No.

The Republic of Indonesia
National Development Planning Agency
(BAPPENAS)

The Republic of Indonesia
Basic Study for
Mid-Term Infrastructure Development

FINAL REPORT

(Summary)

March 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

NIPPON KOEI CO., LTD.

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Table of Contents

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Japan International Cooperation Agency

Table of Contents

Japan International Cooperation Agency

The Republic of Indonesia
Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 1

Introduction

March 2010

1. Objectives of the Study

- To participate in the formulation works for the next National Medium term Development Plan (2010-2014), which works will be mainly handled by BAPPENAS.
- To examine and propose effective measures to further promote the development of the infrastructure.
- From the view point of realizing the above measures, examine and recommend the candidate project list to be put into the next Blue Book (2010-2014).
- During the course of above works, make clear the impacts of sovereign debt on the government finance in the medium to long-term.

2. Target, Region, and Implementing Agency

- Target Area
  - Whole Indonesia
  - Policies and actual projects of economic infrastructure development in the National Medium term Development Plan (2010-2014) to be jointly prepared by BAPPENAS and presiding ministries.
    - Ministry of Public Works, Ministry of Transportation, Ministry of Mine and Energy, Ministry of Public Housing, local governments, state owned enterprises like PT. PLN etc. Target Sector of Infrastructure
- Target Sectors of Infrastructure

  (1) Transportation, (2) Power, (3) Water Supply and Sanitation, (4) Water Resources Development
- Counterpart Agency
  - National Development Planning Agency (BAPPENAS)

3. Time Table for GOI side

Period	Activity
From Dec. 2008	1) Review of the current RPJM (2004-2009) 2) Preparation of outline for formulation work of new RPJM (2010 – 2014)
Jan. 2009	3) Formulation of Macroeconomic frameworks & financing
Feb. - May 2009	4) Preparation of concept draft of medium term of development plan (Renstra) by Ministry of Finance and other Ministries concerned
Middle of Feb. 2009	5) Starting of Working Group Meeting on the formulation of RPJM (2010-2014) (preparation of concept draft in BAPPENAS)
Middle of Apr. 2009	6) Discussion on concept of Initial Draft on RPJM between BAPENAS and Ministries concerned
Jun. - Sep. 2009	8) Collecting the community and local government opinion on 1st Draft of Concept of Initial Draft of RPJM (2010-2014)
Beginning of Oct. 2009	9) Completion of 2nd Draft of Concept of Initial Draft of RPJM (2010 – 2014)
Beginning of Nov. 2009	10) Completion of Draft of RPJM (2010 – 2014)
Middle of Nov. 2009	11) 1st Cabinet meeting on RPJM (2010 – 2014)
Middle of Jan. 2010	12) Finalization of Final Draft of RPJM (2010 – 2014)

(as of March 2009)

4. Flow of the Study (1/4)

Stage	Major work items	Period
(1) Preparatory Work in Japan	[1] Collection and Examination of the Existing Documents and Information [2] Review of Policy and Plan of Infrastructure Development in Indonesia [3] Review of Current Status of Donor's Assistance and Policy in Infrastructure Development [4] Collection and Examination of Review Results of RPJM 2005-2009 [5] Preparation of Inception Report	Middle to end of March 2009 0.3 month
(2) First Work in Indonesia	[1] Explanation and Discussion on IC/R [2] Confirmation of Work Progress of Formulation of New RPJM 2010-2014 [3] Preparation of Draft Strategy for Infrastructure Development in Each Sector → Presentation to GOI side for discussion [4] Identification of Issues to be Prioritized in Each Sector → Presentation to GOI side for discussion [5] Identification of Cross-Sector Issues in Infrastructure Development → Presentation to GOI side for discussion [6] Request of Additional Document and Information to BAPPENAS [7] Report to JICA Indonesia Office	End of March to middle of April, 2009 0.8 month
(3) First Home Work in Japan	[1] Report to JICA Headquarters [2] Analysis of Results of First Work in Indonesia and Collected Documents and Information, re-planning of Approach of 2nd Work in Indonesia [3] Preparation for 2nd work in Indonesia	End of April, 2009 0.3 month

4. Flow of the Study (2/4)

Stage	Major work items	Period
(4) Second Work in Indonesia	[1] Review of Draft Strategy for Infrastructure Development, Issues to be Prioritized in Each Sector and Cross-Sector Issues in Infrastructure Development → Presentation to GOI side for discussion [2] Develop action plans and indicators to monitor the progress of development [3] Examine and propose measures to accelerate infrastructure development considering the nature of fund for development [4] Compare, arrange and evaluate utilization of ODA and PPP scheme for the promotion of infrastructure development [5] Forecast of macroeconomic framework of Indonesia (Indication of multiple scenario) [6] Analysis on impact of public external debt for each macroeconomic framework [7] Draft recommendation on the first concept draft of the next National Medium term Development Plan (RPJM 2010-2014) → Presentation to GOI side for discussion [8] Confirmation, analysis and discussion on the first concept draft (in case the first concept draft is ready) [9] Report to JICA Indonesia Office	Beginning to end of May, 2009 1.0 month

