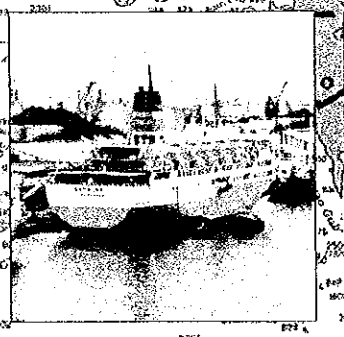
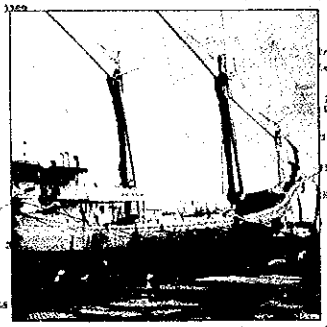
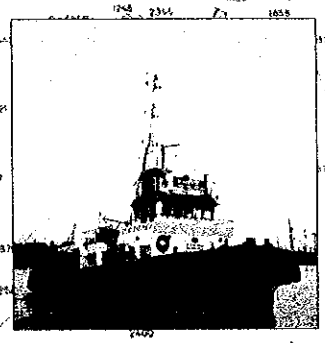
Japan International Cooperation Agency (JICA)
Directorate General of Sea Communication (DGSC)
Ministry of Communications

NO. 62

社会開発調査部報告書

FINAL REPORT
THE STUDY ON THE PORT DEVELOPMENT STRATEGY IN THE REPUBLIC OF INDONESIA



MAIN REPORT VOLUME2

PART2: PORT DEVELOPMENT STRATEGY

March 1999

THE OVERSEAS COASTAL AREA DEVELOPMENT INSTITUTE OF JAPAN(OCDI)

Japan International Cooperation Agency (JICA)
Directorate General of Sea Communication (DGSC)
Ministry of Communications

FINAL REPORT
THE STUDY ON THE PORT DEVELOPMENT STRATEGY IN THE REPUBLIC OF INDONESIA

MAIN REPORT VOLUME2

PART2:PORT DEVELOPMENT STRATEGY

March 1999

THE OVERSEAS COASTAL AREA
DEVELOPMENT INSTITUTE OF JAPAN(OCDI)

PREFACE

In response to a request from the Government of the Republic of Indonesia, the Government of Japan decided to conduct a study on Port Development Strategy in the Republic of Indonesia and entrusted to study to the Japan International Cooperation Agency.

JICA selected and dispatched a study team headed by Dr. Tadahiko Yagyu, Senior Advisor of the Overseas Coastal Area Development Institute of Japan (OCDI) to the Republic of Indonesia, three times between November 1997 and December 1998.

The team held discussions with the officials concerned of the Government of the Republic of Indonesia and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Indonesia for their close cooperation extended to the study.

March 1999

Kimio Fujita
President
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

March 1999

Mr. Kimio FUJITA
President
Japan International Cooperation Agency

Dear Mr. Fujita:

It is my great pleasure to submit herewith the Final Report of the Study on Port Development Strategy in the Republic of Indonesia.

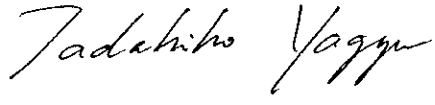
The study team of the Overseas Coastal Area Development Institute of Japan (OCDI) conducted surveys in the Republic of Indonesia over the period between November 1997 and December 1998 as per the contract with the Japan International Cooperation Agency.

The findings of this study, which are compiled in this report, were fully discussed with the officials of the Ministry of Communications of the Indonesian Government and other authorities concerned to formulate the Port Development Strategy in the Republic of Indonesia for the period up to the year 2018.

On behalf of the study team, I would like to express my heartfelt appreciation to the Government of the Republic of Indonesia, the Ministry of Communications and other authorities concerned for their diligent cooperation and assistance and for the heartfelt hospitality which they extended to the study team during our stay in the Republic of Indonesia

I am also greatly indebted to the Japan International Cooperation Agency, the Ministry of Foreign Affairs, the Ministry of Transport and the Embassy of Japan in Indonesia for giving us valuable suggestions and assistance during the preparation of this report.

Yours faithfully,



Tadahiko Yagyu
Team Leader for the Study
on Port Development Strategy
in the Republic of Indonesia

Map of Indnesia

CONTENTS

ABBREVIATION LIST

A	ADPEL	Port Administrator Office
	AMDAL	Environmental Impact Analysis
	ADB	Asian Development Bank
	ASEAN	Association of South East Asian Nations
	ATN	Aids to Navigation
B	BAPEDAL	Environmental Impact Management Agency
	BAPPEDA	Provincial Development and Planning Board
	BAPPENAS	National Development Planning Agency
	BHI	Indonesia Legal Entity
	BIRO	Bureau
	BKPM	Investment Coordination Board
	BKPMD	Regional Investment Coordination Board
	BOD	Biological Oxygen Demand
	BOR	Berth Occupancy Rate
	BOT	Built-Operate-Transfer
	BPS	Central Bureau of Statistics
	BTKP	Shipping Safety Technology Office
	BUMN	State Owned Company
C	CFC	Chlorofluorocarbon
	CFS	Container Freight Station
	CHT	COSCO-HIT Terminals (Hong Kong) Limited.
	COD	Chemical Oxygen Demand
	COSCO	China Ocean Shipping Company
	CT I	Container Terminal I
D	Dati I	First Level Local Government (Province)
	Dati II	Second Level Local Government (District / Municipality)
	DGLC	Directorate General of Land Communication
	DGSC	Directorate General of Sea Communication
	DNI	Negative Investment List
	DO	Delivery Order
	DO	Dissolved Oxygen

E	EDI	Electric Data Interchange
	EIA	Environmental Impact Assessment
	EIDC	Eastern Indonesia Development Council
	EIJA	Export Import Bank of Japan
	EMKL	Sea Freight Forwarding Company
F	FIRR	Financial Internal Rate of Return
	FOI	Foreign Direct Investment
G	GBHN	National Development Guideline
	GDP	Gross Domestic Product
	GHG	Green House Gas
	GOI	Government of Indonesia
	GOJ	Government of Japan
	GRDP	Gross Regional Domestic Product
	GRT	Gross Register Tonnage
	GT	Gross Tonnage
H	HGB	Building Use Right
	HIT	Hongkong International Terminal Limited.
	HMC	Harbor Mobile Crane
I	IBRD	International Bank of Reconstruction and Development
	IDB	Islamic Development Bank
	IEAT	Industrial Estate Authority of Thailand
	ILS	Inter-Island Liner System
	IMF	International Monetary Fund
	INPRES	President Instruction
	INSA	Indonesian National Ship Owner Association
	IPC	Indonesia Port Corporation
J	JICA	Japanese International Cooperation Agency
	JKT	Jakarta
	JO	Joint Operation
	JVC	Joint Venture Company

K	KANPEL	Port Administration Office (Non-commercial Port)
	KANWIL	Province Office of a Central Ministry
	KANWIL DEPHUB	Regional Office of MOC
	KAPET	Integrated Economical Development Area
	KM	Minister Decree
	KSO	Kerjasma Operasi (Joint Operation)
L	L't Beacon	Lighted Beacon
M	MOC	Minister of Transport
	MOF	Minister of Finance
	MOTC	Ministry of Transport and Communications of Thailand
	MOU	Minute of Understanding
	MPA	Maritime and Port Authority
	MSDP	Maritime Sector Development Program
	MSTC	Maritime Training Center
	MTL	Modern Terminals Limited.
N	Nav. Aids	Navigation Aids
	NPSP	National Port System Plan
O	OD	Origin and Destination
	OECF	Overseas Economic Cooperation Fund
P	PAT	Port Authority of Thailand
	PBM	Stevedoring Company
	PBMTO	Terminal Operator Loading-unloading
	PDB	Port Development Board
	PEB	Export Documents
	PELNI	Indonesian National Shipping Company
	PERINTIS	Pioneer Ship System to Serve Remote Area
	PERUMKA	Indonesia State Railways
	PELRA	Rakyat (Traditional Wooden Vessel)
	PERSERO	State-Owned Company
	PERTAMINA	State-Owned Oil Company
	PERUM ASDP	State-Owned Ferry Terminal Company
	PJP II	The Second Long Term Development Plan

	PKL	Local Activity Center
	PKN	National Activity Center
	PKW	Regional Activity Center
	PL	Sailing Vessel
	PLM	Sailing Vessel with Engine
	PP	Government Regulation
	PPKB	Permintaan Pelayanan Kapal dan Barang (The Demands of Ship and Good Services)
	PPSA	One Roof Port Service Center
	PSA	PSA Company (changed from Port of Singapore Authority)
	PSP	Private Sector Participation
	P.T.	Limited Company
	PTPI	IPC (Indonesia Port Corporation)
	PT.RUKINDO	Indonesia Dredging State Limited Company
R	REPELITA	National Five-year Development Plan
	REPELITADA	Local Five-year Development Plan
	Rp.	Rupiah
	RTRW	Spatial Use Plan
S	SAR	Search and Rescure
	SFD	Saudi Arabia Fund Development
	SIMOPPEL	Port Operation Management Information System
	SLOT	Sea-Land Orient Terminals Limited.
	SO	Supervisi Operasi (Operation Supervisor)
	SOLAS	International Convention on Safety of Life at Sea
	SS	Suspended Solid
	STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
T	TEU	Twenty Foot Equivalent Unit
	TKBM	Loading / Un-loading Workers
	TOR	Term of Reference
	TSP	Total Suspended Particular
U	UPT	Technical Planning Unit
	ULCC	Ultra Large Crude Oil Carrier

V	VLCC	Very Large Crude Oil Carrier
W	WB	World Bank
	WPPI	Central Area of Industrial Development

LIST OF TABLES

PART 2 PORT DEVELOPMENT STRATEGY

LIST OF FIGURES

PART 2 PORT DEVELOPMENT STRATEGY

PART 2

PORT DEVELOPMENT STRATEGY

Chapter 1 INTRODUCTION

(1) Background of the Study

Indonesia is the biggest archipelago country in the world with over 17,000 islands. Sea transportation is vitally important to both domestic and international transportation.

In recent years, the socio-economic disparity between advanced and less advanced regions of Indonesia has been widening despite steady economic growth.

Under these circumstances, one of the Government's principal policies is to develop the sea transportation as a measure to deal with the increasing traffic demand and to eliminate the regional socio-economic disparity.

