and the Tioman Island are the only destinations known to the international tourist. It is expected that a synthesized tourism development based on a variety of tourism resources will further enhance the attractiveness of the Coast, resulting in more international tourist arrivals.

Tourism development of the South East Coast is largely dependent on the relationship between Johor Bahru and Singapore; the former as an entry point to Malaysia, particularly to the South East Coast and the latter as an international tourist market.

Fig. 2.1 shows the distribution of tourism resources of the South East Coast. Coastal beach resources are facing to the South China Sea for the section between Desaru and Mersing/Rompin. Island resources are scattered to the east of Mersing, Tioman Island being the major attraction point. The biggest tropical rain forest is located to the west of Mersing and smaller ones are distributed along most of the South East Coast. Roadside scenery for the sections between Mawal and the Hulu Sedili river and between the Tinggi hill and Kanang Bahru are potential scenic corridors. Significant flora and fauna are found in both Endau-Rompin and Endau-Tinggi tropical rain forests. The South East Coast has very limited historical and cultural resources.

Tourism development of the South East Coast will largely depend on the development and improvement of the transportation network because resources are distributed over a large area and island resources require sea transportation.

Fig. 2.1 Tourism Resources in the South East Coast





LEGEND

 South East Coast


 MAJOR COASTAL/ISLAND RESOURCES AND POTENTIAL BEACH

 NATURAL FOREST AND POTENTIAL FOREST

 POTENTIAL SCENIC CORRIDOR

 WATERFALL

 SIGNIFICANT FLORA/FAUNA

 HISTORICAL/CULTURAL RESOURCE

Source: JICA Study Team

2.2 Tourism Development Concept of the South East Coast

The long term tourism development concept and image is shown in Fig. 2.2. Focal components of the South East Coast are beaches in a green environment, island resources, and tropical rain forests. Tourism development concepts and images will integrate these natural endowments and Malay characteristics into a comprehensive plan.

The development core stretches north-south from Mersing to Desaru along the coast line. Desaru is expected to be the major tourism core because of good accessibility to Singapore, beach resources, tropical rain forest and vast hinterland with Malay characteristics. Mersing constitutes a tourism sub-core with the function of both transportation to the islands resort area to the east and tropical forest recreational area to the west, and a beach resort distinct from Desaru.

The island resort area is connected to the core in two ways; main link to Mersing and sub-link to Desaru. Aircraft and sea crossings will directly link the island resort area with outside. The island resort area is divided into three marine parks of Tioman, Aur/Pemanggil and offshore Mersing on the basis of resource characteristics and location. A direct ocean linkage from Desaru to the island resort area is important to significantly enhance the total attractiveness of the Desaru New Tourism Core.

The tropical forest recreational area is connected to Mersing Tourism Sub-Core to the east and to Air Hitam for Kuala Lumpur. The area is sub-divided into the two forest parks of Endau-Rompin and Endau-Kota Tinggi. Endau-Rompin forest park is to be developed as a destination for special interest groups.

The realization of the above concept and image will largely depend on the improvement and development of a transportation network linking the Desaru New Tourism Core with the Mersing Tourism Sub-Core. It is required to take necessary measures both to reduce the actual travelling time between these two cores and to make tourists perceive a comfortable and interesting journey to travel along the axis corridor.

Tourism development before 1995 should be concentrated to enhance the attractiveness of Desaru. Tourism resource components of beach resort area, island resort area and tropical forest recreation area should be linked with each other for this purpose.

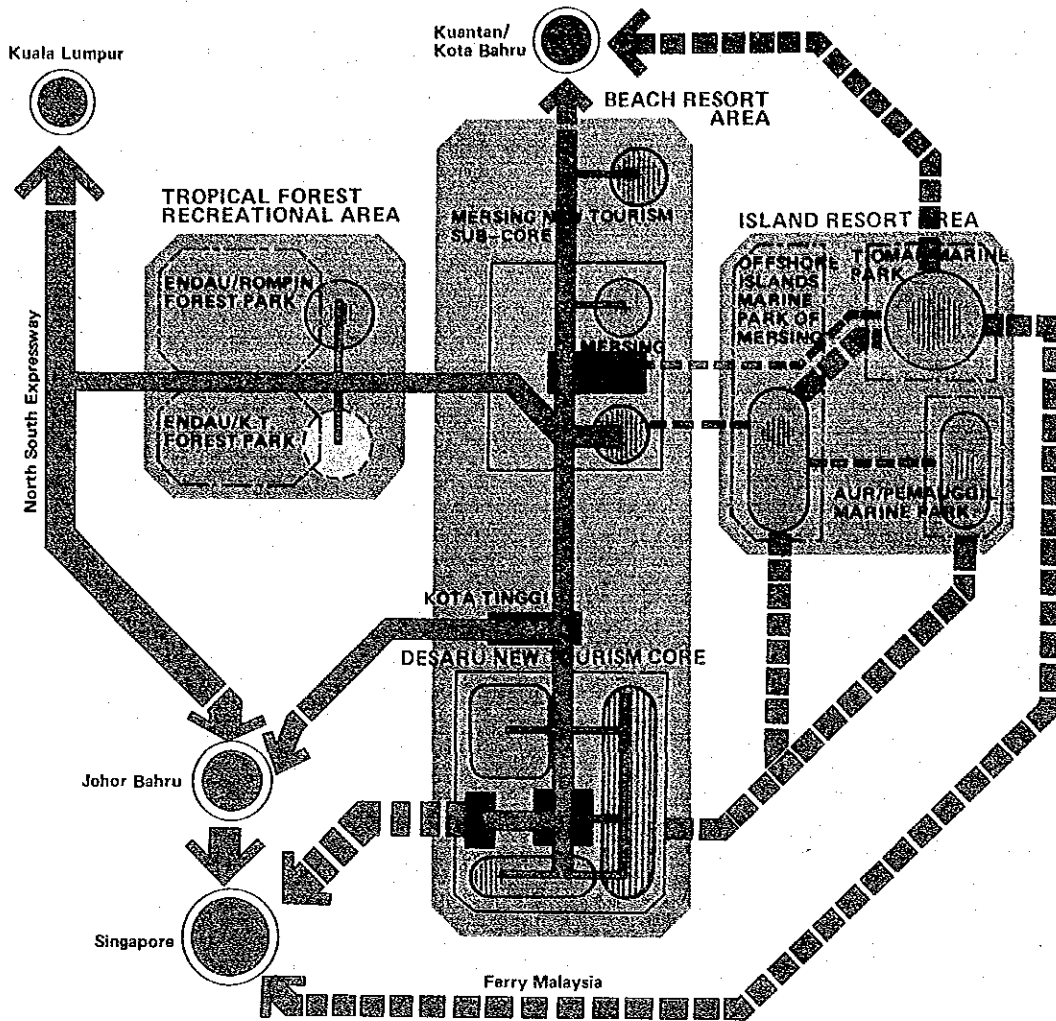
The main function of Mersing area will be limited as a transportation node for the tourist flow to the island resort area and to the tropical forest recreation area before 1995.

In the island resort area, a major effort will be concentrated on upgrading the standard of infrastructure and accommodation facilities together with appropriate measures to conserve the natural environment. Tropical forest recreational area will remain the destination of special interest groups. Accessibility into the forest will be improved within the limits of assuring environmental preservation.















It is important to take the following measures to conserve the good natural environment for attaining the long lasting coexistence of nature and tourism:

- to designate the precious tropical rain forest as forest reserve and/or national/state park,
- to prohibit logging practices in any primary/secondary forest,

Fig. 2.2 Tourism Development Concept in Long Term Perspective



LEGEND

- | | | | |
|---|--|---|--|
|  | Transportation NOde |  | Characterized Major Tourism Area |
|  | Expressway |  | Strategic New Tourism Core/
Sub-Core Development Zone |
|  | Major Road/Transportation Service Network |  | Major Tourism Area |
|  | Minor Road/Optional Tour Service |  | Service Town (/Transportation Node) |
|  | Major/Frequent Ferry Service |  | Tourist Accommodation |
|  | Major Sea Transportation Service Network |  | Forest/Marine Park |
|  | Minor Sea Transportation Service Network | | |
|  | International Gateway for SOUTH EAST COAST | | |

- to preserve tropical rain forest as much as possible even in the tourism development area,
- to designate a wild life reserve,
- to designate a marine park area,
- to restrict the tourism development on the offshore islands within the limits of maintaining a marine and island environment,
- to require the installation of sewage and drainage system for the facilities on the offshore islands, and
- to introduce appropriate measures to prevent beach erosion.

2.3 Projects Required

The period before 1995 can be characterized as a preparation period for the forthcoming tourism development of the whole South East Coast. Development as well as improvement to transportation, other infrastructures, accommodation and other facilities are set forward while tourism promotional activities are activated towards potential international tourists through Singapore.

The Desaru New Tourism Core is to be the focal destination to actively lure more international tourists to the South East Coast. The Desaru beach resort zone will be developed into an international high quality beach resort. Recreational facilities will be allocated along the east-west corridor to the hinterland so as to satisfy the demand of day-trippers as well as weekenders from Singapore and Johor Bahru.

Offshore islands which constitute another attraction of the South East Coast will be designated as a marine park area for the purpose of ensuring excellent beach and marine resources. Accommodation as well as attachment facilities of Tioman Island will be improved to the high quality standard.

For the realization of the above scheme, it is vitally important to improve the existing transportation network. Land and sea links between Desaru New Tourism Core and Singapore and between Desaru New Tourism Core and Mersing/Tioman Island are the major improvement/development requirement.

The period after 1995 can be characterized as a tourism development phase to integrate each component of the tourism resources in the South East Coast.

The Desaru New Tourism Core becomes a greater tourism core with diversifying tourism attractions and facilities.

Mersing Tourism Sub-Core will be established to accept some international tourists who might visit Desaru and/or the offshore island resort area.

Tourism facilities and services will be developed both on the offshore islands other than Tioman Island, and Endau/Rompin Forest Recreation Area with due measures to environmental conservation.

Based on the tourism development conceptual plan, projects required for the forthcoming tourism development of the South East Coast are listed in Table 2.1 through 2.3.

Table 2.1 Project List Before 1991

Area	Category	No.	Name of Project	Stage	
Desaru	Transportation	1	Car Ferry Jetties on Changi Point and Tg. Belungkor	Design/Const.	
		2	Transportation Terminal and Gate Facilities on Tg. Belungkor (Shopping Promnade and Transportation Terminals)	Design/Const.	
		3	Up-grading of Federal Road NO.92 (dual 4 lanes)	Design/Initiation of Const.	
		4	Access Road to Coastal Resort Area (F1-F4/D1/D3)	Design/Initiation of Const.	
		5	Other Roads Improvement (D4/F102)	Design	
	Utilities	1	Water Supply	Design/Initiation of Const.	
		2	Sewerage	Design/Initiation of Const.	
		3	Electricity Supply	Design/Initiation of Const.	
		4	Telecommunication	Design/Initiation of Const.	
		5	Solid Waste Disposal	Design	
	Tourist Facility	Coastal Resort Area	1	Renovation/Expansion of Existing Hotels	Design/Const.
			2	Parks and Gardens in Amenity Core	Design/Const.
			3	Jetty and Marina/Beach Recreational Facilities/ Pools in Amenity Core	Design
			4	Renovation of Existing Club House of Golf Course	Design/Const.
			5	Beachside Promnade	Design/Const.
		Tg. Belungkor Gate Area	6	Hill Top Restaurants on Tg. Belungkor Gate Area	Design/Const.
			7	Marina Complex on Tg. Belungkor Gate Area	Design
			8	Major Fun Park on Tg. Belungkor Gate Area	Design/Initiation of Const.
		Johor Lama	9	Improvement of Kg. Sengat	Design/Const.
	Others	1	Major Nursery of Planting Materials for Gardening/Landscaping	Design/Const.	
2		Bandar Penawar Art Center	Design		
3		Housing for Hotel Emp. in Bandar Penawar	Design		
4		Establishment of Forest/Historical Parks	Survey/Study		
5		Coastal Erosion in Front of Existing Hotel Sites	Survey/Study		
6		Aerophoto Shooting and Mapping for Tourism Dev't and Conservation of Forest/Historical Heritages	Survey/Mapping		
Mersing	Transportation	Improvement of Existing Port Facilities			
		1	Extension of Ferry Jetty and Improvement of Management System for Operation of Jetty	Design/Initiation of Const.	
		2	Beautification of Port and Mersing Riversides	Design/Initiation of Const.	
		Improvement of Terminal Functions of Land Transportation			
3	Taxi Stand/Bus Terminal	Design/Const.			
4	Car Parking	Design/Const.			
Tourist Facility	1	Tourist Information Complex (agent offices, ticketing, kiosk etc)	Design/Const.		
	2	Two Resing Spots Dev't on National Highway No.3(Batu74/108)	Design/Const.		
Tioman Island	Utilities	1	Water Supply Network Systems	Design/Initiation of Const.	
		2	Sewerage Treatment Systems (Biofiltration)	Design/Initiation of Const.	
Tourist Facility	1	Legislation and Up-grading of Existing Chalets (500rooms before 1991)	Survey/Study		
	Others	1	Establishment of Marine Park Systems in Tioman	Survey/Study	
2		Coastal Erosion in Front of Existing Hotel Sites	Survey/Study		
Other Islands	Others	1	Establishment of Marine Park Systems for Islands	Survey/Study	
Endau/Rompin /Inland Forest	Others	1	Establishment of National/State Park and Nature Conservation Systems (Including of Aerophoto Shooting, Mapping and Field Surveys)	Survey/Study	
Johor Bahru/ Kota Tinggi	Transportation	1	Improvement of Causeway	Design/Const.	
		2	Up-grading and Roadside Landscaping of National Highway No.3(JB-KT)	Design/Const.	
Others	1	Improvement and Expansion of Immigration and Custom-Facilities (excluding Land Reclamation Works)	Design/Const.		
	1	Improvement of Sign/Symbol Systems for Transp./Tourism Information	Design/Const.		

Table 2.2 Project Lists in 1991-1995 for Desaru New Tourism Core

	EAST COAST RESORT AREA	DAILY/DAY TRIPPERS ACTIVITY AREA
A. ACCOMMODATION FACILITY		
a. New Development		
1. High Class Hotel	800 rooms	
2. Medium Class Hotel	980 rooms	
B. OTHER TOURISM FACILITY		
a. Sports/Recreational Facility		
1. Outdoor Sports	- Racket sports courts - Jungle trekking course	- Outdoor sports complex
2. Outdoor Recreation	- Strolling/cycling course	- Major fun land - Lebam river cruising
3. Beach/Marine Sports/Rec.	- Main/sub marine sports Recreational center	- Major water rec. complex - Marina
4. Indoor Sports/Rec.	- Indoor sports complex	- Indoor sports complex
b. Entertainments/Sightseeing Facility		
1. Performance/Exhibition	- Craftman village/research training center - Exhibition Center with research/training center	- Multi-purpose plaza/ outdoor theatre
2. Sightseeing	- Observation place/decks/ beachside promnade - Flower theme corridor - Orchid/orchard gardens	- Johor Lama historical park - Flowering theme corridor - Crocodile garden - Bird Sanctuary(watching) - Beetle/butterfly garden
c. Shopping Facility		
1. Dutyfree Shop	- Dutyfree Shops	
2. Shopping Arcade/Streets	- Shopping/souvenior promnade	- Shopping/souvenior promnade
3. Other Shopping Facility		
d. Restaurants/Others		
1. Restaurants/or Streets	- Restaurant Plaza	- Seafoods restaurant (street)
2. Food Stands		- Up-grading of seafood restaurants in Kg.S.Bunut/ Sengat
C. INFRASTRUCTURE		
a. Transportation Network		
1. Road Network	- Federal road from J.B. to Desaru via K.T. - Inner road of coastal resort	- Tg. Pengerang-Penawar
2. Sea Route Network	- Jetty (connect to Tioman)	- Committed car ferry jetty
3. Transportation Terminals	- Main/sub terminal	- Ferry/bus/taxi terminal
b. Water Supply Network	- Distribution network	- Main/distribution network
c. Power Supply Network	- Distribution network	- Main/distribution network
d. Telecommunication Network	- Distribution network	- Main/distribution network
e. Sewage System	- Sewage system	- Sewage system
D. TOURIST TOWN/RELATED INDUSTRY		
a. Housing for Tourism Employments	- Expansion of Bandar Penawar	
b. Supporting Social Infrastructures	- Health/police/postal/ Firebrigade systems/facility	
c. Supporting/Related Industries	- Site Preparation for related Industries - Information center (with tour guide/agents)	- Information center (with tour guide/agents)

Note : For Further Details, refer to Chapter 6

Source : JICA Study Team

Table 2.3 Project List in 1991-1995 for Other Tourism Development Areas

	TIOMAN ISLAND	TINGGI/SIBU/BESAR ISLANDS	MERSING COASTAL RESORT	FOREST RECREATION AREA
A. ACCOMMODATION FACILITY				
a. New Development				
1. International	110 rooms	67 rooms		
2. Domestic				17 rooms (temporary)
b. Up-grading				
1. from Domestic to Regional	186 rooms	132 rooms	15 rooms	
B. OTHER TOURISM FACILITY				
a. Sports/Recreational Facility				
1. Outdoor Sports	- Mt. climbing/tracking routes/huts			- Mt. climbing/tracking routes/huts
2. Outdoor Recreation	- Beachside strolling/cycling street			
3. Beach/Marine Sports/Rec	- Marine sports center	- Marine sports center		
b. Entertainment/Sightseeing Facility				
1. Sightseeing	- Observation place/deck/hut	- Observation place/deck/hut		- Observation place/hut
c. Shopping Facility				
1. Other Shopping Facility	- Pro-shop/souvenir	- Pro-shop/souvenir	- Souvenir shops	
d. Restaurants/Other Eating Facility				
1. Restaurants/for Streets	- Seafood restaurant street		- Up-grading of existing restaurant	
C. INFRASTRUCTURE				
a. Transportation Network				
1. Road Network	- Seaside access road of east coast		- Up-grading/landscaping of K.T. Mersing road	- Scenic corridor of Kanang Bahru-Jemaluang
2. Sea Route Network	- Improvement of Jetty	- Improvement of Jetty	- Improvement of port	
b. Water Supply Network				
	- Improvement			
c. Power Supply Network				
	- Improvement	- Improvement		
d. Telecommunication Network				
	- Improvement	- Development of system		
e. Sewage System				
	- Improvement	- Improvement		
D. TOURIST TOWN RELATED INDUSTRY				
a. Housing for Tourism Employments				
	- Village improvement			
b. Supporting Social Infrastructure				
	- Improvement			
c. Supporting/Related Industry				
	- Information center	- Information center	- Improvement of existing information center	
E. CONSERVATION OF NATURAL/HISTORICAL RESOURCES				
a. Natural Heritages				
	- Marine park	- Marine park		- National or State park

Source : JICA Study Team

3. Development of Desaru New Tourism Core

3.1 Introduction

It is proposed that the Desaru New Tourism Core is to be developed into a so-called "self-contained resort complex" which packages every kind of comfort, convenience and amenity with a view to satisfying varied demand of tourists. In view of the recent trend of international tourist demand, the resort is required to assure them of the convenience of urban life in a more sophisticated manner under the excellent natural environment which greatly differs with their usual living environment.

