4.4.3 Infrastructure

1) Transportation

(1) Basic means of transportation

There are three means of transportation available for the Tanjung Lesung Beach Resort: by road, sea and air.

- Land transportation

Traveling by road, tourists would follow the provincial roads either from Merak or Pandeglang in the direction of Labuan. The local Kabupaten road leading to Citeureup branches off the provincial road from Pandeglang at Bama south of Labuan. From Citeureup, a dirt road leads to the small village of Tanjung Jaya some 8 km away, near where the proposed Tanjung Lesung Beach Resort will be located.

Kabupaten road links are of two lane country road standard with a pavement width of about 4.5 m to 6.0 m, of which level is about Class III A of the design criteria for Kabupaten roads. Current road conditions are sufficient for a designated traffic volume of 3,000 ADT according to the criteria.

At present dirt access road is not passable even by four wheel drive vehicle. When conditions are suitable, a motor-cycle can be used from Citeureup, but even this needs to be pushed from time to time.

- Sea Transportation

Facilities for sea transportation are programmed at this site under the project to cater for operation of cruise boat services to and from Ujung Kulon, the Krakatau Islands and other places of interest (refer to Annex II.A.9).

By using the same facilities, a sea route could be opened for direct sea transportation from Jakarta and elsewhere. The viability of such an operation, however, needs in-depth assessment in terms of economics and financial characteristics.

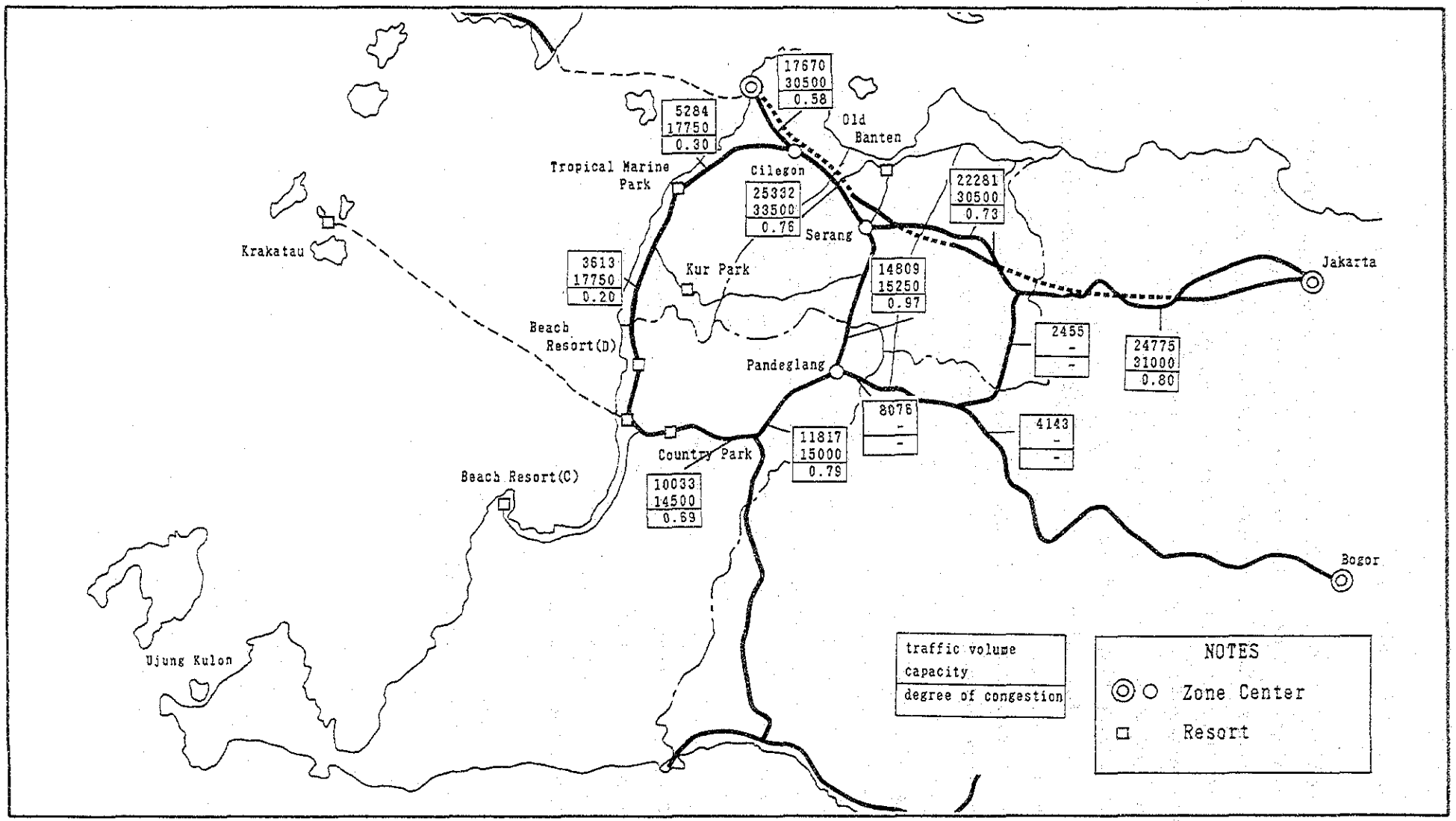
- Air Transportation

There is at present no air strip/field which could be used for fixed wing airplane in the study area. It would be possible, however, to operate a rotary wing type (helicopters), provided sufficient space is available for takeoffs and landings. The financial viability of this kind of operation is far less competitive than other means of transportation so that this type will be left until future opportunities arise.

Of the three alternatives, the road transportation will no doubt play the major role, making it necessary to look into this means in more detail.

(2) Impact on trunk roads

Fig. 4-4-9 shows the anticipated traffic volume including that generated by Tanjung Lesung Beach Resort tourism development in the study region in 2010. From the results of the study, the impact of tourism development on trunk roads in the study region



Source: Prepared by the Study Team

Non-scale

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IN THE WESTERN PART OF JAVA

Fig. 4-4-9

TOURISM TRAFFIC VOLUME IN 2010
(BEACH RESORT)

should cause no major problems (For details, refer to Annex II(c)-1).

It is clear from this that the impact of development is small enough to be negligible.

(3) Necessary works

As explained earlier, the only road link to the Tanjung Lesung Beach Resort is by the local earth road branching off from Citeureup, south of Labuan. As far as can be assessed by the JICA Study Team, the road from Citeureup to the village of Tanjung Jaya is in a very bad condition being unusable even by four-wheel driven cars (4 WD).

There is no official inventory of this link road available either from Bina Marga or the Kabupaten government, nor is there any program for maintenance or betterment works on this road in the immediate future.

The JICA Study Team has assessed the condition of this link road through preliminary observation and reconnaissance surveys. The present condition is approximately as summarized below:

Road length	:	approx. 8 km
Right of way	:	approx. 12 m
Roadway width	:	approx. 5.0 m
Surfacing	:	earth
Surface condition	:	very bad
Drainage	:	virtually non-existing

The necessary works will therefore amount to virtually complete reconstruction of the road, including drainage, culverts, etc.

(4) Design criteria

According to the planning concept of Tanjung Lesung Beach Resort, there will be about 494,000 tourists visiting the site annually by year 2010. Using a figure of two percent as the coefficient for the concentration rate to obtain the one day number of tourists and by applying the trend of modal split from experience of other tourism development, then the number of motorcars in one day will approximately be 1,100.

The forecast 10th year average per day traffic volume is used to determine road classification for design criteria. Applying this method and taking into account the average traffic volume, the suitable road classification for catering to tourists traffic only would be Class III B-1 or 2 though, Class III A is adopted as shown in Fig. 4-4-10 for accelerated area development and traffic attracted by tourism development, thus resulting in more traffic on the access road.

2) Water supply

(1) Water demand

Water demand in the Tanjung Lesung Beach Resort is projected to be approximately 2,170 m^3 per day (25 lit/sec) for the first stage and 3,700 m^3 per day (43 lit/sec) for the final stage. The detailed data for the demand projection are included in Annex II.A.4.

Class III A Classification

(Flat to rolling terrain)

	Desirable	Minimum
Surface Type	Asphalt Seal (double)	
Traffic Volume (ADT)	3,000 - 500 (Average Day Traffic)	
Traffic Lanes	1+	
Design Speed (km/hr)	70	30
Gradient (%, limiting)	4	7
Pavement Width (m)	6.0	4.5
Shoulder Width (m)	2.0	1.5
Road Bed Width (m)	10.0	6.0
Right of Way (m)	16.0	12.0
Road Camber (%)	Pavement: 3	Shoulder: 4

Typical Cross Section

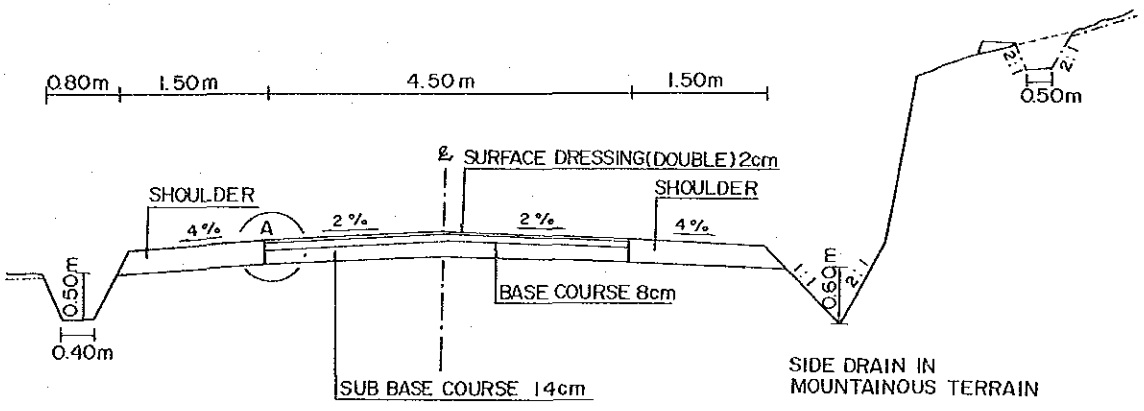

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Fig. 4-4-10
FUNDAMENTALS OF DESIGN CRITERIA FOR CLASS III A CLASSIFICATION

(2) Water source and distribution system

Ciseukeut river upstream of the development is assumed to have a flow of more than 43 lit/sec and good water quality. This is preferred as a source of water for the project instead of Kalicaah river which is located inside the project site but has limited flow capacity and salty water, according to the site investigation done by JICA Study Team. This will need a 200 mm diameter water conveyance pipe approximately 19 km long from Ciseuket river to the project site.

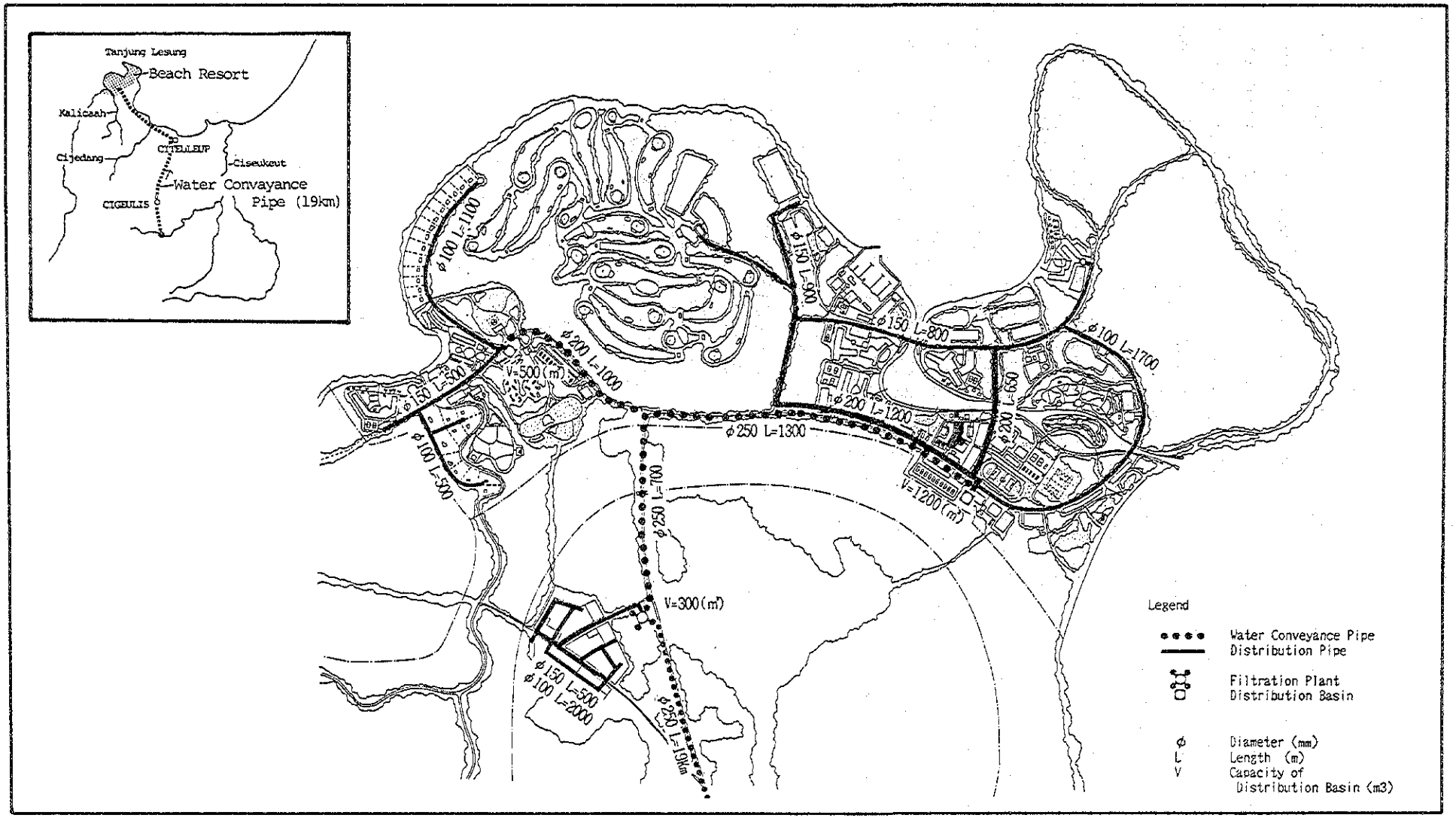
Water could be supplied also to existing local villages and towns which are now served by shallow wells with poor water quality. The feed pipes and other pipework to villages and towns would be installed by the local government.

(3) Water supply system in the project area

The following facilities are needed for the integrated water supply system in the beach resort.

- Intake wear
- Filtration plant
- Distribution basin
- Water conveyance pipe
- Distribution pipe
- Others (hydrants, booster pump)

Fig. 4-4-11 shows the water supply system in Beach Resort for the final stage development.



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IN THE WESTERN PART OF JAVA

Fig.4-4-11

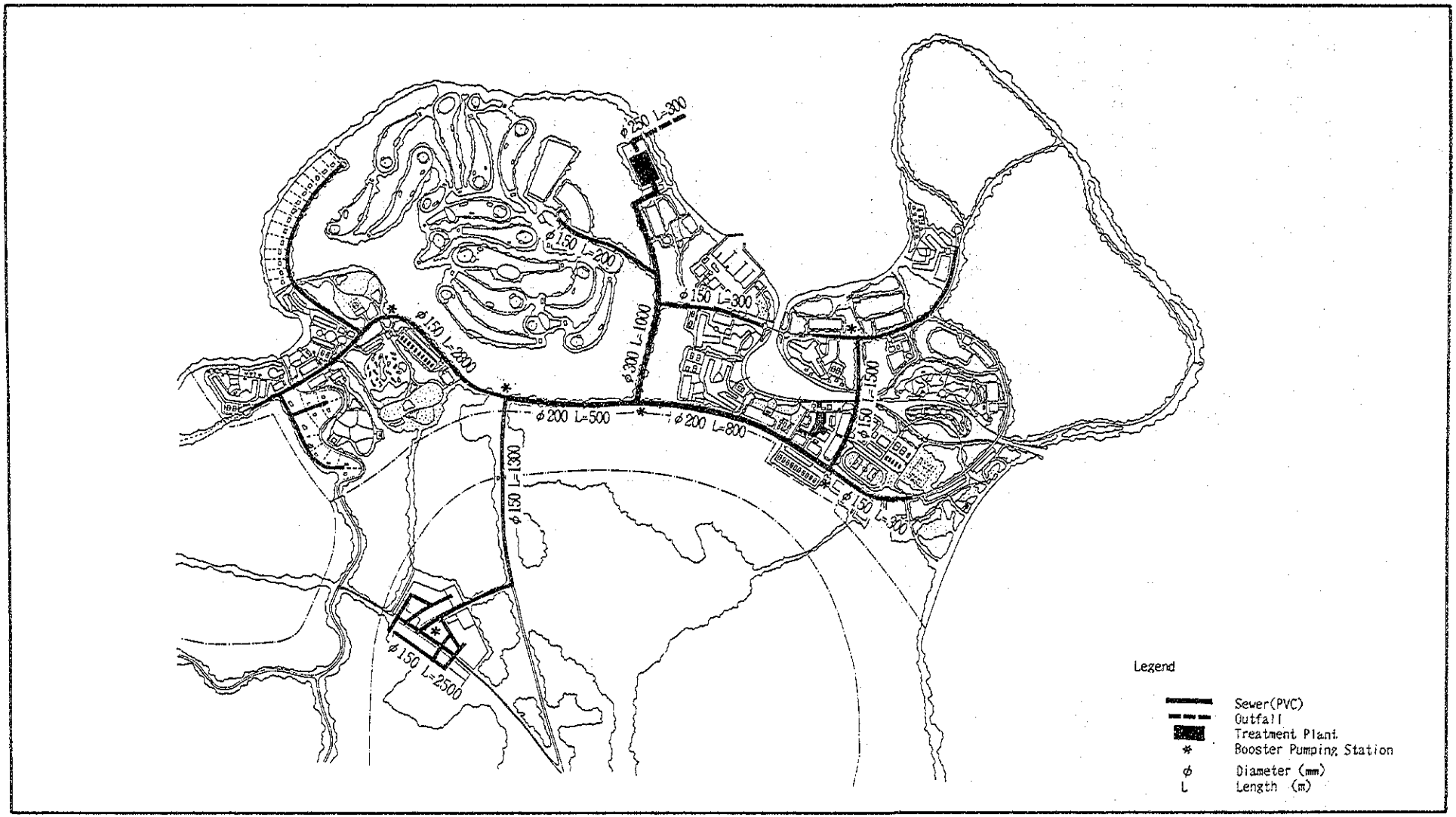
WATER SUPPLY SYSTEM IN TANJUNG LESUNG
BEACH RESORT

3) Sewage

The quantity of sewage was estimated to be approximately 3,300 m^3/day in the year 2010, on the assumption that 90% of the supplied water goes down the sewer. In addition, the infiltration of ground water into sewer pipes was assumed at 10% of the sewage (For detail, see Annex II.A.7).

In view of the purity and high quality of sea water in the Sunda Straits, water contamination should be minimized by applying high standard treatment of waste water in the beach resort. The BOD quality of the effluent from the sewage treatment plant is recommended to be 20-25 mg/lit and a COD of less than 30-40 mg/lit (refer to 4.7, prevention of sea water pollution).

The oxidation ditch method for sewage treatment that is recommended for Beach Resort is explained in Annex II.A.7. Fig. 4-4-12 shows the layout plan of the sewage treatment system for the final stage.



0 100 200 500 1000 m

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IN THE WESTERN PART OF JAVA

Fig. 4-4-12

SEWAGE TREATMENT SYSTEM
IN TANJUNG LESUNG BEACH RESORT

4) Power supply

The electric power demand for the Beach Resort is estimated at 3,200 KVA for the first stage in 1995 and 5,400 KVA for the final stage in 2,000 as shown in Annex II.A.8.

In order to meet the demand, two alternatives are proposed: 1) the installation of diesel generators and 2) transmission of electricity from the existing substation in Cilegon.

Installation of a diesel generator is easy and economical. On the other hand, the cost of a 100 km transmission line from the existing substation in Cilegon to the Beach Resort site will require a higher construction cost.

Nevertheless, it is recommended that a transmission line system into Beach Resort should be provided from the initial stage based on the following reasons.

- The cost to the Beach Resort developer for the electricity will be the initial connection charge and a monthly payment for consumption which will be charged by PLN instead of the construction cost of the electric facility. These charges are inexpensive.

- Non electrified local towns located between Labuan and the Beach Resort will also be able to make use of the transmission line from Cilegon.

As suggested by PLN, at least two years must be allowed for completion of the power supply to the Beach Resort.

The concept of the power supply system to the Beach Resort is illustrated as below.

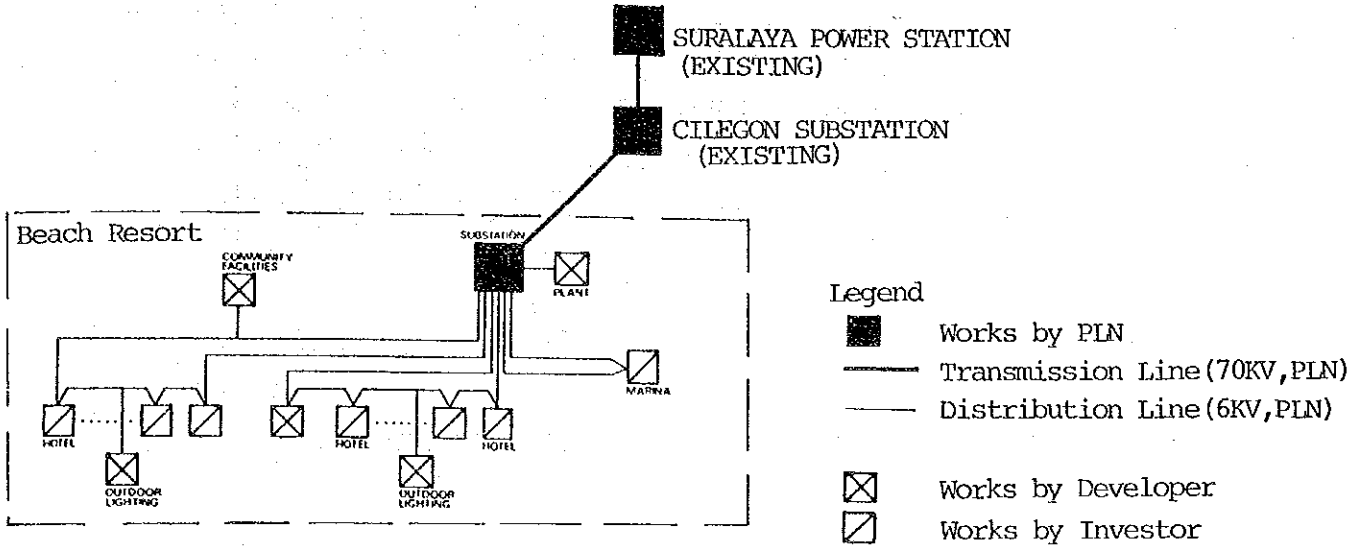


Fig. 4-4-13 POWER SUPPLY SYSTEM IN BEACH RESORT

5) Telephone

Since Tanjung Lesung will become an international resort, the JICA Study Team proposes the establishment of a digital-telephone system for both domestic and international telecommunication.

Considering with the line demand of fifty in final stage, a radio concentrator system, connecting with the existing exchange station in Cilegon by wireless telephone, is proposed as the telephone system in Beach Resort.

Concept of the telephone system in Beach Resort is illustrated as presented in Fig. 4-4-14.