4. Flow of the Study (3/4)

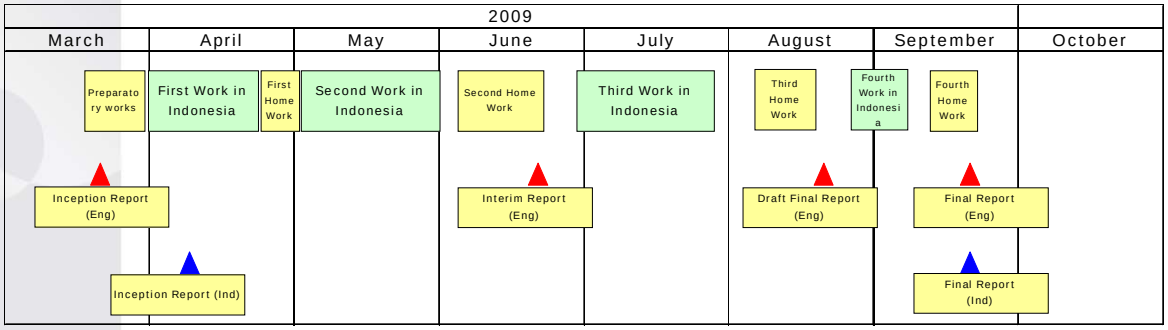
Stage	Major work items	Period
(5) Second Home Work in Japan	[1] Report to JICA Headquarter the Result of Second Work in Indonesia [2] Preparation of Interim Report → Submission to JICA for discussion and consent	Middle of June, 2009 0.5 month
(6) Third Work in Indonesia	[1] Explanation and Discussion of Interim Report [2] Monitoring of Procedure of Collecting Local Government and Community Opinions on 1st Concept Draft [3] Collection and Analysis of Infrastructure Development Plans submitted by other Ministries and Agency concerned [4] Cross-sector Integration of Infrastructure Development Plan [5] Cross-sector Integration of Proposed Project to Blue-books and PPP [6] Preparation of List of Proposed Project in the Blue-books based on Plural Scenario Analysis on Appropriate Investment Size → Presentation to GOI side for discussion [7] Preparation of draft list of proposed project under PPP → Presentation to GOI side for discussion [8] Report to JICA Indonesia Office	Beginning of July to end of July, 2009 1.0 month
(7) Third Home Work in Japan	[1] Report to JICA Headquarter the result of third work in Indonesia [2] Preparation of Draft Final Report → Submission to JICA for discussion and consent	Beginning to middle of August, 2009 0.5 month

4. Flow of the Study (4/4)

Stage	Major work items	Period
(8) Fourth Work in Indonesia	[1] Explanation and Discussion on Draft Final Report [2] Preparation of Recommendations of 1st Concept Draft of RPJM (2010 – 2014) [3] Finalization of Proposed Projects List in Blue-books → Presentation to GOI side for discussion [4] Finalization of Proposed Projects List to be implemented under PPP → Presentation to GOI side for discussion	Beginning of September, 2009 0.3 month
(9) Forth Home Work in Japan	[1] Report to JICA Headquarter the Result of Fourth Work in Indonesia [2] Preparation of Final Report	End of September, 2009 0.4 month

