

## Appendix A.4 Singapore

### A.4.1 Outline of Singapore Port

The Port of Singapore is strategically located at the crossroads of international trade and is rated as one of the busiest ports in the World in terms of shipping tonnage. The port is endowed with a well-sheltered, natural deep water harbour and the extensive facilities cater for super tankers, container ships, bulk carriers, cargo freighters, luxury ocean liners, coastal vessels, lighters, trawlers and other smaller craft. The Port of Singapore is connected with more than 580 ports by more than 380 shipping companies in the world. In 1996, 12,800,000 TEUs were handled in Singapore Port. See Figure A.4.1, Table A.4.1, Picture A.4.1 and Figure A.4.2.

### A.4.2 Recent shipping trend

Since second half of 1980's through 1990's, the world economy has been developed with the progress of Asian countries. In the world shipping, routes from/to Hong Kong and Singapore have played an important role in Asia. Especially Singapore Port has played an important role as a hub port between North America/Europe and the neighboring countries including Indonesia. Direct call vessels started from ports in Japan drop in Singapore on the way to ports in Indonesia.

Feeder service vessels based on Singapore are carrying cargo from India, Thai, Southern China, Vietnam and Cambodian to Indonesian ports through Singapore Port. SAMUDERA which is one of major feeder operator, provides feeder service covering major Indonesian ports with 100 TEU - 1,000 TEU container vessels according to cargo volumes. Feeder ports in Indonesia are Surabaya, Semarang, Jakarta and Merak in Java, Panjang, Palembang, Jambi, Pekanbaru, Medan in Sumatera.

### A.4.3 Port development

#### A.4.3.1 Current Policy for Port Development

Principle of the national port development of Singapore is to develop port facilities by disbursing lots of budget on port development. The port and the airport of Singapore are key infrastructures which attract foreign merchants in Singapore. So, Singapore government has played the dominant role for the port development. The port development has been conducted as a key of the national policy by using lots of budgets. It has been also very supportive to the port development.

Consumption in Singapore is not expected to increase in the future because of limited land area and small population. Singapore has been traditionally developed by intermediate trades between East and West. Now, finance business and high technology of computer equipment and its surrounding industries are fundamental industries of Singapore which needs to export to the world market.

In 1988, Urban Redevelopment Authority formulated the total land use plan which target year is 2008. In this plan, the port development plan as of 2000, 2010 and year X when the population reaches 4 million is also indicated. See Figure A.4.3.

#### A.4.3.2 Future prospect of the port development

Especially the Singapore port puts importance on constructing the "Pasir Panjang Terminal", which has most modernized container handling system, and has big capacity for container handling.

In this plan, the terminal is due to be divided and developed in four phases over 30 years. Phase 1, due for completion in 1998, is composed with reclamation area of 129ha and the construction of eight container berths with a total length of 2,730m. Phase 2 will offer 18 berths and is due for completion in 2009. On completion, the terminal will have 50 container berths, total length 17,000m.

Based on the above plan, capacity for container handling in Singapore will reach 36 million TEU in the future in spite of the present capacity 12 million TEU. After completion of this new terminal, land use of the area, where old terminal are located, will be converted to the urban area redevelopment. See Picture A.4.2.

#### A.4.4 Present Situation of Administration and Management/Operation of Singapore Port

Maritime and Port Authority(MPA) is responsible for infrastructure planning, all navigational matters in Singapore port and the safety standards of all classes and types of vessels. The MPA is a new statutory board which came into operation on 2 Feb 96, having been established by the MPA Act (1996).

The Board's key mission is to protect Singapore's strategic maritime interests and to promote Singapore as a major port and international maritime center. The MPA was formed by merging the Marine Department, the National Maritime Board, the regulatory departments of the Port of Singapore Authority(PSA). The MPA comes under the purview of the Ministry of Communications.

In July 1997, in order to aim at an efficient port operation, The PSA has changed its function from government division to three private management, container terminal division, warehousing & logistic division and international business division.

Background of the above is as follows.

- 1) Port development, management and operation became beneficial because of the previous efforts by the government as well as geographical advantage and qualified rich human resources.
- 2) Privatization of the PSA can make it possible to distribute the benefit earned through port activity to the people equally.
- 3) The PSA can invest in foreign ports for more benefit by privatization.

The PSA has about seventy direct-call liner services around the world. The PSA corporation operates Tanjong Pagar Terminal, Keppel Terminal, Brani Terminal and newly developed Pasir Panjang Terminal covering 259 hectares.

Details of the terminals are shown in Table 10.4.6.

#### A.4.5 Others

##### (1) Privatization

Recently some people criticizes the privatization of the PSA. Because the government cannot support the activity of the fully privatized the PSA against the present severe situation, such as the increase of the ports in neighboring countries which are open to the world in Asian countries and recent monetary crisis in Asia.

##### (2) Neighboring Ports

Recently, neighboring countries have constructed their own ports which can handle the international container cargoes to be shipped to destination or from the origin by direct call. And now the volume of the container cargoes which were handled in these ports is rapidly increasing as follows.

##### Container handling in Ports neighboring Singapore

<u>Port</u>	<u>Container (TEUs)</u>	<u>Increase Rate (%)</u>
Tanjung Priok	1.6 million	+ 8.9% (for 1995)
Port Kelang	1.4 million	+ 24.3
Laem Chabang	0.73 million	+ 38.0
Manila	1.92 million	+ 13.7
Colombo	1,36 million	+ 35.6

##### (3) To compete with rivals

The competition between consortiums which serve European liner service and American service become more serious. To make liner service very substantial, shipping company began to call neighboring other ports of Singapore Port.

To cope with the above situation, Singapore makes efforts to maintain and increase the international competitiveness, such as improvement of the efficiency/productivity, investment for the port development in foreign countries and so on. For example, in improvement of the efficiency/productivity, the PSA gives the shipping companies incentives for establishing the new routes calling Singapore Port, by discounting the tariff. The PSA also recommends them quick turnarounds in order to utilize the narrow container yard, by giving the users discount for transshipment within 24hours.

(4) The PSA have International Advisory Council(IAC) comprising top executives of major container shipping lines and related Boards, deliberated on current topics of interest, and on shipping and trade trends.

Table A.4.1 Statistics of the activity of Singapore Port

# Operating Statistics

## Cargo handled by the Port of Singapore

	General & Bulk Cargo	Mineral Oil-In-bulk	Total (freight tonnes)
1987	55,881,000	73,597,400	129,458,400
1988	71,237,300	83,501,500	154,738,800
1989	89,877,700	84,420,100	174,297,800
1990	100,883,800	86,905,500	187,789,300
1991	114,914,200	91,514,800	206,429,000
1992	133,001,600	105,444,300	238,445,900
1993	150,245,800	123,477,300	273,723,100
1994	165,994,900	124,079,800	290,074,700
1995	179,109,000	126,375,000	305,484,000
1996	184,286,300	129,877,700	314,164,000

Note: Includes cargo handled at the anchorages and private wharves w.e.f. January 1989

## Cargo & Containers handled at the Tanjong Pagar Terminal/Keppel Terminal and Brani Terminal\*/ex-Keppel Wharves & M01-M06

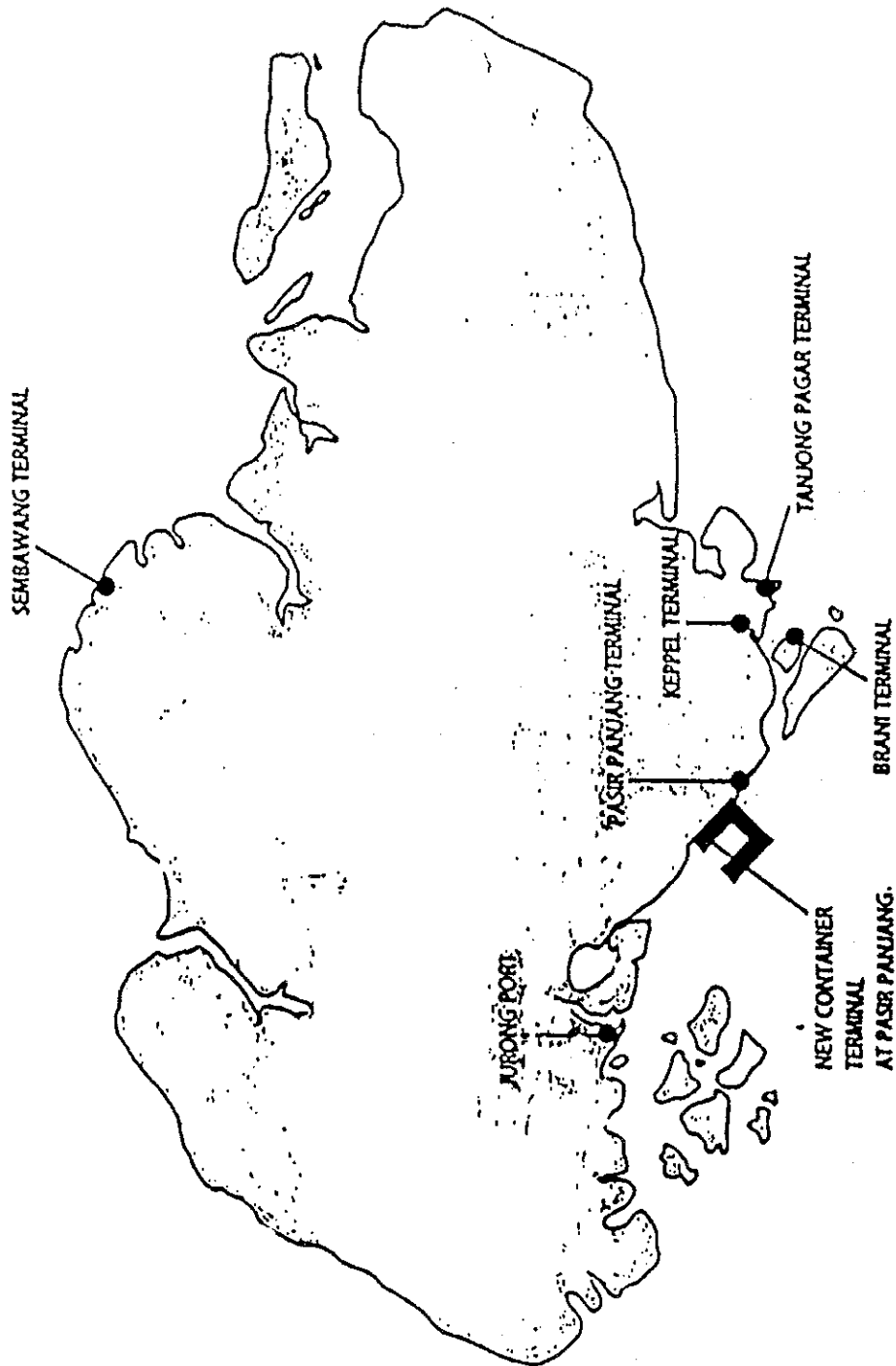
	General Cargo (freight tonnes)	Bulk Cargo (freight tonnes)	Total (freight tonnes)	No of containers (TEUs)
1987	42,044,500	673,600	43,622,100	2,532,000
1988	50,490,600	796,000	57,286,600	3,302,500
1989	70,529,400	850,900	71,380,300	3,915,600
1990	80,002,800	741,400	80,744,200	5,133,800
1991	92,686,000	933,500	93,619,500	6,245,300
1992	108,495,000	938,800	109,433,800	7,398,500
1993	125,259,300	967,800	126,227,100	8,876,900
1994	140,396,900	1,027,200	141,424,100	10,254,900
1995	152,829,100	1,013,900	153,843,000	11,713,200
1996	158,921,200	931,500	159,852,700	12,823,800