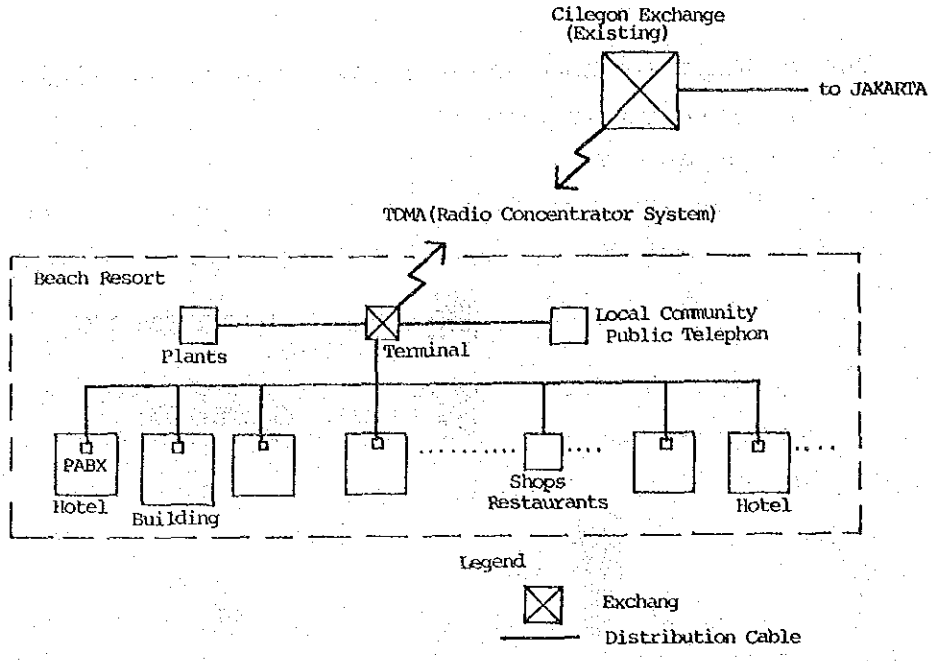


Fig. 4-4-14 TELECOMMUNICATION SYSTEM IN BEACH RESORT

6) Solid waste

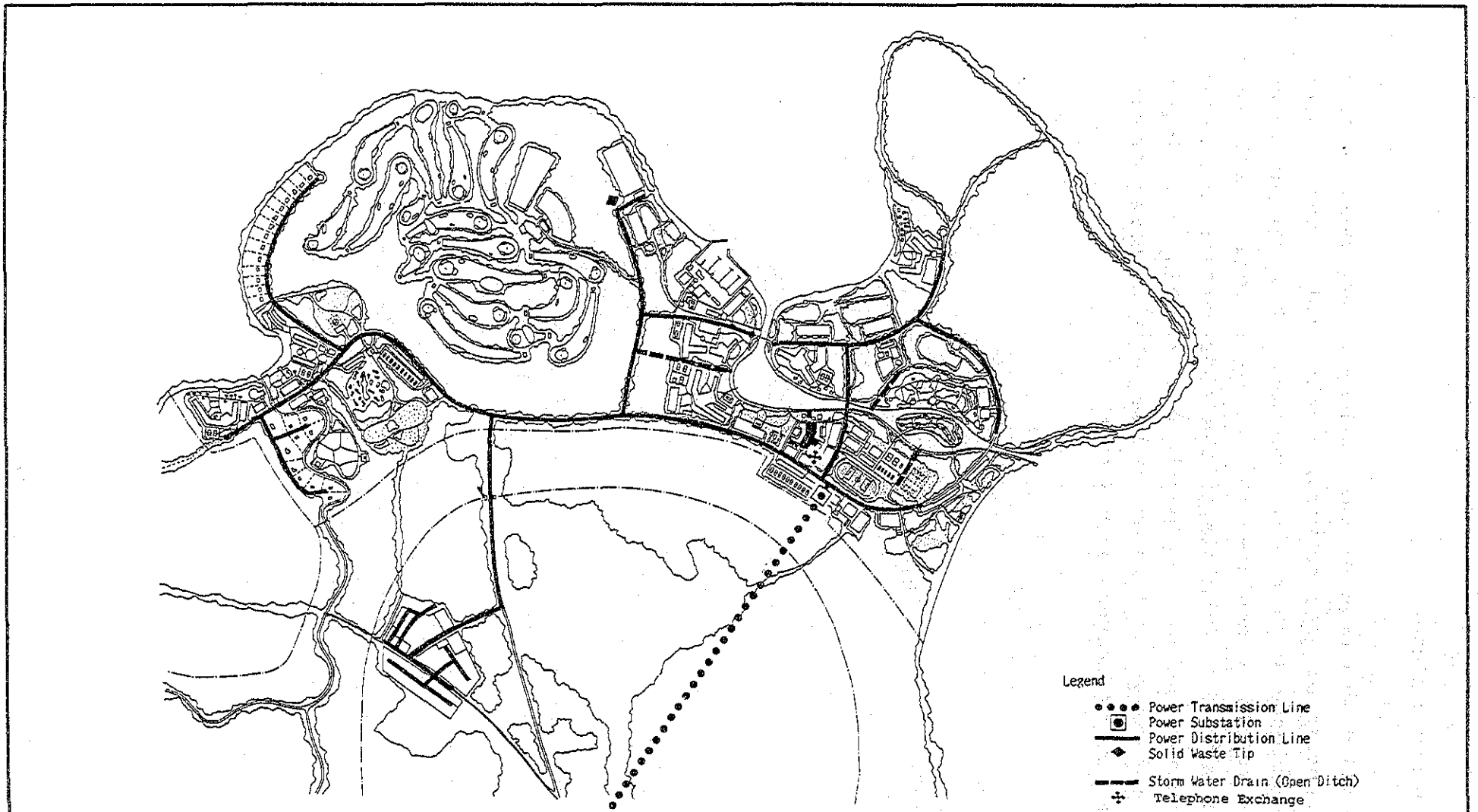
It is estimated that the solid waste generated at the beach resort will amount to 7.2 m^3 per day in 1995 and 9.8 m^3 in 2000. The accumulated volume of solid waste will total 7,200 m^3 until the year of 2010.

For sanitary reasons as well as beautification of the landscape, a complete disposal system is proposed for solid waste at the Beach Resort site and in the surrounding area.

The JICA Study Team recommends the adoption of the land filling method to prevent bad smells and insects. For that purpose, the land filling method will consist in the construction of a solid waste tip 5 meter deep with a capacity of 7,200 m^3 of waste. Annex II.A.8 contains further details of this system for the disposal of solid waste.

7) Storm water drainage

Storm water drainage at the Tanjung Lesung Beach Resort will consist of side gutters, ditches and drains. Based on experience with similar developments, the drainage system should be designed for the recurrence of a 5-year return period. To minimize the construction cost, the side gutters and ditches will have no covers. Fig. 4-4-15 shows the construction plan of the related infrastructure at the Tanjung Lesung Beach Resort.



0 100 200 500 1000 m

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JAPAN INTERNATIONAL COOPERATION AGENCY

THE STUDY ON THE REGIONAL DEVELOPMENT PROJECT
IN THE WESTERN PART OF JAVA

Fig. 4-4-15

OTHER INFRASTRUCTURE SYSTEM
IN TANJUNG LESUNG BEACH RESORT

4.5 Execution Plan

4.5.1 Development cost

As mentioned in the Master Plan, the Tanjung Lesung Beach Resort will be developed in two stages. The scale and scope of development are planned in connection with the tourist demand projection.

The JICA Study Team estimated development costs comprising construction costs and land acquisition costs by stages. Development in the first stage will be mainly concerned with construction of the upper middle class zone in the northern part of the site, while that in the second stage will be for construction of the high class zone in the southern part.

The development costs are estimated at Rp.219 billion in total consisting of Rp.115 billion for the first stage and Rp.104 billion for the second stage (refer to Table 4-5-2).

According to the JICA Study Team estimation (refer to Annex II.B.4), the above development cost can be divided by type of currency as shown in Table 4-5-1. The proportion of foreign currency is expected to reach 28% of total development cost in the final stage.

Table 4-5-1 FOREIGN AND LOCAL CURRENCY OF DEVELOPMENT COST IN BEACH RESORT

(Rp. billion)

	Stage 1	Stage 2	Total	
Foreign currency	32.0	28.9	60.9	(27.8%)
Local currency	83.0	75.4	158.4	(72.2%)
Total	115.0	104.3	219.3	(100%)

Table 4-5-2 DEVELOPMENT COST (BEACH RESORT)

(Unit: Rp. million)

Items	Development Cost			Remarks
	Stage 1	Stage 2	Total	
DIRECT CONSTRUCTION COST				
1. Preparatory works	2,808	2,808	5,616	
2. Earthwork	153	284	437	
3. Lagoon, Beach	4,550	-	4,550	
4. Hotels	28,202	23,192	51,394	
5. Condominium	4,809	2,463	7,272	
6. Private villa, GH	-	4,013	4,013	
7. Marina	2,706	478	3,184	
8. Central plaza (Center)	4,133	1,771	5,904	
9. Sports facilities	2,500	624	3,124	
10. Picnic area	1,122	604	1,726	
11. Orchid garden	-	1,090	1,090	
12. Miniature golf	-	430	430	
13. Seminar house	-	900	900	
14. Diving school	580	-	580	
15. Open air theater	274	-	274	
16. Golf course	-	5,600	5,600	
17. Play ground	255	-	255	
18. Giant maze	480	-	480	
19. Athletics field	199	-	199	
20. Horseback riding	288	-	288	
21. Theme park	-	1,230	1,230	
22. Camping area	397	-	397	
23. Economical lodges	217	93	310	
24. Employee's village	973	382	1,355	
25. Roads	1,057	465	1,522	
26. Storm drainage	60	-	60	
27. Sewage	1,987	1,155	3,142	
28. Solid disposal	18	18	36	
29. Electricity	555	365	920	
30. Water supply	2,190	339	2,529	
31. Telephone	-	-	-	/1
32. Access road	900	-	900	
33. Miscellaneous	1,228	966	2,194	
Sub Total	62,641	49,270	111,911	
Engineering and Administration	9,396	7,390	16,786	Sub total x 15%
Physical contingency	7,204	5,666	12,870	All the above x 10%
Total	79,241	62,326	141,567	
Land acquisition	516	-	516	
Vessel	700	700	1,400	
Price contingency	34,529	41,278	75,807	
Grand total	114,986 (52.4%)	104,304 (47.6%)	219,290 (100%)	

Note: /1 The PERMUTEL will construct the telecommunication system without charge, if the project is authorized in the Repelita V.

4.5.2 Development body and project finance

1) Overall development system

Based on the results of the foregoing study, the following should be taken into consideration for the development of the project:

- smooth and early commencement of the project,
- expectation of successful development effects,
- financial procurement of the large amount of development costs,
- necessity for the construction of infrastructure, and
- operation of diversified facilities to be offered for visitors.

This project cannot be implemented by the public sector alone, and must in cooperation with the various parts of the private sectors. Considering the process and the contents of the development and the operation of the proposed facilities, the following two types of development bodies will need to be involved in the project.

Development Corporation

- To promote and control the project in accordance with the master plan
- To procure the funds for the development of infrastructures and public tourist facilities
- To construct the above facilities
- To operate and maintain the above facilities
- To lease land with infrastructures to tourist facility operators as facility site
- To direct tourist facility operators in order to pursue the objectives of the project

Tourist facility operators (Private firms)

- To procure the funds for the development of hotels and other commercial tourist facilities
- To construct the above facilities
- To operate and maintain the above facilities

The abovementioned Development Corporation shall be differentiated from the development body of Old Banten Site project because of different objectives and nature of the project.

Taking into consideration their roles and tasks, the above development bodies can be characterized as follows:

A Development Corporation , which will be set up by local government and private firms, is desirable to pursue the expected objectives to mutual advantage and to secure inter-governmental finance as well as private funds. The private firms involved in this Corporation will comprise some of the following firms participating in this project as the tourist facility operators.

Tourist facility operators (Private firms) will consist of domestic firms and some of hoteliers.

The latter will be joint ventures between foreign and domestic private firms or between foreign firms and the Development Corporation. More than 51% of its equity share must be acquired by a domestic partner within ten years after commencement of business according to the Decrees of May 6, 1986.

For smooth and early commencement of the project, it is advised to set up, as proposed in Old Banten Site project, to set up a "Preparatory Committee" in order to make arrangement among the concerned agencies and to formulate and undertake basic and important framework of development

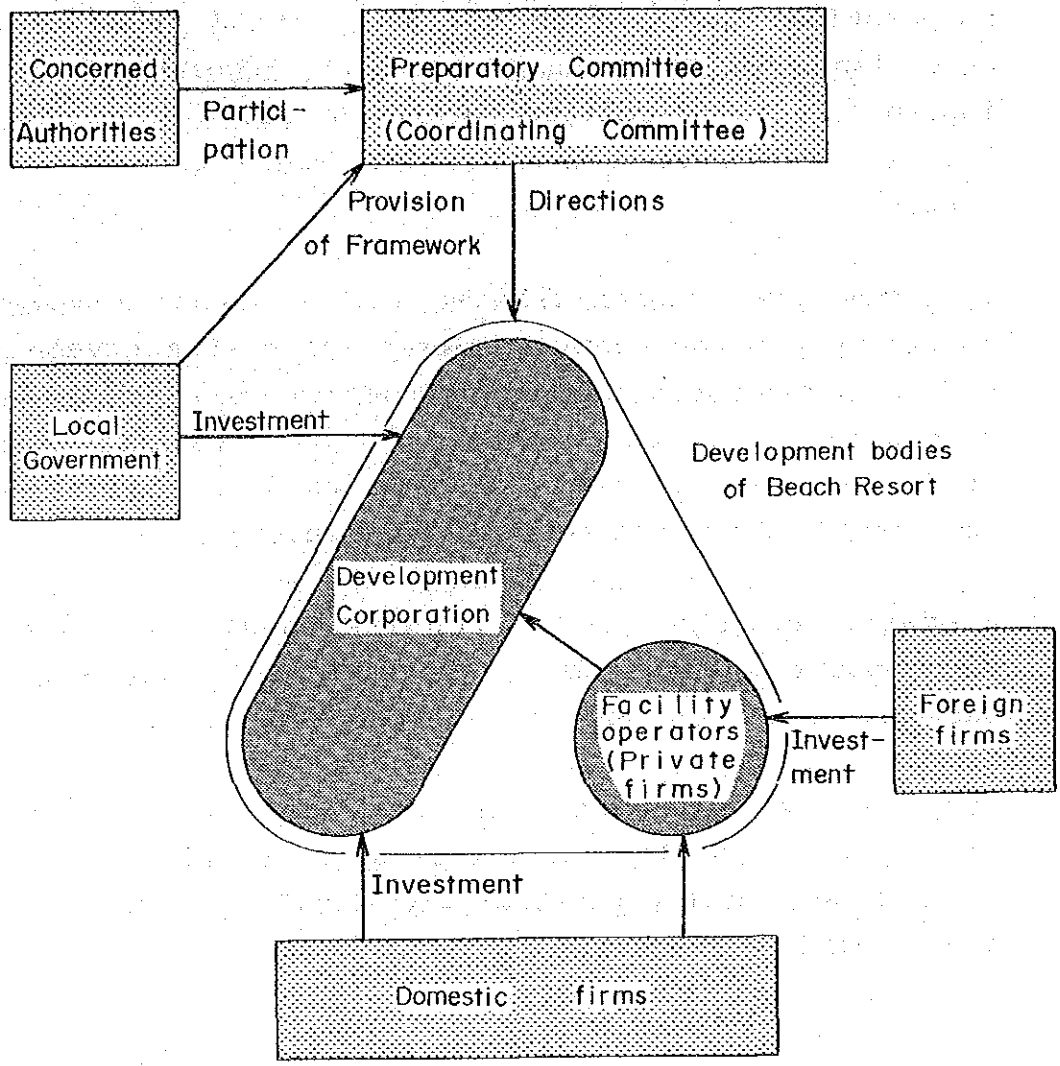
such as procurement programme of fund in the Development Corporation, negotiation for acquisition of government owned land, for enactment of necessary regulations and for implementation of related government projects related to this project, and principles for inducement of private firms.

This Committee, which will also play important roles in operation period, that is, direction of the development bodies and discussions on revision of the 2nd stage development plan on the basis of practical progress of operation, may change its name to the "Coordinating Committee" after completion of construction.

Summarizing the above requirements, the overall development system and its detail can be presented as shown in Fig. 4-5-1 and Table 4-5-3 respectively.

In addition, although hoteliers and tourist facility operators can be logically separated, tourist facilities need to be operated together with hotels by hoteliers for their sound management.

Fig. 4-5-1 OVERALL DEVELOPMENT SYSTEM IN BEACH RESORT



Through a series of financial study presented later, the assignment of development and operation was settled and its detail is as shown in Table 4-5-3.

Table 4-5-3 DEVELOPMENT COST BY SECTOR

(Unit: Rp. million)

		Stage 1	Stage 2		in charge of
Prep works		2,808	2,808		D.C
Earth works		153	284		D.C
Lagoon		4,550			D.C
Hotels		28,202	23,192		P.F
Condo.		4,809	2,463		D.C
Villa			4,013		D.C
Marina		2,706	478		P.F
Centre		4,133	1,771		D.C
Sports fac		2,500	624		P.F
Picnic		1,122	604		P.F
Orchid			1,090		P.F
Mini Golf			430		P.F
Seminar h.			900		P.F
Diving s.		580			P.F
Theater		274			P.F
Golf			5,600		P.F
Play ground		255			D.C
Maze		480			P.F
F. Athletics		199			P.F
Horseback		288			P.F
Theme Park			1,230		P.F
Camping		397			P.F
Economical lodges		217	93		D.C
Employees		973	382		D.C
Road		1,057	465		D.C
Drainage		60			D.C
Sewage		1,987	1,155		D.C
Solid disp.		18	18		D.C
Electricity		555	365		D.C
Water		2,190	339		D.C
Telephone		-	-		(*1)
Access road		900			D.C
Misc		1,228	966		D.C
Sub total		62,641	49,270		
Engineering		9,396	7,390		
Contingency(physical)		7,204	5,666		
Total		79,241	62,326		
Land		516			D.C
Vessel		700	700		P.F
Contingency(price)		34,529	41,278		
Gross Total	D.C	47,877	31,909	79,786	(36.4%)
	P.F	67,108	72,395	139,503	(63.6%)
	Total	114,985	104,304	219,289	(100%)

D.C: Development Corporation
P.F: Private firms
(*): The PERUMTEL will construct the telecommunication system without charge, if the project is authorized in the Repelita VI.

2) Project finance

Project finance will be a matter of significance for the development of Tanjung Lesung Beach Resort because of its large amount of development costs.

Development costs will be secured by the developers concerned in the form of capital and loans.

(1) Development Corporation

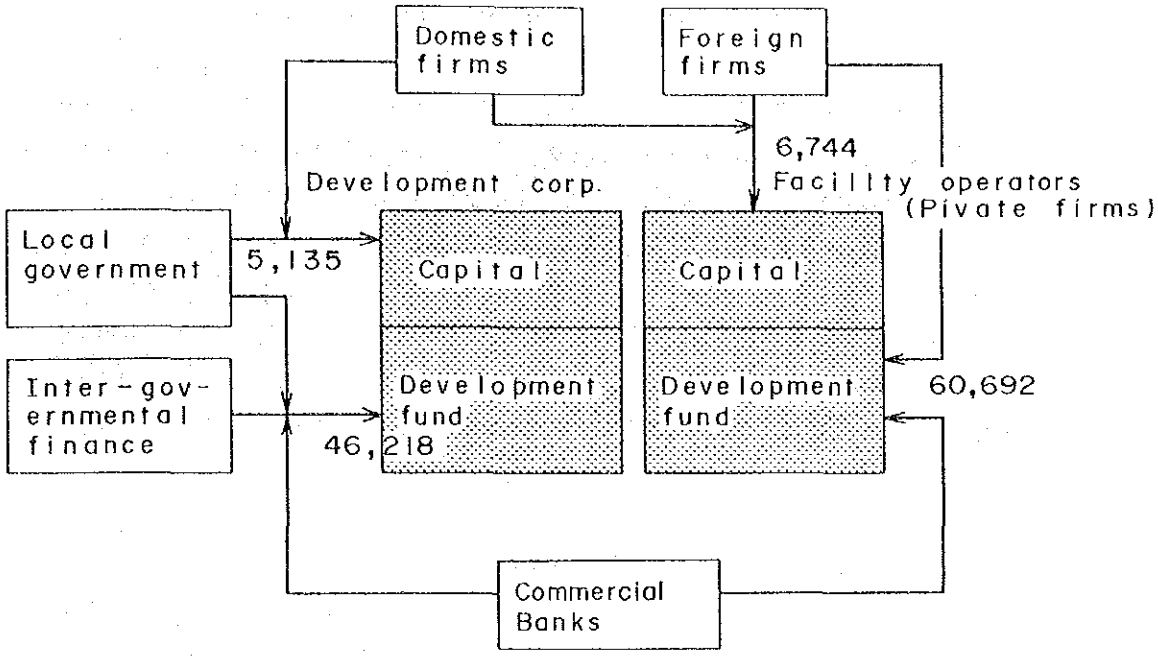
It is essential for the Corporation to secure advantageous inter-governmental finance for implementation of infrastructures and public tourist facilities which cannot be profitable independently.

Since the above finance will be arranged through negotiation between the Governments concerned and disbursed through an Indonesian development bank, the Local Government need to play an important role in the Development Corporation to enable the arrangement to proceed smoothly on the basis of preliminary arrangement by the aforementioned Preparatory Committee.

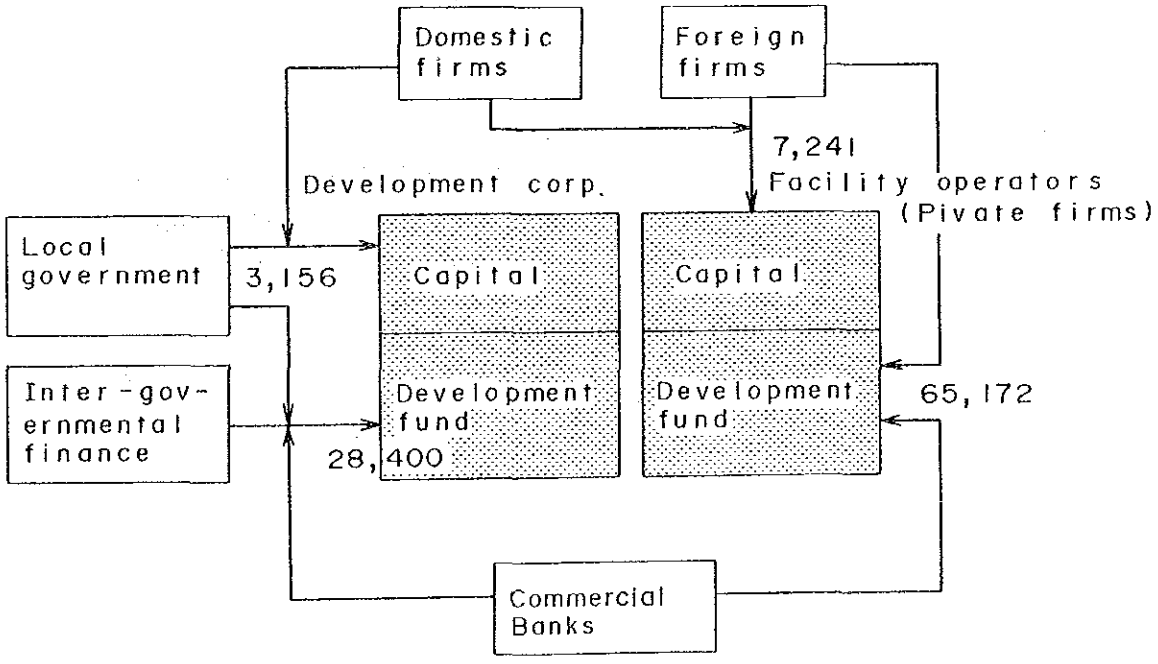
Assuming the capital to be 10% of the said development cost, the Development Corporation need to secure capital and finance as shown in Fig. 4-5-2. The above capital and finance will cover the development cost and necessary fund for operation.

Fig. 4-5-2 FINANCE PROGRAMME FOR BEACH RESORT

Stage 1



Stage 2



(Unit: Rp. million)

(2) Tourist facility operators (Private firms)

Tourist facilities such as hotels and other recreation facilities can be developed by private firms, which need to raise the funds as shown in Fig. 4-15.

