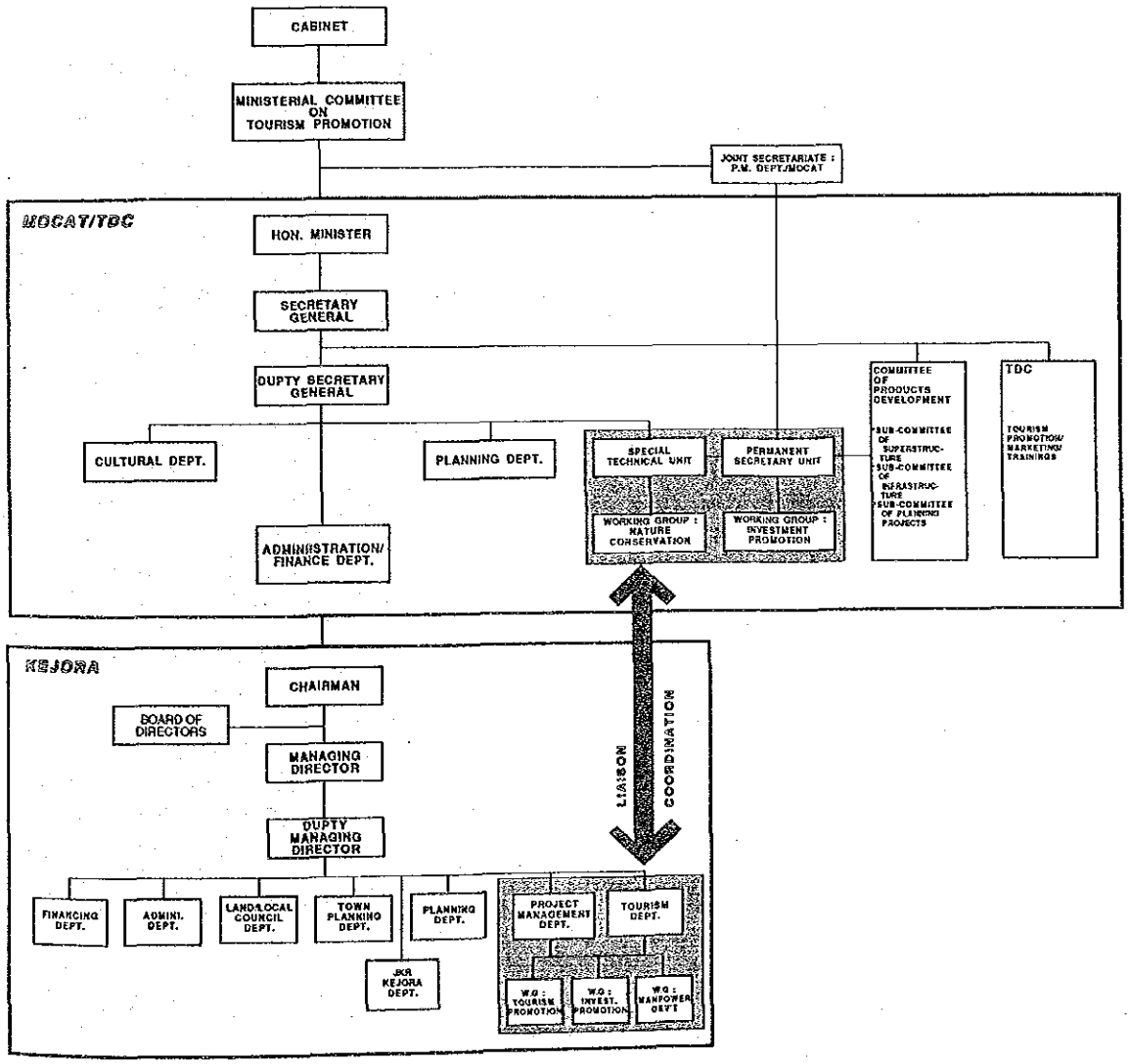
8.1.3 Organisation for Planning, Coordination, and Administration

Major roles and functions of the organisation can be summarised as follows:

- To establish policy and guidelines for the development of Desaru New Tourism Core,
- To create and coordinate consensus among ministries and agencies as well as state governments,
- To prepare a financial base for the development,
- To generally administer the whole process of implementation, and
- To prepare a set of support for the development in terms of incentives ,for investors, international promotion activities, and manpower development.

Fig. 8.1.2 Organisation for Planning, Coordination and Administration



1) Cabinet

- To deliberate and determine the policy and guideline for the development of the Desaru New Tourism Core
- To develop the budget and other supporting measures

2) Ministerial Committee on Tourism Promotion

- This is the highest level of decision making on tourism development in the country. It must include all ministries and agencies related to the development of the Desaru New Tourism Core.
- To discuss and approve the plans for the development
- To review and monitor the execution of the development and to make modifications, where necessary
- To approve the budget for implementing the approved plans
- To delegate MOCAT as the central execution agency of developing Desaru New Tourism Core
- To prepare a set of guidelines to ministries, state government, regional authorities, and private investors for cooperating with MOCAT, MOLARD, and the Johor State Government

3) Joint Secretariat

- This is an existing secretariat comprising members of the Prime Minister's Committee on Tourism Promotion
- To realise good communication among ministries to facilitate the decision making by Ministerial Committee on Tourism Promotion

4) MOCAT

- MOCAT is to be appointed as the central execution agency under the close collaboration with MOLARD and the Johor State Government for developing Desaru New Tourism Core. It is proposed to organise a secretariat unit on a permanent basis for supporting the activities by Joint Secretariat of Ministerial Committee on Tourism Promotion as well as for secretariat of other committees
- To establish consensus and coordinate activities among ministries, agencies and state governments on operational level
- To prepare policies and guidelines for planning and developing Desaru New Tourism Core for the sake of decision making by Ministerial Committee on Tourism Promotion
- To implement the policies and guidelines approved by Ministerial Committee on Tourism Promotion
- To nominate implementation authority for developing Desaru New Tourism Core

- To define the scope and extent of project and programme packages

- To adjust the implementation schedule of project and programme packages in view of their progress

- To allocate and disburse the budget to project and programme packages in consultation with related ministries, agencies and state governments

- To administer and appraise the implementation, and make necessary adjustment, where necessary

- It is proposed to organise a permanent secretariat unit including TDC under Secretary General for the purpose of supplementing the activities of Joint Secretariat

- It is also proposed to organise a special technical unit under Deputy Secretary General to involve MOLARD and Johor State for providing such technical consultation and appraisal as product planning, marketing and infrastructure development

5) KEJORA

- KEJORA is proposed to be the Implementation Authority of the development of Desaru New Tourism Core in close coordination with ministries and state governments

- To establish a set of detailed guidelines and control measures for the development activities by the third party including private sector so as to maintain the environment and create superb resort area

- To demarcate public and private participation in the development and expedite the collaboration with private sector

- To coordinate with the related agencies of the development of basic as well as tourism infrastructures in view of budgetary expenditure by public sector and required technical standard

- To undertake project management of the construction works on behalf of the related agencies, if necessary

- To take part in promotional activities to lure international tourists as well as foreign investors to Desaru New Tourism Core with full cooperation with MOCAT and TDC

- To prepare training programme of manpower as well as hospitality awareness of the local people

- It will be necessary to introduce some change in the organisation of KEJORA by giving more emphasis on tourism development; introduction of new board members, acceptance of stationed officials from MOCAT, establishment of specific working group, and introduction of training programme for its employees.

8.1.4 Organisation for Implementation

Most of the area for Desaru New Tourism Core is planned and developed, among other agencies, by KEJORA under Ministry of Land and Regional Development. As stated earlier, this is the most suitable area for tourism development, particularly for international tourist market. Accessibility to Singapore, rich endowment of tourism resources, cumulation of basic infrastructures and availability of a vast plot of land are some of the major supporting reasons.

It is proposed that this valuable land be wholly planned and controlled by KEJORA for the purpose of developing a self-contained resort complex of international standard. It is required, as a consequence, that KEJORA is the implementation authority for the development, directly responsible for realizing the resort complex. KEJORA is required to develop a master scheme for the development and invite private investors.

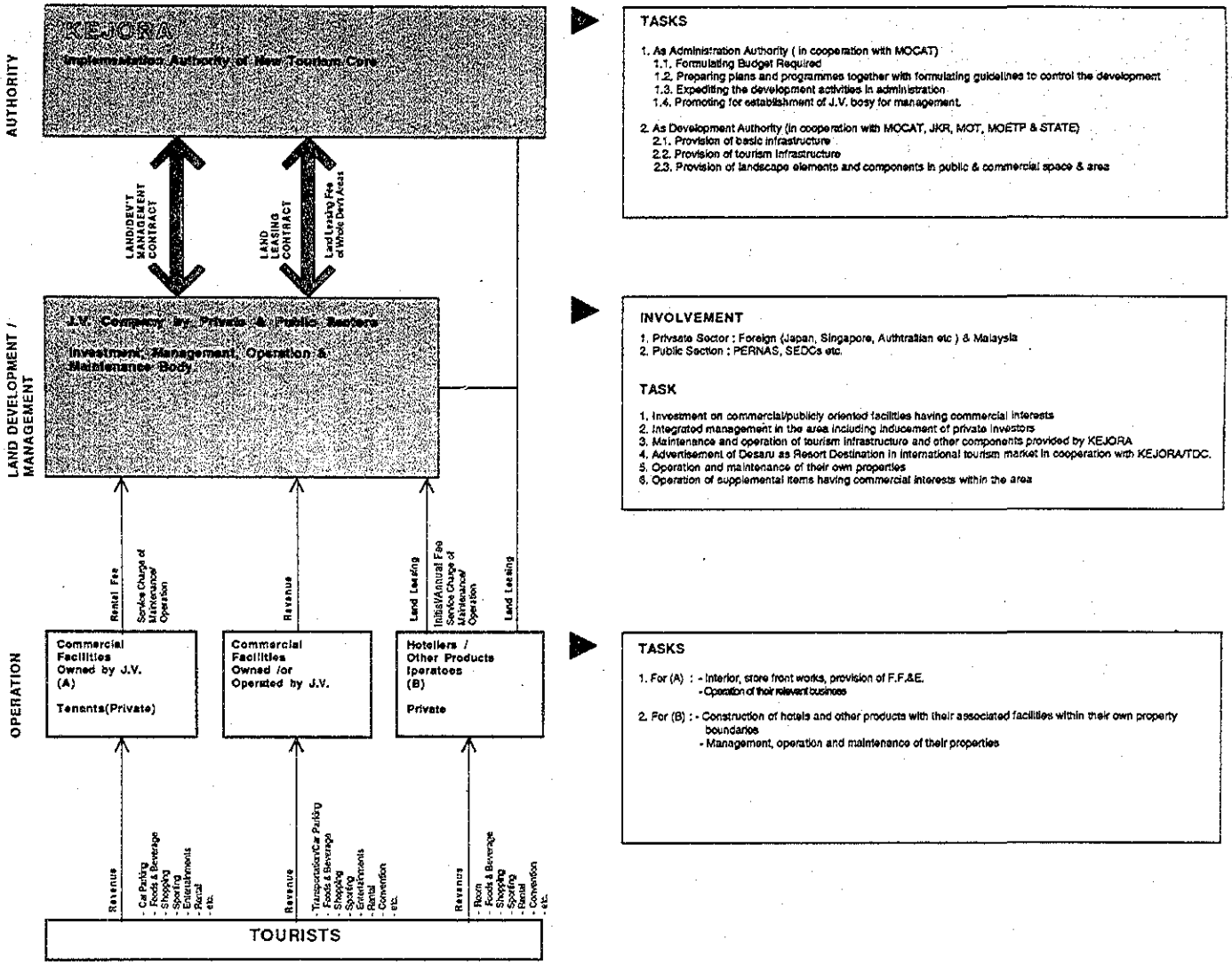
Fig. 8.1.3 illustrates a proposed organisation for implementing the projects in Desaru New Tourism Core. The basic concept is that some part of KEJORA territory is leased to the third party who is willing to participate in the master scheme.

KEJORA participates in the development of basic infrastructures and in the joint venture 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 investors is proposed to be established. Main scope of the organisation is 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.

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

Fig. 8.1.3 Organisation for Implementation



TASKS

1. As Administration Authority (in cooperation with MOCAT)
   1.1. Formulating Budget Required
   1.2. Preparing plans and programmes together with formulating guidelines to control the development
   1.3. Expediting the development activities in administration
   1.4. Promoting for establishment of J.V. bosy for management.

2. As Development Authority (in cooperation with MOCAT, JKR, MOT, MOETP & STATE)
   2.1. Provision of basic infrastructure
   2.2. Provision of tourism infrastructure
   2.3. Provision of landscape elements and components in public & commercial space & area

INVOLVEMENT

1. Privsate Sector : Foreign (Japan, Singapore, Authtralian etc) & Malaysia
2. Public Section ; PERNAS, SEDCs etc.

TASK

1. Investment on commercial/publicly oriented facilities having commercial interests
2. Integrated management in the area including inducement of private investors
3. Maintenance and operation of tourism infrastructure and other components provided by KEJORA
4. Advertisement of Desaru as Resort Destination in international tourism market in cooperation with KEJORA/TDC.
5. Operation and maintenance of their own properties
6. Operation of supplemental items having commercial interests within the area

TASKS

1. For (A) : - Interior, store front works, provision of F.F.&E.
   - Operation of their relevent business

2. For (B) : - Construction of hotels and other products with their associated facilities within their own property boundaries
   - Management, operation and maintenance of their properties

8.2 Manpower Development

8.2.1 Manpower Requirement

The development of Desaru New Tourism Core requires about 5,700 employees in 1995. Table 8.2.1 shows the estimated manpower requirement by major destination areas. The biggest job opportunity is created by Accommodation Area, accounting for about 63% of the total opportunities.

Table 8.2.1 Manpower Requirement

Major Destination	Persons	%
Accommodation Area	3,550	62.5
Amenity Core	720	12.7
Amenity Sub-Core	260	4.6
Tg. Belungkor Gate Area	760	13.4
Others	390	6.9
Total	5,680	100.0

Source : JICA Study Team

Most of the manpower requirement is related to service trade in which hospitality and efficiency are the most important factor. In this section, employment by hotel business is highlighted for clarifying the quality of manpower requirement.

Manpower requirement by level of skill in Malaysia was revealed by the study performed by WTO/TDC as shown in Table 8.2.2. According to the study, skilled labour has the biggest share of requirement, accounting for about 56%, followed by semi-skilled labour of 14%. The total of these two type of labour accounts for about 70%. In real terms, it amounts to 2,500 persons.

Table 8.2.2 Manpower Requirement by Level of Skill in Hotel Business

Level of Skill	Share (%)	Persons
Managerial Level	5.6	200
Supervisory Level	12.7	450
Skilled Labour	55.8	1,980
Semi-Skilled Labour	14.4	510
Unskilled Labour	11.5	410
Total	100.0	3,550

Source : "Share" by WTO / TDC Study
"Persons" by JICA Study Team

The data regarding the manpower requirement by level of skill in other service trade are not available in Malaysia. If the percentage share of skilled and semi-skilled labour in hotel business is applied to the other service trade, the total number of skilled and semi-skilled labour amounts to slightly less than 4,000 persons.

In view of the prevailing agriculture in the region, it is considered most important to establish a training institute for the skilled and semi-skilled labours though, of course, private investors will prepare their in-house programme for training their employees. As for the managerial and supervisory manpowers, it is expected that most of the private investors will prepare by themselves including foreign expatriates because successful business depends largely on the availability of this type of manpower.

8.2.2 Institute for Manpower Training

Manpower training, in principle, should be taken care of by private investors. In view of the job opportunities expected by younger age groups in the region, however, it will be necessary to establish a training course or programme in the region to facilitate the younger age groups to work for the tourism sector, instead of solely dependent on agriculture.

At present, most of the manpower training facilities for tourism are concentrated in Kuala Lumpur, even for the skilled and semi-skilled labourers. In view of a large number of manpower requirement, particularly of skilled and semi-skilled labour, it is proposed to locate a training institute under ITM in the area with an emphasis on skilled and semi-skilled labour for the hotel business.

The training programme by public sector must focus on the orientation to hotel business for the possible trainees from the region who are traditionally farmers. The programme is also required to take account of the succeeding training programmes provided by private hoteliers. The main subjects covered by public sector should involve orientation to tourism, importance of quality service, introduction to office automation, and so on. After completion of the programme, trainees are required to be prepared for accepting the training programmes provided by individual hoteliers. They are usually composed of two types of training: attitude training to build employee morale, confidence, and loyalty to a given resort, and task training to improve existing skills, aptitudes, and capabilities.

In the longer perspective, it will become possible that the training institute caters for more diversified and advanced training curriculums. It is proposed, at the beginning, that the institute provides newcomers to tourism industry with basic orientation courses. KEJORA is a candidate for catering the manpower development in Desaru New Tourism Core. Full support is invited from National Committee on Manpower Training, ITM and NPC.

8.2.3 Hospitality

Impressions of tourists are largely formed by personal contacts that they experience during their journey.

In Desaru New Tourism Core, international tourists have a first contact with Malaysian people mainly at Tg. Belungkor Gate Area with immigration and customs officers, workers for transportation services, shop keepers, and so on. These employees should be fully aware of the importance of hospitality and that their behaviour must conform to expected standards.

Local residents also have chances to contact international tourists, and their warm welcome would be a crucial element of tourism in Malaysia.

Hospitality is a kind of common sense, and, in this respect, school education can have a contribution. For the adult, however, it is required that the training institute include the education in its programme with the support of federal as well as local governments. Occasional education through audio visual materials will be effective for this purpose.

8.3 Public and Private Sector Cooperation

8.3.1 Privatisation

Cooperation of both the public and private sectors is essentials for the successful realisation of Desaru New Tourism Core which is a complex of every element involving from basic infrastructure to commercial facilities and entertainment.

The public sector is expected to play a central role in developing basic infrastructure, while private sector is expected to play a central role in commercial facilities such as hotels, restaurants, and shops. There are a variety of intermediaries which cannot be easily demarcated into public or private responsibilities. They are, for instance, circulating transportation service, roadside landscaping, parks and gardens, and outdoor sport facilities all of which are indispensable to create a good environment for tourists..

In Desaru New Tourism Core, three type of organisations are introduced as explained in Section 8.1. KEJORA is an implementation authority of public nature, and hoteliers as well as other commercial facility operators are examples of private nature. It was proposed to establish a joint venture (JV) of public and private participation which is responsible to develop and operate the remaining facilities.

The privatisation scheme is materialised in the form of the JV. The main purpose of the JV is to pursue the efficiency of the development and management through eliminating such defects of public sector as inefficiency, inelasticity and low return on investment and promoting such advantages of private sector as efficiency, elasticity, creativity, and quick adaptability to trend.

In view of tourism development, it is required to place more emphasis on software development for the purpose of providing information about available amenities. This means that creative ideas based on market information should be well integrated into the resort development for the satisfaction of visitors and that quality services of high value added should be provided to visitors for attaining higher returns from the investment. It is required, in the context, that the JV should be organised to activate the creativeness of private sector. Foreign investors in Desaru New Tourism Core are invited to take part in the JV.

8.3.2 Financial Incentives in Tourism Development

One of the major hurdles that all tourism projects face before they are realised is that of securing the financing needed for their development. Many tourism

projects have not been developed because their developers have been unable to attract the right amount or types of financing even though they have been proven economically feasible. The number of government agencies providing specific financial incentives for tourism projects has increased rapidly in recent years on a worldwide basis.

Government financial incentives for tourism projects can be classified into two categories. Fiscal incentives are special allowances for income tax or other tax purposes. Direct and indirect incentives constitute the second main category, and include a wide variety of programmes aimed at easing the financial requirements of projects. The basic objective of most of these incentive programmes is to help businesses carry out tourism development projects that, without assistance, may have been completely abandoned or seriously delayed.

"Fiscal Incentives" adopted by the Government of Malaysia are tax holidays or deferrals, tax reductions and remission of tariffs as explained in Section 2.6.2. These incentives, however, have been tailored only for specific tourism facilities such as hotels and parks.

The development of Desaru New Tourism Core is considerably different from those in the past in that it covers a large plot of land, that it contains various public services 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.

Examples of "Direct and Indirect Incentives" can be enumerated as follows:

- Nonrefundable grants,
- Low-interest loans,
- Interest rebates,
- Forgivable loans,
- Loan guarantees,
- Working capital loans,
- Equity participation,
- Training grants,
- Infrastructure assistance,
- Leasebacks, and
- Land donations.

Among the above 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 burdened 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.

It might be an alternative to change the present regulations on the domestic and foreign portion. If domestic portion is decreased to a great extent in Desaru New Tourism Core, the problem of domestic financing will be relieved.

Equity participation and a kind of leasebacks are required to be introduced in Desaru New Tourism Core. PERNAS and SEDC are expected to participate in the equity of the JV. KEJORA is expected to lease its land to the JV and the JV is expected to lease a part of land and/or facilities further to private investors.

8.4 Tourist Promotion to Desaru

8.4.1 Tourist Promotion Policy

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 critical 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. The market should focus on Japan, Australia, U.K., U.S.A., and Singapore including foreign residents in Singapore.

5) To carry into effect the promotional activities under the well programmed promotion scheme.

   - To establish a promotion concept of Desaru
   - To perform a well coordinated promotion mix so as to raise the awareness of Desaru in international tourist market
   - To provide potential tourists with attractive information
   - To provide tourists to Desaru with more detailed information
   - To enhance the satisfaction of visitors to Desaru
   - To establish a tourist promotion board under the Implementation Authority of KEJORA with close cooperation with TDC

8.4.2 Target Market

Target markets of Desaru New Tourism Core are classified into three major groups as shown below based on the tourist arrivals to Singapore and results of both interview survey at Desaru and future estimation.

Primary Market	:	Japan, Singapore
Secondary Market	:	Australia, U.K., U.S.A., Foreign Residents in Singapore
Tertiary Market	:	Hong Kong, Taiwan (showing rapid increase in recent years)

Primary Market: Japanese

In terms of age group, women in their twenties are the most prospective market, followed by women in their forties, and silver age groups over sixty years old. Women in their twenties and forties belong to group package tourists, and silver age group belongs to a pair travellers. Their activities in destination are sightseeing, shopping, beach and marine sports, and rest. Popular seasons of their travelling abroad are March - May, summer holiday season, October, and at the end and beginning of new year season.

Primary Market: Singaporean

The main target of this market is men and women in their twenties and thirties. These young groups are active in sightseeing, recreation activities, and participating in training course and/or meetings. Their major activities in destination are eating, swimming in the pool, and sports. July and August are the most popular season for travelling abroad.

Secondary Market

Main target segment in this group is people in their forties, followed by thirties. Most of them are individual travellers, couples, or families. Major activities in destination are rest, swimming, enjoying cultural contacts, and sometimes adventure. Summer holiday season is the peak season for them to visit Asia.

Foreign residents of their thirties are the main target segment in Singapore. Most of them travel with family. Major activities in destination are rest and sports. Summer holiday season is the high season for them to visit Malaysia.

8.4.3 Creation of Image

Desaru New Tourism Core is surrounded by various competitive resorts in Pacific Asia region. They are those of Hawaii, Guam and Saipan, Fiji and Tahiti, and neighbouring ASEAN. It is required to introduce some distinction with those competing resort in its image creation.

The distinction with the former three destinations can be established, for instance, by taking account of the following factors:

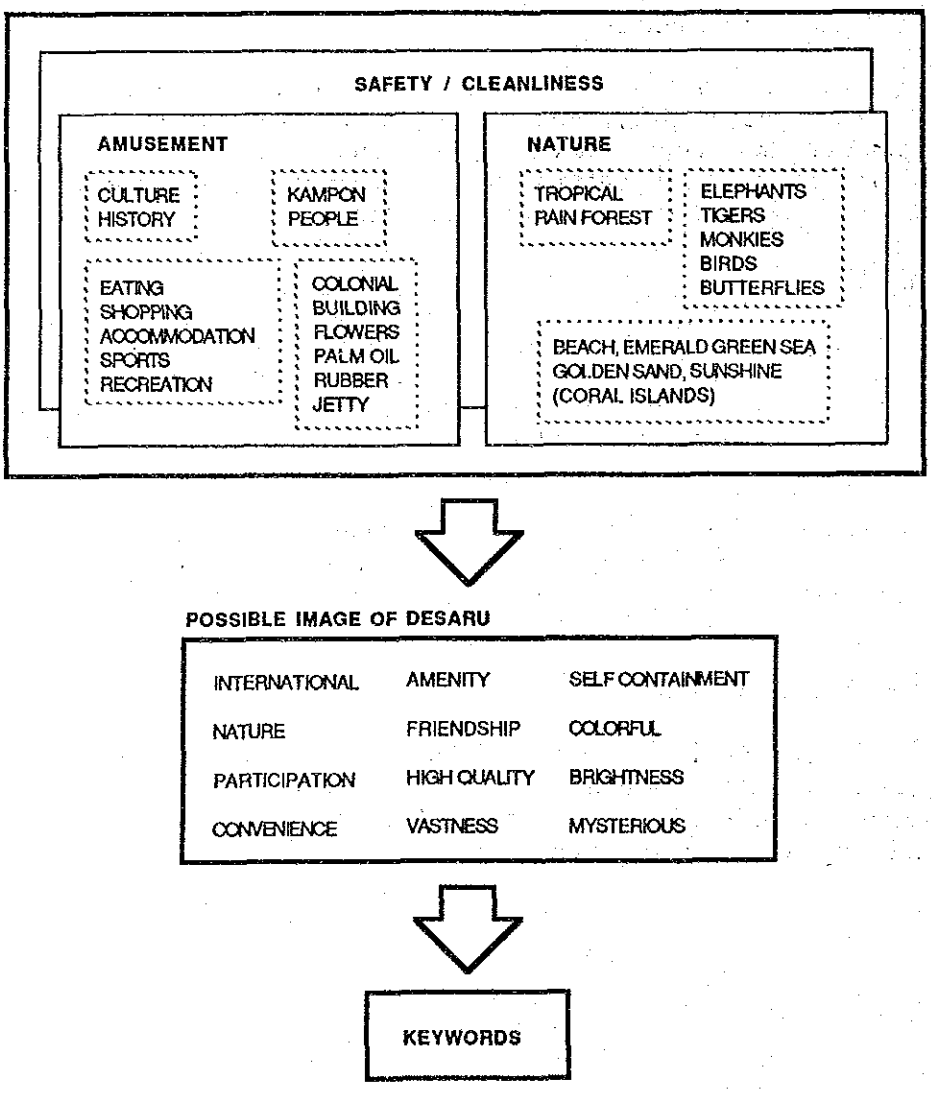
- beach resort combined with culture, history and urban amenity
- beach resort with various tourism resources in a vast hinterland
- beach resort with long shorelines coupled with tropical rain forest and wildlife
- beach resort with a variety of recreation and entertainment facilities

The distinction with those in ASEAN countries can be established by taking account of the following factors;

- beach resort with high quality self-containment
- beach resort with beautiful offshore islands and virgin jungles
- beach resort with colonial architecture and plantations

Point of sales of Desaru New Tourism Core can be outlined as illustrated in Fig. 8.4.1 based on the above discussions. It is suggested that key words should be established on the basis of these points for attracting the attention of potential consumers.

Fig. 8.4.1 Creation of Promotional Image for Desaru New Tourism Core



APPENDICIES

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Future Tourist Arrivals

A.1. Present Tourist Distribution Pattern

The Present Tourist Distribution Pattern is estimated based upon the Interview Survey performed by the Study Team and TDC Hotel Survey Report.

Interview Survey

- Place of interview : Desaru and Tioman Island
- Duration of survey : Desaru (16 - 24, April 1988)
  [16 - 30 April, 1988 for Japanese]
  Tioman Island (17 - 24 April, 1988)
- Number of respondents :

Desaru	Malaysian	41
	Singaporean	79
	Japanese	101
	Other foreigner	78
	Total	299
Tioman Is.	Malaysian	34
	Singaporean	21
	Japanese	6
	Other foreigner	176
	Total	237

In accordance with the Survey results and the TDC Report, the present tourist distribution pattern in 1987 is estimated.

Table A.1.1 Estimation of the Number of Visitors to the South East Coast by Area

AREA	NUMBER OF ROOMS			NUMBER OF BEDS	BEDS OCCUP. RATE	NUMBER OF GUEST -NIGHTS	NUMBER OF STAYING GUESTS				LENGTH OF STAY				NUMBER OF VISTORS				
	HOTEL	CHALET	LONG HOUSE				Malaysia	S'pore	Japan	Others	Malaysia	S'pore	Japan	Others	Malaysia	S'pore	Japan	Others	TOTAL
TIOMAN	74	135	168	1384	75	120543	31756 (26%)	30709 (25%)	1570 (1%)	56507 (47%)	3.2	2.8	2.0	5.5	9920	10970	790	10270	31950
Tioman Island Resort	74	45		138	60	52343	14656 (28%)	13609 (26%)	1570 (3%)	22507 (43%)	3.2	2.8	2.0	5.5	4580	4860	790	4090	14320
Other Tioman Islands		90	168	1246	15	68200	17100 (25%)	17100 (25%)	(0%)	34000 (50%)	3.2	2.8		5.5	5340	6110		6180	17630
Sibu and Other Island		123	79	878	20	64100	16000 (25%)	16000 (25%)	(0%)	32100 (50%)	3.2	2.8		5.5	5000	5710		5840	16550
MERSING	193	0	0	386	85	53000	36200 (68%)	8400 (16%)	400 (1%)	8000 (15%)	1.6	2.0	1.4	2.4	22620	4200	290	3340	30450
Merlin Resort Hotel	34			68	50	12400	3700 (30%)	3100 (25%)	400 (3%)	5200 (42%)	1.6	2.0	1.4	2.4	2310	1550	290	2170	6320
Other Mersin	159			318	35	40600	32500 (80%)	5300 (13%)	(0%)	2800 (7%)	1.6	2.0		2.4	20310	2650		1170	24130
Rompin	12			24	15	1300	990 (76%)	90 (7%)	(0%)	220 (17%)	1.5	1.4		1.7	660	60		130	850
Desaru	304			678	50	111672	17599 (16%)	48028 (43%)	23081 (21%)	22904 (21%)	1.4	2.1	1.4	2.4	12570	22870	16490	9540	61470
Kota Tinggi	69	15		183	45	30100	24100 (80%)	3900 (13%)	(0%)	2100 (7%)	1.5	1.4		1.7	16070	2790		1240	20100
SOUTH EAST COAST	652	273	247	3533	290	380715	126645 (33%)	107127 (28%)	25051 (7%)	121831 (32%)	1.9	2.3	1.4	4.0	66840	46600	17570	30360	161370

Fig. A.1.1 Present Distribution Pattern (Singaporean)

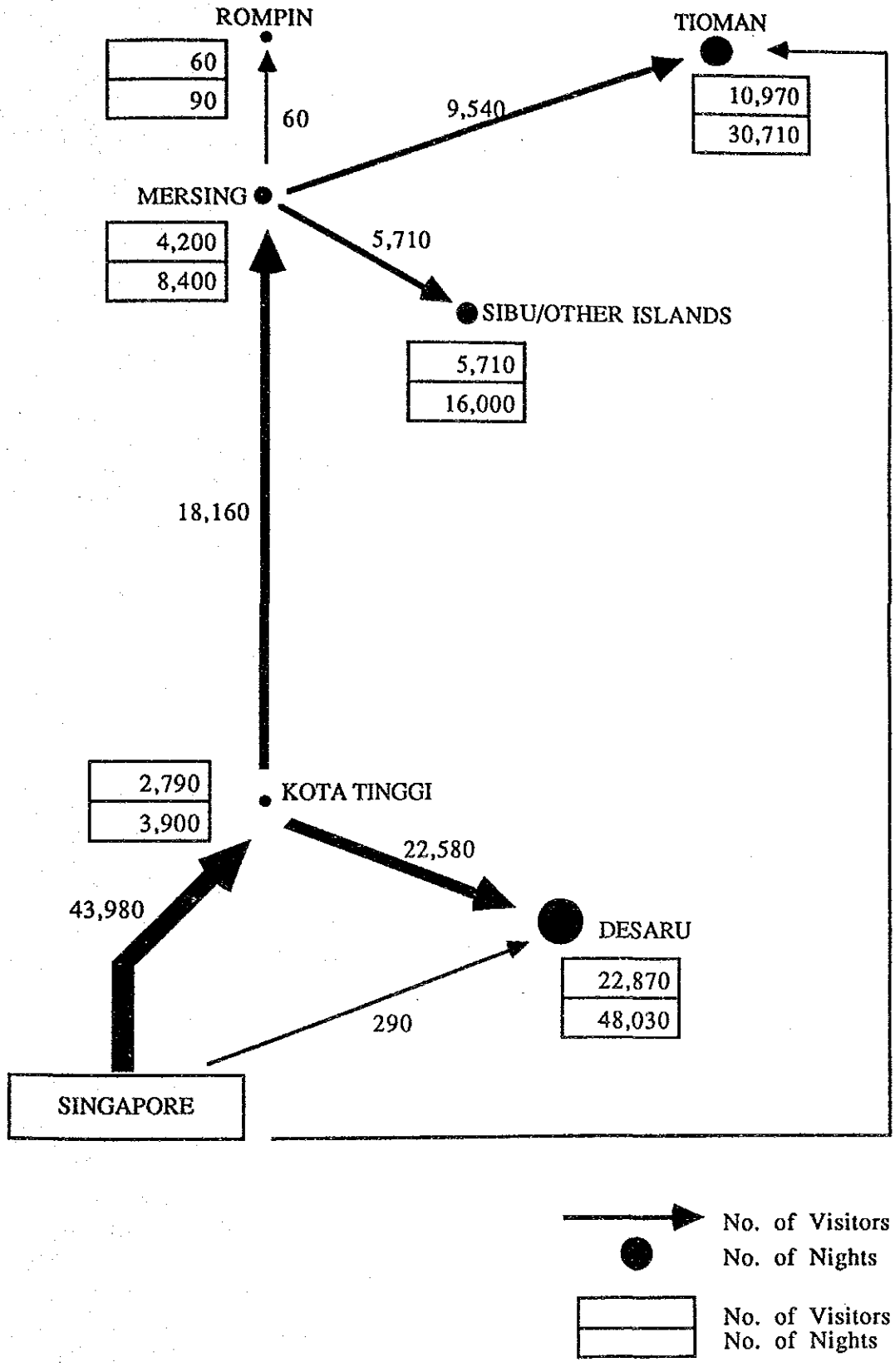


Fig. A.1.2 Present Distribution Pattern (Japanese)