\* Brani Terminal commenced operations in December 1991

\* Brani Terminal commenced operations in December 1991

TEUs - Twenty-foot Equivalent Units

Figure A.4.1 Location of the Terminals



Picture A.4.1 Container Handling Activity in Present Container Terminals

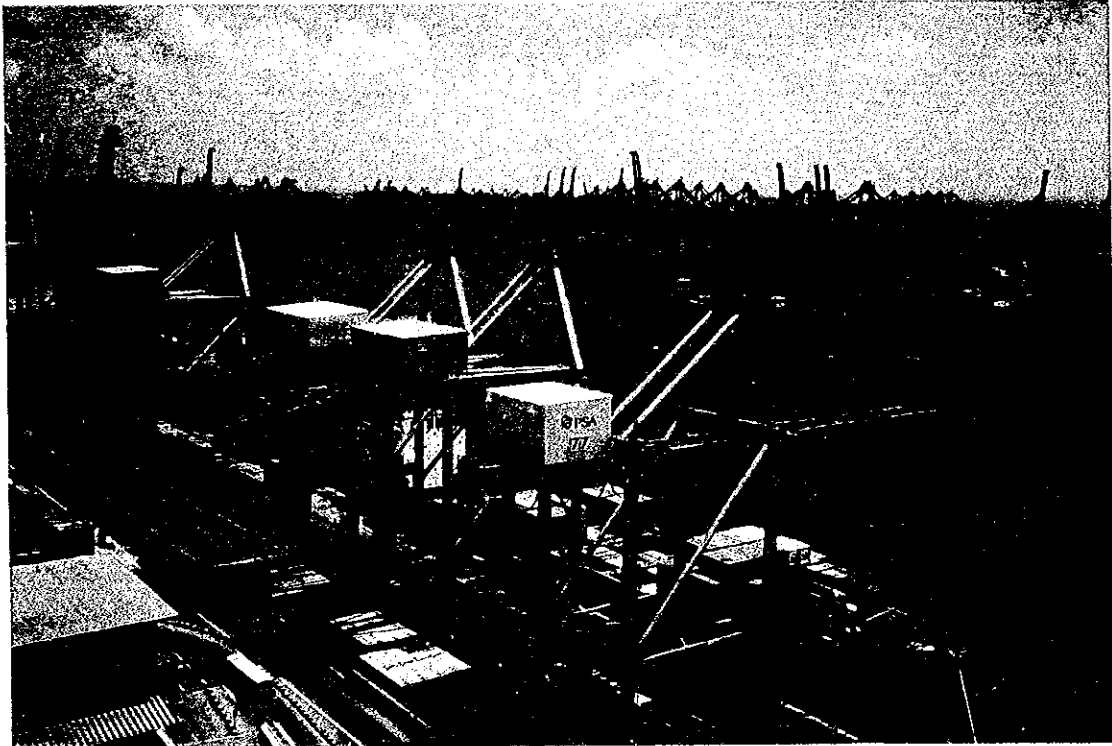
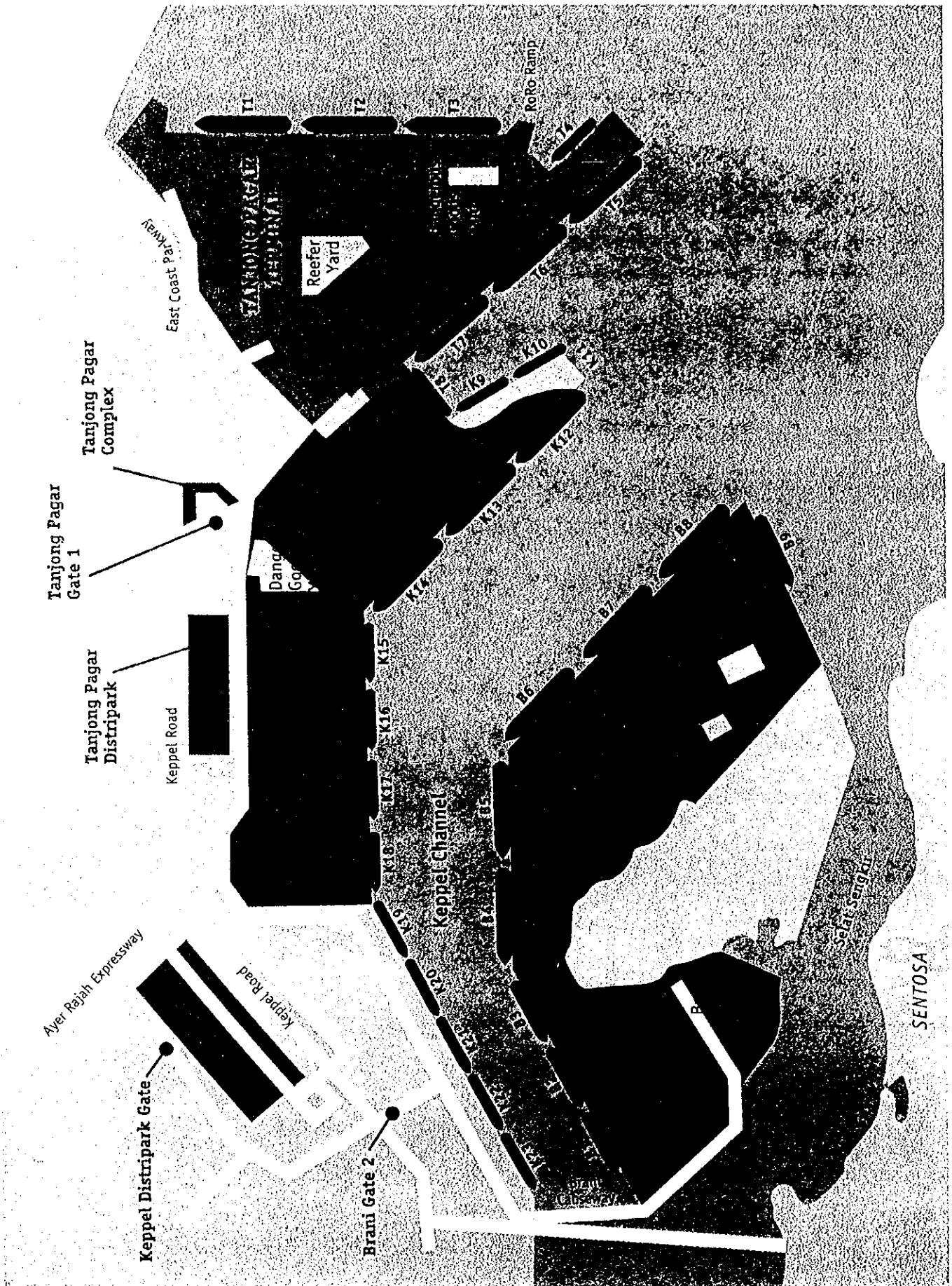


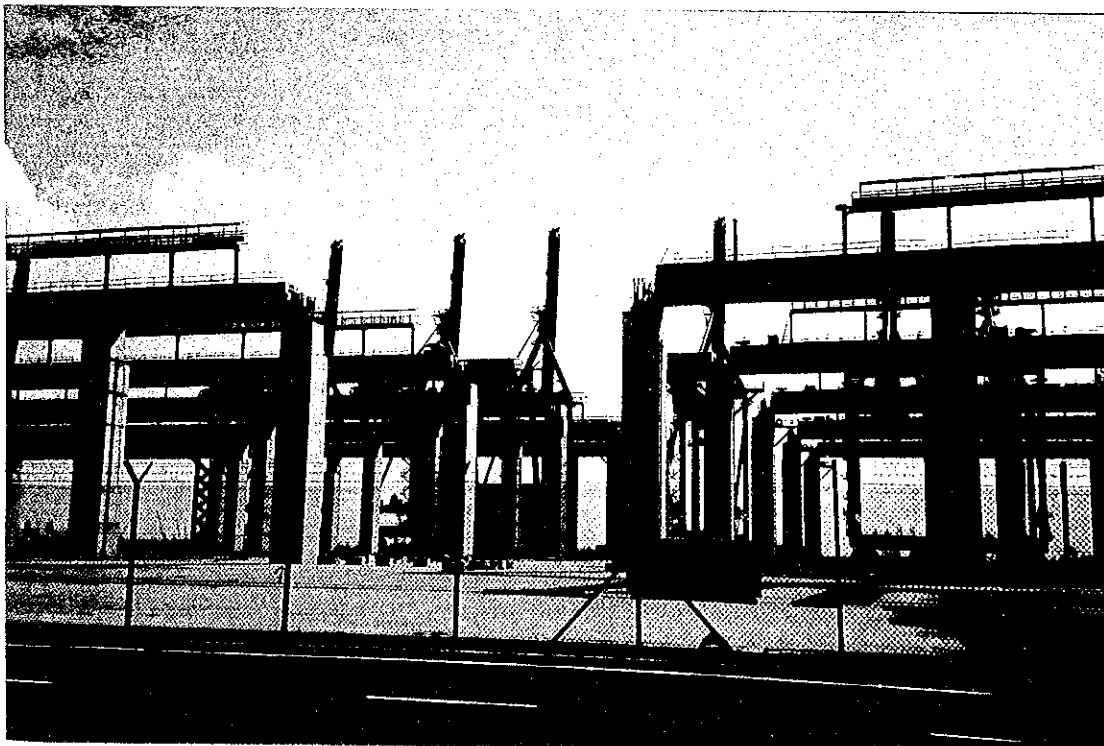
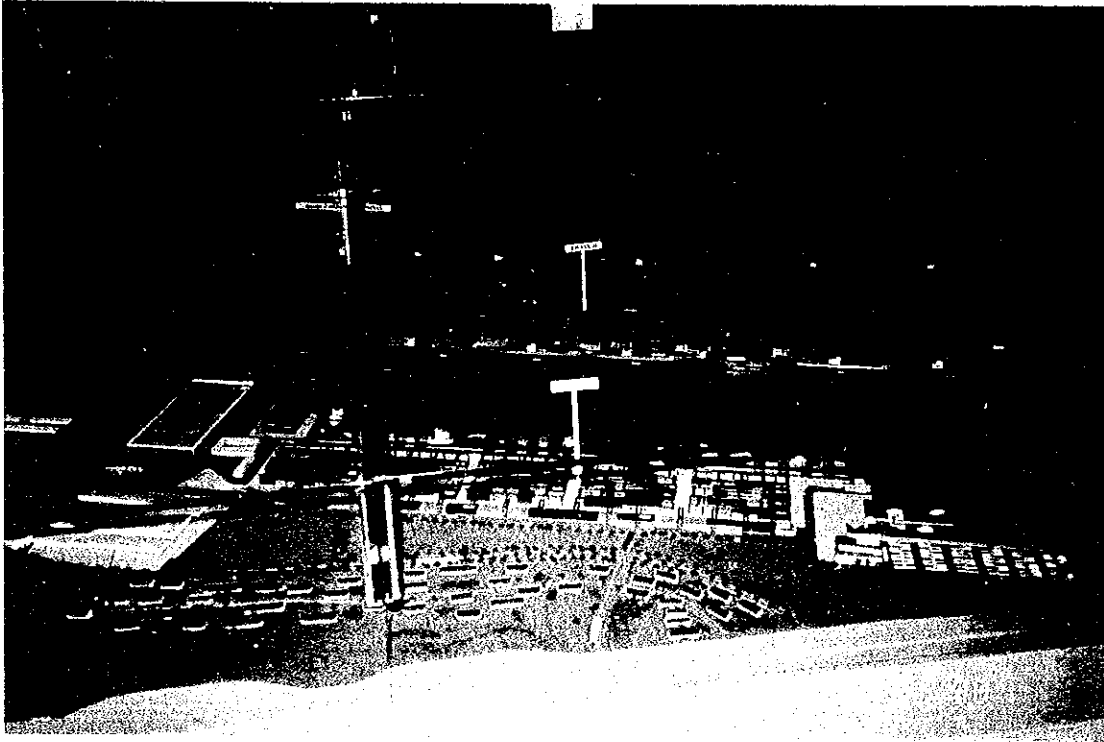
Figure A.4.2 Layout of the Present Container Terminal



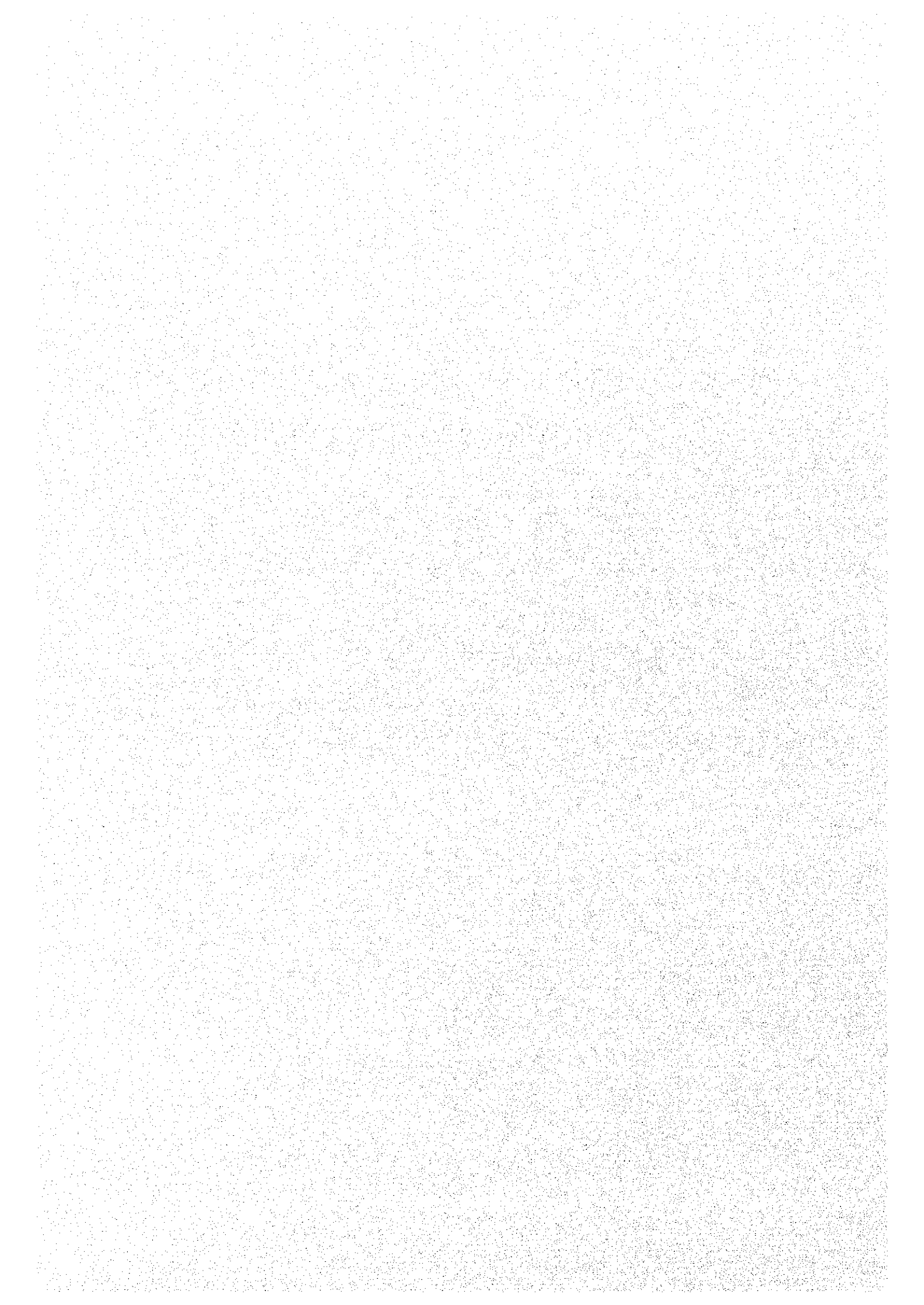




Picture A.4.2 Present Situation of the New Container Terminal



**Appendix B    DISCUSSION ON THE FRAMEWORK OF  
THE PORT DEVELOPMENT STRATEGY**



## Appendix B DISCUSSION ON THE FRAMEWORK OF THE PORT DEVELOPMENT STRATEGY

### B.1 Result of the Discussion dated on December 10, 1997

A meeting chaired by Mr. Batubara, Director of Ports and Dredging of DGSC and co-chairman, Dr. Tadahiko Yagyu, leader of JICA Study Team, was held in Mr. Batubara's room of DGSC on December 10, 1997. The main purpose for the meeting was discussion about the strategy for port administration, management and operation. The presence was of officials from DGSC (hereinafter referred to as Indonesian side) and members of JICA Study Team (hereinafter referred to as the Study Team). The Study Team made brief presentation about the strategy for port administration, management and operation. The attendants are listed in the attached sheet.

The discussion was made to exchange views of their mutual concerns. The main points discussed and confirmed during the meeting are as follows:

#### (1) Port Planning Administration

The Study Team stated that it is recommendable to establish a Local Port Council at Medan, Jakarta, Surabaya and Ujung Pandang respectively to handle port master plans in each IPC's jurisdiction and to establish another council in the central government to examine and evaluate results of the local port council's consideration from the view point of national interest.

Indonesian side replied that good coordination with related national governments and local government is quite important. It also stated that now MOC plays a substantial role for coordination with those organization, so strengthening the current systems for coordination shall be the first step.