Rapid changes in port activities, such as the increase in the number of import/export cargoes as well as the worldwide trend of containerization and the necessity of private sector participation even in port activities, have been clearly identified.

To cope with these recent changes in port activities, the Government of Indonesia has begun to prepare the REPELITA VII and to formulate a new long-term port development strategy.

Considering the situation as mentioned above, Government of Indonesia requested the Government of Japan to conduct a study for formulating a port development strategy in January 1996.

In response to this request of Government of Indonesia, Government of Japan has decided to conduct the Study for Port Development Strategy in the Republic of Indonesia and dispatched the study team composed of members of the Overseas Coastal Area Development Institute of Japan through the Japan International Cooperation Agency accordingly.

(2) Objectives of the Study

Based on the background described above, the objective of the Study is to formulate the long-term port development strategy for the Indonesian ports up to the year 2018.

(3) Scope of the Study

In order to achieve objectives as mentioned above, the Study shall cover the following items ;

1. Analysis of the present situation of Indonesian sea-borne trade and ports
   1-1 Collection of existing data and information
   1-2 Identification of present problems
2. Analysis of future trend of Indonesian sea-borne trade and ports
   2-1 Review of past studies and development plans as well as projects related to the ports
   2-2 Forecast of the demand for passenger, cargo and vehicle traffic through ports
3. Formulation of the port development strategy up to the year 2018
   3-1 Review of the present strategy for port development
   3-2 Establishment of the fabric of the new port development strategy
   3-3 Strategy for port infrastructure development
      (1) Establishment of appropriate port hierarchy system
      (2) Selection of strategic ports
      (3) Allocation of functions and traffic between strategic ports for the initial 5-year term
      (4) Preliminary estimate of required investment for the initial 5-year term
      (5) Preparation of maintenance and investment policy for navigation channels
   3-4 Strategy for management and operation
      (1) Allocation of roles between government, public enterprise and private sector
      (2) Identification of possible areas for private sector participation
      (3) Preparation of measures for improvement of port service efficiency
   3-5 Strategy for finance
      (1) Preparation of the framework for port financing
      (2) Preparation of guideline for private sector participation
      (3) Preliminary identification of financing resources for the initial 5-year term
   3-6 Others
      (1) Identification of environmental factors and its possible prevention measures
      (2) Preparation of staff training programs for port sector
      (3) Preparation of institutional framework
4. Conclusion and recommendations

(4) Steering Committee

Directorate General of Sea Communication, Ministry of Communications has set up the Steering Committee for the duration of the Study, which is organized by related officials of BAPPENAS, MOC, DGSC and others as shown Table 1.1. Director General of DGSC chairs the committee.

(5) Counterparts

DGSC has nominated its officials as counterparts of each professional field for the Study Team, which are as shown in Table 1.2. Drs. Tjipto TH is the chairman of the counterparts.

(6) Members of the Study Team

The Study Team is headed by Dr. Tadahiko Yagyu and composed of 12 experts. Their names and responsibilities are shown in Table 1.3.

Table 1.1 Organization of Steering Committee

Chairman : Director General of Sea Communication
Vice Chairman: 1. Secretary of Directorate General of Sea Communication
2. Head of Port and Dredging Directorate, DGSC
Secretary : Head of Planning Division, DGSC
Members : 1. Head of Communication & Transportation Bureau, BAPPENAS
2. Head of Planning Division, MOC
2. Head of Planning Bureau, DGSC
3. Head of Sea Traffic Directorate, DGSC
4. Head of Navigation Directorate, DGSC
5. Head of Marine Safety Directorate, DGSC
6. Head of Sea Cost Guard Directorate, DGSC
7. Board of Director Port Corporation I; II; III and IV Indonesia

Table 1.2 Counterparts

No.	**N a m e**	**Position**	**Division**
1.	Drs. Tjipto TH	Chairman	Planning Division
2.	Ir. Djoko Pramono	Vice Chairman I	Port & Dredging Directorate
3.	Ir. Adolf R.Tambunan, MSc	Vice Chairman II	Planning Division
4.	Drs. Eko H.Rumekso, MBA	Secretary	Planning Division
5	Ir. Kemal Heryandry, Dipl.Ing (Ir. Iskandar S)	Member	P & D Directorate
6.	Drs. Cholik Kirom	Member	P & D Directorate
7.	Ir. Suwandi Saputro	Member	P & D Directorate
8.	Ir. Bambang Ristianto	Member	Planning Division
9.	Drs. Hotman OP	Member	Planning Division
10.	Ir. Bhakti Sitepu	Member	Planning Division
11.	Ir. Harry Budiarto	Member	P & Directorate
12	Ir. Albert Samboh, MSc	Member	P & D Directorate
13.	Drs. TW Pasaribu	Member	P & D Directorate
14.	Ir. Frankie Napitupulu	Member	Planning Division
15.	Ir. Wijayanto	Member	P & D Directorate
16.	Ir. M.Tohir	Member	P & D Directorate
17.	Ir. Irawan Setiabudi	Member	Planning Division

18.	Simson Sinaga, SE, MSc	Member	Sea Traffic Directorate
19.	Ir. A. Tonny Budiono	Member	Navigation Directorate
20.	Ir. T. Sitorus	Member	Navigation Directorate
21.	Ir. Tumbaksyah	Member	Planning Division
22.	Ir. Paulus Raga, MSTr	Member	Research & Development Agency of MOC
23.	Ir. Fadly Sulaiman, MSTr	Member	Research & Development Agency of MOC
24		Member	Planning Bureau MOC
25.	Sri Ida Lumongga, SE	Member	Planning Division
26.	Drs. Soepardi	member	Indonesian Port I
27.	Ir. Iskarnanto	Member	Indonesian Port I
28.	Ir. Syambu Rizal, MM	Member	Indonesian Port II
29	Ir. S. Djauharianto, MM	Member	Indonesian Port III
30.	Drs. Ferdinand N.MBA	Member	Indonesian Port III
31.	Ir. Alfred Natsir	Member	Indonesian Port IV
32	Ir. Edy DM Nursewan	Member	Indonesian Port IV

Table 1.3 Members of the Study team

Dr. Tadahiko YAGYU	Team Leader, Basic Direction of Port Policy
Mr. Yukio NISHIDA	Sub-Leader, Port Management and Operation (1)
Dr. Shuichi SODA	Sub-Leader, Port Management and Operation (1)
Mr. Takeo KONO	Maritime Transportation
Mr. Shinichi TAGAWA	National and Regional Development
Mr. Tomoo AMANO	Demand Forecast
Mr. Hidetoshi KUME	Port Planning (1)
Capt. Nobuaki KOJIMA	Navigation Safety and Waterway Maintenance
Mr. Makoto SAWAI	Port Planning (2)
Mr. Toshihiro OKURA	Port Finance
Mr. Hidetoshi TAKAHASHI	Port Management and Operation (2)
Mr. Hideki KOBAYASHI	Environmental Consideration
Mr. Hiroshi MAEDA	Coordination

Chapter 2 BASIC POLICY OF THE STUDY AND APPLICATION OF THE PROPOSALS

2.1 Role and Function of the Study

Considering the agreements made by the governments of Indonesia and Japan, the basic role and function of the Study are identified as shown below.

(1) The Study should provide the Indonesian government (DGSC as the counterpart organization of the Study) with well analyzed information of port sector activities and proposals mainly on long and medium term port development strategy.

(2) It is imperative that the Study shall not simply propose a set of final port sector development strategies, but have positive function to encourage the Indonesian government in promoting its own port policy on the basis of suggestions and ideas to be included in the Study outputs.

(3) Technology transfer in the port planning field through the course of the Study is another important part of the Study function. The Study should therefore be well designed for easy and efficient transference of the technologies and know-how on basic port policy making, institutional arrangements, port administration system, privatization policy, physical port planning, port management and operation, port promotion strategies and so on.

2.2 Basic Policy of the Study

On the basis of the above concept, the main features of the Study can be summarized as follows;

(1) Proposals of the Study are arranged to show clearly the selected major policy categories so that the users of the report could easily identify the most important domain of the port policy of Indonesia.

(2) Overall level of target achievement of the port development and administrative performance are set strategically higher than would normally be practical, in the hope that the proposed plans could lead the government and private sectors concerned to attain better final achievement

(3) With the view to reserving wider future options of alternative strategies for port sector

development, the proposals of the Study include the consultants' original and independent suggestions which may not necessarily be fully acceptable to the Indonesian side at this moment.

(4) The Study proposes strategies of which realization may be difficult under the current administrative system, because overall or cross sectional cooperation and coordination among the government organizations are often required to improve basic port sector performance.

(5) Since the final target year of the Study is set far into the future (the year of 2018), the Study is designed to include information and suggestions which could make the proposed strategies as strong and flexible as possible against future contingencies.

(6) To promote public acceptance and a clear understanding on the port development policy direction, an official name of the new port development policy is proposed in the Study, namely "Port Network Policy in the Era of the Global Exchange".

2.3 Application of the Proposals of the Study

In order to ensure the successful application of the Study proposals to actual port administration and management, the followings items should carefully be considered.

(1) Although the Study proposals have been conceived from the long term perspective, it is essential to periodically review, and make necessary adjustments of each policy element for better application of the basic concept of the proposed strategies under any future changes in the socio-economic situation of Indonesia.

(2) Since the objective of the Study is to propose the overall direction and framework of long term port development and administration strategies, detailed studies on the individual port projects are not discussed in the report. It is therefore essential to conduct further studies on prioritized projects for effective implementation of the strategies.

(3) All proposed strategies are closely related to each other. Therefore, application of any single strategy to the actual port administration should always be checked against possible effects (positive or negative) on other parts of the policy. In this regard, a trial-and-error approach may sometimes be effective to keep consistent application of the strategy.

(4) The Study proposals include such kinds of strategies in which a long time is required for effects to materialize. Therefore, once a strategy is selected and applied, every effort should

be made to realize the effects of the selected strategy. Unstable policy application to the port development may often be harmful to sound promotion of the sector.

(5) While the Study suggests the intermediate stages towards the final targets of the port policy, detailed process and time schedule of each stage needs to be carefully examined and adjusted in accordance with the actual conditions of Indonesia. Therefore, in the Study, implementation process policy is proposed for the "Short term", "Middle term" and "Long term" respectively without mentioning detailed target years.