In consideration of less cumulation of tourism facilities in the Desaru area, it is required to develop a set of infrastructure and tourism facilities at its beginning in accordance with a master development scheme in a long term perspective. This type of tourism development requires a large area for maintaining good environment of resort as well as accommodating future expansion, and heavy investment at its initial stage.

Desaru New Tourism Core has an advantage, in terms of international tourism development, over the other tourist destinations as follows:

- proximity to Singapore which is a hub in the international air network,
- beautiful beach line with tropical rain forest,
- potential tourist sub-destinations in the South East Coast, and
- vast hinterland with river, plantation, and Malay settlements.

Combination of these advantages enhances the development potential of self contained resort in that they provide an excellent background for introducing a variety of attractions and amenities.

The second greatest advantage of Desaru is that a vast land is enclosed in KEJORA territory which indicates the least probability of land acquisition problems. The third greatest advantage of Desaru is that an infrastructure has already been developed by KEJORA. It is expected that the existence of road network, power supply network, and reservoir of large capacity contributes to save the initial investment by a considerable amount.

Another advantage of Desaru is that it has a potential to be developed as an attractive destination of day trippers and weekenders from Singapore and from Johor Bahru. Shortening of travelling time through the introduction of a ferry link between Tg. Belungkor and Changi Point is expected to facilitate the inflow of day trippers and weekenders from Singapore. Development of recreation and activity zones for them will greatly contribute to augment the amenities for international tourists visiting the proposed resort in Desaru.

3.2 Target Number of Visitors

The number of tourist arrivals to Desaru New Tourism Core is targeted at 330,600 persons in 1995 which is equal to 5.4 times of that of 1987 as shown in Table 3.1. The Japanese market is expected to be the greatest, accounting for 56% of the total arrivals, followed by Singaporean for 26%.

The number of day trippers in 1995 is assumed at 2.6 million persons. The major market is Singaporeans, amounting to 2.3 million persons and the remaining is Malaysian.

Table 3.1 Target Number of Tourist Arrivals

	1987	1995	Increment	Annual
	Persons (%)	Persons (%)	Persons (%)	Growth Rate (%)
Tourist Arrivals				
Malaysian	12,570 (20)	21,400 (7)	8,830 (3)	6.9
Singaporean	22,870 (37)	87,100 (26)	64,230 (24)	18.2
Japanese	16,490 (27)	186,600 (56)	170,110 (63)	35.4
Other Foreigners	9,540 (16)	35,500 (11)	25,960 (10)	17.9
Total	61,470(100)	330,600(100)	269,130(100)	23.4

Note: "Persons in 1987" is an estimate.

3.3 Development Scheme of Desaru New Tourism Core

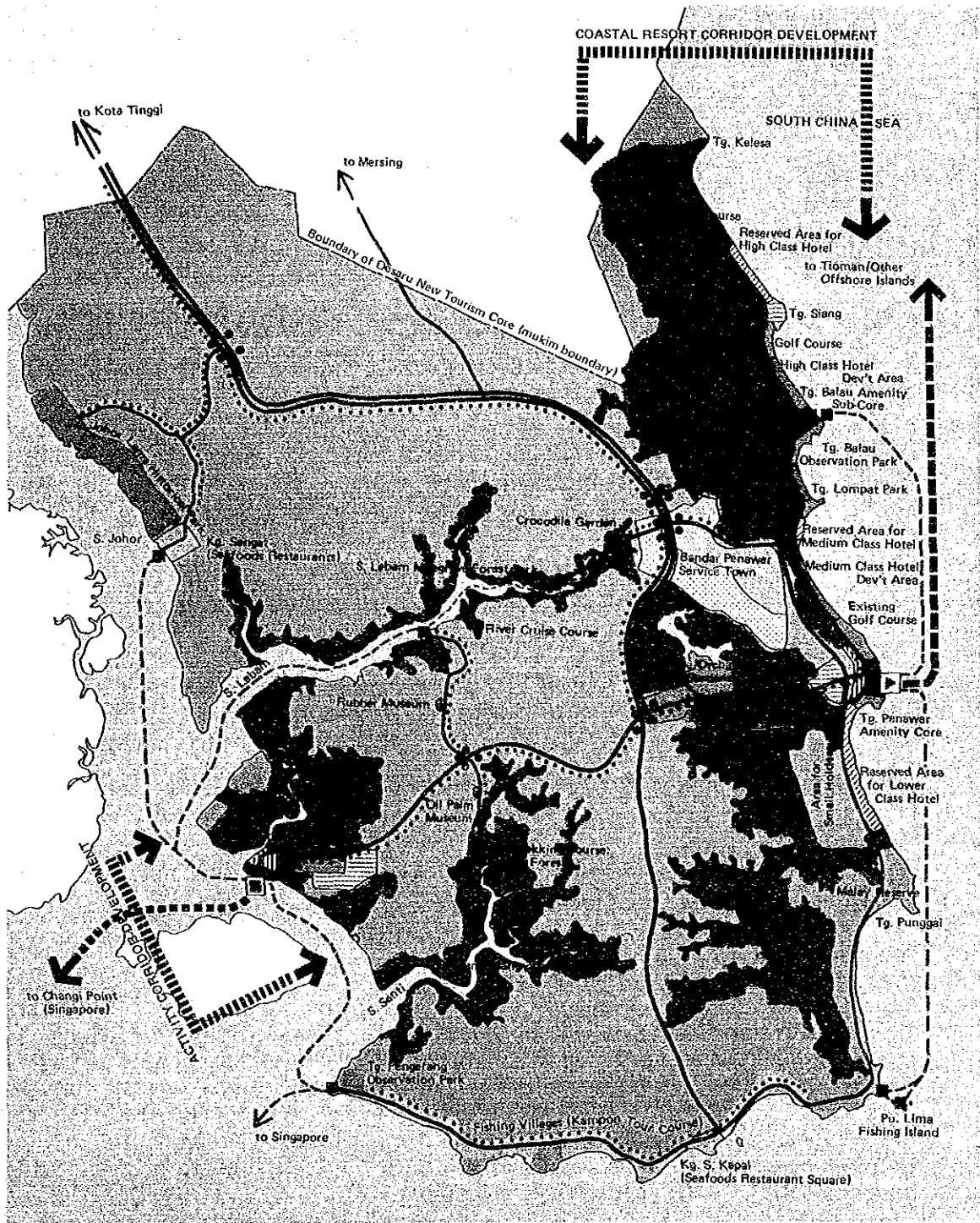
It will take a long time before the Desaru New Tourism Core is developed into a full-scale, self-contained resort complex. The period by the year 1995 can be defined as the first stage of development. It is required, for the successful debut to the international tourist market, that a set of quality core facilities be presented in an attractive way, somewhat different from the competing resorts.

Fig. 3.1 illustrates the proposed development scheme of Desaru New Tourism Core by the year 1995. The development area extends to almost all the area for the long term development.

The Desaru New Tourism Core by the year 1995 will be composed of the following destination zones:











- Coastal Resort Corridor
 - Accommodation Area
 - Amenity Core
 - Amenity Sub-Core
- Day Tripper Activity Corridor
 - Tg. Belungkor Gate Area
 - Rubber and Oil Palm Museum Area
 - Orchard and Orchid Garden
- Other Activity Zones
 - Lebam and Santi River Tourism Area
 - Johor Lama Tourism Area,
 - South Tourism Area,
 - Pulau Lima Fishing Island

Fig. 3.1 Development Scheme of Desaru New Tourism Core by 1995



LEGEND

1995 after 1995

- | | | | | |
|---|---|--|---|--|
|  |  | Facility Oriented Development Area |  | Roadside Landscaping/Special Planting for Node/Gate Identification |
|  |  | Hotel/Accommodation Development Area |  | Jetty for Car Ferry/Major Jetty/Minor Jetty |
|  |  | Open Space Oriented Development Area | | |
|  |  | Service Town/Kampon Development and Improvement Area | | |

Development of infrastructure is very important during the beginning stage by 1995. It includes road network, jetty construction, water supply and treatment system, power supply, and telecommunication network. Every kind of network as well as system is required to be ready for the possible expansion in the future though, at the same time, the initial investment is required to be saved as much as possible. Investment on hotel construction is another big investment item in this stage. About 71% of the cost will be borne by private investors.

Future development after 1995 is to concentrate on introducing more attractions and sophisticating a total system of self-contained resort complex. It will be necessary to further elaborate the development scheme of each zone by reflecting the requirements of tourists and day trippers visited Desaru New Tourism Core by 1995.

Development scheme of major facility area/core are outlined as follows:

1) Accommodation Area

The Accommodation Area is to be located along the coast line for attaining easy access to the beach and good view from hotel rooms. The whole stretch of the beach is divided into three sections; high class hotels in the north, middle class hotels in the centre and lower class hotels in the south.

The hotel rooms required in the year 1995 is estimated at 2,100 rooms;

- high class hotels : 800 rooms (new construction)
- middle class hotels : 1,200 rooms in total
 - 880 rooms (new construction)
 - 100 rooms (expansion of existing hotel)
 - 234 rooms (renovation of existing hotel)
- lower class hotels : 100 rooms (existing chalets)

It is proposed that new hotels of high and middle classes have 250-300 rooms each with possible future expansion of 100-120 rooms.

2) Amenity Core and Sub-Core Area

The Amenity Core is planned to be located at the intersection of Coastal Resort Corridor and Activity Corridor at Tg. Penawar for the common space for both hotel guests and day trippers. The main function is to offer opportunities for various kinds of amenities for hotel guests as a programme of a self-contained resort complex. It comprises marine/beach/inland sports and recreation activities, cultural, as well as artistic performances, and other kind of activities of shopping, eating, and communicating with occasional neighbours.

The Amenity Sub-Core is designed to serve mainly for the hotel guests in high as well as middle class hotels. It is desirable that the sub-core offers personal quality services to the consumers in a superb atmosphere of no crowds, no lines, and no hassles. It is planned to be located at inbetween of the high and middle class hotel areas.

3) Tg. Belungkor Gate Area

Tg. Belungkor Gate Area is the main transportation terminal of Desaru New Tourism Core. Ferry jetty, terminal building and interface with land transport service are the minimum necessities.

The gate area is to be developed as a main destination of day trippers and weekenders by making the most of excellent natural environment near the river. The area is an amenity centre mainly for day trippers and weekenders just as Amenity Core for hotel guests. It is expected that the development of the dual corridors for hotel guests and day trippers will contribute to keep the Accommodation Area calm and tranquil though they can enjoy bustle and festive atmosphere in respective corridors.

Landscaping and circulating transport services is another important factor.

Desaru New Tourism Core can be characterised by its complete greenery over a vast land, which is completely different from those of other beach resorts. International tourists who visit Malaysia, usually, have some preconception that Malaysia is rich in wild nature, rubber, oil palms, butterflies, and so on. It is required to design the landscaping in the context of both the regional characteristics and the tourists' expectation. It is preferable to establish a total image of Desaru New Tourism Core based on nature.

Flowers and trees of tropical nature can be a symbol representing the total image. Well coordinated landscaping should cover the whole area to create strong visual impression, particularly at the entry points to the Core, along the roadside from the entry points to major destinations in the Core, and in the destinations. From a broad point of view, Johor Bahru and Kota Tinggi are entry points to the Core in terms of international tourists. It is important to extend the landscaping to these entry points as well.

Development of transportation network is vitally important for the tourism development of the Desaru New Tourism Core. The transportation network comprises three major components; the first one between Singapore and Desaru New Tourism Core, the second one in Desaru New Tourism Core, and the third one to and from other tourist destinations in the South East Coast.

Local roads in Desaru New Tourism Core connect each facility together. It is necessary to pay more attention to the comfortable stroll of tourists in the area than to vehicular traffic. Provision of landscaping and pedestrian deck is the minimum requirement for this purpose. It is also required to prepare the roads only for pedestrians.

Location of transportation terminals as well as parking lots plays an important role in keeping a good environment for hotel guests. It is required to prepare a main terminal at the entrance of Amenity Core and several sub-terminals in Accommodation Area.

Important routes of circulating transport service are as follows:

- Tg. Belungkor Gate Area ~ Amenity Core,
- Rubber Museum ~ Oil Palm Museum,
- Circulation in Amenity Core,
- Circulation in Penawar Area, and
- Shuttle Service between Amenity Core and Accommodation Area.

3.4 Estimation of Investment Cost

Investment cost for developing the Desaru New Tourism Core is estimated at 1,183 million ringgit comprising 205 million ringgit for infrastructure development and 978 million ringgit for tourism facilities as shown in Table 3.2.

Major cost items for infrastructure development are sewerage system with 72 million ringgit, power supplying system with 51 million ringgit and road network with 42 million ringgit. Peak years for the disbursement are 1991 and 1992.

Major cost items for tourism facilities are accommodation facilities with 445 million ringgit, facilities in Activity Zone with 246 million ringgit and facilities in Amenity Core with 111 million ringgit. Peak years for the disbursement are 1992 and 1993.

The estimated demarcation among public sector, joint venture between public and private sectors, and private sector is 371 million ringgit (31.3%) with public sector, 226 million ringgit (19.1%) with joint venture, and 586 million ringgit (49.5%) with private sector.

3.5 Financial Outlook

Financial analysis was carried out to give a preliminary view of the financial outlook of private owners of middle class hotels, the joint venture with public and private sectors, and the public sectors as an implementation authority (KEJORA).

1) Hoteliers (Middle Class)

Hoteliers construct and operate their hotels in the site with the approval of KEJORA or the JV. Major cost items are construction cost, operation and management cost, and rent for the land. Major revenue items are the room charge, sales of food and beverage, and others.

Financial indicators of internal rate of return (IRR) and net present value (NPV) at 8% are calculated at 16.1% and 39.6 million ringgit, respectively. Payback period of the investment is calculated at 7 years based on the following loan conditions; 15 years of loan period, 7% of interest rate and 3 years of grace period.

2) Joint Venture

The important responsibility of the joint venture is to construct and operate the tourism facilities other than accommodation facilities both in Coastal Resort Corridor and Activity Corridor through some of them are completely entrusted to private sectors. Major cost items are construction cost, operation and maintenance cost, and rent for the land. Major revenue items are expenditures by hotel guests and day trippers outside hotels and transportation charges.

Financial indicators of internal rate of return and net present value at 8% are calculated at 19.3% and 225.6 million ringgit, respectively. Payback period of the investment is calculated at 11 years based on the following conditions; 25 years of loan period, 4% of interest rate and 7 years of grace period.

3) Implementation Authority (Public Sector)

The important responsibility of the Implementation Authority is to construct and maintain the basic infrastructures in the Desaru New Tourism Core. Major cost items are construction and maintenance costs. Major revenue items are land rent, consumption charges, and taxes imposed on the hoteliers and the joint venture.

Financial indicators of internal rate of return and net present value at 8% are calculated at 20.7% and 247.6 million ringgit, respectively. Payback period of the investment is calculated at 14 years based on the same financial conditions with that of the joint venture.

Table 3.2 Investment Cost for Desaru New Tourism core (Current Price in 1988)

Construction Item	Unit : Million Rgt.			Total
	Public Sector	Joint Venture	Private Sector	
Road Network	41.9	0.0	0.0	41.9
Jetties	6.5	0.0	0.0	6.5
Water Supply System	24.0	0.0	0.0	24.0
Sewerage System	71.6	0.0	0.0	71.6
Solid Waste Disposal System	8.3	0.0	0.0	8.3
Electrical System	50.8	0.0	0.0	50.8
Telecommunication System	2.3	0.0	0.0	2.3
Infrastructure Total	205.3	0.0	0.0	205.3
Coastal Resort Corridor (Total)	53.4	135.1	444.7	633.1
<i>Amenity Core Area</i>	18.1	92.8	0.0	110.9
<i>Amenity Sub-Core Area</i>	1.2	42.3	0.0	43.5
<i>Accommodation Area</i>	0.0	0.0	444.7	444.7
<i>Parks in Accommodation Area</i>	34.0	0.0	0.0	34.0
Daytrip./Daily Act. Zone	55.1	85.2	105.6	245.9
Bandar Penawar Service Town	55.0	0.0	29.3	84.3
Other T. Activity Zone	2.2	6.1	6.5	14.8
Tourism Facility Total	165.7	226.4	586.0	978.1
INVESTMENT COST TOTAL	371.0	226.4	586.0	1,183.4

Source : JICA Study Team

3.6 Economic Impact

The development of Desaru New Tourism Core is expected to produce benefits to the national economy in terms of foreign currency earnings, creation of job opportunities and increase of regional production.