After discussion, both side agreed that establishing the flexible organization for coordination which convene occasionally shall be examined in this study.

#### (2) Water Area Management

The Study Team stated that in order to utilize water area, which is supposed to be public assets, a law regulating the need of consultations among the ministries of communications, environment, home affairs and related local governments for the use of water area, shall be issued.

The Indonesian side replied that now MOC is responsible for water area management and

more effort for unifying the right for the management of water area shall be done by MOC and relevant government organization.

### (3) Close Coordination among Port Related Organizations

The Study Team stated that in order to attain well-balanced national development and to facilitate efficient transport network, it is advisable to coordinate activities related to port business of DGSC and DGLT particularly in ferry ports.

The Indonesian side agreed it.

The Study Team stated that it could be suggested that the power of KANWIL located in, for instance, Medan, Jakarta, Surabaya and Ujung Pandang should be strengthened in order to manage, control and integrate the activities of the other KANWIL's tasks in its jurisdiction which may be the same coverage as IPC's coverage.

The Indonesian side replied that it is quite difficult to strengthen the power of certain KANWIL offices, because it is present national government policy that one KANWIL exists in one province and administrates it.

### (4) Role Sharing among DGSC, IPCs and Local Governments

The Study team stated that it is recommendable to transfer the management of small ports to local government and that in this case revenue obtained from the port activities shall be given to the local government to compensate for their financial burden to manage the port. It added the construction and maintenance costs of such local ports, however, shall be spent by DGSC.

The Indonesian side replied that it is worthy for being examined to transfer some responsibility from the national government to local government and to request the local government to shoulder some portion of the necessary budget for the projects which are beneficial to the local government. The Indonesian side added that however almost all budget for infrastructure development is subsidized by the national government. So it is not feasible to expect the local government to shoulder certain portion of the infrastructure development budget.

## LIST OF ATTENDANTS

### INDONESIAN SIDE

#### [DGSC]

Ir. E. Batubara	Director of Ports and Dredging
Drs. Tjipto TH	Head of Planning Division
Ir. Djoko Pramono	Head of Sub Directorate Port and Dredging
Ir. Adolf	Head of Sub Division of Planning
Ir. Suwandi S	Head of Budgeting Program Section
Drs. Eko Hadi Rumecko MBA	Staff of Planning Division
Ir. Wijayanto	Staff of Directorate of Port and Dredging

### JAPANESE SIDE

#### [STUDY TEAM]

Dr. Tadahiko Yagyu	Leader
Dr. Shuichi Soda	Sub-leader
Mr. Takeo Kono	Member of the Team
Mr. Shinichi Tagawa	Member of the Team
Mr. Tomoo Amano	Member of the Team
Mr. Hidetoshi Kume	Member of the Team
Capt. Nobuaki Kojima	Member of the Team
Mr. Makoto Sawai	Member of the Team

#### [JICA]

Mr. Tetsuro Ikeda	Staff of JICA Headquarters Office
Ms. Tomoko Takeuchi	Staff of JICA Jakarta Office

#### [JICA EXPERT]

Mr. Y. Yamamoto	JICA Expert
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## B.2 Result of the Discussion dated on January 27, 1998

A meeting chaired by Mr. Batubara, Director of Ports and Dredging of DGSC and co-chairman, Dr. Soda, sub-leader of JICA Study Team, was held at a conference room of DGSC on January 27, 1998. The main purpose for the meeting was discussion about the port development strategy. The presence was of officials from DGSC and Indonesian Port Cooperation (IPC) (hereinafter referred to as Indonesian side) and members of JICA Study Team (hereinafter referred to as the Study Team). The Study Team made brief presentation about the strategy for strengthening port development, private sector participation, port finance and the theoretically desirable channel dimensions at ports.

The discussion was made to exchange views of their mutual concerns. The main points discussed and confirmed during the meeting are as follows:

(1) The Indonesian side asked why figures in the Population of the Port Hinterland table count only for commercial ports.

The Study Team replied that in the next report, the figures for both commercial and noncommercial ports will be examined.

(2) The Indonesian side requested the Study Team to further elaborate the principles of the strategy for strengthening the port development and to propose the detailed strategies based on these principles. It also was stated that minimizing the total transportation cost could be one of the important principles.

The study team replied that so far, the principles have not yet been indicated in this paper, then it will be introduced in the future.

The Study Team asked whether whole transportation modes are considered for minimizing total transportation cost. The Indonesian side replied it is necessary.

(3) The Indonesian side commented that "certain period cargo distribution port network" idea is itself very unique and important in order to secure the civil minimum of the life standard of the people all over Indonesia. With regards to the fact that the number of public ports in Indonesia are smaller compared to that of Japan and Philippines, Indonesian side stated the size of islands in Indonesia must also be considered. In addition, the land network is also a great influence to this matter. Therefore this concept is not necessarily applicable in whole Indonesia.

The Study Team agreed it and commented that this concept can be applied to advanced areas (for instance Java and Sumatra islands) but not for less advanced areas.

(4) The Study Team stated that in REPELITA VI, the budget for developing the public ports is very low compared to the budget for other infrastructure. The share of sea transportation which include port development for total development budget is 1.7%, which is lower than the budget for air transportation. The Indonesian side replied that sea transportation plays an important role for cargo distribution as well as for mobilization of people and agreed with the study team.

(5) The Study Team stated that in order to export or import the container cargo effectively and smoothly to or from foreign countries, it is necessary to improve the domestic container cargo handling, using the three measures, which are strengthening the lift-on/lift-off, the Ro/Ro and ferry transportation systems.

The Indonesian side commented that at the moment the lift on/lift off system is most economical and efficient, particularly from the viewpoint of necessary space for handling.

(6) The Study team stated that the government and IPC should expand the scope of works or business segments operated by private sector.

The Indonesian side commented that the government and IPC are responsible for this. In the future, there shall be a possibility that the IPC will not execute all operations.

(7) The Indonesian side stated that in the future, there may be some possibility that the terminal shall be owned by not only one but possibly two or three companies (private sectors), and they will establish their own tariff. Hence, tariff can be established by the private sector, however the government still has some involvement in it, such as approval of the tariff.

The study team commented that the tariff structure will be tried in Indonesia to find which is the best.

(8) The Indonesian side commented that in Hongkong there is no port authority and all activities related to port development, management and operation are conducted by private sector. On the other hand, in Singapore "maritime and port authority of Singapore" (government body) is responsible for port administration particularly in the water area and "PSA corporation" (operator of terminal) is responsible for port development, management and operation. It seems that Singapore type, in which government body still plays leading role on port development and administration, is suitable for Indonesia, since it is relevant to Indonesia's shipping law number 21 year 1992. On the other hand Government of Indonesia/IPC's can also play roles as land loads which be able to lease a piece of land to the private sector.

(9) The Indonesian side asked that in order to stand in international stage, what the neighboring countries has been done and what Indonesia must do in the near future. It also requested the Study Team to include the matrix and comparison of items (comparing with the neighboring countries) in its next report.

The Study Team replied that the government should establish clear and proper guidelines for PSP in port development in order to promote PSP projects. Malaysia had already established private sector participation guidelines. The Study Team would like to research such good examples of any other countries and introduce excellent points from them.

(10) The Indonesian side asked how the government should do to invite or attract more shipping companies to Indonesian ports in the future.

If Indonesia establishes appropriate tariff system and improves cargo handling productivity, more companies will use its ports. The study team was also agreed to explain further in its next report.

(11) The Indonesian side asked that though there are many concepts introduced, which one is best to be applied in Indonesia. The Study Team replied that this shall be future elaborated.

(12) The study team stated that it is very important to clarify the system and standard regarding private sector participation in order to attract more investors to port development. Therefore, the government should clarify the differences of rolls among government, IPC and private sector. In this sense, the general laws or guidelines regarding PSP and foreign investment should be more clarified for investors.

(13) The Indonesian side asked which type of PSP is suitable for Indonesia although there are so many PSP types.

The study team answered that BOT (Build, Operate and Transfer) is most clever ways especially for large-scale development projects. Originally, the government or IPC must construct everything at its own cost. However, if the government uses private sector based on BOT style, the government doesn't need to do anything. All the more, the government or IPC can get revenues from concession fees or royalty that the government originally can't obtain.

The study team added that on the other hand, BOT always brings risks for investors.

It is very important for private sector to expect how much money they can get from and how much money they must pay for the development and operation in order to calculate the profit in advance. The government should make every efforts to create desirable climate for investors to alleviate or reduce these risks. The Indonesian side agreed with this.

(14) The Indonesian side commented that since the target year of this study 2018 is very far, it may be divided into medium and long terms.

It also requested that the monetary crises and possible change of law and regulation after the General Election in March this year shall be taken into account.

### **LIST OF ATTENDANTS**

#### INDONESIAN SIDE

##### [DGSC]

Ir. E. Batubara	Director of Ports and Dredging
Drs. Cholik K	Head of Sub Directorate of Dredging
Ir. Adolf	Head of Sub Division of Planning
Ir. Suwandi S	Head of Budgeting Program Section
Ir. Ari Purnomo	Head of Port Facilities Section
Drs. Suroto	Staff of Directorate of Navigation
MS. Gultom	Staff of Directorate of Navigation
Drs. Syafruddin Syam	Staff of Sub Directorate of Dredging
Ir. Wijayanto	Staff of Directorate of Port and Dredging
Ir. M. Tohir	Staff of Directorate of Port and Dredging

##### [IPC]

Drs. J. Soepardi	IPC I
Ir. Agung Prabowo	IPC II
Ir. Widodo	IPC II
Ir. Achmad Baroto	IPC III

#### STUDY TEAM

Dr. Shuichi Soda	Sub-leader
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Mr. Hidetoshi Kume	member of the team
Capt. Nobuaki Kojima	member of the team

Mr. Makoto Sawai

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Mr. Y. Yamamoto

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## Appendix C APPENDIX FOR EACH CHAPTER

Appendix C.2 SOCIO-ECONOMIC CONDITIONS

Table C.2.1.2 GDP of each Province at Constant 1993 Price, by Industrial Origins, from 1994 to 1996  
(With Oil, Gas and Its Projects)

Year	Industry	Aceh	Sumatra Utara	Sumatra Barat	Riau	Jambi	Sumatra Selatan	Bengkulu	Lampung	Jakarta	Jawa Barat	Jawa Tengah	Jawa Timur	
1996	Agriculture, animal, forestry,	2,330,315	6,197,978	1,571,284	1,347,203	877,534	2,623,699	523,727	2,351,882	122,561	9,383,964	8,480,479	795,211	
	Mining and quarrying	3,233,885	598,991	504,355	11,104,286	140,736	2,168,786	50,521	144,230	0	3,588,869	499,416	69,960	
	Manufacturing industry	3,164,148	5,762,747	3,443,486	3,443,486	588,281	2,833,769	63,473	1,004,809	13,928,084	23,411,801	13,327,648	694,724	
	Electricity, gas and drinking	19,434	237,524	101,141	70,623	22,874	98,209	14,917	40,174	1,071,297	1,633,677	346,833	34,110	
	Construction	553,621	1,043,358	468,112	583,263	195,484	1,080,564	127,420	718,514	10,135,328	4,298,221	2,011,485	532,827	
	Wholesale and retail trade	619,810	4,453,035	1,267,898	1,446,425	557,123	2,422,942	248,303	1,060,856	15,112,910	12,532,514	8,972,204	797,939	
	Transport and communication	723,634	2,049,148	889,239	535,478	310,923	691,109	290,725	515,240	5,577,738	3,844,345	1,705,242	575,293	
	Banking and other financial	187,768	1,704,547	421,428	724,883	143,110	712,321	83,980	412,214	14,341,226	3,137,865	2,114,567	544,356	
	Services	624,632	1,667,409	1,149,028	551,255	306,653	934,327	321,281	664,384	5,912,631	5,651,045	4,301,952	1,067,143	
	Gross Regional Domestic Product	11,477,247	23,714,737	7,606,971	19,808,696	3,142,718	13,567,126	1,726,349	6,912,303	66,201,775	67,522,301	41,759,826	5,111,563	
	GRDP/Without oil, gas & isoproduct	6,213,757	23,273,774	7,606,970	7,853,097	3,045,829	11,611,903	1,726,349	6,912,303	66,201,775	67,522,301	41,759,826	5,111,563	
	Per Capita GRDP	2,909	2,097	1,733	4,882	1,278	1,830	1,179	1,016	7,087	1,683	1,398	1,754	
	1995	Agriculture, animal, forestry,	2,173,907	5,701,576	1,482,442	1,324,463	810,034	2,448,499	501,014	2,274,651	123,035	9,350,686	8,211,174	747,526
		Mining and quarrying	3,355,039	594,720	475,231	10,756,104	115,510	1,996,897	57,146	121,664	0	3,464,618	471,646	970,067
Manufacturing industry		3,070,390	5,274,706	1,098,601	3,088,039	523,413	2,575,067	55,902	917,033	12,865,288	20,810,291	12,260,155	635,002	
Electricity, gas and drinking		18,230	209,100	80,955	66,193	21,802	86,693	11,479	34,141	1,009,380	1,390,037	304,155	30,607	
Construction		511,830	926,165	425,352	511,324	182,150	973,705	118,295	603,472	8,783,484	3,847,812	1,808,179	493,891	
Wholesale and retail trade		591,665	4,094,269	1,176,767	1,333,433	511,663	2,214,940	220,518	966,953	13,664,018	11,577,618	8,293,591	733,368	
Transport and communication		680,302	1,824,951	821,521	486,383	292,478	629,553	261,436	461,244	5,100,642	3,569,072	1,510,648	538,537	
Banking and other financial		170,795	1,542,377	407,942	690,763	136,693	678,276	76,915	374,787	13,326,468	3,019,396	1,974,206	499,920	
Services		614,516	1,521,942	1,085,608	526,397	296,855	912,131	307,286	650,874	5,776,374	5,461,635	4,135,899	995,338	
Gross Regional Domestic Product		11,186,674	21,689,806	7,054,419	18,783,299	2,890,598	12,515,761	1,609,991	6,404,819	60,648,689	62,491,165	38,969,653	4,741,903	
GRDP/Without oil, gas & isoproduct		5,736,875	21,241,205	7,054,419	7,211,639	2,816,530	10,881,751	1,609,991	6,404,819	60,648,689	62,491,165	38,969,653	4,741,903	
Per Capita GRDP		2,898	1,946	1,630	4,786	1,213	1,730	1,138	1,038	6,621	1,589	1,313	1,626	
1994		Agriculture, animal, forestry,	2,049,763	5,249,345	1,373,560	1,263,956	761,861	2,211,374	461,012	1,999,906	124,943	8,989,698	7,782,116	716,889
		Mining and quarrying	3,457,654	547,164	398,914	10,608,115	108,584	1,896,768	56,420	106,115	0	3,538,119	432,942	64,045
	Manufacturing industry	3,088,623	4,829,682	978,413	2,727,767	445,481	2,119,431	49,403	840,946	11,651,125	18,142,182	11,322,072	601,917	
	Electricity, gas and drinking	17,045	182,412	64,156	61,878	19,085	77,251	11,009	28,333	974,402	1,303,723	264,698	28,327	
	Construction	468,013	873,556	389,551	457,289	172,816	874,649	110,066	493,394	7,593,541	3,558,630	1,688,679	451,468	
	Wholesale and retail trade	566,620	3,744,438	1,105,079	1,230,157	473,822	2,021,886	206,440	923,799	12,317,610	10,797,261	7,580,717	676,167	
	Transport and communication	603,079	1,738,163	735,915	439,903	263,422	573,689	229,014	431,105	4,668,406	3,314,599	1,378,873	502,371	
	Banking and other financial	166,487	1,367,384	395,054	654,280	131,633	650,109	70,126	332,952	12,592,349	2,836,519	1,869,210	444,862	
	Services	608,878	1,409,880	1,033,671	506,743	288,022	890,134	293,671	637,991	5,580,892	5,342,375	4,025,868	901,028	
	Gross Regional Domestic Product	11,026,162	19,942,024	6,474,313	17,950,088	2,664,626	11,515,291	1,487,061	5,796,541	55,503,268	57,823,106	36,345,175	4,387,074	
	GRDP/Without oil, gas & isoproduct	5,294,948	19,525,051	6,474,313	6,589,047	2,590,865	9,687,887	1,487,061	5,796,541	55,503,268	57,823,106	36,345,175	4,387,074	
	Per Capita GRDP	2,921	1,816	1,518	4,730	1,154	1,633	1,088	1,088	6,181	1,499	1,233	1,503	