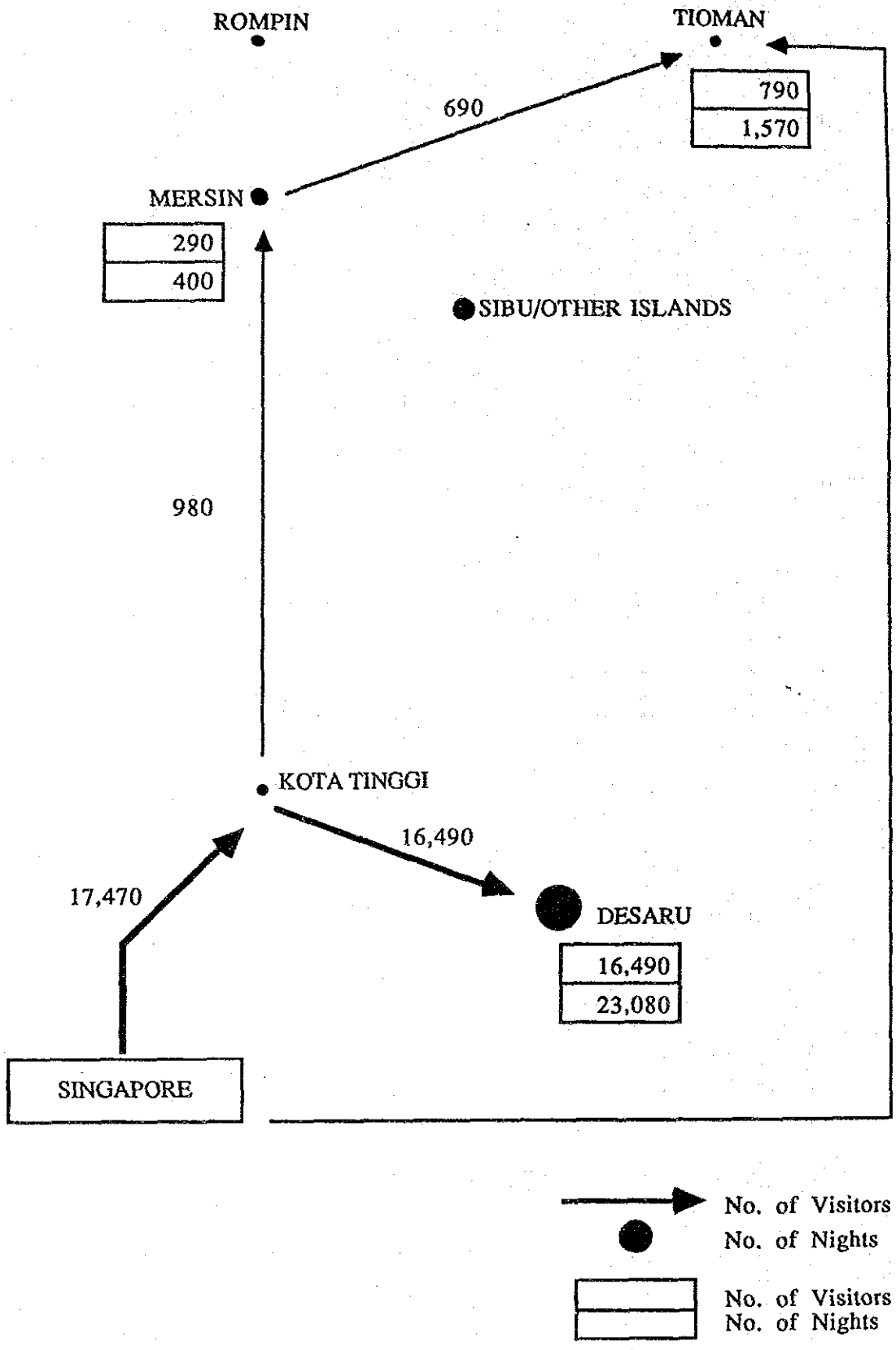
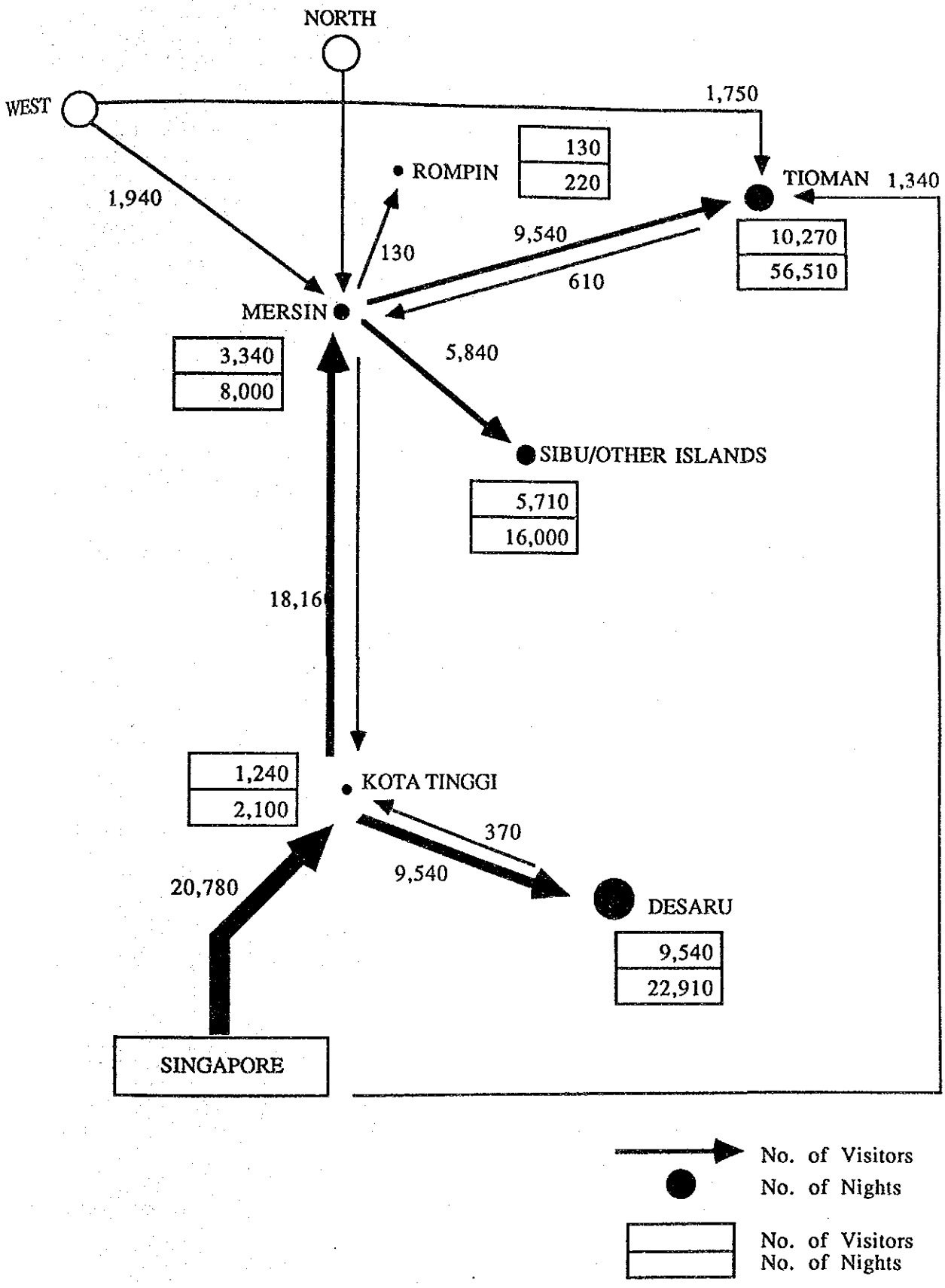


Fig. A.1.3 Present Distribution Pattern (Other Foreigners)



A.2 Future Tourist Distribution Pattern

The Future Tourist Demand is estimated in accordance with the forecast future tourists to Singapore and the share of tourist who come to the southeast area through Singapore. This is combined with the determination of the assumed share of tourist origins other than Singapore.

The number of tourists coming into the region via Singapore is shown in following pages.

The future tourist distribution pattern is estimated by assumed tour courses such as Desaru/JB, Desaru Tioman. Direct Sibu, etc. Desaru Tioman, for example, means tourist stay overnight in Desaru and moves on to Tioman for another overnight stay. The share of each assumed tour and Present Distribution pattern are also shown in following pages.

A.2.1 Tourist Demand in Future through Singapore

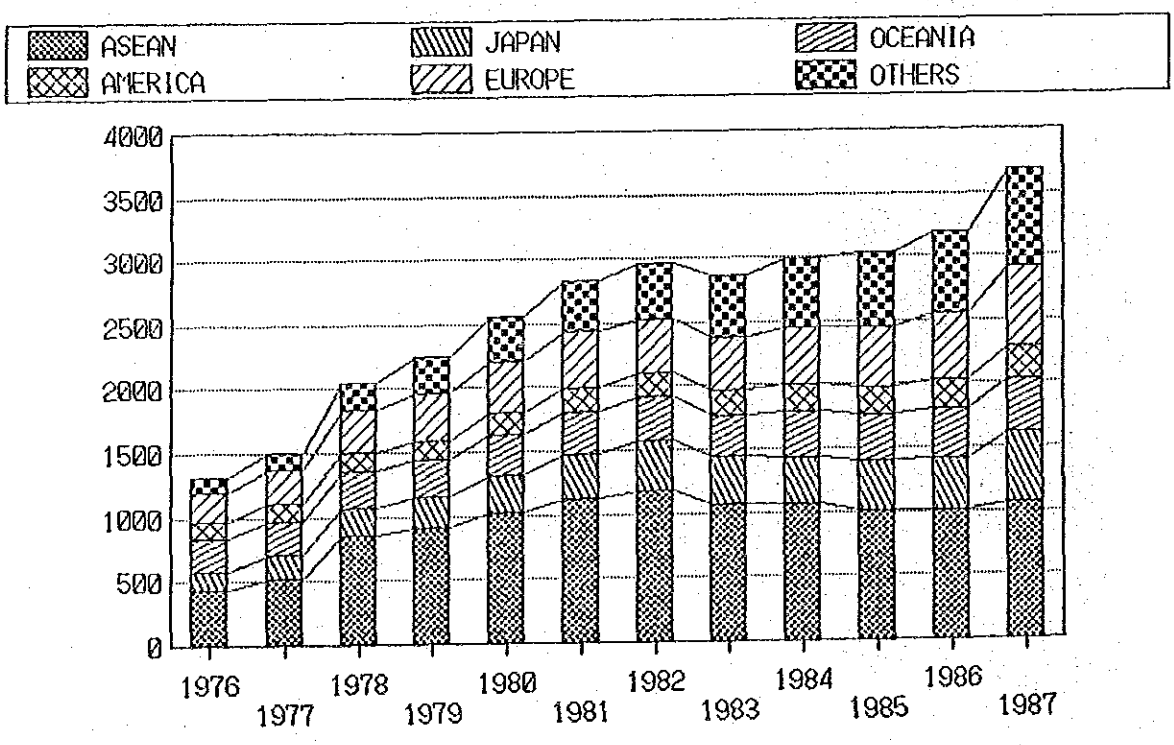
(1) Forecast Number of Visitor Arrivals to Singapore

In accordance with the number of visitors arrivals to Singapore by origin countries in the past, formulas to estimate the international tourist coming into Singapore are formulated.

Based on these formulas future visitor arrivals to Singapore by Origin countries are estimated

Fig. A.2.1 shows visitor arrivals to Singapore in the past.

Fig. A.2.1 Number of Visitors Arrivals to Singapore



The following are forecast formula of international tourist demand to Singapore in future. Fig. A.2.2 and Fig. A.2.3 show the number of visitors arrivals to Singapore.

1) ASEAN : $Y = 272.9 \times \ln T + 487.4$
$R^2 = 0.8826$

2) JAPAN : $\ln Y = 0.100T + 5.06$
$R^2 = 0.9407$

3) OCEANIA : $\ln Y = 0.044T + 5.49$
$R^2 = 0.9752$

4) AMERICA : $\ln Y = 0.056T + 4.86$
$R^2 = 0.9855$

5) EUROPE : $\ln Y = 0.072T + 5.52$
$R^2 = 0.9293$

6) OTHERS : $Y = 55.1T + 51.1$
$R^2 = 0.9336$

T: 1 (=1976) - 12 (=1987)
N = 12

Fig. A.2.2 Forecast Number of Visitors Arrivals to Singapore (1)

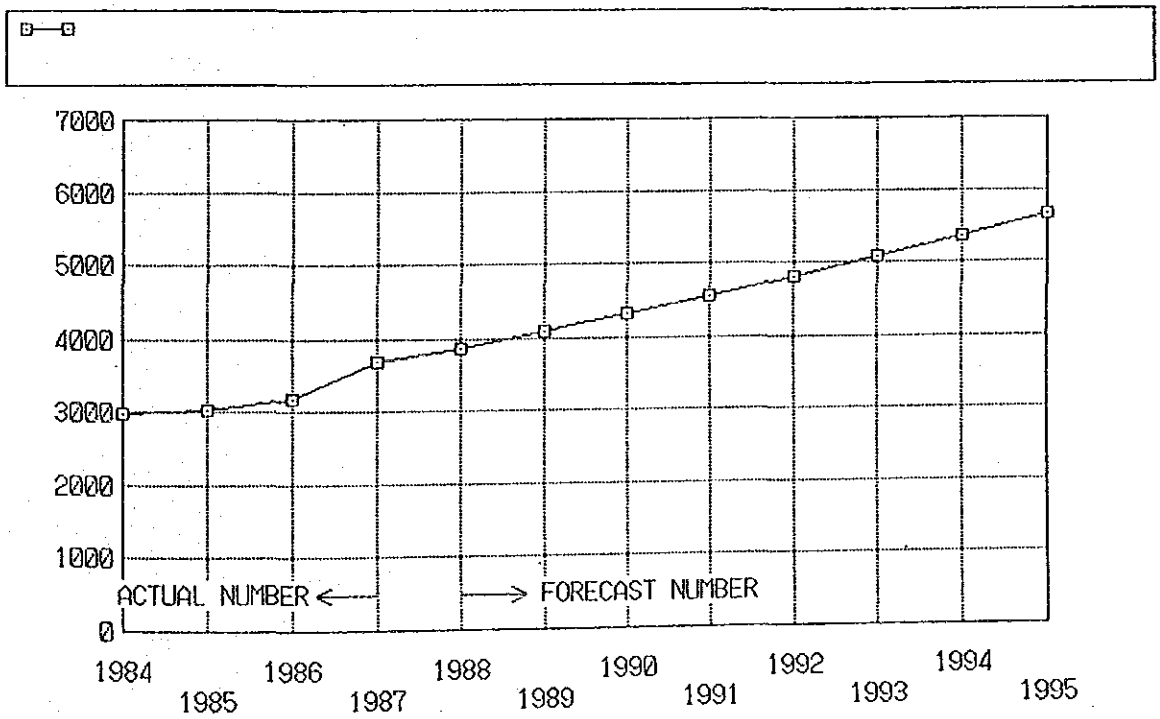
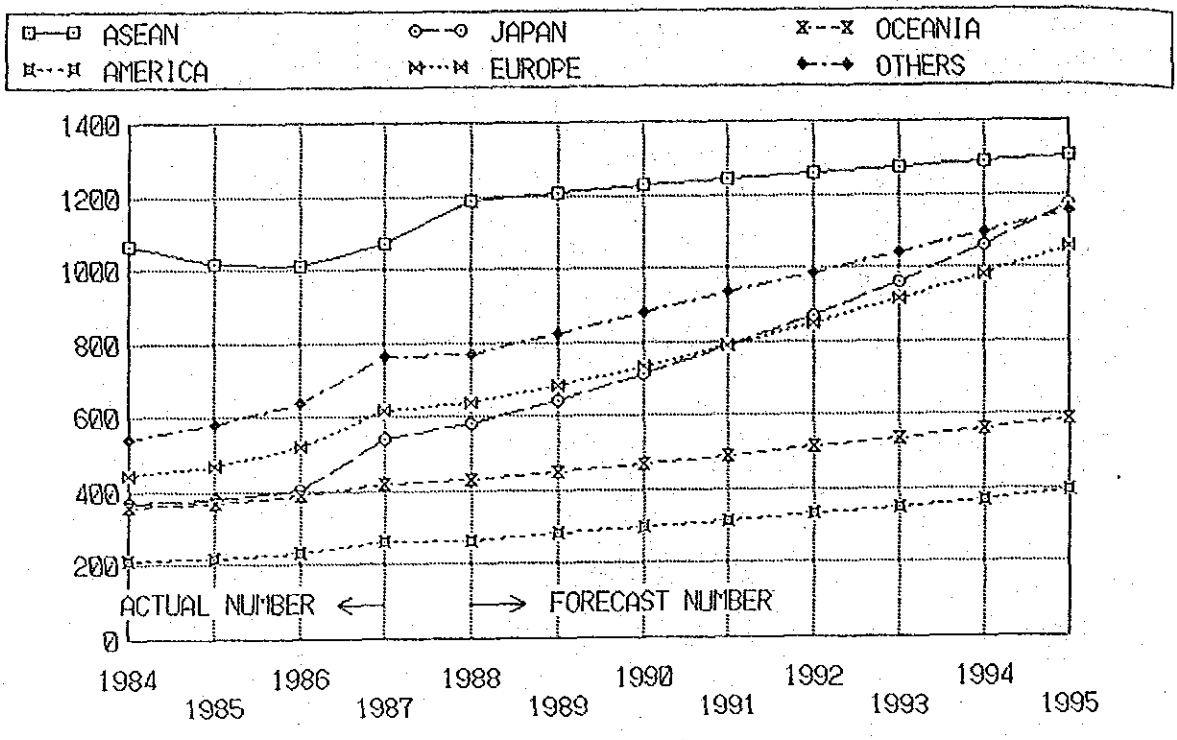


Fig. A.2.3 Forecast Number of Visitors Arrivals to Singapore (2)



(2) Demand Forecast of South East Coast by Origin

1) Singaporean

[Model Formula]

Model formula was constructed by regression analysis as follows:

$Y_5 = 0.259X_8 + 0.079$

Y_5: Number of Singaporean visitors to south east coast/Number of Singaporean visitors to Peninsula Malaysia

X_8: Recreation resource (X_4)/Travel time (X_1)

$R^2 = 0.994907$

Table A.2.1 Input Data and the Result of Calculation (1)

	1987				1995				
	Actual Share (Y_5)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Normal-ize (YH)	Fore-cast Share
Tioman	0.489	6.6	10.0	0.471	4.2	10.0	0.695	0.682	
	0.682								
Sibu Other Is	0.255	7.1	6.2	0.305	6.0	6.2	0.346	0.339	
	0.339								
Mersing	0.187	3.6	1.8	0.208	2.5	1.8	0.265	0.260	
	0.260								
Desaru	1.020	2.3	8.3	1.013	1.2	12.0	2.667	2.612	
	2.612								
Kota Tinggi	0.124	1.5	0.0	0.079	1.0	0.0	0.079	0.077	
	0.124								
Visitors to Malaysia	100.0	-	-	100.0	-	-	102.0	100.0	100.0
Visitors to South East Coast	2.075	-	-	2.076	-	-	-	-	4.017

2) Japanese

[Model Formula]

Model formula was constructed by regression analysis as follows:

$Y_6 = 2.049X_{15} - 0.195$

Y_6: Number of Japanese visitors to south east coast/Number of Japanese visitors to Peninsula Malaysia

X_{15}: Recreation resource (X_4)/Square of Travel time (X_{1-2})

$R^2 = 0.995821$

Table A.2.2 Input Data and the Result of Calculation (2)

	1987				1995				
	Actual Share (Y_5)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Normal-ize (YH)	Fore-cast Share
Tioman	0.146	6.6	10.0	0.275	4.2	10.0	0.966	0.840	
	0.840								
Sibu Other Is	0.000	7.1	6.2	0.057	6.0	6.2	0.158	0.137	
	0.137								
Mersing	0.054	3.6	1.8	0.090	2.5	1.8	0.395	0.343	
	0.343								
Desaru	3.046	2.3	8.3	3.019	1.2	12.0	16.878	14.682	
	14.682								
Kota Tinggi	0.000	1.5	0.0	-0.195	1.0	0.0	-0.195	-0.170	
	0.000								
Visitors to Singapore	100.0	-	-	100.0	-	-	115.0	100.0	100.0
Visitors to South East Coast	3.246		-	-	3.246	-	-	-	16.002

3) Other Foreigners

[Model Formula]

Model formula was constructed by regression analysis as follows:

$Y_7 = 0.044X_4 + 0.063$

Y_6: Number of other foreign visitors to south east coast/Number of other foreign visitors to Peninsula Malaysia

X_4: Recreation resource

$R^2 = 0.995821$

Table A.2.3 Input Data and the Result of Calculation (3)

	1987				1995				
	Actual Share (Y_5)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Input Data X_1	Input Data X_4	Esti-mation (YH)	Normal-ize (YH)	Fore-cast Share
Tioman	0.498	6.6	10.0	0.500	4.2	10.0	0.500	0.499	
	0.499								
Sibu Other Is	0.283	7.1	6.2	0.334	6.0	6.2	0.334	0.333	
	0.333								
Mersing	0.162	3.6	1.8	0.142	2.5	1.8	0.142	0.142	
	0.142								
Desaru	0.462	2.3	8.3	0.426	1.2	12.0	0.587	0.586	
	0.586								
Kota Tinggi	0.060	1.5	0.0	0.063	1.0	0.0	0.063	0.063	
	0.063								
Visitors to Singapore	100.0	-	-	100.0	-	-	100.2	100.0	100.0
Visitors to South East Coast	1.465	-	-	1.465	-	-	-	-	1.623

A.2.2 Future Tourist Distribution

(1) Distribution Share by Tour Course

Table A.2.4 Tourist Distribution by Tour Course

TOUR TYPE Code No.	Name of Tour	Origin of Tourist (Distribution Share of Each Tour within Origin of Tourist)		No. Tourist
K-1	Kota Tinggi	Malaysian	0.2	15000
		Singaporean	0.05	6500
D-1	Desaru JB	Malaysian	0.29	21375
		Singaporean	0.2	26000
		Japanese	0.34	64600
		Other Foreigner	0.17	9350
D-2	Ferry Desaru	Singaporean	0.45	58500
		Japanese	0.61	116280
		Other Foreigner	0.43	23650
D-3	Desaru/Sibu	Singaporean	0.01	1300
		Japanese	0.01	1900
		Other Foreigner	0.02	1100
D-4	Desaru/Tioman	singaporean	0.01	1300
		Japanese	0.02	2850
		Other Foreigner	0.02	1100
D-5	Desaru/optional Endau	Japanese	0.01	950
		Other Foreigner	0.01	275
T-1	Direct Tioman by land	Malaysian	0.08	6000
		Singaporean	0.12	15730
		Japanese	0.01	1900
		Other Foreigner	0.16	8525
T-2	Direct Tioman by air from Singapore	Singaporean	0.01	1820
		Japanese	0	570
		Other Foreigner	0.03	1650
T-3	Direct Tioman by air from KL	Malaysian	0.05	3750
		Other Foreigner	0.04	2200
T-4	Tioman/Mersing	Malaysian	0.02	1500
		Singaporean	0.01	1300
		Japanese	0.01	950
		Other Foreigner	0.03	1650
S-1	Direct Sibu	Malaysian	0.05	3750
		singaporean	0.07	9100
		Other Foreigner	0.08	4400
S-2	Sibu/Mersing	Malaysian	0.01	750
		Singaporean	0.01	1300
		Other Foreigner	0.02	825
M-1	Mersing	Malaysian	0.3	22500
		Singaporean	0.05	6500
M-2	Mersing/optional Endau	Malaysian	0.01	375
		Singaporean	0.01	650
		Other Foreigner	0.01	275

Fig. A.2.4 Future Distribution Pattern (Singaporean)

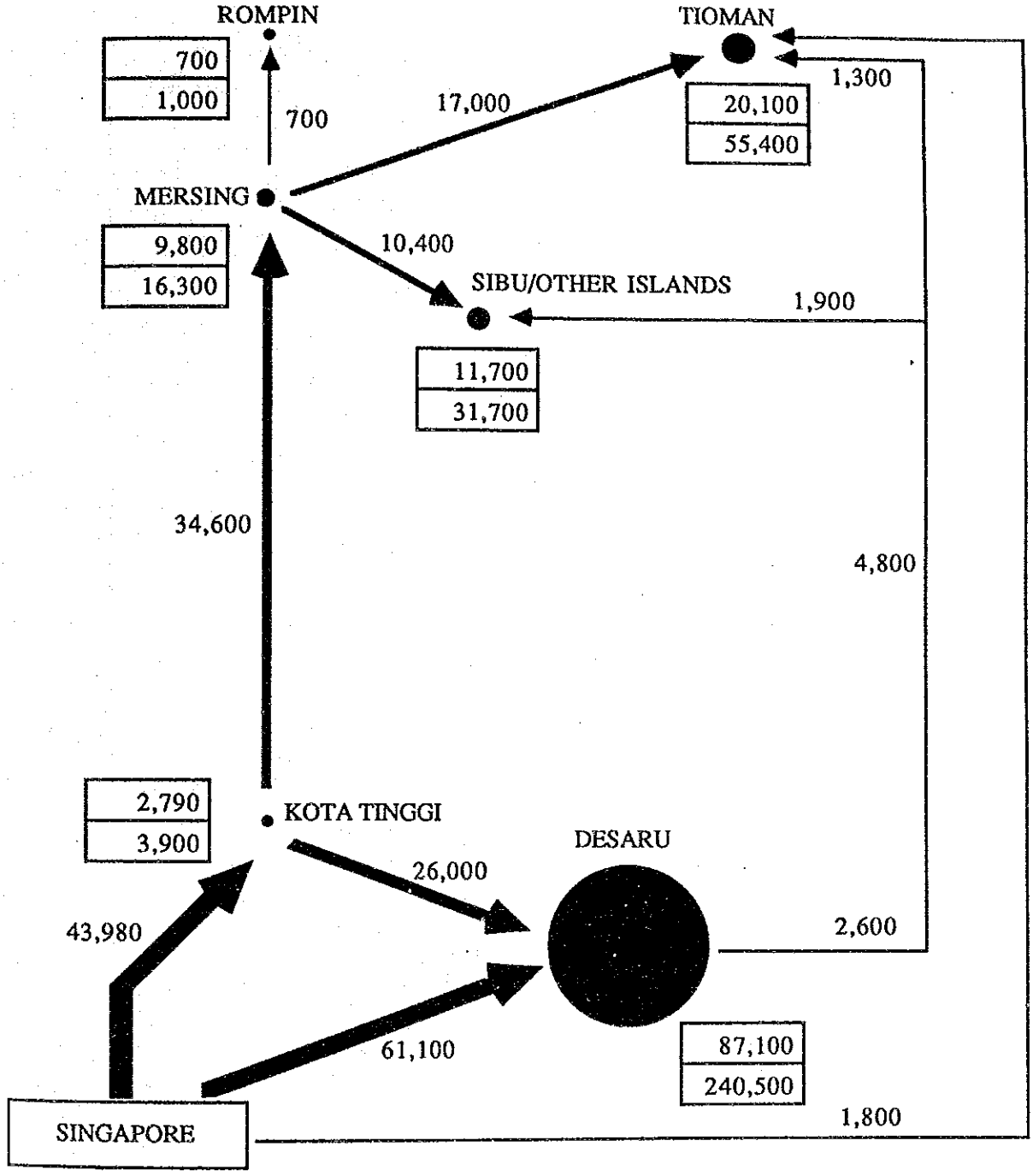


Fig. A.2.5 Future Distribution Pattern (Japanese)

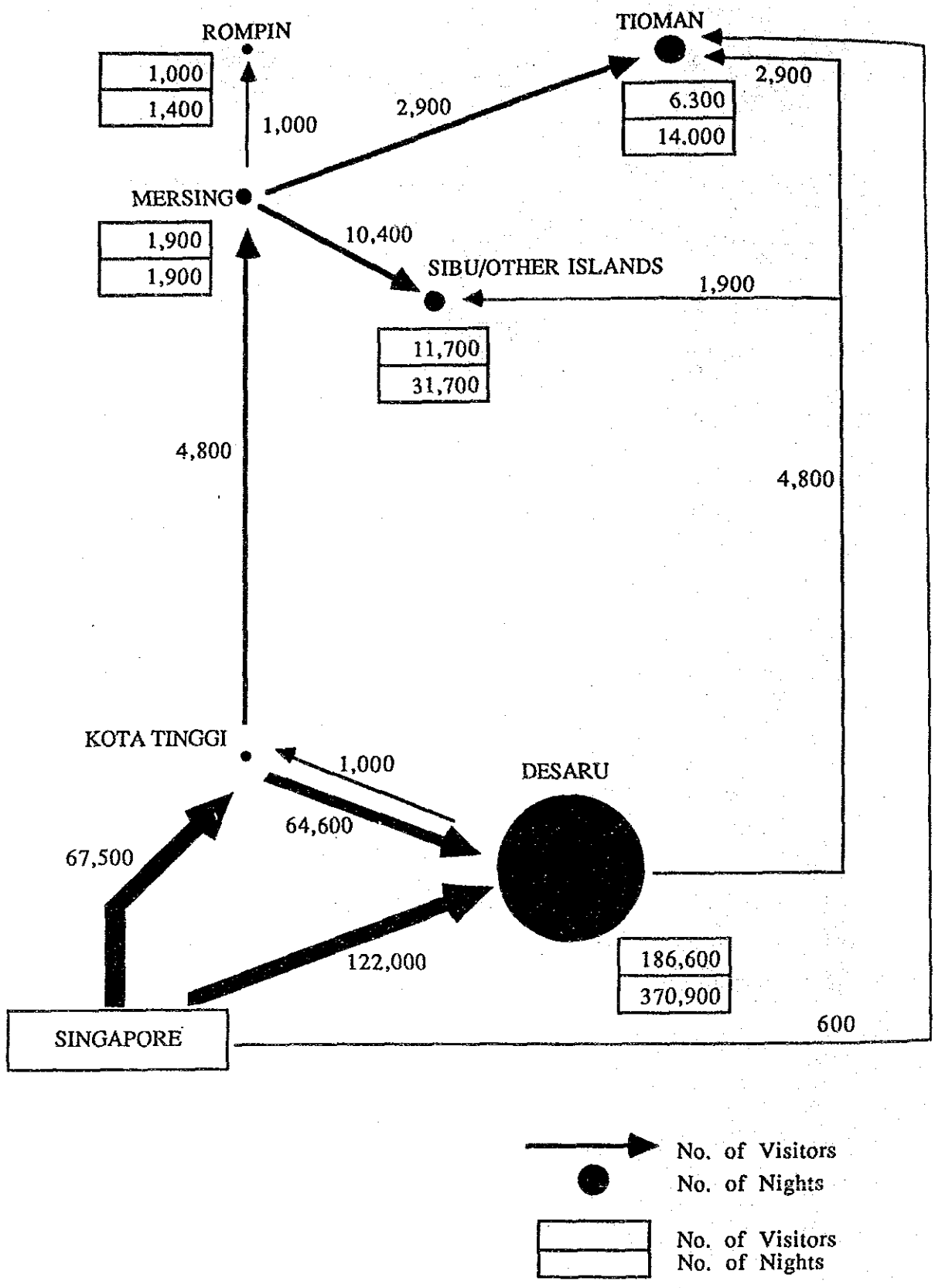
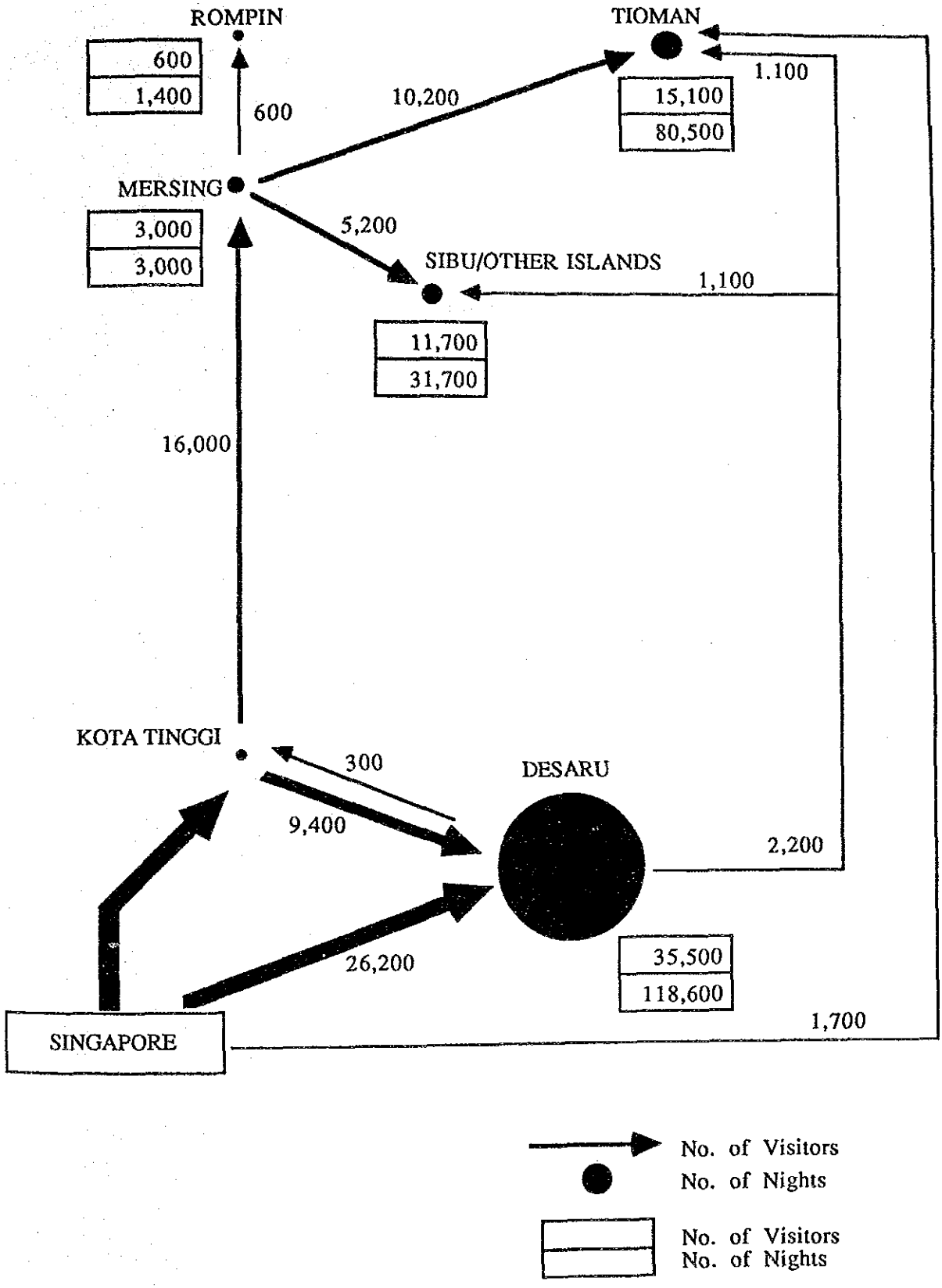


Fig. A.2.6 Future Distribution Pattern (Other Foreigners)



Appendix-B

Distribution of Accommodation Facilities

B.1 Tourist and Hotel Guest Nights Distribution

Table B.1.1 shows average length of stay at each destination.