Foreign currency earning is estimated at 179.4 million ringgit one year later when all the hotel rooms are completed in 1995, inclusive of expenditures by international tourists on hotel accommodations, other tourism facilities and transportation.

The number of jobs created by the development is estimated at 13,700 persons in 1995, inclusive of direct employees in hotels as well as other tourism facilities and indirect employees. On top of this, construction works will create job opportunities of about 2,440 person years by the year 1995.

Increase of regional production is roughly expected to amount to 74.7 million ringgit one year later when all the hotel rooms are completed in 1995.

Economic indicators of net present value (NPV), benefit/cost ratio (B/C), and economic internal rate of return (EIRR) are calculated based on the above benefits, and economic cost of construction, operation and maintenance. NPV at 8% discount rate is calculated at 1,104.0 million ringgit, B/C at 1.60 and EIRR at 18.8%.

3.7 Machinery for Developing Desaru New Tourism Core

Development of Desaru New Tourism Core requires participation of the cabinet at the level of policy making and participation of private business at the opposite level of daily operations of hotels, shops, restaurants and so on. In order to well coordinate and integrate different type of participants, it is very important to develop a machinery appropriate to the development.

Fig. 3.3 illustrates the outline of the machinery for Desaru New Tourism Core in the context of the tourism development of the South East Coast.

The following points are taken into account in proposing the machinery:

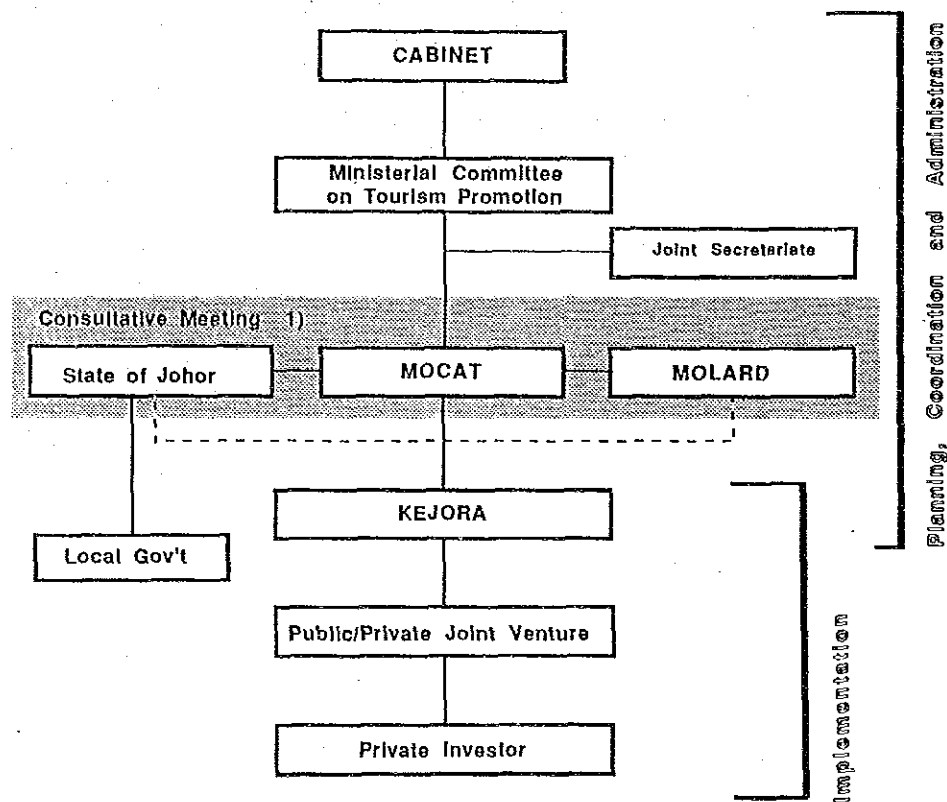
- Ministry of Culture and Tourism (MOCAT) including Tourist Development Corporation of Malaysia (TDC) plays a central role for the development in the administrative aspects of setting policy and guideline, inter-ministerial coordination, and horizontal coordination with close cooperation with Ministry of Land and Regional Development (MOLARD) and the State of Johor.
- Committees and sub-committees already established for tourism development will be maintained and partly tailored for the development of Desaru New Tourism Core.
- Johor Tenggara Development Authority (KEJORA) is expected to take an active role in implementing the development of Desaru New Tourism Core in accordance with the policy and guideline prepared by MOCAT, MOLARD, and the State of Johor and in close cooperation with ministries, state governments, and private investors.

KEJORA participates in the development of basic and tourism infrastructures as an authority of public sector. It takes a role in tourism administration to control and encourage the development as well as the operation by private sector.

A joint venture between public sector and private investor is proposed to be established to develop the tourism facilities other than those in Accommodation Area with the cooperation of private sector, to maintain landscaping and parks, and to operate circulating transportation services.

Private sector is to be involved in construction and operation of accommodation facilities and other commercial facilities like amusement park, shops, restaurants and entertainment facilities.

Fig 3.2 Outline of Development Machinery of Desaru New Tourism Core



1) The meeting involves EPU & ICU

3.8 Financial Incentives for Tourism Development

The development of Desaru New Tourism Core are considerably different from tourism development in the past in that it covers a large plot of land, that it contains the infrastructure and facilities, and that it requires a large number of participants including foreign investors. It requires a new framework of fiscal incentives. In view of the large amount of initial investment, the incentive period of five years for Pioneer Status and Investment Tax Allowance is required to be extended to seven years at the shortest, and ten years preferably.

Among the other incentives, infrastructure assistance is the most important support by public sector for the development of Desaru New Tourism Core. It is expected to be undertaken by the implementation authority with relevant support by federal as well as state government.

Low-interest loans coupled with loan guarantees is another important incentive for the development. This is particularly important for domestic and foreign ventures. The portion to be borne by domestic company will amount to a considerable amount owing to the large amount of investment cost and the regulated share of domestic and foreign portions. In order to facilitate investment on domestic portion, low-interest loans coupled with loan guarantee becomes more and more important.

3.9 Tourist Promotion

Policies for promoting international tourists to visit Desaru New Tourism Core can be summarised as follows;

- 1) To designate Desaru as a strategic tourist destination of the country. It is required to enhance the total attractiveness of Desaru through the concentration of the resources available in the country.
- 2) To establish a target of tourist promotion. The target is required to enable every effort to be synthesized for achieving the target.
- 3) To allocate budget for promotion. It is required that the yearly budget adequately reflect the target and specifications of tourist promotion. Promotion budget is usually more than 2% of sales and commenced one year before facility opening.
- 4) To identify the target segment of market countries and determine the promotion policy. Japan, Australia, U.K., U.S.A., and Singapore should be focused for promotion.
- 5) To carry into effect the promotional activities under the well programmed promotion scheme in close relationship with tourism facility development.

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Abbreviation

ASEAN	Association of South-East Asian Nations
BEP	Break Even Point
BOD	Biological Oxygen Demand
B/C	Benefit/Cost
FELCRA	Federal Land Consolidation and Rehabilitation
FELDA	Federal Land Development Authority
FIC	Foreign Investment Committee
FIRR	Financial Internal Rate of Return
GDP	Gross Domestic Product
GIT	Group Inclusive Tour
GRDP	Gross Domestic Regional Product
I-O Analysis	Input-Output Analysis
IRR	Internal Rate of Return
IT	Inclusive Tour
ITA	Investment Tax Allowance
ITM	Mara Institute of Technology
JAL	Japan Airlines
JICA	Japan International Cooperation Agency
JKR	Jabatan Kerja Raya
JV	Joint Venture
KEJORA	Johore Tenggara Development Authority
KL	Kuala Lumpur
KK	Kota Kinabalu
KTM	Kretapi Tanah Melayu (Malayan Railway)
KV	Kilo Volt
MAH	Malaysian Association of Hotels
MAS	Malaysian Airline System
MATTA	Malaysian Association of Tour and Travel Agents
MIDA	Malaysian Industrial Development Authority
MOCAT	Ministry of Culture and Tourism
MVA	Mega-Volt Ampere
NEB	National Electricity Board
NIES	Newly Industrialized Economies
NIF	New Investment Fund
NITTCB	National Industrial Training and Trade Certificate Board
NPC	National Productivity Centre
NPV	Net Present Value
NTC	National Tourism Council of Malaysia
NIO	National Tourism Office
OECD	Organisation for Economic Cooperation and Development
PATA	Pacific Asia Travel Association
PERNAS	Perbadanan Nasional Berhad
ppm	Parts per million
PTR	Peninsular Tourism Region
MVA	Mega-Volt Ampere
Rgt.	Ringgit
ROE	Return on Equity
ROI	Return on Investment
SDC	State Development Cooperation
SEB	Sabah Electricity Board
SEDC	State Economic Development Corporation
SEPU	State Economic Planing Unit
SESCO	Sarawak Electricity Supply Corporation
SRT	State Railway of Thailand
STM	Syrikat Telekom Malaysia

STPB	Singapore Tourism Promotion Board
TDC	Tourist Development Corporation, Malaysia
TR	Tourism Region
UDA	Urban Development Authority
UNDP	United Nations Development Programme
WTO	World Tourism Organisation

Glossary of Special Terms

billion: 1,000 million

Tourism Products:

An integrated concept of tourism facilities, services, and amenities for satisfying tourists' demands

New Tourism Products:

Tourism products which differ from the conventional type of tourism product with a view to luring international tourists

Urban Amenities:

An integrated set of amenities in the urban area, including areas for shopping, eating and drinking, strolling, communicating with occasional neighbours, enjoying music and dance, and so on.

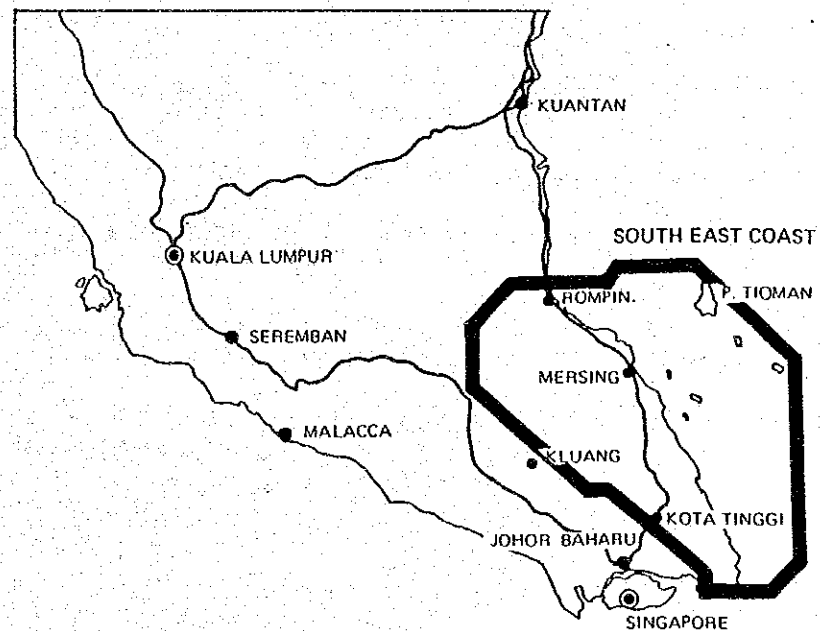
Urban Type of Amenities:

An integral preparation of amenities like in urban area

Part 1 : TOURISM DEVELOPMENT OF THE SOUTH EAST COAST

CHAPTER 1

INTRODUCTION



The number of international tourists attracted to the Pan Pacific Tourism region has been increasing in recent decade. The Pan Pacific Tourism region is characterized by excellent beach and island resources. They are Hawaii, Guam, Capricorn islands, ASEAN beaches, Seychelles, Maldives, and so forth.

It is considered that this tendency of beach resort orientation is based on the increasing popularity of people's long stay in an excellent natural environment with a possible variety of activities. Such marine activities as swimming, scuba diving, and sailing are the most significant attraction of a beach resort.

This tendency is becoming prominent in the South East Coast, particularly at Desaru and the Tioman Island. More international tourists, especially Japanese, are expected to visit Desaru as a package tour to Singapore in pursuit of natural beaches, Europeans and Americans are increasing visitors to the Tioman Island in pursuit of long stay in unspoiled beach and island environment.

Singapore is of great significance to the South East Coast in the following respects;

- 80% of Japanese tourists visited Malaysia through Singapore,
- more than a quarter of international tourists other than Japanese and Singaporeans visited Malaysia through Singapore and the same number left for Singapore after visiting Malaysia,
- Singaporean visitors to Malaysia have been increasing expecting vast and abundant natural resources, and
- the tourism development policy of "beyond Singapore", together with the capacity increase of Changi Airport, indicates an increasing possibility of more international tourist arrivals to the South East Coast.

It is expected, in this context, that the improvement of accessibility from Singapore to Johor Bahru and the South East Coast will further enhance the tourism development potentials of the South East Coast.

Comparison of the six tourism regions of the country indicated that South Peninsular Tourism Region (South PTR) is the tourism region with the highest potential for luring more international tourists to the country in the medium term perspective, by the year 1995. This is mainly based on the following:

- South PTR has good accessibility to the international tourist market via an international hub airport of Singapore.
- South PTR, particularly the South East Coast, is blessed with excellent tourism resources: beach, offshore islands, and tropical rain forest.
- South PTR has a well-developed infrastructure with roads, power and water supply, and telecommunications.

Part 2 discusses a possible strategy of tourism development of the South East Coast, mainly in relation to Singapore. Potential tourist destinations are Desaru, Mersing, Tioman Island and the Endau/Rompin Forest area.

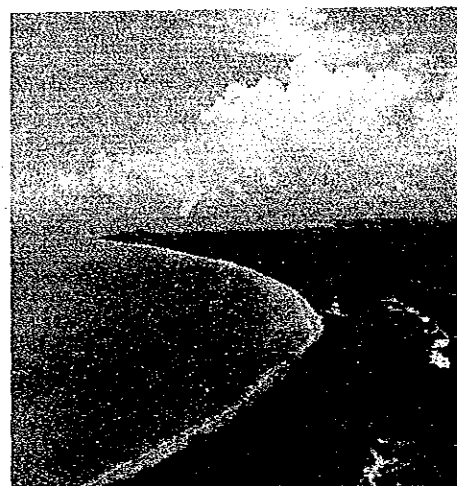
In view of the present situation of the country as a late comer into international tourist market, however, it will be necessary to introduce a new kind of tourism product at the first stage of development. It is proposed to develop a beach resort with internal beauty in the Desaru area, called Desaru New Tourism Core.

The main thesis of Part 1 is to establish a tourism development scheme of the South East Coast in the long term perspective, and to select a new tourism core for development by 1995.

Part 2 mainly discusses a tourism development plan of the Desaru New Tourism Core as a series of action programmes by the year 1995.



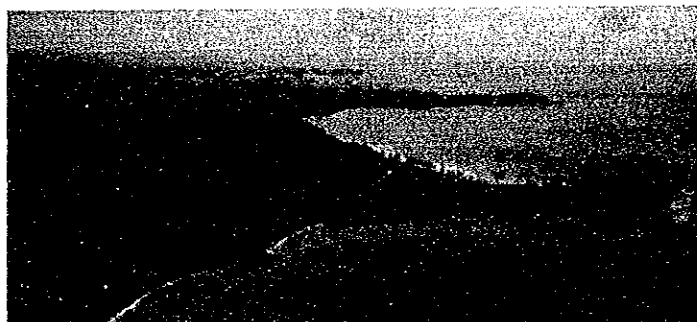
Existing Hotel in Desaru



Beach Area between Tg. Siang to Tg. Balau



Beach Area from Tg. Punggai to South



Tg. Lompat and Tg. Balau



Beach Area from Tg. Punggai to South



Existing Golf Course in Desaru

CHAPTER 2

PRESENT CONDITIONS AND ISSUES OF SOUTH EAST COAST

2.1 Outline of South East Coast

2.2 Tourists to the South East Coast

2.3 Transportation Network and Other Infrastructures

2.4 Existing Tourist Attractions

2.5 Natural and Social Environment

2.6 Tourism Development Machinery

2.7 Issues

2.1 Outline of the South East Coast

2.1.1 General

The South East Coast of the peninsula includes the eastern half of the State of Johor and the southern border of the State of Pahang including Tioman Island. The South East Coast is in the proximity of Johor Bahru which is the main gateway from the Republic of Singapore.

The South East Coast is blessed with tourist attractions such as coastal beaches, offshore islands and a natural rain forest. At the moment, however, Desaru and the Tioman Island are the only destinations known to the international tourist. It is expected that a plan for synthesized tourism development based on a variety of tourism resources will further enhance the attractiveness of the Coast, resulting in more international tourist arrivals.

Tourism development of the South East Coast is largely dependent on the relationship between Johor Bahru and Singapore; the former as an entry point to Malaysia, particularly to the South East Coast and the latter as an international tourist market.

This chapter discusses the present conditions and issues of tourism development of the South East Coast.

2.1.2 Natural Conditions

The South East coast covers an area of about 11,600 square kilometres of which part of the Coast belongs to the State of Johor (districts of Kota Tinggi and Mersing) and a part to the State of Pahang (district of Rompin and the Tioman Island).