For a sound management of the project, it is more preferable to operate a tourist facility in the form of combination with a hotel than to operate independently. Therefore, the tourist facility operators will be composed of five hoteliers in partnership with some other private firms. In this connection, each tourist facility operator need to secure Rp.22.5 billion in stage 1 and Rp.36.2 billion in stage 2 in average for development.

It can be said that in recent hotel business, the owner is not necessarily the managing body and the managing body is not necessarily the owner, because a hotel company can entrust its management to a management company on the basis of an operation and management agreement with the payment of a management fee.

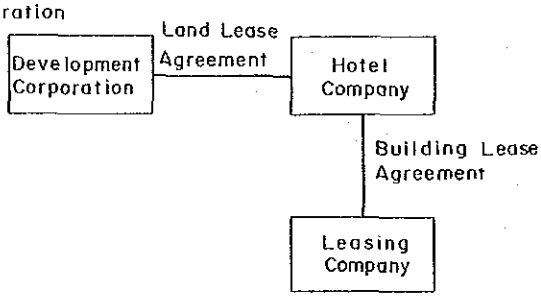
Furthermore, a hotel company can obtain the rights of building use in terms of an agreement with a leasing company. Then, four types of hotel development system as shown in Fig. 4-5-3 would be available at Tanjung Lesung Beach Resort.

Fig. 4-5-3 TYPES OF HOTEL BUSINESS SYSTEM

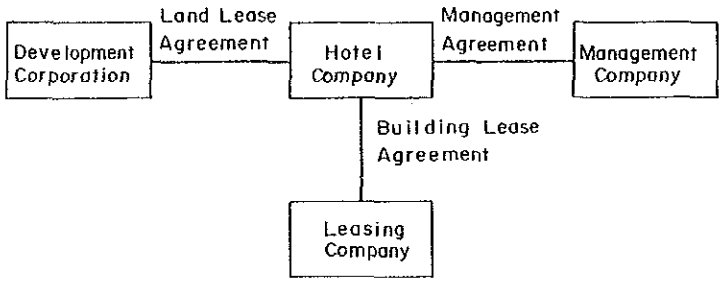
(Case 1)
Land : Lease hold
Building : Ownership
Management : Direct operation

(Case 2)
Land : Lease hold
Building : Ownership
Management : Entrust

(Case 3)
Land : Lease hold
Building : Lease hold
Management : Direct operation



(Case 4)
Land : Lease hold
Building : Lease hold
Management : Entrust



3) Inducement of developers

The inducement of developers will be another important task for Central Government so that Local Government, the main founder of Development Corporation, can be involved in the project with the least risk.

In order to promote successful inducement of the private sector as developers, the following activities need to be carried out:

- effective approaches to foreign firms,
- selection of domestic firms from broad sectors,
- early commencement of inducement activity, and
- relaxation of regulations and provision of incentives.

(1) Effective approach to foreign firms

Considering the large amount of development costs of a hotel, it will be the key to successful development to find excellent foreign firms to be involved in the hotel business.

Consequently, it is essential to make effective approaches to foreign firms with the recognition of their motivation to participate in the tourism business.

The following are thought to be the likely reasons for their involvement in Tanjung Lesung Beach Resort project.

- To expand their tourism business opportunities outside Jakarta (foreign hotel owner in Jakarta)

- To promote their sales by the establishment of a new attractive tourist destination (foreign airline

company dealing with regular flights to and from Jakarta)

- To extend their business or reinvest their profits in tourism business (foreign firms dealing with other than tourism business)

Taking into consideration the above motivation, DGT should prepare a list of likely firms with the assistance of the Preparatory Committee and to prepare an attractive presentation of the project for sounding out their interest.

It is also necessary to contact other foreign firms in the hotel or tourist industry in Indonesia more generally.

(2) Selection of domestic firms

Domestic firms are expected to be successful development partners. The participation of domestic firms of good repute in the project is very necessary for the encouragement of foreign developers.

The aforementioned motivations to participate will be common, to some extent, to domestic firms, as seen in the case of the marina in Anyer which was newly developed to PT Djarum.

Therefore, it is necessary to make contact with promising firms with possible interest in participating in tourism business as well as existing tourism operators.

In this connection, it is recommended that a broad search be made for potential domestic participants.

(3) Early commencement of inducement activities

The financial risk and debt can be minimized, if the inducement of developers is successfully completed on schedule.

In order to complete the inducement of developers without serious delay, early commencement of inducement activities is strongly recommended.

It is essential to commence and proceed with those activities in parallel with the preparatory works and before construction works such as land acquisition, legal procedures, financial arrangements, and design works are commenced.

For effective promotion, it is desirable to prepare a PR video presenting the existing conditions of the site, the concepts and contents of the project, and its future prospects.

(4) Relaxation of regulations and proposition of incentives

The regulations concerned with regional development appear to be conceived unduly particularly for the control of foreign capital. There would seem to be a case following the world-wide tendency to deregulate development activities by the private sector, to rely more on authorized master plan or governmental policies.

It is therefore recommended that the regulation system be simplified and the regulations relaxed in the case of a national project or its equivalent.

For instance, there is the Decrees of May 6, 1986 regulating foreign investment from the following aspects.

- Initial minimal proportion of domestic equity ownership
- Transfer of major equity share to domestic firms within 10 years after the commencement of the business
- Prohibition of land acquisition by foreign firms

Since more than 10 years are needed to recover initial investment in resort tourism business, the above Decrees need to be relaxed for resort tourism. Otherwise, it will be hard for foreign capital to find the merits in involvement in tourism business.

It will also be effective in the encouragement of foreign investment to relax the period for the transfer of major equity share to domestic firms.

Besides the above-mentioned relaxations, it is also recommended that the following incentives, as mentioned for Old Banten be provided to the participants:

- provision of the opportunity to participate in other profitable projects,
- reduction of income tax for a certain period,
- introduction of an advantageous loan, and
- priority implementation of the related public works.

4.5.3 Relocation of local inhabitants

Housings of 300 inhabitants and their farms exist in the proposed site. In order to realize the project, it is inevitable to relocate the abovementioned housings and farms

prior to construction. For smooth negotiation with the persons involved, the following measures need to be taken in the early stage:

- Giving priority in job opportunity in the project with necessary training,
- Preparation of alternative land with favorable infrastructures instead of paying land price and compensation as requested,
- Possibility of involvement in cooperative business such as local market and economic lodge by improving the construction camp of the project.

Prior to negotiations on the above matters, the Corporation needs to undertake minute public relations of the project, careful survey on land tenure and land use in the site and preliminary talks with those people.

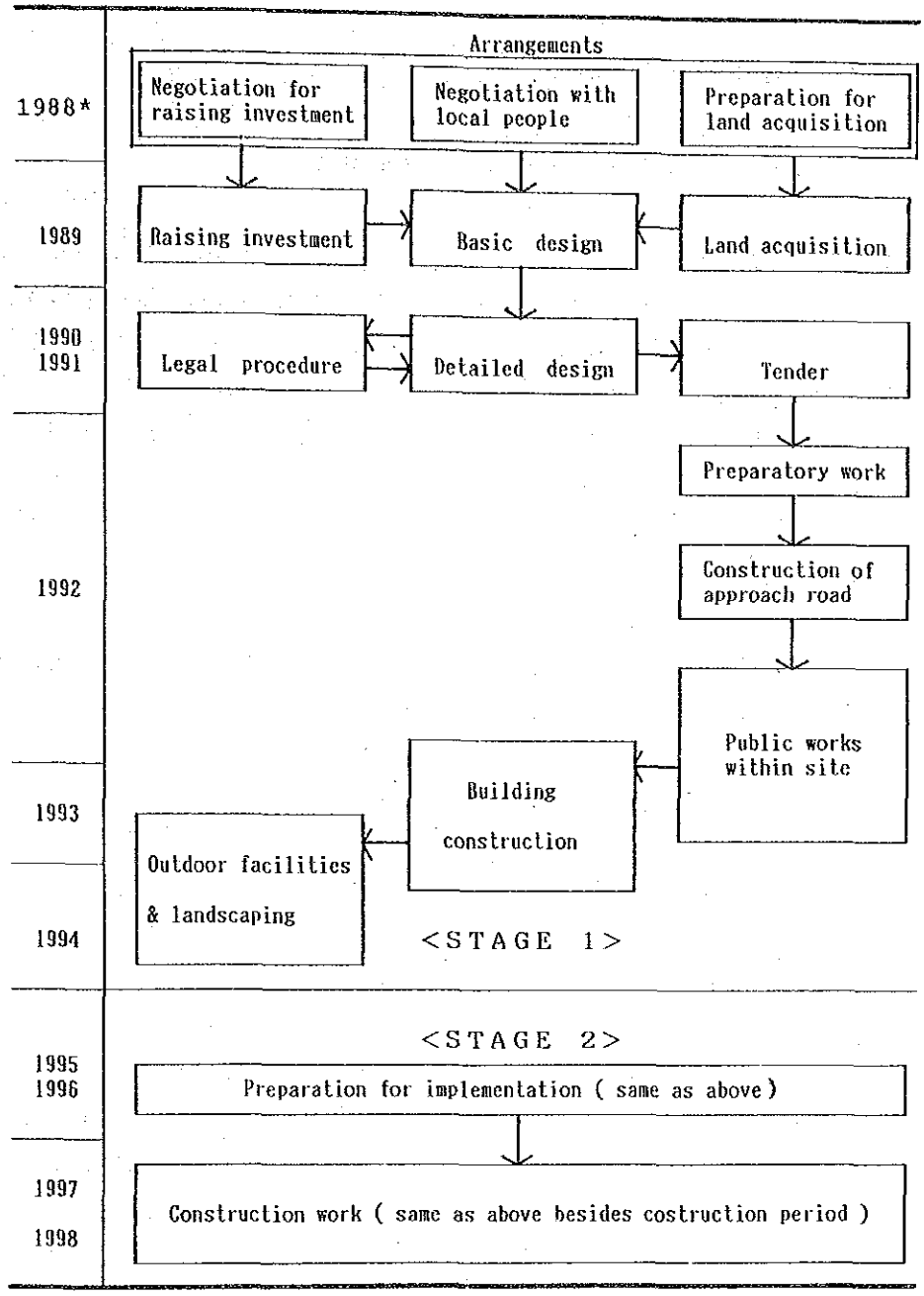
4.5.4 Development schedule

The following will be the necessary steps in the early stages of the project.

- Negotiation with local people on the implementation of the project
- Preparation for land acquisition
- Financial procurement for the project
- Basic and detail design
- Legal procedures
- Tendering

Construction works will take three years after all the above prerequisites have been completed. Fig. 4-5-4 shows the chronological arrangements in the development schedule of the project.

Fig. 4-5-4 DEVELOPMENT SCHEDULE OF BEACH RESORT



(*) Fiscal year

The construction work will have to start with the approach road together with the trunk water supply line from the Cisekeut River and followed by other public works.

4.6 Operation and Management Plan

4.6.1 Outline of operation and management

Since two types of development bodies, the Development Corporation and tourist facility operators, will be involved in this project, the operation and management plan must focus on these bodies, especially the Development Corporation to be funded by the local governments in cooperation with the private sectors.

1) Development Corporation

The duties of the Corporation, similar to those for the Old Banten Project, are as follows:

(1) Pre-opening duties

< Administration >

a. Establishment of the Corporation

As mentioned in Old Banten Site project, the Preparatory Committee, first of all, needs to settle the basic framework for establishment of the Corporation such as components of participants, financial arrangement and personnel appointment of executive staff in the Corporation.

Based on these preparatory works, the Development Corporation will be set up after completing legal procedure and registration.

Table 4-6-1 PRE-OPENING DUTIES IN BEACH RESORT

Administration	- Establishment of the Corporation - Legal procedure for operation - Preparation of contract agreement with private developers - Recruitment and education of staff
Finance	- Procurement of construction funds - Purchasing furniture, fixtures and equipment
Local arrangements	- Public relations to local communities - Negotiation with inhabitants in the site - Land acquisition
Construction	- Basic and Detailed Design - Tender - Construction
Operation	- Development of a management plan - Determination of operation system
Sales	- Sales of condominium and second houses
Marketing	(refer to 4.6.4)
Others	- Liaison with local government - Involvement of developers - Preparation of approach transportation service

b. Preparation of contract agreement with developers

The Corporation will develop and maintain not only the infrastructure but also some public tourist facilities to induce private developers, who will construction and develop commercial facilities under land lease contract. Therefore, it can be said that success of commercial operations provided by private developers greatly owes to the Development Corporation.

In this context, it is recommended, that these developers be charged a levy in the form of an overhead in proportion to their sales rather than at fixed rate. To realize this system, it is necessary to prepare a well arranged contract agreement with developers and detailed systems for monitoring of their sales.

For the latter, each developer should be expected to submit daily operation reports to the Development Corporation as is done in shopping complex management in urban areas.

c. Recruitment and education of staff

Considering the nature of the Corporation's duties, it is necessary to put emphasis on the recruitment of staff with experience both in management and in construction. Management staff should be recruited from other fields to secure the level of experiences required.

For construction, since staff duties will decrease after completion of construction works, it would be preferable to use the services of professional consultants to a great extent to minimise necessary permanent staff. Many local people could be employed in this project both during construction and operation.

To achieve the aim of maximising employment of local people, basic training will have to be offered as pointed out in the Old Banten Project. This program will have to be provided by the Regional Tourism Association at a training school located in the nearest village (refer to 6.4.3 of the Main Report of Master Plan and 4.4.2-3) of this report).

< Finance >

Development funds shall be secured in the form of inter-governmental finance and commercial loans on the basis of the framework arranged by the Preparatory Committee to meet payment schedule of construction works. In addition, the financial programme in the operation period shall also be examined by referring to the result of engineering service carried out prior to determination of inter-governmental finance. Apart from the above activities, necessary furniture, fixtures and equipment shall be purchased through specified procedure.

< Local arrangements >

As mentioned in 4.5.3 on Page , great attention needs to be paid to local arrangements comprising public relations, survey on land tenure and land use in the site, and negotiations with the persons concerned in order to relocate inhabitants in the site and to acquire the project site.

< Construction >

Design works will be carried out during 1990 (Fiscal year) and 1991 after completion of necessary arrangements. Installation of infrastructures will start from 1992 and will be followed by construction of hotels and other tourist facilities.

As for these temporary duties related to local arrangements and construction works, it is advisable to use consultant services for smooth reshuffle for operation.

The corporation also needs to adjust and review the project timely in order to cope with the change of surrounding conditions.

< Operation >

A "Job Manual" shall be formulated by the heads of the respective sections of the managerial staff based on the operation system, which will be determined among executive staff in earlier stage. The Manual needs to be driven home to all personnel through training activities.

< Marketing >

Refer to 4.6.4 on Page for its detail.

(2) Post-opening duties

The duties of the Corporation in the operation phase can be classified into:

- administration,
- planning and development,
- marketing,
- sales of condominium and second houses,
- operation of the various facilities, and
- maintenance of facilities and infrastructure.

a. Administration

Among administrative affairs, the principal ones will be personnel training, management of other sectors' sales, and budget and fund management.

Apart from the technical program, as mentioned in Old Banten Site project, personnel training is required to help the corporation's staff to

understand that their ultimate role lies in assistance and support for better operation of the whole beach resort.

In addition, attention shall be paid to secondary recruitment of staff for development in the 2nd stage development.

The management of sales in other sectors will provide information on the present conditions of each business as well as the necessary data for the determination of overhead cost to be charged to the tourism sectors. This will also enable the Corporation to formulate relevant measures for development of their management.

Furthermore, it is a greatly significant duty to supervise and direct those tourist facility operators in order to observe the master plan and pursue the objectives of the project.

In budget and fund management, attention must be given not only to operational needs but also to integration with second stage development.

b. Planning and development

As the Beach Resort is to be extended in the second stage (in year 1997/1998), various preparatory works must be finished by year 1996.

The preparation of the detailed design for the second stage development should incorporate practical experience gained through operation in the first stage. In other words, a review of the master plan and basic design should be made before detailed design, for better operation in future.

The detailed design itself can be undertaken by professional consultants under the direction of the Development Corporation.

c. Marketing

Refer to 4.6.4 for its detail.

d. Sales of condominium and second houses

Refer to 4.6.3 for its detail.

e. Operation of tourist facilities

The Development Corporation will operate the following tourist facilities:

- Condominiums & private villa (second houses)
- Center (plaza)
- Play ground

The Development Corporation needs to maintain condominiums and second houses under the agreement with their owners, and offer necessary services such as utilities, and linen supply with extra charge during their stay.

A play ground will be provided for children without charge and will be maintained under the public open space maintenance programme.

The center plaza will accommodate public spaces such as an information center, a hall as well as commercial and administrative facilities. For lively promotion of the resort, it needs to provide diversified and attractive events in the above hall such as concerts art performances exhibitions and fairs.

The Corporation will be responsible for collection of an entrance fee at the toll gate, for control of visitors and the maintenance of an agreeable atmosphere as well as for the earning of income.

f. Maintenance of the various facilities and infrastructure

In order to maintain an agreeable atmosphere in the Beach Resort and trouble-free conditions for operation of commercial facilities, it must ensure good maintenance of the public open spaces such as the beach, roadside green belts, landscaped area, and infrastructures in accordance with the "Job Manual".

The maintenance program will comprise daily, periodical and occasional works similar to those described for Old Banten.

2) Tourist facility operators (Private firms)

As mentioned before, private firms will operate not only hotels but also some commercial tourist facilities closely related to the promotion of hotel business.

There are some similarities between the Development Corporation and private firms in their operation and management duties. Of these, however, guest oriented services will be more important for hoteliers since this will be the key business of the Beach Resort.

Financial management will also be important for the steady repayment of the fairly large loan required for its construction.

For all the above responsibilities, it is necessary to stress the importance of recruiting good senior staff and the training of other staff.

It may be difficult to recruit senior staff from the existing related fields due to the limited number of available experts.

However, a hotel owner could entrust the whole operation to a professional hotel management company under a management agreement, if necessary.

Other staff would be recruited from the graduates of training schools and local people, and would be trained on one of the hotel training programs.

In addition to sound operation, it is necessary for hoteliers to offer comprehensive and high quality services to guests as may be found at some established resorts such as those run by Club Mediterranean. For this, it is essential to prepare ample training, and operation manuals elaborated with the assistance of foreign experts in the related field.

The tariffs of the various facilities will have to be determined by considering the contents and scope of the proposed facilities by comparison with existing cases in the related area. Standard tariffs will be proposed in Financial Analysis (4.8).

Concerning preparations for opening of the Beach Resort, it is advisable, based on practical experience, to set up a pre-opening office at least one year prior to its commencement of business.

In the marketing aspect, independent activity by sector will not be effective for sales promotion, because of poor popularity of the site at the beginning. Therefore, joint

promotion needs to be made in cooperation with other sectors as well as the Development Corporation.

For this activity, the Corporation shall be responsible for enhancement of understanding its necessity and organization of those sectors.

4.6.2 Subdivision programme

As already experienced in the development of Mega Indah, second houses will be popular in future as household incomes increase and also possibly as retirement homes. To meet the future diversified demands, second houses are proposed to be developed both in the form of condominiums and as detached villas.

50 units of condominium would be established in Stage 1 (1995), and 25 units of condominium and 25 detached villas in Stage 2 (1999) (see Table 4-6-2). Detached villas with 150 m^2 of building space are proposed along the seacoast possibly with a private mooring facility, and beside the golf course.

Concerning the legal aspect of condominium, existing "Storied Flat Law (Rummer Susun)" will be applied even in case of common ownership of property.

Table 4-6-2 SUBDIVISION OF SECOND HOUSES

Type	Space/ unit m^2	Stage 1		Stage 2		Overall
		No. of units	Standard capacity	No. of units	Standard capacity	Standard capacity
Condominiums	100	50	200 psns.	25	100	300
Detached villas	150			25	100	100
Total		50	200	50	200	400

The condominiums with 100 m^2 of building space would be located near sports and recreation facilities such as a swimming pool, tennis courts and picnic areas.

In order to promote sales of the second houses, the followings are suggested:

- to commence sales activities in parallel with the construction works, and
- to entrust consumer oriented sales activities to real estate agents in big cities such as Jakarta.

For effective sales promotion, it is recommended that attractive pamphlets be prepared, presenting perspectives and sketches after completion of development as well as the existing conditions. As for entrustment of sales activities, a sales agreement should be made between the Corporation and the agents concerned, with provision for payment of a commission in the case of successful sales.

It is also necessary to put emphasis on the complete operation system, such as annual maintenance services, the allocation of security guards, linen service during stay and utility services.

Furthermore, it is proposed to take into consideration the possible utilization of second houses as a rental holiday

villas after obtaining operation permit, when not occupied by the owner. If this is undertaken as an additional service to owners, it will need well-developed know-how and experience in sales, booking and accounting, especially with owners. This is a business to be commenced in future after carrying out a careful study and consultation with owners. For the further extension, the reserved area could to be developed if needed.

4.6.3 Organization for operation and management

In order to carry out the aforementioned operation and management duties, it is proposed to establish the following organizations as shown in Fig. 4-6-1 and 4-6-2.

The following are main duties of the Development Corporation by division.

< Administration >

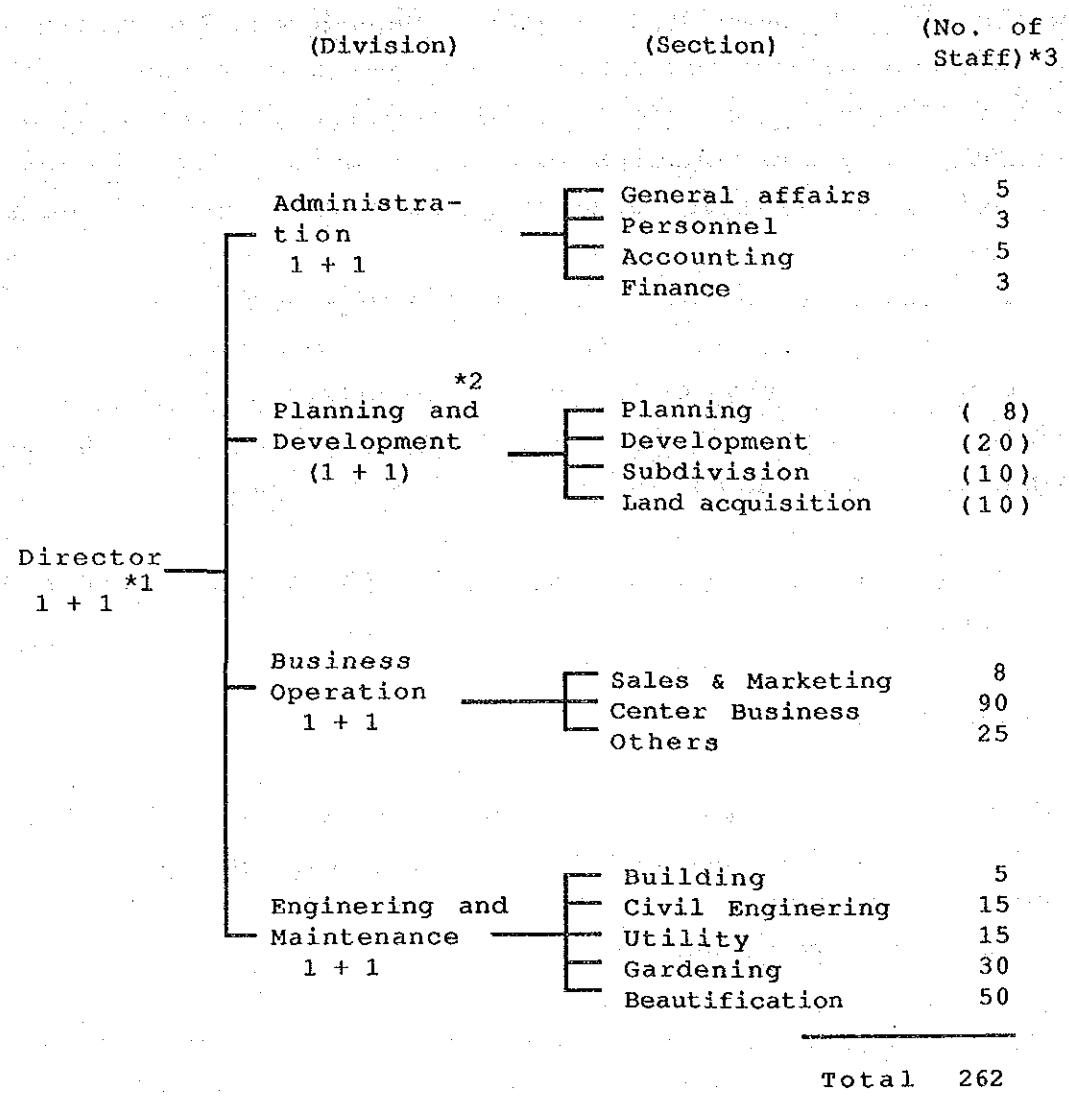
- General Affairs Section will deal with common administrative duties in the Corporation, property administration, administration of private firms, legal affairs and negotiation with outsiders.