Source: BPS

(Unit: Million rupiah)

C.212. continued

Year	Industry	Ibali	N. Jawa Barat	N. Jawa Timur	Timor Timur	Kariman. Barat	Kariman. Tengah	Kariman. Selatan	Kariman. Timur	Sulawesi Utara	Sulawesi Tengah	Sulawesi Selatan	Sulawesi Tenggara	Maluku	Irian Jaya	Total	
1996	Agriculture, animal, forestry,	1,388,757	1,159,683	1,019,609	166,263	1,556,550	1,491,861	1,296,316	1,967,424	974,312	829,723	3,448,387	485,792	767,973	1,219,041	64,563,766	
	Mining and quarrying	53,991	99,490	46,030	7,000	90,180	125,274	628,494	5,995,529	179,482	63,766	338,524	54,498	183,867	3,713,130	34,685,710	
	Manufacturing industry	583,460	153,367	69,997	22,368	1,316,671	460,914	1,173,494	7,051,073	315,833	175,340	1,128,290	126,729	538,180	375,573	100,767,460	
	Electricity, gas and drinking	73,070	14,949	17,652	5,485	49,981	12,054	72,642	58,265	25,171	15,237	108,823	10,240	17,117	18,649	5,328,609	
	Construction	349,727	271,263	239,936	151,652	437,923	257,404	356,521	612,804	400,694	189,120	553,488	196,812	231,881	535,285	30,842,962	
	Wholesale and retail trade	2,200,841	523,293	354,431	70,947	1,390,939	709,624	986,291	1,853,578	411,709	288,686	1,515,202	182,257	562,193	304,420	73,754,152	
	Transport and communication	932,515	342,087	279,286	70,553	682,914	472,224	594,456	2,049,261	493,182	210,701	631,705	130,322	178,637	242,239	29,170,298	
	Banking and other financial	502,254	101,342	122,593	30,662	450,128	110,440	277,407	709,864	190,718	101,639	605,545	91,868	173,240	133,482	32,129,256	
	Services	1,036,818	529,821	527,546	161,976	737,475	396,718	514,405	462,689	583,592	338,435	1,135,302	282,484	444,991	36,990,705		
	Gross Domestic Product	7,141,433	3,195,295	2,679,100	687,228	6,712,361	4,036,151	5,902,026	20,762,487	3,574,695	2,212,649	9,465,266	1,561,002	2,969,943	6,986,810	408,232,919	
	GDP/Without oil, gas & hydrocarbons	7,141,433	3,195,295	2,679,100	687,228	6,712,361	4,035,151	5,897,186	10,915,544	3,574,695	2,212,649	9,465,266	1,561,002	2,955,004	6,748,555	373,666,443	
	Per Capita GDP	2,442	0,862	0,736	0,799	1,798	1,194	1,331	1,108	1,230	0,950	1,387	0,950	1,387	3,457	2,058	
	1995	Agriculture, animal, forestry,	1,335,731	1,093,249	945,055	148,967	1,442,874	1,380,699	1,227,408	1,767,316	902,024	760,910	3,241,399	473,733	746,935	1,136,280	61,617,680
		Mining and quarrying	51,283	90,283	42,029	6,132	76,816	87,416	422,272	5,709,904	119,534	58,263	302,292	45,519	156,351	3,183,953	32,798,403
Manufacturing industry		529,487	137,484	63,283	20,731	1,212,278	451,254	1,151,561	5,819,098	286,859	163,118	1,040,763	122,096	508,688	325,168	90,808,500	
Electricity, gas and drinking		63,126	13,302	17,998	4,060	41,624	10,812	65,992	53,189	22,039	12,543	89,403	8,760	15,409	16,877	4,709,789	
Construction		318,582	243,595	218,279	143,680	380,519	223,248	312,375	533,411	364,742	175,994	504,985	183,004	210,622	486,410	27,342,115	
Wholesale and retail trade		1,998,471	472,373	307,434	64,737	1,279,289	632,422	928,374	1,673,644	378,225	247,748	1,466,473	165,150	527,605	284,916	67,612,431	
Transport and communication		830,108	303,251	259,720	62,042	614,345	382,548	551,284	1,794,548	456,225	188,680	560,212	121,745	161,350	219,851	26,502,842	
Banking and other financial		458,716	89,905	107,244	24,386	410,103	108,092	260,478	635,689	176,544	96,239	335,739	77,008	160,741	120,628	29,926,306	
Services		996,896	512,185	510,546	145,431	604,381	332,208	498,196	412,375	565,755	338,979	1,063,653	275,499	294,987	426,418	33,364,094	
Gross Domestic Product		6,602,400	2,955,627	2,471,588	620,186	6,062,229	3,608,699	5,417,940	18,401,174	3,271,947	2,042,474	8,744,919	1,472,514	2,782,679	6,200,501	376,682,160	
GDP/Without oil, gas & hydrocarbons		6,602,400	2,955,627	2,471,588	620,186	6,062,229	3,608,699	5,387,549	9,830,028	3,271,947	2,042,474	8,744,919	1,472,514	2,768,482	5,948,162	343,858,432	
Per Capita GDP		2,275	0,809	0,690	0,736	1,660	1,104	1,234	1,049	1,154	0,924	1,328	0,924	1,328	3,170	1,929	
1994		Agriculture, animal, forestry,	1,277,987	1,038,720	911,141	155,666	1,341,633	1,271,256	1,143,463	1,650,936	829,837	701,130	3,002,814	448,440	762,338	1,050,949	58,236,783
		Mining and quarrying	49,320	82,624	35,776	5,342	65,904	19,296	332,071	5,844,763	111,946	53,797	274,653	41,862	121,199	2,395,000	31,103,000
	Manufacturing industry	470,873	128,960	59,418	17,070	1,123,573	433,852	1,024,984	6,068,511	260,496	149,679	963,182	88,489	481,333	224,484	82,482,822	
	Electricity, gas and drinking	54,119	11,663	16,333	3,439	35,054	8,212	59,420	48,921	18,783	10,309	87,044	7,716	13,895	15,076	4,209,848	
	Construction	299,916	220,588	184,965	123,636	322,284	209,765	283,224	483,453	331,946	162,848	469,589	177,910	175,687	432,506	24,447,275	
	Wholesale and retail trade	1,833,470	410,925	269,563	62,233	1,165,358	380,295	881,545	1,553,411	337,370	230,496	1,300,053	153,869	467,704	266,328	62,067,815	
	Transport and communication	776,539	263,561	223,520	49,513	506,104	357,461	509,434	1,565,416	414,379	169,475	492,404	113,257	149,071	203,592	24,237,020	
	Banking and other financial	424,836	82,685	100,492	21,961	375,942	100,617	255,416	594,841	164,507	92,195	510,967	72,264	153,612	111,736	28,136,747	
	Services	930,174	496,175	474,966	127,870	540,859	329,097	474,273	382,257	548,908	318,946	987,441	267,603	288,292	403,648	34,004,295	
	Gross Domestic Product	6,117,234	2,735,901	2,276,174	566,730	5,536,111	3,309,851	4,963,830	17,692,509	3,018,172	1,888,875	8,088,147	1,371,410	2,613,131	5,103,319	348,925,605	
	GDP/Without oil, gas & hydrocarbons	6,117,234	2,735,901	2,276,174	566,730	5,536,111	3,309,851	4,935,769	8,858,890	3,018,172	1,888,875	8,088,147	1,371,410	2,600,381	4,796,574	315,424,072	
	Per Capita GDP	2,124	0,760	0,646	0,686	1,550	2,082	1,747	1,153	0,995	1,084	0,887	1,276	0,887	2,697	1,815	

Source: IBS



Table C.2.3.1 Production Estimates for Selected Agricultural Products in Repelita VI

Category	Unit	End of Repelita V 1)	End of Repelita VI 2)	Growth (% year) 3)
Paddy 4)	thousand ton	48,200	53,243	2.0
Rice	thousand ton	31,330	34,608	2.0
Corn	thousand ton	7,987	9,611	3.8
Soy beans	thousand ton	1,792	2,095	3.2
Cassava	thousand ton	16,356	16,495	0.2
Sweet Potatoes	thousand ton	2,277	2,509	2.0
Groundnuts	thousand ton	703	840	3.6
Green beans	thousand ton	319	407	5.0
Vegetables	thousand ton	4,377	5,613	5.1
Fruits	thousand ton	5,388	6,587	4.1
Meat	thousand ton	1,261	1,647	5.5
Eggs	thousand ton	604	784	5.4
Milk	million liter	402	530	5.7
Fish	thousand ton	3,608	4,587	4.9
Sugar Cane	thousand ton	2,412	3,030	4.7
Coconut	thousand ton	2,466	2,741	2.1
Palm Kernel/Palm Oil	thousand ton	3,760	5,541	8.1

Note : 1) Estimate 2) Target 3) Comparison between Repelita V and VI  
4) Unhusked Paddy

Source : Repelita VI, a Summary (BAPPENAS)

Table C.2.3.2 Production Estimates for Selected Forestry Products in Repelita VI

Category	Unit	End of Repelita V 1)	End of Repelita VI 2)	Growth (% year) 3)
Industrial Crop Forest	million m3	1.35	5.37	31.8
Smallholders Forest and Rubber Plantation	million m3	8.95	9.20	0.6
Natural Forest				
Permanent Forest Production	million m3	18.85	22.46	3.6
Convention Forest	million m3	2.65	3.20	3.8

Note : 1) Estimate 2) Target 3) Comparison between Repelita V and VI

Source : Repelita VI, a Summary (BAPPENAS)

Table C.2.3.3 Production Estimates for Selected Manufacturing Products in Repelita VI

Category	Unit	End of Repelita V 1)	End of Repelita VI 2)	Growth (% year) 3)
<b>A. Food, Agroprocessing, Textiles</b>				
Palm Oil	million ton	1.3	2.4	13.0
Milk Condensed/Powder	thousand ton	198.2	308.0	9.2
<b>Canned Food</b>				
Vegetables and Fruits	thousand ton	151.2	446.0	24.2
Fish	thousand ton	251.1	385.0	8.9
Wheat Flour	thousand ton	1,751.0	2,780.0	9.7
Crumb Rubber	thousand ton	1.1	1.7	9.1
Fatty Acid	thousand ton	237.7	383.0	10.0
Textile/Textile Sheets	thousand ton	960.6	1,753.0	12.8
Garments	thousand ton	296.5	515.0	11.7
Weaving Yarn	thousand ton	1,090.9	2,122.0	14.2
<b>B. Basic Chemicals Industries</b>				
Urea Fertilizer	million ton	5.3	7.8	8.0
Cement	million ton	18.7	33.1	12.1
Pulp	million ton	1.3	3.1	19.0
Paper	million ton	2.5	4.1	10.4
Tires (for Motor Vehicles)	million piece	36.6	69.5	13.7
Sheet Glass	thousand ton	504.2	773.0	8.9
Fiber Glass	thousand ton	4.0	6.0	8.4
Pure Terephthalic Acid (PTA)	thousand ton	207.0	506.0	19.6
Methanol	thousand ton	270.6	396.0	7.9
Paraxyilene	thousand ton	261.9	369.0	7.1
Polypropylene	thousand ton	159.0	323.0	15.2
<b>C. Machinery, Basic Metal and Electronic Industries</b>				
Billets	thousand ton	2,376.1	2,860.0	3.8
Steel slabs	thousand ton	1,050.0	1,560.0	8.2
Hot Rolled Sheets (HRS)	thousand ton	1,700.0	2,410.0	7.2
Cold Rolled Sheets (CRS)	thousand ton	466.5	660.0	7.2
Palm Oil Plant Machinery and Equipment	ton	7,563.0	11,900.0	9.5
Rubber Plant Machinery and Equipment	ton	1,984.0	3,000.0	8.6
Power Transformer (over 10 MVA)	unit	43.0	80.0	13.2
Electric Generator	unit	9,528.0	17,000.0	12.3
Small Earth Satellite	unit	43.0	60.0	6.9
Telephone Instrument	thousand unit	1,208.1	1,700.0	7.1
Integrated Circuit	million piece	158.0	252.0	9.8
Aircraft	unit	24.0	105.0	34.3
Helicopter	unit	50.0	86.0	11.5
New Steel Ships	thousand ton	97.5	169.0	11.6

Note : 1) Estimate 2) Target 3) Comparison between Repelita V and VI

4) Cumulative for 5 years

Source : Repelita VI, a Summary (BAPPENAS)

Table C.2.3.4 Production Estimates for Selected Mineral Products in Repelita VI

Category	Unit	End of Repelita V 1)	End of Repelita VI 2)	Growth (% year) 3)
Crude Oil and Condensate	million barrel	560.0	547.5	-0.5
Natural Gas	billion cubic feet	2,776.5	2,960.0	1.3
Coal	thousand ton	30,000.0	71,000.0	18.8
Geothermal 4)	Mw	255.0	1,025.0	32.1
Tin	thousand ton	31.2	40.3	5.3
Nickel Ore	thousand ton	2,547.5	2,750.0	1.5
Bauxite	thousand ton	1,087.0	1,000.0	-1.7
Copper Concentrate	thousand ton	1,042.0	1,761.0	11.1
Iron Sand	thousand ton	315.7	340.0	1.5
Gold 5)	kg	40,324.0	70,600.0	11.9
Silver 6)	kg	71,094.0	143,000.0	15.0

Note : 1) Estimate 2) Target 3) Comparison between Repelita V and VI

4) Installed Capacity

5) Including Gold in Copper Concentrate

6) Including Silver in Copper Concentrate

Source : Repelita VI, a Summary (BAPPENAS)



## Appendix C.3 SEA TRANSPORTATION

### C.3.1 Study on Route Network of Domestic Sea Transportation

The outline of the "Study on Route Network of Domestic Sea Transportation", which was completed in February 1997, is as follows.