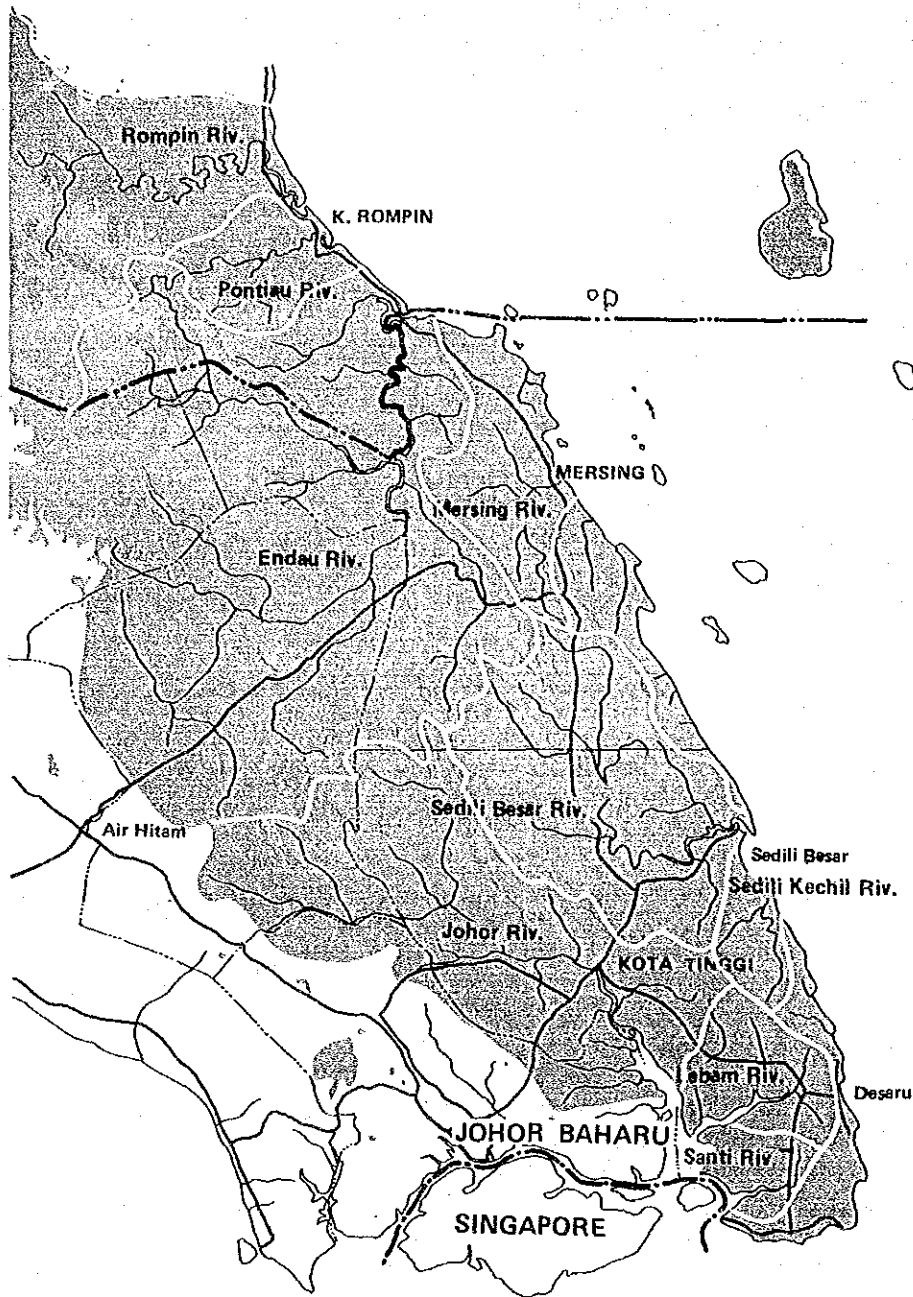
The coast stretches northwest-southeast for approximately 250 km. The coastline has a variety of sand beaches separated by rocky headlands and hill formations. The mountain chain is the west border of the South East Coast with the highest peaks of about 1,000 m. There are three large rivers of Johor, Sedili Besar and Endau which constitute the major water catchment area. Fig. 2.1.1 shows the topography and water catchment areas.

The climate is tropical, the temperature on the Coast is almost constant throughout the year with a mean maximum temperature of 31.7 degrees and mean minimum temperature of 22.4 degrees Centigrade. Annual rainfall amounts to 2,300-2,700 mm. The Coast is affected by monsoons for the three months of November, December and January. Tioman Island is the area most influenced by monsoons with a maximum average rainfall of 569 mm in December and the minimum of 76 mm in July. Kota Tinggi and Mersing districts are less affected.


As shown in Fig. 2.1.2, the prevailing wind in the monsoon season is from the north to the south. In Mersing, a wind velocity of 5-10 m/sec. has a probability of about 25% in the monsoon season.

Meteorological conditions have no serious influence on inland areas but the island areas, however, are affected; Transportation problems may be caused by strong winds in the monsoon season and possible deficiency in the water supply in the summer season.

Fig. 2.1.1 Topography and Water Catchment Area



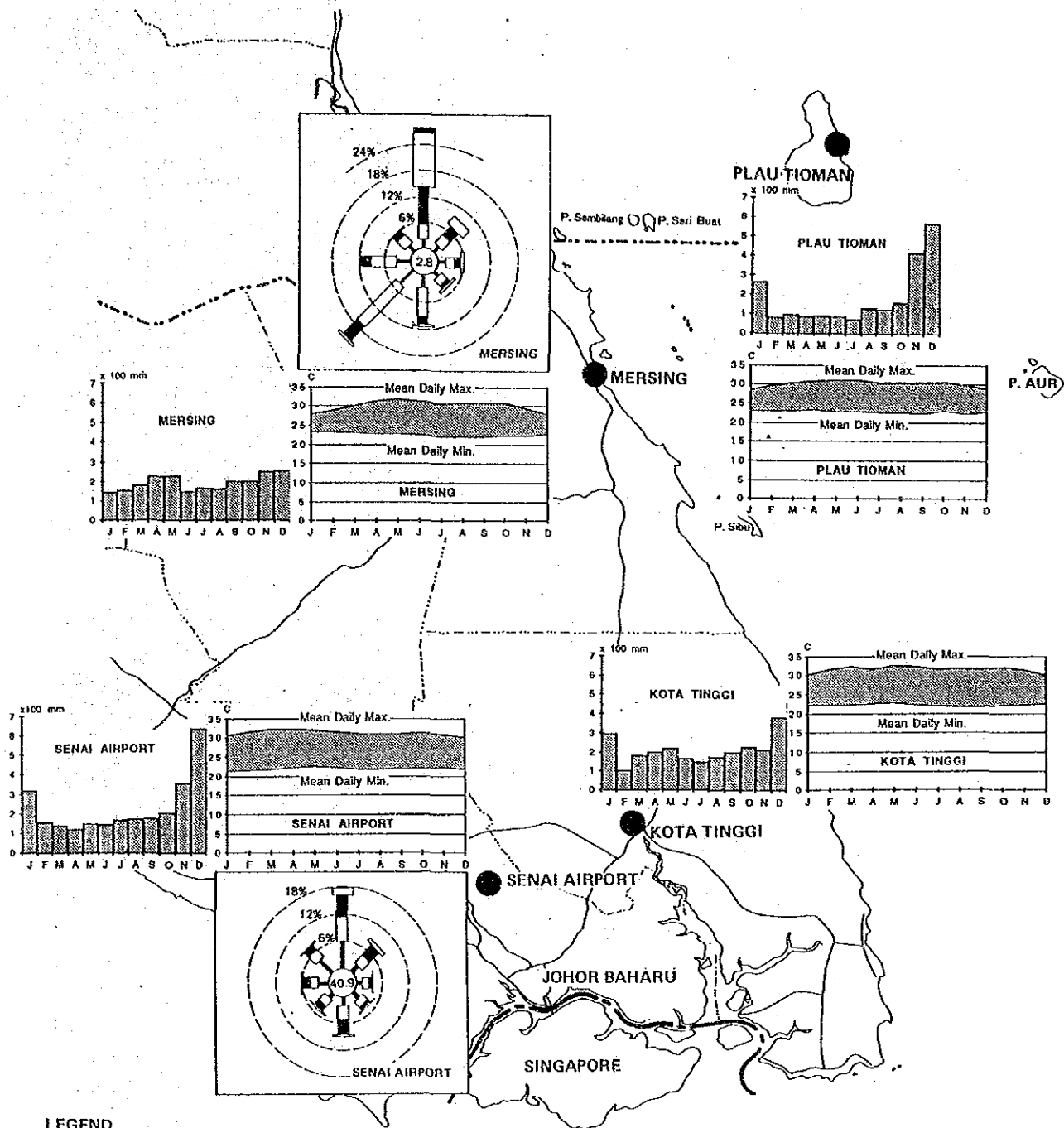
LEGEND

 HILL AND MOUNTAIN AREA
HIGHER 76m THAN SEALEVEL

 MAJOR WATER CATCHMENT AREA

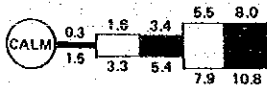
Source: JICA Study Team

Fig. 2.1.2 Rainfall and Wind Conditions

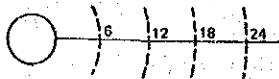


LEGEND
WIND ROSE SUMMARY (1975-1985)

ANNUAL AVERAGE (m/s)



TIME 24 hours (%)



Source : National Coastal Erosion Study

2.1.3 Population

The population of the South East Coast was estimated as 236,900 persons in 1985 with distribution shown in Table 2.1.1. The annual population growth rate is calculated at 3.8% for the period of 1980-1985. Despite such a high growth rate in recent years, the population density of the Coast is calculated to be only 20.6 persons per square kilometer.

Population growth rates for the districts in the South East Coast are 4.0% for Rompin, 3.9% for Kota, and 3.2% for Mersing during the period 1980-1985. High population growth rates of the first two districts are attributable to the immigration caused by the development activities under the jurisdiction of DARA and KEJORA.

Fig. 2.1.3 indicates the age structure of the South East Coast. It represents a typical pyramid with a greater number in the younger age groups and a smaller number of older people. This is mainly due to the immigration of younger labour into Kota Tinggi district, thus increasing the birth rate.

It is expected that job opportunities will be created to absorb the increasing number of young labourers. A block of land provided for farmers at their settlements is not large enough to sustain a second generation. The second generation will therefore be forced to find employment outside the existing plantations.

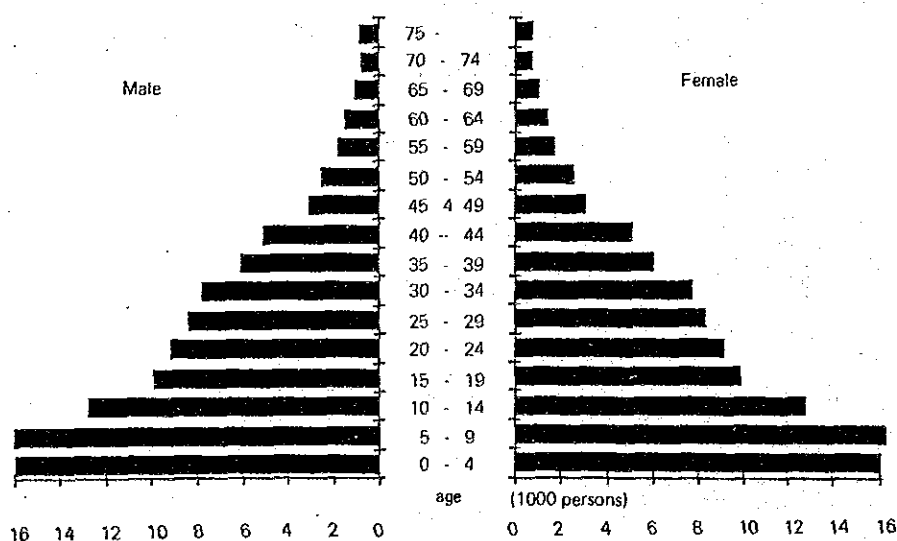
Tourism development in the South East Coast will provide the younger generations with direct and indirect job opportunities. To ensure a smooth adaptation to a tourist service industry, it will become necessary to initiate a suitable training institute and programmes.

Table 2.1.1 Population by District

Area	Population (1,000 persons)			Growth Rate 1) 1980-1985 (% p.a.)	Area (km ²)	Population Density 1985 (persons/km ²)
	1970	1980	1985			
Kota Tinggi	60.9	114.3	138.7	3.9	3,483	39.8
Mersing	34.6	42.2	49.5	3.2	2,838	17.4
Rompin	22.6	40.0	48.7	4.0	5,201	9.4
Study Area	118.1	196.5	236.9	3.8	11,522	20.6
Johor State	1,277.2	1,638.2	1,867.3	2.7		
Pahang State	504.9	798.8	921.4	2.9		
Peninsular Malaysia	8,809.5	11,426.6	12,981.0	2.6		

Note: 1) Estimation based on the growth rate between the period 1970-1980
Source: Population & Housing Census of Malaysia, 1970 and 1980

Fig. 2.1.3 Population by Age Group in the Study Area



Source: Department of Statistics

2.1.4 Economic Activities

The Gross Domestic Product (GDP) of the State of Johor amounted to M\$6,103 million in 1985 which was 10.4% of all Malaysia. Table 2.1.2, shows that the sectoral composition is 31.3% for the primary sector, 22.6% for the secondary sector and 46.1% for the tertiary sector. The composition is similar to that of the Malaysian average. Per capita GDP amounted to M\$3,324 which was below the national average by 12%.

Table 2.1.2 Economic Production by Industry in 1980, 1985 and 1990

Industry	The State of Johor						Whole Malaysia 1985	
	1980		1985		1990 1)		Mil. M.\$	(%)
	Mil. M.\$	(%)	Mil. M.\$	(%)	Mil. M.\$	(%)		
Primary Industry	1,733	(37.0)	1,910	(31.3)	1,984	(26.0)	18,052	(30.8)
Secondary Industry	1,109	(23.7)	1,379	(22.6)	1,830	(24.0)	11,357	(19.4)
Tertiary Industry	1,840	(39.3)	2,814	(46.1)	3,820	(50.0)	29,186	(49.8)
Total	4,682	(100.0)	6,103	(100.0)	7,634	(100.0)	58,595	(100.0)
GDP per capita (M\$)	2,916		3,324		3,709		3,758	

Note: 1) Forecast

Source: Fifth Malaysia Plan 1986 - 1990

According to the Fifth Malaysia Plan for 1986-1990, it is expected that the secondary and tertiary sectors will be more developed than the primary sector, the share of which will be reduced by 5.3% in 1990.

Table 2.1.3 shows the employment structure of the South East Coast. The total labour force in 1980 was 63,600 persons with an employment of 32.4%. The sectoral composition was 59.9% for primary sector, 9.4% for secondary sector, and 28.9% for tertiary sector. Compared with the average of Peninsular Malaysia, dependence on primary sector was higher by about 23% and that of secondary sector was lower by about 10%. The Coast is solely dependent on the primary sector without diversified economic activities.

The South East Coast has been absorbing immigration from outside mainly due to the progress of the development programmes by KEJORA. It is estimated that supply and demand of the labour force in the Coast is rather tight. Tourism development will tend to further tighten the demand particularly in Kota Tinggi district.

Table 2.1.3 Employment Structure by Industry, 1980

Industry	Unit : 1,000 persons					
	Peninsular Malaysia		Study Area		Johor State	
	Persons	(%)	Persons	(%)	Persons	(%)
Primary Industry	1,427.0	(37.0)	38.1	(59.9)	236.1	(43.2)
Secondary Industry	738.9	(19.2)	6.0	(9.4)	103.7	(19.0)
Tertiary Industry	1,627.3	(42.2)	18.4	(28.9)	198.5	(36.3)
Looking for First Job	62.1	(1.6)	1.1	(1.7)	8.7	(1.6)
Total Labor Force	3,855.3	(100.0)	63.6	(100.0)	547.0	(100.0)

Source: Population & Housing Census of Malaysia

2.1.5 Land Use

The outlined land use of the South East Coast is shown in Table 2.1.4 and Fig. 2.1.4 based on the data on the Kota Tinggi and Mersing districts.

Total forest including plantation forest accounted for about 90% of all land for both districts. Land use for the other purposes is quite minimal; other agriculture use and bushes/abandoned land each account for 3% and urban land use and others 1.7% each.

The outstanding difference in the land use of both Kota Tinggi and Mersing districts lies in the difference of primary/secondary forest and plantation forest. Primary/secondary forest in Mersing district accounts for 66.7% but plantation forest for 6.9%. The composition ratio of primary/secondary forest in Kota Tinggi district was about 30% less than that of Mersing district, whereas that for plantation forest was about 30% more than that of Mersing district. This difference indicates the greater plantation development in Kota Tinggi district.