- Personnel Section will be in charge of labor management, personnel welfare, manpower recruitment, personnel training, etc.

- Accounting Section will be responsible for purchasing, book keeping, payroll, money handling and so on.

- Main duties of Finance Section will be budget drawing, financial management, financial procurement, preparation of financial documents and internal auditing.

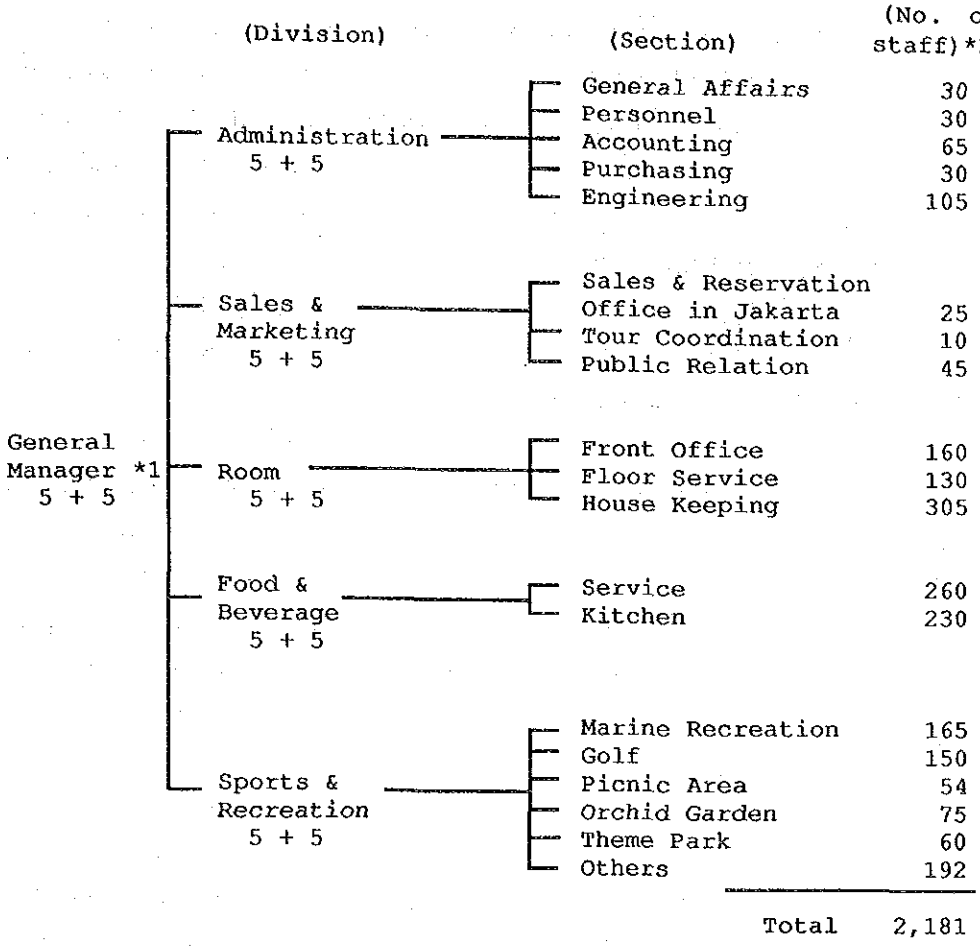
Fig. 4-6-1 ORGANIZATION OF DEVELOPMENT CORPORATION IN BEACH RESORT



(*1) Secretary
(*2) Number of temporary staff to be reshuffled to other divisions after completion of construction works.
(*3) No. of staff after reshuffle

The organization of the Development Corporation will require inevitable reorganisation after completion of construction works in stage 1 and 2, because of the changes in duties. In particular, others, some parts of the Planning and Development Division will have to be integrated into the Engineering and Maintenance Division in order to secure effective assignments of personnel.

Fig. 4-6-2 ORGANIZATION OF PRIVATE FIRMS (TOURIST FACILITY OPERATORS) IN BEACH RESORT



(*1) Secretary
(*2) Total number of staff in respective firms

< Planning an Development >

- Planning Section will deal with coordination between the master plan and design works, review of the master plan prior to the 2nd stage development on the basis of actual operation in 1st stage, and improvement programme of facilities. Furthermore, the preparation of events also will be handled by this section in cooperation with Sales and Marketing section.

- Development Section will be responsible for design works and supervision of construction works.

- Subdivision Section will handle development and sales of condominiums and second houses.

- Land Acquisition Section will be in charge of public relations, negotiation, compensation for acquisition of project site.

< Business Operation >

- This Division will deal with sales promotion (Sales & Marketing Section) and tourist facility operation (Center Business and Other Section) including admission fee collection at gate.

< Engineering and Maintenance >

- Duties of this Division comprise inspection, test and repair of buildings, utilities, equipments and furniture. In addition, maintenance of landscaped area and beautification of the site including rubbish disposal also will be handled by this Division.

4.6.4 Marketing programme

1) Marketing Position

(1) Foreign tourism

Taking into consideration the distribution of tourist destinations presented in Fig. 2-2-1), the nature of the proposed Beach Resort and the potential demand of foreign tourism, the following marketing position can be identified for foreign tourism:

- a handy and economical but high quality and exotic beach resort for people in neighbour countries such as Singapore, Malaysia, Hong Kong and Japan, where beaches are crowded and the sea polluted,

- a beach resort with clear water diving sites for diving enthusiasts in South East Asia countries,

- a stopover point of overland tours for Europeans, Japanese, Americans and Australians,

- an excursion destination from Jakarta for business travelers to Jakarta, convention/exhibition participants and/or their companions and tourists who are visiting relatives or friends, and

- a base resort for cruises or expeditions to Ujung Kulon and Krakatau Nature Reserves.

(2) Domestic tourism

Similarly the marketing position for domestic tourism may be identified as:

- a handy high quality holiday beach resort from Jakarta for the family market,

- the "Mecca" for marine and field activities for the single market,

- a handy and attractive honeymoon trip destination for the honey-mooner market,

- as an out-of-town convention and seminar place for the corporate and association market,

- a bus trip destination for both company and school excursions,

- an out-door musical concert/cultural performance venue for such enthusiast,

- a sports training camp location for sports enthusiast, and

- a base resort for visits to Ujung Kulon and Krakatau Nature Reserves (but second to Labuan for low budget school parties etc.)

2) Merchandising

(1) Amenities and selling points

The following will be potential amenities and selling points.

- Exotic newly developed international beach resort in uncrowded, unpolluted natural environment

- Three hours' drive from Jakarta or International Airport

- Attractive optional tours:

  - to Pulau Peucang or Pulau Panaitan for snorkeling and diving,
  - to Ujung Kulon for observing wildlife,
  - to Krakatau for the world famous volcano,
  - to Badui Village for ethnological interests,
  - to Old Banten and Pulau Dua for historic relics and bird sanctuary,
  - to off-shore for sunset-dinner cruise and starlight-cocktail cruise,and
  - to highland area for tropical fruits.

- Indonesian style hotels and seminar houses on beach front with modern facilities

- Variety of facilities such as:

  - unpolluted natural beach and artificial lagoon,
  - marina and marine shop,
  - scuba diving pool,
  - eighteen(18) holes' championship golf course,
  - ample tennis courts,
  - soccer ground,
  - volleyball court,
  - badminton court,
  - field athletic course,
  - running course,
  - bicycle riding course,
  - giant maze,
  - horse-back riding field and course to rain-forest jungle,
  - orchid garden,
  - miniature golf,
  - theme park,
  - play ground with nursery,
  - open-air theater,
  - hand craft center,

- local food center, and
- souvenir shops.

(2) Merchandising for foreign market

In view of the accessibility of the Beach Resort from the International Airport or Jakarta and language barrier, the majority of visitors from overseas will be in the form of package tours organized by tour operators and/or airline companies.

The followings are likely routes for such package tours:

a. Package tour route 1 (3 nights)

Airport - Old Banten - Beach Resort (stay 3 nights) - Bogor - Jakarta - Airport

Principal Markets:
Singapore and Malaysia, including expatriates living in those countries

Competitive Destinations:
Penang, Phuket, Medan/Lake Toba, Bali

Winning Factor: Enhancement of name-value (exotic, uncrowded, pollution free paradise)

b. Package tour route 2 (4 nights)

Airport - Jakarta (stay) - Old Banten - Beach Resort (stay 2 nights) - Bogor - Jakarta (stay) - Airport

Principal Markets:

Singapore, Malaysia and Hong Kong, including expatriates living in those countries.

Competitive Destinations:

Bangkok/Phuket, Kuala Lumpur/ Penang, Manila/Sebu, Medan/Lake Toba, Bali

Winning Factor: Enhancement of name-value (Exotic, uncrowded, pollution free paradise)

c. Package tour route 3 (6 nights)

Airport - Jakarta (stay) - Bogor - Beach Resort (stay 3 nights) - Old Banten - Airport - Singapore (stay 2 nights) - Home country

Principal Markets:

Japan, Hong Kong, Taiwan

Competitive destinations:

Bali/Singapore, Singapore/Penang, Bangkok/Pattaya, Bangkok/Phuket, Guam/Saipan

Winning Factor: Competitive tour price including top quality golf, optional tour to Ujung Kulon/Krakatau Is.

d. Package tour route 4 (7 nights)

Airport- Jakarta (stay) - Pulau Seribu (stay 2 nights) - Krakatau Is. - Beach Resort (stay 2 nights) - Airport - Singapore (stay 2 nights) - Home country

Principal Market:

Japan

Competitive Destinations:

Guam/Cocos, Saipan/Rota, Guam/Saipan, Hawaii, Waikiki, Maui/Waikiki

Winning Factor: New and attractive snorkeling/diving spots, top quality golf and exotic facilities

e. Package tour route 5 (Java - Bali overland)

Airport - Jakarta (stay) - Old Banten - Beach Resort (stay) - Bali

Principal Markets:

Europe, Japan, USA, Australia

Competitive Destinations:

Thailand, China, India, Australia/New Zealand

Winning Factor: Further development of world famous tourism spots and the quality of the very varied facilities

f. Package tour route 6 (West Java excursion)

Jakarta - Old Banten - Beach Resort (stay) -

Bogor - Jakarta (Alternative. A)
Ujung Kulon/Krakatau Is. - Beach Resort -
Bogor - Jakarta (Alternative B)

Principal Markets:

Business travelers to Jakarta
Convention participants and their accompanied
Tourists who visit their relatives or friends

Competitive Destinations:

Bandung, Yogyakarta, Pulau Seribu, Bali

Winning Factor: Accessibility combined with variety and quality of facilities

g. Package tour route 7 (survival camp)

Jakarta - Beach Resort - Pulau Peucang (stay 3 nights) (trekking in Ujung Kulon, exploration of Palau Panaitan) - Krakatau Is. - Beach Resort (stay) - Old Banten - Jakarta

Principal Market:

Adventure oriented tourists

Competitive Destinations:

Kalimantan, Nusatenggara, Irian Jaya

Winning Factor: Permission procedure combined with accessibility of base, quality of guides and information, quality of environment

(3) Merchandising for domestic market

In view of the present tendency to stay in accommodations at Pantai Carita, it can be said that Jakarta will be the largest market for Beach Resort.

Therefore, it is necessary to focus on the said market, avoiding conflicts with Pantai Carita (for which separate provisions are recommended elsewhere in Chapter 5).

Based on the above considerations and the likely pattern of tourism development in future, the following package tours can be envisaged for domestic tourism:

a. Individual market (single/couple/family)

- Marina sports lesson packages (sailing, wind-surfing, scuba diving, etc.)
- Tennis lesson package
- Golf lesson package
- Physical fitness training package
- Horse back riding lesson package
- Week-end packages
- Week-day packages
- Honey-mooner packages
- Wildlife/nature adventure tour packages

b. Group market:

- Company excursion packages
- Out-of-town convention and seminar packages
- School excursion packages
- sports camp packages

3) Sales promotion

(1) Phases of sales promotion

For orderly development of the Beach Resort, sales promotion should be examined by development phase as shown below:

Development schedule	1988 ----- 1994 Stage 1	1995 ----- 1998 Stage 2
Subdivision of Land	1991 -- 1992 1st subdivision	1995 --- 1996 2nd subdivision
Phases of Sales Promotion	1992 ---------- 1998 Phase 1	1999 --- Phase 2

(2) Direction of sales promotion

Sales promotion is necessary to be provided to meet the development stage.

Phase 1:

- To promote and enhance the name of Beach Resort among the travel agents and residents in Jakarta
- To establish Beach Resort as a newly developed destination with an easy accessibility of Krakatau and Ujung Kulon area
- To promote the preparation of package tours involving Beach Resort

Phase 2:

- To diversify the features of Beach Resort as an international tourist destination abundant in a series of amenities
- To settle Beach Resort as a main destination of the package tours

(3) Promotional activity for each phase

Based on the above direction, the Development Corporation needs to be involved in the following promotion activities:

Phase 1:

- To set up a joint sales and reservation office in Jakarta
- To prepare a promotion video film featuring its marine activities and easy accessibility to Krakatau Islands and Ujung Kulon area

- To conduct familiarization trip for the persons concerned with travel trade in Jakarta at least once a year

- To provide press-release quarterly

- To distribute a monthly leaflet "This Month at the Beach Resort"

- To plan and execute a sales campaign and events covering West Java and Lampung area such as Krakatau yacht race, "tall yacht" (i.e. Madura proa or square rig) boat race, firework festival, etc.

- To continue periodic sales-calls to travel agents, airlines companies, corporation, associations, etc. located in Jakarta, among others

- To conduct sales trips to neighboring countries such as Singapore, Malaysia, Hong Kong, Taiwan, Japan and Korea

- To join both national and international travel trade associations and participate in their seminars and/or travel marts

Phase 2:

- To secure international sales and reservation networks

- To prepare new promotion video film featuring a greater variety of amenities

- To conduct familiarization trips for persons concerned with the travel trade both in Jakarta and in major overseas markets

- To provide press-releases quarterly

- To distribute a monthly leaflet "This Month at Beach Resort"

- To plan and execute sales campaigns and events covering Java, Sumatra and neighboring countries such as an international yacht race, international triathlon race, international music contest and international soccer tournament

- To continue periodical sales-calls to travel agents, airlines companies, corporations, associations, diplomatic agencies, etc. located in Jakarta, among others

- To conduct sales trips to both to neighboring countries and distant countries

- To join both national and international travel trade association, participate in their seminars

and/or travel mart, and try to induce one or two of those seminars and/or travel marts to be held at the Beach Resort

(4) Co-operation with DGT, KANWIL, DIPARDA Tk I and DIPARDA TK II

As mentioned in Chapter 3, cooperation with the above agencies is essential for successful sales promotion.

Among others, the following sales promotion activities would seem to be mutually fruitful.

- Familiarization tours
- Sales campaigns and events
- Introduction of the Beach Resort in printed materials
- Introduction of the Beach Resort at tourism information centers
- Disclosure of marketing information and statistical data
- Assistance in film production.

4.7 Measures for Environmental Protection

For the environmental study on Tanjung Lesung Beach Resort site, the study team carried out data collection, a field reconnaissance and an interview survey with the help of Indonesian counterparts.

4.7.1 Natural environment

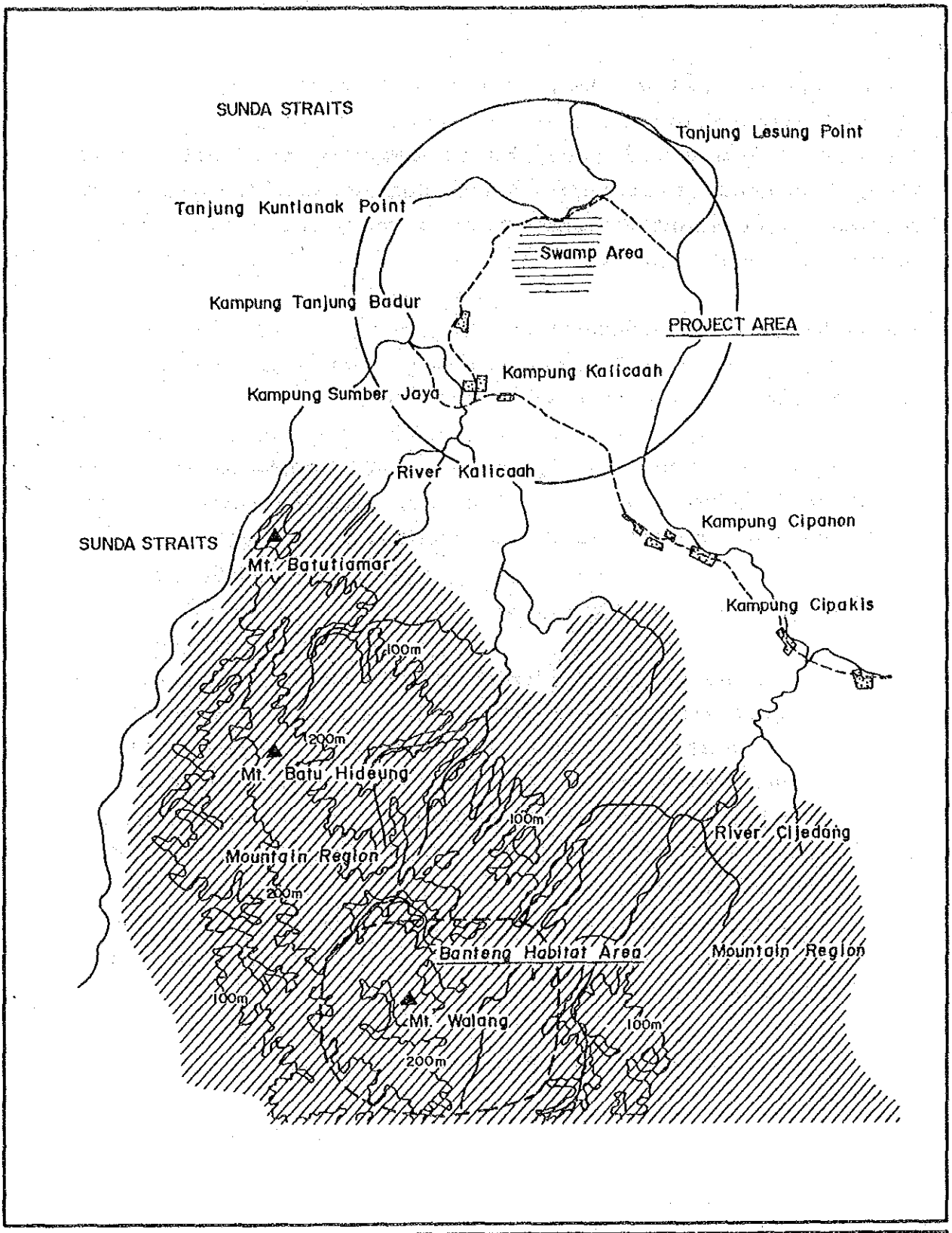
1) Conditions of the natural environment

In general, the land is mostly flat except to the south where it adjoins a range of hills. The both northern and western parts face the Sunda Straits.

(1) Fauna

From the result of field reconnaissance and interview survey with local inhabitants (see Annex II.D.10), it was confirmed that Banteng (Bos sondaicus), a protected species, occurs in the southern part of the project area (near Mt. Walang). It is known that the Rusa deer (Cervus equinnus) and Hornbill (Bucerotidae) which are also protected by law can be seen in and around the project area. Fig. 4-7-1 shows the present condition of Beach Resort site and the distribution of Banteng habitat area.

The adjacent sea is also abundant in marine life.



DEPARTMENT OF TOURISM, POST AND TELECOMMUNICATION
DIRECTORATE GENERAL OF TOURISM

JAPAN INTERNATIONAL COOPERATION AGENCY

THE STUDY ON THE REGIONAL DEVELOPMENT PROJECT
IN THE WESTERN PART OF JAVA

Fig. 4-7-1
PRESENT CONDITION IN SURROUNDING AREA
OF BEACH RESORT PROJECT SITE

(2) Flora

The project site though formerly covered by primary tropical rain forest is now partly covered with secondary forest such like tropical rain forest, and grass and shrub. According to the interviews (see Annex II.D.4), Pandanus sp. seems to be dominant in the area. The wild Durian (Durio zibethinus) protected by law also can be seen in and around the area.

(3) Water quality

From the water quality survey (see Annex II.D.5(1)) the sea water was found to be of excellent quality. The water quality of the rivers around the project site is not so bad, though its salinity is rather high. The latter seems to be intensified in the dry season and also due to the drought in recent years.

2) Anticipated impacts of the project on the natural environment

(1) Fauna

Although Banteng (wild oxen) live in the southern part of this region, it can be said that influence of this project on the Banteng would be negligible since their nearest habitat is located about 8 km from the project site. Other protected wild life such as Rusa (deer) and Hornbill (bird) which inhabit this region could not be affected due to the existing scattered human habitation and cultivated land. They could even benefit especially from the golf course development as deer are attracted by short grass and open spaces for evening and early morning grazing.

Uncontrolled marine activities could have adverse impacts on marine life and this will have to be provided against.

(2) Flora

There are some protected trees and some interesting flora around the project site. It is believed that it should be possible to avoid their disturbance.

(3) Water contamination

The discharge of waste water from the facilities of Beach Resort if not well treated could cause the water contamination in the sea of Sunda Straits.

3) Measures for protection of the natural environment

(1) Fauna

As no precious species are presently found on site or land, no special measures for protection of fauna will be necessary to be taken. If the Rusa deer are attracted to the golf course some special shelter may be required for them.

Along the shoreline and in the adjacent marine areas suitable management arrangements will have to be designed to preserve the quality of the marine life for the enjoyment of visitors.

Hunting shall be prohibited in development areas surrounding reserve and buffer zones.

With regard to the conservation zone, it is recommended to prohibit hunting except to a limited number of local people with strict by the authority.

(2) Flora

According to the aforementioned examination, it is believed that there should be no need to prepare any special measures for the protection of the fauna in the project site other than incorporation of interesting flora, especially trees, into the planning of the project.

However, if any protected trees or precious species of flora are found in the development area, the following countermeasures must be taken:

- To change part of the layout plan and or facility plan to leave the protected tree and/or precious species and to preserve its growing condition.
- Not to fell any trees and shrubs in the buffer zone.
- To utilize existing flora in the landscape plan of the project as much as possible.
- To control the felling of trees in the conservation zone.

(3) Water contamination

a. Standard of sea water quality

According to information from KANTOR MENTERI NEGARA KEPENDU DUKAN DAN LINGKUNGAN HIDUP (Office of the Minister of State for Population and Environment), the following standards for sea water quality are desirable especially for swimming.

BOD	below 6.0 ppm
COD	below 12.0 ppm
Total Coliform	1,000 MPN/100 ml

b. Protection of sea water quality

In order to prevent any serious water contamination in the Sunda Straits, following three protective measures should be considered:

(a) Treatment of sewage and all waste water by appropriate treatment plant,
(b) Installation of a discharge pipe of an appropriate length offshore,
(c) Combination of (a) and (b).

Fig. 4-7-2 shows the dilution projection for sewage effluent in the above cases.

The second measure, if no treatment is provided, could cause serious water contamination in Beach Resort.