5. Work Schedule

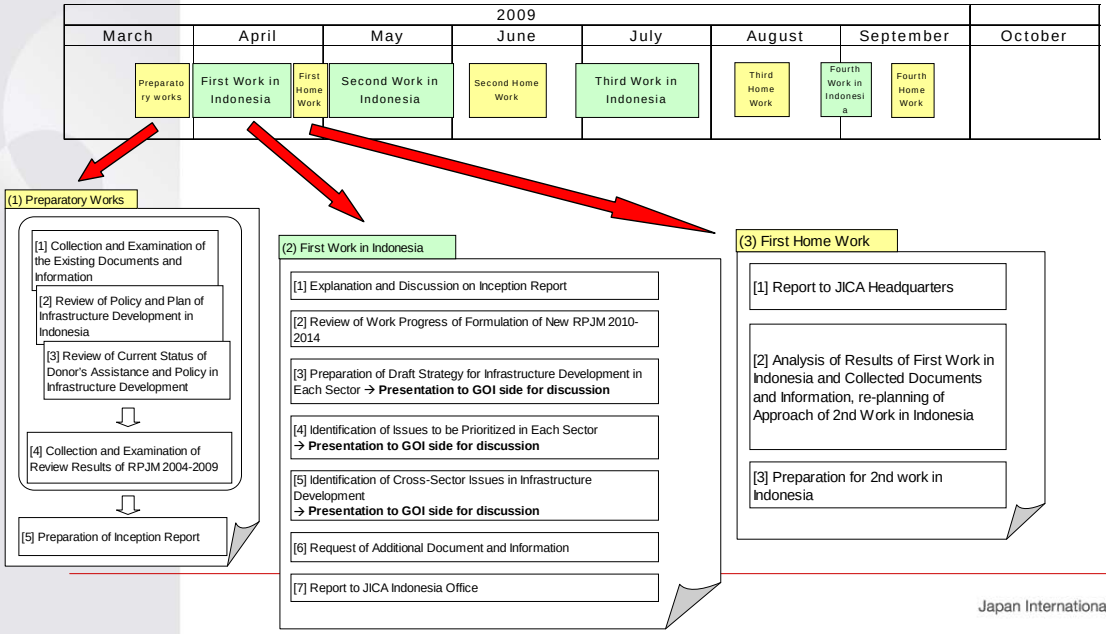
Original Work Schedule is as follows:



6. Work Items (1/3)

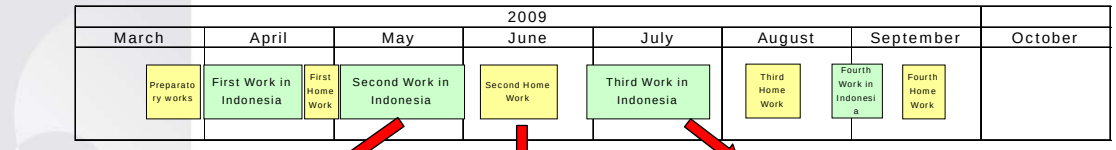
Work items of the relevant study stages are as follows:

- Preparatory Works, 1st Field, 1st Home



6. Work Items (2/3)

- Work items of the relevant study stages are as follows:
  - 2nd Field, 2nd Home, 3rd Field



(4) Second Work in Indonesia

- [1] Review of Draft Strategy for Infrastructure Development, Issues to be Prioritized in Each Sector and Cross-Sector Issues in Infrastructure Development → **Presentation to GOI side for discussion**
- [2] Develop action plans and indicators to monitor the progress of development
- [3] Examine and propose measures to accelerate infrastructure development considering the nature of fund for development
- [4] Compare, arrange and evaluate utilization of ODA and PPP scheme for the promotion of infrastructure development
- [5] Forecast of macroeconomic framework of Indonesia (Indication of multiple
- [6] Analysis on impact of public external debt for each macroeconomic framework
- [7] Draft recommendation on the first concept draft of the next National Medium term Development Plan (RPJM 2010-2014) → **Presentation to GOI side for discussion**
- [8] Confirmation, analysis and discussion on the first concept draft (in case the first concept draft is ready)
- [9] Report to JICA Indonesia Office

(5) Second Home Work

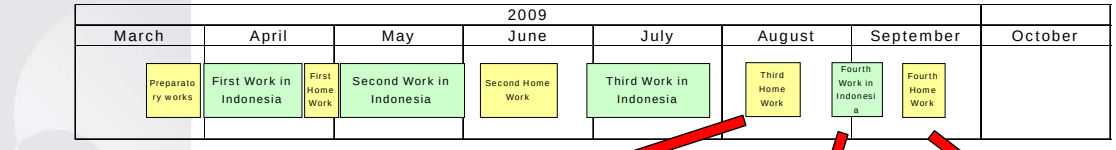
- [1] Report to JICA Headquarter the Result of Second Work in Indonesia
- [2] Preparation of Interim Report → **Submission to JICA for discussion and consent**

(6) Third Work in Indonesia

- [1] Explanation and Discussion of Interim Report
- [2] Monitoring of Procedure of Collecting Local Government and Community Opinions on 1st Concept Draft
- [3] Collection and Analysis of Infrastructure Development Plans submitted by other Ministries and Agency concerned
- [4] Cross-sector Integration of Infrastructure Development Plan
- [5] Cross-sector Integration of Proposed Project to Blue-books and PPP
- [6] Preparation of List of Proposed Project in the Blue-books based on Plural Scenario Analysis on Appropriate Investment Size → **Presentation to GOI side for discussion**
- [7] Preparation of draft list of proposed project under PPP → **Presentation to GOI side for discussion**
- [8] Report to JICA Indonesia Office

6. Work Items (3/3)

- Work items of the relevant study stages are as follows:
  - 3rd Home, 4th Field、4th Home