Determination of the duration of stay is based on the present average length of stay and development policy of the area.

Number of guests nights at destinations are calculated in accordance with above average length of stay and forecast number of tourists described in Appendix A.

Table B.1.2 shows the estimated number of guest nights.

B.2 Hotel Room Distribution

The estimate of the number of hotel rooms required in the future is based on the estimated number of guest nights and target occupancy rate. Required number of hotel rooms in 1995 are estimated by class.

Following are the target occupancy rates.

Area	Target Occupancy Rate
Desaru	0.5
Kota Tinggi	0.5
Mersing	0.4
Sibu and other Islands	0.35
Tioman Island	0.35
Endau/Rompin	0.35

Table B.1.1 Average Length of Stay at Each Destination

TOUR TYPE Code No.	Name of Tour	Origin of Tourist	Overnight Areas Average Length of Stay in 1995					
			DESARU	K.T.	MERSING	SIBU/O	TIOMAN	ENDAU/R
K-1	Kota Tinggi	Malaysian		2				
		Singaporean		1				
D-1	Desaru JB	Malaysian	2					
		Singaporean	2.8					
		Japanese	2					
		Other Foreigner	3.4					
D-2	Ferry Desaru	Singaporean	2.8					
		Japanese	2					
		Other Foreigner	3.4					
D-3	Desaru/Sibu	Singaporean	1.5			2		
		Japanese	1.5			2		
		Other Foreigner	2.5			2.5		
D-4	Desaru/Tioman	singaporean	1.5				2	
		Japanese	1.5				2.5	
		Other Foreigner	2.5				3	
D-5	Desaru/optional Endau	Japanese	2		1			1.5
		Other Foreigner	2.5		1			2.5
T-1	Direct Tioman by land	Malaysian					3.2	
		Singaporean					2.8	
		Japanese					2	
		Other Foreigner					5.5	
T-2	Direct Tioman by air from Singapore	Singaporean					2.8	
		Japanese					2	
		Other Foreigner					5.5	
T-3	Direct Tioman by air from KL	Malaysian					3.2	
		Other Foreigner					5.5	
T-4	Tioman/Mersing	Malaysian			1		3.2	
		Singaporean			1		2.8	
		Japanese			1		2	
		Other Foreigner			1		5.5	
S-1	Direct Sibu	Malaysian				3.2		
		singaporean				2.8		
		Other Foreigner				5.5		
S-2	Sibu/Mersing	Malaysian			1	3.2		
		Singaporean			1	2.8		
		Other Foreigner			1	5.5		
M-1	Mersing	Malaysian			1.6			
		Singaporean			2			
M-2	Mersing/optional Endau	Malaysian			1			1.5
		Singaporean			1			1.5
		Other Foreigner			1			2.5

Table B.1.2 Estimated Number of Guest Nights

Code No.	Name of Tour	Origin of Tourist	Total No. of Overnights						
			DESARU	K.T.	MERSING	SIBU/O	TIOMAN	ENDAU/R	Totals
K-1	Kota Tinggi	Malaysian	0	22500	0	0	0	0	22500
		Singaporean	0	9100	0	0	0	0	9100
D-1	Desaru JB	Malaysian	42750	0	0	0	0	0	42750
		Singaporean	72800	0	0	0	0	0	72800
		Japanese	129200	0	0	0	0	0	129200
		Other Foreigner	31790	0	0	0	0	0	31790
D-2	Ferry Desaru	Singaporean	163800	0	0	0	0	0	163800
		Japanese	232560	0	0	0	0	0	232560
		Other Foreigner	80410	0	0	0	0	0	80410
D-3	Desaru/Sibu	Singaporean	1950	0	0	2600	0	0	4550
		Japanese	2850	0	0	3800	0	0	6650
		Other Foreigner	2750	0	0	2750	0	0	5500
D-4	Desaru/Tioman	singaporean	1950	0	0	0	2600	0	4550
		Japanese	4275	0	0	0	7125	0	11400
		Other Foreigner	2750	0	0	0	3300	0	6050
D-5	Desaru/optional Endau	Japanese	1900	0	950	0	0	1425	4275
		Other Foreigner	688	0	275	0	0	688	1650
T-1	Direct Tioman by land	Malaysian	0	0	0	0	19200	0	19200
		Singaporean	0	0	0	0	44044	0	44044
		Japanese	0	0	0	0	3800	0	3800
		Other Foreigner	0	0	0	0	46888	0	46888
T-2	Direct Tioman by air from Singapore	Singaporean	0	0	0	0	5096	0	5096
		Japanese	0	0	0	0	1140	0	1140
		Other Foreigner	0	0	0	0	9075	0	9075
T-3	Direct Tioman by air from KL	Malaysian	0	0	0	0	12000	0	12000
		Other Foreigner	0	0	0	0	12100	0	12100
T-4	Tioman/Mersing	Malaysian	0	0	1500	0	4800	0	6300
		Singaporean	0	0	1300	0	3640	0	4940
		Japanese	0	0	950	0	1900	0	2850
		Other Foreigner	0	0	1650	0	9075	0	10725
S-1	Direct Sibu	Malaysian	0	0	0	12000	0	0	12000
		singaporean	0	0	0	25480	0	0	25480
		Other Foreigner	0	0	0	24200	0	0	24200
S-2	Sibu/Mersing	Malaysian	0	0	750	2400	0	0	3150
		Singaporean	0	0	1300	3640	0	0	4940
		Other Foreigner	0	0	825	4538	0	0	5363
M-1	Mersing	Malaysian	0	0	36000	0	0	0	36000
		Singaporean	0	0	13000	0	0	0	13000
M-2	Mersing/optional Endau	Malaysian	0	0	375	0	0	563	938
		Singaporean	0	0	650	0	0	975	1625
		Other Foreigner	0	0	275	0	0	688	963
		Malaysian	42750	22500	38625	14400	24000	563	142838
		Singaporean	240500	9100	16250	31720	55380	975	353925
		Japanese	370785	0	1900	3800	13965	1425	391875
		Other Foreigner	118388	0	3025	31488	80438	1375	234713
		Total	772423	31600	59800	81408	173783	4338	1123350

Appendix-C

List of Tourism Facilities in Desaru New Tourism Core

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
1 0 0	**COASTAL RESORT CORRIDOR (TOTAL)**	**2,915.3**	**187,715**
1 1 0	AMMENITY CORE AREA	502.7	44,895
1 1 1	Tourist Centre	6.2	775
	Information Centre		100
	Travel Agents		75
	Airline Offices		150
	Bank/Insurance Office		50
	Money Exchanger		50
	Post Office		50
	Clinic/Dentist		100
	Rental Cycle Shop		200
1 1 2	Restaurant Plaza (1200 seats)	27.0	6,700
	Restaurants		
	Cafe Terrace		
	First Foods Shops		
	Kiosks		
	Disco		
	Night Club		
1 1 3	Shopping Promenade (32 Shops)	17.0	4,200
	Boutiques	13.0	3,200
	Souvenior/Handicraft Shops		
	Sports Equipments		
	Foods/Beverage		
	Duty Free Shop	4.0	1,000
	Game Centre		
1 1 4	Exhibition Centre	22.4	4,800
	Exhibition Plaza/Outdoor Theatre	5.0	500
	Theatre/Cinema(200 seats)	1.6	400
	Art/Craft Centre/Art Museum	4.0	1,000
	Exhibition Hall	11.0	2,700
	Children Club/Play Lot	0.8	200
1 1 5	Craftsman Village	28.0	7,000
	Training Centre/Exhibition Hall	8.0	2,000
	Craftsmen's Houses/Workshops	20.0	5,000
1 1 6	Indoor Sports Complex	24.0	5,900
	Gymnasium	10.8	2,700
	Indoor Swimming Pool	6.0	1,500
	Club House	2.4	500
	Bawlling	4.8	1,200

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
1 1 7	Outdoor Sports Complex	64.0	5,300
	Club House	2.0	500
	Badmington Courts(6)	6.0	
	Tennis Courts(10)	10.0	
	Centre Court with Stands	18.0	4,500
	Athletic Field	3.0	
	Volley Ball Courts(2)	2.0	
	Shooting Ranges-Clay/Archery/	3.0	100
	Horseback Riding	20.0	200
1 1 8	Jetty/Marine Sports Complex (Infra)	13.0	250
	Admini. Office	0.8	200
	Long Jetty(pedestrian/carriage)	12.0	
	First Aid/Rescue Centre	0.2	50
1 1 9	Jetty/Marine Sports Complex (Private)	11.1	2,780
	Cafe Terrace(200 seats)	3.2	800
	Restaurant(400 seats)	6.4	1,600
	Kiosk	0.3	80
	Rental Shops of Marine Sports Eq.	0.4	100
	Pro-shop	0.8	200
1 1 10	Jetty/Marine Sports Complex (Public)	13.0	3,200
	Observation Tower	5.0	1,200
	Floating Beck for Marine Sports		
	Aquarium	8.0	2,000
1 1 11	Major Water Recreation Complex	40.0	3,340
	Club House	22.8	2,000
	Swimming Pools	7.9	
	Waving Pool	2.6	
	Water Slider Pool	0.6	
	Stream Pool	2.1	
	Poolside Restaurants(200 seats)		800
	Outdoor Theatre/Plaza	4.0	500
	Coffee House/Kiosk		40
1 1 12	Transportation Centre	75.0	170
	Gate/Office	5.0	100
	Major Car Parking	50.0	10
	Bus Terminal	10.0	10
	Taxi Terminal	10.0	10
	Kiosk		40
1 1 13	Parks /Gardens	162.0	480
	Orchid Gardens	60.0	200
	Tg.Penawar Observation Park	102.0	200
	Seaside Pedestrian Way/Decks		80
	Cut/Fill		

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
1 2 0	AMMENITY SUB-CORE AREA	783.6	9,140
1 2 1	Golf Course	700.0	3,000
	Club House	20.0	3,000
	Golf Course(18 holes)	680.0	
1 2 2	Shopping/Restaurant	11.0	2,600
	Boutiques	6.0	1,400
	Souvenior/Handicraft Shops		
	Sports Equipments		
	Foods/Beverage		
	Restaurants (200 seats)	3.0	800
	Cafe Terrace (100 seats)	2.0	400
1 2 3	Theatre	22.0	1,000
	Multi-purpose Festival Plaza	20.0	500
	Theatre(250 seats)	2.0	500
1 2 4	Beach/Marine Club (Infra)	1.8	250
	Admini. Office	1.8	200
	Short Jetty(pedestrian only)		
	First Aid/Rescue Centre		50
1 2 5	Beach/Marine Club (Private)	4.8	1,240
	Rental Shops of Marine Sports Eq.	0.4	100
	Pro-shop	0.4	100
	Restaurant(150 seats)	2.4	600
	Cafe Terrace (100 seats)	1.6	400
	Kiosk		40
1 2 6	Beach/Marine Club (Public)		
	Floating Beck for Marine Sports		
1 2 7	Outdoor Sports	29.0	800
	Club House	2.0	500
	Tennis Court (8 Courts)	4.0	
	Shooting Ranges-Clay/Archery/	3.0	100
	Horseback Riding	20.0	200
1 2 8	Transportation Sub-terminal	15.0	250
	Car Parking	11.0	20
	Taxi Stand	2.0	50
	Bus Terminal	2.0	140
	Kiosk		40
130—160	ACCOMMODATION & PARKS IN HOTEL AREA		
1 3 0	HOTEL DEV'T ON TG. SIANG-BALAU	754.0	64,400
1 3 1	High Class Hotel(international delux)	281.0	64,000
	250 Rooms Hotel(expand to 350)	88.0	20,000
	250 Rooms Hotel(expand to 350)	88.0	20,000
	300 Rooms Hotel(expand to 400-450)	105.0	24,000
1 3 2	Tg./Lagoon Parks	473.0	400

Code No.			Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
1	4	0	HOTEL DEV'T ON TG. BALAU-LOMPAT	430.0	24,700
1	4	1	Middle Class Hotel(International)	98.0	24,500
			150 Rooms Hotel(expand to 210-250)	42.0	10,500
			200 Rooms Hotel(expand to 250-300)	56.0	14,000
1	4	2	Tg./Lagoon Parks	332.0	200
1	5	0	HOTEL DEV'T ON TG. LOMPAT-PENAWAR	445.0	44,580
1	5	1	Middle Class Hotel(International)	176.0	44,300
			100 Rooms Expansion	28.0	7,200
			Renovation of Golf Hotel		
			250 Rooms Hotel(expand to350)	70.0	17,500
			280 Rooms Hotel(expand to350-400)	78.0	19,600
1	5	2	Tg./Lagoon Parks	269.0	280
1	6	0	OTHER LANDSCAPING AREAS		
1	6	1	Beachside Promenade(infra.easement)		
1	6	2	Jungle Trecking Courses		
			Lowland Forest Course		
			Swamp Forest Course		
			Beach Forest Course		

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
2 0 0	**DAYTRIPPER/DAILY ACTIVITY ZONE**	**2,112.3**	**34,635**
2 1 0	TG. BELUNGKOR GATE AREA	82.0	2,255
2 1 1	Tg. Belungkor Ferry Jetty	63.0	755
	Jetty		
	Terminal Building		
	Gate/Monument Plaza	60.0	
	Tourist Information	0.4	100
	Souvenior Shop/Kiosk (10 Shops)	0.3	80
	Travel Agents/Airline Offices	0.9	225
	Bank/Insurance Office	0.2	50
	Post Office	0.2	50
	Rental Cycle Shop	0.8	200
	Money Exchanger	0.2	50
2 1 2	Shopping Promenade(15 Shops)	4.0	1,000
	Boutiques	4.0	1,000
	Souvenior/Handicraft Shops		
	Sports Equipments Shops		
	Food/Beverage Shops		
	Game Centre		
2 1 3	Transportation Terminal	15.0	500
	Car Parking	10.0	10
	Taxi Stand	1.0	10
	Bus Terminal	2.0	40
	Office/Waiting Room	2.0	400
	Kiosk		40
	Mono Rail		
2 2 0	TG. BELUNGKOR MARINE SPORTS AREA	153.5	8,000
2 2 1	Marine Sports Complex	136.5	3,800
	Club House	8.0	2,000
	Restaurants(200 seats)	3.0	800
	Swimming Pool	3.5	500
	Marina	120.0	
	Repair House	2.0	500
2 2 2	Bt.Belungkor Hill Restaurant	17.0	4,200
	Restaurants(450 seats)	17.0	4,200
	Coffee Shops(200 seats)		
	First Food Shops		
	Kiosk		
	Plaza		
	Cable Car		

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
2 3 0	RECREATIONAL ACTIVITIES AREA	500.0	6,600
2 3 1	Major Fun Park	500.0	6,600
	Administration Office	490.0	500
	Gate/Entrance		
	Restaurants(800 seats)		3,200
	Cafe Terrace(600 seats)		2,400
	Event Plaza		
	Outdoor Theatre	10.0	500
	Mono Rail		
	Roller Coaster		
	Ferris Wheel		
	Parachuter		
	Other Equipments		
2 4 0	INLAND SPORTS AREA	750.0	9,100
2 4 1	Golf Course	700.0	3,000
	Club House	20.0	3,000
	Golf Course(18 holes)	680.0	
2 4 2	Indoor Sports Complex	10.0	2,500
	Club House	2.0	500
	Gymnasium	6.0	1,500
	Squash Courts	2.0	500
2 4 3	Outdoor Sports Complex	40.0	3,600
	Club House	2.0	500
	Tennis Courts(8)	8.0	
	Indoor Tennis Court(3)		2,800
	Badmington Courts(6)	6.0	
	Athletic /Jogging	1.0	
	Shooting Ranges(archery/others)	3.0	100
	Horseback Riding	20.0	200
2 5 0	ORCHARD/ORCHID GARDENS	110.0	880
2 5 1	Orchard Gardens	90.0	440
	Research/Admini Station		400
	Nursery	10.0	
	Orchards	80.0	
	Coffee Shop/Kiosk		40
2 5 2	Orchid Garden	20.0	440
	Research/Admini Station		400
	Nursery	5.0	
	Orchid Garden	15.0	
	Coffee Shop/Kiosk		40

Code No.	Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
2 6 0	LAKESIDE PARKS	516.8	7,800
2 6 1	Lakeside Park	100.0	900
	Administration Office	0.8	200
	Sightseeing/Strolling Path	96.4	
	Rest House/Kiosk/Lakeside Restaurant	2.8	700
2 6 2	Bird Sanctuary	400.0	2,700
	Research/Admini Station	0.8	200
	Sightseeing/Strolling Path	389.2	
	Giant Cages of Birds	10.0	2,500
2 6 3	Insect Gardens	16.8	4,200
	Research/Admini Station	0.8	200
	Batterfly Garden	8.0	2,000
	Beattle Garden	4.0	1,000
	Others (Reptiles)	4.0	1,000

Code No.			Name of Facility	Area Requirement Site (1000sqm)	Floor(sqm)
3	**0**	**0**	**BANDAR PENAWAR SERVICE TOWN**	**472.2**	**129,500**
3	1	0	TOWN CENTER	4.6	1,200
3	1	1	Public Facilities	4.6	1,200
			Fire Brigade Centre	2.0	500
			Hospital	2.0	500
			Police Station	0.3	100
			Post Office	0.3	100
3	2	0	SUPPORTING INDUSTRIAL AREA	200.0	400
3	2	1	Site Preparation		
3	2	2	Nursery	200.0	400
			Office		50
			Shade House		200
			Workshops/Storage	200.0	150
3	3	0	BANDAR PENAWAR ART CENTER	13.6	2,900
3	3	1	Headquarter	3.6	900
			Administration Office		300
			Research Centre		300
			Meeting Halls		300
3	3	2	Dance/Music Centre	10.0	2,000
			Traditional Performance Research		1,000
			Training/Exhibition		1,000
3	4	0	RESIDENTIAL AREA FOR HOTEL EMPLOYEES	254.0	125,000
3	4	1	Residential	254.0	125,000
			Housing	175.0	116,000
			Community Facilities	35.0	9,000
			Roads	44.0	

Code No.	Name of Facility	Site	Area Requirement (1000sqm)	Floor(sqm)
4 0 0	**OTHER TOURISM ACTIVITY ZONES**		**1,214.0**	**8,680**
4 1 0	LEBAM RIVER TOURISM AREA		17.2	2,350
4 1 1	Rubber Museum		11.2	1,800
		Museum	4.0	1,000
		Outdoor Exhibition Area	4.0	
		Colonial Style Restaurant(200 seats)	3.2	800
4 1 2	River Cruising		1.0	250
		Administration office		100
		Kiosk/Pro-shop for River Fising		150
		Jetties		
4 1 3	Crocodile Garden		5.0	300
		Resarch/Admini Centre		100
		Nursery		200
		Garden(with Fence)	5.0	
4 2 0	SANTI RIVER TOURISM AREA		6.0	1,300
4 2 1	*Oil Palm Museum*		6.0	1,300
		Museum/Admini Office	2.8	1,000
		Cafe Terrace/Kiosk	1.2	300
		Outdoor Exhibition Area	2.0	
4 3 0	JOHOR LAMA HISTORICAL PARK AREA		1,022.4	840
4 3 1	Johor Lama Historical Park		1,000.0	240
		Park Office/Presentaion Room	0.8	200
		Sightseeing Path/Landscaping	999.0	
		Rest House/Kiosk	0.2	40
4 3 2	Kg. Sengat Seafood Restaurants		22.4	600
		Restaurant(150 seats)	2.4	600
		Landscaping of the Town	20.0	
4 4 0	TG. PENGERANG/SOUTH BEACH		168.4	4,190
4 4 1	Tg.Pengerang Historical Park		2.0	240
		Observation Place/Rest Houses/Kiosks	2.0	240
		Sightseeing Path/Landscaping		
4 4 2	South Beach Beautification		164.4	3,600
		Seafood Restaurant Square	14.4	3,600
		Roadside Beautification	150.0	
4 4 3	Pulau Lima Fishing Island		2.0	350
		Admini. Office		200
		Pro-shop/Kiosk		150
		Jetties on Tg.Penyasop/Islands		

Appendix-D

Cost Estimate

D.1 Road

D.1.1 Future Traffic Volume on the Roadway in the Southeast Tourism Area

Future traffic on the federal roads in the Southeast Tourism Area are normally estimated by extrapolation of past traffic counts using linear regression techniques. Sixteen hour count data is available from "Traffic Volumes Malaysia 1946-1986" published by the JKR. Data from this report are available from 1976 to 1985 except for the Kota Tinggi to Desaru link which was only opened to traffic in 1982. due to this recent opening, the regression techniques normally applied would yield unreasonable estimates; therefore, the ratio of traffic on this branch to the main Kota Tinggi - Mersing highway is simply assumed as constant.

Table D.1.1 Estimated Future Traffic Volume (ADT of 16 hours)

Road Section	ST. No	1990	1991	1992	1993	1994	1995
Singapore - Johor Bahru	OD49						
Johor Bahru - Kota Tinggi	F49	13,295	14,172	15,108	16,105	17,167	**18,300**
Kota Tinggi - Kg. Haji Mohd Jambi	H09	6,771	7,297	7,863	8,474	9,132	**9,841**
Kota Tinggi - Desaru	OD51	8,447	9,004	9,598	10,232	10,907	**11,627**
Desaru - Kg. Haji Mohd Jambi	- NA -						
Kg. Haji Mohd Jambi - Jemaluangu	F50	3,772	4,025	4,295	4,564	4,892	**5,221**
Jemaluangu - Mersing	H20	3,023	3,161	3,306	3,456	3,614	**3,779**
Jemaluangu - Kanang Bahru	F55						

D.1.2 Unit Construction Cost

Cost of road construction and improvement for each 1 kilometre are set as shown below.

Construction Cost for each km length of road

New Construction — Unit: 1,000 Rgt.

Standard	Flat Terrain	Rolling Terrain
R05	696	1,007
U03	1,021	1,367
R01	-	345

Improvement — Unit: 1,000 Rgt.

Standard	Flat Terrain	Rolling Terrain
R05 Repavement	395	395
U03 Repavement	115	115
R01 1 Lane Add.	325	360

These unit construction costs are based on the construction 1987 cost data of JKR.

Unit cost for a bridge is based on the cost of a 3 span, I-beam concrete bridge with a span length of 25 meters. Piles 20 metres deep for the foundation are provided. The Unit Cost for 1 sq. meter of bridge construction is 1,750 Rgt.

Design and supervision fee is assumed as 4% of construction cost for design and 7% for supervision, as recommended by the World Bank.

The landscaping cost does not include the cost of plant material, since it is assumed that plants are provided by the nursery owned by the project execution agency of the Desaru New tourism Core.

After the type of construction, terrain, and necessary construction items including landscaping of each road section are determined, the construction cost of each road section is estimated.

Table D.1.2 indicates the construction cost of the each road section by year.

Table D.1.2 Road Costs

Road name	CONDITION			COST(mill M$)			Cost (Mill M$)							M/O COST
	CLASS	NOMB. LANE	LENGTH (km)	-1995	1995-	TOTAL	1989	1990	1991	1992	1993	1994	1995	(Mill M$/ YEAR)
D-1	U03	2	8.45	6.288	-	6.288	0.226	3.031	3.031					0.252
D-2	U03	2	3.48	4.160	-	4.160	-	-	0.150	2.005	2.005			0.104
D-3	U03	2	5.55	4.423	-	4.423	0.160	2.131	2.131					0.165
D-4	U03	2	1.93	2.318	-	2.318	-	0.084	1.117	1.117				0.058
D-5	U03	2	1.00	1.195	-	1.195	-	-	0.043	1.152				0.030
F-1	R05	2	9.95	0.568	-	0.568	-	-	-	-	0.020	0.548		0.297
F-2	R05	2	8.00	9.407	-	9.407	0.339	4.534	4.534					0.239
F-3	R05	2	4.83	0.300		0.300	0.011	0.096	0.096	0.097				0.144
F-4	R05	2	6.00	7.058	-	7.058	0.254	2.268	2.268	2.268				0.179
F-101	R01	2	7.00	1.393	-	1.393	0.050	1.343						0.207
F-102	R01	2	5.00	0.995	-	0.995	-	0.035	0.960					0.149
F-103	R01	2	2.30	0.458	-	0.458	-	-	0.017	0.441				0.069
F-104	R01	2	5.50	1.095	-	1.095	-	-	0.040	1.055				0.164
F-105	R01	2	2.50	0.498	-	0.498	-	-	-	0.018	0.480			0.075
R-3 (J.B.-R92)	R05	4	29.60	26.761	-	26.761	0.964	6.449	6.449	6.449	6.450			1.768
R-3 (R92-Mersing)	R05	2	91.20	96.059	-	96.059	-	-	3.461	15.433	15.433	30.866	30.866	2.723
R-92 (R3-R89)	R05	4	50.80	45.322	-	45.322	1.633	10.922	10.922	10.922	10.923			3.033
R-89	R05	2	16.90	0.859	-	0.859	-	-	0.031	0.828				0.505
R-99	R05	2	40.50	-	17.767	17.767	-	-	-	-	-	-	-	1.209
J-26	R05	2	38.60	-	47.252	47.252	-	-	-	-	-	-	-	1.153
Total			339.09	209.157	65.019	274.176	3.637	30.893	35.250	41.785	35.311	31.414	30.866	

D.2 Investment Cost Estimation of Jetty Construction

D.2.1 Natural Conditions Related to the Jetty Design & Construction

(1) Tide

Tidal heights above Chart Datum

Unit: meter

Location	MHHW	MLHW	MSL	MHLW	MLLW
Tg. Penawan Tg. Balau	2.2	2.1	1.5	1.3	0.6
Mersing Tioman	2.4	1.8	1.5	1.2	0.6

Source: National Coastal Erosion Study (Aug. 1985, Stanlay Consultant for Tg. Penawar & Tg. Balau

JKR Report for Mersing & Tioman

(2) Wave

Wave conditions are as follows.

Location	Probable Direction (°N)	50 year Significant Wave Height (Meters)
Tg. Penawar	NE	2.4
Tg. Pengelih	SW	1.5
Changi Point	SE	1.7
Sg. Belungkor	SW	0.4
Tg. Langsat	SE	0.6
Telok Sengat	SSW	0.5
Tioman 1/	-	(1.5)

Source: KEJORA report (Jurutera Consultant, 1985)

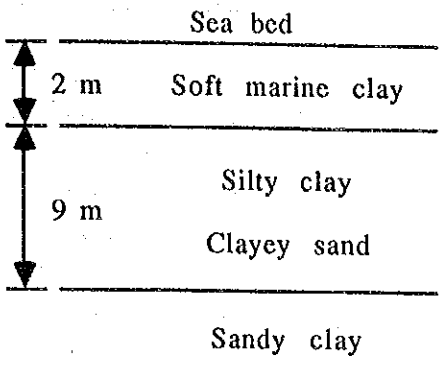
Note: 1/ Assumed.

(3) Seabed Topography

Assumed from charts, scale 1/75,000 and 1/50,000.

(4) Soil

In accordance with the KEJORA Report mentioned in previously, the sea bed soil condition of Tg. Penawan is as shown in Table D.3.1.



Same structure is applied for other areas.

D.2.2 Design Vessel

The following vessel is assumed to be berthed at Tg. Penawar and Tioman Jetty.

1) Dimension

Length over all	28.7 m
Breadth over deck	6.4 m
Width over hydrofoil	10.8 m
Draft from bottom of hydrofoil, floating	3.5 m
Draft from bottom of hydrofoil, cruising	1.4 m

2) Classification

Hydrofoil Craft

3) Tonnage

Gross tonnage	170 tons

4) Speed, etc.

Max. speed	37 kt
Cruising speed	35 kt
Cruising range	400 km

D.2.3 Jetty Structure

Unit: meters

Location	Total Length	Causeway	(Foot Path)	Bridge	Warf	Pontoon
Tg. Penawar (Amenity core)	320	L = 230 B = 10	L = 230 B = 10	L = 70 B = 5	L = 10 B = 20	L = 10 B = 20
Tg. Balau (Amenity, sub-core)				L = 100 B = 3		
Jetties for river cruise (2 locations)	100 & 30		L = 100 & L = 30			
Tioman Is.*	130			L = 110	L = 10	L = 10
Mersing Port* (Improvement)					L = 20 B = 10	

* Outside of the Desaru New Tourism Core.

D.3 Investment Cost Estimation of Water Supply System

D.3.1 Water Demand

Water Demand of the following 4 categories are estimated based upon the tourism facilities and Township development plan.

1) Hotel

Number of Rooms x Unit demand/room/day

2) Day-Tripper

Visitor Arrival x Duration of stay x Unit demand/person/day

3) Golf Course

Course (18 holes) x Daily demand

4) Resident

Service population x Unit demand/person/day

Unit demand is as shown below.