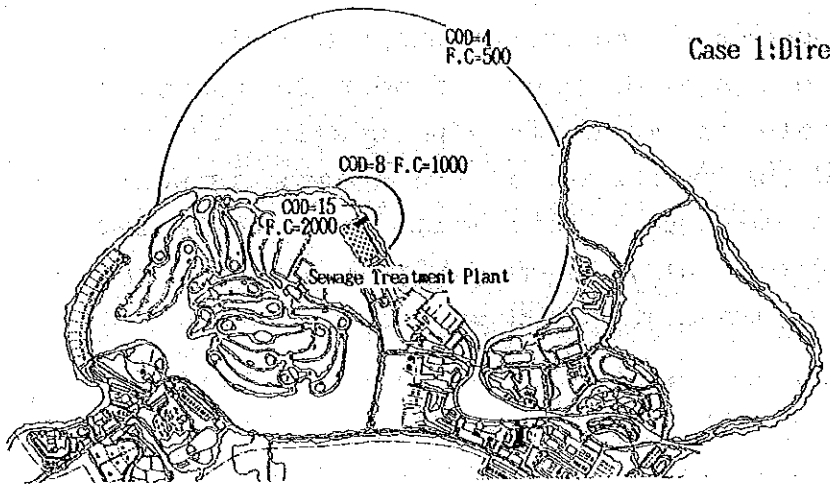
The first measure on its own might cause a concentration of fecal coliform more than 1,000 MPN/100 ml in the coastal area adjacent to the treatment plant.

By contrast, the third measure by which the effluent would be discharged offshore through a 100 m long submarine outfall after treatment, cause the minimum contamination of the sea water.

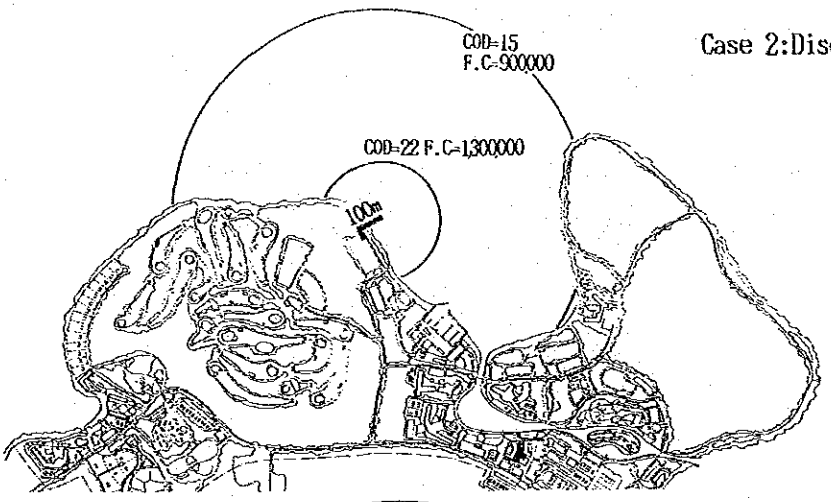
Considering with the importance of clean water quality to the tourism development area and precious natural environment, the third measure is recommended for protection against sea water contamination.

Special provisions will have to be made to prevent sea water pollution by boats using the marina.

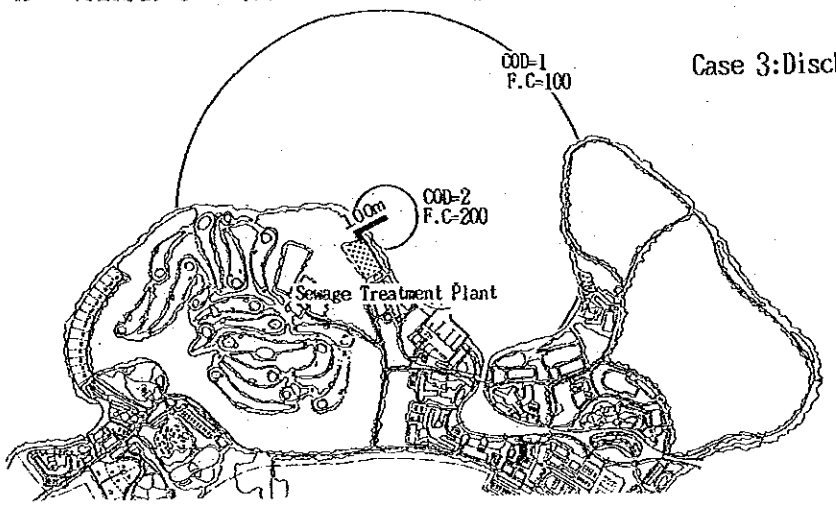
(4) The physical topographic and oceanographic position of Ujung Kulon and the west coast of West Java should make it possible to maintain the quality of the environment and the facilities if the project is well-planned and well-managed. This needs to be reflected in the training of staff, in operational manuals, and in the conduct of management and operation.



Case 1:Direct Discharge on Sea Shore from Sewage Treatment Plant



Case 2:Discharge from 100m Length Outfall without Treatment



Case 3:Discharge from 100m Length Outfall after Treatment

Legend

COD:Chemical Oxygen Demand
Sea Water Quality Standard =12PPM

F.C:Fecal Coliform
Sea Water Quality Standard
=1,000MPN/100ml

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THE STUDY ON THE REGIONAL DEVELOPMENT PROJECT IN THE WESTERN PART OF JAVA

Fig. 4-7-2

PROJECTION OF DILUTION OF SEWAGE EFFLUENT

4.7.2 Socio-cultural environment

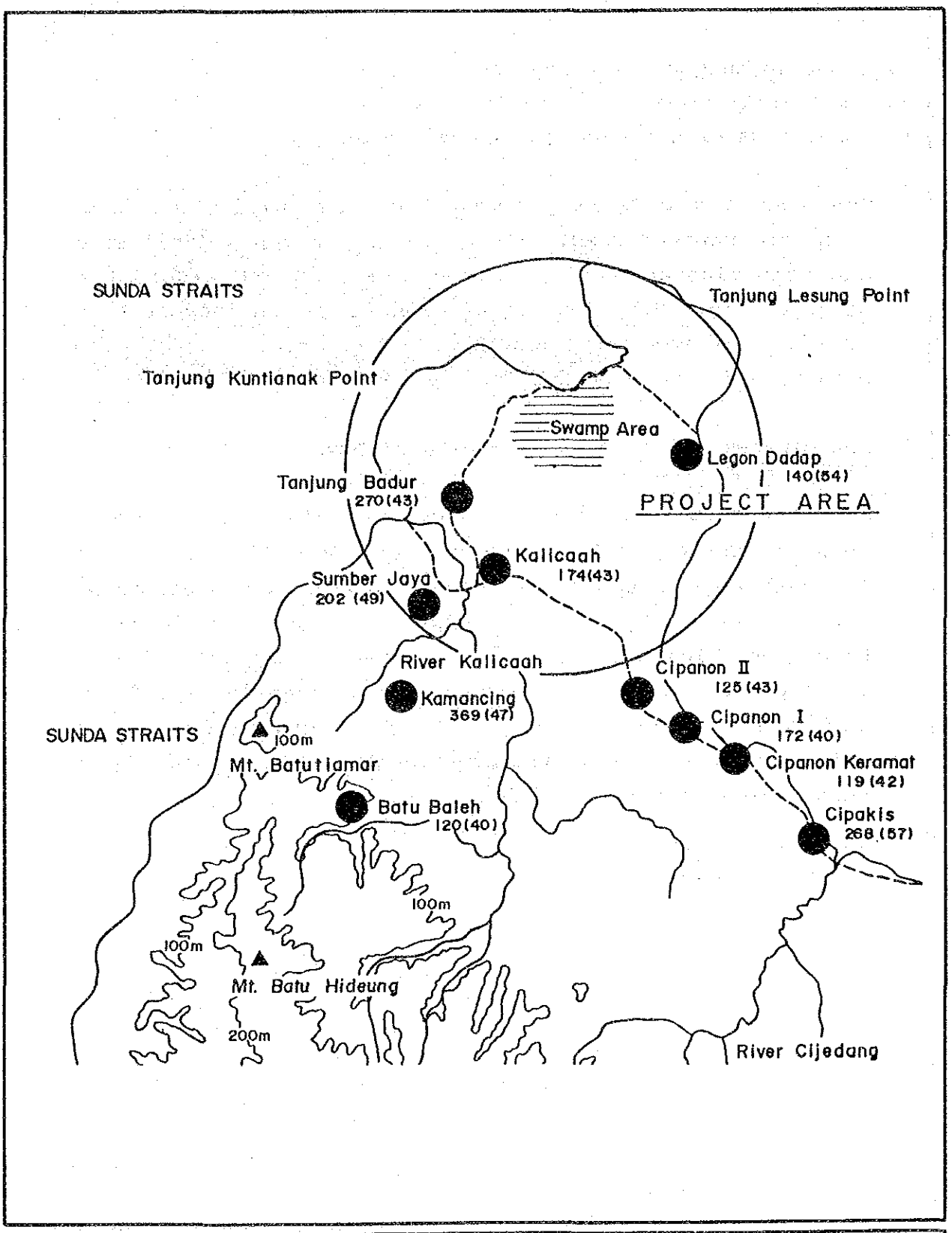
1) Conditions of socio-cultural environment

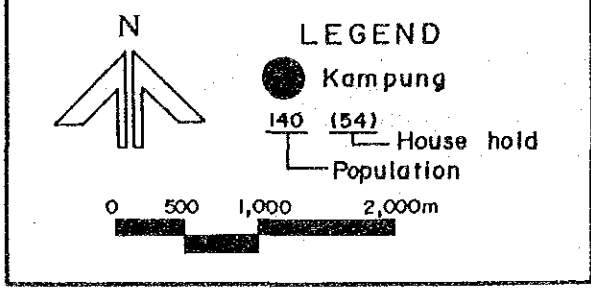
There are a few farming communities and cultivated lands along the unpaved road. There are also a few paddy fields and some plantations of coconut trees in and around the project site. Very few farmers and fishermen inhabit this area as compared with the Old Banten area. It is also much more remote with far fewer facilities.

2) Anticipated impact on socio-cultural environment

From the results of the socio-cultural interview survey/1 shown in Table 4-7-1, it is apparent that the formal and informal leaders basically accept this tourism development project (see Fig. 4-7-4). There is also a folklore tradition which tells that the Tanjung Lesung area will be developed one day in the future. They eagerly expect the increase in job opportunities and consolidation of infrastructure, which will improve the living standards in this region (see Fig. 4-7-5).

Note: /1 The list of eighteen formal and informal leaders (3 persons from each Kabupaten, Kecamatan, 2 persons from Desa and 10 persons from Kampung) for the interview survey is shown in Annex II.D.9.





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THE STUDY ON THE REGIONAL DEVELOPMENT PROJECT IN THE WESTERN PART OF JAVA

Fig. 4-7-3

LOCATION OF KAMPUNG IN SURROUNDING AREA OF BEACH RESORT PROJECT SITE

Table 4-7-1 EXPECTATIONS AND ANXIETIES EXPRESSED BY LOCAL LEADERS FOR TOURISM DEVELOPMENT (BEACH RESORT)

	Formal Leader	Informal Leader
Kecamatan	- Environmental conservation must be cared for - No gambling, no prostitution	- Do not inflict losses on the community, land, tradition and religion - Do not inflict local population
Desa	- Do not bring about any adverse effects to the local people - Compensation for land & plants - Unemployed youngsters must be utilized in the implementation as much as possible	- Limited development in terms of area/location, so that local population will not be moved aside - Do not construct any religious facilities other than Islamic
Kampung	- Appropriate land compensation - Utilization of local labor - Do not irritate the people - The project must contribute to the local development - Personal approach to informal leader before the project implementation is very important - Do not bring any negative effect on the life of local people - Create many kinds of new jobs in order to solve the problem of unemployment in this region	- Proper land compensation to be applied and employment of local labor - The community must not be shut out from the planning - Try to please local population as a result of development - Do not cause any negative impacts on the life of community - Create some job opportunities. Priority must be given to local people in order to get these opportunities - Local customs must be conserved even in the development - Land price must be strictly controlled

Fig. 4-7-4 SYMPATHY TO THE TOURISM DEVELOPMENT IN TANJUNG LESUNG AREA (BEACH RESORT PROJET)

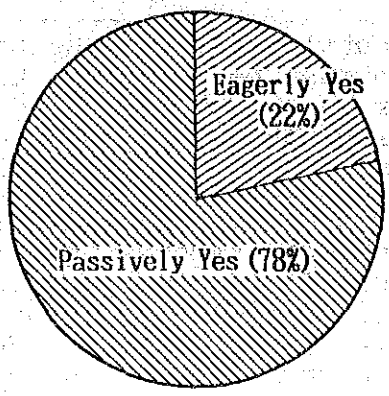
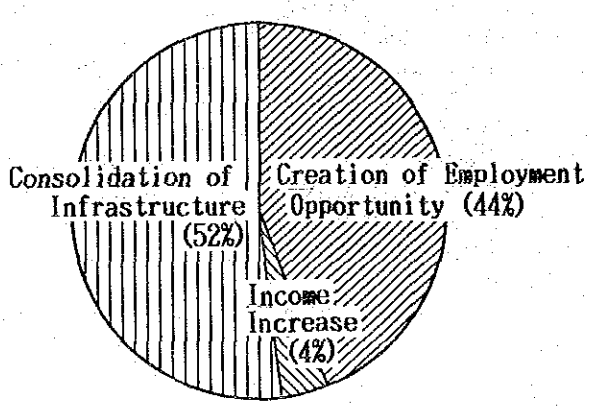


Fig. 4-7-5 EXPECTATION FOR THE TOURISM DEVELOPMENT IN TANJUNG LESUNG AREA (BEACH RESORT PROJECT)



The condition of roads around this project site is very poor. Untreated and salty water from neighboring rivers has to be used for daily life. As for infrastructure, local people desire roads, electricity and a public water supply system (see Fig. 4-7-6).

On the other hand, local people are afraid of the following negative impacts (see Fig. 4-7-7) of the development project.

- Inadequate compensation for their property
- Land price speculation
- Degradation of public morals (mainly Moslem norms and dogmas)
- Changes in their life style due to the influence of incoming city people and foreigners
- Rise in prices and seasonal swelling in demand
- Disturbance of Islamic religious life

3) Countermeasures to the impacts

In order to avoid the above impacts, the following measures are proposed to be taken:

(1) Minimization of negative impacts

- To practice correct and proper land acquisition and compensation after careful investigation of land prices to avoid speculation,

- To handle carefully the resettlement of any local people whose land will be acquired by this project. This will require:

  a. Providing in priority job opportunities to the affected after necessary training,

Fig. 4-7-6 IMPROVEMENT OF INFRASTRUCTURES DESIRED BY LOCAL PEOPLE IN RELATION TO BEACH RESORT DEVELOPMENT

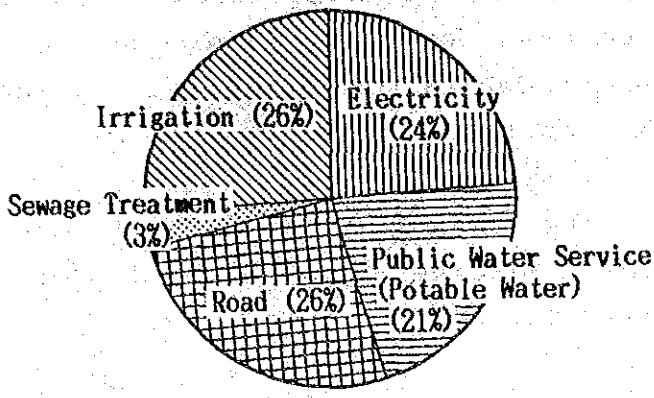
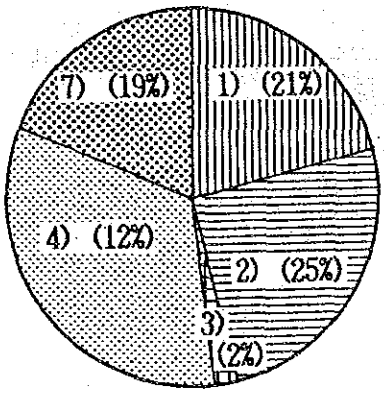
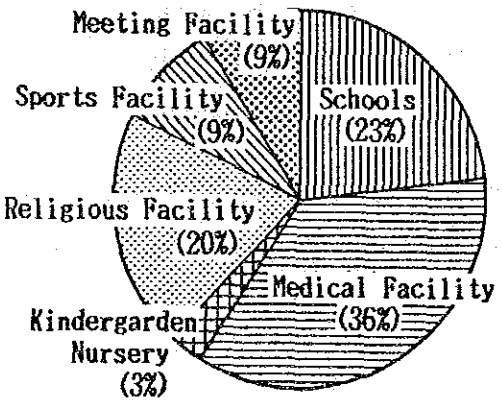


Fig. 4-7-7 ADVERSE IMPACT FORESEEN SUBSEQUENT TO THE DEVELOPMENT OF BEACH RESORT PROJECT



1) Land speculation
2) Degradation of public morals
3) Sudden collapse of regional socio-economic structure
4) Changes in life style of local people in consequence of demonstration effect
5) Secularization of ancient rituals
6) Alternation of physical environment
7) Rise in prices, seasonal swelling in demand and inflationary trend
8) Others

Fig. 4-7-8 SOCIO-CULTURAL FACILITIES REQUESTED BY LOCAL PEOPLE IN RELATION TO BEACH RESORT DEVELOPMENT



b. Providing alternative land and housing with basic facilities or paying appropriate compensation of resettlement cost.

- To pay attention to the Moslem norms and dogmas, such as:

  a. If a public theater is to be constructed, the film showing schedule should be made in such a way so that it is not held at the time of prayer of Maghrib and Isya (18:00~20:00),
  b. To prepare public swimming pools separated by sex,
  c. To serve alcoholic drinks discreetly and only in specific areas,
  d. Prohibition of gambling and prostitution.

- To construct a mosque on the project site so that Moslem employees can follow their religious activities.

- Not to disturb religious piety and praying time, etc.

- To take into consideration the opinions of local people in the planning process through routine consultation (Dakwah). It is important to give assurance to the local people in order to avoid antagonism which could cause the failure of this tourism development project.

(2) Enlargement of positive impacts

- To increase the employment opportunities for local people by establishment of a vocational school, and thereby to increase personal and regional income both directly and indirectly.

- To consolidate infrastructure such as, roads, public water supply, electricity, etc., and thereby to vitalize the regional economy and to improve the living environment.

From the result of the aforementioned interview survey as shown in Figs. II-4-7 and 8, it is recommended that the following additional infrastructure and socio-cultural facilities need to be provided for the local people:

- Irrigation facilities
- Medical facilities (Hospital, Clinic)
- School (Junior high school and High school)
- Sport facilities
- Meeting facilities

Concerning the above infrastructures, the Tanjung Lesung development project could contribute to:

- installation of tanks and water supply line from which water can be fed to the neighboring villages, and
- increase in regional income through the construction of public facilities.

4.8 Financial Analysis

4.8.1 General

Financial analysis of the Tanjung Lesung Beach Resort Project ("Beach Project") was also carried out through FIRR, following the same method as mentioned in Section 3.8.1. (The basic concept of FIRR is shown in ANNEX II.E.1.) However, the financial analysis of the Beach Resort was carried out both in the whole project and by sector: Development Corporation and private companies sector.

4.8.2 Estimation of costs

The financial costs of the Beach Project was calculated based on the same procedures as explained in Section 3.8.2.

1) Capital cost

(1) Construction cost

Financial cost of construction is shown in Table 4-8-1. Total construction cost (financial) was estimated at Rp.218,954 million.

(2) Cost of operation equipments

Financial cost of the operational equipments is estimated at 8% of the total construction cost.

2) Operation and maintenance (O&M) cost

The operational assignment of the respective sector will be as shown in Table 4-8-2.

Table 4-8-1 FINANCIAL CONSTRUCTION COST OF THE BEACH PROJECT

(1) Whole Project

Unit: Rp. million

Year86	Current price/ price F/C	L/C	Land acquisition F/C	L/C	Engineering F/C	L/C	Construction F/C	L/C	Total construction cost F/C	L/C	Total construction with price escalation F/C	L/C	Total
1989	1.17	1.31		516					0	516	0	673	673
1990	1.18	1.35			641	1426			641	1426	754	1927	2681
1991	1.19	1.40			641	1426			641	1426	762	1994	2756
1992	1.23	1.45			641	1426	4937	9544	5578	10970	6862	15874	22736
1993	1.27	1.50			641	1426	8475	19087	9116	20513	11606	30723	42329
1994	1.32	1.55			641	1426	8475	19087	9116	20513	12012	31798	43811
1995	1.36	1.60			630	1402			630	1402	859	2250	3109
1996	1.41	1.66			630	1402			630	1402	889	2328	3218
1997	1.46	1.72			630	1402	10512	22707	11142	24109	16278	41434	57713
1998	1.51	1.78			630	1402	6541	15138	7171	16540	10844	29421	40265
										Total	60867	158422	219290
										Stage I total	31997	82989	114986
										Stage II total	28871	75433	104304

Note: F/C = Foreign currency, L/C = Local currency

(2) Development Corporation

Unit: Rp. million

Year86	Current price/ price F/C	L/C	Land acquisition F/C	L/C	Engineering F/C	L/C	Construction F/C	L/C	Total construction cost F/C	L/C	Total construction with price escalation F/C	L/C	Total
1989	1.17	1.31		516					0	516	0	673	673
1990	1.18	1.35			227	627			227	627	267	847	1115
1991	1.19	1.40			227	627			227	627	270	877	1147
1992	1.23	1.45			227	627	1514	4182	1741	4810	2142	6960	9102
1993	1.27	1.50			227	627	3029	8364	3256	8992	4145	13467	17612
1994	1.32	1.55			227	627	3029	8364	3256	8992	4290	13938	18228
1995	1.36	1.60			163	461			163	461	222	740	962
1996	1.41	1.66			163	461			163	461	229	766	995
1997	1.46	1.72			163	461	2601	7379	2764	7841	4038	13475	17513
1998	1.51	1.78			163	461	1734	4920	1897	5381	2868	9571	12439
										Total	18472	61315	79787
										Stage I total	11115	36763	47877
										Stage II total	7357	24552	31909

Note: F/C = Foreign currency, L/C = Local currency

(3) Private Firms

Unit: Rp. million

Year86	Current price/ price F/C	L/C	Land acquisition F/C	L/C	Engineering F/C	L/C	Construction F/C	L/C	Total construction cost F/C	L/C	Total construction with price escalation F/C	L/C	Total
1989	1.17	1.31		0					0	0	0	0	0
1990	1.18	1.35			414	799			414	799	487	1079	1566
1991	1.19	1.40			414	799			414	799	492	1117	1609
1992	1.23	1.45			414	799	3423	5361	3837	6160	4720	8914	13634
1993	1.27	1.50			414	799	5446	10723	5860	11522	7461	17256	24717
1994	1.32	1.55			414	799	5446	10723	5860	11522	7722	17860	25582
1995	1.36	1.60			467	941			467	941	638	1510	2147
1996	1.41	1.66			467	941			467	941	660	1563	2222
1997	1.46	1.72			467	941	7911	15327	8378	16268	12241	27959	40200
1998	1.51	1.78			467	941	4807	10218	5274	11159	7976	19850	27826
										Total	42396	97107	139503
										Stage I total	20882	46226	67108
										Stage II total	21514	50881	72395

Note: F/C = Foreign currency, L/C = Local currency

Table 4-8-2 OPERATIONAL ASSIGNMENT

Item	Development Corporation	Private Firms
Hotels		o
Condominiums	o	
Private Villa, GH	o	
Marina		o
Center	o	
Sports facilities		o
Picnic area		o
Orchid garden		o
Miniature golf		o
Seminar house		o
Diving school		o
Open air theater		o
Golf course		o
Play ground	o	
Giant maze		o
Field athletics		o
Horseback riding		o
Theme park		o
Camping area		o
Economical lodges	(to be operated by villagers)	

Annual operation and maintenance costs of the project facilities shown in Table 4-8-3 are estimated from the following principles.

(1) Personnel cost

Number of employees by sector was figured out in Fig. 4-6-1 and 4-6-2.

Average personnel expense will be Rp.80,000 per month.