Table 2.1.4 Land Use in 1981

Item	Unit : 1,000 ha					
	Kota Tinggi		Mersing		Total	
	Area	(%)	Area	(%)	Area	(%)
Forest	190.0	(54.5)	243.8	(84.9)	433.8	(68.2)
Primary/Secondary Forest	123.8	(35.5)	191.4	(66.7)	315.2	(49.6)
Bush Forest	24.3	(7.0)	12.3	(4.3)	36.6	(5.8)
Swamp Forest	41.9	(12.0)	40.1	(14.0)	82.0	(12.9)
Plantation Forest	121.7	(34.9)	19.8	(6.9)	141.5	(22.3)
Oil Palm	89.1	(25.5)	12.7	(4.4)	101.8	(16.0)
Rubber	32.6	(9.3)	7.1	(2.5)	39.7	(6.2)
Other Agriculture	7.9	(2.3)	12.0	(4.2)	19.9	(3.1)
Grass/Abandoned Land	15.2	(4.4)	4.0	(1.4)	19.2	(3.0)
Town/Mining/Public Use	7.1	(2.0)	3.6	(1.3)	10.7	(1.7)
Others	7.0	(2.0)	3.8	(1.3)	10.8	(1.7)
Total	348.9	(100.0)	287.0	(100.0)	635.9	(100.0)

Source : Johor State Planning and Development Study, 1986

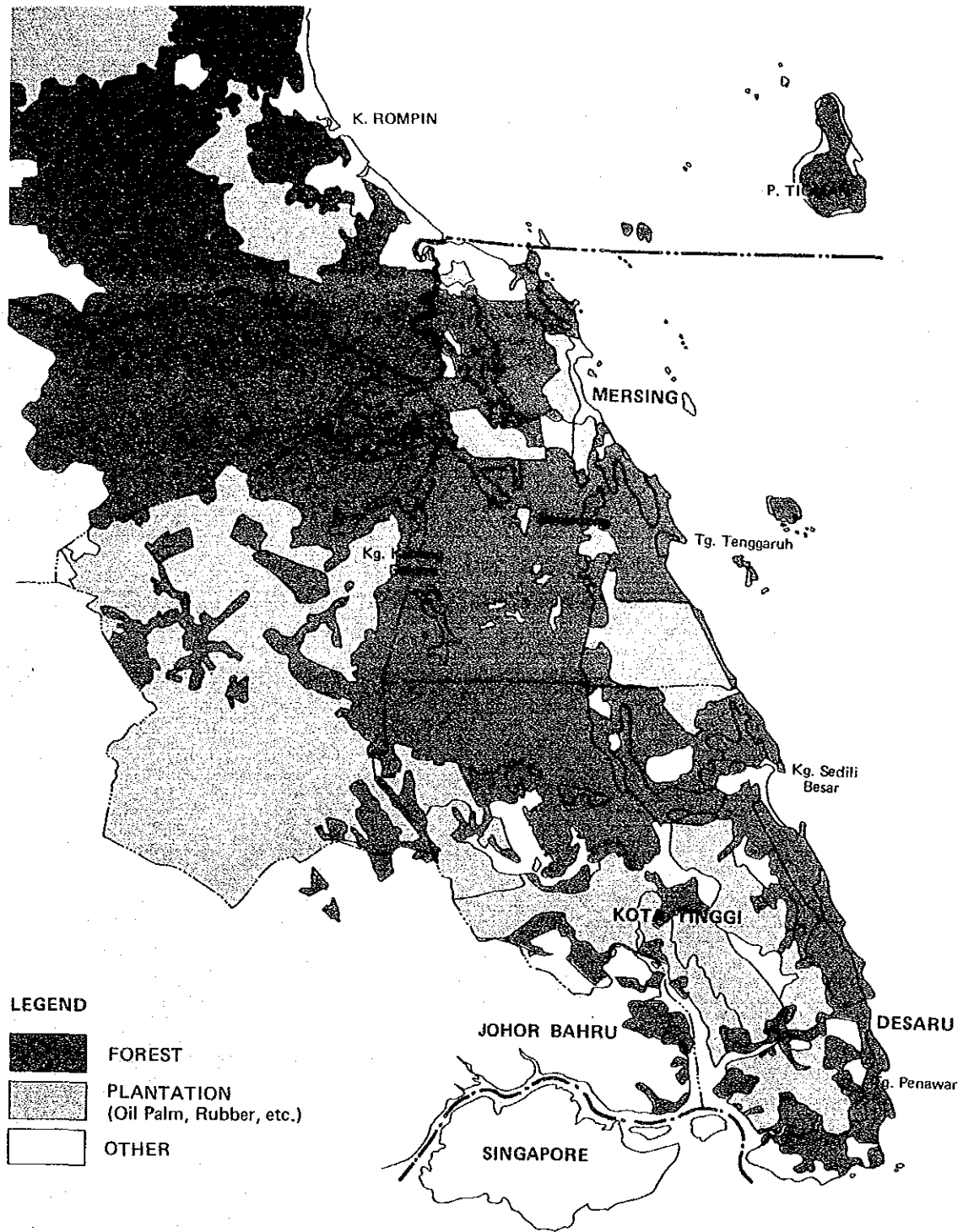
The distribution of urban centres in and around the South East Coast is shown in Fig. 2.1.5. Johor Bahru had the largest urban population of 250,000 persons in 1980. Most of the remaining urban centres had a population of less than 10% of that of Johor Bahru.

Kota Tinggi and Mersing had an urban population of 14,000 persons in 1980. These two towns are district centres equipped with such public facilities as government branch offices, local hospitals, high school, fire and police stations and post office. They are integrated into the national electricity and telecommunication network. Supermarkets, banks, auto repair factories, and other small factories are located near the centres to satisfy local demands.

Village centres are administered by the district centre. A typical village centre has a population of 1,000-3,000 persons and supplies daily necessities and services for the villagers.

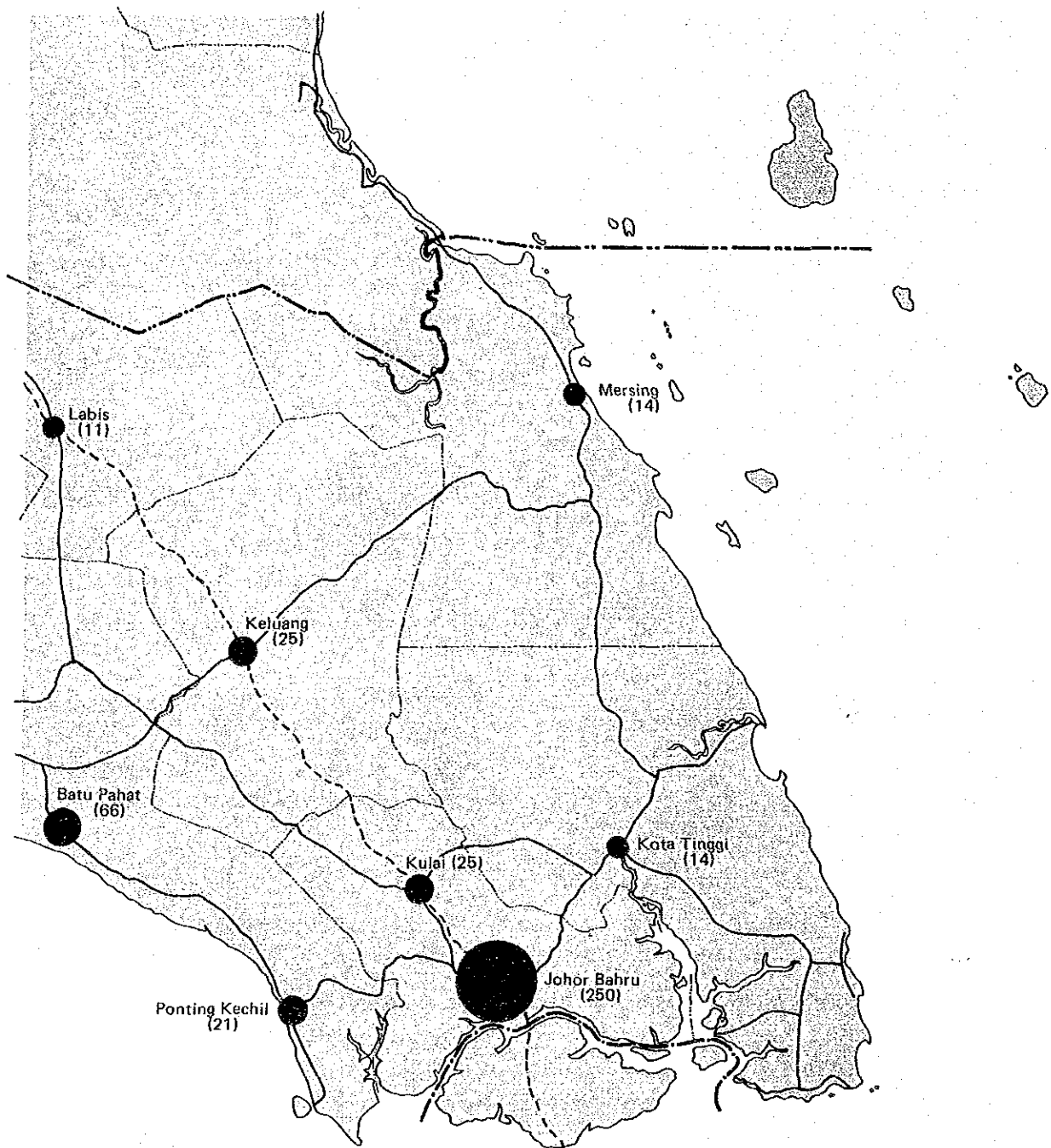
Tourism development requires various kind of supplies from local markets. In consideration of the limited functions provided by district and village centres in the South East Coast, Johor Bahru is expected to be an important support centre for the development of the South East Coast.

Fig. 2.1.4 Land Use



Source: Forest Dept. of the States of Johor and Pahang
District Land Offices of the States of Johor and Pahang

Fig. 2.1.5 Urban Centres



NOTE; Figures in () show population in 1980. (unit: 1000)
SOURCE; Population and Housing Census of Malaysia 1980

2.1.6 Issues

Development of tourism in the South East Coast will have to address issues in terms of natural as well as social environment as noted in the preceding sections.

- offshore islands will suffer monsoons in November, December and January,
- some of the offshore islands have the possibility of water shortage in the dry months of June and July,
- further reduction of primary/secondary forests might decrease the natural attraction,
- tourism development will tighten the local labour market, resulting in migration to the South East Coast, and
- manpower development programmes especially for younger generations will be necessary to facilitate employment in tourism sector.

Investment in tourism development by foreign capital must take account of the land tenure system specific to Malaysia. Some parts of the coastal area are designated Malay reserves where foreign capital has to obtain a consensus for development activities.

2.2 Tourists to the South East Coast

2.2.1 Numbers of Tourist Arrivals

Tourist arrivals in the South East Coast in 1987 was estimated on an overnight basis. The data was obtained by;

- hotel survey by TDC,
- hotel guest survey by the study team, and
- estimated room occupancy rates.

The total number of overnight tourists in the South East Coast was estimated at 161,600 persons in 1987. Desaru had the largest number of tourists, 61,470 persons (38.0%), followed by Tioman with 32,150 persons (19.9%) and Mersing with 30,450 persons (18.8%) as shown in Table 2.2.1

Table 2.2.1 Tourist Arrivals to the South East Coast in 1987

	Unit : persons				
	Malaysian	Singaporean	Japanese	Others	Total
Tioman	10,120	10,970	790	10,270	32,150
Other Islands	5,000	5,710	-	5,840	16,550
Mersing	22,620	4,200	290	3,340	30,450
Rompin	660	60	-	130	850
Desaru	12,570	22,870	16,490	9,540	61,470
Kota Tinggi	16,070	2,790	-	1,240	20,100
Total	67,040	46,600	17,570	30,360	161,570

Source: JICA Study Team

Fig. 2.2.1 shows the monthly fluctuation of hotel guests at Desaru View Hotel and Tioman Island Resort. Characteristics of monthly fluctuation of tourist demand can be summarized as follows;

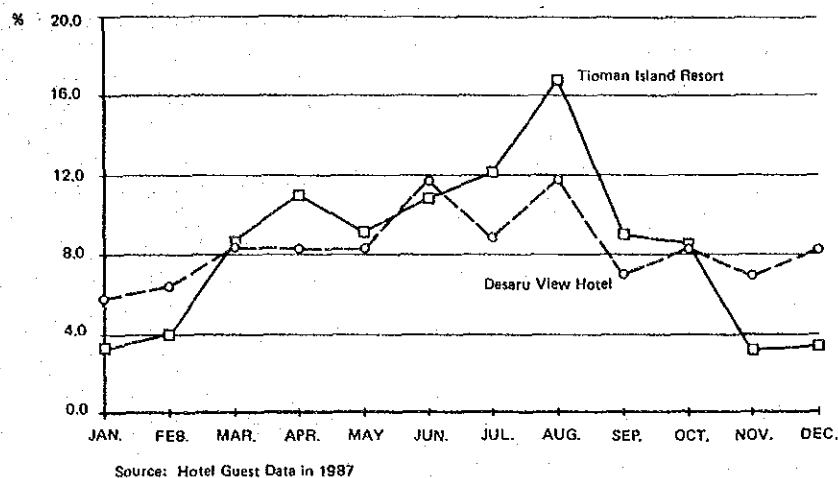
Monthly fluctuation at Desaru is small (6.0%-12.0%) due to the following reasons:

- influence of monsoon is less than Tioman,
- the Desaru View Hotel continues to constantly attract Japanese package tours, and
- Desaru has become a weekend destination for Singapore citizens.

Monthly fluctuation at Tioman is far greater than Desaru (3.0%-17.0%) due to;

- monsoon season affects the tourist arrivals in November, December and January,
- the highest peak of 17.0% appears in August though the other months are fairly constant, and
- a large number of low cost accommodation is available to absorb the wide fluctuation of tourist arrivals.

Fig. 2.2.1 Monthly Fluctuation of Hotel Guests in Tioman and Desaru



2.2.2 Characteristics of Tourists

An interview survey was carried out by this study to understand the characteristics of tourists visiting the South East Coast. Table 2.2.2 shows the number of interviews performed.

Table 2.2.2 Number of Interviews

	Desaru 1)		Tioman 2)		Total	
	Number	(%)	Number	(%)	Number	(%)
Malaysian	41	(13.8)	34	(14.3)	75	(14.0)
Singaporean	79	(26.5)	21	(8.9)	100	(18.7)
Japanese	100	(33.6)	6	(2.5)	106	(19.8)
Others	78	(26.2)	176	(74.3)	254	(47.5)
Total	298	(100.0)	237	(100.0)	535	(100.0)

Note : 1) at Desaru View Hotel, Desaru Chalet and Desaru Golf Course Hotel for April 16 - 24, 1988

2) at Tioman Island Resort, ABC Chalet, Swiss Chalet, etc for April 17 - 24, 1988

Source : JICA Study Team

a. Characteristics of Singaporean Citizens:

Desaru: average guest nights: 2.1 days

route to Desaru:

- Singapore/Johor Bahru/Kota Tinggi/Desaru

no destinations other than Desaru

Tioman: average guest nights: 2.8 days

route to Tioman:

- Singapore/Johor Bahru/Mersing/Tioman (48%)

- Singapore/Tioman (38%)

- Singapore/Other Destinations/Senai/Mersing/Tioman (14%)

Characteristics:

- most Singaporeans who stay overnight at Desaru are weekenders who are repeat visitors,
- Desaru and Tioman are considered separate destinations due to the transportation difficulties,
- more frequent air service between Singapore and Tioman will attract more Singaporeans to Tioman.

b. Characteristics of Japanese Visitors:

Desaru: average guest nights: 1.4 days

route to Desaru:

- Singapore/Johor Bahru/Kota Tinggi/Desaru

no destinations other than Desaru

Characteristics:

- the number of guest nights are very limited as Desaru is included in a package tour to Singapore of 5-6 days,
- honeymooners are 22% of the total tourists,
- sightseeing bus is the sole transportation means to Desaru.

c. Characteristics of Other International Tourists:

Desaru: average guest nights: 2.4 days

route to Desaru:

- Singapore/Johor Bahru/Kota Tinggi/Desaru

6% of them visited Tioman

Tioman: average guest night 5.5 days

route to Tioman

- from Singapore (73%)
- from Kuala Lumpur (17%)
- from Penang (3%)
- from others (7%)

Characteristics:

- 40% of the total guests at Desaru are foreigners from Singapore,
- Singaporeans account only for 3% of the visitors to Tioman,
- visitors to Tioman via Kuala Lumpur use air services and have no other destination.

d. Characteristics of Domestic Tourists:

Desaru: average guest nights: 2.4 days

route to Desaru:

- from State of Johor (61%)
- from KL (17%)

no destinations other than Desaru

Tioman: average guest nights: 4.2 days

route to Tioman:

- from State of Johor (41%)
- from KL (34%)

no destinations other than Tioman

Characteristics:

- nearly 80% of the total guests are from the State of Johor and KL,
- nearly 60% of visitors to Desaru are day trippers,
- visitors to Tioman belong to younger age groups and group package tourists.

e. Attractions for international tourists were categorized according to attraction and nationality. (May sum to over 100%)

Desaru

Singaporean: beach (43.0%), food (34.2%), cleanliness (29.1%), roads (24.1%), marine sport facilities (22.8%)

Japanese : scenic beauty (36.0%), food (33.0%), historical assets (32.0%), local transportation (32.0%), marine sport facilities (28.0%), souvenir (25.0%), advertisement (23.0%), traditional performances (20.0%)

Others : beach (47.4%), cleanliness (24.4%)

Domestic : beach (53.7%), food (26.8%), cleanliness (24.4%), marine sports facilities (22.0%)

Tioman

Others : keep as it is now (50.2%), cleanliness (30.8%), food (25.4%), accommodation (21.4%)

Domestic : cleanliness (53.1%), accommodation (46.9%), marine sports facilities (37.5%), food (37.5%), local transportation (34.4%), information service (25%)

According to the above, Japanese tourists have the most diversified interests, followed by Singaporean. Other international tourists have specific requirements with greater emphasis on particular items. This kind of difference should be noted in planning the tourism development of the South East Coast.