(6) For effective utilization of the Study, it is necessary to authorize at least the major parts of the proposed strategies in an appropriate way, so that consistent promotion of the port policy could be secured. In this regard, it is also important to open the selected policy to the public to promote acceptance and consensus of various parties concerned.

(7) Various data and reference materials shown in Appendix are essential for reviewing or adjusting the policies if necessary. Accordingly, constant updating of the relevant data and facts is also vital.

Chapter 3 ANALYSIS OF FUTURE TREND ON KEY FACTORS ON PORT SECTOR DEVELOPMENT

3.1 General

In order to formulate port development strategy, the following necessary analysis was conducted.

In Section 3.2, nationwide development scenario related to port development was examined.

At present, promotion of regional development of the Eastern Indonesia to eliminate the economic disparity is an important task for the Indonesian Government. One of the important means to support the regional development is, in general, to reinforce the economical transportation mode. In particular, port development in the Eastern Indonesia is an effective means to that end. Potential areas for development and classification of development and role of port were examined.

Based on the analysis of the above, nationwide development scenario of sectors and regions related to port development shall be examined. In addition Japanese experiences in regional development related to port development were also introduced.

In Section 3.3, trading condition between Indonesia and major trading partners was examined. In particular, future trend of main trading partners is valuable information for improvement of international competitiveness and regional development which utilize the international economic cooperation with neighboring countries.

In Section 3.4, future trend of container and main domestic shipping was examined.

Considering the importance of dealing with the rapid containerization of cargo transportation, an efficient container transportation system must be established. In addition rational cargo distribution system should be also established to support and activate various kinds of economic activities.

In this section, the future trend of shipping such as vessel size deployed on international container service shall be analyzed. Moreover the future trend of inter-island shipping, which is main domestic shipping was examined.

In Section 3.5, future trend of international competitiveness of container cargo transportation was examined.

Improvement of international competitiveness of container cargo handling is vital matter in Indonesia, because establishment of an efficient container transportation system is essential to

promote the activities of port users in Indonesia.

In this section, through analyzing the future trend of container transportation in the world, necessary conditions for improving international competitiveness of ports were examined from the viewpoints of cargo volume, geographical location and port services.

In Section 3.6, based on the above review and analysis, sea traffic demand were forecasted.

3.2 Nationwide Development Scenario related to Port Development

3.2.1 Potential Areas for Development

(1) Industrial Zone Development

According to the study of industrial zone development conducted by the Ministry of Industry and Trade in 1994, potential areas for industrial zone development in PJP II and the priority of development are shown in Figure 3.2.1.1.

It should be considered that the priority is not a standard throughout the whole country, but a standard in each region. In other words, priority I in Sumatra and the priority I in Maluku are different in their grades.

(2) Integrated Economic Development Area (KAPET)

In order to give priority to economic development, some strategic areas have been chosen as Integrated Economic Development Areas (KAPET) (See Figure A3.2.1.1 in Appendix Chapter III). In Sumatra, ten strategic areas have been chosen, and recently, Weh Island (Sabang in Aceh) has also been classified as a KAPET area.

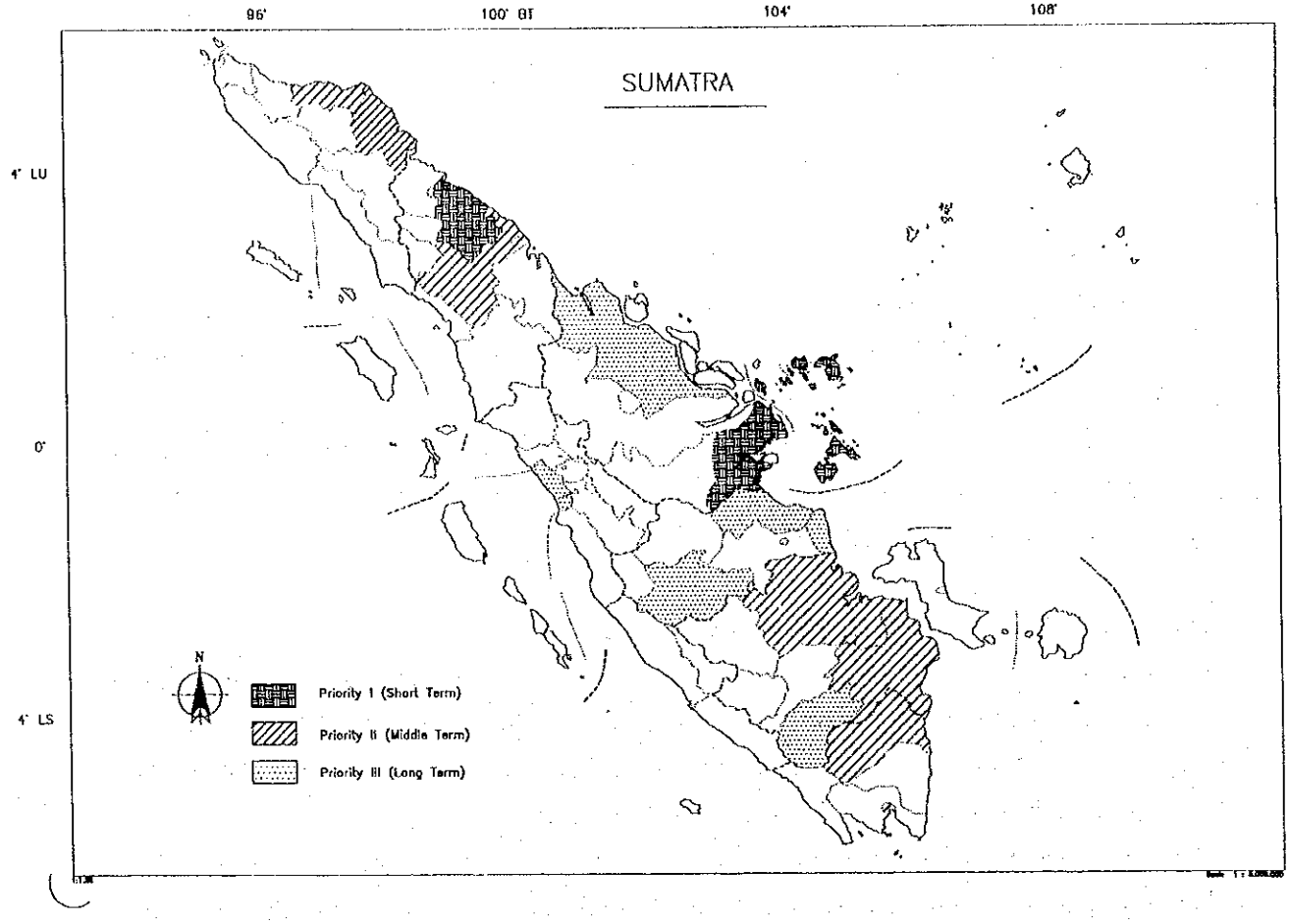
On the other hand, in the eastern part of Indonesia, thirteen strategic areas have been chosen, one for each province. According to the draft master plan of each of the 13 KAPET and presidential decree concerning area determination, potential areas for development in the eastern part of Indonesia are shown in Figure 3.2.1.2. And major development programs of each of the 13 KAPET are shown in Table 3.2.1.1.

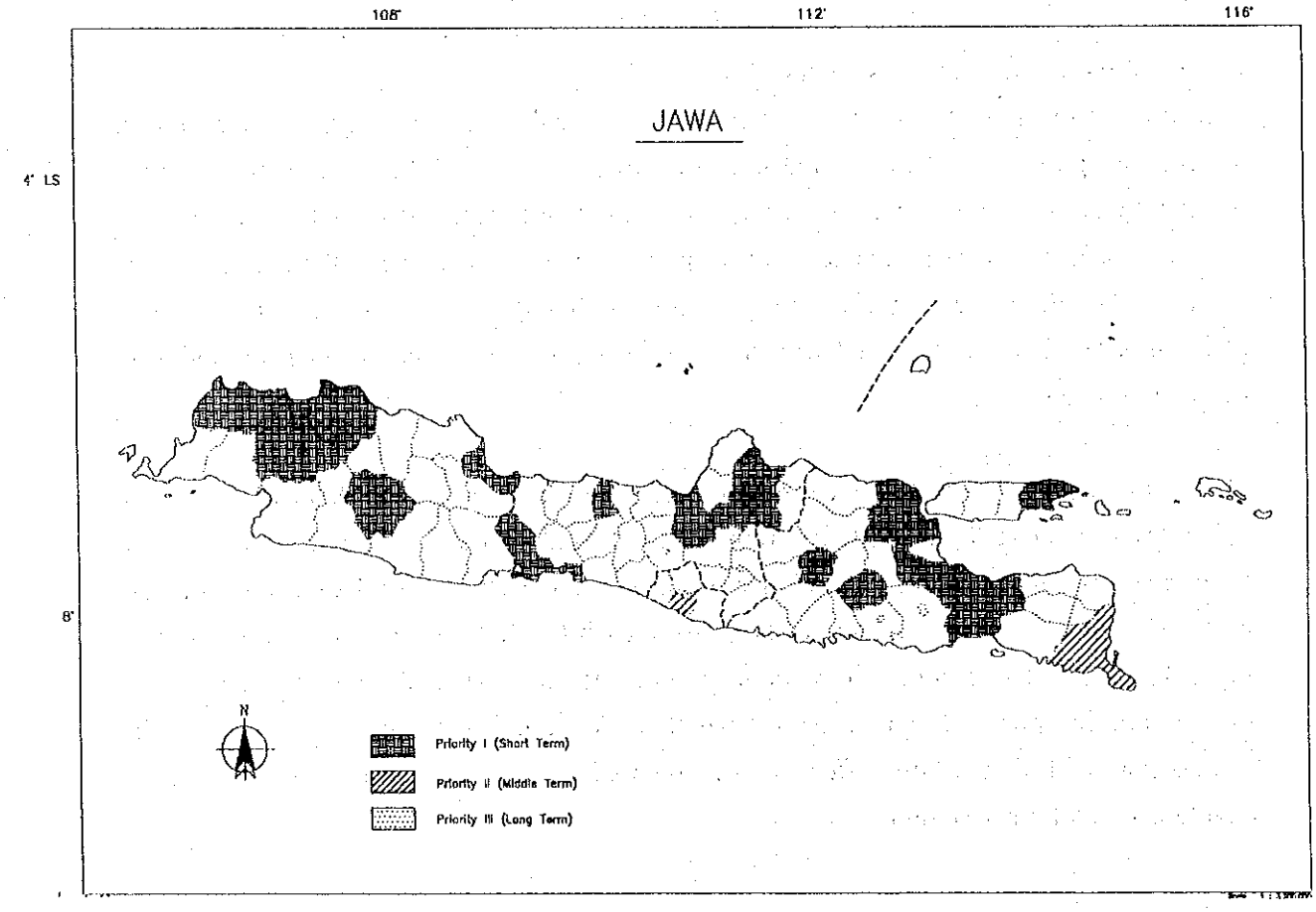
KAPET project is still in the preparatory stage, and its progress greatly depends on government policy. The priority and potential level of each KAPET is indistinct for the present. In addition, existing draft master plans are not sufficient and should be examined in more detail. The central government is taking the initiative in proposing the plans. In order to materialize the projects, the central government should take care that the development plans of KAPET are well-linked with the overall regional development plan proposed by local governments.