Table 4-8-3 ANNUAL OPERATION AND MAINTENANCE COST

	Material cost	Utility cost	Overhead cost
Private companies	10% of room charge 35% of food and beverage sales	1.9 million Rp. per bed	9% of sales
	20% (others) of sales	7.5% of sales	8% of sales
Development Corporation	20% of sales 60% (shops) 35% (restaurant)	5% of sales	7% of sales

(2) Material cost

a. Hotels

Material cost for room service will consist of linen, toiletries, flowers, statuaries and others. It will be 10% of room charges.

Material cost for food and beverage will be 35% of the sales amount. It will cover foodstuffs, drinks and spirits and so on. Cost for dishes and other equipment is partly included.

b. Others

Proportion of material cost to the sales amount will vary depending on the kind of services, that is, 35% for restaurant, 60% for shops and 20% for other services.

(3) Utility cost

a. Hotels

Utility cost consists of that of electricity, water, sewage and fuel. Fuel for transportation are excluded. Electricity for air conditioning will be dominant.

It is assumed that overall yearly utility costs will amount to Rp.1.9 million per bed.

b. Others

Utility cost for each service is assumed to be 5% of sales amount. However, some part of water supply and sewage cost will be allocated to the Development Corporation in charge of those services and 2.5% of total sales will be paid to outer sectors.

(4) Overhead cost

Overhead cost or administration cost can be broken down into three categories. General expenses including bookkeeping and other clerical costs will be 2% of total sales amount. Sales promotion and advertisement costs will be 3% and repair and maintenance cost will be 2%. These costs will not include personnel cost which was already counted into labor cost. In addition, Rp.1,000 per bed will be charged as yearly registration fee of the star classified hotels in Indonesia. Those charge will be included in the General expenses.

Furthermore, each private company need to pay a certain amount of money to the Development Corporation as a concession and/or management charge, and a ground

rent. It will be 2% of total sales amount for hotels while 1% for tourist facility operators.

4.8.3 Estimation of revenues

Financial benefits of the Beach Project will be composed of various project revenues. All the unit revenues given in the following are expressed in 1986 price. The unit revenues in 1995 will be set by inflating them by inflation rate of 60% during 1986 and 1995. Taking into consideration the increase trend of the prevailing charges and fees, an addition of 10.9% was applied every 4 years to the respective items. The revenues were estimated based on the following assumptions.

1) Hotel room charge

Room charge revenue is estimated based on number of rooms, room rate and room occupancy ratio.

(1) Number of rooms

Five hotels are planned to be constructed within the area. Three will open in 1995 and the remaining will start business in 1999. Number of hotel rooms and its commencement of operation are assumed as shown in Table 4-8-4:

Table 4-8-4 OUTLINE OF HOTELS

Hotel	Rooms	(Twin)	(Suite)	Class	Open
A	200	190	10	Middle	'95
B	200	190	10	Middle	'95
C	240	220	20	Middle	'95
D	200	190	10	High	'99
E	200	190	10	High	'99

(2) Room charge

Based on the questionnaire survey on hotel business in Jakarta and Bali, regular room charge is assumed as shown in Table 4-8-5.

Table 4-8-5 ROOM CHARGE OF HOTELS

Unit:US$

	Single	Twin	Suite
Middle class	60.00	70.00	200.00
High class	90.00	100.00	300.00

(3) Number of guests per room

Also it is assumed that 30 percent of twin rooms are occupied by single users while suite room accommodate 2.5 persons on an average. There will be no difference on occupancy rate between twin room and suite or between middle class hotel and high class hotel.

(4) Room charge of middle class hotel

Middle class hotel will earn the following sales amount from room charge from one guest per one overnight stay:

US$60.00 x 0.938 x 0.3 + US$70.00 x 0.938 x 0.7/2 + US$200.00 x 0.062/2.5 = US$44.84

where: US$60.00, 70.00 and 200 = room rates for single and twin users of twin room , and for suite room
0.938 and 0.062 = proportion of twin/suite room or

0.938 = (190 + 190 + 220)/(200 + 200 + 240),
0.3 and 0.7 = proportion of single/twin use and
2.5 = number of guests in suite room.

(5) Room charge revenue of high class hotel

In a same manner, high class will earn;

US$90.00 x 0.950 x 0.3 + US$100.00 x 0.950 x 0.7/2 + US$300.00 x 0.050/2.5 = US$64.90

where: 0.95 = (190 + 190)/(200 + 200)

(6) Length of stay

One overnight visitor is expected to stay for 1.5 nights in 1995 and 2.5 nights in 2010. Average length of stay during the period will be estimated by the following formula:

$$N = 1.5 + 1.0 \times (J - 1995)/15$$

where: N: average length of stay (day)
J: year (A.D.)

(7) Revenue from room charge in hotels

Overall hotel revenue from room charge between 1995 and 1998 will be estimated as follows:

$$R = N \times US\$44.83 \times C$$
$$= N \times C \times Rp.\ 62,150$$

where: R: total room charge revenue,
N: average length of stay,
C: person visit for hotel.

Then revenue after 1999 can be estimated by the following formula:

$$R = N \times (US\$44.83 \times 0.615 + US\$64.90 \times 0.385) \times C$$
$$= N \times US\$52.56 \times C$$
$$= N \times C \times Rp.73,250$$

where: 0.615 and 0.385: proportion of the number of rooms in middle class to that in high class hotel respectively,
or 0.615 = (200 + 200 + 240)/(200 + 200 + 200 + 200 + 240).

The number of hotel visitors are presented in Table 4-3-1.

2) Food and beverage sales in hotels

(1) Unit expenditure

Referring to the assumption made by a hotel expert, the food and beverage expenditure of hotel guests is fixed as shown in Table 4-8-6.

Table 4-8-6 FOOD AND BEVERAGE EXPENDITURE IN HOTELS

(Rp./Guest)

	High class	Middle class
Breakfast	10,000	Rp. 8,000
Lunch	15,000	12,000
Dinner	25,000	20,000

Then, a hotel guest of high class will spend Rp.50,000 for food and beverage per day in a high class hotel, while Rp.40,000 in a middle one.

(2) Revenue from food and beverage sales in hotel

Total hotel revenue from food and beverage is estimated as follows:

$$F = N \times C \times U \times 0.85$$

where: F = revenue from food and beverage
N = average length of stay
C = number of person-visits to hotel
U = average daily expenditure for food and beverage
or U = Rp.40,000 <between '95 and '98>
U = Rp.40,000 x 640/1040 + Rp.50,000 x 400/1040
= Rp.43,850 <after 1999>
(640 and 400 = the number of rooms for middle and high class hotels respectively.)
0.85 effective coefficient

Effective coefficient is adopted to take into account the guests who bring lunch box or take meal outside of the beach resort area.

There could be cases that hotel guests may take their meal outside of the hotel, or condominium and villa residents and day tripper may use hotel premises. However, such phenomena are considered to be counteracted together.

3) Condominium and villa

(1) Sale of condominium and villa

In view of the construction cost and sales cost, condominium and villa will be sold at the following prices:

Condominium	Rp.170 million per unit
Villa	Rp.350 million per unit

Fifty (50) units condominiums are sold in 1995, and remaining twenty five (25) units and 25 villas will be sold in 1999.

(2) Management charge

Condominium and villa owner will be charged certain amount for maintenance, security, water and sewage charge and others.

Condominium	Rp.400,000 per annum
Villa	Rp.500,000 per annum

Prices are determined considering their development cost.

(3) Linen service charge

According to general standard of existing cases, linen and clean up services will be provided for every guests at the below charge:

Condominium	Rp.5,000 per person-night
Villa	Rp.6,000 per person-night

Both condominium and villa guests are estimated to stay 1.5 to 2.5 nights according to year. The figure will be same as N described in the previous section.

4) Gate charge

Instead of charging entrance fee for picnic field, camping site and levy parking fee separately, a lumpsum fee will be charged for day trippers in the form of gate charge

Average fee will be Rp.200 per person until 1998, and Rp.500 after 1999.

5) Restaurants in center plaza

(1) Average daily expenditure of a villa and condominium guest

Restaurants will be used by day condominium/villa guests as well as hotel guests.

Both condominium and villa residents will spend Rp.40,000 for 3 meals per day per person between 1995 and 1998, and Rp.44,000 after 1999.

Since guests will not always have meals in restaurants, effective coefficient (0.667 or 2/3) is needed to be considered.

(2) Average daily expenditure of day visitor

Day trippers are assumed to spend Rp.5,000 for lunch. Forty (40) percent of total day trippers is assumed to use restaurants.

(3) Revenue

$$Fv = Rp.40,000 \times Cv \times N \times 0.667 + Rp.5,000 \times 0.4 \times Cd \quad \text{<between 1995 and 1998>}$$

$$Fv = Rp.44,000 \times Cv \times N \times 0.667 + Rp.5,000 \times 0.4 \times Cd \quad \text{<after 1999>}$$

where: Fv = revenue in restaurants from condominium/villa guests
Cv = number of condominium/villa guests
Cd = number of day trippers
N = 1.5 + 1.0 x (J - 1995)/15, J: year

6) Shopping

(1) Average expenditure

A hotel guest is assumed to spend Rp.10,000 for souvenirs, drinks, tid-bits and other daily goods per day.

A condominium and villa guest is assumed to spend Rp.5,000 per day. The above difference comes from the anticipation that a villa guest will not buy much souvenirs because of its repeating visits.

On the other hand a day tripper is expected to spend Rp.3,000 per day.

(2) Revenue from sales in shops

$$F = (Rp.10,000 \times Ch + Rp.5,000 \times Cv) \times N + Rp.3,000 \times Cd$$

where: F = revenue from sales in shops
Ch = number of hotel guests
Cv = number of condominium/villa guests
Cd = number of day trippers
N = 1.5 + 1.0 x (J - 1995) / 15, J: year

7) Marina

(1) Mooring charge

The marina can accommodate 150 boats/yachts in floating and 150 more in inland custody. A boat/yacht owner will pay Rp.2 million for the annual charge of mooring at jetty while Rp.1 million/1 for that on inland.

Revenue from boat/yacht mooring charge will be Rp.450 million annually, assuming that every facilities are fully occupied.

Actual mooring charge have to be determined according to the length of boat/yacht.

(2) Cruising and sailing charge

Other than annual mooring charge, additional fee will be levied for use of equipments and facilities when a boat/yacht sailing out and in. Average fee will be Rp.20,000 per day. It will include fuel and lubrication cost.

It is also assumed that 2.5 persons will go on board per boat in average. 5% of Hotel and villa guests, 10% of condominium guests and 1% of day trippers will participate in sailing.

Note: /1 Monthly mooring charge in Arcol yacht harbor is Rp.200,000 to 400,000 per boat.

The above difference in percentage comes from:

- Some of villa has its own pier, and
- Condominium is much closer to the marina and will be sold focussing on boating lovers.

Revenues from the marina use is estimated as follows:

$$F = Rp.20,000 \times (0.05 \times Ch + 0.1 \times Cc + 0.05 \times Cv1 + + 0.01 \times Cd)/2.5$$

where: F = revenue from marina use
Ch = number of hotel guests
Cc = number of condominium guests
Cv1 = number of detached villa guests
Cd = number of day trippers

8) Golf course

(1) Average expenditure

Overall playing fee, including caddie fee and driving range charge is assumed to be Rp.50,000 per person. It is on a par with other public courses.

(2) Revenue from golf course

It is assumed that 5% of hotel guests, 7.5% of condominium/villa guests, and 0.5% of day trippers will be the participants in golf play. Therefore, revenues from the course can be estimated by th following formula.

$$F = Rp.50,000 \times (Ch \times 0.05 \times Cv \times 0.075 + Cd \times 0.005)$$

where: F = revenue from golf course
Ch = number of hotel guests
Cv = number of villa/condominium guests
Cd = number of day trippers

Expenditure for food and drinks in club house will be enumerated within the revenue from restaurants. Purchase of golf ball, glove, bottle/canned drink and other goods will be counted as revenues from shopping.

9) Tennis court

(1) Average expenditure

Average charge for a tennis court is set as Rp.3,000 for half day. It will include locker fee and ball boy charges.

(2) Number of participants

9% of hotel guests, 12% of villa/condominium guests and 1% of day trippers will use tennis court while on visit. Each court is assumed to be occupied by four guests in average.

(3) Revenue

$$F = Rp.3,000 \times (Ch \times 0.09 + Cv \times 0.12 + Cd \times 0.01)/4$$

where: F = revenue from tennis court
Ch = number of hotel guests
Cv = number of villa/condominium guests
Cd = number of day trippers

Although most of hotels have their own tennis courts, the revenue from such in house premises are not counted in this item.

Sale of tennis balls, drinks and others will be counted in the sales of shops, and revenue from coffee shop attached to the clubhouse will be done in those of restaurants.

10) Miniature golf

(1) Average expenditure

Mini golf or baby golf will be served the charge of Rp.1,000 per play.

(2) Number of participants

0.3 percent of hotel guests, 0.5% of villa/condominium guests and day trippers will use the premise.

(3) Revenue

$$F = Rp.1,000 \times (0.003 \times Ch + 0.005 \times Cv + 0.005 \times Cd)$$

where: F = revenue from miniature golf
Ch = number of hotel guests
Cv = number of villa/condominium guests
Cd = number of day trippers

11) Others

(1) In-area transportation

Transportation between premises within the resort area will be provided. Average charge for such services will be Rp.2,000 per ride.

Assuming that 10 percent of all visitors will enjoy such services and 1.5 person, in average, will get on each car, revenue from in-area transportation will be as follows:

$$F = Rp.2,000 \times C/1.5 \times 0.1$$

where: F = revenue from in-area transportation
C = number of visitors
1.5 = average number of passengers

The above revenue does not include service charges for inbound and outbound transportation which will be offered at cost for sales promotion.

(2) Cruise for Pulau Krakatau and Ujung Kulong

Sailing/cruising tour for Krakatau Island and Ujung Kulong natural parks will be provided at the charge of Rp.80,000 in average.*1 2.5 passengers are assumed to be on board per cruise.
1.5% of hotel guests, 1% of condominium/villa guests and 0.5% of day trippers will participate in cruising.

(*1) Present charge for cruising to Ujung Kulon is Rp. 250,000 per day per boat.

Then, the revenue from cruising service will be:

$$N = Rp.80,000 \times (Ch \times 0.015 + Cv \times 0.01 + Cd \times 0.005)/2.5$$

where: F = revenue from cruising service
Ch = number of hotel guests
Cv = number of villa/condominium guests
Cd = number of day trippers

The above difference in percentage comes from the anticipation that a fairly part of condominium/villa owners have their own boats.

(3) Miscellaneous revenue

Other revenue from premises and services is assumed as shown in Table 4-8-7.

Table 4-8-7 MISCELLANEOUS REVENUE IN BEACH RESORT

Name of premise/service	Charge (Rp.)	Participation ratio (%)		
		Hotel guests	Villa guests	Day trippers
Field athletics and giant maze	1,000	5	2	7.5
Horseback riding	5,000	2.5	1	0.1
Theme park	500	10	5	20
Camping area	500	2.5	5	20

(4) Other revenues

Charge of gymnasium will be Rp.50,000 per half day. It will be occupied every Sunday and holidays or 60 times per annum. Then, its annual revenue will be Rp.3 million.

Entrance fee for event hall will be Rp.1,000 per person on average. Every event will attract 300 participants. Events will be held on every weekend or 52 times a year. Therefore, its annual revenue will be Rp.15.6 million.

A seminar house, attached to one of the high class hotels, will be offered at the charge of Rp.2 million per day. The hall will be occupied 1 time per month. Annual income will be Rp.24 million, which will be allocated in hotel's revenue.

Number of visitors per annum after year 2010 is assumed to increase at same growth volume as that between year 2009 and 2010.

Based on a series of data shown in Table 4-8-8, the revenues by category can be calculated as presented in Table 4-8-9.

Table 4-8-8 BASIC DATA FOR REVENUES IN BEACH RESORT

(Rp. if not specified)

Premises	Units prices	Average number of persons per service	Hotel/1 guests	Condo./1 guests	Villa/1 guests	Day/1 visitor
Hotel room	98,500-492,000	1.7	100%			
Hotel F&B	40,000-50,000	1	85%			
Cond. management	400,000/year 5,000/day	2.5		100%		
Villa management	500,000/year 6,000/day	2.5			100%	
Gate charge	200-500	1				100%
Shopping		average	10,000	5,000	5,000	3,000
Marina mooring	1,000,000-2,000,000/year					
Marina sailing	20,000/time	2.5	5%	10%	5%	1%
Golf	50,000	1	5%	7.5%	7.5%	0.5%
Tennis court	5,000	4	9%	12%	12%	1%
Mini. golf	1,000	1	0.3%	0.5%	0.5%	0.5%
Transportation	2,000	1.5	10%	10%	10%	10%
Cruise for Krakatau	80,000	2.5	1.5%	1%	1%	0.5%
Field athletics	1,000	1	5%	2%	2%	7.5%
Horse riding	5,000	1	2.5	1%	1%	0.1%
Theme park	500	1	10%	5%	5%	20%
Camping	500	1	2.5%	5%	5%	20%
Gymnasium	500,000		60 times a year			
Theater	1,000	1	52 times a year, average entrant 300			
Convention hall	2,000,000		12 times a year			

Note: /1 The figures in this column show the ratio of participants in the concerned service presented in the left column to whole guests by category.

Table 4-8-9 REVENUES BY CATEGORY

Unit: Rp. million

Year	Revenues															Total Revenue	Total revenue with price up once/4year
	Hotel Charge			Condominium & Villa			Gate charge			Restraurant &Shop			Leisure & Sports			Other facilities			Total Revenue				
	Million Rp.	1,000 US$		Million Rp.	1,000 US$		Million Rp.	1,000 US$		Million Rp.	1,000 US$		Million Rp.	1,000 US$		Million Rp.	1,000 US$		Million Rp.	1,000 US$			
1989	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1995	2154	3065	9406	9	14	6	1867	2280	1274	417	43	0	14759	5777	24232	38772							
1996	2288	3255	907	9	15	6	1965	2414	1287	423	43	0	6504	6108	16521	26433							
1997	2421	3445	907	10	15	6	2065	2550	1300	430	43	0	6752	6441	17315	27704							
1998	2562	3644	907	11	15	6	2168	2691	1314	437	43	0	7009	6788	18142	32183							
1999	5400	7683	13917	25	74	30	4231	5265	2122	863	43	0	25787	13866	48528	86087							
2000	5699	8108	918	25	76	31	4434	5542	2150	878	43	0	13319	14584	37236	66055							
2001	6004	8542	919	26	77	32	4642	5825	2179	893	43	0	13863	15318	38985	76676							
2002	6322	8994	919	27	78	32	4859	6119	2209	908	43	0	14429	16081	40802	80249							
2003	6651	9464	921	30	80	33	5091	6435	2239	924	43	0	15025	16885	42717	84016							
2004	6989	9944	922	32	81	33	5325	6754	2271	940	43	0	15631	17703	44664	97395							
2005	7362	10475	924	34	83	34	5582	7102	2309	960	43	0	16302	18604	46813	102082							
2006	7820	11126	925	36	85	35	5902	7532	2366	989	43	0	17140	19718	49477	107891							
2007	9005	12812	929	41	95	39	6767	8661	2592	1106	43	0	19431	22659	56591	136821							
2008	9449	13444	930	43	97	40	7073	9078	2633	1127	43	0	20226	23732	59147	143001							
2009	9904	14092	932	45	99	41	7387	9506	2676	1149	43	0	21041	24832	61767	149334							
2010	10376	14763	933	48	101	41	7713	9948	2721	1172	43	0	21887	25973	64481	172845							
2011	10859	15449	935	50	103	42	8045	10401	2765	1195	43	0	22749	27138	67255	180282							
2012	11352	16151	937	53	105	43	8384	10864	2809	1218	43	0	23630	28328	70088	187875							
2013	11856	16868	939	55	107	44	8730	11336	2854	1241	43	0	24528	29544	72980	216895							
2014	12370	17600	941	58	109	45	9083	11819	2898	1264	43	0	25444	30785	75931	225664							
2015	12895	18347	942	60	111	45	9443	12311	2942	1287	43	0	26377	32051	78940	234609							
2016	13431	19109	944	63	113	46	9810	12813	2987	1310	43	0	27328	33342	82009	270226							
2017	13978	19887	946	66	115	47	10184	13325	3031	1333	43	0	28297	34658	85136	280532							
2018	14535	20680	948	69	117	48	10565	13847	3075	1356	43	0	29284	35999	88323	291032							
2019	15103	21488	950	72	119	49	10953	14379	3120	1379	43	0	30288	37366	91568	334528							
2020	15682	22311	952	75	121	49	11348	14921	3164	1402	43	0	31310	38758	94873	346600							

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4.8.4 Financial feasibility

The financial feasibility of the Beach Project was analyzed both in the whole project and, by sector: Development Corporation and private companies.

Based on the cash flow shown in Table 4-8-10, the financial internal rate of return (FIRR) of the whole Project is 18.2%. FIRR of the Development Corporation (core management body) is 16.6%, while that of the private sector dealing with commercial facilities and service is 20.2%, as shown in Table 4-8-11 and 4-8-12. These values justify that the Project is financially feasible in any sector.

The results of sensitivity analysis of FIRR for the whole Beach Project are shown hereunder:

Revenue	Project Cost			
	-10%	±0%	+10%	One-year delay
-10%	18.2%	15.9%	13.9%	15.7%
±0%	20.5%	18.2%	16.1%	18.0%
+10%	22.6%	20.3%	18.2%	20.1%

Sensitivity to the delay of development up to five-year delay is referred to ANNEX II.E.3.