#### C.3.1.1 Background and Main Problem

- (1) There seems to be the imbalance in cargo distribution of the domestic sea transportation which is uneven and not proportional between the route network.
- (2) Because of the uncertain services, users often face disturbance of cargo traffic and have to utilize foreign ships.
- (3) Due to uncertain information regarding the frequency of ships and cargo volumes in ports, which makes it difficult for the government to establish the routes.
- (4) Observing the current issue, it is necessary to make short, medium and long term domestic sea transportation network system, which enable to give efficiency increase for economic circle as well as increasing the utilization of existing facilities and infrastructure.

#### C.3.1.2 Projection Study

- (1) In order to achieve the expected objectives, the study would be done in several stages, which are Review stage, Analysis stage and Formulation stage.
- (2) The domestic sea transportation route network composing study is expected to produce.
  - 1) Domestic sea transportation route network which is able to connect all ports in Indonesia, in the trunk and feeder network.
  - 2) Proportion and role of reliable port of each province in Indonesia, in accordance with geographic characteristic, potential of the region, supply and demand volume of each port.
  - 3) Projection of inter-port volume in the tonnage unit, in order to forecast the needed facilities and as an input in composing the route in the next period.
  - 4) Recommendation which is expected to become a solution to the problem hampering the achievement of optimum sea route.

#### C.3.1.3 Composing the sea transportation route network

The steps in composing the sea transportation's network are expected as follow:

- (1) Analysis of ship movement in the form of origin-destination matrix.
- (2) Analysis of movement pattern of cargo traffic according to its home port.

(3) Select the cargo traffic which forms route pattern for the relevant home port.

#### C.3.1.4 Scenario of domestic sea transportation route network

The factors influencing the composition of domestic sea transportation route network scenario are the basic principles of hierarchy, geography, economy and region development.

The scenario is composed in three periods as follows:

- (1) Short term scenario is planned up to Repelita VI
- (2) Medium term scenario is planned up to Repelita VII
- (3) Long term network scenario is planned up to Long Term Development (PJP) II year 2018.

#### C.3.1.5 Recommendation

After conducting study concerning the domestic sea transportation route network, some recommendation can be given which are expected to be able to help realizing optimum role of sea mode.

Appendix C.4 NATIONAL AND REGIONAL DEVELOPMENT  
RELATED TO THE PORTS

Table C. 4.1.1. Development Expenditure of First and Second Level Local Government (Dati I, II) by province  
(billion Rp)

Province	First Level Local Government (Dati I)		Second Level Local Government (Dati II)	
	1989/90	1996/97	1989/90	1996/97
1 Special Territory of Aceh	26.89	84.14	56.99	142.35
2 North Sumatra	58.48	169.34	89.3	281.93
3 West Sumatra	17.48	71.48	34.36	125.04
4 Riau	35.24	154.59	25.68	164.65
5 Jambi	20.42	76.00	21.77	100.2
6 South Sumatra	31.05	119.27	51.24	212.74
7 Lampung	24.66	75.96	32.85	132.47
8 Bengkulu	13.23	51.76	9.41	47.65
9 Special Territory of Jakarta	272.11	1,229.10	0	0
10 West Java	69.40	473.45	174.68	856.18
11 Central Java	60.43	249.89	155.91	499.93
12 Special Territory of Yogyakarta	15.49	47.17	17.48	67.21
13 East Java	86.09	418.46	184.19	598.4
14 Bali	25.74	85.60	43.21	128.4
15 West Kalimantan	20.93	74.27	32.37	124.12
16 Central Kalimantan	24.61	96.58	20.96	128.75
17 South Kalimantan	16.90	62.30	29.89	134.63
18 East Kalimantan	27.90	128.74	42.7	193.94
19 North Sulawesi	24.94	63.52	17.73	79.22
20 Central Sulawesi	19.14	68.71	16.47	136.84
21 South Sulawesi	29.26	99.53	51.31	218.61
22 Southeast Sulawesi	14.66	62.37	9.64	49.98
23 West Nusa Tenggara	15.16	57.43	22.03	74.49
24 East Nusa Tenggara	18.18	75.02	22.6	141.88
25 Maluku	22.09	67.42	14.28	83.79
26 Irian Jaya	22.14	117.12	16.3	176.92
27 East Timor	15.95	47.47	7.25	67.14
<b>Western part of Indonesia</b>	<b>756.71</b>	<b>3,306.21</b>	<b>897.07</b>	<b>3,357.15</b>
<b>Eastern part of Indonesia</b>	<b>271.86</b>	<b>1,020.48</b>	<b>303.53</b>	<b>1,610.31</b>
<b>Total</b>	<b>1,028.57</b>	<b>4,326.69</b>	<b>1,200.60</b>	<b>4,967.46</b>

Source : Financial Note, Republic of Indonesia (BAPPENAS)

Table C.4.1.2 Support for Regional Development by Presidential Instruction (Inpres) by Province  
(Inpres for Development of First and Second Level Local Government (Dati I, II), and Upgrading Provincial Road)  
(billion Rp)

Province	First level local government (Dati I)		Second level local government (Dati II)		Upgrading provincial road	
	1989/90	%	1989/90	%	1989/90	%
1 Special Territory of Aceh	12.0	3.7	28.9	3.6	1.9	2.1
2 North Sumatra	12.0	3.7	30.0	3.7	5.9	5.6
3 West Sumatra	12.0	3.7	28.0	3.5	6.8	2.5
4 Riau	12.0	3.7	31.6	3.9	4.5	2.2
5 Jambi	12.0	3.7	28.7	3.5	2.9	1.3
6 South Sumatra	12.0	3.7	32.6	4.0	3.3	3.8
7 Lampung	12.0	3.7	27.5	3.4	10.4	3.3
8 Bengkulu	12.0	3.7	26.4	3.3	1.6	0.6
9 Special Territory of Jakarta	12.0	3.7	25.0	3.1	13.5	5.0
10 West Java	12.0	3.7	28.0	3.5	49.8	18.9
11 Central Java	12.0	3.7	27.3	3.4	42.5	15.8
12 Special Territory of Yogyakarta	12.0	3.7	25.2	3.1	4.7	1.4
13 East Java	12.0	3.7	28.4	3.5	49.4	16.2
14 Bali	12.0	3.7	25.4	3.1	4.1	1.4
15 West Kalimantan	12.0	3.7	35.3	4.4	4.6	2.1
16 Central Kalimantan	12.0	3.7	35.7	4.4	1.9	1.2
17 South Kalimantan	12.0	3.7	27.6	3.4	3.6	1.5
18 East Kalimantan	12.0	3.7	39.8	4.9	2.8	1.7
19 North Sulawesi	12.0	3.7	26.9	3.3	3.9	1.4
20 Central Sulawesi	12.0	3.7	29.5	3.6	2.5	1.2
21 South Sulawesi	12.0	3.7	29.4	3.6	10.6	4.0
22 Southeast Sulawesi	12.0	3.7	27.7	3.4	1.9	0.9
23 West Nusa Tenggara	12.0	3.7	26.4	3.3	4.7	1.8
24 East Nusa Tenggara	12.0	3.7	28.3	3.5	4.9	1.9
25 Maluku	12.0	3.7	30.5	3.8	2.7	1.3
26 Irian Jaya	12.0	3.7	52.6	6.5	0.9	2.0
27 East Timor	12.0	3.7	26.0	3.2	2.6	1.1
<b>Western part of Indonesia</b>	168.0	51.9	393.0	48.6	220.0	81.7
<b>Eastern part of Indonesia</b>	156.0	48.1	415.7	51.4	49.2	22.1
<b>Total</b>	324.0	100.0	808.7	100.0	269.2	100.0
					1,173.8	100.0
					69.3	100.0
					512.6	100.0
					20.2	3.9
					4.8	3.9
					38.3	55.3
					204.4	39.9
					31.0	44.7
					308.2	60.1
					512.6	100.0

Source : Financial Note, Republic of Indonesia (BAPPENAS)



Table C.4.1.3 The value of Foreign Investment by province

	Province	1973/74 *	%	1978/79 *	%	1983/84 *	%	1988/89 *	%	1993/94 *	%	1996/97 *	%
1	Special Territory of Aceh	0.0	0.0	0.0	0.0	630.4	4.8	683.2	2.9	1,687.5	2.6	4,294.7	2.4
2	North Sumatra	44.7	2.4	1,093.4	23.2	2,098.4	16.0	2,939.5	12.6	4,523.8	6.8	7,961.5	4.5
3	West Sumatra	2.0	0.1	8.2	0.2	30.7	0.2	63.6	0.3	211.2	0.3	485.3	0.3
4	Riau	14.3	0.8	56.9	1.2	342.7	2.6	1,118.2	4.8	1,118.2	1.7	11,333.7	6.4
5	Jambi	13.6	0.7	13.6	0.3	23.8	0.2	23.8	0.1	25.3	0.0	4,095.4	2.3
6	South Sumatra	24.7	1.3	38.1	0.8	46.7	0.4	971.6	4.2	971.6	1.5	4,696.4	2.7
7	Lampung	0.4	0.0	64.1	1.4	68.6	0.5	139.4	0.6	722.9	1.1	1,309.1	0.7
8	Bengkulu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.1	0.1	198.0	0.1
9	Special Territory of Jakarta	458.8	24.3	918.0	19.5	2,734.9	20.8	4,541.5	19.5	15,325.2	23.2	25,785.7	14.6
10	West Jawa	695.3	36.8	1,443.1	30.6	4,002.0	30.4	7,160.0	30.7	23,152.3	35.1	50,902.9	28.8
11	Central Jawa	98.4	5.2	145.6	3.1	429.7	3.3	475.4	2.0	2,449.3	3.7	10,479.4	5.9
12	Special Territory of Yogyakarta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	148.9	0.2	303.3	0.2
13	East Jawa	121.9	6.5	285.0	6.1	693.4	5.3	1,567.0	6.7	6,140.0	9.3	27,017.4	15.3
14	Bali	8.5	0.5	17.5	0.4	95.4	0.7	481.5	2.1	2,432.0	3.7	2,970.9	1.7
15	West Kalimantan	2.7	0.1	8.2	0.2	8.2	0.1	100.2	0.4	124.6	0.2	846.6	0.5
16	Central Kalimantan	6.5	0.3	45.5	1.0	96.3	0.7	243.2	1.0	267.8	0.4	481.2	0.3
17	South Kalimantan	9.0	0.5	22.9	0.5	57.7	0.4	109.3	0.5	845.3	1.3	2,903.0	1.6
18	East Kalimantan	0.0	0.0	114.6	2.4	189.6	1.4	314.1	1.3	2,042.5	3.1	5,294.0	3.0
19	North Sulawesi	76.1	4.0	76.1	1.6	78.5	0.6	104.4	0.4	378.9	0.6	819.7	0.5
20	Central Sulawesi	0.0	0.0	1.0	0.0	1.0	0.0	25.3	0.1	43.2	0.1	161.9	0.1
21	South Sulawesi	153.9	8.1	161.6	3.4	1,215.6	9.2	1,218.4	5.2	1,428.4	2.2	7,340.4	4.1
22	Southeast Sulawesi	0.3	0.0	15.9	0.3	15.9	0.1	35.8	0.2	78.6	0.1	78.5	0.0
23	West Nusa Tenggara	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	81.6	0.1	1,462.0	0.8
24	East Nusa Tenggara	1.9	0.1	3.3	0.1	3.3	0.0	16.2	0.1	18.1	0.0	125.7	0.1
25	Maluku	5.1	0.3	11.6	0.2	12.4	0.1	12.4	0.1	116.5	0.2	371.9	0.2
26	Irian Jaya	150.6	8.0	165.0	3.5	271.6	2.1	954.4	4.1	1,632.8	2.5	5,217.6	2.9
27	East Timor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	0.0
	<b>Western part of Indonesia</b>	<b>1,482.6</b>	<b>78.5</b>	<b>4,083.5</b>	<b>86.7</b>	<b>11,196.7</b>	<b>85.2</b>	<b>20,164.7</b>	<b>86.5</b>	<b>58,983.3</b>	<b>89.3</b>	<b>151,833.7</b>	<b>85.8</b>
	<b>Eastern part of Indonesia</b>	<b>406.1</b>	<b>21.5</b>	<b>625.7</b>	<b>13.3</b>	<b>1,950.1</b>	<b>14.8</b>	<b>3,136.7</b>	<b>13.5</b>	<b>7,058.3</b>	<b>10.7</b>	<b>25,134.6</b>	<b>14.2</b>
	<b>Total</b>	<b>1,888.7</b>	<b>100.0</b>	<b>4,709.2</b>	<b>100.0</b>	<b>13,146.8</b>	<b>100.0</b>	<b>23,301.4</b>	<b>100.0</b>	<b>66,041.6</b>	<b>100.0</b>	<b>176,968.3</b>	<b>100.0</b>

\* : Cumulative value from 1967

Source : Regional Development in Figures, 1997 (BAPPENAS)