(3) Relation between Potential Areas for Development and Locations of Major Ports

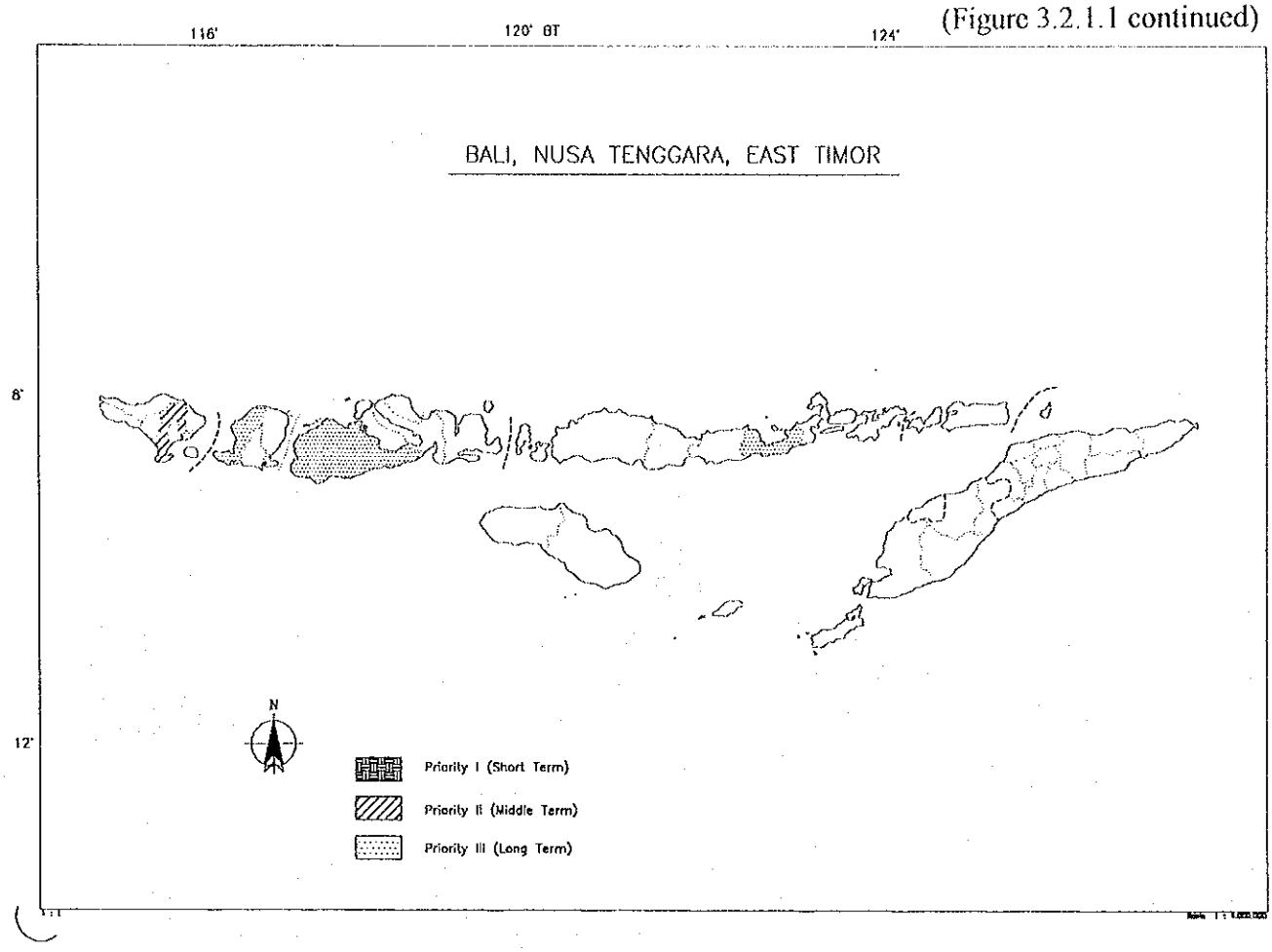
We tried to select the central city from each potential area and to measure the distance from the city to major ports on a road map. Distance from each industrial zone to the nearest port is shown in Table 3.2.1.2, and distance from each KAPET to the nearest port is shown in Table 3.2.1.3. These tables show the degree of influence that each potential area has on the neighboring ports. It can be considered that the status, scale and future plan of the nearest port will have a large effect on the potential area, especially in areas with under-developed land-transportation.

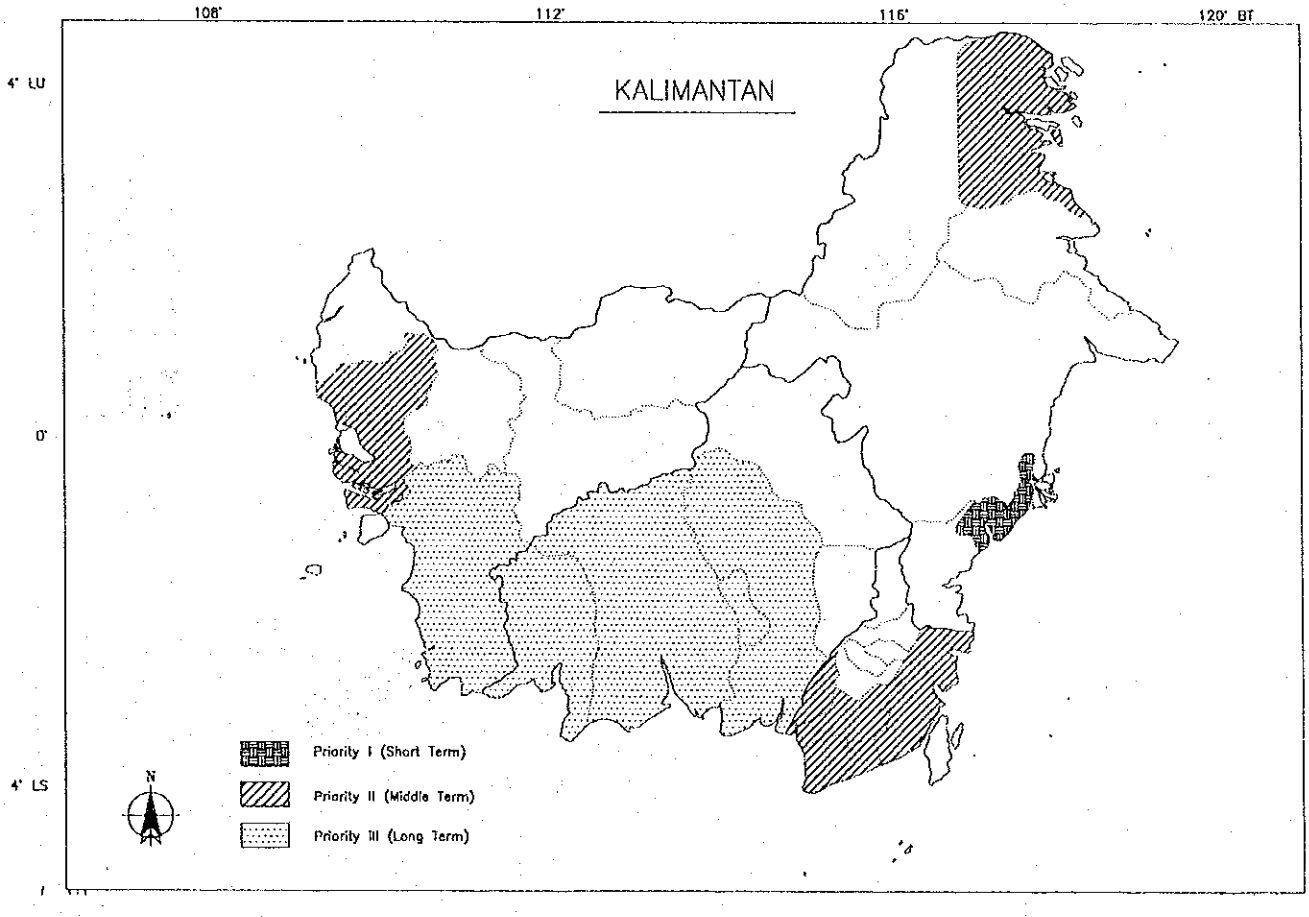
Figure 3.2.1.1 Potential Areas for Industrial Zone Development in PJP II