Table D.3.1 Unit Demand of Water Supply

Item	Year	1995		Future	
	Unit	Daily Max.	Daily Ave.	Daily Max.	Daily Ave.
Hotel	m3 per room per day	2.10	1.40	2.10	1.40
Day-Tripper	liters per person per day	200	133	200	133
Golf Course	m3 per day	1,230	820	1,230	820
Resident	liters per person per day	230	153	240	160

Note: Daily Maximum Demand/Daily Average Demand = 1.5

Table D.3.2 Water Demand by Year (Daily Max)

Unit: m3/d

Items	Year	1993	1994	1995	Future
Hotel	Max.	3,026	3,471	4,450	10,500
	Ave.	1,412	1,619	2,076	4,900
		1,450 Rooms (68%)	1,650 Rooms (78%)	2,119 Rooms (100%)	(5,000 Rooms)
Day-Tripper	Max.	1,289	2,306	3,391	3,391
	Ave.	859	1,537	2,260	2,260
		1.00 M. Persons (38%)	1.80 M. Persons (68%)	2.65 M. Persons (100%)	
Golf Course	Max.	1,230	1,230	3,690	3,690
	Ave.	820	820	2,460	2,460
		(1 Course)	(1 Course)	(3 Courses)	
Resident	Max.	9,936	10,488	11,040	13,440
	Ave.	6,610	6,977	7,344	8,960
		43,300 Persons (90%)	45,700 Persons (95%)	48,000 Persons (100%)	(56,000 Persons)
Total	**Max.**	**15,481**	**17,495**	**22,571**	**31,021**
	Ave.	**9,701**	**10,953**	**14,140**	**18,580**

Future Demand is established to avoid the reconstruction of the system after 1995. Pipelines and Reservoirs meet the future demand which correspond to the development of 5,000 Hotel rooms and related township. A flow chart for demand estimation is shown in Fig. D.3.1 and total water demand by year is shown on Table D.3.2.

D.3.2 Water Resource and Treatment Plant

Existing Sungai Lebam dam is used for row water reservoir.

Additional pumps will be installed in the existing water treatment plant to meet the demand.

Existing water reservoir and treatment plant capacity are as followings.

- Capacity of Sg. Lebam water reservoir ..... 32,000 m^3/d (7 MGD)
- Row Water Pump (2 units) ..... 22,700 m^3/d (5 MGD)
- Water Treatment Plant (capacity) ..... 45,400 m^3/d (10.0 MGD)
- Treated Water Pump (2 units) ..... 24,100 m^3/d (5.3 MGD)

Fig. D.3.2 shows the Daily Maximum Water Consumption.

Table D.3.3 shows Breakdown of the Investment.

Table D.3.3 Breakdown of Investment cost

Unit: Million Rgt.

Item	Investment Cost		
	Up to 1995	Future	Total
Basic Construction Cost	21.62	1.88	23.50
D/D & Supervision	2.37	0.23	2.60
Total	23.99	2.11	26.10

Fig. D.3.1 Flow Chart for Demand of Water Supply

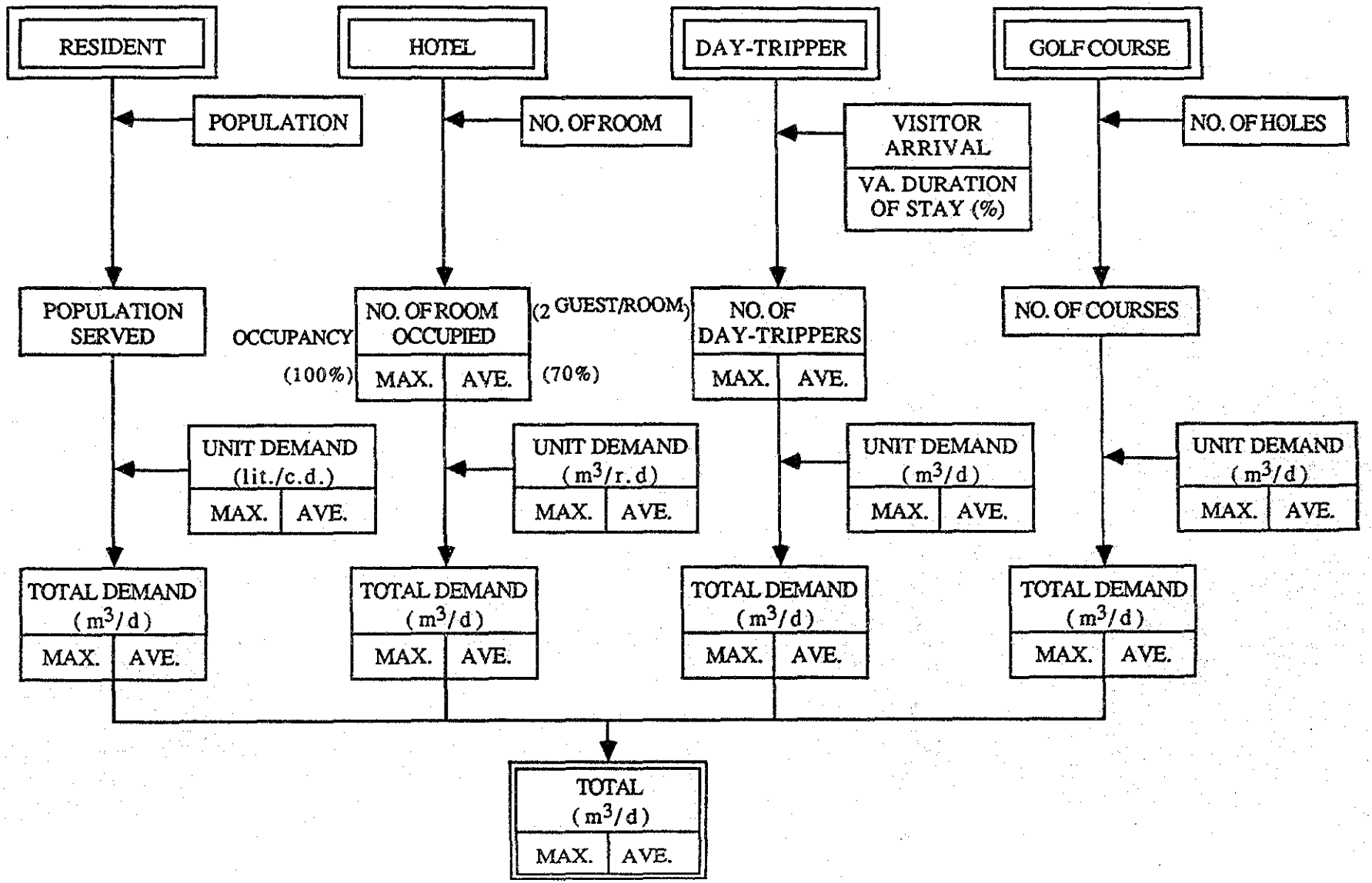
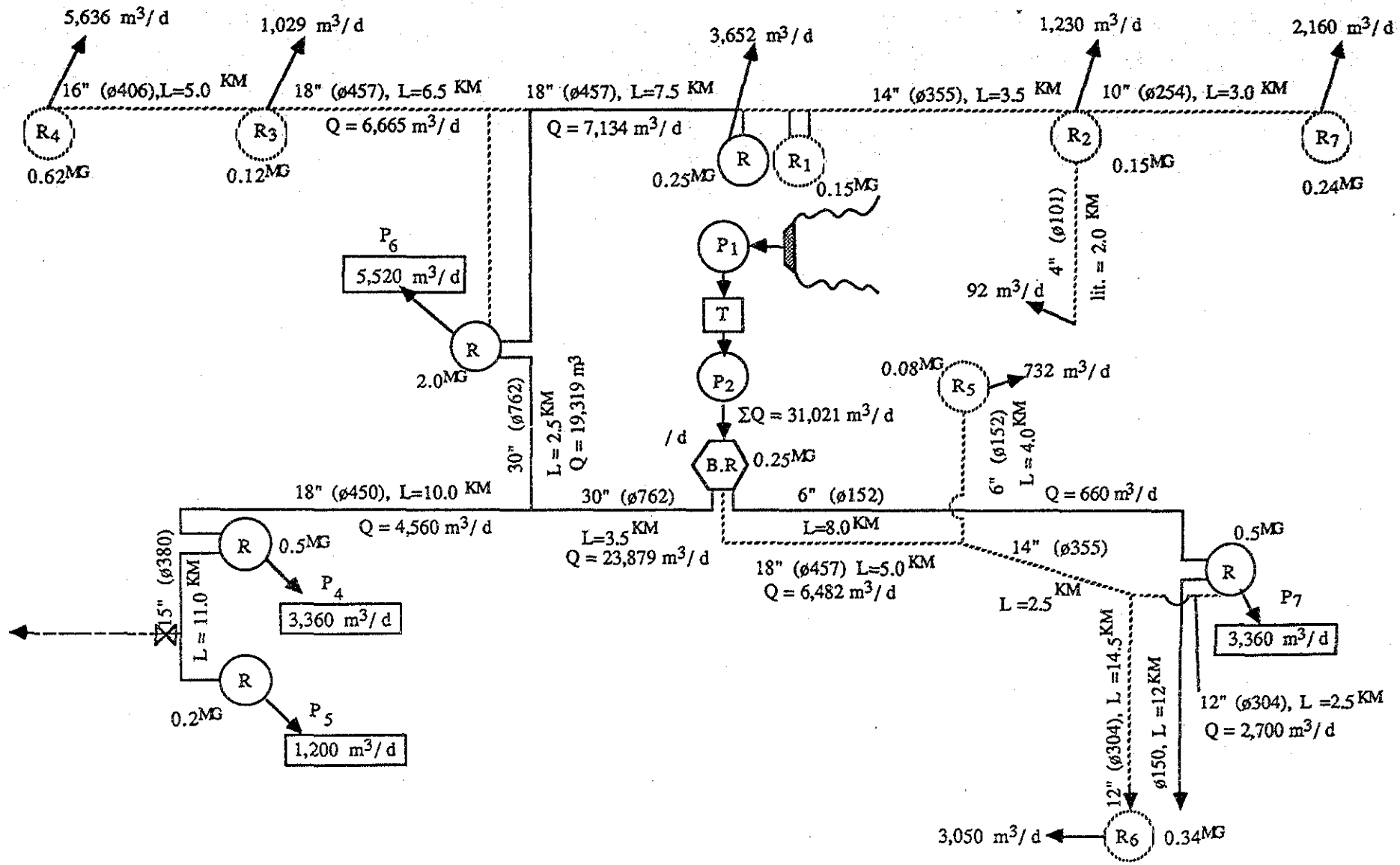


Fig. D.3.2 Daily Maximum Water Consumption



D.4 Sewerage System

D.4.1 Unit Discharge of Sewage

Estimates of the unit discharge of sewage by purpose is based on the water demand.

1) Hotel

   Water demand/room/day - Air conditioning water/room/day - Swimming pool water/room/day

2) Golf Course

   Daily water demand - sprinkled water/day

3) Day-tripper

   Equal to water demand/person/day

4) Flow of underground water into drain pipes is estimated as 20% of maximum daily discharge of sewage.

Unit discharge of sewage by purpose is shown in Table D.4.1.

Future discharge is established to avoid the reconstruction of sewerage system after 1995.

Study flow chart for the estimation of sewage discharge is shown in Fig. D.4.1 and the estimated sewage discharge by year is shown in Table D.4.2.

Table D.4.1. Unit Discharge of Sewage

		1995		Future	
		Daily Max.	Daily Ave.	Daily Max.	Daily Ave.
Hotel	m3/ per room per day	1.50	1.00	1.50	1.00
Day-tripper	litres per person per day	204	136	204	136
Golf course	m3 per day	105	70	105	70

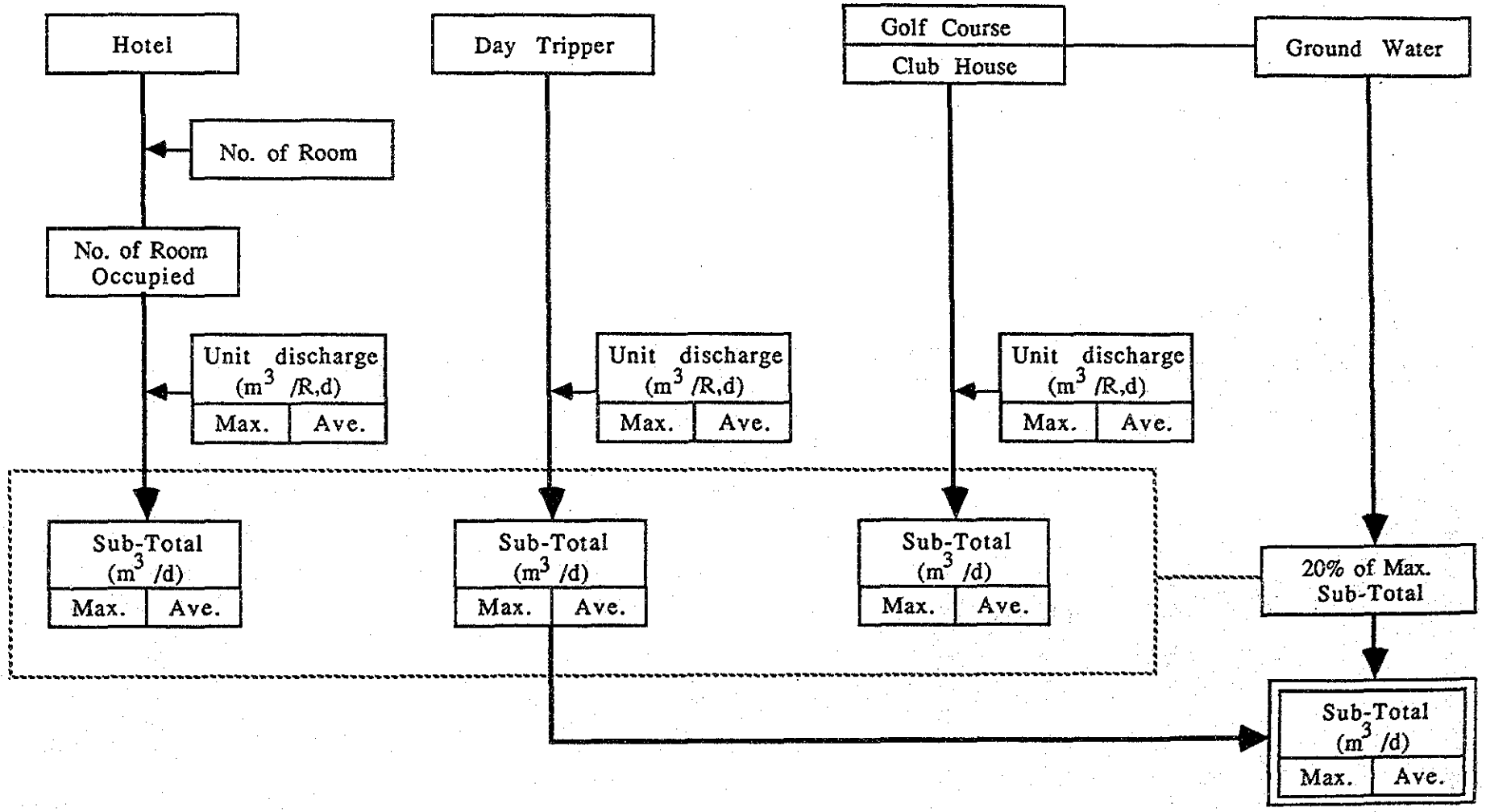
Note: Daily Max. Discharge/Daily Ave. Discharge = 1.5

Table D.4.2 Sewage Forecast by Year (Daily Max)

Unit: CMD

Area	Year	1993 (48%)	1994 (61%)	1995 (100%)	Future
North Area	Daily MAX	1,121	1,425	2,336	4,785
	Daily AVG.	644	819	1,342	2,703
South Area	Daily MAX.	1,685	2,140	3,508	6,243
	Daily AVG.	1,076	1,368	2,242	3,761
Total	Daily MAX.	2,805	3,565	5,844	11,028
	Daily AVG.	1,720	2,187	3,584	6,464

Fig. D.4.1 Study Flow Chart for Demand of Water Supply



D.4.2 Sewerage System

Two sewerage treatment plants are planned to be constructed in the Coastal Resort corridor. The capacities of the treatment plants and other related facilities such as pumping stations, manhole pumps, and pipelines are listed in Table D.4.3.

Table D.4.3 Facilities of Sewerage System

Area	Item	1995	Future	Total
No	Treatment Plant	2,400 m^3/d	2,400 m^3/d	4,800 m^3/d
So	Treatment Plant	3,500 m^3/d	3,500 m^3/d	7,000 m^3/d
No	Pumping Station	1.60 m^3/min		1.60 m^3/min
So	Pumping Station	-	2.36 m^3/min	2.36 m^3/min
So	Pumping Station	4.10 m^3/min		4.10 m^3/min
So	Pumping Station	5.49 m^3/min		5.49 m^3/min
No	Pumping Station	6.88 m^3/min		6.88 m^3/min
No	Manhole Pump	0.36 m^3/min		0.36 m^3/min
No	Manhole Pump	-	0.36 m^3/min	0.36 m^3/min
So	Manhole Pump	0.76 m^3/min		0.76 m^3/min
So	Manhole Pump	1.26 m^3/min		1.27 m^3/min
So	Manhole Pump	1.53 m^3/min		1.53 m^3/min
No	Manhole Pump	2.04 m^3/min		2.04 m^3/min
So	Manhole Pump	2.29 m^3/min		2.29 m^3/min
So	Manhole Pump	3.07 m^3/min		3.07 m^3/min
No	Manhole Pump	3.79 m^3/min		3.79 m^3/min
	Pipe Line			
No	DCIP ø200	3.0 km		3.0 km
So	DCIP ø200	-	1.2 km	1.2 km
So	DCIP ø250	1.5 km		1.5 km
No	DCIP ø300	1.2 km		1.2 km
So	DCIP ø300	1.7 km		1.7 km
	Pipe Line			
No	R.C.P. ø200	1.0 km	1.5 km	2.5 km
So	R.C.P. ø200	1.2 km		1.2 km
No	R.C.P. ø250	3.2 km		3.2 km
So	R.C.P. ø250	9.0 km		9.0 km
No	R.C.P. ø300	1.6 km		1.6 km
So	R.C.P. ø300	1.7 km	1.5 km	3.2 km
So	R.C.P. ø350	2.2 km		2.2 km

Note: No - North Area
So - South Area

D.4.3 Cost Estimation

The investment cost of the total system is broken down by item as shown in Table D.4.4.

Table D.4.4 Breakdown of Investment Cost

Unit: Million Rgt.

Item	Investment Cost		
	Up to 1995	Future	Total
Basic Construction Cost	64.46	27.56	92.02
D/D & Supervision	7.09	3.03	10.12
Total	71.55	30.59	102.14

D.5 Solid Waste Disposal System

D.5.1 Unit Discharge of Solid Waste Disposal

Unit discharge of solid waste disposal is based on the reports of other similar tourism development area. Unit discharge and specific gravity of solid waste disposal are shown in Table D.5.1.

Table D.5.1. Unit Discharge of Solid Waste Disposal

Item	Unit	Unit Discharge	Specific Gravity (t/m^3)
Hotel	kg/room•day	8.00	0.45
Day Tripper	kg/person•day	0.50	0.40
Resident	kg/person•day	0.75	0.30

The amount of discharge of solid waste disposal is estimated to avoid the *reconstruction of system* after 1995 and is calculated by item as shown in Tables D.5.2 and D.5.3.

Table D.5.2 Total Discharge of Solid Waste Disposal (Weight)

Year	Hotel			Day Tripper			Resident		Total		
	Daily Max. (t/d)	Daily Ave. (t/d)	Annual Amount (t/y)	Daily Max. (t/d)	Daily Ave. (t/d)	Annual Amount (t/y)	Daily Amount (t/d)	Annual Amount (t/y)	Daily Max. (t/d)	Daily Ave. (t/d)	Annual Amount (t/y)
1993	11.6	8.1	2,960	3.2	2.2	800	12.2	4,450	27.0	22.5	8,210
1994	13.2	9.2	3,360	5.7	4.0	1,460	14.3	5,220	33.2	27.5	10,040
1995	17.0	11.9	4,340	8.3	5.8	2,120	16.6	6,060	41.9	34.3	12,520
Future	40.0	28.0	10,220	8.3	5.8	2,120	23.0	8,400	71.3	56.8	20,740

Table D.5.3 Total Discharge of Solid Waste Disposal (Volume)

a1

Year	Hotel			Day Tripper			Resident		Total		
	Daily Max. (m^3/d)	Daily Ave. (m^3/d)	Annual Amount (m^3/y)	Daily Max. (m^3/d)	Daily Ave. (m^3/d)	Annual Amount (m^3/y)	Daily Amount (m^3/d)	Annual Amount (m^3/y)	Daily Max. (m^3/d)	Daily Ave. (m^3/d)	Annual Amount (m^3/y)
1993	25.8	18.0	6,580	8.0	5.5	2,010	40.7	14,860	74.5	64.2	23,450
1994	29.3	20.4	7,470	14.3	10.0	3,650	47.7	17,410	91.3	78.1	28,530
1995	37.8	26.4	9,640	20.8	14.5	5,290	55.3	20,180	113.9	96.2	35,110
Future	88.9	62.1	22,710	20.8	14.5	5,290	76.7	28,000	186.4	153.3	56,000

D.5.2 Site Area of Solid Waste Disposal System

Past experiments have proved that the volume of solid waste disposal will be reduced to 45 - 50% of its original volume.

In this study, the solid waste disposal system is designed assuming that a 40% volume reduction is expected for safety.

Considering covering soil (30% of the total amount of discharge) for effective sanitary landfill, the required capacity of the fill area will be estimated as 293,000 cubic meters.

The site area will total 78,000 square meters assuming 5-meter-depth of landfill and considering the area for two seepage water treatment plants and a 10-meter-margin around the site.

D.5.3 Cost Estimation

The investment cost of the total system is broken down by item as shown in Table D.5.4.

Table D.5.4 Breakdown of Investment Cost

Unit: Million Rgt.

Item	Investment Cost		
	Up to 1995	Future	Total
Basic Construction Cost	7.41	1.56	8.97
D/D & Supervision	0.89	0.19	1.08
Total	8.30	1.75	10.05

D.6 Investment Cost Estimation of Power Supply System

D.6.1 Electrical Demand

The calculation of the electrical demand in average for each development facility is made on the basis of the following standards.

First-class hotel	3.5 kVA/room
Middle-class hotel	3.0 kVA/room
Domestic class hotel	2.7 kVA/room
Residential housing	0.28 kVA/person
Theatre	0.16 kVA/m^2
Museum/Aquarium/Town centre	0.14 kVA/m^2
Restaurant	0.10 kVA/m^2
Shop	0.09 kVA/m^2
Office/Club house	0.07 kVA/m^2
Outdoor facility	0.01 kVA/m^2

The future electrical demand is established to avoid the reconstruction of power supply system after 1995 as shown in Table D.6.1.

Lighting demand on streets and roads, and public car parking are taken into account for the calculation.

D.6.2 Power Supply System

The connection diagram and the power distribution network are shown in Fig. D.6.1.

D.6.3 Cost Estimation

The estimated costs are generally made up of equipment costs, material costs, labour costs. fuel costs and hire of construction equipments.

Various government taxes, land acquisition costs, demolition costs of existing generating plant and cost escalation are not included in the cost estimation.

Engineering service costs have been estimated as 35% of the net construction costs.

Overhead and profit of construction have been estimated as 11% of the net construction costs.

Fig.D.6.1 Connection Diagram

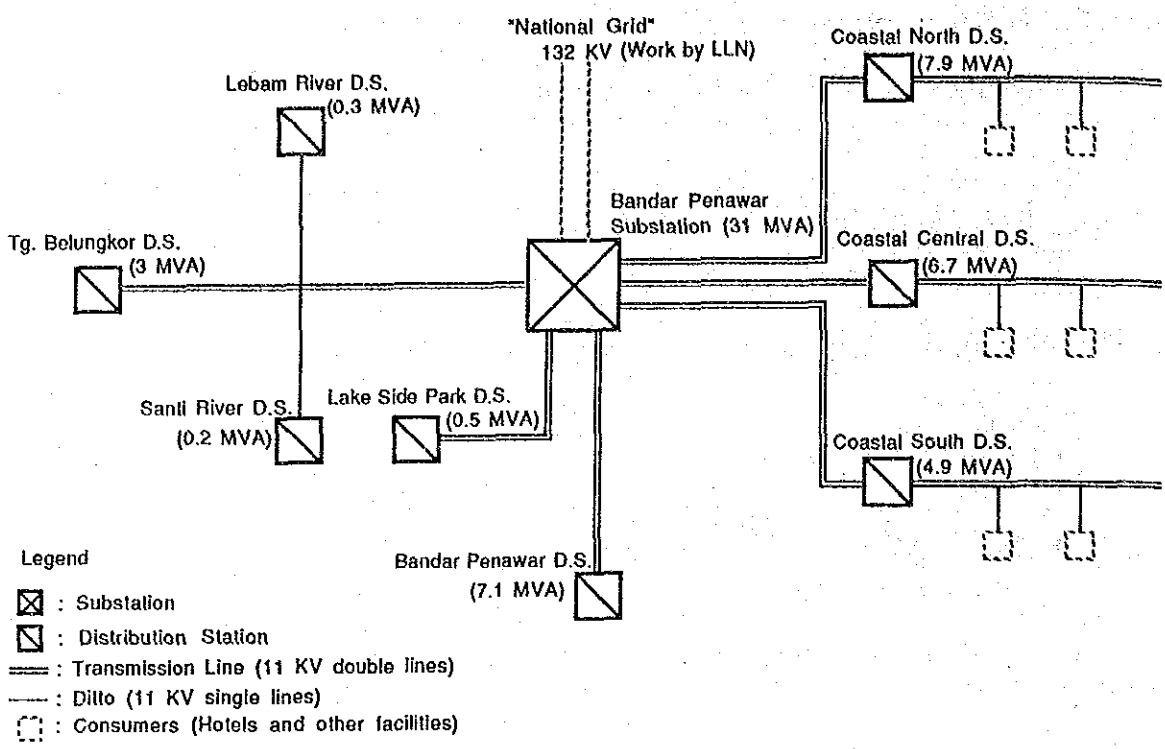


Table D.6.1 Electrical Demand

Unit : KVA

Distribution Station	Development Area/Facility	Max. Demand Up to 1995	Max. Demand After 1995	Max. Demand Total
Coastal North Distribution Station	First-Class Hotel Dev't Area	2,800	4,270	7,070
	Tg. Balau Ammenity Sub-Core	790	—	790
	Sewerage Water Plant	40	—	40
	Sub Total	**3,630**	**4,270**	**7,900**
Coastal Central Distribution Station	Middle-Class Hotel Dev't Area	3,957	2,733	6,690
	Sewerage Water Plant	40	—	40
	Sub Total	**3,997**	**2,733**	**6,730**
Coastal South Distribution Station	Tg. Penawar Ammenity Core	2,888	—	2,888
	Domestic Class Accommodation	—	2,025	2,025
	Sub Total	**2,888**	**2,025**	**4,913**
Bandar Penawar Distribution Station	Bandar Penawar Service Town	5,600	—	5,600
	Town Centre	133	—	133
	Supporting Industrial Area	28	—	28
	Art Centre	833	—	833
	Water Supply Treatment Plant	500	—	500
	Sub Total	**7,094**	—	**7,094**
Tg. Berungkor Distribution Station	Tg. Berungkor Gate Area	707	—	707
	Tg. Berungkor Marine Sports	686	—	686
	Recreational Activities Area	894	—	894
	Inland Sports Area	707	—	707
	Orchard Gardens	62	—	62
	Sub Total	**3,056**	—	**3,056**
Lake Side Park Distribution Station	Lake Side Park Area	511	—	511
	Sub Total	**511**	—	**511**
Lebam River Distribution Station	Rubber Museum	252	—	252
	Sub Total	**252**	—	**252**
Santi River Distribution Station	Oil Palm Museum	182	—	182
	Sub Total	**182**	—	**182**
Others	Crocodile Garden	38	—	38
	Johor Lama Historical Park Area	77	—	77
	Tg. Pengerang/South Beach Area	134	—	134
	Lighting for Street and Car Parking	643	—	643
	Sub Total	**892**	—	**892**
GRAND TOTAL		**22,502**	**9,028**	**31,530**

D.7 Investment Cost Estimation of Telecommunication System

D.7.1 Telephone Line Demand

The calculation of the average demand for telephone lines for each development component is made as shown in Table D.7.1. The telephone line demand includes lines public phones, telex, and facsimile. The following standards are taken as the telephone line demand for hotels.

City line	20	rooms/line
Public telephone	50	rooms/line
Telex	1	line/hotel
Facsimile	1	line/hotel

D.7.2 Telecommunication System

The connection diagram and the telephone line distribution system are shown in Fig. D.7.1.

D.7.3 Cost Estimation

The estimated costs are generally made up of equipment costs, material costs, labour costs, fuel costs and hire of construction equipments.

Various government taxes, land acquisition costs and cost escalations are not included in the cost estimation.

Engineering service costs have been estimated as 35% of the net construction costs.

Overhead and profit of construction have been estimated as 11% of the net construction costs.

Fig. D.7.1 Telephone Network

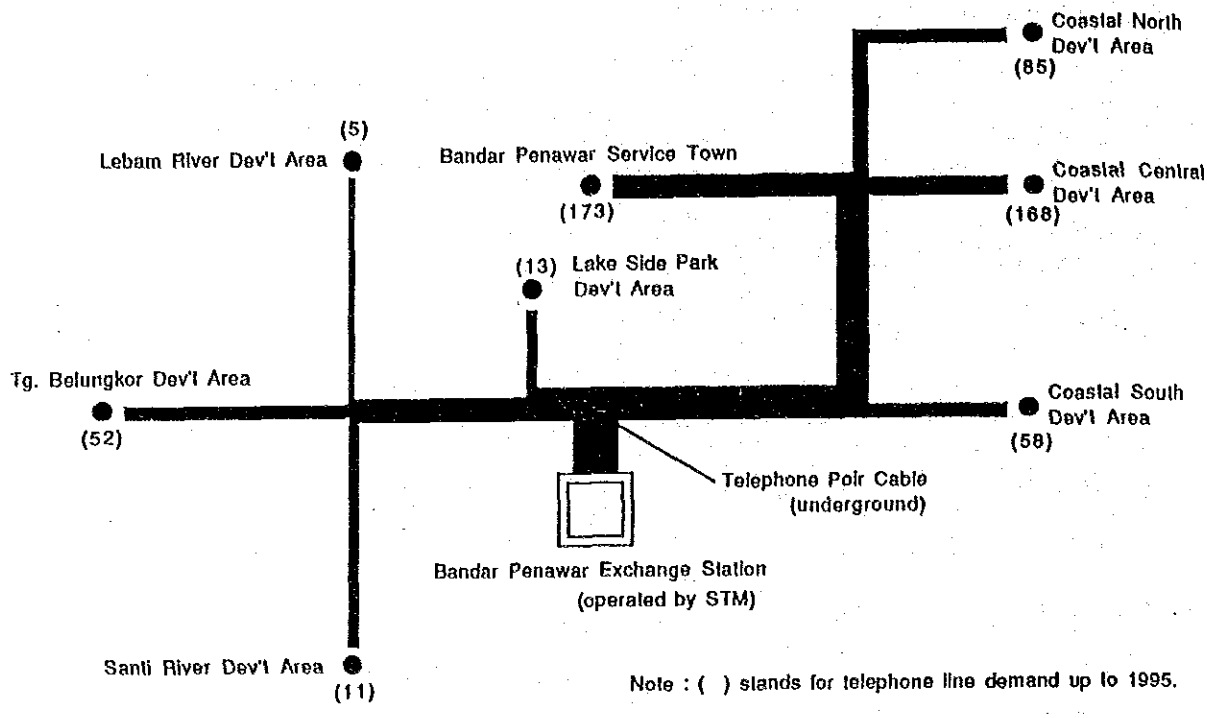


Table D.7.1 Telephone Line Demand

Unit : Number of Lines

Development Area	Facility	Demand up to 1995
Coastal North Dev't Area	Hotels	62
	Others	23
	Sub Total	85
Coastal Central Dev't Area	Hotels	110
	Others	58
	Sub Total	168
Coastal South Dev't Area	Hotels	—
	Others	58
	Sub Total	58
Bandar Penawar Service Town	Others	173
Tg. Berungkor Dev't Area	Others	52
Lake Side Park Dev't Area	Others	13
Lebam River Dev't Area	Others	5
Santi River Dev't Area	Others	11
Crocodile Garden	Others	3
Johor Lama Historical Park	Others	5
Tg. Pengerang/South Beach Area	Others	11
GRAND TOTAL		**584**

D.8 Investment Cost Estimation of Tourism Facility

The site area and the floor area are estimated by each facility based on the assumptions described in Section 6.3.

The investment cost of each facility is calculated based on the site and floor areas and the unit price determined for the construction cost of a building. It includes a professional fee which is composed of design and supervision fees.

The calculated investment costs are shown in Table D.8.1.

The design fee and the supervision fee used for hotels are 10% and 3% of their construction costs respectively.

These fees used for other tourism facilities are 7% and 3% of their construction costs respectively.