Table C.4.1.4 The value of Domestic Investment by province

	Province	1973/74 *	%	1978/79 *	%	1983/84 *	%	1988/89 *	%	1993/94 *	%	1996/97 *	%
1	Special Territory of Aceh	6.4	0.6	21.0	0.7	353.1	1.8	1,409.0	1.4	3,609.3	1.4	6,134.1	1.2
2	North Sumatra	44.4	4.4	125.6	4.1	743.9	3.7	3,225.0	3.2	8,597.7	3.4	16,401.5	3.2
3	West Sumatra	13.4	1.3	28.8	0.9	366.5	1.8	1,131.8	1.1	2,392.2	0.9	6,293.1	1.2
4	Riau	16.8	1.6	117.2	3.8	509.9	2.5	3,548.0	3.5	3,548.0	1.4	34,597.7	6.7
5	Jambi	3.8	0.4	15.8	0.5	91.7	0.5	1,620.2	1.6	4,964.1	2.0	15,933.9	3.1
6	South Sumatra	27.2	2.7	246.7	8.0	986.8	4.9	2,522.4	2.5	2,522.4	1.0	13,570.4	2.6
7	Lampung	6.7	0.7	26.3	0.9	282.2	1.4	2,193.8	2.2	3,923.2	1.5	8,478.3	1.6
8	Bengkulu	0.0	0.0	2.0	0.1	25.3	0.1	336.0	0.3	785.6	0.3	3,422.6	0.7
9	Special Territory of Jakarta	292.1	28.7	571.1	18.5	2,639.9	13.1	9,987.4	9.9	31,850.3	12.5	61,058.9	11.8
10	West Java	223.0	21.9	678.6	22.0	6,297.9	31.2	40,164.1	39.7	93,159.7	36.6	162,058.8	31.2
11	Central Java	151.9	14.9	274.1	8.9	1,930.6	9.6	7,992.0	7.9	19,920.8	7.8	31,786.9	6.1
12	Special Territory of Yogyakarta	11.4	1.1	21.9	0.7	73.9	0.4	580.9	0.6	1,445.6	0.6	2,010.4	0.4
13	East Java	104.6	10.3	528.1	17.1	2,614.1	13.0	10,940.4	10.8	25,820.0	10.2	52,035.3	10.0
14	Bali	10.6	1.0	29.1	0.9	144.9	0.7	765.1	0.8	6,327.1	2.5	9,016.9	1.7
15	West Kalimantan	11.4	1.1	29.7	1.0	344.1	1.7	2,458.7	2.4	7,301.2	2.9	20,422.9	3.9
16	Central Kalimantan	23.1	2.3	66.2	2.1	160.7	0.8	328.7	0.3	782.7	0.3	5,798.6	1.1
17	South Kalimantan	5.6	0.5	17.8	0.6	222.1	1.1	1,265.7	1.3	4,162.2	1.6	7,335.2	1.4
18	East Kalimantan	0.0	0.0	117.0	3.8	830.7	4.1	4,338.2	4.3	12,757.3	5.0	19,261.6	3.7
19	North Sulawesi	8.8	0.9	11.2	0.4	159.8	0.8	560.8	0.6	2,032.6	0.8	3,745.4	0.7
20	Central Sulawesi	1.3	0.1	6.7	0.2	111.4	0.6	691.8	0.7	1,277.6	0.5	5,112.9	1.0
21	South Sulawesi	14.4	1.4	79.8	2.6	317.6	1.6	1,193.6	1.2	3,329.4	1.3	8,052.1	1.6
22	Southeast Sulawesi	24.7	2.4	24.7	0.8	488.5	2.4	540.8	0.5	1,109.8	0.4	2,557.6	0.5
23	West Nusa Tenggara	0.2	0.0	0.3	0.0	5.2	0.0	119.7	0.1	1,667.8	0.7	1,859.7	0.4
24	East Nusa Tenggara	0.5	0.0	1.2	0.0	24.5	0.1	229.8	0.2	884.6	0.3	1,407.4	0.3
25	Maluku	11.3	1.1	21.9	0.7	225.6	1.1	983.0	1.0	4,456.0	1.8	6,584.8	1.3
26	Irian Jaya	5.1	0.5	20.3	0.7	204.5	1.0	1,970.8	1.9	5,443.4	2.1	13,292.1	2.6
27	East Timor	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	228.6	0.1	735.7	0.1
	<b>Western part of Indonesia</b>	912.3	89.6	2,686.3	87.1	17,060.7	84.6	86,416.1	85.5	208,866.0	82.1	422,798.8	81.5
	<b>Eastern part of Indonesia</b>	106.4	10.4	396.8	12.9	3,094.7	15.4	14,683.9	14.5	45,433.2	17.9	96,166.0	18.5
	<b>Total</b>	1,018.7	100.0	3,083.1	100.0	20,155.4	100.0	101,100.0	100.0	254,299.2	100.0	518,964.8	100.0

\* : Cumulative value from 1967

Source : Regional Development in Figures, 1997 (BAPPENAS)

Table C.4.1.5 Cumulative value of Foreign Investment by sector by province (1967-1996)

(million US\$)

	Province	Agriculture	%	Fishery	%	Forestry	%	Mining	%	Manufacturing	%	Services	%	Total	%
1	Special Territory of Aceh	79.4	1.7	11.8	1.8	0.0	0.0	50.0	0.7	3,498.5	3.0	481.3	1.1	4,121.0	2.4
2	North Sumatra	410.9	9.0	0.2	0.0	137.7	21.2	150.3	2.2	4,457.0	3.9	826.4	1.8	5,982.5	3.4
3	West Sumatra	231.6	5.1	2.3	0.4	22.2	3.4	0.0	0.0	176.2	0.2	46.4	0.1	478.7	0.3
4	Riau	735.7	16.2	26.4	4.1	0.0	0.0	74.6	1.1	6,562.4	5.7	2,941.7	6.4	10,340.8	6.0
5	Jambi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,339.6	6.4	27.7	0.1	7,367.3	4.2
6	South Sumatra	845.3	18.6	1.1	0.2	11.0	1.7	228.2	3.4	3,444.2	3.0	104.8	0.2	4,634.6	2.7
7	Lampung	611.8	13.5	14.3	2.2	0.0	0.0	0.0	0.0	226.5	0.2	422.7	0.9	1,275.3	0.7
8	Bengkulu	114.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	50.1	0.0	17.4	0.0	181.5	0.1
9	Special Territory of Jakarta	0.6	0.0	15.2	2.3	0.0	0.0	61.8	0.9	7,537.0	6.5	17,910.8	39.1	25,525.4	14.7
10	West Java	216.5	4.8	42.0	6.5	0.0	0.0	706.8	10.4	43,768.3	38.0	6,141.8	13.4	50,875.4	29.3
11	Central Java	20.5	0.5	4.6	0.7	0.0	0.0	0.0	0.0	3,394.0	2.9	5,101.4	11.1	8,520.5	4.9
12	Special Territory of Yogyakarta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.8	0.0	247.2	0.5	292.0	0.2
13	East Java	202.1	4.4	10.0	1.5	1.0	0.2	0.0	0.0	20,383.0	17.7	5,927.3	13.0	26,523.4	15.3
14	Bali	7.2	0.2	18.3	2.8	0.0	0.0	0.0	0.0	163.0	0.1	2,951.9	6.4	3,140.4	1.8
15	West Kalimantan	223.2	4.9	18.4	2.8	149.7	23.1	72.4	1.1	124.7	0.1	267.6	0.6	856.0	0.5
16	Central Kalimantan	186.2	4.1	0.0	0.0	113.3	17.5	96.1	1.4	61.9	0.1	23.8	0.1	481.3	0.3
17	South Kalimantan	180.6	4.0	6.0	0.9	22.8	3.5	254.1	3.7	2,243.9	1.9	186.9	0.4	2,894.3	1.7
18	East Kalimantan	371.1	8.2	13.1	2.0	148.5	22.9	1,120.6	16.5	3,136.3	2.7	390.3	0.9	5,179.9	3.0
19	North Sulawesi	4.9	0.1	76.7	11.8	0.0	0.0	421.0	6.2	53.3	0.0	253.0	0.6	808.9	0.5
20	Central Sulawesi	0.0	0.0	29.1	4.5	0.0	0.0	0.0	0.0	83.2	0.1	49.0	0.1	161.3	0.1
21	South Sulawesi	33.0	0.7	21.2	3.3	0.0	0.0	1,886.0	27.8	4,929.1	4.3	470.1	1.0	7,339.4	4.2
22	Southeast Sulawesi	0.0	0.0	10.9	1.7	0.0	0.0	0.0	0.0	65.4	0.1	2.2	0.0	78.5	0.0
23	West Nusa Tenggara	0.0	0.0	14.0	2.2	0.0	0.0	20.0	0.3	1,250.5	1.1	175.5	0.4	1,460.0	0.8
24	East Nusa Tenggara	50.2	1.1	9.9	1.5	0.0	0.0	0.0	0.0	18.4	0.0	47.3	0.1	125.8	0.1
25	Maluku	0.0	0.0	217.1	33.4	0.0	0.0	100.0	1.5	6.6	0.0	44.5	0.1	368.2	0.2
26	Irian Jaya	22.2	0.5	86.9	13.4	42.7	6.6	1,550.1	22.8	2,199.0	1.9	679.4	1.5	4,580.3	2.6
27	East Timor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	0.1	32.1	0.0
	<b>Western part of Indonesia</b>	<b>3,475.6</b>	<b>76.4</b>	<b>146.2</b>	<b>22.5</b>	<b>171.9</b>	<b>26.5</b>	<b>1,271.7</b>	<b>18.7</b>	<b>101,044.6</b>	<b>87.7</b>	<b>43,148.8</b>	<b>94.3</b>	<b>149,258.8</b>	<b>86.0</b>
	<b>Eastern part of Indonesia</b>	<b>1,071.4</b>	<b>23.6</b>	<b>503.3</b>	<b>77.5</b>	<b>477.0</b>	<b>73.5</b>	<b>5,520.3</b>	<b>81.3</b>	<b>14,172.3</b>	<b>12.3</b>	<b>2,621.7</b>	<b>5.7</b>	<b>24,366.0</b>	<b>14.0</b>
	<b>Total</b>	<b>4,547.0</b>	<b>100.0</b>	<b>649.5</b>	<b>100.0</b>	<b>648.9</b>	<b>100.0</b>	<b>6,792.0</b>	<b>100.0</b>	<b>115,216.9</b>	<b>100.0</b>	<b>45,770.5</b>	<b>100.0</b>	<b>173,624.8</b>	<b>100.0</b>

Source : BKPM

Table C.4.1.6 Cumulative value of Domestic Investment by sector by province (1967-1996)

(billion Rp)

Province	Agriculture	%	Fishery	%	Forestry	%	Mining	%	Manufacturing	%	Services	%	Total	%
1 Special Territory of Aceh	824.5	1.6	49.6	0.6	311.7	5.0	32.4	0.6	4,149.0	1.4	74.7	0.1	5,441.9	1.1
2 North Sumatra	2,243.7	4.4	121.5	1.5	90.5	1.5	14.0	0.3	7,157.1	2.3	3,083.2	3.1	12,710.0	2.7
3 West Sumatra	1,967.2	3.8	22.0	0.3	16.1	0.3	131.4	2.4	3,893.1	1.3	268.2	0.3	6,298.0	1.3
4 Riau	7,040.2	13.7	1,808.3	22.9	1,297.4	20.8	560.8	10.4	15,853.4	5.2	4,941.5	5.0	31,501.6	6.6
5 Jambi	1,420.7	2.8	0.0	0.0	340.0	5.5	0.0	0.0	3,592.4	1.2	82.7	0.1	5,435.8	1.1
6 South Sumatra	4,591.6	8.9	866.7	11.0	19.2	0.3	896.7	16.6	5,523.9	1.8	989.4	1.0	12,887.5	2.7
7 Lampung	1,537.1	3.0	1,306.6	16.5	35.8	0.6	90.5	1.7	4,762.1	1.5	453.5	0.5	8,185.6	1.7
8 Bengkulu	984.1	1.9	13.3	0.2	882.3	14.2	118.4	2.2	1,136.0	0.4	139.0	0.1	3,273.1	0.7
9 Special Territory of Jakarta	19.1	0.0	106.2	1.3	31.5	0.5	15.3	0.3	11,221.6	3.7	44,048.0	44.6	55,441.7	11.6
10 West Java	2,306.6	4.5	560.7	7.1	6.9	0.1	487.2	9.0	131,407.8	42.8	15,874.3	16.1	150,643.5	31.6
11 Central Java	352.2	0.7	382.2	4.8	42.3	0.7	18.1	0.3	28,593.2	9.3	2,349.1	2.4	31,737.1	6.7
12 Special Territory of Yogyakarta	1,151.1	2.2	1.5	0.0	0.0	0.0	1.3	0.0	713.1	0.2	1,191.7	1.2	2,022.7	0.4
13 East Java	1,812.7	3.5	157.3	2.0	0.0	0.0	2,026.6	37.6	36,316.8	11.8	10,074.7	10.2	50,388.1	10.6
14 Bali	52.4	0.1	54.0	0.7	0.0	0.0	0.0	0.0	285.1	0.1	8,546.8	8.7	8,938.3	1.9
15 West Kalimantan	8,745.0	17.0	21.4	0.3	347.4	5.6	8.6	0.2	9,210.7	3.0	176.2	0.2	18,509.3	3.9
16 Central Kalimantan	2,732.8	5.3	8.1	0.1	190.2	3.1	28.4	0.5	2,102.7	0.7	289.5	0.3	5,351.7	1.1
17 South Kalimantan	1,517.9	2.9	257.5	3.3	198.8	3.2	25.7	0.5	4,943.1	1.6	217.1	0.2	7,160.1	1.5
18 East Kalimantan	4,776.5	9.3	33.2	0.4	850.3	13.7	321.9	6.0	11,981.1	3.9	957.4	1.0	18,920.4	4.0
19 North Sulawesi	831.9	1.6	413.9	5.2	49.0	0.8	23.0	0.4	1,193.9	0.4	1,407.1	1.4	3,918.8	0.8
20 Central Sulawesi	1,885.9	3.7	69.6	0.9	76.7	1.2	29.1	0.5	3,028.7	1.0	20.6	0.0	5,110.6	1.1
21 South Sulawesi	1,862.9	3.6	125.9	1.6	60.8	1.0	61.1	1.1	3,873.7	1.3	1,323.4	1.3	7,307.8	1.5
22 Southeast Sulawesi	414.0	0.8	277.9	3.5	1.6	0.0	486.3	9.0	967.8	0.3	87.2	0.1	2,234.8	0.5
23 West Nusa Tenggara	196.3	0.4	105.5	1.3	0.0	0.0	0.1	0.0	52.9	0.0	1,505.9	1.5	1,858.7	0.4
24 East Nusa Tenggara	158.4	0.3	60.4	0.8	0.0	0.0	13.7	0.3	915.1	0.3	77.4	0.1	1,225.0	0.3
25 Maluku	890.1	1.7	1,032.9	13.1	481.9	7.7	2.1	0.0	3,933.8	1.3	230.1	0.2	6,570.9	1.4
26 Irian Jaya	1,864.5	3.6	48.4	0.6	895.9	14.4	0.0	0.0	10,162.2	3.3	325.5	0.3	13,296.5	2.8
27 East Timor	388.9	0.8	1.4	0.0	0.0	0.0	0.0	0.0	331.7	0.1	13.7	0.0	735.7	0.2
<b>Western part of Indonesia</b>	<b>25,267.2</b>	<b>49.0</b>	<b>5,449.9</b>	<b>68.9</b>	<b>3,073.7</b>	<b>49.4</b>	<b>4,392.7</b>	<b>81.5</b>	<b>254,604.6</b>	<b>82.9</b>	<b>92,116.8</b>	<b>93.3</b>	<b>384,904.9</b>	<b>80.7</b>
<b>Eastern part of Indonesia</b>	<b>26,265.1</b>	<b>51.0</b>	<b>2,456.1</b>	<b>31.1</b>	<b>3,152.6</b>	<b>50.6</b>	<b>1,000.0</b>	<b>18.5</b>	<b>52,697.4</b>	<b>17.1</b>	<b>6,629.1</b>	<b>6.7</b>	<b>92,200.3</b>	<b>19.3</b>
<b>Total</b>	<b>51,532.3</b>	<b>100.0</b>	<b>7,906.0</b>	<b>100.0</b>	<b>6,226.3</b>	<b>100.0</b>	<b>5,392.7</b>	<b>100.0</b>	<b>307,302.0</b>	<b>100.0</b>	<b>98,745.9</b>	<b>100.0</b>	<b>477,105.2</b>	<b>100.0</b>