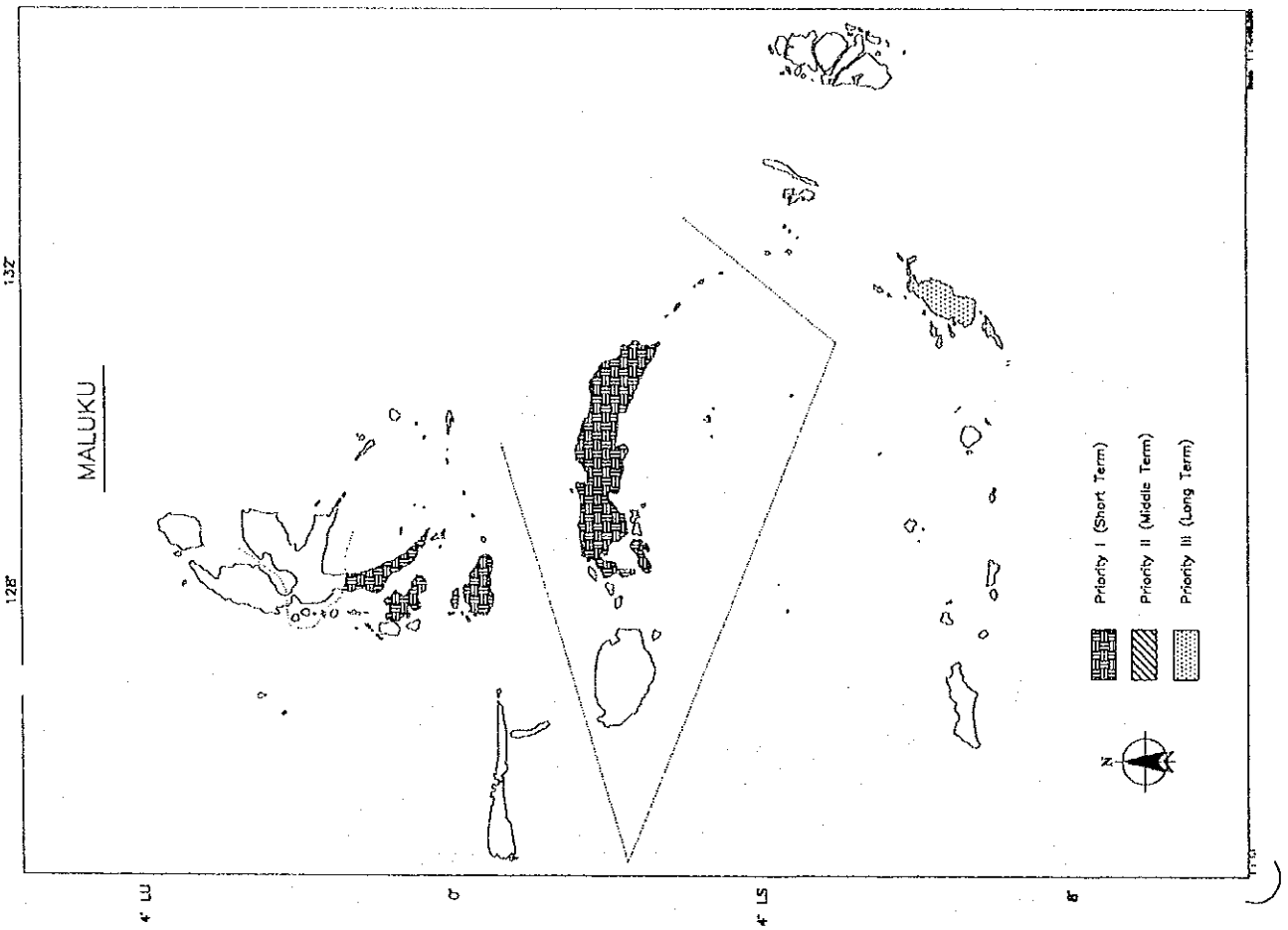


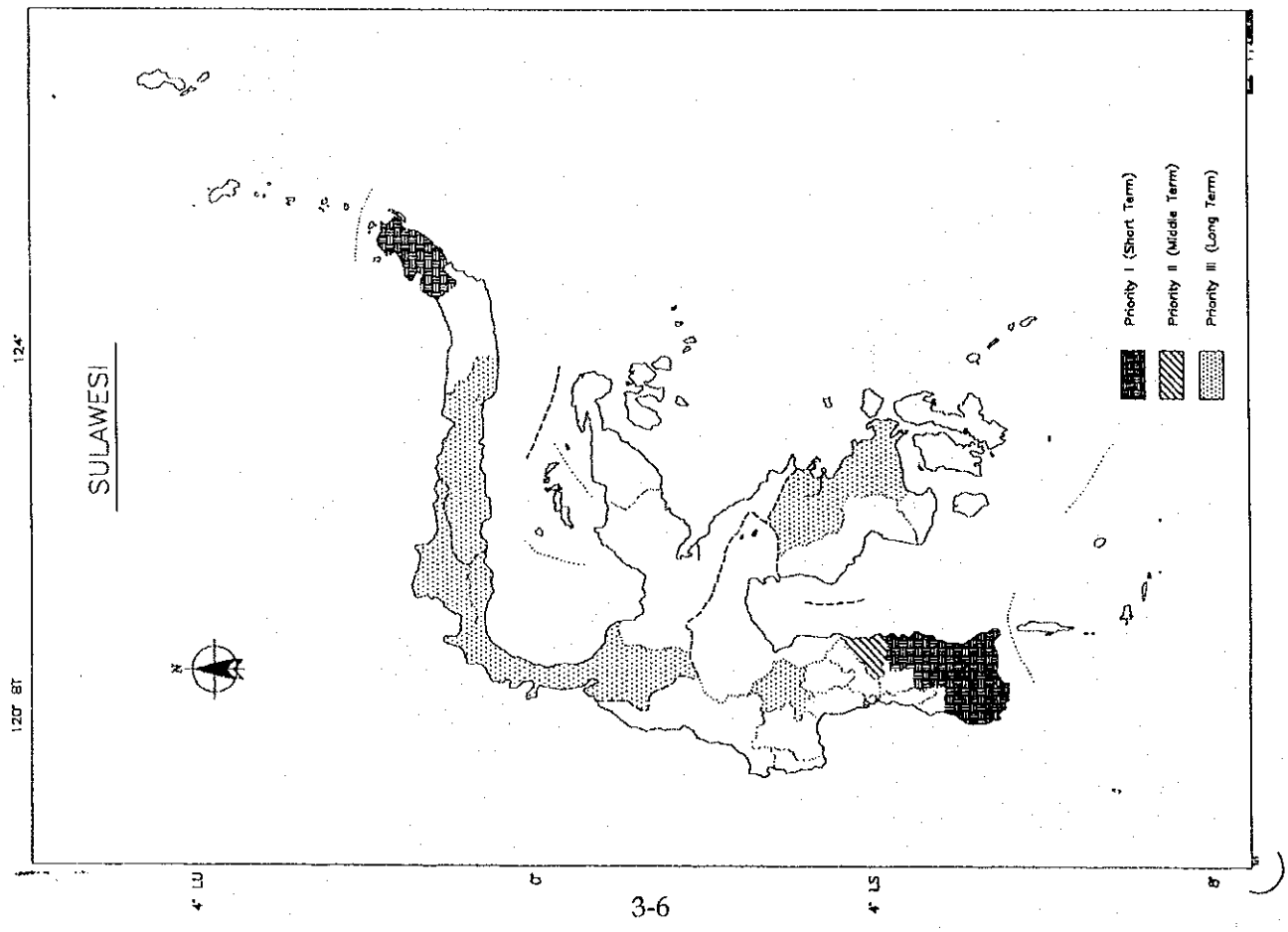


(Figure 3.2.1.1 continued)






MALUKU
Priority I (Short Term)
Priority II (Middle Term)
Priority III (Long Term)
N


SULAWESI
Priority I (Short Term)
Priority II (Middle Term)
Priority III (Long Term)
N

(Figure 3.2.1.1 continued)