2.3 Transportation Network and Other Infrastructures

2.3.1 Transportation Network

As shown in Fig. 2.3.1, the South East Coast is connected to international as well as domestic major transportation nodes in the following ways;

- international traffic from Singapore crosses the causeway to Johor Bahru, and then travels to Kota Tinggi by way of Route 3.
- Domestic traffic from Kuala Lumpur travels south along Route 1 to Johor Bahru, and then to Kota Tinggi by Route 3.
- Domestic traffic from Kuantan travels to the coast by way of Route 3 to Mersing.
- Air transport is available between Kuala Lumpur and Johor Bahru and between Kuala Lumpur and Tioman Island.

International traffic via Singapore has the biggest traffic volume to the South East Coast according to the interview survey carried out by this study.

Fig. 2.3.2 illustrates the accessibility from the South East Coast in terms of travel time by both land and sea transport. From Desaru, Malacca and Kuantan can be reached in six hours, Singapore and Mersing in three hours. From Tioman Island, Johor Bahru and Kuantan can be reached in six hours, Mersing in three hours. Tioman Island is accessible to Kuala Lumpur and Singapore in forty-five minutes by air.

There are three airports or air-strips in and around the South East Coast as shown in Fig. 2.3.3. Senai Airport is the largest with a runway of 3,350 m capable of accommodating B747. Frequent air service is offered to and from Kuala Lumpur with a weekly seat capacity of 2,430 seats. Air service is also offered to Kota Kinabalu and Kuching.

Tioman Airport is on Tg. Tekek with a runway of 792 m accommodating BN 2. Due to the lack of flat land on the island, the runway is situated in a pocket of the mountains near the beach line. Aircraft are forced to take a sharp turn for landing and taking off. Air service is offered to Kuala Lumpur with nine flights and Singapore with six flights weekly.

The difficulty of improving Tioman Airport implies a need for accessibility improvements for sea transportation.

Mersing Air-strip has a length of 366 m, and is only used by small aircraft. There is no plan to improve the air-strip.

Changi Airport in Singapore is outside the area but it is used by visitors to the South East Coast. It is expected that the new ferry link between Changi Point and Tg. Belungkor will greatly facilitate international tourist travel to the South East Coast.

Fig. 2.3.1 Existing Transportation Network

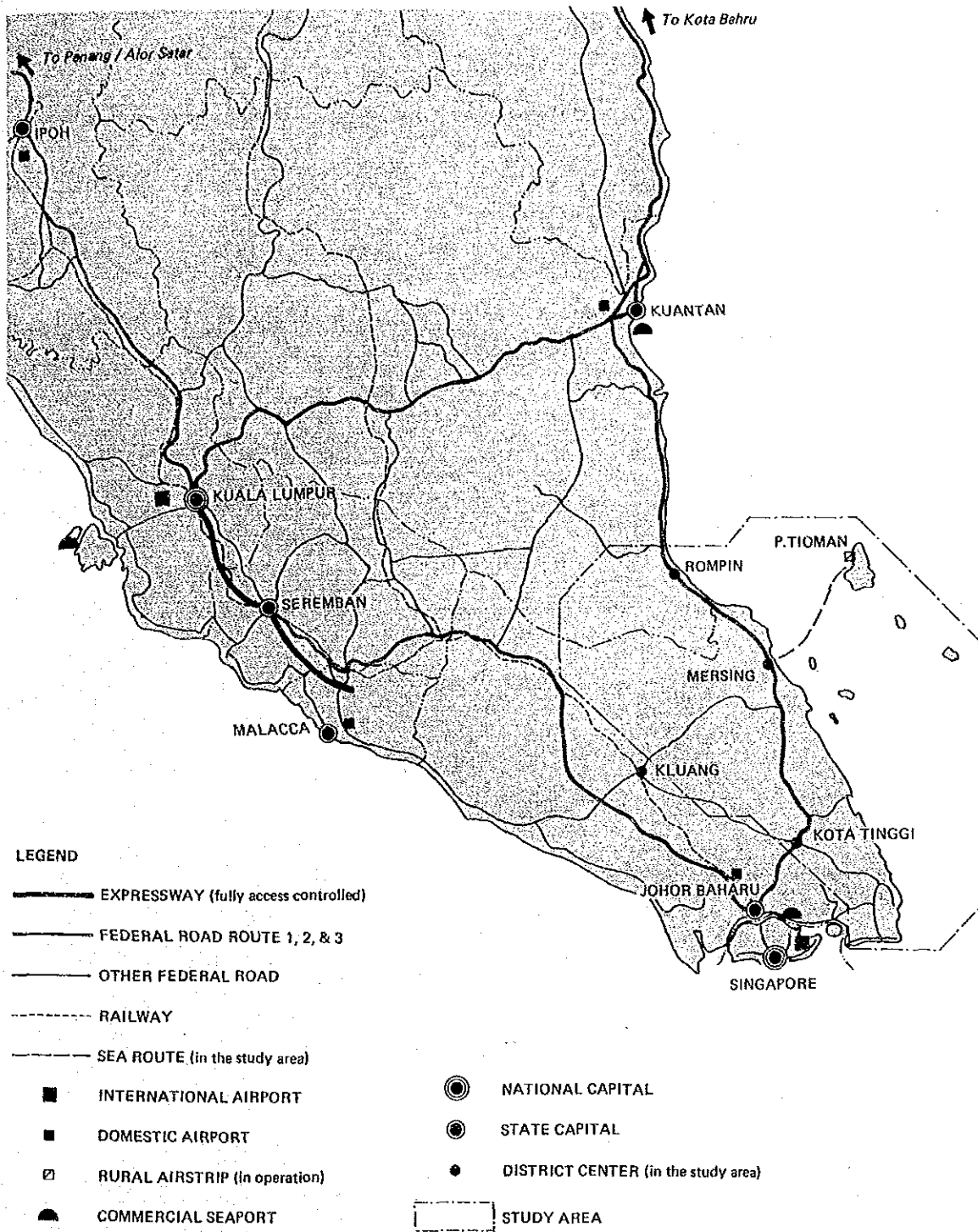


Fig. 2.3.2 Travel Time from Major Tourism Sports at Present

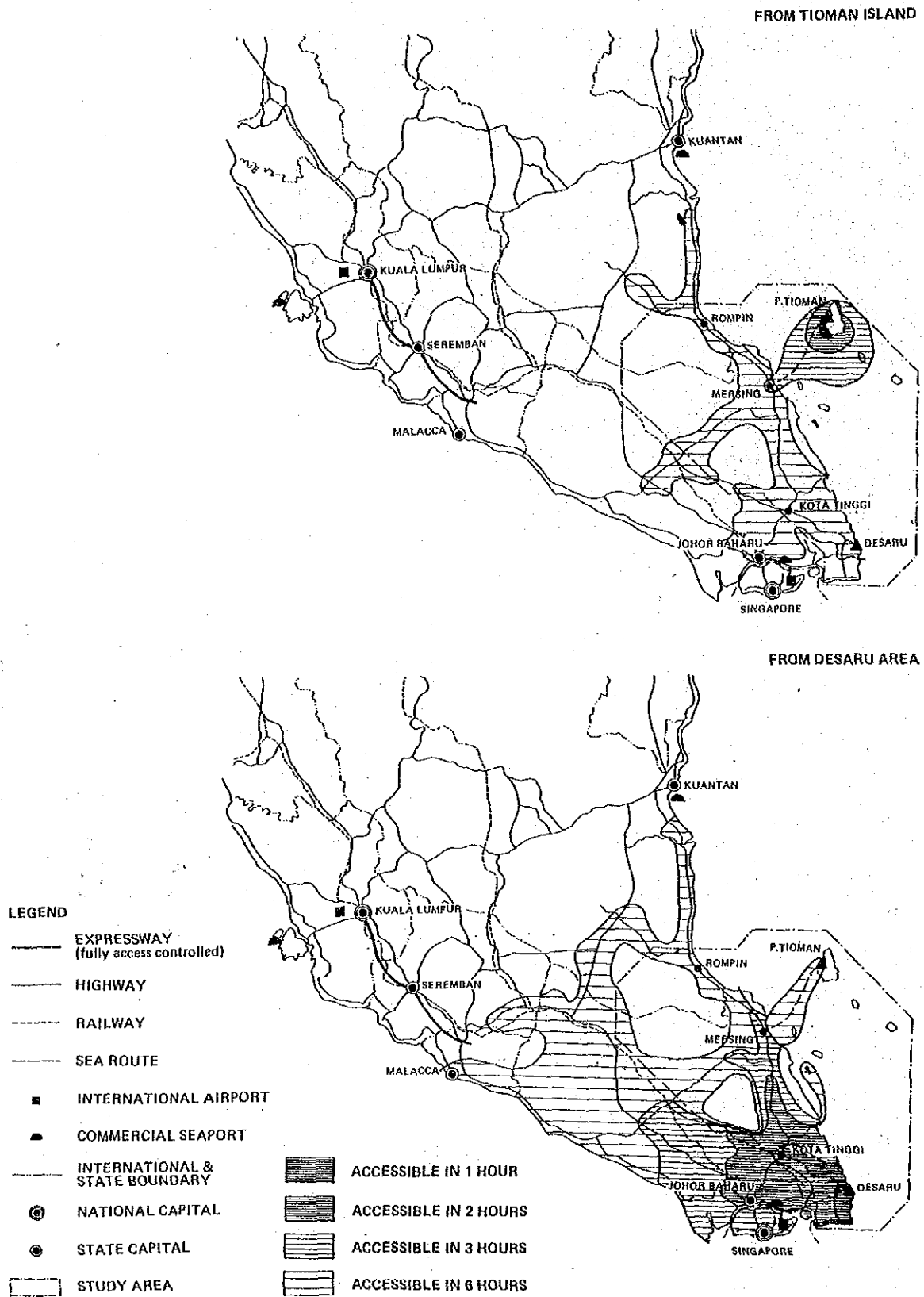
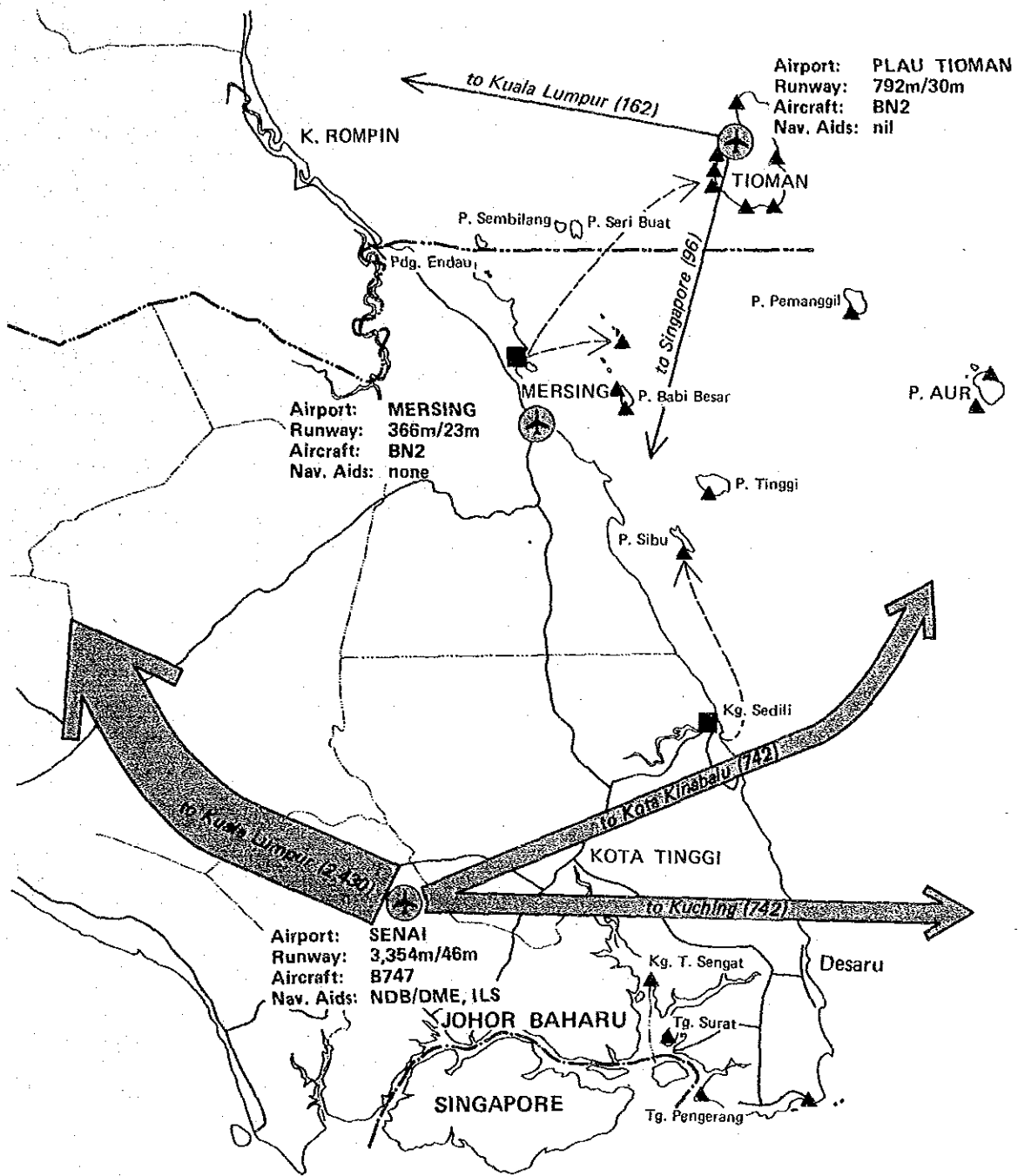




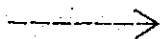


Fig. 2.3.3 Existing Air and Sea Transportation Facilities and Network



LEGEND

-   DOMESTIC AIRPORT/AIR STRIP
(available number of seats per week)
-  FISHERY PORT
-  JETTY
-  BOAT SERVICE

Source: Statistics and Flight Schedule of MOT

2.3.2 Land Transport

Johor Bahru and Singapore are connected by a 1,038 m long four lane causeway. Traffic from Singapore is introduced into the city centre of Johor Bahru through Jl. Wong Ah Fook and Jl. Tebrau with a total of 4-5 lanes for each direction. The traffic capacity of both the causeway and two streets is sufficient to accommodate the present traffic volume. Traffic flow in this area, however, is disturbed to a considerable extent mainly due to slow immigration and custom procedures. Traffic queues are piled up on both sides of the immigration booths, and cause traffic congestion in the centre of Johor Bahru.

Route 1 along the west coast from Kuala Lumpur is a two lane road of JKR standard 03-04 though there are some sections with the standard 05. A dual carriage expressway with full access control is open to traffic for the section between Kuala Lumpur and Malacca. A further extension to Air Hitam is scheduled for completion by 1991 and the remaining section to Johor Bahru by 1995. Travelling time from Kuala Lumpur to Johor Bahru is expected to be reduced to four hours when the whole stretch is completed.

Route 3 along the east coast from Kuantan is a two lane road with JKR standard 02-03. Due to the undulating topography, however, road alignment is inferior to Route 1. The section between Mersing and Kota Tinggi in the South East Coast has the worst alignment. The section between Kota Tinggi and Johor Bahru is scheduled to be improved to standard 05-06 by 1990. This will greatly improve the accessibility to the South East Coast.

Road network in the South East Coast comprises the following routes:

- Kota Tinggi-Kg. Tk. Ramunia,
- Muwal-Kg. Sedili,
- Muwal-Desaru,
- Kota Tinggi-Keluang, and
- Mersing-Air Hitam.

Kota Tinggi-Kg. Tk. Ramunia is of two lanes and is newly developed by KEJORA with JKR standard 05. The other routes are low standard local roads. Access to the coast is extremely limited.

Tioman Island has a path crossing the mountain area from Tg. Tekek to Juara, but no coastal road link connecting the separated beaches. Rocky ridges going directly into the sea prevents the construction of a road link around the island.

The transportation issues for development of tourism in the South East Coast are :

- inferior road conditions between Kota Tinggi and Mersing impedes an integrated development of tourism in the South East Coast,
- new access road construction is necessary to connect tourists' destinations with national highways, and
- immigration and custom procedures must be improved for a smooth flow of tourists between Malaysia and Singapore.

2.3.3 Sea Transport

The South East Coast has no commercial port but there are two fishery ports of Mersing and Sedili as shown in Fig. 2.3.3. Both ports suffer shallow water due to the sedimentation in the rivers.

Mersing Port is an important transportation node to the offshore islands. A hydrofoil with a seat capacity for 60 passengers offers service to Tioman Island in about two hours. A catamaran with a capacity of 150 passengers also serves Tioman in about one and a half hours. The daily operations is dependant on the water level and the number of passengers but no service is available during the monsoon season. There are 75 registered passenger boats and 59 registered cargo boats at present. These offer sea transport services on a charter basis with a travel time of 3-4 hours to Tioman Island. In addition to these vessels, a considerable number of fishing boats are engaged in passenger transportation to the offshore islands without proper registration.

There are seven offshore islands equipped with jetties; Tioman Island has 8 jetties, and there are 2 jetties each on Aur and surrounding islands. The remaining island have one jetty each. Most jetties are simple wooden structures.

In relation to Singapore, there is a sea link by passenger boat between Changi Point and Tg. Pengerang. The service is offered 6-7 times a day with a travel time of about 40 minutes. The maximum capacity is approximately 20 passengers. A ferry service between the South East Coast and Changi Point in Singapore is a major sea transportation network being planned for the region.