Table 4-8-10 CASH FLOW OF THE BEACH PROJECT (WHOLE PROJECT)

Unit: Rp. million

Year	Total revenue with price up 1/4year	Capital cost at current price: Construcion cost F/C potion	Construcion cost L/C potion	Operation Equipments	O & M cost at 1986 price: Employee (L/C90%)	Material (L/C60%)	Utility (L/C100%)	Overhead (L/C80%)	Total O&M cost at 1986 price	Total cost at current price	infrator	Net Profit
1989	0	0	673	8% of C.cost	0	0	0	0	0	673		-673
1990	0	754	1927	(L/C30%)	0	0	0	0	0	2681		-2681
1991	0	762	1994		0	0	0	0	0	2756		-2756
1992	0	6862	15874		0	0	0	0	0	22736		-22736
1993	0	11606	30723		0	0	0	0	0	42329		-42329
1994	0	12012	31798	9199	0	0	0	0	0	53009		-53009
1995	38772	859	2250		1876	3469	3371	1103	9818	18818	1.60	19954
1996	26433	889	2328		1876	3644	3410	1158	10088	19464	1.66	6969
1997	27704	16278	41434		1876	3822	3450	1213	10361	74504	1.71	-46800
1998	32183	10844	29421	8344	1876	4006	3491	1271	10644	67492	1.77	-35309
1999	86087				2345	7665	5956	2489	18456	32885	1.84	53201
2000	66055				2345	8033	4446	2609	17433	31221	1.90	34834
2001	76676				2345	8549	4533	2731	18158	35714	1.97	40962
2002	80249				2345	8942	4624	2858	18770	37079	2.04	43171
2003	84016				2345	9362	4720	2992	19419	38522	2.11	45494
2004	97395				2345	9786	4817	3129	20077	43781	2.18	53614
2005	102082				2345	10398	4925	3279	20947	45857	2.26	56225
2006	107891				2345	10979	5058	3466	21848	48006	2.34	59885
2007	136821				2345	12522	5414	3964	24245	58617	2.42	78204
2008	143001				2345	13081	5541	4143	25110	60907	2.50	82094
2009	149334				2345	13653	5672	4326	25996	63256	2.59	86078
2010	172846				2345	14246	5808	4516	26915	72148	2.68	100698
2011	180282				2345	14853	5947	4710	27855	74888	2.77	105394
2012	187875				2345	15476	6088	4908	28818	77697	2.87	110179
2013	216895				2345	16142	6233	5111	29831	88657	2.97	128238
2014	225664				2345	16788	6381	5317	30831	91872	3.08	133792
2015	234609				2345	17447	6531	5528	31851	95157	3.18	139452
2016	270226				2345	18119	6684	5743	32891	108379	3.30	161848
2017	280532				2345	18803	6841	5962	33951	112142	3.41	168390
2018	291032				2345	19501	7000	6185	35031	115981	3.53	175051
2019	334528				2345	20211	7162	6412	36131	131997	3.65	202531
2020	346600				2345	20934	7328	6643	37250	136387	3.78	210213

Note: Total cost at current price is caluculated by following fomula; FIRR= 18.17%

Total cost = Capital cost + Employee x infrator + (Material+Utility+Overhead) x multiplier of revenue(given in Table 4-8-9) NPV(12%)= 89630

Taole 4-8-11 CASH FLOW OF THE DEVELOPMENT CORPORATION

Unit: Rp. million

Year	Revenue with price up 1/4year	From Privete Firms	Total Revenue	Capital cost at current price			O & M cost at 1986 price					Total cost at current price	infrator	Net Profit
				Capital Cost F/C	Capital Cost L/C	Operation Equipments	Employee (L/C90%)	Material (L/C60%)	Utility (L/C100%)	Overhead (L/C80%)	Total O&M cost at 1986 price			
1989	0	0	0	0	673	8% of C.cost	0	0	0	0	0	673	0.00	-673
1990	0	0	0	267	847	(L/C30%)	0	0	0	0	0	1115	0.00	-1115
1991	0	0	0	270	877		0	0	0	0	0	1147	0.00	-1147
1992	0	0	0	2142	6960		0	0	0	0	0	9102	0.00	-9102
1993	0	0	0	4145	13467		0	0	0	0	0	17612	0.00	-17612
1994	0	0	0	4290	13938	3830	0	0	0	0	0	22059	0.00	-22059
1995	17832	1088	18920	222	740		201	984	132	185	1502	2278	1.60	16642
1996	4355	1150	5505	229	766		201	1025	136	191	1553	2341	1.66	3163
1997	4488	1211	5700	4038	13475		201	1068	140	196	1606	18895	1.71	-13195
1998	5120	1415	6535	2868	9571	2553	201	1112	144	202	1659	16521	1.77	-9986
1999	31560	2872	34432				252	1944	1836	336	4367	4890	1.84	29541
2000	8773	3022	11795				252	2025	247	347	2871	2103	1.90	9692
2001	10039	3520	13559				252	2247	255	358	3112	2600	1.97	10960
2002	10363	3697	14059				252	2335	263	370	3220	2653	2.04	11406
2003	10756	3880	14636				252	2437	273	384	3346	2736	2.11	11900
2004	12340	4510	16850				252	2537	283	397	3468	3053	2.18	13797
2005	12781	4740	17521				252	2789	293	411	3745	3445	2.26	14077
2006	13346	5024	18370				252	2925	306	429	3912	3545	2.34	14825
2007	16576	6398	22974				252	3286	343	481	4361	4146	2.42	18828
2008	17167	6702	23869				252	3418	355	498	4522	4252	2.50	19617
2009	17776	7013	24789				252	3552	368	515	4687	4362	2.59	20427
2010	20406	8133	28539				252	3692	381	534	4858	4888	2.68	23651
2011	21118	8498	29617				252	3835	394	552	5033	5016	2.77	24600
2012	21844	8872	30716				252	3985	407	571	5215	5155	2.87	25560
2013	25039	10259	35298				252	4167	421	591	5430	5880	2.97	29418
2014	25875	10690	36565				252	4319	435	610	5617	6028	3.08	30537
2015	26726	11131	37857				252	4475	450	630	5807	6180	3.18	31676
2016	30592	12839	43431				252	4634	464	651	6001	6934	3.30	36497
2017	31570	13346	44916				252	4796	479	672	6198	7106	3.41	37811
2018	32565	13864	46429				252	4960	494	693	6399	7280	3.53	39149
2019	37227	15955	53183				252	5128	509	714	6603	8168	3.65	45015
2020	38368	16551	54919				252	5298	525	736	6811	8364	3.78	46555

Note: Total cost at current price is caluculated by following fomula; FIRR= 16.58%

Total cost = Capital cost + Employee x infrator + (Material+Utility+Overhead+Payment to DC) x multiplier of revenue NPV(12%)= 19013

Table 4-8-12 CASH FLOW OF THE PRIVATE FIRMS

Unit: Rp. million

Year	Total revenue with price up 1/4year	Capital cost at current price Construction Cost F/C	Construction Cost L/C	Operation Equipments	O & M cost at 1986 price Employee (L/C90%)	Material (L/C60%)	Utility (L/C100%)	Overhead (L/C80%)	Payment to D.C (L/C100%)	Total cost Total O&M cost at 1986 price	Total cost O&M cost at current price	infrator	Net Profit
1989	0	0	0	8% of C.cost	0	0	0	0	0	0	0		0
1990	0	487	1079	(L/C30%)	0	0	0	0	0	0	1566		-1566
1991	0	492	1117		0	0	0	0	0	0	1609		-1609
1992	0	4720	8914		0	0	0	0	0	0	13634		-13634
1993	0	7461	17256		0	0	0	0	0	0	24717		-24717
1994	0	7722	17860	5369	0	0	0	0	0	0	30951		-30951
1995	20940	638	1510		1675	2485	3238	917	680	8996	16541	1.60	4399
1996	22078	660	1563		1675	2619	3274	967	718	9254	17123	1.66	4956
1997	23216	12241	27959		1675	2753	3309	1017	757	9512	55610	1.71	-32394
1998	27063	7976	19850	5792	1675	2894	3347	1069	798	9783	50971	1.77	-23908
1999	54527				2094	5721	4121	2153	1619	15708	27995	1.84	26532
2000	57282				2094	6008	4199	2262	1703	16265	29119	1.90	28163
2001	66636				2094	6302	4278	2373	1790	16836	33114	1.97	33522
2002	69887				2094	6607	4361	2489	1879	17430	34426	2.04	35461
2003	73260				2094	6924	4446	2609	1973	18046	35786	2.11	37474
2004	85055				2094	7249	4534	2732	2068	18677	40727	2.18	44327
2005	89301				2094	7609	4632	2868	2174	19376	42412	2.26	46889
2006	94545				2094	8054	4752	3036	2304	20240	44461	2.34	50085
2007	120246				2094	9236	5071	3483	2646	22530	54471	2.42	65775
2008	125834				2094	9663	5186	3645	2772	23360	56655	2.50	69179
2009	131558				2094	10101	5305	3810	2901	24210	58894	2.59	72664
2010	152440				2094	10554	5427	3982	3034	25092	67260	2.68	85180
2011	159164				2094	11018	5553	4158	3170	25993	69871	2.77	89292
2012	166031				2094	11491	5681	4337	3310	26913	72541	2.87	93490
2013	191856				2094	11975	5812	4520	3452	27852	82777	2.97	109079
2014	199790				2094	12468	5945	4707	3597	28811	85844	3.08	113945
2015	207883				2094	12971	6081	4898	3745	29789	88977	3.18	118907
2016	239634				2094	13484	6220	5092	3896	30787	101445	3.30	138189
2017	248962				2094	14007	6362	5290	4050	31803	105037	3.41	143925
2018	258467				2094	14540	6506	5492	4207	32840	108701	3.53	149766
2019	297301				2094	15083	6653	5698	4367	33895	123829	3.65	173472
2020	308232				2094	15636	6803	5907	4530	34970	128023	3.78	180209

Note: Total cost at current price is caluculated by following fomula;

Total cost = Capital cost + Employee x infrator + (Material+Utility+Overhead+Payment to DC) x multiplier of revenue

FIRR= 20.17%

NPV(12%)= 86490

4.9 Economic Analysis

4.9.1 General

The economic evaluation of the Tanjung Lesung Project was also made from the point of view of the whole national economy to confirm its economic viability through computation of economic internal rate of return (EIRR), following the same method as mentioned in Section 3.9.1 (the basic concept of EIRR is shown in ANNEX II.E.2).

4.9.2 Economic costs estimation

1) Basic concept

The economic costs of the Beach Project was calculated based on the same procedures as explained in Section 3.9.2-1).

2) Capital cost

The economic capital cost was estimated by following same procedures as explained in Section 3.9.2-2). The procedures applied in the study are summarized below.

a. Value added tax and import tax (each 10%) was eliminated.
b. Standard Conversion Factor (SCF) of 0.9 to the domestic portion
c. Conversion Factor for construction sector of 0.8 to the domestic portion
d. Shadow wage rate of 0.6 for the unskilled labour
e. Exchange rate: US$1 = Rp.1,640

The economic construction costs thus obtained are indicated in Table 4-9-1.

4.9.3 Operation and maintenance cost

The economic O&M cost of Beach Project was calculated based on the financial O&M cost following the same procedures as mentioned in Section 4.9.2.

4.9.4 Economic benefits estimation

1) Basic concept

The economic benefits derived from the Beach Project were calculated on the basis of the comparison between "with Project" and "without Project" cases for the year 2020. The Beach Project is expected to provide various benefits including recreation benefit and consumers' surplus, but only the direct tangible benefits were taken up as the Project's benefits as explained in Section 3.9.4.

2) Direct benefits

In this study, the financial benefits mentioned in Section 4.8.3 were used as economic benefits on the assumption that the tourists who visit the Project area are "willing to pay".

(1) Acquisition of foreign exchange

Foreign exchange earnings are one of the important aims of the tourism development in Indonesia.

The amount of foreign currencies acquired by the projects is assumed to be equal to the expenses of foreigners in the project area.

They will comprise hotel & restaurant expenses, expenses for facilities, shopping expenses and transportation expenses.

Although no distinction is made in number of overall visitors between foreigners and Indonesians, it is considered that overnight use by foreigners will greatly exceed that of overnight use by Indonesians.

The above tendency can be recognized in case of Bali as follows:

The number of visitors to tourist objectives in Bali by nationality (1985)

Foreigners	644 x 10^3 persons (47%)
Indonesians	733 x 10^3 persons (53%)

The number of guests in three to five star hotels in Bali by nationality (1985)

Foreigners	902 x 10^3 persons (81%)
Indonesians	209 x 10^3 persons (19%)

Source: DIPARDA TK.I Bali

According to the above data, the study team assumed that about 50% of the whole visitors and 30% of the hotel guests will be foreigners as shown in Table 4-9-2.

The amount of foreign exchange earnings accrued from the Project was taken as the revenues obtained from foreign visitors.

Table 4-9-2 TOURISM DEMAND FOR THE TANJUNG LESUNG BEACH PROJECT

(Unit: 1,000 persons)

Year	Total No. of Visitors (thousand)			Hotel		Villa		Condominimum		Day Use	
	Total	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
1989	0.0	Totalx254/507	Totalx253/507	Ratio=3:7		Rario= 3:7		Rario= 3:7			
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	186.1	92.9	93.2	19.5	45.6	0.0	0.0	0.8	2.0	72.5	45.7
1996	189.0	94.3	94.7	19.9	46.3	0.0	0.0	0.8	2.0	73.6	46.4
1997	192.0	95.8	96.2	20.2	47.0	0.0	0.0	0.9	2.0	74.8	47.1
1998	195.1	97.4	97.7	20.5	47.8	0.0	0.0	0.9	2.0	76.0	47.9
1999	373.3	186.3	187.0	35.5	82.7	0.5	1.1	1.4	3.3	149.0	99.9
2000	379.5	189.4	190.1	36.1	84.1	0.5	1.1	1.4	3.3	151.5	101.6
2001	385.9	192.6	193.3	36.7	85.5	0.5	1.1	1.4	3.3	154.0	103.5
2002	392.6	195.9	196.7	37.3	87.0	0.5	1.1	1.4	3.3	156.8	105.3
2003	399.5	199.4	200.1	38.0	88.6	0.5	1.2	1.5	3.5	159.4	107.0
2004	406.6	202.9	203.7	38.6	90.1	0.5	1.2	1.5	3.6	162.2	108.9
2005	415.1	207.1	208.0	39.4	92.0	0.5	1.2	1.6	3.6	165.7	111.1
2006	427.7	213.4	214.3	40.6	94.8	0.5	1.2	1.6	3.7	170.7	114.5
2007	478.3	238.7	239.6	45.4	106.0	0.6	1.4	1.8	4.1	190.9	128.1
2008	487.5	243.3	244.2	46.3	108.1	0.6	1.4	1.8	4.3	194.5	130.5
2009	497.1	248.1	249.0	47.2	110.2	0.6	1.5	1.9	4.4	198.3	133.1
2010	507.0	253.0	254.0	48.2	112.4	0.6	1.5	1.9	4.5	202.3	135.7
2011	516.9	257.9	259.0	49.1	114.5	0.7	1.5	2.0	4.6	206.3	138.3
2012	526.8	262.9	263.9	50.0	116.7	0.7	1.6	2.0	4.7	210.2	141.0
2013	536.7	267.8	268.9	50.9	118.9	0.7	1.6	2.0	4.8	214.2	143.6
2014	546.6	272.8	273.8	51.9	121.0	0.7	1.6	2.1	4.9	218.1	146.3
2015	556.5	277.7	278.8	52.8	123.2	0.7	1.7	2.1	5.0	222.1	148.9
2016	566.4	282.6	283.8	53.7	125.4	0.7	1.7	2.2	5.1	226.0	151.6
2017	576.3	287.6	288.7	54.7	127.5	0.7	1.7	2.2	5.2	230.0	154.2
2018	586.2	292.5	293.7	55.6	129.7	0.8	1.8	2.3	5.3	233.9	156.9
2019	596.1	297.5	298.6	56.5	131.9	0.8	1.8	2.3	5.4	237.9	159.5
2020	606.0	302.4	303.6	57.5	134.1	0.8	1.8	2.4	5.5	241.8	162.2

(2) Recreation benefit

The recreation benefit can be measured through the expenses of domestic visitors in the project areas. What people consume in the region represents the benefit that the people will get which is equivalent to the consumption. The expenses will be composed of hotel & restaurant expenses, expenses for the facilities, shopping expenses and transportation expenses.

(3) Consumers' surplus

Consumers' surplus is the benefit tourists receive over and above what they actually pay. The consumers' surplus together with the tourists actual payment constitutes the willingness to pay of consumers.

4.9.5 Economic feasibility

1) Economic internal rate of return

The economic internal rate of return (EIRR) of the Beach Project was calculated on the basis of costs and benefits of the Project (see Sections 4.9.2 and 4.9.3).

As shown in Table 4-9-3, the internal rate of return (IRR) of the Project would be 34.9% with the consumers' surplus taken into account. In case this surplus is excluded, EIRR would be 21.6% (Table 4-9-4). These values justify that the Project is economically feasible.

In addition to the calculation of EIRR, a sensitivity test was carried out to the examine the eventual fluctuation of EIRR. The results of sensitivity test are summarized below.

Project Benefit	EIRR (%)			
	Project Cost			
	-10%	±0%	+10%	One-year delay ±0%
-10%	34.9 (21.6)	31.6 (18.9)	28.7 (16.6)	31.6 (18.9)
±0%	38.4 (24.5)	34.9 (21.6)	31.9 (19.2)	34.9 (21.6)
+10%	41.6 (27.1)	38.0 (24.2)	34.9 (21.6)	38.0 (24.1)

Note: The figures in parentheses show EIRR without the consumers' surplus.

As seen from the above table, the Project EIRR would not substantially fluctuate from 28.7% in the worst case characterized by a 10% fall in benefit and a 10% increase in project cost, to 41.6% in the case characterized by a 10% increase of benefit an a 10% decrease in project cost.

Sensitivity to the delay of development up to five-year delay is referred to ANNEX II.E.3.

Table 4-9-3 ECONOMIC COST-BENEFIT STREAM OF THE BEACH PROJECT
(INCLUDING CONSUMER'S SURPLUS)

Year	Revenues			Transportation benefit			Consumer's surplus	Total rec. benefit		Foreign Ex. earnings		Cost									Benefit-Cost			
	L/C	F/C		L/C	F/C			(L/C)		(F/C)		Capital cost			Operation cost			Transportation cost			Total cost			L/C	F/C	Total
	Million	Rp.	1,000 US$	Million	Rp.	1,000 US$	Million Rp.	Million	Rp.	1,000	US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million Rp.
1989	0	0	0	0	0	0	0	0	0	0	0	375	0	0	0	0	0	0	0	0	375	0	0	-375	0	0	-375
1990	0	0	0	0	0	0	0	0	0	0	0	1037	323	0	0	0	0	0	0	0	1037	323	0	-1037	-323	0	-1567
1991	0	0	0	0	0	0	0	0	0	0	0	1037	323	0	0	0	0	0	0	0	1037	323	0	-1037	-323	0	-1567
1992	0	0	0	0	0	0	0	0	0	0	0	7978	2811	0	0	0	0	0	0	0	7978	2811	0	-7978	-2811	0	-12588
1993	0	0	0	0	0	0	0	0	0	0	0	14919	4594	0	0	0	0	0	0	0	14919	4594	0	-14919	-4594	0	-22453
1994	0	0	0	0	0	0	0	0	0	0	0	14919	4594	0	0	0	0	0	0	0	14919	4594	0	-14919	-4594	0	-22453
1995	14759	5777	1207	739	13207	29173	6516	1020	317	4695	925	1375	360	7094	1603	22079	4913	30136									
1996	6504	6108	1226	751	13412	21143	6858	1020	317	4764	966	1400	366	7184	1649	13959	5209	22502									
1997	6752	6441	1246	762	13625	21622	7204	17534	5615	6535	1007	1422	372	25492	6993	-3869	210	-3525									
1998	7009	6788	1266	775	13845	22120	7563	12029	3614	6693	1050	1445	378	20168	5041	1952	2522	6088									
1999	25787	13866	2422	1482	26491	54700	15349			9899	1939	2766	723	12664	2662	42036	12687	62843									
2000	13319	14584	2462	1507	26931	42712	16091			8831	2025	2812	735	11643	2760	31069	13331	52932									
2001	13863	15318	2503	1532	27385	43752	16851			10779	2141	2859	747	13638	2889	30114	13962	53011									
2002	14429	16081	2547	1559	27861	44837	17640			11118	2234	2909	760	14026	2994	30810	14646	54830									
2003	15025	16885	2592	1587	28350	45967	18472			11537	2332	2960	773	14497	3105	31470	15367	56672									
2004	15631	17703	2638	1615	28854	47123	19318			11899	2431	3012	787	14911	3218	32212	16099	58615									
2005	16302	18604	2693	1648	29457	48452	20253			12291	2569	3075	804	15366	3373	33086	16880	60768									
2006	17140	19718	2775	1698	30352	50266	21416			12730	2705	3169	828	15899	3533	34367	17883	63695									
2007	19431	22659	3103	1899	33942	56476	24558			13648	3067	3544	926	17192	3993	39285	20566	73012									
2008	20226	23732	3163	1936	34595	57984	25668			14155	3197	3612	944	17767	4141	40217	21527	75522									
2009	21041	24832	3225	1974	35277	59543	26806			15140	3331	3683	962	18822	4293	40720	22513	77642									
2010	21887	25973	3289	2013	35979	61155	27986			15649	3470	3756	982	19405	4451	41749	23535	80346									
2011	22749	27138	3353	2053	36682	62784	29191			16171	3612	3830	1001	20000	4612	42784	24578	83092									
2012	23630	28328	3417	2092	37384	64431	30420			16707	3757	3903	1020	20610	4777	43821	25643	85876									
2013	24528	29544	3482	2131	38087	66096	31675			17256	3912	3976	1039	21233	4951	44864	26724	88692									
2014	25444	30785	3546	2171	38789	67779	32955			17818	4063	4050	1058	21868	5121	45911	27834	91559									
2015	26377	32051	3610	2210	39492	69479	34261			18406	4217	4123	1077	22529	5294	46950	28966	94455									
2016	27328	33342	3674	2249	40194	71197	35591			18989	4374	4196	1097	23185	5471	48012	30121	97409									
2017	28297	34658	3739	2289	40897	72933	36947			19584	4534	4270	1116	23853	5650	49079	31297	100406									
2018	29284	35999	3803	2328	41600	74686	38327			20190	4697	4343	1135	24533	5832	50153	32495	103445									
2019	30288	37366	3867	2367	42302	76457	39733			20808	4863	4416	1154	25224	6017	51233	33716	106527									
2020	31310	38758	3931	2407	43005	78246	41164			21436	5032	4490	1173	25926	6206	52319	34959	109652									
																					EIRR=			33.42%	37.36%	34.92%	
																					NPV(12%)=			83104	43484	154417	

Note: Capital cost includes the cost of operation equipments.

Bruno Ratio(12%)= -1911

Table 4-9-4 ECONOMIC COST-BENEFIT STREAM OF THE BEACH PROJECT
(WITHOUT CONSUMER'S SURPLUS)

Year	Revenues			Transportation benefit			Consumer's surplus	Total rec. benefit		Foreign Ex. earnings		Cost										Benefit-Cost			
	L/C	F/C		L/C	F/C			(L/C)		(F/C)		Capital cost			Operation cost			Transportation cost			Total cost			L/C	F/C		Total
	Million	Rp.	1,000 US$	Million	Rp.	1,000 US$	Million Rp.	Million	Rp.		1,000 US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million	Rp.	1,000US$	Million Rp.
1989	0	0	0	0	0	0	0	0	0	0	0	375	0	0	0	0	0	0	0	0	375	0	0	-375	0	0	-375
1990	0	0	0	0	0	0	0	0	0	0	0	1037	323	0	0	0	0	0	0	0	1037	323	0	-1037	-323	0	-1567
1991	0	0	0	0	0	0	0	0	0	0	0	1037	323	0	0	0	0	0	0	0	1037	323	0	-1037	-323	0	-1567
1992	0	0	0	0	0	0	0	0	0	0	0	7978	2811	0	0	0	0	0	0	0	7978	2811	0	-7978	-2811	0	-12588
1993	0	0	0	0	0	0	0	0	0	0	0	14919	4594	0	0	0	0	0	0	0	14919	4594	0	-14919	-4594	0	-22453
1994	0	0	0	0	0	0	0	0	0	0	0	14919	4594	0	0	0	0	0	0	0	14919	4594	0	-14919	-4594	0	-22453
1995	14759	5777	1207	739	13207	15966	6516	1020	317	4695	925	1379	360	7094	1603	8872	4913	16930									
1996	6504	6108	1226	751	13412	7730	6858	1020	317	4764	966	1400	366	7184	1649	547	5209	9090									
1997	6752	6441	1246	762	13625	7997	7204	17534	5615	6535	1007	1422	372	25492	6993	-17495	210	-17150									
1998	7009	6788	1266	775	13845	8275	7563	12029	3614	6693	1050	1445	378	20168	5041	-11893	2522	-7757									
1999	25787	13866	2422	1482	26491	28209	15349			9899	1939	2766	723	12664	2662	15545	12687	36352									
2000	13319	14584	2462	1507	26931	15781	16091			8831	2025	2812	735	11643	2760	4138	13331	26001									
2001	13863	15318	2503	1532	27385	16367	16851			10779	2141	2859	747	13638	2889	2728	13962	25626									
2002	14429	16081	2547	1559	27861	16976	17640			11118	2234	2909	760	14026	2994	2950	14646	26970									
2003	15025	16885	2592	1587	28350	17617	18472			11537	2332	2960	773	14497	3105	3120	15367	28321									
2004	15631	17703	2638	1615	28854	18269	19318			11899	2431	3012	787	14911	3218	3357	16099	29760									
2005	16302	18604	2693	1648	29457	18995	20253			12291	2569	3075	804	15366	3373	3628	16880	31311									
2006	17140	19718	2775	1698	30352	19915	21416			12730	2705	3169	828	15899	3533	4016	17883	33343									
2007	19431	22659	3103	1899	33942	22534	24558			13648	3067	3544	926	17192	3993	5342	20566	39070									
2008	20226	23732	3163	1936	34595	23389	25668			14155	3197	3612	944	17767	4141	5622	21527	40927									
2009	21041	24832	3225	1974	35277	24266	26806			15140	3331	3683	962	18822	4293	5444	22513	42365									
2010	21887	25973	3289	2013	35979	25176	27986			15649	3470	3756	982	19405	4451	5770	23535	44367									
2011	22749	27138	3353	2053	36682	26103	29191			16171	3612	3830	1001	20000	4612	6102	24578	46410									
2012	23630	28328	3417	2092	37384	27047	30420			16707	3757	3903	1020	20610	4777	6437	25643	48491									
2013	24528	29544	3482	2131	38087	28010	31675			17256	3912	3976	1039	21233	4951	6777	26724	50605									
2014	25444	30785	3546	2171	38789	28990	32955			17818	4063	4050	1058	21868	5121	7122	27834	52770									
2015	26377	32051	3610	2210	39492	29987	34261			18406	4217	4123	1077	22529	5294	7458	28966	54963									
2016	27328	33342	3674	2249	40194	31003	35591			18989	4374	4196	1097	23185	5471	7817	30121	57215									
2017	28297	34658	3739	2289	40897	32036	36947			19584	4534	4270	1116	23853	5650	8182	31297	59509									
2018	29284	35999	3803	2328	41600	33086	38327			20190	4697	4343	1135	24533	5832	8554	32495	61846									
2019	30288	37366	3867	2367	42302	34155	39733			20808	4863	4416	1154	25224	6017	8931	33716	64225									
2020	31310	38758	3931	2407	43005	35241	41164			21436	5032	4490	1173	25926	6206	9315	34959	66647									

Note: Capital cost includes the cost of operation equipments.