Table D.8.1 Investment Cost Estimation of Tourism Facility (1/6)

Code No.	Name of Facility	Unit Price (Rgt.) Landscape	Unit Price (Rgt.) Building	Construction Cost (1000 Rgt.) Landscape	Construction Cost (1000 Rgt.) Building	Construction Cost (1000 Rgt.) Total	Professional Fee (1000 Rgt.)	Investment Cost (1000 Rgt.)
1 0 0	Coastal Resort Corridor (TOTAL)					564,815	66,283	633,098
1 1 0	AMMENITY CORE AREA			44,097	56,731	100,828	10,083	110,911
1 1 1	Tourist Center	81.5	1,200	440	930	1,370	137	1,507
	Information Center							
	Travel Agents							
	Airline Offices							
	Bank/Insurance Office							
	Money Exchanger							
	Post Office							
	Clinic/Dentist							
	Rental Cycle Shop							
1 1 2	Restaurant Plaza (1200 seats)	81.5	1,300	1,834	8,710	10,544	1,054	11,598
	Restaurants							
	Coffee Terrace							
	First Foods Shops							
	Kiosks							
	Disco							
	Night Club							
1 1 3	Shopping Promnade (32 Shops)	83.0	1,300	1,179	5,460	6,639	664	7,303
	Boutiques							
	Souvenior/Handicraft Shops							
	Sports Equiopments							
	Foods/Beverage							
	Duty Free Shop							
	Game Center							
1 1 4	Exhibition Center			2,264	7,385	9,649	985	10,614
	Exhibition Plaza/Outdoor Theater	300.0	1,100	1,350	550	1,900		
	Theater/Cinema(200 seats)	70.0	1,650	84	660	744		
	Art/Craft Center/Art Museum	69.0	1,500	207	1,500	1,707		
	Exhibition Hall	70.0	1,650	581	4,455	5,036		
	Children Club/Play Lot	70.0	1,100	42	220	262		
1 1 5	Craftman Village			760	5,200	5,960	596	6,556
	Training Center/Exhibition Hall	60.0	1,000	360	2,000	2,360		
	Craftmans' Houses/Workshops	26.6	640	400	3,200	3,600		
1 1 6	Indoor Sports Complex			824	7,095	7,919	792	8,711
	Gymnusium	45.0	800	364	2,160	2,524		
	Indoor Swimming Pool	45.0	1,350	203	2,025	2,228		
	Club House	50.0	1,500	95	750	845		
	Bawlling	45.0	1,800	162	2,160	2,322		
1 1 7	Outdoor Sports Complex			3,630	6,285	9,915	992	10,907
	Club House	90.0	1,500	135	750	885		
	Badmington Courts(6)	18,000.0 *1		216		216		
	Tenis Courts(10)	50,000.0 *1		1,000		1,000		
	Center Court with Stands	100.0	1,150	1,350	5,175	6,525		
	Athletic Field	50.0		150		150		
	Volley Ball Courts(2)	144.5		289		289		
	Shooting Ranges-Clay/Archery/	30.0	1,200	90	120	210		
	Horseback Riding	20.0	1,200	400	240	640		
1 1 8	Jetty/Marine Sports Complex (Infra)			92	280	372	37	409
	Admini. Office	133.0	1,100	80	220	300		
	Long Jetty(pedestrian/carriage)							
	First Aid/Rescue Center	80.0	1,200	12	60	72		
1 1 9	Jetty/Marine Sports Complex (Private)			697	3,482	4,179	418	4,597
	Caffee Terrace(200 seats)	81.5	1,300	196	1,040	1,236		
	Restaurant(400 seats)	81.5	1,300	391	2,080	2,471		
	Kiosk	168.0	400	37	32	69		
	Rental Shops of Marine Sports Eq.	81.5	1,100	24	110	134		
	Pro-shop	81.5	1,100	49	220	269		
1 1 10	Jetty/Marine Sports Complex (Public)			1,816	6,800	8,616	862	9,478
	Observation Tower	88.5	1,500	336	1,800	2,136		
	Floating Beck for Marine Sports			1,000		1,000		
	Aquarium	80.0	2,500	480	5,000	5,480		
1 1 11	Major Water Recreation Complex			14,594	4,606	19,200	1,920	21,120
	Club House		1,500		3,000	3,000		
	Swiming Pools			13,544 *2		13,544		
	Waving Pool							
	Water Slider Pool							
	Stream Pool							
	Poolside Restaurants(200 seats)		1,300		1,040	1,040		
	Outdoor Theatre/Plaza	300.0	1,100	1,050	550	1,600		
	Coffee House/Kiosk		400		16	16		
1 1 12	Transportation Center			4,487	146	4,633	463	5,096
	Gate/Office	70.0	1,000	343	100	443		
	Major Car Parking	50.0	1,000	2,500	10	2,510		
	Bus Terminal	114.5	1,000	1,144	10	1,154		
	Taxi Terminal	50.0	1,000	500	10	510		
	Kiosk		400		16	16		

Table D.8.1 Investment Cost Estimation of Tourism Facility (2/6)

Code No.	Name of Facility	Unit Price (Rgt.) Landscape	Building	Construction Cost (1000 Rgt.) Landscape	Building	Total	Professional Fee (1000 Rgt.)	Investment Cost (1000 Rgt.)
1 1 13	Parks /Gardens			11,480	352	11,832	1,183	13,015
	Orchid Gardens	60.0	1,000	3,600	200	3,800		
	Tg.Penawar Observation Park	20.0	600	2,040	120	2,160		
	Seaside Pedestrian Way/Decks	20.0	400	3,840	32	3,872		
	Cut/Fill			2,000		2,000		
1 2 0	AMMENITY SUB-CORE AREA			26,773	12,787	39,560	3,956	43,516
1 2 1	Golf Course			16,810	4,500	21,310	2,131	23,441
	Club House	35.9	1,500	610	4,500	5,110		
	Golf Course(18 holes)	900,000.0 *3		16,200		16,200		
1 2 2	Shopping/Restaurant			685	3,640	4,325	433	4,758
	Boutiques	81.5	1,400	375	1,960	2,335		
	Souvenior/Handicraft Shops							
	Sports Equipments							
	Foods/Beverage							
	Restaurants (200 seats)	81.5	1,400	179	1,120	1,299		
	Coffee Terrace (100 seats)	81.5	1,400	131	560	691		
1 2 3	Theatre			5,959	1,425	7,384	738	8,122
	Multi-purpose Festival Plaza	300.0	1,200	5,850	600	6,450		
	Theatre(250 seats)	72.5	1,650	109	825	934		
1 2 4	Beach/Marine Club (Infra)			92	280	372	37	409
	Admini. Office		1,100	92	220	312		
	Short Jetty(pedestrian only)							
	First Aid/Rescue Center		1,200		60	60		
1 2 5	Beach/Marine Club (Private)			299	1,636	1,935	194	2,129
	Rental Shops of Marine Sports Eq.	83.0	1,100	25	110	135		
	Pro-shop	83.0	1,100	25	110	135		
	Restaurant(150 seats)	83.0	1,400	149	840	989		
	Coffee Terrace (100 seats)	83.0	1,400	100	560	660		
	Kiosk		400		16	16		
1 2 6	Beach/Marine Club (Public)			1,000		1,000	100	1,100
	Floating Deck for Marine Sports			1,000		1,000		
1 2 7	Outdoor Sports			1,024	1,080	2,104	210	2,314
	Club House	90.0	1,500	134	750	884		
	Tennis Court (6 Courts)	50,000.0 *1		400		400		
	Shooting Ranges-Clay/Archery/	30.0	1,100	90	110	200		
	Horseback Riding	20.0	1,100	400	220	620		
1 2 8	Transportation Sub-terminal			904	226	1,130	113	1,243
	Car Parking	53.0	1,000	583	20	603		
	Taxi Stand	54.0	1,000	105	50	155		
	Bus Terminal	116.0	1,000	216	140	356		
	Kiosk		400		16	16		
130—160	ACCOMMODATION & PARKS IN HOTEL AREA					424,427	54,244	478,671
1 3 0	HOTEL DEVT ON TG. SLANG-BALAU			31,270	179,360	210,630	27,077	237,707
1 3 1	High Class Hotel(international delux)			21,360	179,200	200,560	26,070	226,630
	250 Rooms Hotel(expand to 350)	80.0	2,800	6,720	56,000	62,720		
	250 Rooms Hotel(expand to 350)	80.0	2,800	6,720	56,000	62,720		
	300 Rooms Hotel(expand to 400-450)	80.0	2,800	7,920	67,200	75,120		
1 3 2	Tg./Lagoon Parks	20.9	400	9,910	160	10,070	1,007	11,077
1 4 0	HOTEL DEVT ON TG. BALAU-LOMPAT			14,339	61,330	75,669	9,596	85,265
1 4 1	Medium Class Hotel(International)			6,419	61,250	67,669	8,796	76,465
	150 Rooms Hotel(expand to 210-250)	70.0	2,500	2,751	26,250	29,001		
	200 Rooms Hotel(expand to 250-300)	70.0	2,500	3,668	35,000	38,668		
1 4 2	Tg./Lagoon Parks	23.8	400	7,920	80	8,000	800	8,800
1 5 0	HOTEL DEVT ON TG. LOMPAT-PENAWAR			18,506	110,862	132,368	16,995	149,363
1 5 1	Medium Class Hotel(International)			11,536	110,750	125,286	16,287	141,573
	100 Rooms Expansion	70.0	2,500	1,834	18,000	19,834		
	Renovation of Golf Hotel					3,000		
	250 Rooms Hotel(expand to350)	70.0	2,500	4,592	43,750	48,342		
	280 Rooms Hotel(expand to350-400)	70.0	2,500	5,110	49,000	54,110		
1 5 2	Tg./Lagoon Parks	25.9	400	6,970	112	7,082	708	7,790
1 6 0	OTHER LANDSCAPING AREAS					5,760	576	6,336
1 6 1	Beachside Promnade(infra.easement)					2,160	216	2,376
1 6 2	Jungle Tracking Courses					3,600	360	3,960
	Lowland Forest Course					1,200		
	Swamp Forest Course					1,200		
	Beach Forest Course					1,200		

Note : * 1 - Unit price of one court
* 2 - Construction cost of all the pools
* 3 - Unit price of one course

Table D.8.1 Investment Cost Estimation of Tourism Facility (3/6)

Code No.	Name of Facility	Unit Price (Rgt.) Landscape	Unit Price (Rgt.) Building	Construction Cost (1000 Rgt.) Landscape	Construction Cost (1000 Rgt.) Building	Construction Cost (1000 Rgt.) Total	Professional Fee (1000 Rgt.)	Investment Cost (1000 Rgt.)
2 0 0	DAYTRIPPER/DAILY ACTIVITY ZONE			143,424	80,084	223,508	22,351	245,859
2 1 0	TG.BERUNGKOR GATE AREA			8,115	38,252	46,367	4,637	51,003
2 1 1	Tg. Berungkor Ferry Jetty			6,966	676	7,642	764	8,406
	Jetty							
	Terminal Building							
	Gate/Monument Plaza	113.0		6,780		6,780		
	Tourist Information	81.0	1,100	24	110	134		
	Souvenior Shop/Kiosk (10 Shops)	100.0	600	22	48	70		
	Teavel Agents/Airline Offices	81.0	900	55	203	258		
	Bank/Insurance office	81.0	900	12	45	57		
	Post Office	81.0	900	12	45	57		
	Renta Cycle Shop	81.0	900	49	180	229		
	Money Exchanger	81.0	900	12	45	57		
2 1 2	Shopping Promnade(15 Shops)	83.0	1,100	249	1,100	1,349	135	1,484
	Boutiques							
	Souvenior/Handicraft Shops							
	Sports Equipments Shops							
	Food/Beverage Shops							
	Game Center							
2 1 3	Transportation Terminal			800	36,476	37,276	3,738	41,114
	Car Parking	50.0	1,000	500	10	510		
	Taxi Stand	50.0	1,000	50	10	60		
	Bus Terminal	110.0	1,000	218	40	258		
	Office/Waiting Room	84.0	1,000	134	400	534		
	Kiosk		400		16	16		
	Mono Rail				36,000	36,000		
2 2 0	TG.BERUNGKOR MARINE SPORTS AREA			25,113	16,390	41,503	4,150	45,653
2 2 1	Marine Sports Complex			24,223	4,530	28,753	2,875	31,628
	Club House	60.0	1,300	360	2,600	2,960		
	Restaurants(200 seats)	67.0	1,100	148	880	1,028		
	Swimming Pool	675.0	1,300	2,025	650	2,675		
	Marina	180.0		21,600		21,600		
	Repair House	80.0	800	90	400	490		
2 2 2	Bt.Berungkor Hill Restaurant			890	11,860	12,750	1,275	14,025
	Restaurants(450 seats)	69.5	1,300	890	5,460	6,350		
	Coffee Shops(200 seats)							
	First food Shops							
	Kiosk							
	Plaza							
	Cable Car				6,400	6,400		
2 3 0	RECREATIONAL ACTIVITIES AREA			88,270	7,820	96,090	9,609	105,699
2 3 1	Major Fun Park			88,270	7,820	96,090	9,609	105,699
	Administration Office		1,100		550	550		
	Gate/Entrance							
	Restaurants(800 seats)		1,200		3,840	3,840		
	Caffee Terrace(600 seats)		1,200		2,880	2,880		
	Event Plaza							
	Outdoor Theatre	300.0	1,100		550	550		
	Mono Rail							
	Roller Coaster							
	Ferris Wheel							
	Parachuter							
	Other Equipments							
2 4 0	INLAND SPORTS AREA			15,211	9,920	25,131	2,513	27,644
2 4 1	Golf Course			13,210	4,200	17,410	1,741	19,151
	Club House	35.9	1,400	610	4,200	4,810		
	Golf Course(18 holes)	700,000.0 # 1		12,600		12,600		
2 4 2	Indoor Sports Complex			341	2,250	2,591	259	2,850
	Club House	45.5	1,300	68	650	718		
	Gymnusium	45.5	800	205	1,200	1,405		
	Squash Courts	45.5	800	68	400	468		
2 4 3	Outdoor Sports Complex			1,660	3,470	5,130	513	5,643
	Club House	89.3	1,300	134	650	784		
	Tennis Courts(8)	50,000.0 # 2		800		800		
	Indoor Tennis Court(3)		900		2,520	2,520		
	Badmington Courts(6)	18,000.0 # 2		216		216		
	Athletic /Jogging	20.0		20		20		
	Shooting Ranges(archery/others)	30.0	1,000	90	100	190		
	Horseback Riding	20.0	1,000	400	200	600		

Table D.8.1 Investment Cost Estimation of Tourism Facility (4/6)

Code No.	Name of Facility	Unit Price (Rgt.) Landscape	Building	Construction Cost (1000 Rgt.) Landscape	Building	Total	Professional Fee (1000 Rgt.)	Investment Cost (1000 Rgt.)
2 5 0	ORCHARD/ORCHID GARDENS			4,250	752	5,002	500	5,502
2 5 1	Orchard Gardens			2,600	376	2,976	298	3,274
	Research/Addmini Station		900		360	360		
	Nursery	20.0		200		200		
	Orchards	30.0		2,400		2,400		
	Coffee Shop/Kiosk		400		16	16		
2 5 2	Orchid Garden			1,650	376	2,026	203	2,229
	Research/Addmini Station		900		360	360		
	Nursery	60.0		300		300		
	Orchid Garden	90.0		1,350		1,350		
	Coffee Shop/Kiosk		400		16	16		
2 6 0	LAKESIDE PARKS			2,465	6,950	9,415	942	10,357
2 6 1	Lakeside Park			1,000	1,090	2,090	209	2,299
	Administration Office	60.0	900	36	180	216		
	Sightseeing/Strolling Path			796		796		
	Rest House/Kiosk/Lakeside Restaurant	80.0	1,300	168	910	1,078		
2 6 2	Bird Sanctuary			1,192	1,680	2,872	287	3,159
	Research/Addmini Station	60.0	900	36	180	216		
	Sightseeing/Strolling Path			781		781		
	Giant Cages of Birds	50.0	600	375	1,500	1,875		
2 6 3	Insect Gardens			273	4,180	4,453	445	4,898
	Research/Addmini Station	60.0	900	36	180	216		
	Batterfly Garden	19.5	1,000	117	2,000	2,117		
	Beattle Garden	20.0	1,000	60	1,000	1,060		
	Others (Reptiles)	20.0	1,000	60	1,000	1,060		

Note : # 1 - Unit price of one course
2 - Unit price of one court

Table D.8.1 Investment Cost Estimation of Tourism Facility (5/6)

Code No.	Name of Facility	Unit Price (Rgt.)		Construction Cost (1000 Rgt.)			Professional Fee	Investment Cost
		Landscape	Building	Landscape	Building	Total	(1000 Rgt.)	(1000 Rgt.)
3 0 0	**BANDAR PENAWAR SERVICE TOWN**			11,944	64,670	76,614	7,661	84,275
3 1 0	TOWN CENTER			252	1,010	1,262	126	1,388
3 1 1	Public Facilities			252	1,010	1,262	126	1,388
	Fire Brigade Center	76.0	600	114	400	514		
	Hospital	76.0	900	114	450	564		
	Police Station	60.0	600	12	80	92		
	Post Office	60.0	800	12	80	92		
3 2 0	SUPPORTING INDUSTRIAL AREA			5,000	270	6,270	627	6,897
3 2 1	Site Preparation							
3 2 2	Nursery			6,000	270	6,270	627	6,897
	Office	60.0	900	9	45	54		
	Shade House		600		120	120		
	Workshops/Storage	30.0	700	5,991	105	6,096		
3 3 0	BANDAR PENAWAR ART CENTER			592	3,190	3,782	378	4,160
3 3 1	Headquater			184	990	1,174	117	1,291
	Addministration Office	68.9	1,100	62	330	392		
	Research Center	68.0	1,100	61	330	391		
	Meeting Halls	68.0	1,100	61	330	391		
3 3 2	Dance/Music Center			408	2,200	2,608	261	2,869
	Traditional Performance Research	53.5	1,100	204	1,100	1,304		
	Training/Exhibition	53.5	1,100	204	1,100	1,304		
3 4 0	RESIDENTIAL AREA FOR HOTEL EMP			5,100	60,200	65,300	6,530	71,830
3 4 1	Residential			5,100	60,200	65,300	6,530	71,830
	Housing	26.8	449	1,160	52,100	53,260		
	Community Facilities	60.0	900	1,540	8,100	9,640		
	Roads	55.0		2,400		2,400		

Table D.8.1 Investment Cost Estimation of Tourism Facility (6/6)

Code No.	Name of Facility	Unit Price (Rgt.)		Construction Cost (1000 Rgt.)			Professional Fee (1000 Rgt.)	Investment Cost (1000 Rgt.)
		Landscape	Building	Landscape	Building	Total		
4 0 0	OTHER TOURISM ACTIVITY ZONES			3,968	9,512	13,478	1,348	14,826
4 1 0	LEBAM RIVER TOURISM AREA			1,144	2,820	3,964	396	4,360
4 1 1	Rubber Museum			624	2,260	2,884	288	3,172
	Museum	100.0	1,300	300	1,300	1,600		
	Outdoor Exhibition Area	30.0		120		120		
	Colonial Style Restaurant(200 seats)	85.0	1,200	204	960	1,164		
4 1 2	River Cruising			50	270	320	32	352
	Addministration office	65.0	900	20	90	110		
	Kiosk/Pro-shop for River Fising	65.0	1,200	30	180	210		
	Jetties							
4 1 3	Crocodile Garden			470	290	760	76	836
	Research/Addmini Center	60.0	900	18	90	108		
	Nursery	100.0	1,000	60	200	260		
	Garden(with Fence)	83.4		392		392		
4 2 0	SANTI RIVER TOURISM AREA			251	1,660	1,911	191	2,102
4 2 1	Oil Palm Museum			251	1,660	1,911	191	2,102
	Museum/Addmini Office	70.0	1,300	126	1,300	1,426		
	Caffee Terace/Kiosk	72.2	1,200	65	360	425		
	Outdoor Exhibition Area	30.0		60		60		
4 3 0	JOHOR LAMA HISTORICAL PARK AREA			1,117	976	2,093	209	2,302
4 3 1	Johor Lama Historical Park			600	256	856	86	942
	Park Office/Presentaion Room	60.0	1,200	36	240	276		
	Sightseeing Path/Landscaping	55.2		552		552		
	Rest House/Kiosk	70.0	400	12	16	28		
4 3 2	Kg. Sengat Seafood Restaurants			517	720	1,237	124	1,361
	Restaurant(150 seats)	75.0	1,200	135	720	855		
	Landscaping of the Town	19.1.		382		382		
4 4 0	TG. PENGERANG/SOUTH BEACH			1,454	4,056	5,510	551	6,061
4 4 1	Tg.Pengerang Historical Park			124	96	220	22	242
	Observation Place/Rest Houses/Kiosks		400		96	96		
	Sightseeing Path/Landscaping	70.5		124		124		
4 4 2	South Beach Beautification			1,230	3,600	4,830	483	5,313
	Seafood Restaurant Swquare	60.0	1,000	648	3,600	4,248		
	Roadside Beautification			582		582		
4 4 3	Pulau Lima Fishing Island			100	360	460	46	506
	Admini. Office	60.8	900	73	180	253		
	Pro-shop/Kiosk	60.0	1,200	27	180	207		
	Jetties on Tg.Penyasop/Islands							

Appendix-E

Validity Analysis

In this Appendix E, calculation of project return, cash flow, and profit and loss statement are shown for financial analysis, while the economic analysis estimation processes of economic costs and economic benefit of the project are shown.

In preparing cash flow analysis, depreciation cost and loan repayment expenditure are taken into account. Those are calculated based on the following assumptions:

Depreciation

Depreciation Periods

30 years	60% of the total cost
15 years	20% of the total cost
5 years	10% of the total cost

Since concept of depreciation is not well defined, prevailing cases in Japan and U.S. are referred. Distribution of total cost to each depreciation period category is based on the material composition share. Concrete structure is categorised into 30 year depreciation item while furniture etc. are categorised into 5 years. Remaining are set out for 15 year depreciation items.

Loan Repayment Expenditure

Capital : Equal amount repayment during the repayment period
Interest : Remaining loan amount is subject of interest.

Condition A: for hotel development

Interest	:	7%
Repayment period	:	15 years
Grace period	:	3 years

Condition B: for public sector and J.V.

Interest	:	3%
Repayment period	:	25 years
Grace period	:	7 years

Condition B is set according to a governmental concessional loan of Japan.

Table E.1.1 Revenue of the Public Sector

YEAR	NO. OF TOURIST ARRIVALS (persons/year)		AVERAGE LENGTH OF STAY (day/person)	HOTEL ROOM TARRIF (Ringgit/person/day)			OCCUPANCY RATIO								
	HOTEL GUEST	DAYTRIPPER		HIGH	MEDIUM (1)	MEDIUM (2)	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM
				20	20	20									
1988	0	0	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1989	0	0	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1990	61,596	31,995	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.48	0.45	0.35	0.00
1991	64,700	479,325	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.50	0.48	0.37	0.00
1992	68,563	675,146	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.53	0.50	0.40	0.00
1993	215,937	1,574,655	2.338	200	180	170	0.43	0.43	0.00	0.00	0.00	0.55	0.53	0.43	0.45
1994	234,403	1,877,454	2.338	200	180	170	0.48	0.48	0.00	0.00	0.00	0.57	0.55	0.43	0.50
1995	330,600	2,571,000	2.338	200	180	170	0.53	0.53	0.43	0.44	0.45	0.57	0.55	0.43	0.52
1996	374,776	2,623,712	2.338	220	200	190	0.60	0.60	0.48	0.48	0.48	0.60	0.60	0.48	0.60
1997	408,403	2,676,187	2.338	220	200	190	0.65	0.65	0.53	0.53	0.53	0.65	0.65	0.53	0.65
1998	446,823	2,729,710	2.338	220	200	190	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.60	0.70
1999	458,805	2,784,305	2.338	220	200	190	0.70	0.70	0.65	0.65	0.65	0.70	0.70	0.65	0.70
2000	470,787	2,839,991	2.338	220	200	190	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2001	470,787	2,896,790	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2002	470,787	2,954,726	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2003	470,787	3,013,821	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2004	470,787	3,074,097	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2005	470,787	3,135,579	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2006	470,787	3,198,291	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2007	470,787	3,262,257	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2008	470,787	3,327,502	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2009	470,787	3,394,052	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2010	470,787	3,461,933	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2011	470,787	3,461,933	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2012	470,787	3,461,933	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2013	470,787	3,461,933	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2014	470,787	3,461,933	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2015	470,787	3,461,933	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2016	470,787	3,461,933	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2017	470,787	3,461,933	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2018	470,787	3,461,933	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2019	470,787	3,461,933	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2020	470,787	3,461,933	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2021	470,787	3,461,933	2.338	320	300	290	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2022	470,787	3,461,933	2.338	320	300	290	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70

	GUEST-NIGHTS											ROOM SALES (million Rgt.)				
HOTEL (M-7) 280 RM	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	TOTAL GUEST-NIGHT	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM
0.00	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000
0.00	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.000
0.00	0	0	0	0	0	81,994	32,850	26,828	0	0	141,671	0.000	0.000	0.000	0.000	0.000
0.00	0	0	0	0	0	85,410	35,040	28,361	0	0	148,811	0.000	0.000	0.000	0.000	0.000
0.00	0	0	0	0	0	90,535	36,500	30,660	0	0	157,695	0.000	0.000	0.000	0.000	0.000
0.45	78,475	78,475	0	0	0	93,951	38,690	32,960	82,125	91,980	496,656	15.695	15.695	0.000	0.000	0.000
0.50	87,600	87,600	0	0	0	97,367	40,150	32,960	91,250	102,200	539,127	17.520	17.520	0.000	0.000	0.000
0.52	96,725	96,725	94,170	47,917	65,700	97,367	40,150	32,960	94,900	106,288	772,902	19.345	19.345	18.834	8.625	11.826
0.60	109,500	109,500	105,120	52,560	70,080	102,492	43,800	36,792	109,500	122,640	861,984	24.090	24.090	23.126	10.512	14.016
0.65	118,625	118,625	116,070	58,035	77,380	111,033	47,450	40,625	118,825	132,860	939,328	26.098	26.098	25.535	11.607	15.476
0.70	127,750	127,750	131,400	65,700	87,600	119,574	51,100	45,990	127,750	143,080	1,027,694	28.105	28.105	28.908	13.140	17.520
0.70	127,750	127,750	142,350	71,175	94,900	119,574	51,100	49,823	127,750	143,080	1,055,252	28.105	28.105	31.317	14.235	18.980
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	28.105	28.105	33.726	15.330	20.440
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	30.660	30.660	36.792	16.863	22.484
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	30.660	30.660	36.792	16.863	22.484
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	30.660	30.660	36.792	16.863	22.484
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	30.660	30.660	36.792	16.863	22.484
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	30.660	30.660	36.792	16.863	22.484
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	33.215	33.215	39.858	18.396	24.528
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	33.215	33.215	39.858	18.396	24.528
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	33.215	33.215	39.858	18.396	24.528
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	33.215	33.215	39.858	18.396	24.528
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	33.215	33.215	39.858	18.396	24.528
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	35.770	35.770	42.924	19.929	26.572
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	35.770	35.770	42.924	19.929	26.572
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	35.770	35.770	42.924	19.929	26.572
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	35.770	35.770	42.924	19.929	26.572
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	35.770	35.770	42.924	19.929	26.572
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	38.325	38.325	45.990	21.462	28.616
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	38.325	38.325	45.990	21.462	28.616
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	38.325	38.325	45.990	21.462	28.616
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	38.325	38.325	45.990	21.462	28.616
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	38.325	38.325	45.990	21.462	28.616
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	40.880	40.880	49.056	22.995	30.660
0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750	143,080	1,082,809	40.880	40.880	49.056	22.995	30.660

HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	TOTAL OF HOTEL SALES	HOTEL LAND RENT	HOTEL SERVICE TAX	HOTEL BUSINESS TAX EXPENDITURE (million Rgt.) HOTEL (H-1) 250 RM GOP=	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM
						3%	5%	32%								
0.000	0.000	0.000	0.000	0.000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13.939	5.585	4.561	0.000	0.000	24.1	0.723	1.204	0.000	0.000	0.000	0.000	0.000	4.460	1.787	1.459	0.000
14.520	5.957	4.821	0.000	0.000	25.3	0.759	1.265	0.000	0.000	0.000	0.000	0.000	4.646	1.906	1.543	0.000
15.391	6.205	5.212	0.000	0.000	26.8	0.804	1.340	0.000	0.000	0.000	0.000	0.000	4.925	1.986	1.668	0.000
15.972	6.577	5.603	14.783	16.556	90.9	2.726	4.544	5.022	5.022	0.000	0.000	0.000	5.111	2.105	1.793	4.730
16.552	6.826	5.603	16.425	18.396	98.8	2.965	4.942	5.606	5.606	0.000	0.000	0.000	5.297	2.184	1.793	5.256
16.552	6.826	5.603	17.082	19.132	143.2	4.295	7.159	6.190	6.190	6.027	2.760	3.784	5.297	2.184	1.793	5.466
19.473	8.322	6.990	21.900	24.528	177.0	5.311	8.852	7.709	7.709	7.400	3.364	4.485	6.232	2.663	2.237	7.008
21.096	9.016	7.719	23.725	26.572	192.9	5.788	9.647	8.351	8.351	8.171	3.714	4.952	6.751	2.885	2.470	7.592
22.719	9.709	8.738	25.550	28.616	211.1	6.333	10.556	8.994	8.994	9.251	4.205	5.606	7.270	3.107	2.796	8.176
22.719	9.709	9.466	25.550	28.616	216.8	6.504	10.840	8.994	8.994	10.021	4.555	6.074	7.270	3.107	3.029	8.176
22.719	9.709	10.194	25.550	28.616	222.5	6.675	11.125	8.994	8.994	10.792	4.906	6.541	7.270	3.107	3.262	8.176
25.111	10.731	11.268	28.105	31.478	244.2	7.325	12.208	9.811	9.811	11.773	5.396	7.195	8.035	3.434	3.606	8.994
25.111	10.731	11.268	28.105	31.478	244.2	7.325	12.208	9.811	9.811	11.773	5.396	7.195	8.035	3.434	3.606	8.994
25.111	10.731	11.268	28.105	31.478	244.2	7.325	12.208	9.811	9.811	11.773	5.396	7.195	8.035	3.434	3.606	8.994
25.111	10.731	11.268	28.105	31.478	244.2	7.325	12.208	9.811	9.811	11.773	5.396	7.195	8.035	3.434	3.606	8.994
25.111	10.731	11.268	28.105	31.478	244.2	7.325	12.208	9.811	9.811	11.773	5.396	7.195	8.035	3.434	3.606	8.994
27.502	11.753	12.341	30.660	34.339	265.8	7.974	13.290	10.629	10.629	12.755	5.887	7.849	8.801	3.761	3.949	9.811
27.502	11.753	12.341	30.660	34.339	265.8	7.974	13.290	10.629	10.629	12.755	5.887	7.849	8.801	3.761	3.949	9.811
27.502	11.753	12.341	30.660	34.339	265.8	7.974	13.290	10.629	10.629	12.755	5.887	7.849	8.801	3.761	3.949	9.811
27.502	11.753	12.341	30.660	34.339	265.8	7.974	13.290	10.629	10.629	12.755	5.887	7.849	8.801	3.761	3.949	9.811
27.502	11.753	12.341	30.660	34.339	265.8	7.974	13.290	10.629	10.629	12.755	5.887	7.849	8.801	3.761	3.949	9.811
29.894	12.775	13.414	33.215	37.201	287.5	8.624	14.373	11.446	11.446	13.736	6.377	8.503	9.566	4.088	4.292	10.629
29.894	12.775	13.414	33.215	37.201	287.5	8.624	14.373	11.446	11.446	13.736	6.377	8.503	9.566	4.088	4.292	10.629
29.894	12.775	13.414	33.215	37.201	287.5	8.624	14.373	11.446	11.446	13.736	6.377	8.503	9.566	4.088	4.292	10.629
29.894	12.775	13.414	33.215	37.201	287.5	8.624	14.373	11.446	11.446	13.736	6.377	8.503	9.566	4.088	4.292	10.629
29.894	12.775	13.414	33.215	37.201	287.5	8.624	14.373	11.446	11.446	13.736	6.377	8.503	9.566	4.088	4.292	10.629
32.285	13.797	14.487	35.770	40.062	309.1	9.274	15.456	12.264	12.264	14.717	6.868	9.157	10.331	4.415	4.636	11.446
32.285	13.797	14.487	35.770	40.062	309.1	9.274	15.456	12.264	12.264	14.717	6.868	9.157	10.331	4.415	4.636	11.446
32.285	13.797	14.487	35.770	40.062	309.1	9.274	15.456	12.264	12.264	14.717	6.868	9.157	10.331	4.415	4.636	11.446
32.285	13.797	14.487	35.770	40.062	309.1	9.274	15.456	12.264	12.264	14.717	6.868	9.157	10.331	4.415	4.636	11.446
32.285	13.797	14.487	35.770	40.062	309.1	9.274	15.456	12.264	12.264	14.717	6.868	9.157	10.331	4.415	4.636	11.446
34.676	14.819	15.560	38.325	42.924	330.8	9.923	16.539	13.082	13.082	15.698	7.358	9.811	11.096	4.742	4.979	12.264
34.676	14.819	15.560	38.325	42.924	330.8	9.923	16.539	13.082	13.082	15.698	7.358	9.811	11.096	4.742	4.979	12.264