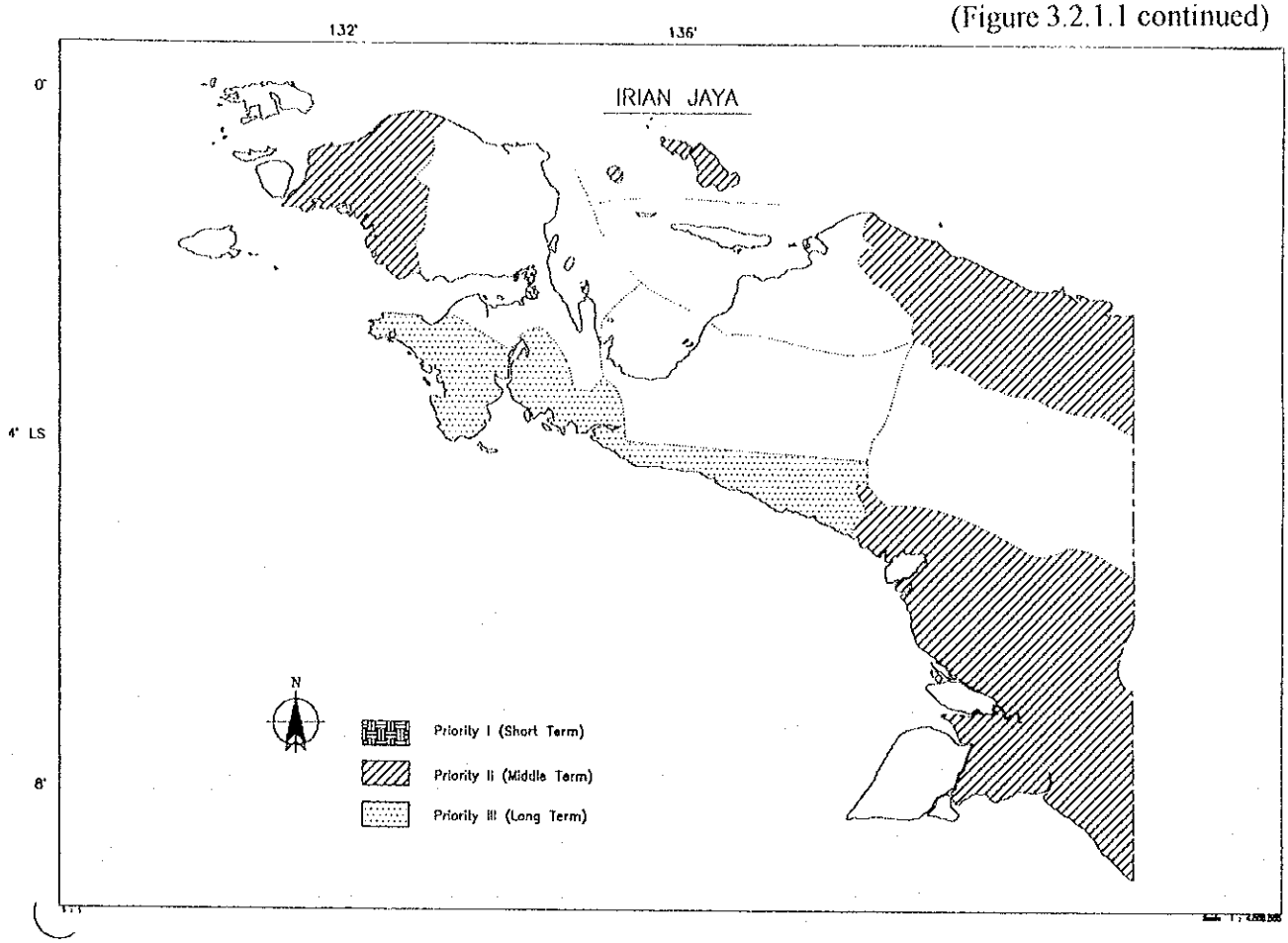
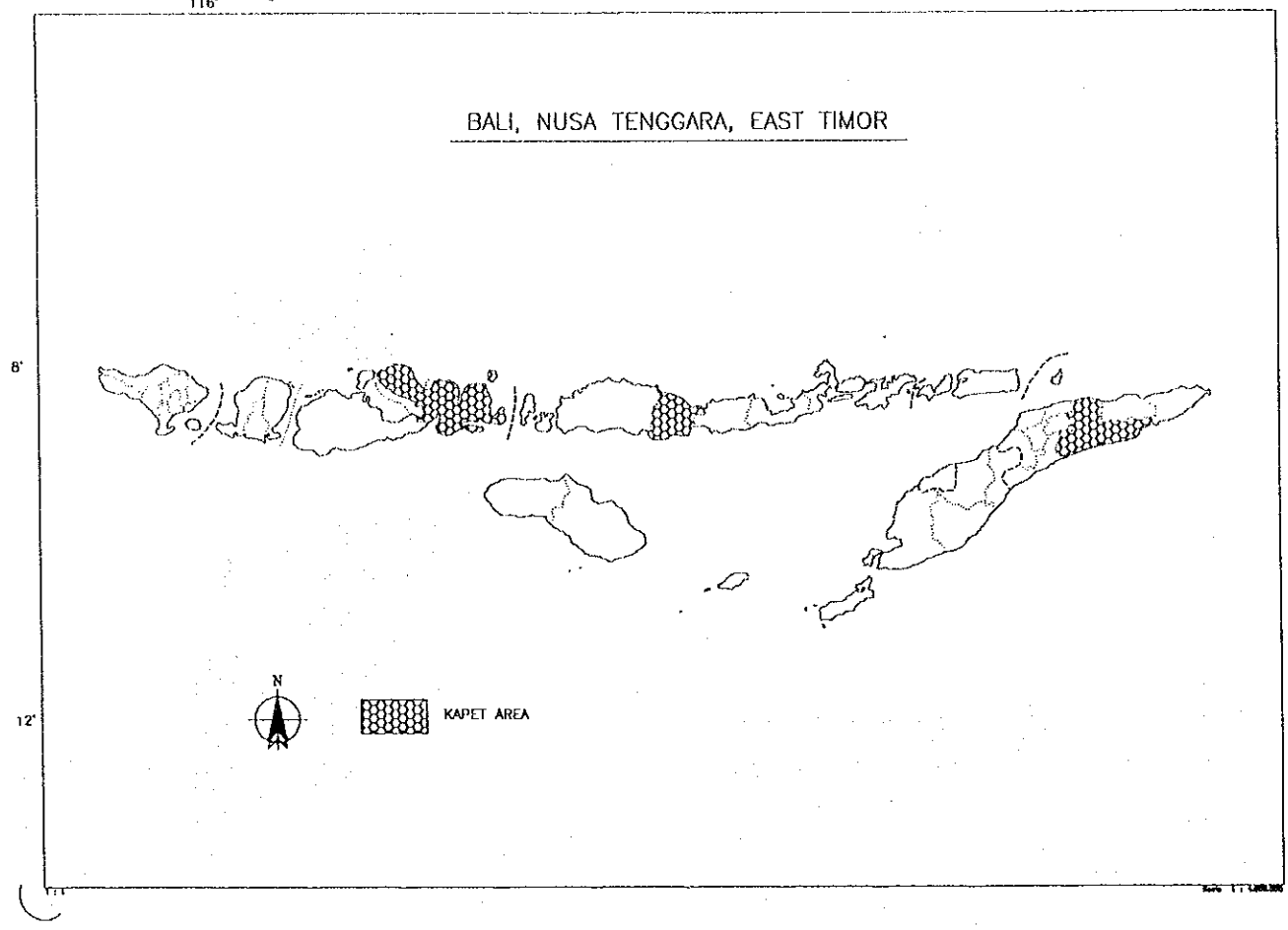
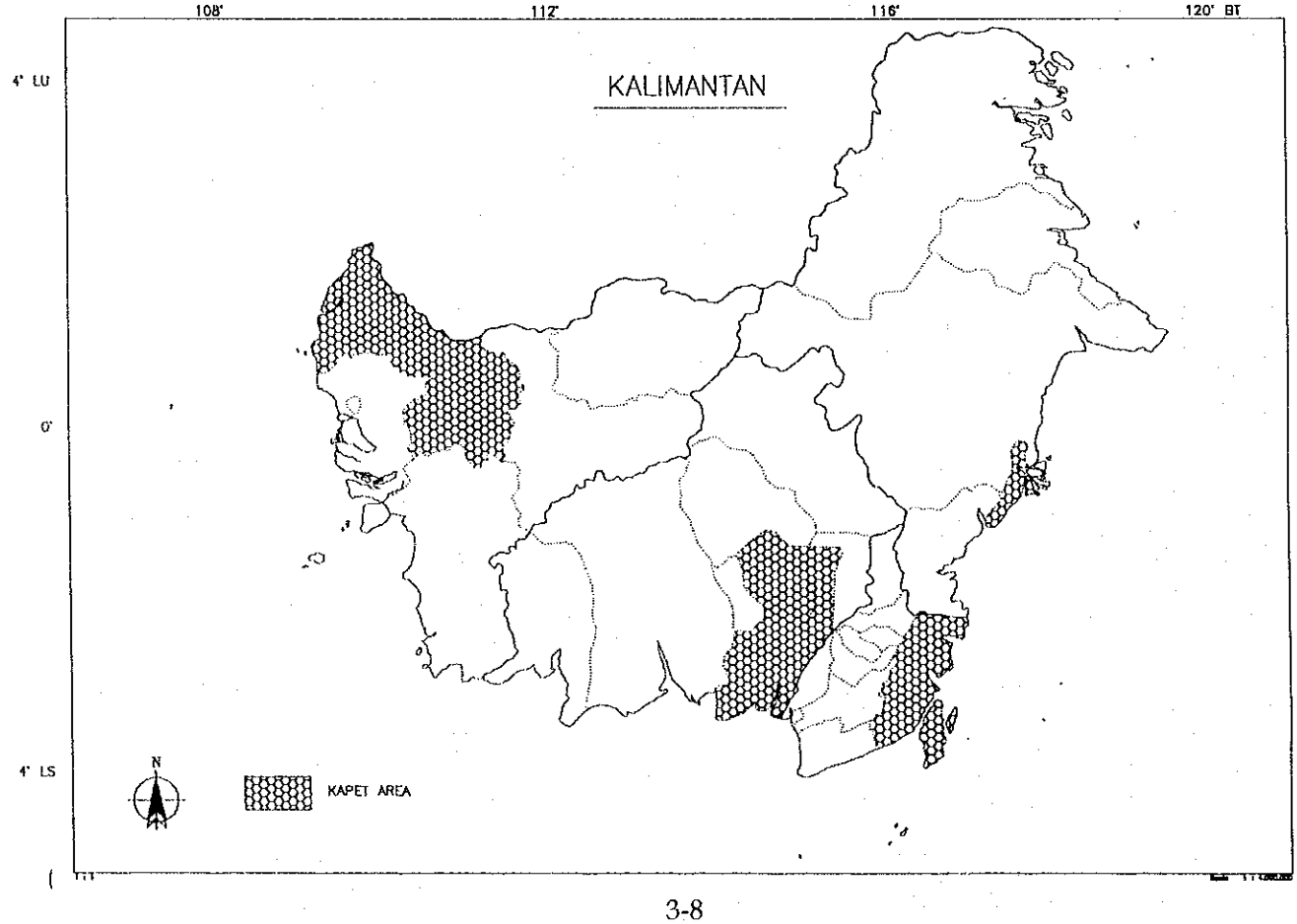
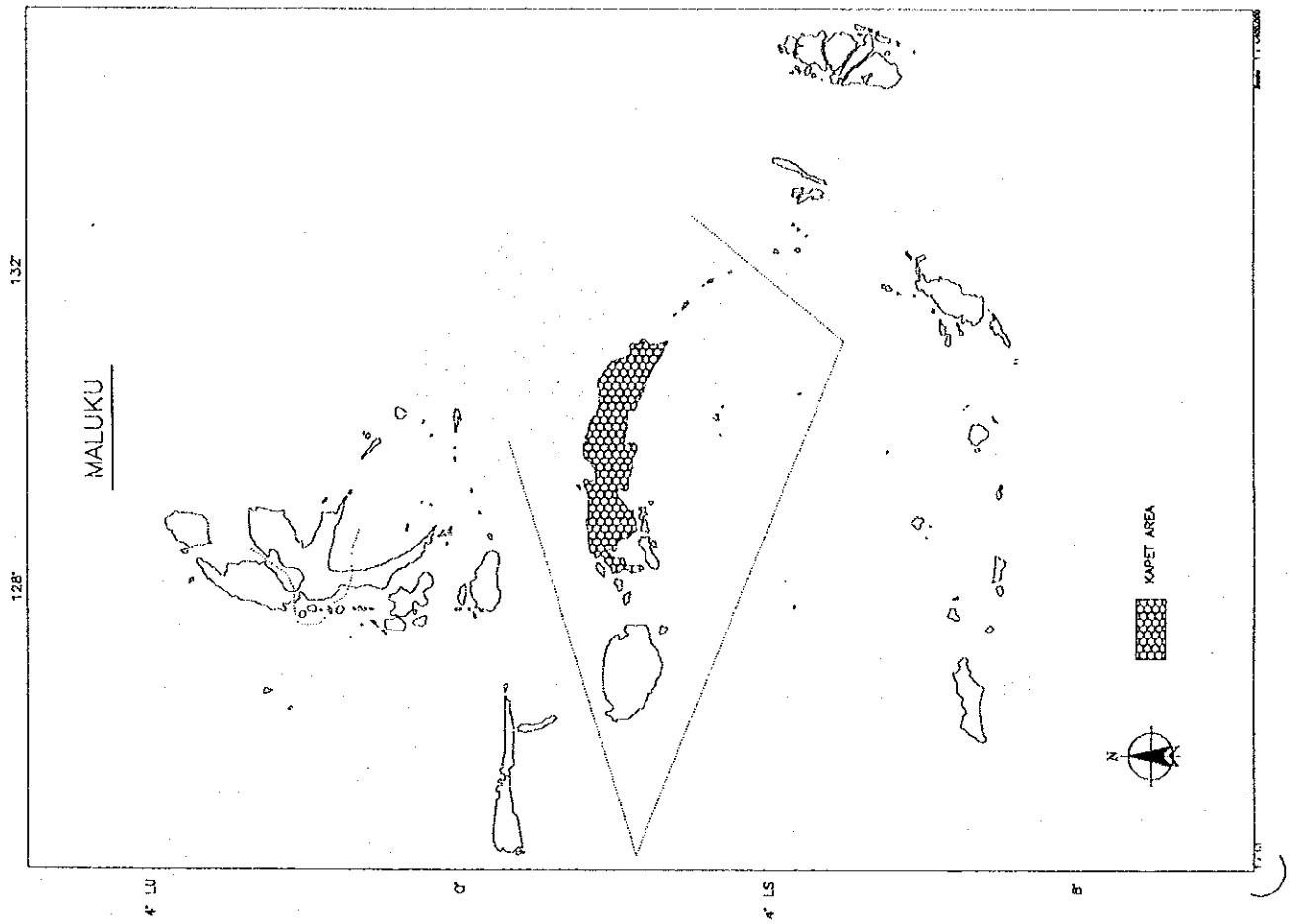