Source : BKPM

Table C.4.1.7 Activity Centers in each Special Area

Province	No.	Special Area	Activity Center												
			PKN	PKW		PKL									
Special Territory of Aceh	1	Banda Aceh		Banda Aceh	Janthoi	Sabang	Sigli								
	2	Lhokseumawe		Lhokseumawe	Bircun	Takengon	Langsa	Idi							
	3	Pantai Barat Selatan			Meulaboh	Biang Pidi	Labuhan Haji	Tapaktuan	Kutacane	Singkil					
North Sumatra	4	Medan	Medan		Lubuk Pakam	Binjai	Stabat	Brandan	Sidikalgang	Kabarijah	Tanjung Pura				
					Brastagi										
	5	Pematang Siantar		Pematang	Perdagangan	Tebingtinggi									
	6	Rantau Prapat-Kisaran		Rantau Prapat	Kisaran	Kota Pinang	Aek Kanopan	Bandar Durian	Tanjung Balai	Kuala Tanjung					
	7	Tapaneli		Sibolga	Padang	Tarutung	Kotanoan	Gumung Tua	Barus						
West Sumatra	8	Toba Lake			Parapat	Balige	Porsea	Pangururan	Siborong-borong	Dolak Sanggul					
	9	Nias			Gunung Sitoli	Tetak Dalam									
	10	Padang Pariaman		Padang	Pariaman	Painan	Lubuk Alung								
	11	Agam-Bukit Tinggi			Bukittinggi	Padangpanjang	Payakumbuh	Batusangkar	Lubuk						
Riau	12	Solok			Sawahlunto	Solok	Sijunjung								
	13	Pekanbaru		Pekanbaru	Bangkinang	Pasir									
	14	Dumai			Dumai	Bagan Siapiapi	Duri	Bengkalis							
Jambi	15	Rengat-Kuala Enok			Rengat	Kuala Enok	Tembilahan	Sungai Akar	Air Molek	Teluk Kuantan	Pulau Kijang				
	16	Natuna													
	17	Batam Zone	Batam		Tanjung Pinang	Tanjung Balar	Selat Panjang	Tanjung Kijang							
	18	Muara Bulian		Jambi	Muara Bulian	Kuala Tungkal	Muara Tembesi	Muara Sabak	Nipah Panjang	Pelabuhan					
	Muara Bungo-Sarolangun			Muara Bungo	Bangka	Sarolangun	Muara Tebo	Sungai Penuh	Sungai Bengkal						

Source : National Spatial Plan (BAPPENAS)

(Table C.4.1.7 continued)

Province	No.	Special Area	Activity Center												
			PKN	PKW		PKL									
South Sumatra	20	Palerbang	Palerbang			Kayu Agung	Sekayu	Tanjung Batu	Tanjung Enim						
	21	Muara Enim		Muara Enim		Lahat	Baturaja	Pagar Alam		Prabumulih					Martapura
	22	Lubuk Linggau				Lubuk Linggau									
Bengkulu	23	Bangka-Beljitung				Pangkal Pinang	Tanjung Pandan	Manggar	Sungai Liat		Muntok				
	24	Bengkulu			Bengkulu		Curup	Argamakmur	Kepahiang						
Lampung	25	Manna					Marua	Bintuhan							
	26	Bandar Lampung-Metro		Bandar Lampung		Metro	Pringsewu	Talang Padang	Kalianda	Labuan				Kota Agung	Sekampung
Special Territory of Jakarta	27	Mesuji				Bandar Jaya	Sidamulya	Bakauheni	Jabung						
	28	Kotabumi				Mesuji	Menggata								
West Java	29	Jakarta		Jakarta		Kotabumi	Liwa	Krui	Bukit Kemuning						
	30	Bojonegara-Merak-Cilegon			Cilegon	Pandeglang	Rangkas Bitung								
	31	Buffer Area of DKI Jakarta			Bekasi	Tangerang	Depok	Serpong	Ciputat	Cileungsi	Mauk				Teluk Naga
	32	Cirebon-Indramayu				Tambun	Cibitung	Serang	Pontang	Plered	Balaraja				Cikande
	33	Bopunjur				Purwakarta	Karawang	Cikampek	Cikarang	Jatuhur					
	34	Cekungan Bandung		Bandung		Indramayu	Pahimanan	Jatibarang	Sumber	Majalengka	Kuningan				Ciledug
	35	East Priangan				Cianjur	Cipanas	Cisarua	Ciampes	Cibinong	Ciranjang				Citeureup
	36	Sukabumi				Cimahli	Padalarang	Lembang	Majalaya	Cileunyi	Banjaran				Soreang
	37	Pangandaran				Pangalengan	Ciwidey	Ciparay	Sumedang	Subang					
						Tasikmalaya	Garut	Ciamis	Banjar						
						Sukabumi	Pelabuhan Ratu	Cibadak							
						Pangandaran									

Source : National Spatial Plan (BAPPENAS)

(Table C.4.1.7 continued)

Province	No.	Special Area	Activity Center											
			PKN	PKW			PKL						Sragen	
Central Java	38	Subosuko		Surakarta		Boyolali	Sukoharjo	Karang Anyar	Tawangmangu	Klaten				
	39	Semarang-Demak	Semarang	Ungaran	Salatiga	Kendal	Demak	Purwodadi						
	40	Bregas		Tegal	Pemalang	Pekalongan	Brebes	Batang	Slawi					
	41	Pati-Kudus-Jepara		Kudus		Pati	Jepara							
	42	Purwokerto		Puwokerto		Banjarnegara	Purbalingga	Banyumas	Sokaraja					
	43	Kebumen		Kebumen		Karang Anyer	Gombong							
	44	Cilacap		Cilacap		Wangon	Kroya							
	45	Borobudur		Magelang		Murtihan	Mungkid	Borobudur						
	46	Yogyakarta		Yogyakarta		Bantul	Sleman	Prambanan	Wates	Wonosari				
	47	Gerbang kertosisila	Surabaya	Bangkalan	Sumenep	Gresik	Mojokerto	Sidoarjo	Lamongan	Diyorejo	Porong	Krian		
	48	Probolinggo-Pasuruan		Probolinggo		Sampang								
	49	Tuban				Pasuruan	Bangil							
	50	Kediri-Tulung Agung-Blijar				Tuban	Bojonegoro	Babat						
	51	Malang		Malang		Kediri	Tulung Agung	Blitar	Trenggalek					
	52	Situbondo-Bondowoso-Jember				Singosari	Batu	Buhilawang	Lawang					
53	Madiun				Situbondo	Bondowoso	Jember	Tamanan	Besuki	Jatiroto				
54	Banyuwangi		Banyuwangi		Ponorogo	Madiun	Magetan	Ngawi	Pacitan					
55	Singaraja		Singaraja		Muncar	Genteng	Glenmore							
56	Denpasar-Ubud Kintamani	Denpasar			Seririt	Kubutambahan	Grogak							
					Gianyar	Tabanan	Ubud	Mengwi	Bajera	Semarapura	Bangli			
					Amlapura	Negara								

Source : National Spatial Plan (BAPENAS)

(Table C.4.1.7 continued)

Province	No.	Special Area	Activity Center																	
			PKN	PKW	Praya	Selong	Gerung	Lembar	PKL	Gerung	Selong	Praya								
West Nusa Tenggara	57	Mataram		Mataram																
	58	Sumbawa Besar		Sumbawa Besar		Samatung	Sernongkat	Lopok	Empang	Alas										
	59	Bina				Raba	Dompur	Sape												
East Nusa Tenggara	60	Kupang		Kupang		Camplong	Soe	Baa	Baun											
	61	Mauere-Ende				Mauere	Ende	Waiowaru	Detusoko											
	62	Komodo				Labuan Bajo	Reo	Wanokaka	Kodi	Waikabubak	Ruteng									Waingapu
East Timor	63	Dili-Manatuto				Manaturo	Ermera	Liquisa	Aliau	Same										
	64	Suai-Arinaro				Suai	Almaro	Maliana	Maubisse											
	65	Los Palos-Baucau				Los Palos	Baucau	Laga	Viqueque											
West Kalimantan	66	Pontianak				Pontianak	Rasau Jaya													
	67	Johar-Sanggau				Sintang	Sanggau	Sekadau	Nangapinuh	Nangataman	Tayan									
	68	Singkawang				Bengkayang	Singkaawang	Pemangkat	Sambas											
Central Kalimantan	69	Ketapang				Ketapang	Kendawangan	Nangatayap												
	70	Kapuas Hulu				Punussibau														
	71	Kuala Kapuas		Palangkaraya		Kasongan	Pulang Pisau	Kuala Kapuas	Kuala Kurun	Lupak Dalam										
	72	Sampit				Sampit	Kotabesi	Hanjallipan	Kuala Kayan	Parenggeran	Tumbang Samba									
	73	Pangkalan Bun				Pangkalan Bun	Kumai	Nagabulik												
	74	Buntok				Buntok	Ampah	Tamiang Layang												
	75	Muarateweh				Muarateweh	Purukcahu	Mitara Laung												

Source : National Spatial Plan (BAPPENAS)



(Table C.4.1.7 continued)

Province	No.	Special Area	Activity Center					PKL				
			PKN	PKW	PKL	PKL	PKL	PKL	PKL	PKL	PKL	
South Kalimantan	76	Banjarmasin		Banjarmasin		Banjjar Baru	Martapura	Pleihari	Marabahan			
	77	Kandangan				Kandangan	Rantau	Barabai	Amuntai	Tanjung		
	78	Banulicin				Banulicin	Kotabaru	Pagatan				
East Kalimantan	79	Balikpapan-Samarinda	Balikpapan	Samarinda		Bontang	Tenggarong	Kota Bangun	Marangkayu			
	80	Tanjung Redep				Tanjung Redep	Tanjung Selor	Tanjung Pagar	Tanjung Santan	Sangkalirang	Muarawahau	
North Sulawesi	81	Tarakan		Tarakan		Nunukan						
	82	Tanah Grogot				Tanah Grogot	Muara Taloke					
	83	Gorontalo				Gorontalo	Limboto	Suwawa				
	84	Manado	Manado			Tondano	Bitung	Tomohon	Likupang	Tahuna		
	85	Kotamobagu				Kotamobagu						
Central Sulawesi	86	Palu		Palu		Donggala	Tawaesi	Dolo	Kulawi			
	87	Poso		Poso		Tentena						
	88	Luwuk		Luwuk		Biak	Ampapa					
South Sulawesi	89	Kolonedale				Kolonedale	Tamata	Tokaia Atas				
	90	Toli-Toli		Toli-Toli		Santigi						
	91	Ujung Pandang	Ujung Pandang			Pangkajene	Maros	Pattalasang	Sungguminasa			
South Sulawesi	92	Palopo		Palopo		Makale	Rantepao	Masamba	Wotu	Matili	Soroako	Mamasa
	93	Bulukumba-Watampone		Watampone		Sinjai	Bulukumba	Benteng	Jenepono	Bantaeng	Segkang	Watzinsopeng
	94	Pare-Pare		Pare-Pare		Pinrang	Sinderang	Rappang	Enrekang	Barru		
	95	Mamuju		Mamuju		Majene	Polewali					

Source : National Spatial Plan (BAPPENAS)

(Table C.4.1.7 continued)

Province	No.	Special Area	Activity Center						
			PKN	PKW	PKL			PKL	
Southeast Sulawesi	96	Kendari		Kendari	Lasolo	Una Aha			
	97	Kolaka			Kolaka	Pomaliaa			
	98	Muna-Buton			Raha	Bau-Bau	Pasarwajo		
Maluku	99	Buru Seram		Ambon	Masohi	Kairatu	Wahai	Namlea	
	100	North Halmahera		Ternate	Soa Siu	Jailolo	Buli	Tobelo	
	101	Group of Islands of Kai Aru		Tual	Dobo	Saumlaki			
	102	Sula Islands			Dofa				
Irian Jaya	103	Jayapura		Jayapura	Abepura	Demta	Tengon		
	104	Merauke			Merauke	Kumbe			
	105	Tembagapura			Timika	Tembagapura			
	106	Biak		Biak	Bosnik				
	107	Sorong		Sorong	Mega				
	108	Nabire			Nabire				
	109	Fak-Fak			Fak-Fak	Kokas	Piar	Kaimana	
	110	Manokwari			Manokwari	Ransiki	Prafi	Serui	
	111	Wamena			Wamena	Kurima			

Source : National Spatial Plan (BAPPENAS)