HOTEL (M-7) 280 RM	TOTAL HOTEL SALES	TOTAL OF HOTEL BUSINESS TAX	OTHER DAILY EXPENDITURE UNIT (Rgt/person/day) HOTEL GUEST	DAYTRIPPER	EXPENDITURE HOTEL GUEST	DAYTRIPPER	TOTAL	TOURIST FA. LAND RENT	TOURIST FA. SERVICE TAX	TRANSPORTATION REVENUE (INTRA DESARU NEW TOURISM CORE) 1. OIL PALM MUSIUM - RUBBER MUSIUM LINE PASSENGER	WAY	FARE (M$)	FARE EARNING FOR YEAR (million M$)	2. AMENITY CORE INNER CIRC PASSENGER	WAY
		444.7	0	0				3%	5%						
0.000	0.000	0.000	100	35	0.000	0.000	0.000	0.000	0.000	0	0	2.00	0.000	0	0
0.000	0.000	0.000	100	35	0.000	0.000	0.000	0.000	0.000	0	0	2.00	0.000	0	0
0.000	7.707	0.000	100	35	6.160	1.120	7.279	0.218	0.364	0	0	2.00	0.000	0	0
0.000	8.095	0.000	100	35	6.470	16.776	23.246	0.697	1.162	0	0	2.00	0.000	0	0
0.000	8.579	0.000	100	35	6.856	23.630	30.486	0.915	1.524	0	0	2.00	0.000	0	0
5.298	29.082	0.000	100	35	21.594	55.113	76.707	2.301	3.835	0	0	2.00	0.000	0	0
5.887	31.629	0.000	100	35	23.440	65.711	89.151	2.675	4.458	0	0	2.00	0.000	0	0
6.122	45.814	0.000	100	35	33.060	89.985	123.045	3.691	6.152	0	0	2.00	0.000	0	0
7.849	56.655	0.000	100	35	37.478	91.830	129.308	3.879	6.465	420	2	2.00	0.613	4,000	1
8.503	61.741	0.000	100	35	40.840	93.667	134.507	4.035	6.725	420	2	2.00	0.613	4,000	1
9.157	67.555	30.400	100	35	44.682	95.540	140.222	4.207	7.011	420	2	2.00	0.613	4,000	1
9.157	69.377	31.220	100	35	45.881	97.451	143.331	4.300	7.167	420	2	2.00	0.613	4,000	1
9.157	71.198	32.039	100	35	47.079	99.400	146.478	4.394	7.324	420	2	2.00	0.613	4,000	1
10.073	78.128	35.158	100	35	47.079	101.388	148.466	4.454	7.423	420	2	2.00	0.613	4,000	1
10.073	78.128	35.158	100	35	47.079	103.415	150.494	4.515	7.525	420	2	2.00	0.613	4,000	1
10.073	78.128	35.158	100	35	47.079	105.484	152.562	4.577	7.628	420	2	2.00	0.613	4,000	1
10.073	78.128	35.158	100	35	47.079	107.593	154.672	4.640	7.734	420	2	2.00	0.613	4,000	1
10.073	78.128	35.158	100	35	47.079	109.745	156.824	4.705	7.841	420	2	2.00	0.613	4,000	1
10.989	85.058	38.276	100	35	47.079	111.940	159.019	4.771	7.951	420	2	2.00	0.613	4,000	1
10.989	85.058	38.276	100	35	47.079	114.179	161.258	4.838	8.063	420	2	2.00	0.613	4,000	1
10.989	85.058	38.276	100	35	47.079	116.463	163.541	4.906	8.177	420	2	2.00	0.613	4,000	1
10.989	85.058	38.276	100	35	47.079	118.792	165.871	4.976	8.294	420	2	2.00	0.613	4,000	1
10.989	85.058	38.276	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
11.904	91.988	41.395	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
11.904	91.988	41.395	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
11.904	91.988	41.395	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
11.904	91.988	41.395	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
11.904	91.988	41.395	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
12.820	98.918	44.513	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
12.820	98.918	44.513	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
12.820	98.918	44.513	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
12.820	98.918	44.513	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
12.820	98.918	44.513	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
13.736	105.848	47.632	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1
13.736	105.848	47.632	100	35	47.079	121.168	168.246	5.047	8.412	420	2	2.00	0.613	4,000	1

JLATION LINE FARE (M$)	FARE EARNING FOR YEAR (million M$)	3. PENEWAR INNER IRCULATION LINE PASSENGER	WAY	FARE (M$)	FARE EARNING FOR YEAR (million M$)	4. BEACHSIDE CORRIDOR LINE PASSENGER	WAY	FARE (M$)	FARE EARNING FOR YEAR (million M$)	TOTAL REVENUE BUS SERVICE	TOTAL OF BUS SERVICE TAX	BUS SEVICE TAX (TO DESARU) NO OF USER	FARE	REVENUE	SERVICE TAX OF BUS	FERRY OPERAT NO OF USER
										TAX RATE=	5%		15		0.050	
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	0	15	0.000	0.000	0
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	0	15	0.000	0.000	0
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	24,330	15	0.369	0.018	65,274
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	137,300	15	2.060	0.103	291,423
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	187,299	15	2.809	0.140	392,423
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	451,967	15	6.780	0.339	960,077
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	532,652	15	7.990	0.399	1,126,249
1.00	0.000	0	0	5.00	0.000	0	0	4.00	0.000	0.000	0.000	732,012	15	10.980	0.549	1,549,980
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	757,118	15	11.357	0.568	1,611,677
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	779,316	15	11.690	0.584	1,664,816
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	803,070	15	12.046	0.602	1,722,313
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	819,954	15	12.299	0.615	1,759,197
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	837,110	15	12.557	0.628	1,796,625
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	851,310	15	12.770	0.638	1,825,025
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	865,794	15	12.967	0.649	1,853,993
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	880,568	15	13.209	0.660	1,883,540
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	895,637	15	13.435	0.672	1,913,678
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	911,007	15	13.665	0.683	1,944,419
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	926,685	15	13.900	0.695	1,975,775
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	942,877	15	14.140	0.707	2,007,758
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	958,988	15	14.385	0.719	2,040,381
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	975,825	15	14.634	0.732	2,073,656
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596
1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168	4.701	0.235	992,596	15	14.889	0.744	2,107,596

ION SERVICE TAX		SERVICE TAX OF FERRY	RETURN ACCRUING TO FACILITY USERS														
			ROAD	JETTY	WATER SUPPLY				SEWERAGE SYSTEM			SOID WASTE DISPOSAL			ELECTRICAL SUPPLY		
FARE	REVENUE				HOTEL ROOM	DEMAND (m.m3/year)	CHARGE (Rgt/m3)	REVENUE (m Rgt/year)	DEMAND (m.m3/year)	CHARGE (Rgt/m3)	REVENUE (m Rgt/year)	DEMAND (ton/year)	CHARGE (Rgt/ton)	REVENUE (Rgt/year)	DEMAND UNIT HOTEL (kva/year)	OTHER FACI (kva/year)
15		5%														
15	0.000	0.000	0	0	0	0.000	1.885	0.000	0.000	5.477	0.000	0.00	137.52	0.000	0	0
15	0.000	0.000	0	0	0	0.000	1.885	0.000	0.000	5.477	0.000	0.00	137.52	0.000	0	0
15	0.979	0.049	0	0	393	0.141	1.885	0.265	0.100	5.477	0.550	1,147.53	137.52	0.158	406,861	59,367
15	4.371	0.219	0	0	413	0.148	1.885	0.278	0.105	5.477	0.578	1,205.36	137.52	0.166	427,364	889,385
15	5.886	0.294	0	0	437	0.156	1.885	0.295	0.112	5.477	0.612	1,277.32	137.52	0.176	452,878	1,252,730
15	14.401	0.720	0	0	1,358	0.486	1.885	0.916	0.347	5.477	1.901	3,966.60	137.52	0.545	1,426,330	2,921,764
15	16.894	0.845	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	1,548,302	3,483,606
15	23.250	1.162	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	24.175	1.209	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	24.972	1.249	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	25.835	1.292	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	26.388	1.319	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	26.949	1.347	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	27.375	1.369	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	27.810	1.390	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	28.253	1.413	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	28.705	1.435	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	29.166	1.458	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	29.637	1.482	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	30.116	1.506	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	30.606	1.530	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.105	1.555	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477
15	31.614	1.581	0	0	2,114	0.756	1.885	1.425	0.540	5.477	2.958	6,172.88	137.52	0.849	2,219,675	4,770,477

DEMAND HOUR HOTEL (hour/day)	OTHER FACI (hour/day)	TARIFF HOTEL (Rgt/kwh)	OTHER FACI (Rgt/kwh)	REVENUE HOTEL (m.Rgt/year)	OTHER FACI (m.Rgt/year)	TOTAL	TELECOMMUNICATON ROOM	LINE	FREQUENCY OVERSEAS (time/day)	DOMESTIC (time/day)	TARRIF OVERSEAS (Rgt/time)	DOMESTIC (Rgt/time)	REVENUE OVERSEAS (m Rgt/year)	DOMESTIC (m Rgt/year)	TOTAL (m Rgt/year)	TOTAL OF FACILITIES' REVENUE (m Rgt./year)
16	10	0.3	0.3	0.000	0.000	0.000	0	0	0.1	1	60	0.4	0.000	0.000	0.000	0.0
16	10	0.3	0.3	0.000	0.000	0.000	0	0	0.1	1	60	0.4	0.000	0.000	0.000	0.0
16	10	0.3	0.3	1.953	0.178	2.131	147	147	0.1	1	60	0.4	0.321	0.021	0.343	3.4
16	10	0.3	0.3	2.051	2.668	4.720	154	154	0.1	1	60	0.4	0.337	0.022	0.360	5.1
16	10	0.3	0.3	2.174	3.758	5.932	163	163	0.1	1	60	0.4	0.357	0.024	0.381	7.4
16	10	0.3	0.3	6.846	8.765	15.612	514	514	0.1	1	60	0.4	1.126	0.075	1.201	20.2
16	10	0.3	0.3	7.432	10.451	17.883	558	558	0.1	1	60	0.4	1.222	0.081	1.304	24.4
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1
16	10	0.3	0.3	10.654	14.311	24.966	800	800	0.1	1	60	0.4	1.752	0.117	1.869	32.1

Table E.1.2 Profit/Loss Calculation and Cash Flow for Public Sector

(unit: million Rgt.)

ST NO.	YEAR	TOTAL INCOME	OPERATION AND MAINTENANCE	G.O.P.	% DEPRECIATION OF G.O.P.	EXPENDITURE	PROFIT ON BUSINESS	INTEREST PAYABLE	RECURRING PROFIT	ACCUMU-LATION	INVESTMENT TAX ALLOWANCE	PROFIT AFTER TAX	ACCUMUL.	CASH FLOW: PROFIT AFTER TAX	CASH FLOW: DEPRECIATION EXPENDITURE	CASH FLOW	TOTAL CASH FLOW	LOAN REPAYMENT
1 ST	1989	0.0	0.4	-0.4	0.0	0.0	-0.4	0.0	-0.4	-0.4	0.0	-0.4	-0.4	-0.4	0.0	-0.4	-0.4	0.0
2 ND	1990	3.4	1.7	1.8	51.4	12.1	-10.4	4.3	-14.7	-15.1	0.0	-14.7	-15.1	-14.7	12.1	-2.5	-2.9	0.0
3 RD	1991	5.1	2.8	2.3	45.1	12.1	-9.8	4.3	-14.1	-29.2	0.0	-14.1	-29.2	-14.1	12.1	-2.0	-4.9	0.0
4 TH	1992	6.0	3.3	2.7	44.5	12.1	-9.5	4.3	-13.7	-42.9	0.0	-13.7	-42.9	-13.7	12.1	-1.6	-6.5	0.0
5 TH	1993	17.6	7.4	10.2	57.9	12.1	-2.0	4.3	-6.2	-49.1	0.0	-6.2	-49.1	-6.2	12.1	5.9	-0.6	0.0
6 TH	1994	20.2	8.0	12.2	60.6	12.1	0.1	4.3	-4.2	-53.3	0.0	-4.2	-53.3	-4.2	12.1	8.0	7.4	0.0
7 TH	1995	27.9	9.2	18.7	67.2	7.9	10.9	4.3	6.6	-46.7	0.0	6.6	-46.7	6.6	7.9	14.4	21.8	0.0
8 TH	1996	30.9	11.7	19.2	62.0	7.9	11.3	4.3	7.1	-39.6	0.0	7.1	-39.6	7.1	7.9	14.9	36.7	0.0
9 TH	1997	32.4	11.9	20.5	63.3	7.9	12.7	4.3	8.4	-31.2	0.0	8.4	-31.2	8.4	7.9	16.3	53.0	5.9
10 TH	1998	64.5	15.1	49.4	76.6	7.9	41.6	4.0	37.5	6.3	0.0	37.5	6.3	37.5	7.9	45.4	98.3	5.9
11 TH	1999	65.9	15.2	50.7	76.9	7.9	42.8	3.8	39.0	45.3	0.0	39.0	45.3	39.0	7.9	46.9	145.2	5.9
12 TH	2000	67.3	15.4	51.9	77.1	7.9	44.1	3.6	40.5	85.8	0.0	40.5	85.8	40.5	7.9	48.4	193.6	5.9
13 TH	2001	72.3	15.9	56.4	78.0	7.9	48.5	3.3	45.2	131.0	0.0	45.2	131.0	45.2	7.9	53.1	246.6	5.9
14 TH	2002	72.4	15.9	56.5	78.0	7.9	48.6	3.1	45.5	176.5	0.0	45.5	176.5	45.5	7.9	53.4	300.0	5.9
15 TH	2003	72.4	15.9	56.5	78.1	7.9	48.7	2.9	45.8	222.4	0.0	45.8	222.4	45.8	7.9	53.7	353.7	5.9
16 TH	2004	72.5	15.9	56.6	78.1	7.9	48.8	2.6	46.2	268.5	0.0	46.2	268.5	46.2	7.9	54.0	407.7	5.9
17 TH	2005	72.6	15.9	56.7	78.1	5.0	51.7	2.4	49.3	317.9	0.0	49.3	317.9	49.3	5.0	54.3	462.1	5.9
18 TH	2006	77.6	16.4	61.2	78.8	5.0	56.2	2.1	54.0	371.9	0.0	54.0	371.9	54.0	5.0	59.0	521.1	5.9
19 TH	2007	77.7	16.4	61.2	78.9	5.0	56.3	1.9	54.4	426.3	0.0	54.4	426.3	54.4	5.0	59.3	580.4	5.9
20 TH	2008	77.8	16.4	61.3	78.9	5.0	56.3	1.7	54.7	480.9	0.0	54.7	480.9	54.7	5.0	59.7	640.1	5.9
21 TH	2009	77.9	16.4	61.4	78.9	5.0	56.4	1.4	55.0	535.9	0.0	55.0	535.9	55.0	5.0	60.0	700.1	5.9
22 TH	2010	78.0	16.5	61.5	78.9	5.0	56.5	1.2	55.3	591.3	0.0	55.3	591.3	55.3	5.0	60.3	760.4	5.9
23 TH	2011	82.8	16.9	65.9	79.6	5.0	60.9	1.0	59.9	651.2	0.0	59.9	651.2	59.9	5.0	64.9	825.4	5.9
24 TH	2012	82.8	16.9	65.9	79.6	5.0	60.9	0.7	60.2	711.4	0.0	60.2	711.4	60.2	5.0	65.2	890.5	5.9
25 TH	2013	82.8	16.9	65.9	79.6	5.0	60.9	0.5	60.4	771.8	0.0	60.4	771.8	60.4	5.0	65.4	956.0	5.9
26 TH	2014	82.8	16.9	65.9	79.6	5.0	60.9	0.2	60.7	832.5	0.0	60.7	832.5	60.7	5.0	65.6	1,021.6	5.9
27 TH	2015	82.8	16.9	65.9	79.6	5.0	60.9	0.0	60.9	893.3	0.0	60.9	893.3	60.9	5.0	65.9	1,087.5	0.0
28 TH	2016	87.7	17.4	70.3	80.1	5.0	65.3	0.0	65.3	958.6	0.0	65.3	958.6	65.3	5.0	70.3	1,157.7	0.0
29 TH	2017	87.7	17.4	70.3	80.1	5.0	65.3	0.0	65.3	1,023.9	0.0	65.3	1,023.9	65.3	5.0	70.3	1,228.0	0.0
30 TH	2018	87.7	17.4	70.3	80.1	5.0	65.3	0.0	65.3	1,089.1	0.0	65.3	1,089.1	65.3	5.0	70.3	1,298.2	0.0
31 TH	2019	87.7	17.4	70.3	80.1	5.0	65.3	0.0	65.3	1,154.4	0.0	65.3	1,154.4	65.3	5.0	70.3	1,368.5	0.0
TOTAL		1,657.3	418.2			214.1	1,225.0	70.7	1,154.4	11,438.7	0.0	1,154.4	11,438.7	1,154.4	214.1	1,368.5	15,346.4	107.1

ROE = 34.78% ROI = 23.81%

		CASHFLOW INVESTMENT PAYBACK YEARS					P/L INVESTMET PAYBACK YEARS				
CASH FLOW BALANCE	TOTAL CASH FLOW BALANCE	CASH FLOW	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE	RECURRING PROFIT	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE
						214.1					214.1
-0.4	-0.4	-0.4	0.0	0.0	-0.4	214.5	-0.4	0.0	0.0	-0.4	214.5
-2.9	-3.3	-2.5	0.0	4.3	1.8	212.8	-14.7	0.0	4.3	-10.4	224.9
-4.9	-8.2	-2.0	0.0	4.3	2.3	210.4	-14.1	0.0	4.3	-9.8	234.7
-6.5	-14.7	-1.6	0.0	4.3	2.7	207.8	-13.7	0.0	4.3	-9.5	244.2
-0.6	-15.3	5.9	0.0	4.3	10.2	197.6	-6.2	0.0	4.3	-2.0	246.1
7.4	-7.9	8.0	0.0	4.3	12.2	185.3	-4.2	0.0	4.3	0.1	246.0
21.8	13.9	14.4	0.0	4.3	18.7	166.6	6.6	0.0	4.3	10.9	235.1
36.7	50.6	14.9	0.0	4.3	19.2	147.4	7.1	0.0	4.3	11.3	223.8
47.0	97.6	16.3	5.9	4.3	26.5	120.9	8.4	5.9	4.3	18.6	205.2
92.4	190.0	45.4	5.9	4.0	55.4	65.6	37.5	5.9	4.0	47.5	157.7
139.3	329.3	46.9	5.9	3.8	56.6	9.0	39.0	5.9	3.8	48.8	108.9
187.6	516.9	48.4	5.9	3.6	57.9	0.0	40.5	5.9	3.6	50.0	58.8
240.7	757.6	53.1	5.9	3.3	62.3	0.0	45.2	5.9	3.3	54.5	4.4
294.1	1,051.7	53.4	5.9	3.1	62.4	0.0	45.5	5.9	3.1	54.6	0.0
347.8	1,399.5	53.7	5.9	2.9	62.5	0.0	45.8	5.9	2.9	54.6	0.0
401.8	1,801.2	54.0	5.9	2.6	62.6	0.0	46.2	5.9	2.6	54.7	0.0
456.1	2,257.3	54.3	5.9	2.4	62.7	0.0	49.3	5.9	2.4	57.7	0.0
515.1	2,772.5	59.0	5.9	2.1	67.1	0.0	54.0	5.9	2.1	62.1	0.0
574.5	3,346.9	59.3	5.9	1.9	67.2	0.0	54.4	5.9	1.9	62.2	0.0
634.1	3,981.1	59.7	5.9	1.7	67.3	0.0	54.7	5.9	1.7	62.3	0.0
694.1	4,675.2	60.0	5.9	1.4	67.4	0.0	55.0	5.9	1.4	62.4	0.0
754.5	5,429.7	60.3	5.9	1.2	67.5	0.0	55.3	5.9	1.2	62.5	0.0
819.4	6,249.1	64.9	5.9	1.0	71.8	0.0	59.9	5.9	1.0	66.8	0.0
884.6	7,133.7	65.2	5.9	0.7	71.8	0.0	60.2	5.9	0.7	66.8	0.0
950.0	8,083.7	65.4	5.9	0.5	71.8	0.0	60.4	5.9	0.5	66.8	0.0
1,015.7	9,099.4	65.6	5.9	0.2	71.8	0.0	60.7	5.9	0.2	66.8	0.0
1,087.5	10,186.9	65.9	0.0	0.0	65.9	0.0	60.9	0.0	0.0	60.9	0.0
1,157.7	11,344.6	70.3	0.0	0.0	70.3	0.0	65.3	0.0	0.0	65.3	0.0
1,228.0	12,572.6	70.3	0.0	0.0	70.3	0.0	65.3	0.0	0.0	65.3	0.0
1,298.2	13,870.8	70.3	0.0	0.0	70.3	0.0	65.3	0.0	0.0	65.3	0.0
1,368.5	15,239.4	70.3	0.0	0.0	70.3	0.0	65.3	0.0	0.0	65.3	0.0
15,239.4	122,401.6										

YEAR	INVESTMENT COST	OPEATION AND MAINTENANCE	GENERAL ADMINIST-RATION COST	TOTAL COST	LAND LEASE FEE	SERVICE TAX	CHARGE ON INFRA.	BUSINESS TAX	TOTAL INCOME	BALANCE
	35%									
	100%		10%						100%	
1989	5.910	0.403	0.000	6.313	0.000	0.000	0.000	0.000	0.000	-6.313
1990	39.635	1.321	0.343	41.299	0.821	1.398	1.206	0.000	3.425	-37.874
1991	29.659	2.307	0.514	32.480	1.073	1.933	2.135	0.000	5.141	-27.339
1992	35.208	2.744	0.603	38.554	1.216	2.222	2.589	0.000	6.026	-32.528
1993	14.015	5.635	1.757	21.407	3.762	6.747	7.061	0.000	17.570	-3.837
1994	5.973	5.955	2.022	13.950	4.169	7.508	8.547	0.000	20.223	6.273
1995	0.000	6.368	2.788	9.156	5.956	10.697	11.224	0.000	27.877	18.721
1996	0.000	8.654	3.095	11.749	7.057	12.667	11.224	0.000	30.948	19.199
1997	0.000	8.654	3.243	11.897	7.604	13.604	11.224	0.000	32.432	20.535
1998	0.000	8.654	6.452	15.106	8.226	14.669	11.224	30.400	64.518	49.412
1999	0.000	8.654	6.592	15.246	8.439	15.041	11.224	31.220	65.923	50.677
2000	0.000	8.654	6.733	15.387	8.652	15.415	11.224	32.039	67.330	51.943
2001	0.000	8.654	7.227	15.881	9.329	16.557	11.224	35.158	72.267	56.386
2002	0.000	8.654	7.235	15.889	9.356	16.617	11.224	35.158	72.355	56.465
2003	0.000	8.654	7.244	15.898	9.384	16.679	11.224	35.158	72.444	56.546
2004	0.000	8.654	7.254	15.908	9.413	16.742	11.224	35.158	72.535	56.628
2005	0.000	8.654	7.263	15.917	9.442	16.806	11.224	35.158	72.628	56.712
2006	0.000	8.654	7.757	16.411	10.121	17.954	11.224	38.276	77.574	61.163
2007	0.000	8.654	7.767	16.421	10.151	18.020	11.224	38.276	77.671	61.250
2008	0.000	8.654	7.777	16.431	10.182	18.088	11.224	38.276	77.770	61.339
2009	0.000	8.654	7.787	16.441	10.213	18.157	11.224	38.276	77.871	61.429
2010	0.000	8.654	7.797	16.451	10.246	18.228	11.224	38.276	77.973	61.522
2011	0.000	8.654	8.282	16.936	10.895	19.311	11.224	41.395	82.824	65.888
2012	0.000	8.654	8.282	16.936	10.895	19.311	11.224	41.395	82.824	65.888
2013	0.000	8.654	8.282	16.936	10.895	19.311	11.224	41.395	82.824	65.888
2014	0.000	8.654	8.282	16.936	10.895	19.311	11.224	41.395	82.824	65.888
2015	0.000	8.654	8.282	16.936	10.895	19.311	11.224	41.395	82.824	65.888
2016	0.000	8.654	8.768	17.422	11.545	20.394	11.224	44.513	87.675	70.254
2017	0.000	8.654	8.768	17.422	11.545	20.394	11.224	44.513	87.675	70.254
2018	0.000	8.654	8.768	17.422	11.545	20.394	11.224	44.513	87.675	70.254
2019	0.000	8.654	8.768	17.422	11.545	20.394	11.224	44.513	87.675	70.254
TOTAL	130.400	232.429	185.732	548.562	255.467	453.877	302.126	845.854	1,857.325	1,308.763

IRR = 20.63%

NPV = 247.6

Table E.1.3 Revenue of the Joint Venture

(unit: million Rgt.)

YEAR	NO. OF TOURIST ARRIVALS		OTHER DAILY EXPENDITURE UNIT (Rgt/day)		EXPENDITURE			TRANSPORTATION REVENUE (TO DESARU)								
								NO. OF TOURIST ARRIVALS		BUS USER		TOTAL OF	FERRY USER		TOTAL OF	
	HOTEL GUEST	DAYTRIPPER	HOTEL GUEST	DAYTRIPPER	HOTEL GUEST	DAYTRIPPER	TOTAL	HOTEL GUEST	DAYTRIPPER	HOTEL GUEST 0.2	DAYTRIPPER 0.27	BUS USER	HOTEL GUEST 0.8	DAYTRIPPER 0.73	FERRY USER	
1988	0	0	100	35	0.000	0.000	0.000	0	0	0	0	0	0	0	0	0
1989	0	0	100	35	0.000	0.000	0.000	0	0	0	0	0	0	0	0	0
1990	61,596	31,995	100	35	14.167	1.120	15.287	61,596	31,995	12,319	8,639	20,958	49,277	23,356	72,633	
1991	64,700	479,325	100	35	14.881	16.776	31.657	64,700	479,325	12,940	129,418	142,358	51,760	349,907	401,667	
1992	68,563	675,146	100	35	15.770	23.630	39.400	68,563	675,146	13,713	182,289	196,002	54,850	492,857	547,707	
1993	215,937	1,574,655	100	35	49.666	55.113	104.779	215,937	1,574,655	43,187	425,157	468,344	172,750	1,149,498	1,322,248	
1994	234,403	1,877,454	100	35	53.913	65.711	119.624	234,403	1,877,454	46,881	506,913	553,793	187,522	1,370,541	1,558,064	
1995	330,600	2,571,000	100	35	77.290	89.985	167.275	330,600	2,571,000	66,120	694,170	760,290	264,480	1,876,830	2,141,310	
1996	374,776	2,623,712	100	35	86.198	91.830	178.028	374,776	2,623,712	74,955	708,402	783,357	299,821	1,915,310	2,215,131	
1997	408,403	2,676,187	100	35	93.933	93.667	187.599	408,403	2,676,187	81,681	722,570	804,251	326,722	1,953,617	2,280,339	
1998	446,823	2,729,710	100	35	102.769	95.540	198.309	446,823	2,729,710	89,365	737,022	826,386	357,458	1,992,688	2,350,147	
1999	458,805	2,784,305	100	35	105.525	97.451	202.976	458,805	2,784,305	91,761	751,762	843,523	367,044	2,032,543	2,399,587	
2000	470,787	2,839,991	100	35	108.281	99.400	207.681	470,787	2,839,991	94,157	766,798	860,955	376,630	2,073,193	2,449,823	
2001	470,787	2,896,790	100	35	108.281	101.388	209.669	470,787	2,896,790	94,157	782,133	876,291	376,630	2,114,657	2,491,286	
2002	470,787	2,954,726	100	35	108.281	103.415	211.696	470,787	2,954,726	94,157	797,776	891,933	376,630	2,156,950	2,533,580	
2003	470,787	3,013,821	100	35	108.281	105.484	213.765	470,787	3,013,821	94,157	813,732	907,889	376,630	2,200,089	2,576,719	
2004	470,787	3,074,097	100	35	108.281	107.593	215.874	470,787	3,074,097	94,157	830,006	924,164	376,630	2,244,091	2,620,720	
2005	470,787	3,135,579	100	35	108.281	109.745	218.026	470,787	3,135,579	94,157	846,606	940,764	376,630	2,288,973	2,665,602	
2006	470,787	3,198,291	100	35	108.281	111.940	220.221	470,787	3,198,291	94,157	863,539	957,696	376,630	2,334,752	2,711,382	
2007	470,787	3,262,257	100	35	108.281	114.179	222.460	470,787	3,262,257	94,157	880,809	974,967	376,630	2,381,448	2,758,077	
2008	470,787	3,327,502	100	35	108.281	116.463	224.743	470,787	3,327,502	94,157	898,426	992,583	376,630	2,429,076	2,805,706	
2009	470,787	3,394,052	100	35	108.281	118.792	227.073	470,787	3,394,052	94,157	916,394	1,010,551	376,630	2,477,658	2,854,288	
2010	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2011	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2012	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2013	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2014	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2015	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2016	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2017	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2018	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2019	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2020	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2021	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	
2022	470,787	3,461,933	100	35	108.281	121.168	229.449	470,787	3,461,933	94,157	934,722	1,028,879	376,630	2,527,211	2,903,841	

YEAR	BILL (Rgt/person)		REVENUE	REVENUE	TOTAL	TRANSPORTATION REVENUE (INTRA DESARU NEW TOURISM CORE)											
						1. OIL PALM MUSIUM - RUBBER MUSIUM LINE				2. AMENITY CORE INNER CIRCULATION LINE				3. PENEWAR INNER IRCULATION LINE			
	BUS	FERRY	OF BUS	OF FERRY	REVENUE	PASSENGER	WAY	FARE (M$)	FARE EARNING FOR YEAR (million M$)	PASSENGER	WAY	FARE (M$)	FARE EARNING FOR YEAR (million M$)	PASSENGER	WAY	FARE (M$)	
			(million Rgt/year)														
1988	15	15	0.000	0.000	0.000	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1989	15	15	0.000	0.000	0.000	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1990	15	15	0.314	1.089	1.404	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1991	15	15	2.135	6.025	8.160	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1992	15	15	2.940	8.216	11.156	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1993	15	15	7.025	19.834	26.859	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1994	15	15	8.307	23.371	31.678	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1995	15	15	11.404	32.120	43.524	0	0	2.00	0.000	0	0	1.00	0.000	0	0	5.00	
1996	15	15	11.750	33.227	44.977	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
1997	15	15	12.064	34.205	46.269	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
1998	15	15	12.396	35.252	47.648	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
1999	15	15	12.653	35.994	48.647	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2000	15	15	12.914	36.747	49.662	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2001	15	15	13.144	37.369	50.514	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2002	15	15	13.379	38.004	51.383	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2003	15	15	13.618	38.651	52.269	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2004	15	15	13.862	39.311	53.173	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2005	15	15	14.111	39.984	54.095	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2006	15	15	14.365	40.671	55.036	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2007	15	15	14.625	41.371	55.996	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2008	15	15	14.889	42.086	56.974	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2009	15	15	15.158	42.814	57.973	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2010	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2011	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2012	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2013	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2014	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2015	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2016	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2017	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2018	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2019	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2020	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2021	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	
2022	15	15	15.433	43.558	58.991	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	

YEAR	4. BEACHSIDE CORRIDOR LINE					TOTAL REVEN. OF TRANSPORTATION IN NEW TOURISM CORE (million M$)	GRAND TOTAL OF TRANSPORTATION REVENUE (million M$)
	FARE EARNING FOR YEAR (million M$)	PASSENGER WAY	FARE (M$)		FARE EARNING FOR YEAR (million M$)		
1988	0.000	0	0	4.00	0.000	0.000	0.000
1989	0.000	0	0	4.00	0.000	0.000	0.000
1990	0.000	0	0	4.00	0.000	0.000	1.404
1991	0.000	0	0	4.00	0.000	0.000	8.160
1992	0.000	0	0	4.00	0.000	0.000	11.156
1993	0.000	0	0	4.00	0.000	0.000	26.859
1994	0.000	0	0	4.00	0.000	0.000	31.678
1995	0.000	0	0	4.00	0.000	0.000	43.524
1996	1.460	400	2	4.00	1.168	4.701	49.679
1997	1.460	400	2	4.00	1.168	4.701	50.970
1998	1.460	400	2	4.00	1.168	4.701	52.349
1999	1.460	400	2	4.00	1.168	4.701	53.348
2000	1.460	400	2	4.00	1.168	4.701	54.363
2001	1.460	400	2	4.00	1.168	4.701	55.215
2002	1.460	400	2	4.00	1.168	4.701	56.084
2003	1.460	400	2	4.00	1.168	4.701	56.970
2004	1.460	400	2	4.00	1.168	4.701	57.874
2005	1.460	400	2	4.00	1.168	4.701	58.797
2006	1.460	400	2	4.00	1.168	4.701	59.737
2007	1.460	400	2	4.00	1.168	4.701	60.697
2008	1.460	400	2	4.00	1.168	4.701	61.676
2009	1.460	400	2	4.00	1.168	4.701	62.674
2010	1.460	400	2	4.00	1.168	4.701	63.692
2011	1.460	400	2	4.00	1.168	4.701	63.692
2012	1.460	400	2	4.00	1.168	4.701	63.692
2013	1.460	400	2	4.00	1.168	4.701	63.692
2014	1.460	400	2	4.00	1.168	4.701	63.692
2015	1.460	400	2	4.00	1.168	4.701	63.692
2016	1.460	400	2	4.00	1.168	4.701	63.692
2017	1.460	400	2	4.00	1.168	4.701	63.692
2018	1.460	400	2	4.00	1.168	4.701	63.692
2019	1.460	400	2	4.00	1.168	4.701	63.692
2020	1.460	400	2	4.00	1.168	4.701	63.692
2021	1.460	400	2	4.00	1.168	4.701	63.692
2022	1.460	400	2	4.00	1.168	4.701	63.692

Table E.1.4 Profit/Loss Calculation and Cash Flow for Joint Venture

(unit; million Rgt.)