The issues related to sea transportation are that suspension of boat services is frequent in the monsoon season and that the safety of passengers is not assured due to uncontrolled operations.

2.3.4 Transportation Issues

Transportation issues for the development of the South East Coast are:

- improvement of the traffic situation in the centre of Johor Bahru,
- improvement of Route 3 for the section between Johor Bahru and Mersing/Rompin,
- improvement of sea transportation to offshore islands, particularly to Tioman Island,
- additional ferry link required between Changi Point and Tg. Belungkor, and
- improvement of immigration and custom procedures between Malaysia and Singapore.

2.3.5 Other Infrastructures and Public Services

1) Water Supply

Fig. 2.3.4 illustrates the outline of water supply, electricity, and telecommunication services. As discussed in 2.1.2, the peninsular side of the South East Coast has several rivers with abundant water flow. A water reservoir with a daily capacity of 7 million litres was constructed in the Desaru area and is expected to be enlarged to a capacity of 25 million litres per day. There is, therefore, no particular problem with water supply, but it is required that the tropical rain forest in the water catchment area be preserved as much as possible to maintain a high potential for water.

In contrast with the peninsular side, the offshore islands have limited water supply. Special attention should be paid to control development within the limitation of water supply compatible with local water consumption.

2) Electricity

Major diesel-electric power stations are located at Mersing and Penawar. Local electricity plants are installed at every town and village. At present, the capacity of the stations is adequate.

Mersing and Penawar, at present, are not connected into the national electricity grid, however, this will change when the switching stations now being constructed at both sites are completed.

Electricity in the offshore islands is supplied by diesel plants. There will be no change in the supply system on these islands in the future. It is an important issue to ensure a stable supply of diesel fuel to the islands by preparing suitable jetties and storage depots.

3) Telecommunication

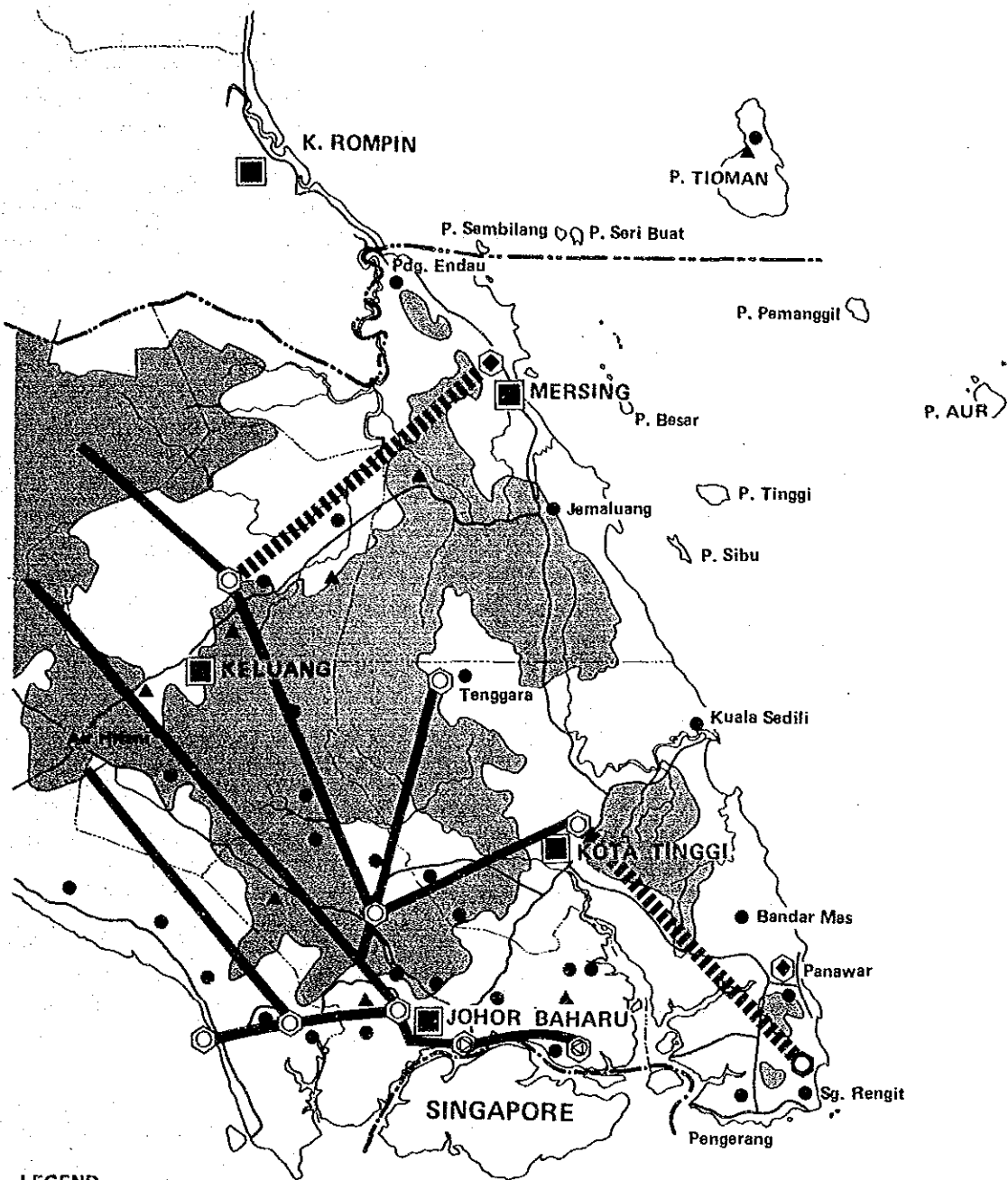
The South East Coast has 3 main and 9 sub exchanges. The total number of subscribers amounts to 6,495 lines where the capacity amounts to 17,400 lines. Tioman Island is connected in the national network through a microwave system to Rompin. The number of subscribers on the Tioman Island amounts only to 15 lines.

Telecommunication is very important for tourism development in the following ways;











- long distance calls related to hotel reservations,
- long distance calls between hotels and wholesalers/airlines, and
- long distance calls by hotel guests.

Development of the telecommunication network will become necessary in accordance with the tourism development of the South East Coast. This requirement can be satisfied by the introduction of new telecommunication technology.

Fig. 2.3.4 Network of Electricity, Telecommunication and Water Catchment Area



LEGEND

- | | | | |
|---|--|---|------------------------------------|
|  | CATCHMENT AREA FOR WATER RESOURCE CONSERVATION | | |
| ELECTRICITY SUPPLY FACILITY AND NETWORK | | TELECOMMUNICATION FACILITY AND NETWORK | |
|  | MAJOR ELECTRICITY GENERATING PLANT |  | MAIN EXCHANGE |
|  | DIESEL ELECTRICITY GENERATING FACILITY |  | EXCHANGE |
|  | NATIONAL GRID SWITCHING STATION |  | RADAR STATION |
|  | N.G. SWITCHING STATION (UNDER CONSTRUCTION) |  | NATIONAL GRID (EXISTING) |
| | |  | NATIONAL GRID (UNDER CONSTRUCTION) |

Source: LLN, STM and the State of Johor

4) Other Facilities and Social Services

a) Flood Mitigation

Flood problems in the South East Coast are not serious compared with that of the East Coast where this is attributable to river mouth sedimentation.

Kota Tinggi and Mersing towns sometimes experience temporary floods due to unsatisfactory drainage. Some of the road sections between Keluang and Jemaluang suffer flooding due to the overflow of river water.

Development of a drainage system in Kota Tinggi and Mersing is required as a part of an urban facility renovation programme.

b) Sewage Treatment

Systemized sewage treatment is not established in the South East Coast except at international standard hotels. Individual septic tanks or pit latrines are used without a centralized collection system. Waste water from households is discharged without any treatment.

This type of sewage disposal has a direct impact on water quality, which in turn influences the ecological system. Immediate improvement of sewage treatment, particularly on the offshore islands, is vital.

c) Solid Waste Treatment

Solid waste is treated in the towns of Kota Tinggi, Mersing, Rompin, and in KEJORA but it is not collected in most parts of the South East Coast. Solid waste is thrown and left in the backyard of the chalets and longhouses located on the offshore islands.

Improvement in solid waste collection and treatment is very important for tourism development for visual as well as sanitary improvement.

d) Social Services

District hospitals are established in Kota Tinggi, Mersing, and Rompin districts. Medical practitioners operate clinics in both district and village centres. These hospitals and clinics offer general medical examinations. General Hospital in Johor Bahru provides more specific and intensive care as required.

The South East Coast has no security problems as police stations are located in district and village centres. It is required to maintain a good security condition in the future to support the expected tourism development.

Postal service covers whole the South East Coast and there is no particular problem at present.

2.4 Existing Tourist Attractions

2.4.1 Tourism Resources

Tourism resources of the South East Coast can be classified into five major categories:

- coastal and island beach resources,
- tropical rain forest,
- potential scenic corridor,
- significant flora and fauna, and
- historical and cultural resources.

Fig. 2.4.1 shows the distribution of tourism resources of the South East Coast. Coastal beach resources are facing to the South China Sea for the section between Desaru and Mersing/Rompin. Island resources are scattered to the east of Mersing, Tioman Island being the major attraction point. The biggest tropical rain forest is located to the west of Mersing and smaller ones are distributed along most of the South East Coast. Roadside scenery for the sections between Mawal and the Hulu Sedili river and between the Tinggi hill and Kanang Bahru are potential scenic corridors. Significant flora and fauna are found in both Endau-Rompin and Endau-Tinggi tropical rain forests. The South East Coast has, however, very limited historical and cultural resources.

Tourism development of the South East Coast will largely depend on the development and improvement of the transportation network because resources are distributed over a large area and island resources require sea transportation.

In order to supplement the lack of developed historical and cultural resources, it is required to develop some specific tourist attractions in terms of regional identity such as Malay Kampongs, fishing villages, local industries, and historic ruins.

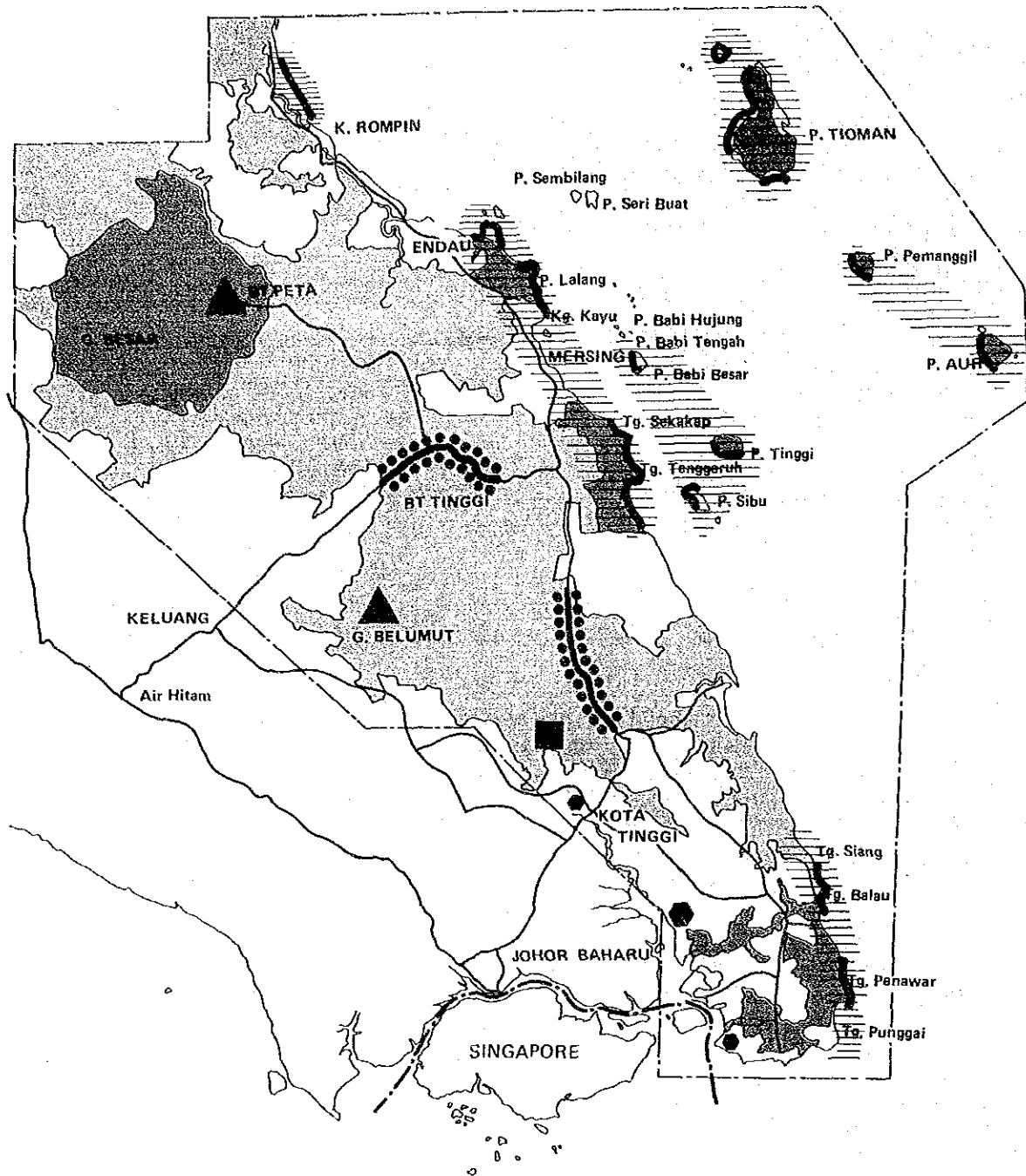
Beach resources along the East Coast are separated by headlands, forming thirty-eight separated beaches. Most of the beaches are of golden-silica sand with a rather narrow and shoaling beach with an average depth of 3 m. The water is clear except in the monsoon season. Coral reefs are found at some headlands. General tidal current is from south to north though there are local currents in front of different beaches.

Fig. 2.4.2 illustrates the evaluation results of beach resources along the East Coast. The evaluation factors considered are beach condition, marine resource, scenery and inland natural resources. The beaches classified as "good" for each factor are:

Beach Condition:	Penyusah-Penawar, Balau-Siang, Liang-Tenggaroh
Marine Resource:	Lompat-Balau, Liang-Muaru
Scenery:	Balau-Siang
Inland Natural Resource:	Lompat, Balau, Siang-Kelesa, Tenggaroh-Sekakap, Arong-Gorek

Overall evaluation of the beaches of the East Coast was performed by synthesizing the individual factor evaluation. The beaches classified as "good" overall are Pungai-Penawar, Balau-Siang, and Liang-Muaru.

Fig. 2.4.1 Tourism Resources in the South East Coast




LEGEND

 South East Coast


 MAJOR COASTAL/ISLAND RESOURCES AND POTENTIAL BEACH

 NATURAL FOREST AND POTENTIAL FOREST

 POTENTIAL SCENIC CORRIDOR

 WATERFALL

 SIGNIFICANT FLORA/FAUNA

 HISTORICAL/CULTURAL RESOURCE

Source: JICA Study Team

Beach resources along the East Coast can generally be evaluated excellent in comparison with those on the peninsula, but they are not equal to some internationally popular beaches.

The outstanding characteristic of the beach resources along the East Coast is that they are backed by tropical rain forests. It is essential to preserve the existing tropical rain forests so as to enhance this major natural advantage.

About fifteen islands are scattered in the South China Sea within 15-80 km from Mersing. Tioman Island is the biggest one with an area of about 140 km², followed by the Tinggi Island with an area of about 15 km². The sea water around these islands is much clearer than the sea water along the East Coast of the peninsula. It is reported that most of the coral reefs in this area were destroyed twenty-thirty years ago by fishery activities using explosives. A marine survey carried out by this study shows that the coral is growing in some places though they are still very young.

Tioman Island, which belongs to the State of Pahang, has a mountain peak of 1,038 m height. Foot of the mountain extends into the shoreline, resulting in several completely separated beaches with small flatlands.

The island beach resources are evaluated by the same evaluation that applied to the coastal beach resources. The beaches classified as "good" by overall evaluation are Juara and Gua Layang-Layar beaches on Tioman Island and those on Aur Island and Tinggi Island. This is shown in Fig. 2.4.3.

Island beach resources, especially on Tioman Island, are internationally attractive tourism resources though they have some constraints for future development. The probable constraints are:

- monsoons during the period of November, December, and January,
- Tioman Island might have a land tenure problem for future tourism development because of the limited availability of flat land and
- the other small islands have rather limited development potential because of the restricted availability of land and water resources.

Inland tourism resources are those attributable to tropical rain forest. There are three typical types of tropical rain forest;

- beach forest,

This type of forest is distributed on hills and headlands along the coastal line and forms a typical tropical scenery with smaller trees and dense foliage.

- lowland dipterocarpus forest,

This type of forest is most representative tropical rain forest composed of multi-layered series of tree crowns. The highest layer can be as high as 50 metres. The scenery is expected to give a powerful and strong jungle impression to visitors.

- mangrove forest.

This type of forest can often be found near river mouths. Dark green mangrove foliage provides an extensive monotonous view along the rivers. The scenery is changed from time to time depending on the tidal fluctuations.

Particular tourism resources attributable to the tropical rain forest can be put into three categories:

- plants peculiar to tropical rain forest,

Buttress trees, cauliflorous plants, climbers, epiphytes, parasites and stranglers are such kind of examples which can hardly be seen in the places other than the tropical zone

- wildlife, birds and insects,

A variety of species of animals, birds and insects inhabit the South East Coast though some of them are endangered due to the logging practices intruding into the depth of the forests

- Endau-Rompin forest area.