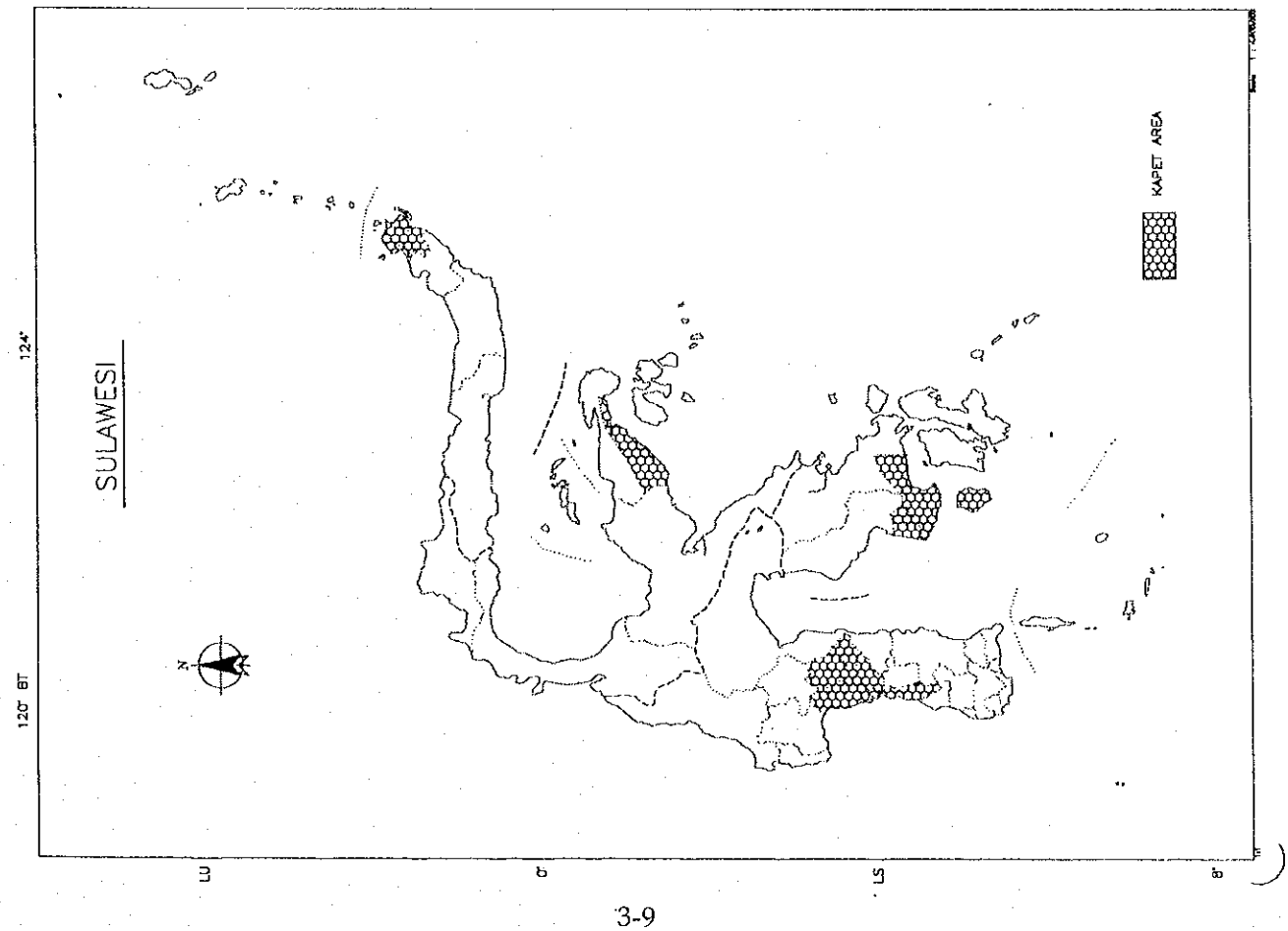
Figure 3.2.1.2 Integrated Economic Development Area (KAPET)





(Figure 3.2.1.2 continued)





(Figure 3.2.1.2 continued)

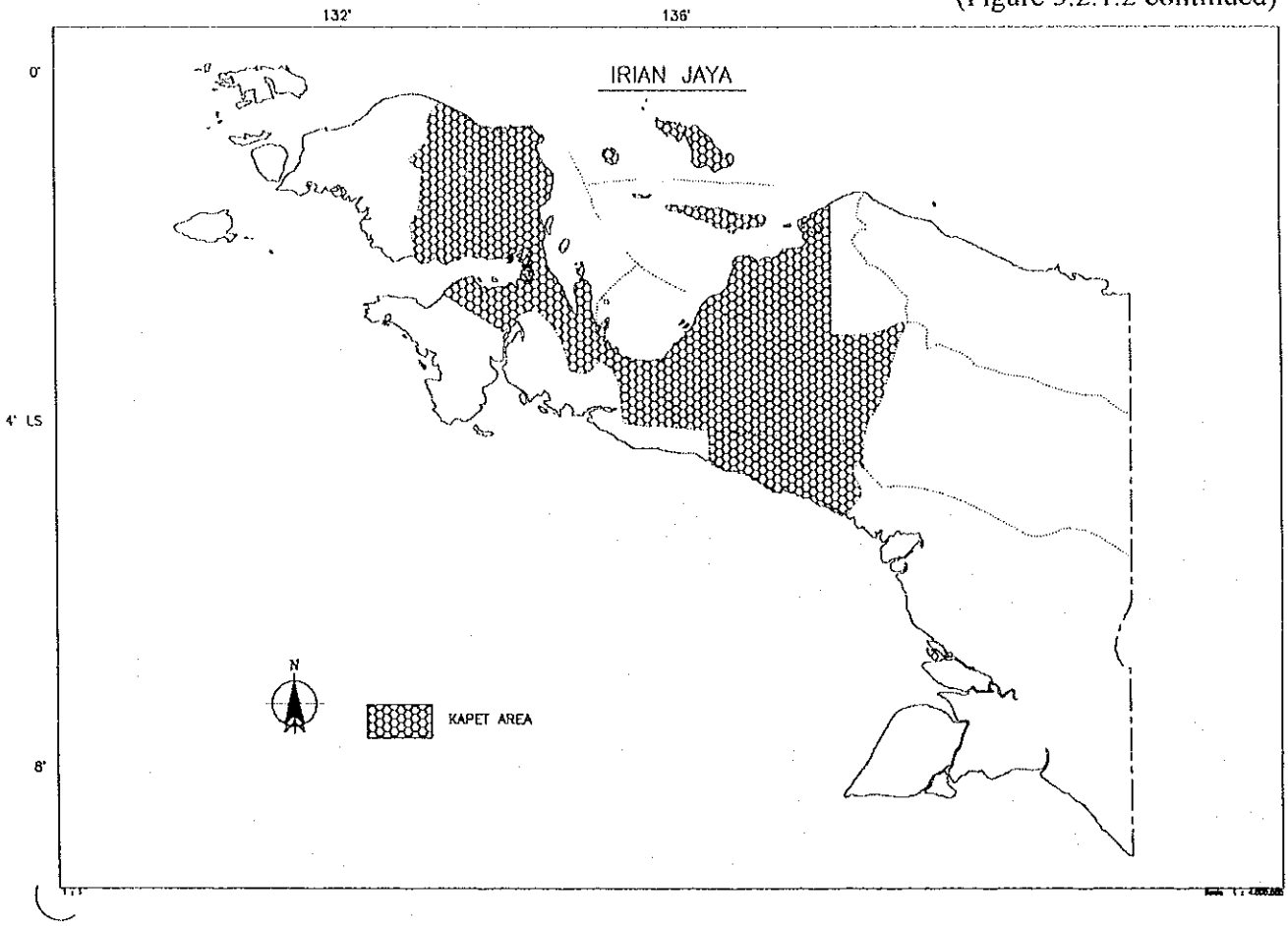


Table 3.2.1.1 Major Development Program of each KAPET (Draft Master Plan)