YEAR	TOTAL REVENUE	COST	GENERAL ADMINI. EXPENSE	LAND LEASE EXPENDI.	TOTAL EXPENDITURE	G.O.P.	% DEPRECIATION OF G.O.P.	% DEPRECIATION EXPENDITURE	PROFIT ON BUSINESS	INTEREST PAYABLE	RECURRING PROFIT	ACCUMU-LATION	INVESTMENT TAX ALLOWANCE	PROFIT AFTER TAX	CASH FLOW ACCUMU.	CASH FLOW PROFIT AFTER TAX	CASH FLOW DEPRECIATION EXPENDITURE
1990	7.5	1.3	0.8	0.5	2.5	5.0	67.1	12.8	-7.8	3.4	-11.2	-11.2	0.0	-11.2	-11.2	-11.2	12.8
1991	17.9	15.0	1.8	0.9	17.7	0.2	1.0	12.8	-12.6	3.4	-16.0	-27.2	0.0	-16.0	-27.2	-16.0	12.8
1992	22.7	24.4	2.3	1.2	27.9	-5.1	-22.5	12.8	-17.9	3.4	-21.3	-48.6	0.0	-21.3	-48.6	-21.3	12.8
1993	59.2	40.4	5.9	3.1	49.5	9.8	16.5	12.8	-3.0	3.4	-6.4	-55.0	0.0	-6.4	-55.0	-6.4	12.8
1994	68.1	66.3	6.8	3.6	76.7	-8.6	-12.7	12.8	-21.5	3.4	-24.9	-79.9	0.0	-24.9	-79.9	-24.9	12.8
1995	94.9	74.7	9.5	5.0	89.2	5.6	6.0	8.3	-2.7	3.4	-6.1	-85.9	0.0	-6.1	-85.9	-6.1	8.3
1996	102.5	73.9	10.2	5.3	89.4	13.0	12.7	8.3	4.7	3.4	1.3	-84.6	0.0	1.3	-84.6	1.3	8.3
1997	107.4	44.6	10.7	5.6	61.0	46.4	43.2	8.3	38.1	3.4	34.7	-49.9	0.0	34.7	-49.9	34.7	8.3
1998	112.8	45.2	11.3	5.9	62.4	50.4	44.7	8.3	42.1	3.2	38.9	-11.0	0.0	38.9	-11.0	38.9	8.3
1999	115.3	45.4	11.5	6.1	63.0	52.3	45.4	8.3	44.0	3.0	41.0	30.0	18.4	22.5	11.5	22.5	8.3
2000	117.9	45.6	11.8	6.2	63.7	54.3	46.0	8.3	46.0	2.8	43.1	73.1	19.4	23.7	35.2	23.7	8.3
2001	119.2	45.7	11.9	6.3	63.9	55.2	46.4	8.3	46.9	2.6	44.3	117.4	19.9	24.4	59.6	24.4	8.3
2002	120.5	45.8	12.1	6.4	64.2	56.3	46.7	8.3	48.0	2.5	45.5	162.9	20.5	25.0	84.6	25.0	8.3
2003	121.8	45.9	12.2	6.4	64.5	57.3	47.0	8.3	49.0	2.3	46.7	209.6	21.0	25.7	110.3	25.7	8.3
2004	123.2	46.0	12.3	6.5	64.8	58.3	47.4	8.3	50.0	2.1	48.0	257.6	21.6	26.4	136.7	26.4	8.3
2005	124.6	46.2	12.5	6.5	65.2	59.4	47.7	5.3	54.1	1.9	52.2	309.8	23.5	28.7	165.4	28.7	5.3
2006	126.0	46.3	12.6	6.6	65.5	60.5	48.0	5.3	55.2	1.7	53.5	363.4	24.1	29.4	194.9	29.4	5.3
2007	127.4	46.4	12.7	6.7	65.8	61.6	48.4	5.3	56.3	1.5	54.8	418.2	24.7	30.2	225.0	30.2	5.3
2008	128.9	46.5	12.9	6.7	66.1	62.8	48.7	5.3	57.5	1.3	56.2	474.4	25.3	30.9	255.9	30.9	5.3
2009	130.4	46.6	13.0	6.8	66.5	63.9	49.0	5.3	58.6	1.1	57.5	531.9	25.9	31.6	287.6	31.6	5.3
2010	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.9	58.9	590.8	26.5	32.4	319.9	32.4	5.3
2011	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.8	59.1	649.8	26.6	32.5	352.4	32.5	5.3
2012	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.6	59.3	709.1	26.7	32.6	385.0	32.6	5.3
2013	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.4	59.5	768.5	26.8	32.7	417.7	32.7	5.3
2014	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.2	59.6	828.2	26.8	32.8	450.5	32.8	5.3
2015	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.0	59.8	888.0	26.9	32.9	483.4	32.9	5.3
2016	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.0	59.8	947.8	26.9	32.9	516.3	32.9	5.3
2017	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.0	59.8	1,007.7	26.9	32.9	549.2	32.9	5.3
2018	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.0	59.8	1,067.5	26.9	32.9	582.2	32.9	5.3
2019	131.9	46.7	13.2	6.9	66.8	65.1	49.4	5.3	59.8	0.0	59.8	1,127.3	26.9	32.9	615.1	32.9	5.3
TOTAL	3,267.3	1,359.6	325.7	171.3	1,857.6	1,409.7	1,170.2	226.4	1,183.4	56.0	1,127.3	11,079.6	512.3	615.1		615.1	226.4

ROE = 49.58%

ROI = 21.59%

						CASHFLOW INVESTMENT PAYBACK YEARS					P/L INVESTMET PAYBACK YEARS				
YEAR	CASH FLOW	TOTAL CASH FLOW	LOAN PAYMENT	CASH FLOW BALANCE	TOTAL CASH FLOW BALANCE	CASH FLOW	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE	RECURRING PROFIT	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE
															101.9
1990	1.6	1.6	0.0	1.6	1.6	1.6	0.0	3.4	5.0	96.8	-11.2	0.0	3.4	-7.8	109.7
1991	-3.2	-1.6	0.0	-3.2	-1.6	-3.2	0.0	3.4	0.2	96.6	-16.0	0.0	3.4	-12.6	122.3
1992	-8.5	-10.1	0.0	-8.5	-10.1	-8.5	0.0	3.4	-5.1	101.8	-21.3	0.0	3.4	-17.9	140.3
1993	6.4	-3.7	0.0	6.4	-3.7	6.4	0.0	3.4	9.8	92.0	-6.4	0.0	3.4	-3.0	143.3
1994	-12.0	-15.7	0.0	-12.0	-15.7	-12.0	0.0	3.4	-8.6	100.6	-24.9	0.0	3.4	-21.5	164.8
1995	2.2	-13.5	0.0	2.2	-13.5	2.2	0.0	3.4	5.6	95.0	-6.1	0.0	3.4	-2.7	167.4
1996	9.6	-3.8	0.0	9.6	-3.8	9.6	0.0	3.4	13.0	81.9	1.3	0.0	3.4	4.7	162.7
1997	43.0	39.1	6.3	36.7	32.8	43.0	6.3	3.4	52.6	29.3	34.7	6.3	3.4	44.3	118.3
1998	47.2	86.3	6.3	40.9	73.7	47.2	6.3	3.2	56.7	0.0	38.9	6.3	3.2	48.4	70.0
1999	30.8	117.2	6.3	24.6	98.3	30.8	6.3	3.0	40.2	0.0	41.0	6.3	3.0	50.3	19.7
2000	32.0	149.2	6.3	25.7	124.0	32.0	6.3	2.8	41.1	0.0	43.1	6.3	2.8	52.2	0.0
2001	32.7	181.8	6.3	26.4	150.4	32.7	6.3	2.6	41.6	0.0	44.3	6.3	2.6	53.2	0.0
2002	33.3	215.2	6.3	27.0	177.4	33.3	6.3	2.5	42.1	0.0	45.5	6.3	2.5	54.2	0.0
2003	34.0	249.2	6.3	27.7	205.2	34.0	6.3	2.3	42.6	0.0	46.7	6.3	2.3	55.3	0.0
2004	34.7	283.9	6.3	28.4	233.5	34.7	6.3	2.1	43.0	0.0	48.0	6.3	2.1	56.3	0.0
2005	34.0	317.9	6.3	27.7	261.3	34.0	6.3	1.9	42.2	0.0	52.2	6.3	1.9	60.4	0.0
2006	34.7	352.6	6.3	28.4	289.7	34.7	6.3	1.7	42.7	0.0	53.5	6.3	1.7	61.5	0.0
2007	35.4	388.0	6.3	29.2	318.9	35.4	6.3	1.5	43.2	0.0	54.8	6.3	1.5	62.6	0.0
2008	36.2	424.2	6.3	29.9	348.7	36.2	6.3	1.3	43.8	0.0	56.2	6.3	1.3	63.8	0.0
2009	36.9	461.1	6.3	30.6	379.4	36.9	6.3	1.1	44.3	0.0	57.5	6.3	1.1	64.9	0.0
2010	37.7	498.8	6.3	31.4	410.8	37.7	6.3	0.9	44.9	0.0	58.9	6.3	0.9	66.1	0.0
2011	37.8	536.6	6.3	31.5	442.2	37.8	6.3	0.8	44.8	0.0	59.1	6.3	0.8	66.1	0.0
2012	37.9	574.4	6.3	31.6	473.8	37.9	6.3	0.6	44.7	0.0	59.3	6.3	0.6	66.1	0.0
2013	38.0	612.4	6.3	31.7	505.5	38.0	6.3	0.4	44.6	0.0	59.5	6.3	0.4	66.1	0.0
2014	38.1	650.5	6.3	31.8	537.3	38.1	6.3	0.2	44.6	0.0	59.6	6.3	0.2	66.1	0.0
2015	38.2	688.7	0.0	38.2	575.5	38.2	0.0	0.0	38.2	0.0	59.8	0.0	0.0	59.8	0.0
2016	38.2	726.9	0.0	38.2	613.7	38.2	0.0	0.0	38.2	0.0	59.8	0.0	0.0	59.8	0.0
2017	38.2	765.1	0.0	38.2	651.9	38.2	0.0	0.0	38.2	0.0	59.8	0.0	0.0	59.8	0.0
2018	38.2	803.3	0.0	38.2	690.1	38.2	0.0	0.0	38.2	0.0	59.8	0.0	0.0	59.8	0.0
2019	38.2	841.4	0.0	38.2	728.3	38.2	0.0	0.0	38.2	0.0	59.8	0.0	0.0	59.8	0.0
TOTAL	841.4	9,917.0	113.2	728.3	6,275.7										

YEAR	YEAR	INVESTMENT COST		O/M COST		GENERAL ADMINI. EXPENSE	LAND LEASE EXPENDI.	SERVICE TAX	TOTAL COST	REVENUE OF TOURIST FACILITY	REVENUE OF TRANSPORT-ATION	TOTAL REVENUE	BALANCE
		TOURIST FACILITY	TRANSPORT-ATION	TOURIST FACILITY	TRANSPORT-ATION								
	1989	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	-0.4
1990	1990	8.0	2.9	0.5	6.0	0.8	0.5	0.8	19.3	6.9	0.6	7.5	-11.8
1991	1991	15.8	4.6	7.4	12.0	1.8	0.9	1.6	44.1	14.2	3.7	17.9	-26.2
1992	1992	31.3	2.9	10.4	10.8	2.3	1.2	2.0	60.9	17.7	5.0	22.7	-38.2
1993	1993	19.9	4.8	24.3	36.0	5.9	3.1	5.2	99.4	47.2	12.1	59.2	-40.2
1994	1994	26.4	2.9	24.3	42.0	6.8	3.6	6.0	112.1	53.8	14.3	68.1	-44.0
1995	1995		4.8	24.3	54.0	9.5	5.0	8.4	106.0	75.3	19.6	94.9	-11.1
1996	1996			11.0	24.3	10.2	5.3	8.9	59.7	80.1	22.4	102.5	42.7
1997	1997			11.0	24.3	10.7	5.6	9.4	61.0	84.4	22.9	107.4	46.4
1998	1998			11.0	24.3	11.3	5.9	9.9	62.4	89.2	23.6	112.8	50.4
1999	1999			11.0	24.3	11.5	6.1	10.1	63.0	91.3	24.0	115.3	52.3
2000	2000			11.0	24.3	11.8	6.2	10.4	63.7	93.5	24.5	117.9	54.3
2001	2001			11.0	24.3	11.9	6.3	10.5	63.9	94.4	24.8	119.2	55.2
2002	2002			11.0	24.3	12.1	6.4	10.6	64.2	95.3	25.2	120.5	56.3
2003	2003			11.0	24.3	12.2	6.4	10.7	64.5	96.2	25.6	121.8	57.3
2004	2004			11.0	24.3	12.3	6.5	10.8	64.8	97.1	26.0	123.2	58.3
2005	2005			11.0	24.3	12.5	6.5	10.9	65.2	98.1	26.5	124.6	59.4
2006	2006			11.0	24.3	12.6	6.6	11.0	65.5	99.1	26.9	126.0	60.5
2007	2007			11.0	24.3	12.7	6.7	11.1	65.8	100.1	27.3	127.4	61.6
2008	2008			11.0	24.3	12.9	6.7	11.2	66.1	101.1	27.8	128.9	62.8
2009	2009			11.0	24.3	13.0	6.8	11.4	66.5	102.2	28.2	130.4	63.9
2010	2010			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2011	2011			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2012	2012			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2013	2013			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2014	2014			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2015	2015			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2016	2016			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2017	2017			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2018	2018			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
2019	2019			11.0	24.3	13.2	6.9	11.5	66.8	103.3	28.7	131.9	65.1
TOTAL	TOTAL	102.3	23.4	354.8	744.5	326.8	171.3	285.6	2,006.7	2,570.2	698.0	3,267.3	1,260.6
												IRR =	19.34%
												npv =	225.6

Table E.1.5 Revenue of Middle Class Hotel

(unit; million Rgt.)

YEAR	NO. OF TOURIST ARRIVALS		AVERAGE LENGTH OF STAY	TOURSIT EXPENDITURE IN HOTEL BOUNDARY (Ringgit/person/day)			OCCUPANCY RATIO								
	HOTEL GUEST	DAYTRIPPER	(day/person)	HIGH	MEDIUM (1)	MEDIUM (2)	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM
1988	0	0	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1989	0	0	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1990	61,596	31,995	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.48	0.45	0.35	0.00
1991	64,700	479,325	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.50	0.48	0.37	0.00
1992	68,563	675,146	2.338	200	180	170	0.00	0.00	0.00	0.00	0.00	0.53	0.50	0.40	0.00
1993	215,937	1,574,655	2.338	200	180	170	0.43	0.43	0.00	0.00	0.00	0.55	0.53	0.43	0.45
1994	234,403	1,877,454	2.338	200	180	170	0.48	0.48	0.00	0.00	0.00	0.57	0.55	0.43	0.50
1995	330,600	2,571,000	2.338	200	180	170	0.53	0.53	0.43	0.44	0.45	0.57	0.55	0.43	0.52
1996	374,776	2,622,420	2.338	220	200	190	0.60	0.60	0.48	0.48	0.48	0.60	0.60	0.48	0.60
1997	408,403	2,674,868	2.338	220	200	190	0.65	0.65	0.53	0.53	0.53	0.65	0.65	0.53	0.65
1998	446,823	2,728,366	2.338	220	200	190	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.60	0.70
1999	458,805	2,782,933	2.338	220	200	190	0.70	0.70	0.65	0.65	0.65	0.70	0.70	0.65	0.70
2000	470,787	2,838,592	2.338	220	200	190	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2001	470,787	2,895,364	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2002	470,787	2,953,271	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2003	470,787	3,012,336	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2004	470,787	3,072,583	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2005	470,787	3,134,035	2.338	240	220	210	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2006	470,787	3,196,715	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2007	470,787	3,260,650	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2008	470,787	3,325,863	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2009	470,787	3,392,380	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2010	470,787	3,460,227	2.338	260	240	230	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2011	470,787	3,529,432	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2012	470,787	3,600,021	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2013	470,787	3,672,021	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2014	470,787	3,745,462	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2015	470,787	3,820,371	2.338	280	260	250	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2016	470,787	3,896,778	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2017	470,787	3,974,714	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2018	470,787	4,054,208	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2019	470,787	4,135,292	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2020	470,787	4,217,998	2.338	300	280	270	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2021	470,787	4,302,358	2.338	320	300	290	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
2022	470,787	4,388,405	2.338	320	300	290	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70

YEAR	GUEST-NIGHTS														TOTAL HOTEL S. (million Rgt.)
	HOTEL (M-7) 280 RM	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	TOTAL	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	SUB-TOTAL	TOTAL OF GUEST-NIGHT	HOTEL (H-1)
1988	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
1989	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000
1990	0.00	0	0	0	0	0	0	81,994	32,850	26,828	0	0	141,671	141,671	0.000
1991	0.00	0	0	0	0	0	0	85,410	35,040	28,361	0	0	148,811	148,811	0.000
1992	0.00	0	0	0	0	0	0	90,535	36,500	30,660	0	0	157,695	157,695	0.000
1993	0.45	78,475	78,475	0	156,950	0	0	93,951	38,690	32,960	82,125	91,880	339,706	496,656	15.695
1994	0.50	87,600	87,600	0	175,200	0	0	97,367	40,150	32,960	91,250	102,200	363,927	539,127	17.520
1995	0.52	96,725	96,725	94,170	287,620	47,917	65,700	97,367	40,150	32,960	94,900	106,288	485,282	772,902	19.345
1996	0.60	109,500	109,500	105,120	324,120	52,560	70,080	102,492	43,800	36,792	109,500	122,640	537,864	861,984	24.090
1997	0.65	118,625	118,625	116,070	353,320	58,035	77,380	111,033	47,450	40,625	118,625	132,860	586,008	939,328	26.098
1998	0.70	127,750	127,750	131,400	386,900	65,700	87,600	119,574	51,100	45,990	127,750	143,080	640,794	1,027,694	28.105
1999	0.70	127,750	127,750	142,350	397,850	71,175	94,900	119,574	51,100	49,823	127,750	143,080	657,402	1,055,252	28.105
2000	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	28.105
2001	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	30.660
2002	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	30.660
2003	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	30.660
2004	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	30.660
2005	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	30.660
2006	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	33.215
2007	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	33.215
2008	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	33.215
2009	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	33.215
2010	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	33.215
2011	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	35.770
2012	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	35.770
2013	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	35.770
2014	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	35.770
2015	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	35.770
2016	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	38.325
2017	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	38.325
2018	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	38.325
2019	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	38.325
2020	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	38.325
2021	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	40.880
2022	0.70	127,750	127,750	153,300	408,800	76,650	102,200	119,574	51,100	53,655	127,750	143,080	674,009	1,082,809	40.880

YEAR	ALES											
	HOTEL (H-2)	HOTEL (H-3)	SUB-TOTAL	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	SUB-TOTAL	TOTAL
1988	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0
1989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0
1990	0.000	0.000	0.000	0.000	0.000	13.939	5.585	4.561	0.000	0.000	24.084	24.1
1991	0.000	0.000	0.000	0.000	0.000	14.520	5.957	4.821	0.000	0.000	25.298	25.3
1992	0.000	0.000	0.000	0.000	0.000	15.391	6.205	5.212	0.000	0.000	26.808	26.8
1993	15.695	0.000	31.390	0.000	0.000	15.972	6.577	5.603	14.783	16.556	59.491	90.9
1994	17.520	0.000	35.040	0.000	0.000	16.552	6.826	5.603	16.425	18.396	63.802	98.8
1995	19.345	18.834	57.524	8.625	11.826	16.552	6.826	5.603	17.062	19.132	85.646	143.2
1996	24.090	23.126	71.306	10.512	14.016	19.473	8.322	6.990	21.900	24.528	105.742	177.0
1997	26.098	25.535	77.730	11.607	15.476	21.096	9.016	7.719	23.725	26.572	115.210	192.9
1998	28.105	28.908	85.118	13.140	17.520	22.719	9.709	8.738	25.550	28.616	125.992	211.1
1999	28.105	31.317	87.527	14.235	18.980	22.719	9.709	9.466	25.550	28.616	129.275	216.8
2000	28.105	33.726	89.936	15.330	20.440	22.719	9.709	10.194	25.550	28.616	132.559	222.5
2001	30.660	36.792	98.112	16.863	22.484	25.111	10.731	11.268	28.105	31.478	146.039	244.2
2002	30.660	36.792	98.112	16.863	22.484	25.111	10.731	11.268	28.105	31.478	146.039	244.2
2003	30.660	36.792	98.112	16.863	22.484	25.111	10.731	11.268	28.105	31.478	146.039	244.2
2004	30.660	36.792	98.112	16.863	22.484	25.111	10.731	11.268	28.105	31.478	146.039	244.2
2005	30.660	36.792	98.112	16.863	22.484	25.111	10.731	11.268	28.105	31.478	146.039	244.2
2006	33.215	39.858	106.288	18.396	24.528	27.502	11.753	12.341	30.660	34.339	159.519	265.8
2007	33.215	39.858	106.288	18.396	24.528	27.502	11.753	12.341	30.660	34.339	159.519	265.8
2008	33.215	39.858	106.288	18.396	24.528	27.502	11.753	12.341	30.660	34.339	159.519	265.8
2009	33.215	39.858	106.288	18.396	24.528	27.502	11.753	12.341	30.660	34.339	159.519	265.8
2010	33.215	39.858	106.288	18.396	24.528	27.502	11.753	12.341	30.660	34.339	159.519	265.8
2011	35.770	42.924	114.464	19.929	26.572	29.894	12.775	13.414	33.215	37.201	172.999	287.5
2012	35.770	42.924	114.464	19.929	26.572	29.894	12.775	13.414	33.215	37.201	172.999	287.5
2013	35.770	42.924	114.464	19.929	26.572	29.894	12.775	13.414	33.215	37.201	172.999	287.5
2014	35.770	42.924	114.464	19.929	26.572	29.894	12.775	13.414	33.215	37.201	172.999	287.5
2015	35.770	42.924	114.464	19.929	26.572	29.894	12.775	13.414	33.215	37.201	172.999	287.5
2016	38.325	45.990	122.640	21.462	28.616	32.285	13.797	14.487	35.770	40.062	186.479	309.1
2017	38.325	45.990	122.640	21.462	28.616	32.285	13.797	14.487	35.770	40.062	186.479	309.1
2018	38.325	45.990	122.640	21.462	28.616	32.285	13.797	14.487	35.770	40.062	186.479	309.1
2019	38.325	45.990	122.640	21.462	28.616	32.285	13.797	14.487	35.770	40.062	186.479	309.1
2020	38.325	45.990	122.640	21.462	28.616	32.285	13.797	14.487	35.770	40.062	186.479	309.1
2021	40.880	49.056	130.816	22.995	30.660	34.676	14.819	15.560	38.325	42.924	199.959	330.8
2022	40.880	49.056	130.816	22.995	30.660	34.676	14.819	15.560	38.325	42.924	199.959	330.8

Table E.1.6 Profit/Loss Calculation and Cash Flow for Middle Class Hotel

(unit; million Rgt.)

YEAR	COST	GENERAL ADMIN. EXPENSE	LAND LEASE EXPENDI.	TOTAL EXPENDITURE	TOTAL INCOME	G.O.P.	% OF G.O.P.	DEPRECIATION EXPENDITURE	PROFIT ON BUSINESS	INTEREST PAYABLE	RECURRING PROFIT	ACCUMU-LATION	SERVICE TAX	INVESTMENT TAX ALLOWANCE	PROFIT AFTER TAX	ACCUMU-LATION
1993	4.0	4.1	0.4	8.6	14.8	6.2	42.0	3.1	3.1	1.9	1.2	1.2	0.7	0.0	0.5	0.5
1994	4.4	4.6	0.5	9.5	16.4	6.9	42.0	3.1	3.8	1.9	1.9	3.1	0.8	0.0	1.9	2.4
1995	4.6	4.8	0.5	9.9	17.1	7.2	42.0	3.1	4.1	1.9	2.2	5.3	0.9	0.0	2.2	4.5
1996	5.9	6.1	0.7	12.7	21.9	9.2	42.0	3.1	6.1	1.9	4.2	9.5	1.1	0.0	4.2	8.7
1997	6.4	6.6	0.7	13.8	23.7	10.0	42.0	3.1	6.9	1.9	5.0	14.4	1.2	0.0	5.0	13.7
1998	6.9	7.2	0.8	14.8	25.6	10.7	42.0	2.0	8.7	1.6	7.1	21.5	1.3	3.2	3.9	17.6
1999	6.9	7.2	0.8	14.8	25.6	10.7	42.0	2.0	8.7	1.4	7.3	28.8	1.3	3.3	4.0	21.6
2000	6.9	7.2	0.8	14.8	25.6	10.7	42.0	2.0	8.7	1.3	7.5	36.3	1.3	3.4	4.1	25.7
2001	7.6	7.9	0.8	16.3	28.1	11.8	42.0	2.0	9.8	1.1	8.7	45.0	1.4	3.9	4.8	30.5
2002	7.6	7.9	0.8	16.3	28.1	11.8	42.0	2.0	9.8	1.0	8.8	53.8	1.4	4.0	4.9	35.3
2003	7.6	7.9	0.8	16.3	28.1	11.8	42.0	2.0	9.8	0.8	9.0	62.8	1.4	4.1	5.0	40.3
2004	7.6	7.9	0.8	16.3	28.1	11.8	42.0	2.0	9.8	0.6	9.2	72.0	1.4	4.1	5.0	45.3
2005	7.6	7.9	0.8	16.3	28.1	11.8	42.0	2.0	9.8	0.5	9.3	81.3	1.4	4.2	5.1	50.5
2006	8.3	8.6	0.9	17.8	30.7	12.9	42.0	2.0	10.9	0.3	10.6	91.9	1.5	4.8	5.8	56.3
2007	8.3	8.6	0.9	17.8	30.7	12.9	42.0	2.0	10.9	0.2	10.7	102.6	1.5	4.8	5.9	62.2
2008	8.3	8.6	0.9	17.8	30.7	12.9	42.0	1.3	11.6	0.0	11.6	114.2	1.5	5.2	6.4	68.5
2009	8.3	8.6	0.9	17.8	30.7	12.9	42.0	1.3	11.6	0.0	11.6	125.8	1.5	5.2	6.4	74.9
2010	8.3	8.6	0.9	17.8	30.7	12.9	42.0	1.3	11.6	0.0	11.6	137.4	1.5	5.2	6.4	81.3
2011	9.0	9.3	1.0	19.3	33.2	14.0	42.0	1.3	12.7	0.0	12.7	150.1	1.7	5.7	7.0	88.3
2012	9.0	9.3	1.0	19.3	33.2	14.0	42.0	1.3	12.7	0.0	12.7	162.7	1.7	5.7	7.0	95.3
2013	9.0	9.3	1.0	19.3	33.2	14.0	42.0	1.3	12.7	0.0	12.7	175.4	1.7	5.7	7.0	102.2
2014	9.0	9.3	1.0	19.3	33.2	14.0	42.0	1.3	12.7	0.0	12.7	188.1	1.7	5.7	7.0	109.2
2015	9.0	9.3	1.0	19.3	33.2	14.0	42.0	1.3	12.7	0.0	12.7	200.8	1.7	5.7	7.0	116.2
2016	9.7	10.0	1.1	20.7	35.8	15.0	42.0	1.3	13.7	0.0	13.7	214.5	1.8	6.2	7.6	123.7
2017	9.7	10.0	1.1	20.7	35.8	15.0	42.0	1.3	13.7	0.0	13.7	228.3	1.8	6.2	7.6	131.3
2018	9.7	10.0	1.1	20.7	35.8	15.0	42.0	1.3	13.7	0.0	13.7	242.0	1.8	6.2	7.6	138.9
2019	9.7	10.0	1.1	20.7	35.8	15.0	42.0	1.3	13.7	0.0	13.7	255.8	1.8	6.2	7.6	146.4
2020	9.7	10.0	1.1	20.7	35.8	15.0	42.0	1.3	13.7	0.0	13.7	269.5	1.8	6.2	7.6	154.0
2021	10.3	10.7	1.1	22.2	38.3	16.1	42.0	1.3	14.8	0.0	14.8	284.3	1.9	6.7	8.2	162.1
2022	10.3	10.7	1.1	22.2	38.3	16.1	42.0	1.3	14.8	0.0	14.8	299.2	1.9	6.7	8.2	170.3
TOTAL	239.2	248.1	26.6	513.9	886.0	372.1	1,260.0	54.6	317.5	18.3	299.2	3,877.5		128.1	170.3	

ROE = 20.78%

	CASH FLOW							CASHFLOW INVESTMENT PAYBACK YEARS					P/L INVESTMET PAYBACK YEARS				
YEAR	PROFIT AFTER TAX	DEPRECIATION EXPENDITURE	CASH FLOW	TOTAL CASH FLOW	LOAN PAYMENT	CASH FLOW BALANCE	TOTAL CASH FLOW BALANCE	CASH FLOW	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE	CASH FLOW	LOAN REPAYMENT	INTEREST PAYABLE	TOTAL	INVESTMENT BALANCE
												54.626					54.6
1993	0.5	3.1	3.6	3.6	0.0	3.6	3.6	3.6	0.0	1.9	5.5	49.2	3.6	0.0	1.9	5.5	49.2
1994	1.9	3.1	5.0	8.5	0.0	8.5	12.1	5.0	0.0	1.9	6.9	42.3	5.0	0.0	1.9	6.9	42.3
1995	2.2	3.1	5.3	13.8	0.0	13.8	25.9	5.3	0.0	1.9	7.2	35.1	5.3	0.0	1.9	7.2	35.1
1996	4.2	3.1	7.3	21.1	2.3	18.8	44.7	7.3	2.3	1.9	11.5	23.6	7.3	2.3	1.9	11.5	23.6
1997	5.0	3.1	8.1	29.1	2.3	26.9	71.6	8.1	2.3	1.9	12.2	11.4	8.1	2.3	1.9	12.2	11.4
1998	3.9	2.0	5.9	35.1	2.3	32.8	104.4	5.9	2.3	1.6	9.8	1.6	5.9	2.3	1.6	9.8	1.6
1999	4.0	2.0	6.0	41.1	2.3	38.8	143.2	6.0	2.3	1.4	9.7	0.0	6.0	2.3	1.4	9.7	0.0
2000	4.1	2.0	6.1	47.2	2.3	44.9	188.1	6.1	2.3	1.3	9.7	0.0	6.1	2.3	1.3	9.7	0.0
2001	4.8	2.0	6.8	54.0	2.3	51.7	239.8	6.8	2.3	1.1	10.2	0.0	6.8	2.3	1.1	10.2	0.0
2002	4.9	2.0	6.9	60.8	2.3	58.6	298.4	6.9	2.3	1.0	10.1	0.0	6.9	2.3	1.0	10.1	0.0
2003	5.0	2.0	7.0	67.8	2.3	65.5	363.9	7.0	2.3	0.8	10.0	0.0	7.0	2.3	0.8	10.0	0.0
2004	5.0	2.0	7.0	74.8	2.3	72.6	436.4	7.0	2.3	0.6	10.0	0.0	7.0	2.3	0.6	10.0	0.0
2005	5.1	2.0	7.1	82.0	2.3	79.7	516.1	7.1	2.3	0.5	9.9	0.0	7.1	2.3	0.5	9.9	0.0
2006	5.8	2.0	7.8	89.8	2.3	87.5	603.6	7.8	2.3	0.3	10.4	0.0	7.8	2.3	0.3	10.4	0.0
2007	5.9	2.0	7.9	97.7	2.3	95.4	699.0	7.9	2.3	0.2	10.3	0.0	7.9	2.3	0.2	10.3	0.0
2008	6.4	1.3	7.7	105.3	0.0	105.3	804.4	7.7	0.0	0.0	7.7	0.0	7.7	0.0	0.0	7.7	0.0
2009	6.4	1.3	7.7	113.0	0.0	113.0	917.3	7.7	0.0	0.0	7.7	0.0	7.7	0.0	0.0	7.7	0.0
2010	6.4	1.3	7.7	120.6	0.0	120.6	1,038.0	7.7	0.0	0.0	7.7	0.0	7.7	0.0	0.0	7.7	0.0
2011	7.0	1.3	8.2	128.9	0.0	128.9	1,166.9	8.2	0.0	0.0	8.2	0.0	8.2	0.0	0.0	8.2	0.0
2012	7.0	1.3	8.2	137.1	0.0	137.1	1,304.0	8.2	0.0	0.0	8.2	0.0	8.2	0.0	0.0	8.2	0.0
2013	7.0	1.3	8.2	145.4	0.0	145.4	1,449.4	8.2	0.0	0.0	8.2	0.0	8.2	0.0	0.0	8.2	0.0
2014	7.0	1.3	8.2	153.6	0.0	153.6	1,603.0	8.2	0.0	0.0	8.2	0.0	8.2	0.0	0.0	8.2	0.0
2015	7.0	1.3	8.2	161.9	0.0	161.9	1,764.9	8.2	0.0	0.0	8.2	0.0	8.2	0.0	0.0	8.2	0.0
2016	7.6	1.3	8.8	170.7	0.0	170.7	1,935.6	8.8	0.0	0.0	8.8	0.0	8.8	0.0	0.0	8.8	0.0
2017	7.6	1.3	8.8	179.5	0.0	179.5	2,115.1	8.8	0.0	0.0	8.8	0.0	8.8	0.0	0.0	8.8	0.0
2018	7.6	1.3	8.8	188.4	0.0	188.4	2,303.5	8.8	0.0	0.0	8.8	0.0	8.8	0.0	0.0	8.8	0.0
2019	7.6	1.3	8.8	197.2	0.0	197.2	2,500.7	8.8	0.0	0.0	8.8	0.0	8.8	0.0	0.0	8.8	0.0
2020	7.6	1.3	8.8	206.1	0.0	206.1	2,706.8	8.8	0.0	0.0	8.8	0.0	8.8	0.0	0.0	8.8	0.0
2021	8.2	1.3	9.4	215.5	0.0	215.5	2,922.3	9.4	0.0	0.0	9.4	0.0	9.4	0.0	0.0	9.4	0.0
2022	8.2	1.3	9.4	224.9	0.0	224.9	3,147.2	9.4	0.0	0.0	9.4	0.0	9.4	0.0	0.0	9.4	0.0
TOTAL	170.3	54.6	224.9	3,174.5	27.3	3,147.2	31,429.9										

ROI = 17.48%

Table E.1.7 Economic Costs of Desaru New Tourism Core Development

(UNIT: Million Rgt.)