Table C.4.3.1 Road Length and Type of Surface by Province in 1996

	Province	Asphalted		Gravel		Earth		Others		Total	
		Km	%	Km	%	Km	%	Km	%	Km	%
1	Special Territory of Aceh	6,998	3.8	3,392	4.7	2,968	2.9	883	2.9	14,241	3.7
2	North Sumatra	14,142	7.8	4,412	6.1	9,465	9.4	2,971	9.7	30,990	8.0
3	West Sumatra	7,623	4.2	3,219	4.4	5,506	5.5	1,949	6.4	18,297	4.7
4	Riau	4,230	2.3	3,554	4.9	4,527	4.5	978	3.2	13,289	3.4
5	Jambi	3,834	2.1	1,829	2.5	3,039	3.0	566	1.8	9,268	2.4
6	South Sumatra	8,561	4.7	2,225	3.1	4,349	4.3	0	0.0	15,135	3.9
7	Bengkulu	3,214	1.8	1,309	1.8	1,356	1.3	106	0.3	5,985	1.6
8	Lampung	5,767	3.2	2,688	3.7	2,865	2.8	0	0.0	11,320	2.9
9	Special Territory of Jakarta	8,404	4.6	99	0.1	145	0.1	3	0.0	8,651	2.2
10	West Java	17,115	9.4	5,073	7.0	3,739	3.7	2,402	7.8	28,329	7.3
11	Central Java	17,930	9.9	4,070	5.6	1,986	2.0	987	3.2	24,973	6.5
12	Special Territory of Yogyakarta	4,814	2.6	2,021	2.8	5,299	5.3	3,608	11.8	15,742	4.1
13	East Java	20,603	11.3	4,977	6.9	6,251	6.2	1,235	4.0	33,066	8.6
14	Bali	4,656	2.6	782	1.1	1,754	1.7	812	2.7	8,004	2.1
15	West Kalimantan	3,899	2.1	1,635	2.3	5,689	5.6	594	1.9	11,817	3.1
16	Central Kalimantan	3,477	1.9	2,603	3.6	6,995	6.9	1,000	3.3	14,075	3.6
17	South Kalimantan	4,901	2.7	1,897	2.6	735	0.7	290	0.9	7,823	2.0
18	East Kalimantan	2,467	1.4	1,692	2.3	1,909	1.9	909	3.0	6,977	1.8
19	North Sulawesi	4,969	2.7	1,120	1.5	2,856	2.8	859	2.8	9,804	2.5
20	Central Sulawesi	2,832	1.6	4,125	5.7	1,375	1.4	1,465	4.8	9,797	2.5
21	South Sulawesi	10,396	5.7	5,678	7.8	9,224	9.2	2,474	8.1	27,772	7.2
22	Southeast Sulawesi	2,847	1.6	1,825	2.5	1,523	1.5	625	2.0	6,820	1.8
23	West Nusa Tenggara	3,446	1.9	831	1.1	2,274	2.3	576	1.9	7,127	1.8
24	East Nusa Tenggara	3,961	2.2	4,747	6.6	6,719	6.7	754	2.5	16,181	4.2
25	Maluku	4,147	2.3	1,241	1.7	1,784	1.8	2,187	7.1	9,359	2.4
26	Irian Jaya	3,592	2.0	4,208	5.8	3,377	3.4	1,657	5.4	12,834	3.3
27	East Timor	3,151	1.7	1,203	1.7	3,063	3.0	743	2.4	8,160	2.1
	<b>Western part of Indonesia</b>	127,891	70.3	39,650	54.7	53,249	52.8	16,500	53.9	237,290	61.5
	<b>Eastern part of Indonesia</b>	54,085	29.7	32,805	45.3	47,523	47.2	14,133	46.1	148,546	38.5
	<b>Total</b>	181,976	100	72,455	100	100,772	100	30,633	100	385,836	100

Source : Statistical year book of Indonesia 1996 (BPS)

Table C.4.3.2 Road Length and Road Condition by Province in 1996

	Province	Good		Moderate		Damaged		Badly Damaged		Total	
		Km	%	Km	%	Km	%	Km	%	Km	%
1	Special Territory of Aceh	6,367	4.3	3,468	3.5	3,099	3.9	1,307	2.3	14,241	3.7
2	North Sumatra	10,051	6.7	7,819	8.0	5,489	6.9	7,631	13.1	30,990	8.0
3	West Sumatra	6,181	4.1	3,229	3.3	4,487	5.6	4,400	7.6	18,297	4.7
4	Riau	5,713	3.8	3,031	3.1	2,287	2.9	2,258	3.9	13,289	3.4
5	Jambi	4,747	3.2	1,682	1.7	1,710	2.1	1,129	1.9	9,268	2.4
6	South Sumatra	9,192	6.1	2,546	2.6	2,031	2.5	1,366	2.4	15,135	3.9
7	Bengkulu	3,270	2.2	790	0.8	1,097	1.4	828	1.4	5,985	1.6
8	Lampung	5,891	3.9	2,447	2.5	2,026	2.5	956	1.6	11,320	2.9
9	Special Territory of Jakarta	7,114	4.7	1,041	1.1	485	0.6	11	0.0	8,651	2.2
10	West Java	10,115	6.8	10,586	10.8	5,686	7.1	1,942	3.3	28,329	7.3
11	Central Java	10,784	7.2	8,211	8.4	4,154	5.2	1,824	3.1	24,973	6.5
12	Special Territory of Yogyakarta	5,178	3.5	2,815	2.9	7,387	9.2	362	0.6	15,742	4.1
13	East Java	13,207	8.8	12,259	12.5	5,302	6.6	2,298	4.0	33,066	8.6
14	Bali	2,906	1.9	2,228	2.3	2,151	2.7	719	1.2	8,004	2.1
15	West Kalimantan	3,466	2.3	2,000	2.0	2,220	2.8	4,131	7.1	11,817	3.1
16	Central Kalimantan	3,263	2.2	4,848	4.9	3,043	3.8	2,921	5.0	14,075	3.6
17	South Kalimantan	3,608	2.4	1,691	1.7	2,030	2.5	494	0.9	7,823	2.0
18	East Kalimantan	2,933	2.0	1,337	1.4	1,130	1.4	1,577	2.7	6,977	1.8
19	North Sulawesi	3,956	2.6	1,218	1.2	2,327	2.9	2,303	4.0	9,804	2.5
20	Central Sulawesi	2,344	1.6	2,269	2.3	2,796	3.5	2,388	4.1	9,797	2.5
21	South Sulawesi	10,067	6.7	7,005	7.1	5,952	7.4	4,748	8.2	27,772	7.2
22	Southeast Sulawesi	1,821	1.2	2,011	2.1	1,328	1.7	1,660	2.9	6,820	1.8
23	West Nusa Tenggara	2,327	1.6	1,579	1.6	2,043	2.6	1,178	2.0	7,127	1.8
24	East Nusa Tenggara	4,750	3.2	3,218	3.3	4,504	5.6	3,709	6.4	16,181	4.2
25	Maluku	3,071	2.1	2,128	2.2	1,367	1.7	2,793	4.8	9,359	2.4
26	Irian Jaya	4,127	2.8	4,493	4.6	2,304	2.9	1,910	3.3	12,834	3.3
27	East Timor	3,324	2.2	2,038	2.1	1,599	2.0	1,199	2.1	8,160	2.1
	<b>Western part of Indonesia</b>	<b>100,716</b>	<b>67.2</b>	<b>62,152</b>	<b>63.4</b>	<b>47,391</b>	<b>59.2</b>	<b>27,031</b>	<b>46.6</b>	<b>237,290</b>	<b>61.5</b>
	<b>Eastern part of Indonesia</b>	<b>49,057</b>	<b>32.8</b>	<b>35,835</b>	<b>36.6</b>	<b>32,643</b>	<b>40.8</b>	<b>31,011</b>	<b>53.4</b>	<b>148,546</b>	<b>38.5</b>
	<b>Total</b>	<b>149,773</b>	<b>100</b>	<b>97,987</b>	<b>100</b>	<b>80,034</b>	<b>100</b>	<b>58,042</b>	<b>100</b>	<b>385,836</b>	<b>100</b>

Source : Statistical year book of Indonesia 1996 (BPS)

Table C.4.3.3 Number and Type of Registered Motor Vehicles by Police Territorial Jurisdiction by Province in 1996

Province	Passenger Cars		Buses		Trucks		Motorcycles		Total	
	Unit	%	Unit	%	Unit	%	Unit	%	Unit	%
1 Special Territory of Aceh	15,490	0.6	4,516	0.6	18,816	1.3	182,610	1.8	221,432	1.5
2 North Sumatra	123,618	5.1	36,546	5.0	110,306	7.6	689,868	6.7	960,338	6.5
3 West Sumatra	20,187	0.8	23,361	3.2	34,696	2.4	145,994	1.4	224,238	1.5
4 Riau	25,857	1.1	15,201	2.1	32,211	2.2	230,970	2.2	304,239	2.0
5 Jambi	105,529	4.4	36,771	5.1	117,928	8.1	596,616	5.8	856,844	5.8
6 South Sumatra										
7 Bengkulu										
8 Lampung										
9 Special Territory of Jakarta	967,229	40.1	310,636	42.9	344,730	23.7	1,775,153	17.2	3,397,748	22.8
10 West Java	281,272	11.7	82,893	11.4	164,344	11.3	714,567	6.9	1,243,076	8.4
11 Central Java	272,606	11.3	34,450	4.8	200,714	13.8	2,069,086	20.1	2,576,856	17.3
12 Special Territory of Yogyakarta										
13 East Java	323,598	13.4	100,778	13.9	185,124	12.7	1,982,390	19.3	2,591,890	17.4
14 West Kalimantan	17,003	0.7	2,953	0.4	13,823	1.0	171,336	1.7	205,115	1.4
15 Central Kalimantan	32,490	1.3	6,246	0.9	28,749	2.0	285,038	2.8	352,523	2.4
16 South Kalimantan										
17 East Kalimantan	29,579	1.2	5,780	0.8	26,212	1.8	178,683	1.7	240,254	1.6
18 North Sulawesi	30,886	1.3	15,778	2.2	42,044	2.9	245,309	2.4	334,017	2.2
19 Central Sulawesi										
20 South Sulawesi	56,463	2.3	22,045	3.0	57,020	3.9	363,638	3.5	499,166	3.4
21 Southeast Sulawesi										
22 Bali	90,332	3.7	15,811	2.2	60,677	4.2	582,972	5.7	749,792	5.0
23 West Nusa Tenggara										
24 East Nusa Tenggara										
25 East Timor										
26 Maluku	9,225	0.4	2,655	0.4	8,841	0.6	34,322	0.3	55,043	0.4
27 Irian Jaya	9,162	0.4	8,494	1.2	8,350	0.6	47,525	0.5	73,531	0.5
Total	2,410,526	100	724,914	100	1,454,585	100	10,296,077	100	14,886,102	100

Source : Statistical year book of Indonesia 1996 (BPS)

Table C.4.3.4 Target of Road Development in PJP II

Category	unit	End of Repelita V 1)	Target in PJP II (End of Repelita)				
			VI	VII	VIII	IX	X
Total length of Road	km	244,170	268,030	304,250	358,240	442,850	632,000

Note : 1) Estimate

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.5 Target of Road Development in Repelita VI (cumulative, 5 years)

Activities	Unit	Repelita V 1)	Repelita VI 2)
1. Rehabilitation and Maintenance of Roads and Bridges			
a. Artery and Collector Roads	km	210,389	213,700
b. Local Roads	km	284,889	428,180
c. Bridges	m	96,728	120,000
2. Road Upgrading and Bridge Replacement			
a. Artery and Collector Roads	km	35,939	21,350
b. Local Roads	km	51,679	65,000
c. Bridges	m	85,389	55,000
3. Construction of New Roads and Bridges			
a. Artery and Collector Roads	km	1,807	4,900
b. Local Roads	km	344	5,100
c. Bridges	m	4,200	30,250
d. Toll Roads	km	223	310

Note : 1) Estimate      2) Target

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.6 Target of Rail Development in PJP II

Category	unit	End of Repelita V 1)	Target in PJP II (End of Repelita)				
			VI	VII	VIII	IX	X
Total length of Rail	km	5,051	5,401	5,956	6,708	7,360	7,660

Note : 1) Estimate

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.7 Target of Rail Development in Repelita VI (cumulative, 5 years)

Activities	Unit	Repelita V 1)	Repelita VI 2)
1. Development of Rollingstock			
a. Procurement			
- Diesel Locomotives	unit	35	52
- Electric Railcars	unit	36	84
- Passenger Coaches	unit	120	170
b. Rehabilitation			
- Diesel Locomotives	unit	3) 591	16
- Electric Railcars	unit	3) 210	30
- Passenger Coaches	unit	3) 2,133	60
2. Development of Railway Infrastructure			
a. Rehabilitation/Upgrading of Railtrack	km	2,174	840
b. Construction of Railtrack	km	50	350
c. Upgrading of Railway Bridges	bridge	269	130
d. Installation of Electric Signals	unit	0	50

Note : 1) Estimate   2) Target  
           3) Number of rehabilitation project

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.8 Target of River, Lake and Ferry Development in Repelita VI  
 (cumulative, 5 years)

Activities	Unit	Repelita V 1)	Repelita VI 2)
1. Construction of Wharves/Terminals			
a. River and Lake	location	55	60
b. Ferry	location	33	41
2. Rehabilitation of Wharves/Terminals			
a. River and Lake	location	8	17
b. Ferry	location	12	25

Note : 1) Estimate   2) Target

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.9 Target of Air Development in PJP II

Category	unit	End of Repelita V 1)	Target in PJP II (End of Repelita)				
			VI	VII	VIII	IX	X
Domestic Passengers	million person	8.2	12.2	17.5	25.1	36.0	51.9
International Passengers	million person	2.5	9.6	13.8	19.8	28.4	40.8

Note : 1) Estimate

Source : Repelita VI, a Summary (BAPPENAS)

Table C.4.3.10 Target of Air Development in Repelita VI (cumulative, 5 years)

Activities	Unit	Repelita V 1)	Repelita VI 2)
1. Infrastructure Development			
a. Development of Runway Facilities	m2	110,550	129,750
b. Development of Terminal Facilities	m2	50,595	93,320
c. Development of Operational Building	m2	16,320	18,300
2. Fleet Development			
a. Procurement of Commercial Aircraft	unit	43	80
b. Procurement of Noncommercial Aircraft	unit	2	25

Note : 1) Estimate 2) Target

Source : Repelita VI, a Summary (BAPPENAS)