Bruno Ratio(12%)= 330

EIRR= 5.87% 37.36% 21.64%

NPV(12%) -14357 43484 56956

2) Bruno ratio

In addition to the assessment by the EIRR, the "Bruno ratio" was calculated in the study to evaluate the effect of foreign exchange earnings. This ratio shows that to save or earn one unit of foreign exchange how much this Project costs in terms of domestic resources. The ratio then called "internal foreign exchange rate".

Bruno ratio (BR) can be calculated by the following formula.

$$BR = \frac{\text{Present value of domestic resources incurred}}{\text{Present value of foreign exchange saved}}$$

In case of the Beach Project (without consumers' surplus), Bruno ratio is 330 with the discount rate of 12%. This figure means that this project is very efficient from the view point of the acquisition of foreign currency, because the ratio is much less than the official exchange rate (US$ = Rp.1,640).

4.9.6 Indirect benefits

Multiple indirect benefits as described below are expected to be generated by the realization of the Beach Project.

1) Employment opportunities

It is estimated that 2,443 of additional job opportunities will be created to operate and maintain the Project facilities such as hotels, condominium & villas, restaurants, shops, leisure facilities, etc.

2) Investment inducing effects

The economic effects of the Tanjung Lesung project will be felt in two ways. One will be the economic effects of the investment and the other is those of operation. The former effect will be the combined effect of investment by the Development Corporation and by private companies.

The same method as described in 3.9.2 can be adopted for estimation of these effects. The multiplier in the bottom line of the inverse matrix of "Construction" sector of the I-O table is 1.710782. The total investment amount of the Development Corporation will amount to Rp.79.8 billion and that of private companies to Rp.139.5 billion, a total of Rp.219.3 billion. Hence, the total economic effect of the investment will amount to Rp.375.2 billion.

3) Operation inducing effects

The consumption expenditure of the tourists will have some effects on the regional economy. The mechanism of the effect of consumption expenditure in Tanjung Lesung Beach Resort will be same as that in Old Banten. The only difference will be found in the items of consumption expenditure. In Tanjung Lesung, it is planned to construct such facilities as hotels, shops, restaurants, tennis courts, marinas and golf courses. The sectors in the I-O table correspond to the above mentioned items are shown in Table 4-9-5.

Hence, the total economic effect of consumption expenditure through 1994 to 2020 will reach Rp.6,923.0 billion.

Table 4-9-5 DETAILS OF OPERATION INDUCING EFFECTS

<Correspondence between consumption items and sectors in I-O table>

Items of consumption	Sectors in I-O Table
Hotels	Restaurant & Hotel
Hotel & Shops	Restaurant & Hotel
Entrance	Other services
Water & Electricity	Electricity, Gas & Water Supply
Condominium & Villa	Restaurant & Hotel
Tennis	Other Services
Golf	Other Services
Marina	Other Services
Restaurant	Restaurant & Hotel
Shops	Trade
Transportation	Transportation
Others	Other Services
Cruise	Other Services

<Multipliers of sectors>

Restaurant & Hotel	1.813473
Other Services	1.456926
Trade	1.126341
Transportation	1.400044
Electricity, Gas & Water Supply	1.710782

<Amount of consumption expenditure of tourists through 1994 to 2020>

Restaurant & Hotel	Rp. 3,382.5 billion
Other Services	251.3
Trade	314.7
Transportation	40.4
Electricity, Gas & Water Supply	6.9/3,995.8

4.10 Project Evaluation and Recommendations

4.10.1 Overall evaluation

The FIRR of the Beach Resort project stands at 18.2%. Calculated on the economic viewpoint, EIRRs are 34.9% and 21.6% respectively in case of inclusion and exclusion of the consumers' surplus.

The FIRR and EIRR values above would prove enough that the beach Project is feasible, both financially and economically.

Compared to Old Banten Project, the Beach Project is rather a business enterprise. It presents many direct and indirect advantages. Among these, it is worthy to mention its substantial contribution to foreign exchange earnings, creation of job opportunities, generation of multiplier effects, promotion of infrastructure, tourism and regional development, etc. Its location near to Jakarta in driving distance is another major merit for early implementation of this project. The advantage lays in its location which is at driving distance from Jakarta. It would attract, beside international tourists, domestic visitors as well as the foreign community members living in West Java. The economic prospect of the project will be far fetched at it will help to bring the area out of its under-development.

The results of overall evaluation are summarized in Table 4-10-1.

Table 4-10-1 GIST OF OVERALL EVALUATION FOR TANJUNG LESUNG BEACH RESORT PROJECT

Index	Comments or Countermeasures
Development cost:	Rp.219 billion (total) Rp.115 billion (Stage 1) Rp.104 billion (Stage 2)
Feasibility & viability	
- Financial feasibility	Viable (FIRR = 18.2%)
- Economic feasibility	Feasible (EIRR = 34.9% including consumers' surplus) (EIRR = 21.6% excluding consumers' surplus)
- Technical soundness	No specific problems
- Impact on natural environment	Although negative impacts due to sewage and nature disturbance are foreseen, they will be able to be minimized by providing treatment plant and long sewerage pineline to offshore, and sufficient buffer zone around the Project site.
- Impact on socio-cultural environment	No serious problems are anticipated, but it is essential to take close contact with the local communities to avoid frictions.
Development benefits	
(Direct benefits, at current price)	
- Foreign exchange earning (total)	US$ 9.2 million (in the operation year 1995) US$68.4 million (in the target year of 2010)
• Development Corporation	US$ 6.7 million (2010) 1.0 (1995)
• Private Sector	US$61.7 million (2010) 8.2 (1995)
- Bruno ratio	330 with the discount rate of 12%. As the exchange US$1 = Rp.1,640, the Project contributes to the earning of foreign exchanges.
- Revenues + Consumers' Surplus	Rp. 46.7 bil. (1995) = Rp.29.2 bil. at constant price of 1986 Rp.162.9 bil. (2010) = Rp.60.8 bil. at constant price of 1986
- Job opportunity	
• Construction period	7 million (man/day)
• Operation period	2,443 persons
(Indirect benefits)	
- Multiplier effects	- Investment inducing effects: Rp.374.6 billion - Operation inducing effects: Rp.6,923.0 billion
- Infrastructure	Construction of access road will contribute to promote the development of the surrounding Project area. If the branch pipeline is installed by the local government, the local community would also enjoy water supply.
- Others	Regional economy is expected to be vitalized subsequent to the promotion of tourism in the region. Understanding about nature and culture in the region will be promoted through realization of this Project.

4.10.2 Recommendations

The area around the site of the beach resort at Tanjung Lesung is sparsely inhabited and the site itself is still in its natural environment. There will be no major technical nor social problems in establishing the project for tourism development at Tanjung Lesung.

Prior to its implementation, it would be necessary for the authorities to take appropriate measures for smooth execution of the project. Necessary prerequisites are;

- Financial negotiations with international agencies.
- Site demarcation of project area.
- Zoning of project area.
- Establishment of an inter-agency committee involving local, regional and national government agencies as well as local civic leaders to promote a balanced regional development.
- Widespread public relation to secure cooperation from local population and particularly religious and civic leaders of surrounding communities.
- Formulation of design principles.
- Preparation of land use map at scale of 1:5000 - 1:10,000.
- Environment impact analysis based on Indonesian regulations.
- Establishment of a development corporation to handle the project.

The development of a tourism project is usually accompanied by multiples effect benefits to the region involved in tourism. Such effects are in demands for goods and consumption that lead to accrued production, transportation and commercialization. These sectors will provide opportunities for job opening that will help in income increase. The construction

sector, although temporary, will help to revitalize the region's economy with additional infrastructures.

With the anticipated new activities in the project area, it is recommended that the Development Corporation should promote such activities as

- Induce the handicraft industry to produce attractive and vernacular souvenir crafts.
- Revitalize traditional and local arts and plays.
- Organize vocational training programme for employment in tourism industry.
- Hold seminars to educate the business community for better services to visitors and tourists.

These measures should be realized in parallel with preparatory works to be ready when the project will come into operation and avoid any damage to its future reputation.

CHAPTER 5

RECOMMENDATIONS FOR IMPROVEMENT OF CARITA BEACH

CHAPTER 5 RECOMMENDATIONS FOR IMPROVEMENT OF CARITA BEACH

5.1 Existing Conditions of the Area

The Carita beach, located about 8 km north of Labuan, has a long sandy beach which is superior to any other beaches along the west coast of Jawa Island.

As the beach is situated in a bay, the waves are moderate enough for bathing. As a result this area was developed as a kind of beach resort some time ago, and is now well-known to people as Pantai Carita.

However, as most of the land along the beach is owned and developed by private companies and citizens, it is difficult for the general public to approach the shore line.

Furthermore, the road is located so close to the beach that there is no space for future extension.

Even though there are three (3) public beaches to the north-east of Carita beach, these are not large enough to accommodate many people and their facilities are minimal. A land use map of this area is shown in Fig. 5-1-1.

It is recommended, therefore, that the area be rearranged and improved into a genuine public beach resort where people can enjoy sea-oriented recreation.

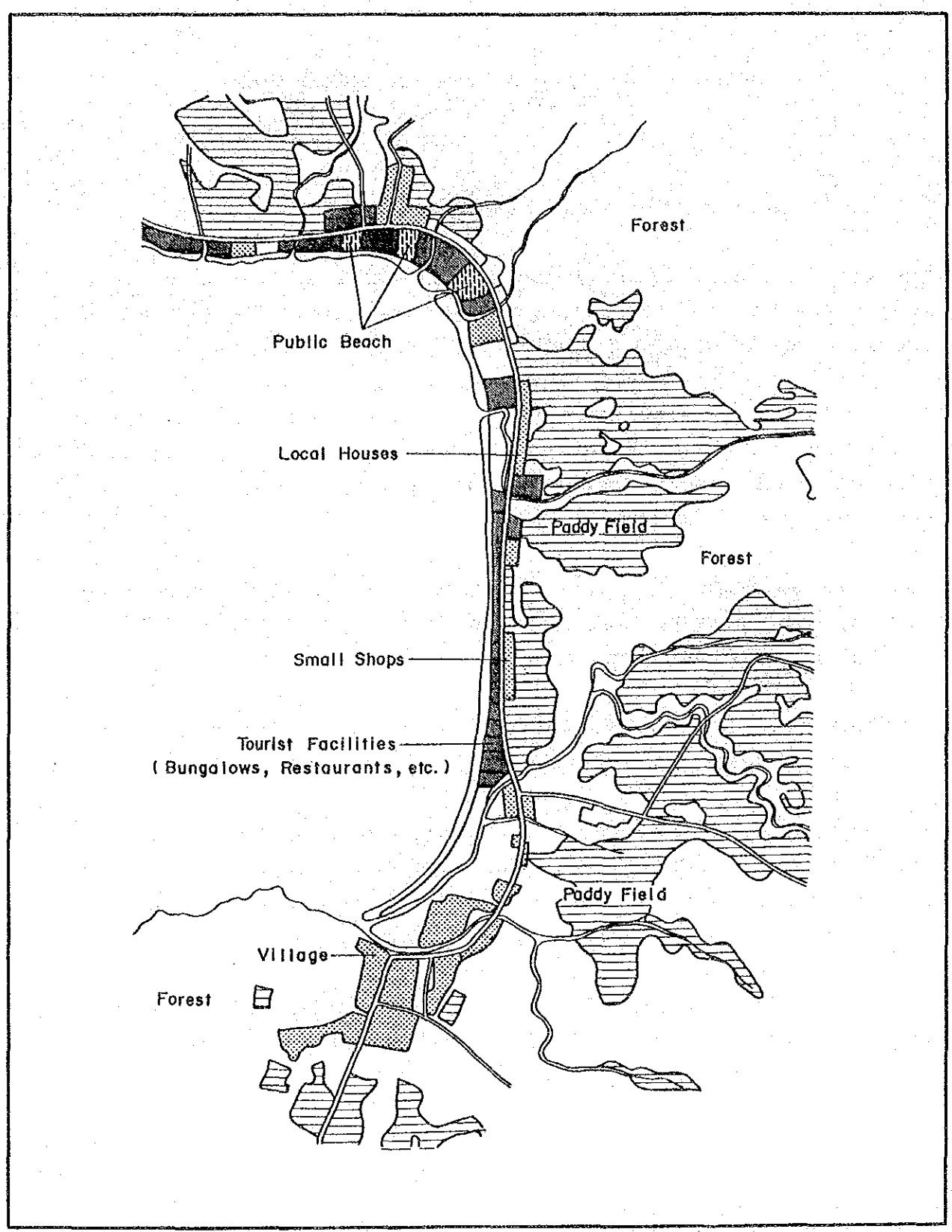

Fig. 5-1-1
PRESENT LAND USE IN AND AROUND
THE CARITA BEACH

5.2 Alternatives of Improvement Plan

In order to improve existing conditions, relocation of the existing road is essential.

According to the length of the road to be relocated, alternative plans can be drawn as shown in Fig. 5-2-1.

The contents and the features of each alternative plans are as follows:

Alternative-1 Construction of 6.0 km by-pass road
- Existing road being changed into a toll road

Alternative 2 Construction of 2.2 km by-pass road
- Existing road being relocated and changed to an internal connecting road.
- Large scale land consolidation would be undertaken (as shown in Fig. 5-2-1).

Alternative-3 Construction of 1.4 km by-pass road
- Existing road being utilized as a controlled road to avoid a heavy traffic.
- Small scale land consolidation would be introduced (to secure public access to the beach).

Considering the feasibility of each plan, especially the possibility of land acquisition and the balance of costs and benefit on the assumption that a new Beach Resort will be constructed in Tanjung Lesung, the most desirable plan might be alternative-3.

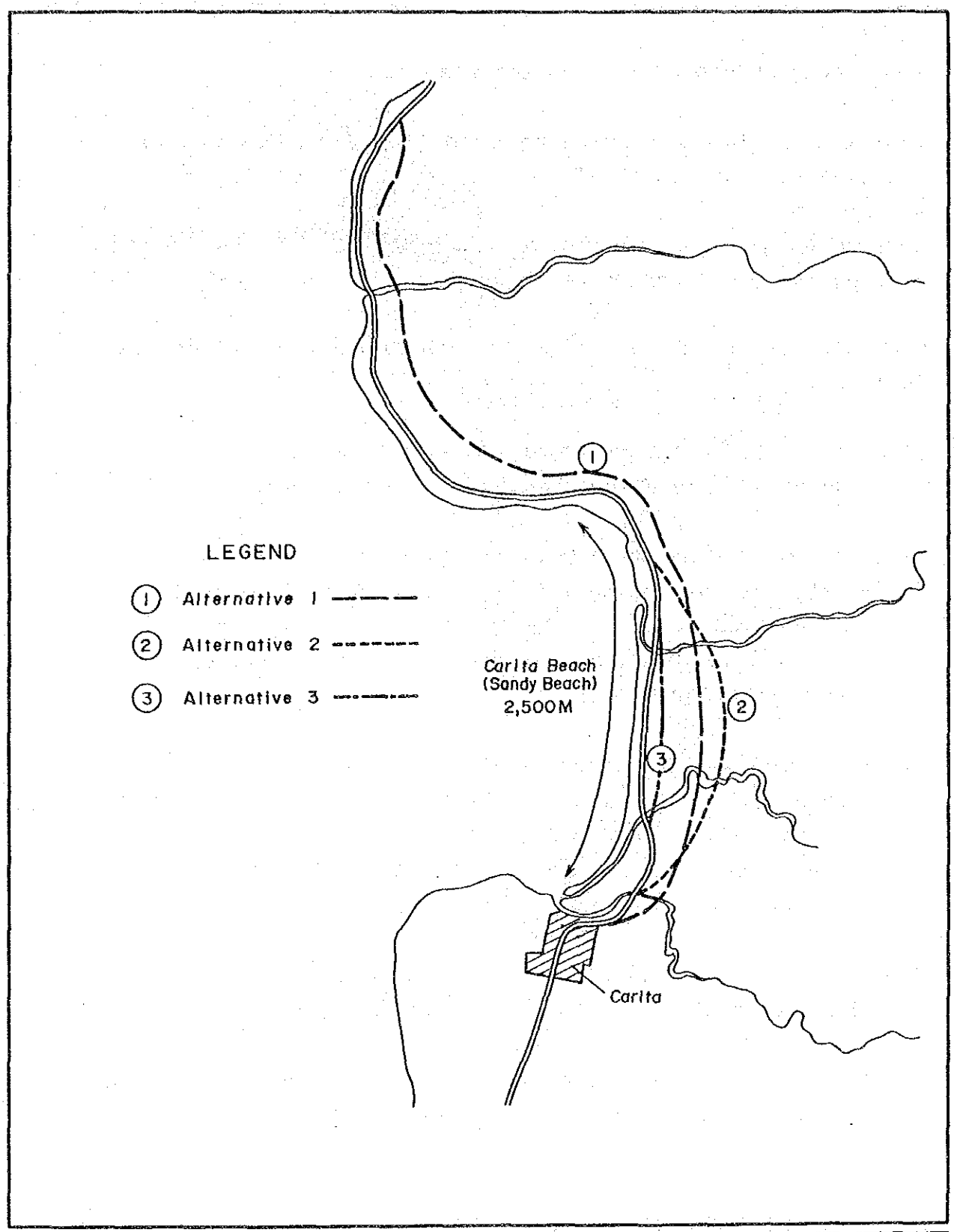

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Fig. 5-2-1
ALTERNATIVE PLANS FOR INSTALLATION
OF BY-PASS ROAD IN CARITA BEACH

5.3 Proposed Plan for Improvement of Carita Beach

Taking all the above into consideration and also existing conditions, the following plan is recommended for improvement of Carita Beach (see Fig. 5-3-1).

- The traffic using the existing road should be diverted onto the new road.

- The land between the coast and the new road should be consolidated to create new spaces for public use, accommodation and other services for the tourists.

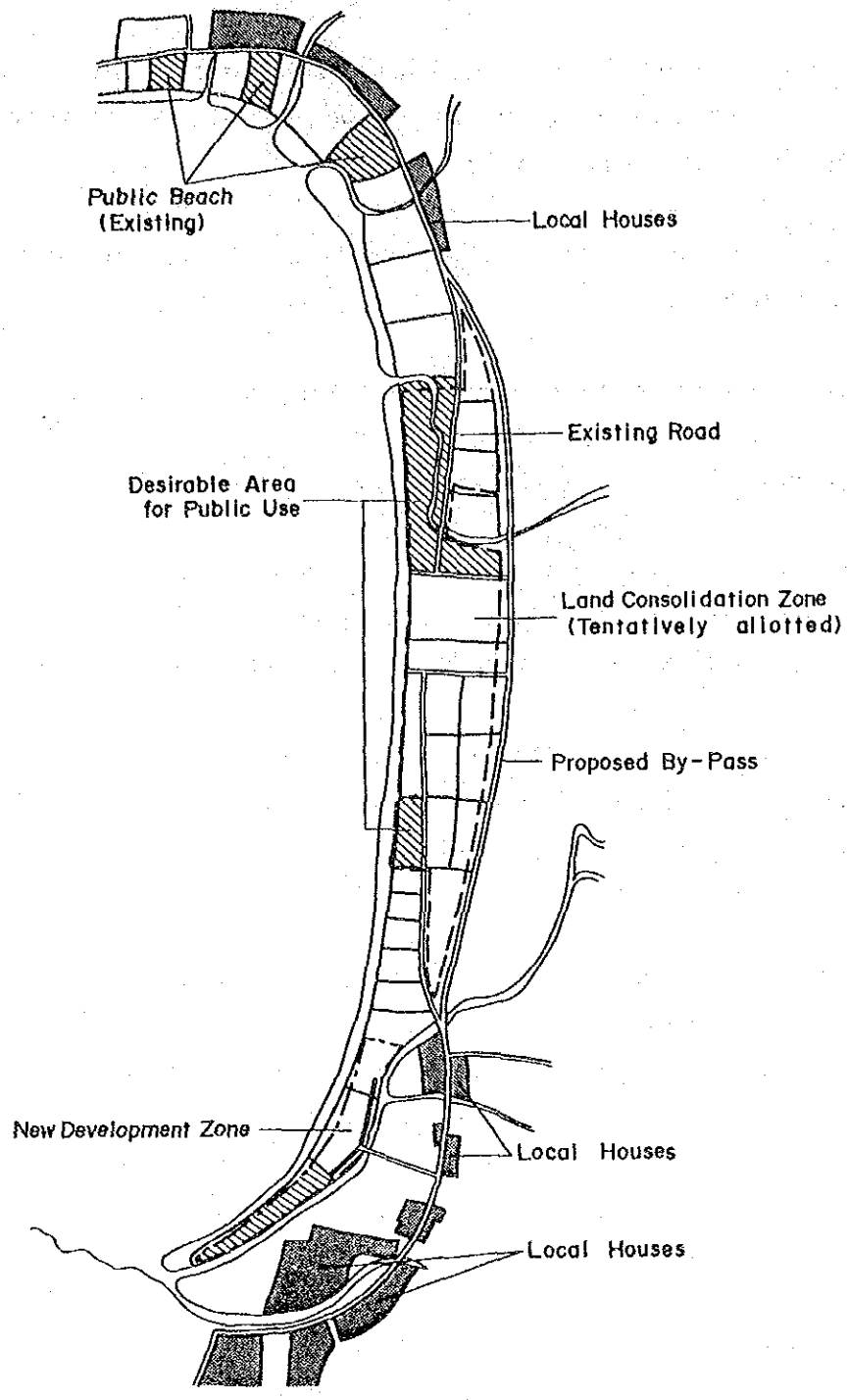
- 400 beds/1 should be provided by new hotels, villas and guest houses. The space for the new demand will be prepared in the land consolidation zone.

- Public conveniences, public beaches, picnic area, rest houses, play ground, parking lots and other facilities would be provided in public areas, as shown in Fig.5-3-1.

- In addition to macro-scopic land use control, detailed regulations and a design code on the following items will be needed to construct a comfortable beach resort:
  - Setback line from the shore line.
  - Ratio of building coverage to the site.
  - Ratio of nature conservation area to the site.
  - Removal of unscenic obstacles.

- It is recommended that the above regulations should be applied not only in Carita Beach but also all along the coast area in West Java.

Note: /1 The target number of beds needed in this area is calculated to be 1,000 in the year of 2010 (see Chapter). Since there already exists about 600 beds, 400 more should be added in the future.



N

0 .2 .4 .6 .8 1.0km

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Fig. 5-3-1
PROPOSED DEVELOPMENT PLAN FOR
CARITA BEACH AREA

5.4 Proposed Method of Implementation

The most important question in this improvement plan is how to acquire the land for public use, such as for the new by-pass road and public open spaces (picnic area, playground and other public facilities).

Taking all the circumstances into consideration it is recommended that land acquisition for the project should be based on a combination of:

Land consolidation, and
Expropriation of unused land.

For the land consolidation, it is recommended that an association be formed consisting of land-owners of the concerned area, under the control of the local government.

Re-allotment of land within the project area would be planned by this association.

VOLUME 4

IMPLEMENTATION PROGRAMME (MAIN REPORT)

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