Construction Item	1989	1990	1991	1992	1993	1994	1995	TOTAL
Tourist Facility								
Coastal Resort Corridor	15.703	23.592	75.609	140.391	118.615	103.029	32.940	510.078
Daytripper/Daily activity Zone	8.289	66.868	29.132	47.644	25.684	20.634	0.000	198.252
Bandar Penewar Service Town	0.483	6.739	30.029	28.726	0.000	0.000	0.000	67.976
Other Tourist Activity Zone	0.581	0.516	0.433	7.367	0.149	2.908	0.000	11.955
Tourist Facility Total	25.056	99.714	135.403	224.128	144.448	126.572	32.940	788.261
Infrastructure								
Road Network	0.774	11.197	12.006	7.472	2.152	0.444	0.000	34.045
Jetty	0.000	0.000	0.154	4.552	0.000	0.965	0.000	5.671
Water Supply System	0.731	6.998	5.713	5.713	3.262	0.000	0.000	22.417
Sewerage System	2.224	7.288	6.718	26.708	23.358	0.000	0.000	66.296
Solid Waste Disposal System	0.000	0.319	1.728	2.552	2.480	0.000	0.000	7.080
Electrical System	1.098	18.394	26.488	2.597	0.718	0.672	0.000	49.966
Telecommunication System	0.099	0.876	0.657	0.657	0.000	0.000	0.000	2.289
Infrastructure Total	4.925	45.072	53.464	50.252	31.969	2.081	0.000	187.764
DEVELOPMENT COST TOTAL	29.982	144.786	188.867	274.380	176.418	128.653	32.940	976.025

CONSTRUCTION COST OF PROJECT (REDUCED 45%, 35%, 100%)
(ECONOMIC PRICES)

(UNIT: Million Rgt.)

Construction Item	1989	1990	1991	1992	1993	1994	1995	TOTAL
Tourist Facility								
Coastal Resort Corridor	13.006	19.540	62.789	116.278	98.243	85.334	27.282	422.472
Daytripper/Daily activity Zone	5.505	44.407	19.347	31.641	17.057	13.703	0.000	131.659
Bandar Penewar Service Town	0.278	5.035	17.303	16.552	0.000	0.000	0.000	39.168
Other Tourist Activity Zone	0.392	0.348	0.292	4.967	0.101	1.961	0.000	8.060
Tourist Facility Total	19.181	69.330	99.730	169.438	115.400	100.998	27.282	601.359
0.35 0.35	0.35	0.35	0.35	0.35	0.35			
Infrastructure								
Road Network	0.271	3.919	4.202	2.615	0.753	0.155	0.000	11.916
Jetty	0.000	0.000	0.054	1.593	0.000	0.338	0.000	1.985
Water Supply System	0.256	2.449	2.000	2.000	1.142	0.000	0.000	7.846
Sewerage System	0.778	2.551	2.351	9.348	8.175	0.000	0.000	23.204
Solid Waste Disposal System	0.000	0.112	0.605	0.893	0.868	0.000	0.000	2.478
Electrical System	0.384	6.438	9.271	0.909	0.251	0.235	0.000	17.488
Telecommunication System	0.035	0.306	0.230	0.230	0.000	0.000	0.000	0.801
Infrastructure Total	1.724	15.775	18.713	17.588	11.189	0.728	0.000	65.717
DEVELOPMENT COST TOTAL	20.905	85.105	118.443	187.026	126.590	101.726	27.282	667.076

Table E.1.8 Economic Costs of Bus Vehicle and Ferry Vessel

(unit; million Rgt.)

ITEM	1988	1989	1990	1991	1992	1993	1994	1995	total
BUS OPERATIONS									
No of Bus									
1. Belungkor - Desaru			2	1	1	1	1	1	7
2. Oil Palm/Rubber Musium								2	2
3. Intra-Ammenity Core					2	1	1		4
4. Intra-Penawar						2	1	1	4
5. Beachside Corridor Line						2	1	1	4
Total of Bus	0	0	2	1	3	6	4	5	21
Price of Bus									
Unit Price at Market (Large)	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	
(Medium)	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	
(Small)	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	
Conversion Factor	0.700	0.700	0.700	0.700	0.700	0.700	0.700	0.700	
Economic Unit Price (Large)	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	
(Medium)	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088	
(Small)	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	
Total Cost of Purchasing Bus	0.000	0.000	0.280	0.140	0.315	0.543	0.385	0.438	2.100
Operation/Maintenance	0.000	0.000	0.409	0.613	1.022	1.854	2.497	3.037	
Total Cost of Bus Operation	0.000	0.000	0.689	0.753	1.337	2.397	2.882	3.474	
FERRY OPERATION									
No of Ferry Vessels									
1. Belungkor - Changi (veh.)			1	1	1	1	1	1	6
2. ditto; (passengers)				1		1		1	3
Sub-total	0	0	1	2	1	2	1	2	9
Price of Ferry									
Unit Price (Vehicle Ves.)	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	
Unit Price (Passenger Ves.)	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	
Conversion Factor	0.910	0.910	0.910	0.910	0.910	0.910	0.910	0.910	
Economic Unit Price (Vehi.)	5.460	5.460	5.460	5.460	5.460	5.460	5.460	5.460	
Economic Unit Price (Pass.)	3.640	3.640	3.640	3.640	3.640	3.640	3.640	3.640	
Total Cost of Purchasing Vessels	0.000	0.000	5.460	9.100	5.460	9.100	5.460	9.100	43.680
Operation/Maintenance	0.000	0.000	6.000	12.000	24.000	36.000	42.000	54.000	
Total Cost of Ferry Operation	0.000	0.000	11.460	21.100	29.460	45.100	47.460	63.100	

Table E.1.9 Estimation of Foreign Exchange Earning

YEAR	NO. OF TOURIST ARRIVALS (persons)		NO. OF TOURIST ARRIVALS BY TRANSPORTATION MOOD				GUEST EXPENDITURE IN HOTEL (Rgt.)			OTHER DAILY EXPENDITURE (Rgt.)		TRANSPORTATION EXPEND. TO DESARU		TOTAL EXPENDITURE PER DAY (Rgt.)		
	HOTEL GUEST	DAYTRIPPER	HOTEL GUEST BY ROAD 20%	HOTEL GUEST BY FERRY 80%	DAYTRIPPER BY ROAD 27%	DAYTRIPPER BY FERRY 73%	HIGH CLASS	MED. CLASS 1	MED. CLASS 2	HOTEL GUEST	DAY-TRIPPER	BUS	FERRY	HOTEL GUEST (MAX)	HOTEL GUEST (MINIMUM)	DAY-TRIPPER
1988	0	0	0	0	0	0	200	180	170	100	35	15	15	315	285	50
1989	0	0	0	0	0	0	200	180	170	100	35	15	15	315	285	50
1990	61,596	31,995	12,319	49,277	8,639	23,356	200	180	170	100	35	15	15	315	285	50
1991	64,700	479,325	12,940	51,760	129,418	349,907	200	180	170	100	35	15	15	315	285	50
1992	68,563	675,146	13,713	54,850	182,289	492,857	200	180	170	100	35	15	15	315	285	50
1993	215,937	1,574,655	43,187	172,750	425,157	1,149,498	200	180	170	100	35	15	15	315	285	50
1994	234,403	1,877,454	46,881	187,522	506,913	1,370,541	200	180	170	100	35	15	15	315	285	50
1995	330,600	2,571,000	66,120	264,480	694,170	1,876,830	200	180	170	100	35	15	15	315	285	50
1996	374,776	2,623,712	74,955	299,821	708,402	1,915,310	220	200	190	100	35	15	15	335	305	50
1997	408,403	2,676,187	81,681	326,722	722,570	1,953,617	220	200	190	100	35	15	15	335	305	50
1998	446,823	2,729,710	89,365	357,458	737,022	1,992,688	220	200	190	100	35	15	15	335	305	50
1999	458,805	2,784,305	91,761	367,044	751,762	2,032,543	220	200	190	100	35	15	15	335	305	50
2000	470,787	2,839,991	94,157	376,630	766,798	2,073,193	220	200	190	100	35	15	15	335	305	50
2001	470,787	2,896,790	94,157	376,630	782,133	2,114,657	240	220	210	100	35	15	15	355	325	50
2002	470,787	2,954,726	94,157	376,630	797,776	2,156,950	240	220	210	100	35	15	15	355	325	50
2003	470,787	3,013,821	94,157	376,630	813,732	2,200,089	240	220	210	100	35	15	15	355	325	50
2004	470,787	3,074,097	94,157	376,630	830,006	2,244,091	240	220	210	100	35	15	15	355	325	50
2005	470,787	3,135,579	94,157	376,630	846,606	2,288,973	240	220	210	100	35	15	15	355	325	50
2006	470,787	3,198,291	94,157	376,630	863,539	2,334,752	260	240	230	100	35	15	15	375	345	50
2007	470,787	3,262,257	94,157	376,630	880,809	2,381,448	260	240	230	100	35	15	15	375	345	50
2008	470,787	3,327,502	94,157	376,630	898,426	2,429,076	260	240	230	100	35	15	15	375	345	50
2009	470,787	3,394,052	94,157	376,630	916,394	2,477,658	260	240	230	100	35	15	15	375	345	50
2010	470,787	3,461,933	94,157	376,630	934,722	2,527,211	260	240	230	100	35	15	15	375	345	50

YEAR	OCCUPANCY RATIO										GUEST-NIGHTS								
	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0
1990	0.00	0.00	0.00	0.00	0.00	0.48	0.45	0.35	0.00	0.00	0	0	0	0	0	81,994	32,850	26,828	0
1991	0.00	0.00	0.00	0.00	0.00	0.50	0.48	0.37	0.00	0.00	0	0	0	0	0	85,410	35,040	28,361	0
1992	0.00	0.00	0.00	0.00	0.00	0.53	0.50	0.40	0.00	0.00	0	0	0	0	0	90,535	36,500	30,660	0
1993	0.43	0.43	0.00	0.00	0.00	0.55	0.53	0.43	0.45	0.45	78,475	78,475	0	0	0	93,951	38,690	32,960	82,125
1994	0.48	0.48	0.00	0.00	0.00	0.57	0.55	0.43	0.50	0.50	87,600	87,600	0	0	0	97,367	40,150	32,960	91,250
1995	0.53	0.53	0.43	0.43	0.45	0.57	0.55	0.43	0.52	0.52	96,725	96,725	94,170	47,085	65,700	97,367	40,150	32,960	94,900
1996	0.60	0.60	0.48	0.48	0.48	0.60	0.60	0.48	0.60	0.60	109,500	109,500	105,120	52,560	70,080	102,492	43,800	36,792	109,500
1997	0.65	0.65	0.53	0.53	0.53	0.65	0.65	0.53	0.65	0.65	118,625	118,625	116,070	58,035	77,380	111,033	47,450	40,625	118,625
1998	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.60	0.70	0.70	127,750	127,750	131,400	65,700	87,600	119,574	51,100	45,990	127,750
1999	0.70	0.70	0.65	0.65	0.65	0.70	0.70	0.65	0.70	0.70	127,750	127,750	142,350	71,175	94,900	119,574	51,100	49,823	127,750
2000	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2001	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2002	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2003	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2004	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2005	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2006	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2007	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2008	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2009	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750
2010	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	127,750	127,750	153,300	76,650	102,200	119,574	51,100	53,655	127,750

YEAR	HOTEL SALES (MILLION M.$)												TOTAL HOTEL SALES OF PROJECT			TOTAL OTHER DAILY EXPENDITURE (million Rgt.)		
	HOTEL (M-7) 280 RM	TOTAL	HOTEL (H-1) 250 RM	HOTEL (H-2) 250 RM	HOTEL (H-3) 300 RM	HOTEL (M-1) 150 RM	HOTEL (M-2) 200 RM	HOTEL (M-3) 234 RM	HOTEL (M-4) 100 RM	HOTEL (M-5) 105 RM	HOTEL (M-6) 250 RM	HOTEL (M-7) 280 RM	HIGH CLASS (mil. Rgt.	LOW CLASS (mil. Rgt.	TOTAL (mil. Rgt.)	HOTEL GUEST	DAY-TRIPPER	PROJECT TOTAL (mill. Rgt.)
1988	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0	141,671	0.0	0.0	0.0	0.0	0.0	13.9	5.6	4.6	0.0	0.0	0.0	24.1	24.1	6.2	1.1	7.3
1991	0	148,811	0.0	0.0	0.0	0.0	0.0	14.5	6.0	4.8	0.0	0.0	0.0	25.3	25.3	6.5	16.8	23.2
1992	0	157,695	0.0	0.0	0.0	0.0	0.0	15.4	6.2	5.2	0.0	0.0	0.0	26.8	26.8	6.9	23.6	30.5
1993	91,980	496,656	15.7	15.7	0.0	0.0	0.0	16.0	6.6	5.6	14.8	16.6	31.4	59.5	90.9	21.6	55.1	76.7
1994	102,200	539,127	17.5	17.5	0.0	0.0	0.0	16.6	6.8	5.6	16.4	18.4	35.0	63.8	98.8	23.4	65.7	89.2
1995	106,288	772,070	19.3	19.3	18.8	8.5	11.8	16.6	6.8	5.6	17.1	19.1	57.5	85.5	143.0	33.1	90.0	123.0
1996	122,640	861,984	24.1	24.1	23.1	10.5	14.0	19.5	8.3	7.0	21.9	24.5	71.3	105.7	177.0	37.5	91.8	129.3
1997	132,860	939,328	26.1	26.1	25.5	11.6	15.5	21.1	9.0	7.7	23.7	26.6	77.7	115.2	192.9	40.8	93.7	134.5
1998	143,080	1,027,694	28.1	28.1	28.9	13.1	17.5	22.7	9.7	8.7	25.6	28.6	85.1	126.0	211.1	44.7	95.5	140.2
1999	143,080	1,055,252	28.1	28.1	31.3	14.2	19.0	22.7	9.7	9.5	25.6	28.6	87.5	129.3	216.8	45.9	97.5	143.3
2000	143,080	1,082,809	28.1	28.1	33.7	15.3	20.4	22.7	9.7	10.2	25.6	28.6	89.9	132.6	222.5	47.1	99.4	146.5
2001	143,080	1,082,809	30.7	30.7	36.8	16.9	22.5	25.1	10.7	11.3	28.1	31.5	98.1	146.0	244.2	47.1	101.4	148.5
2002	143,080	1,082,809	30.7	30.7	36.8	16.9	22.5	25.1	10.7	11.3	28.1	31.5	98.1	146.0	244.2	47.1	103.4	150.5
2003	143,080	1,082,809	30.7	30.7	36.8	16.9	22.5	25.1	10.7	11.3	28.1	31.5	98.1	146.0	244.2	47.1	105.5	152.6
2004	143,080	1,082,809	30.7	30.7	36.8	16.9	22.5	25.1	10.7	11.3	28.1	31.5	98.1	146.0	244.2	47.1	107.6	154.7
2005	143,080	1,082,809	30.7	30.7	36.8	16.9	22.5	25.1	10.7	11.3	28.1	31.5	98.1	146.0	244.2	47.1	109.7	156.8
2006	143,080	1,082,809	33.2	33.2	39.9	18.4	24.5	27.5	11.8	12.3	30.7	34.3	106.3	159.5	265.8	47.1	111.9	159.0
2007	143,080	1,082,809	33.2	33.2	39.9	18.4	24.5	27.5	11.8	12.3	30.7	34.3	106.3	159.5	265.8	47.1	114.2	161.3
2008	143,080	1,082,809	33.2	33.2	39.9	18.4	24.5	27.5	11.8	12.3	30.7	34.3	106.3	159.5	265.8	47.1	116.5	163.5
2009	143,080	1,082,809	33.2	33.2	39.9	18.4	24.5	27.5	11.8	12.3	30.7	34.3	106.3	159.5	265.8	47.1	118.8	165.9
2010	143,080	1,082,809	33.2	33.2	39.9	18.4	24.5	27.5	11.8	12.3	30.7	34.3	106.3	159.5	265.8	47.1	121.2	168.2

TRANSPORTATION EARNING BY YEAR

YEAR	1. TG.BELUNKOR - DESARU AMENITY CO				2. OIL PALM MUSIUM - RUBBER MUSIL				3. AMENITY CORE INNER CIRCULATION				4. PENEWAR INNER IRCULATION				5. BEACHSIDE CORRIDOR LINE			
	PASSENG WAY		FARE (Rgt.)	FARE EARNING (mil. Rgt.)	PASSENG WAY		FARE (Rgt.)	FARE EARNING (mil. Rgt.)	PASSENG WAY		FARE (Rgt.)	FARE EARNING (mil. Rgt.)	PASSENG WAY		FARE (Rgt.)	FARE EARNING (mil. Rgt.)	PASSENG WAY		FARE (Rgt.)	FARE EARNING (mil. Rgt.)
1988	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1989	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1990	343	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1991	343	2	5.00	1.251	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1992	343	2	5.00	1.251	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1993	343	2	5.00	1.251	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1994	343	2	5.00	1.251	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1995	343	2	5.00	1.251	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000	0	0	0.00	0.000
1996	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
1997	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
1998	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
1999	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2000	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2001	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2002	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2003	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2004	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2005	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2006	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2007	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2008	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2009	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168
2010	1,200	2	5.00	4.380	420	2	2.00	0.613	4,000	1	1.00	1.460	400	2	5.00	1.460	400	2	4.00	1.168

YEAR	REVENUE OF BUS OPERA. TO DESARU	TOTAL BUS FARE EARNING (million Rgt.)	TOTAL FERRY FARE EARNING (million Rgt.)	GRAND TOTAL OF PROJECT BENEFIT (million Rgt.)
1988	0.000	0.000	0.000	0.0
1989	0.000	0.000	0.000	0.0
1990	0.314	0.314	1.089	32.8
1991	2.135	3.387	6.025	58.0
1992	2.940	4.191	8.216	69.7
1993	7.025	8.277	19.834	195.7
1994	8.307	9.558	23.371	220.9
1995	11.404	12.656	32.120	310.8
1996	11.750	20.832	33.227	360.4
1997	12.064	21.145	34.205	382.8
1998	12.396	21.477	35.252	408.1
1999	12.653	21.734	35.994	417.9
2000	12.914	21.996	36.747	427.7
2001	13.144	22.226	37.369	452.2
2002	13.379	22.460	38.004	455.1
2003	13.618	22.700	38.651	458.1
2004	13.862	22.944	39.311	461.1
2005	14.111	23.193	39.984	464.2
2006	14.365	23.447	40.671	488.9
2007	14.625	23.706	41.371	492.1
2008	14.889	23.970	42.086	495.4
2009	15.158	24.239	42.814	498.7
2010	15.433	24.514	43.558	502.1

Table E.1.10 Economic Costs and Benefit Flow of Desaru New Tourism Development

(unit; million Rgt.)

		Design & Construction Cost									Vessel & Vehicle Cost		Operation & Maintenance Cost							
		FACILITY	INFRASTRUCTURE								TRANSPORTATION		OPERATION & MAINTENANCE							
Year	Year	Tourist Facility	Road	Jetty	Water Supply System	Sewerage System	Solid Waste Disposal System	Electrical System	Tele-commu-nication System	Sub-total-1	Bus	Ferry	Sub-total-2	Tourist Facility	Road	Jetty	Water Supply System	Sewerage System	Solid Waste Disposal System	Electrial System	Tele-commu-nication System
1989	1989	25.056	0.774	0.000	0.731	2.224	0.000	1.098	0.099	4.925	0.000	0.000	0.000	0.000							0.403
1990	1990	99.714	11.197	0.000	6.998	7.288	0.319	18.394	0.876	45.072	0.280	5.460	5.740	2.112	0.021					0.670	0.630
1991	1991	135.403	12.006	0.154	5.713	6.718	1.728	26.488	0.657	53.464	0.140	9.100	9.240	11.265	0.277					1.400	0.630
1992	1992	224.128	7.472	4.552	5.713	26.708	2.552	2.597	0.657	50.252	0.315	5.460	5.775	23.235	0.597					1.517	0.630
1993	1993	144.448	2.152	0.000	3.262	23.358	2.480	0.718	0.000	31.969	0.543	9.100	9.643	42.949	1.002	0.048	0.536	1.109	0.793	1.517	0.630
1994	1994	126.572	0.444	0.965	0.000	0.000	0.000	0.672	0.000	2.081	0.385	5.460	5.845	56.327	1.322	0.048	0.536	1.109	0.793	1.517	0.630
1995	1995	32.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.438	9.100	9.538	67.593	1.727	0.056	0.536	1.109	0.793	1.517	0.630
1996	1996									0.000			0.000	70.409	2.132	0.056	0.536	1.109	0.793	1.517	0.630
1997	1997									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
1998	1998									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
1999	1999									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2000	2000									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2001	2001									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2002	2002									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2003	2003									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2004	2004									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2005	2005									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2006	2006									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2007	2007									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2008	2008									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2009	2009									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2010	2010									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2011	2011									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2012	2012									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2013	2013									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2014	2014									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2015	2015									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2016	2016									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2017	2017									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
2018	2018									0.000			0.000	70.409	2.132	0.056	0.811	1.877	1.631	1.517	0.630
Total	Total	788.3	34.0	5.7	22.4	66.3	7.1	50.0	2.3	187.8	2.1	43.7	45.8	1,822.9	54.0	1.4	20.0	45.7	39.1	43.0	18.7
		npv = 578.2									npv = 145.7		npv = 32.3	npv = 551.1							

Year	Sub-Total-3	Bus	Ferry	Sub-total-4	Total Economic Cost	Benefit: Earning of Hotels 0.600	Earning of Other Daily Act. Zone 0.600	Earning of Transport-ation 0.600	GRDP Increase	Total Economic Benefit	Net Balance
1989	0.403	0.000	0.000	0.000	30.385	0.000	0.000	0.000	0.000	0.000	-30.385
1990	1.321	0.000	0.000	0.000	153.959	14.450	4.368	0.000	12.572	31.390	-122.569
1991	2.307	0.409	6.000	6.409	218.088	15.179	13.948	0.842	13.205	43.174	-174.914
1992	2.744	0.613	12.000	12.613	318.747	16.085	18.292	5.647	13.994	54.018	-264.730
1993	5.635	1.022	24.000	25.022	259.666	54.529	46.024	7.444	47.440	155.437	-104.230
1994	5.955	1.854	36.000	37.854	234.634	59.305	53.491	16.866	51.596	181.258	-53.376
1995	6.368	2.497	42.000	44.497	160.935	85.812	73.827	19.758	74.657	254.053	93.118
1996	6.773	2.497	42.000	44.497	121.679	106.229	77.585	26.865	92.419	303.098	181.419
1997	8.654	2.497	42.000	44.497	123.560	115.764	80.704	32.435	100.715	329.619	206.059
1998	8.654	2.497	42.000	44.497	123.560	126.666	84.133	33.210	110.200	354.209	230.649
1999	8.654	2.497	42.000	44.497	123.560	130.081	85.999	34.038	113.171	363.288	239.729
2000	8.654	2.497	42.000	44.497	123.560	133.497	87.887	34.637	116.142	372.163	248.603
2001	8.654	2.497	42.000	44.497	123.560	146.490	89.080	35.246	127.447	398.263	274.703
2002	8.654	2.497	42.000	44.497	123.560	146.490	90.296	35.757	127.447	399.990	276.431
2003	8.654	2.497	42.000	44.497	123.560	146.490	91.537	36.278	127.447	401.753	278.193
2004	8.654	2.497	42.000	44.497	123.560	146.490	92.803	36.810	127.447	403.551	279.991
2005	8.654	2.497	42.000	44.497	123.560	146.490	94.094	37.353	127.447	405.384	281.825
2006	8.654	2.497	42.000	44.497	123.560	159.484	95.411	37.906	138.751	431.553	307.993
2007	8.654	2.497	42.000	44.497	123.560	159.484	96.755	38.470	138.751	433.460	309.901
2008	8.654	2.497	42.000	44.497	123.560	159.484	98.125	39.046	138.751	435.406	311.847
2009	8.654	2.497	42.000	44.497	123.560	159.484	99.522	39.633	138.751	437.391	313.831
2010	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.232	138.751	439.415	315.856
2011	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2012	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2013	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2014	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2015	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2016	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2017	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
2018	8.654	2.497	42.000	44.497	123.560	159.484	100.948	40.843	138.751	440.026	316.467
Total	221.9	63.8	1,086.0	1,149.8	4,216.4	3,663.3	2,382.4	915.2	3,187.1	10,148.1	5,931.7

IRR = 18.82%

npv = 67.2

npv = 346.1

npv = 1,720.4

npv = 2,836.8

NPV = 1,104.0

B/C = 1.649

Appendix-F
Main Participants of the Study

Government of Malaysia

1) Economic Planning Unit (EPU)

1.	Dr. Abdullah Mohd. Tahir (Chairman)	Director of Industry Section
2.	Miss Boey Siew Leng	Director of External Assistance Section
3.	Ms. Harvinder Kaur	Principal Assistant Director, Industrial Section
4.	Ms. Kamariah bte Ramli	Principal Assistant Director, Agriculture Section
5.	Ms. Wong Peg Har	Principal Assistant Director, External Assistance Section
6.	Mr. Sakib Kusme	Assistant Director, Infrastructure Section
7.	Mrs. Wan Norma Wan Daud	Assistant Director, External Assistance Section,
8.	Mr. Ong Yew Chee	Assistant Director, Industry Section

2) Ministry of Culture and Tourism

1.	Mr. Ismail Adam	Deputy Secretary General
2.	Ms. Norminshah Sabirin (Phase I)	Deputy Secretary General
3.	Mr. Zainuddin Zain	Undersecretary Planning Division
4.	Mr. Khalid Ibrahim	Principal Assistant Secretary Planning Division
5.	Ms. Yeoh Gim Bee	Assistant Director Planning Division

3) Tourist Development Corporation (TDC)

1.	Mr. Zamhot Hassan	
2.	Mr. Ng Kok Leong	
3.	Mrs. Chong Yoke Har	
4.	Mr. Mohd. Rais Mohd. Saman	Senior Tourist Officer,

4) Other Organisations

1.	Mr. Subhan Jasman	Deputy Director, Implementation Coordination Unit, Prime Minister's Department
2.	Mr. Hamdan Hassan	Implementation Coordination Unit, Prime Minister's Department
3.	Mrs. Rahimah Mohd. Said	Implementation Coordination Unit, Prime Minister's Department
4.	Mr. Mohd. Arif Abu Bakar	Ministry of Land and Regional Development
5.	Mr. Kamarul Bahrin Buyong	National Museum
6.	Mr. Jasmi Abdul	Department of Wildlife and National Parks
7.	Miss Saidah Hj. Hashim	Statistics Department
8.	Mr. Subhas Chandran	Ministry of Finance
9.	Mr. Mahmud/Muhammud Ibrahim	Department of Wildlife and National Parks, Ministry of Science, Technology and Environment
10.	Mr. Mohamad Nik	Implementation and Coordination Unit, Prime Minister's Department
11.	Mr. Ashaari Shahran	Tourism Manager, KEJORA
12.	Mr. Abdul Karim Hassan	Principal Assistant Secretary, State Economic Planning Unit of Johore
13.	Mr. Mohmad Shaid Mohd. Taufek	KEJORA
14.	Mr. Harbans Singh	Statistics Department
15.	Mr. Adi Haji Taha	National Museum
16.	Mr. Abdul Rashid Shamsudin	Department of Wildlife and National Parks
17.	Mr. Hamrose Mohd. Noor	Ministry of Trade and Industry
18.	Mr. Hj. Mohd. Rahsid Mohd. Shariff	Ministry of Culture, Youth and Sports
19.	Mr. Kamarul Baharin Buyong	Museum Department
20.	Mr. Mohd. Kassim Hj. Ali	Curator, National Museum

21.	Mr. Chong Ngian Yet	Deputy Director, International Trade Division, Ministry of Trade and Industry

5) Counterpart Members;

1.	Mr. Mohd. Rais Mohd. Saman	Senior Tourist Officer, TDC,
2.	Mr. Mohd. Roslan Ali	Assistant Director, TDC,
3.	Mr. Hafiz Abdul Majid	Tourist Officer, TDC,
4.	Mr. Dzulkeflee Zakaria	Tourist Officer, TDC,

Government of Japan

1) JICA Advisory Committee

1.	Mr. Koichi Arai	Chairman (Ministry of Transport)
2.	Mr. Tsuneaki Nagasato	Member (Ministry of Transport)
3.	Mr. Satoshi Shibata	Member (Ministry of Transport)
4.	Mr. Shunji Uemura	Member (Ministry of Transport)
5.	Mr. Wataru Tsuchiya	Member (Japan National Tourist Organisation)
6.	Mr. Fumihiro Sampei	Member (Japan National Tourist Organisation)

2) JICA Office

1.	Mr. Takao Matsuzaki	Resident Representative of JICA, Malaysia
2.	Mr. Keizo Kagawa	JICA, Malaysia
3.	Mr. Toshiharu Takahashi	JICA, Tokyo
4.	Ms. Izumi Ohno	JICA, Tokyo
5.	Ms. Chisa Hara	JICA, Tokyo

3) Embassy of Japan, Malaysia

1.	Mr. Hirofumi Ohnishi	First Secretary
2.	Shigeshi Mimura	First Secretary

4) Study Team

1.	Mr. Nobuhiro Koyama	Team Leader
2.	Mr. Itaru Mae	Team Leader (Phase I)

3.	Mr. Shigeharu Tomehara	Tourism Promotion
4.	Mr. Yoshitaka Mizoo	Tourism Administration
5.	Mr. Yuzo Aoyama	Demand Forecast
6.	Mr. Morio Onda	Demand Forecast
7.	Mr. Shigeo Imai	Market Study
8.	Mr. Takashi Kikkawa	Tourism Facility/Development Plan
9.	Mr. Kanao Itoh	Tourism Infrastructures/Tourism Resources
10.	Mr. Tadashi Kume	Regional Plan/Tourism Infrastructure
11.	Mr. Junji Nishi	Transport and Environment
12.	Ms. Michiko Hatakeyama	Socio-Economic Impact
13.	Mr. Tomoaki Sawabe	Tourism Facilities
14.	Mr. Manabu Fukudome	Road Transport
15.	Mr. Yoshiaki Tahira	Port and Coast
16.	Mr. Taketsugu Yanagida	Power Supply & Telecommunication
17.	Mr. Shigeru Komatsu	Water Supply & Sewerage
18.	Mr. Hiroshi Tanaka	Environment
19.	Mr. Akira Nakayama	Financial Analysis
20.	Mr. Akihisa Kojima	Economic Analysis

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