Endau-Rompin Forest area is biologically peculiar in formation with remnants of the flora species of Borneo and is quite rich in biota

Tropical rain forests with better accessibility than those of other ASEAN countries is one of the most precious tourist resources of the South East Coast as shown in Fig. 2.4.4. It is imperative to suspend logging practices as soon as possible.



Tree of Dipterocarpus in Endau Rompin Forest



Riverside Mangrove and Endau Rompin Forest

Fig. 2.4.2 Natural Tourism Resource Evaluation : East Coast

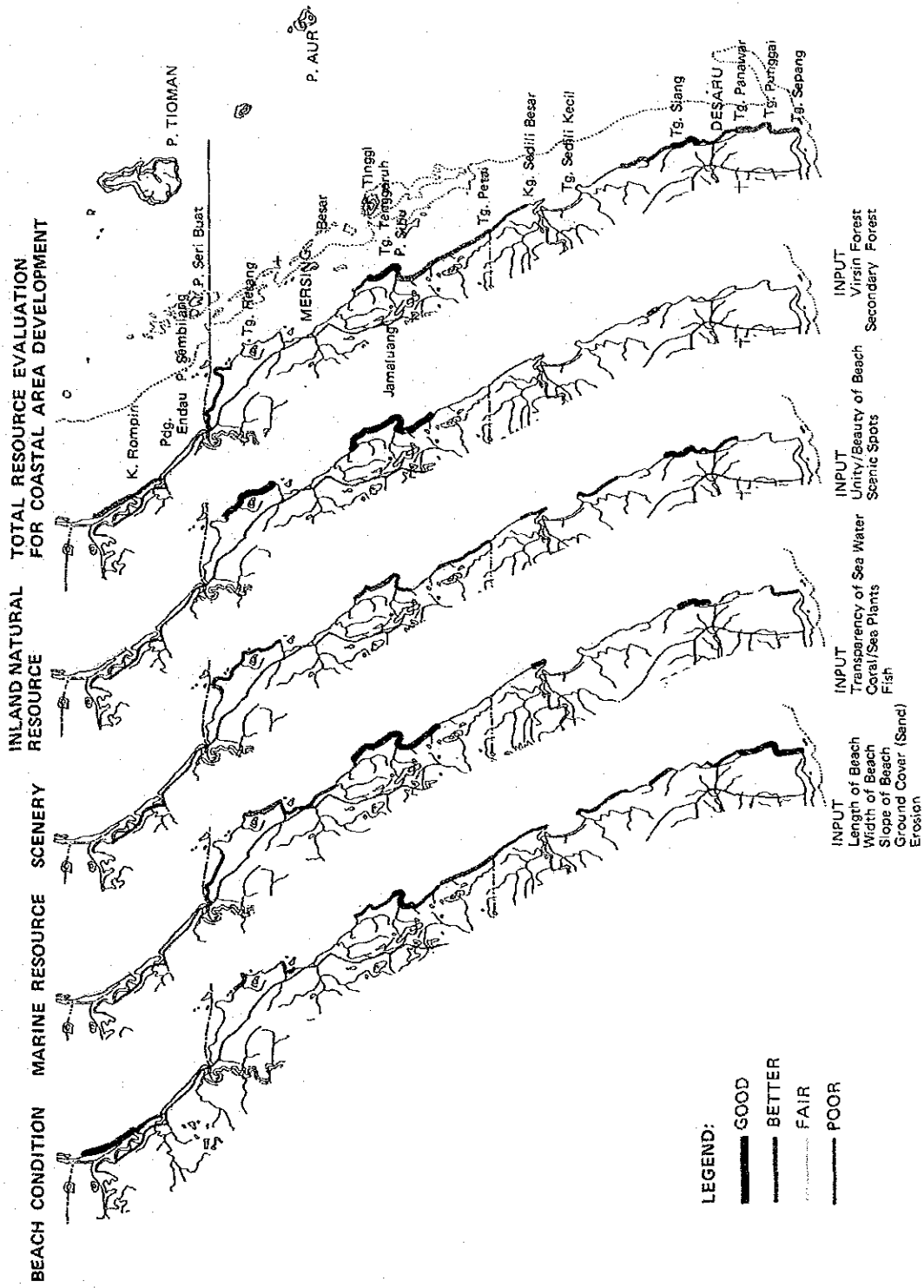
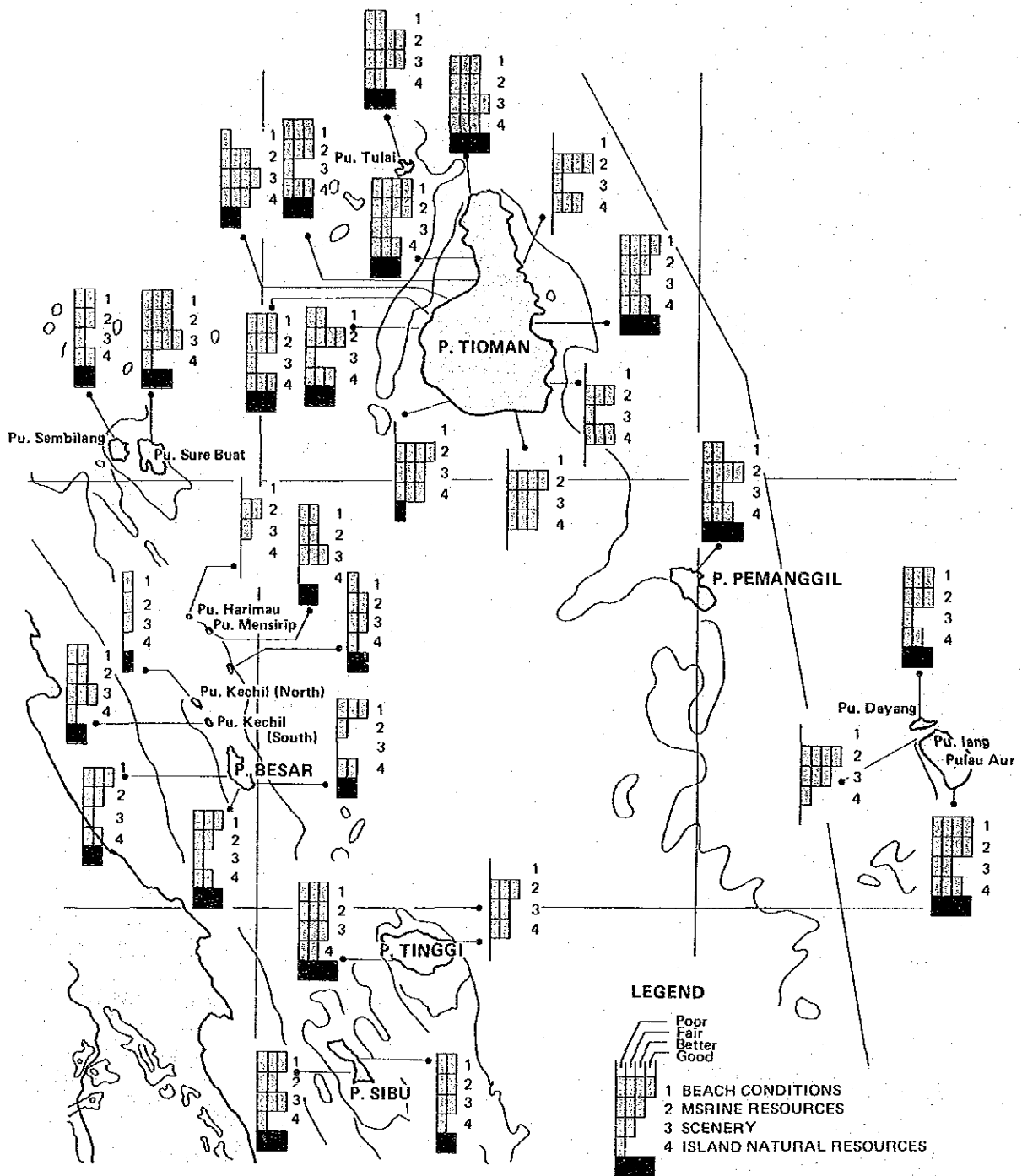
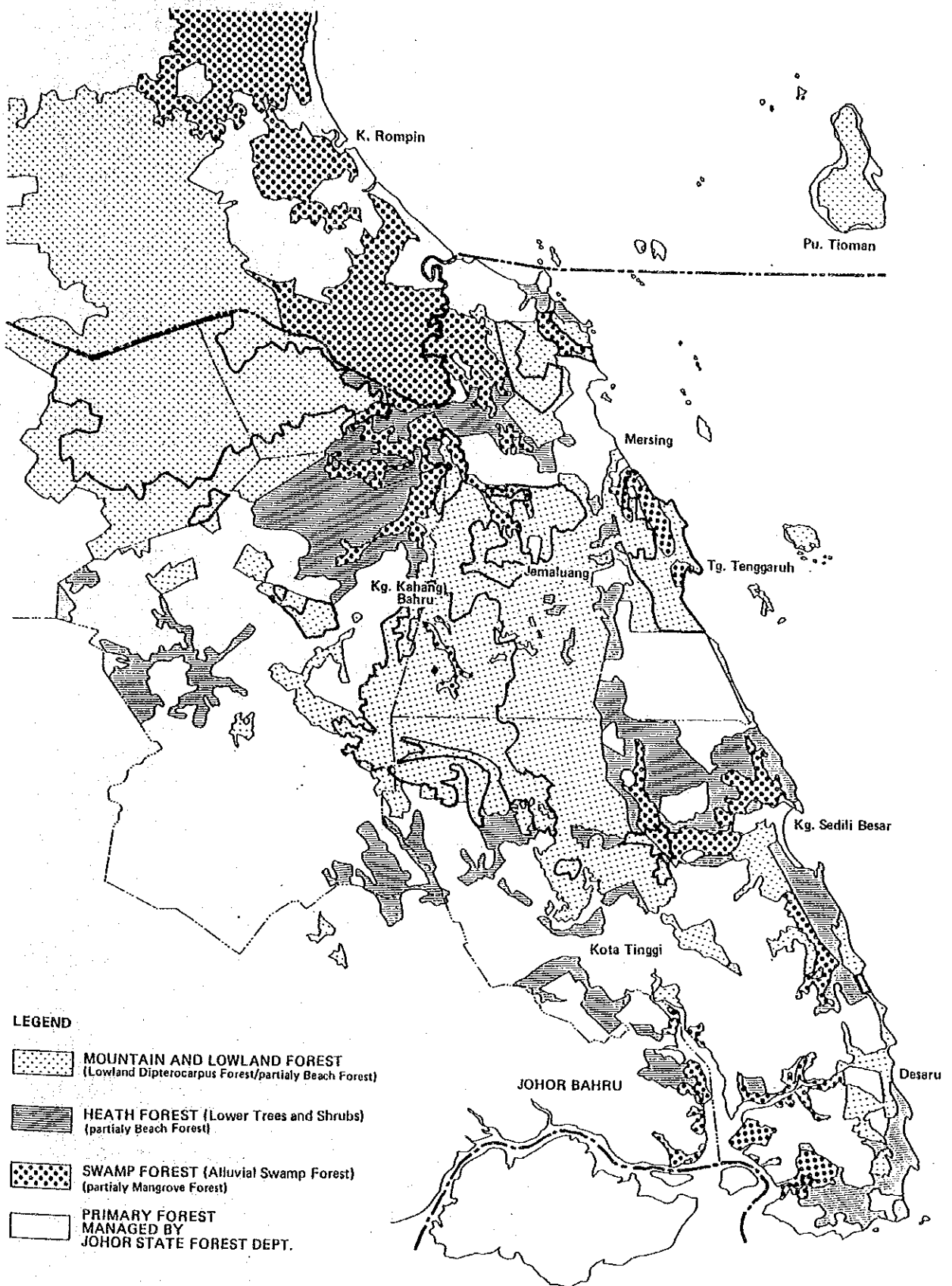


Fig. 2.4.3 Natural Tourism Resource Evaluation : Offshore Islands



Source : JICA Study Team

Fig. 2.4.4 Type of Forest



2.4.2 Tourism Facilities

Tourism facilities of the South East Coast are limited to hotels, chalets, longhouses and some entertainment as well as sporting facilities attached to the hotels.

Table 2.4.1 shows the existing accommodation facilities of the South East Coast. The total number of accommodation amounts to 59 units. Non-registered units accounts for 70% whereas registered only for 30%. The total number of rooms amounts to 1,172 rooms; 56% for hotels, 23% for chalets and 21% for longhouses. There are only five hotels which satisfy the minimum international tourist requirements; three units (304 rooms) in Desaru and one each in Mersing (34 rooms) and on Tioman Island (74 rooms).

The accommodation facilities can be classified into four categories;

- 1) Registered international hotels which are equipped with air-conditioning, telephone, TV set, shower bath, toilet, etc. in each room and offer laundry, 24 hour service, restaurant, sporting facilities, etc. in each hotel,
- 2) Registered hotels below international requirements which are equipped with only shower bath, toilet, etc. in each room without any other services,

Table 2.4.1 Accommodation Facilities

	Units			Rooms			
	Res	Non	Total	Hotels	Chalets	Long	Total
Desaru	3	0	3	304	0	0	304
K. Tinggi	5	3	8	69	15	0	84
Tioman Is.	1	25	26	74	135	168	377
Other Is.	0	10	10	0	123	79	202
Mersing	7	4	11	193	0	0	193
Rompin	1	0	1	12	0	0	12
Total	17	42	59	652	273	247	1,172

Note: Res- Resistered Accommodation
 Non- Non Resistered Accommodation
 Long- Longhouses

Source : JICA Study Team

- 3) Non-Registered chalets in Kota Tinggi and offshore islands which have the same conditions as 2), and
- 4) Non-Registered chalets and longhouses which are only equipped with bed in each room.

Most of chalets and longhouses on Tioman Island are of inferior quality with least capital investment. The number of beds in one room amounts to 6-10 beds in most of the longhouses. It is considered that these low standard accommodations are available to absorb excessive tourist arrivals in the peak season and for a limited number of guests in other seasons.

The problems of the tourism facilities at present are as follows:

- the number of hotels which satisfy the minimum international requirements are so limited that room reservation is very difficult, especially in the peak season,
- non-registered chalets and longhouses carry various problems in terms of sanitation, security, and environmental protection, and
- there are few facilities to make tourist's stay comfortable and enjoyable in and around the accommodations.

2.4.3 Tourism Services

The tourism industry of the South East Coast is still in its infancy. Most of the international tourist arrivals are attributed solely to the excellent natural endowment. The fact that most of the accommodation facilities are below international standard indicates that efforts in the past have been concentrated just on increasing the number of lodges to meet the tourist arrivals in peak season.

Tourism services are classified into the following categories;

- transportation service,
- accommodation service,
- food and drink service,
- shopping service,
- leisure and recreation service,
- guide and information service,
- health and security service,
- amenity and landscaping service, and
- total management service.

Health and security service is most important among others. It is required to improve every kind of tourism service in concert with tourism development.

2.4.4 Issues

The South East Coast has a variety of tourism resources with sufficient attractiveness to make tourists stay longer. Due to the dispersed location of these resources, however, the variety has not created an integrated tourism image of the South East Coast, but have remained as individual tourism spots. Development and improvement of the transportation network will be the most important issue for the future development of tourism.

The South East Coast is characterized as an area endowed with abundant natural resources. Every development should maintain a well balanced coexistence between natural endowments and facility development. Particular attention is required for environmental protection as well as the creation of a harmonious landscape.

Suspension of logging practices in Endau-Rompin forest and purification of waste water on the Tioman Island are critical issues that need immediate action. Increase in international standard hotels and upgrading of existing chalets and longhouses are another requirement for introducing more international tourists to the South East Coast.

2.5 Natural and Social Environment

2.5.1 Natural Environment

As shown in Fig. 2.4.4, the study area has unspoiled natural environment with different types of tropical rain forests, continuously undulated landforms, a series of beaches with headlands, and specific flora and fauna.

Tropical rain forests are distributed both along and behind the coastal line, with a typical type of tropical rain forest found in Endau-Rompin and Endau-Kota Tinggi. The existing tropical rain forests are of great value in this area in that they retain water resources, prevent erosion, maintain water quality, sustain flora and fauna, and provide good scenery.

In the past decades, however, the tropical rain forest has diminished mainly for the following three reasons:

- logging,
- expansion of plantations, and
- construction of low quality accommodations along the island beaches.

This kind of destruction of tropical rain forest causes such problems as decreasing water retainment, erosion and siltation, degradation of seashore environment, and pollution problems.

2.5.2 Social Environment

The South East Coast can be divided into three areas based on the human settlement and economic activities;

- major plantation area under the jurisdiction of KEJORA and DARA,
- traditional Malay settlement area in Mersing district, and
- offshore island area with some habitation of fishermen.

KEJORA and DARA territories have been developed in accordance with their land use plans, in which residence and production lots are clearly separated. Desaru area belongs to KEJORA territory. It is expected that tourism development in Desaru area will have little direct interaction with local communities due to the clear separation of land use between them. The most probable interaction will be labour force supply from local communities for the tourism industry.

In Mersing area outside KEJORA territory, there are Malay reserves where residents follow the traditional way of life. Villages are traditionally scattered. Tourism development in this area will have many-sided interactions with these villages, for instance, land tenure problems, direct influence of tourist behaviour on villagers and labour force procurement.

Offshore islands except Tioman Island will not have a serious social impact due to tourism development. The number of residents are few and the limited availability of flat land and water resources will allow only a limited scale development.

Most fishermen on Tioman Island are engaged in such tourism business as sea transport service and operation of chalets and longhouses. It is expected that extensive tourism development will necessitate close coordination with local residents.