Province	Name of KAPET	Major Development Program			
		Item	Existing	Repelita Ⅶ	Potential
West Kalimantan	Sanggau	Palm Oil	110,439Ha	137,006Ha	373,350Ha
		HTI	6,000Ha	150,000Ha	400,000Ha
		Bauxite	0Ha	-	432M.ton
Central Kalimantan	DAS-KAKAB	Rice Field	50,000Ha	638,000Ha	1M.Ha
South Kalimantan	Batulicin	Palm Oil	41,436Ha	80,649Ha	291,748Ha
		HTI	40,889Ha	306,348Ha	390,260Ha
		Coal	23,518Ha	70,554Ha	234,517Ha
		Cement	50Ha	586Ha	586Ha
		Industrial Estate	-	-	900Ha
East Kalimantan	SASAMBA	Shrimp Pond	2,461Ha	2,300Ha	22,857Ha
		Palm Oil	0Ha	599,375Ha	634,375Ha
		Coconut	10,467Ha	500Ha	20,934Ha
		Coal	1.68M.ton	-	14.76M.ton
		Oil	90.4M.B	-	749,079.6 MB
		Natural Gas	27,216.25 BSCR	-	27,216.25 BSCR
		HTI	100,000 Ha	1,020,000 Ha	3,342,695 Ha
		Industrial Estate	-	-	6,000Ha
North Sulawesi	Manado-Bitung	Tourism	-	7,228Ha	-
		Agro Industry	-	67Ha	-
Central Sulawasi	Batui	Soybean	2,735Ha	10,939Ha	30,000Ha
		Cattle	7,623Ha	30,490Ha	41,417Ha
		Cocoa	10,758Ha	43,002Ha	53,790Ha
		Shrimp Pond	821Ha	3,283Ha	4,425Ha
South Sulawesi	Parepare	Vegetables	-	5,000Ha	-
		Coffee etc.	-	25,000Ha	-
		Rice	76Ha	1,200Ha	-
		Fruit	-	1,800Ha	-
		Fish Pond	-	50Ha	-
		Animal Husbandry	-	3,000Ha 15,000head	-
		Industrial Estate	-	100Ha	-
Southeast Sulawesi	BUKARI	Sugar Cane	500Ha	21,400Ha	21,400Ha
		Cacao	-	4,000Ha	4,000Ha
		Cassava	-	5,000Ha	77,750Ha
		Cattle	300Ha	-	12,000Ha
		Food Plant	-	4,800Ha	60,000Ha
		Fish Pond	-	-	5,170Ha
		Nickel	-	3,300Ha	3,300Ha
		Marble	-	15,000m3 /month	15,000m3 /month
		Cement	-	-	1M.ton

(Table 3.2.1.1 continued)

Province	Name of KAPET	Major Development Program			
		Item	Existing	Repelita Ⅶ	Potential
West Nusa Tenggara	Bima	Soybean	6,158Ha	30,787Ha	-
		Red Onion	1,094Ha	3,210Ha	-
		Rice	-	33,500Ha	-
East Nusa Tenggara	Mbay	Animal Husbandry	-	7,000Ha	9,000Ha
		Tourism	-	2,000Ha	2,000Ha
		Salt	-	700Ha	700Ha
		Wood	-	5,000Ha	5,000Ha
		Spice	-	5,500Ha	11,500Ha
		Coffee	-	5,000Ha	10,000Ha
		Cashew Nut	-	11,000Ha	18,000Ha
		Rice	-	5,000Ha	6,000Ha
		Orange	-	1,800Ha	3,800Ha
Maluku	Seram	Rice	-	-	18,000Ha
		Cacao	-	-	13,000Ha
		Shrimp Pond	-	-	6,000Ha
		Fishery	-	-	63,00ton /year
		Rubber etc.	-	-	17,000Ha
		Cement	-	-	920Ha
		Oil	-	-	5,000B/day
Irian Jaya	Biak	Industrial Estate	-	-	300Ha
		Fishery	3,759ton /year	-	280,000ton /year
East Timor	BENAVIC	Coconut etc.	-	3,300Ha	-
		Rice Field	-	2,000Ha	9,000Ha

Note : HTI --- Forest Plant Industry

Table 3.2.1.2 Distance from each Industrial Zone to the nearest Port

WPPI		Name of Industrial Zone	Central City	Distance from each Industrial Zone to the nearest Port (by each Port classification)									
				Primary Trunk Port	Km	Secondary Trunk Port	Km	Tertiary Trunk Port	Km	Regional Feeder Port	Km	Local Feeder Port	Km
I	1	North Aceh	Lhok Seumawe	-		Belawan	310	**Lhok Seumawe**	0				
	2	Medan	Medan	-		**Belawan**	20						
	3	Asahan	Tanjung Balai	-		Belawan	180	Dumai	340	**Kuala Tanjung**	90		
	4	Bengkalis	Dumai	-		Belawan	500	**Dumai**	0				
	5	Batam-Riau	Batam	**Batam**	0								
	6	Padang	Padang	-		Belawan	620	**Teluk Bayer**	0				
II	1	Tanjung Jabung	Kualatungcal	-		Panjang	520	Palembang	260	**Jambi**	140		
	2	Sarolangun Bangko	Bangko	-		Panjang	640	Palembang	380	**Jambi**	250		
	3	Bengkulu	Bengkulu	-		Panjang	380	Palembang	360	**Bengkulu**	0		
	4	Palembang	Palembang	-		Panjang	260	**Palembang**	0				
	5	Ogan Komering Ulu	Baturaja	-		Panjang	190	**Palembang**	160				
	6	Lampung	Bandar Lampung	-		**Panjang**	10						
	7	Pontianak	Pontianak	-		-		**Pontianak**	0				
	8	Ketapang	Ketapang	-		-		Pontianak	530	-		**Pangkalan Bun**	360
	9	Serang	Serang	-		**Banten**	20						
	10	DKI Jakarta	Jakarta	-		**Tg. Priok**	0						
	11	Bekasi-Krawang	Bekasi	-		**Tg. Priok**	30						
	12	Bandung	Bandung	-		**Tg. Priok**	250						
	13	Cirebon	Cirebon	-		Tg. Emas	220	**Cirebon**	0				
III	1	East Kotawaringin	Sampit	-		-		**Sampit**	0				
	2	Palangka Raya	Palangka Raya	-		-		**Banjarmasin**	160				
	3	Banjar	Banjarmasin	-		-		**Banjarmasin**	0				
	4	Kotabaru	Batu Licin	-		-		**Batu Licin**	0				
	5	Cilacap	Cilacap	-		Tg. Emas	190	**Cilacap**	0				
	6	Pekalongan	Pekalongan	-		Tg. Emas	80	Cirebon	140	**Tegal**	60		
	7	Semarang	Semarang	-		**Tg. Emas**	0						
	8	Yogyakarta	Yogyakarta	-		**Tg. Emas**	110						
	9	Kediri	Kediri	-		**Tg. Perak**	120						
	10	Surabaya	Surabaya	-		**Tg. Perak**	0						
	11	Pasuruan	Pasuruan	-		Tg. Perak	60	-		**Pasuruan**	0		
	12	Banyuwangi	Banyuwangi	-		Tg. Perak	290	-		**Memeng**	10		
	13	Sumenep	Sumenep	-		-		-		-		-	
	14	Bali	Denpasar	-		-		**Benoa**	10				

(Table 3.2.1.2 continued)

WPPI		Name of Industrial Zone	Central City	Distance from each Industrial Zone to the nearest Port (by each Port classification)									
				Primary Trunk Port	Km	Secondary Trunk Port	Km	Tertiary Trunk Port	Km	Regional Feeder Port	Km	Local Feeder Port	Km
IV	1	Bulungan	Tanjung Selor	-		-		**Samarinda**	500				
	2	Samarinda	Samarinda	-		-		**Samarinda**	0				
	3	Donggala/Palu	Palu	-		Makassar	700	Kendari	720	**Pantoloan**	30		
	4	Gorontalo	Gorontalo	-		Bitung	390	-		Anggrek	60	**Gorontalo**	0
	5	Manado	Manado	-		**Bitung**	60						
V	1	Tanah Toraja	Makale	-		Makassar	250	Kendari	530	**Pare Pare**	160		
	2	Ujungpandang	Ujungpandang	-		**Makassar**	0						
	3	Wajo	Singkang	-		Makassar	190	-		**Pare Pare**	100		
	4	West Lombok	Mataram	-		-		-		**Lember**	20		
	5	Sumbawa	Sumbawa Besar	-		-		-		-		**Badas**	0
	6	Sika	Maumere	-		-		-		**Maumere**	0		
VI	1	Kendari	Kendari	-		Makassar	830	**Kendari**	0				
	2	North Maluku	Ternate	-		-		-		**Ternate**	0		
	3	Middle of Maluku	Ambon	-		-		**Ambon**	0				
	4	South East Maluku	Saumlaki	-		-		-		-		-	
	5	Sorong	Sorong	-		-		**Sorong**	0				
	6	Biak Numfor	Biak	-		-		**Biak**	0				
	7	Fak-fak	Fak-fak	-		-		-		**Fak-fak**	0		
	8	Jayapura	Jayapura	-		-		**Jayapura**	0				
	9	Merauke	Merauke	-		-		-		**Merauke**	0		

Note:
Industrial Zone — Future Plan in PJP II based on the Study of Industrial Zone Development conducted by Ministry of Industry and Trade in 1994
Port classification — Based on National Transportation System (SISTRANAS)
Distance — Measured by Curvimeter on a Road Map
(Bold Type) — Nearest Port

Table 3.2.1.3 Distance from each KAPET to the nearest Port

Province	Name of KAPET	Central City	Distance from each Industrial Zone to the nearest Port (by each Port classification)									
			Primary Trunk Port	Km	Secondary Trunk Port	Km	Tertiary Trunk Port	Km	Regional Feeder Port	Km	Local Feeder Port	Km
West Kalimantan	Sanggau	Sanggau	-		-		**Pontianak**	260				
Central Kalimantan	DAS-KAKAB	Kualakapuas	-		-		**Banjarmasin**	30				
South Kalimantan	Batulicin	Batulicin	-		-		**Batulicin**	0				
East Kalimantan	SASAMBA	Samarinda	-		-		**Samarinda**	0				
North Sulawesi	Manado-Bitung	Manado	-		**Bitung**	60						
Central Sulawasi	Batui	Luwuk	-		Makassar	920	Kedari	860	**Luwuk**	0		
South Sulawesi	Parepare	Parepare	-		Makassar	140	-		**Parepare**	0		
Southeast Sulawesi	BUKARI	Poleang	-		-		**Kedari**	160				
West Nusa Tenggara	Bima	Bima	-		-		-		**Bima**	0		
East Nusa Tenggara	Mbay	Bajawa	-		-		-		**Ende**	90		
Maluku	Seram	Mashohi	-		-		-		-		-	
Irian Jaya	Biak	Biak	-		-		**Biak**	0				
East Timor	BENAVIC	Vikeke	-		-		Kupang	420	**Dilli**	170		

Note: Port classification --- Based on National Transportation System (SISTRANAS)
Distance --- Measured by Curvimeter on a Road Map
(Bold Type) --- Nearest Port