(7) Third Home

- [1] Report to JICA Headquarter the result of third work in Indonesia
- [2] Preparation of Draft Final Report → **Submission to JICA for discussion and consent**

(8) Fourth Work in Indonesia

- [1] Explanation and Discussion on Draft Final Report
- [2] Preparation of Recommendations of 1st Concept Draft
- [3] Finalization of Proposed Projects List in Blue-books → **Presentation to GOI side for discussion**
- [4] Finalization of Proposed Projects List to be implemented under PPP → **Presentation to GOI side for discussion**

(9) Fourth Home

- [1] Report to JICA Headquarter the Result of Fourth Work in Indonesia
- [2] Preparation of Final Report

7. Reports

Report		Required Sets			Contents
		English	Indonesian	Japanese	
1)	Inception Report	20	17	-	Basic approach, methodology, plan of operation. Staff of study team
2)	Interim Report	20	-	-	The results of the first and second work in Indonesia and the home works covering all TOR stipulated in the contract
3)	Draft Final Report	20	-	-	The results of the 3rd work in Indonesia and home work in Japan covering all TOR stipulated in the contract.
4)	Final Report (Summary)	25	22	5	The summary of the Final Report
5)	Final Report (Main Report)	25	22	-	Revising Draft Final Report based on the comments on DF/R and the result of 4th work in Indonesia and 3rd home work in Japan.
6)	Final Report (Electric file)	2	2	-	Electric data of the Final Report (CD-ROM)

The Republic of Indonesia

Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 2

Infrastructure Development Strategy for the Next Five Years

March 2010

1. RPJM Aims Growth at 7% by 2014 – with a focus on real sector support and PPP

- ☐ The recent GDP growth has been modest at 5-6%.
- ☐ Boosting economy by another 1-2% cannot be achieved if business as usual is practiced.
- ☐ PPP participation in infrastructure is less than optimal.
- ☐ How should the infrastructure sector do things differently to support the 7% growth?

- ✓ Ways to expand economic growth →
  - (a) increase in final demand
  - (b) increase in physical assets

2. Infrastructure Sector to Support Economic Growth

- Increase in final demand

  Boost the real sector activities: Infrastructure service provision to help increase demand for goods and services by industries and households

  → identify domestic and international demand areas, existing and potential businesses and people's needs

- Increase in physical assets

  Expansion of infrastructure investment as priority

  → identify investment needs and backlogs to improve competitiveness and connectivity, and solicit private participation where appropriate

3. Infrastructure Interventions by Region

<table>
<tr><th></th><th>Java-Bali</th><th>Sumatra</th><th>Kalimantan</th><th>Sulawesi</th><th>Nusa Tenggara</th><th>Maluku / Papua</th></tr>
<tr><td rowspan="2">Growth</td><td colspan="6">Accumulation of capital, increased demand for goods and services, and improved investment climate through provision of public infrastructure</td></tr>
<tr><td colspan="2">Support to manufacturing industry
(Textiles and machinery)</td><td colspan="4">Support to resource processing industry
(Mineral resources, marine, food & beverages, etc.)</td></tr>
<tr><td>Employment</td><td>Manufacturing industry
(Textiles and machinery)</td><td>Manufacturing and agriculture</td><td colspan="4">Resource-processing industry
(Mineral resources, marine, food & beverages, etc.)
Agriculture
Service industry
(Wholesale, retail, tourism, social service)</td></tr>
<tr><td rowspan="4">Distribution and Poverty Reduction</td><td colspan="6">Improved access to public institutions (especially in cities)</td></tr>
<tr><td colspan="6">Improved provision of basic infrastructure (clean water, sanitation, etc)</td></tr>
<tr><td colspan="3">Increased job opportunities
(especially in rural areas)</td><td colspan="3">Increased job opportunities
Improvement of basic infrastructure
(especially in rural areas)</td></tr>
<tr><td colspan="6">Support to small and medium enterprises</td></tr>
</table>

Source: Socioeconomic Study for Assisting Formulation of New JICA's County Assistance Strategy for Indonesia. Modified by the Study Team

4. Economic Performance of Indonesia

- The economic performance is generally good, but "Unemployment Rate" is still high.

Key Economic Indicators of Indonesia

Indicators \ Years	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GDP Growth Rate	0.2%	4.8%	3.5%	3.6%	4.1%	5.1%	5.6%	5.5%	6.3%	6.1%
Inflation Rate (CPI)	2.0%	9.4%	12.6%	10.0%	5.1%	6.4%	17.1%	6.6%	6.6%	11.06%
Unemployment Rate	6.40%	6.10%	8.10%	9.06%	9.57%	9.86%	10.26%	10.28%	9.11%	8.39%
Foreign Currency Reserve (US$ Billion)	27.3	29.3	27.9	31.2	36.3	36.3	34.7	42.6	56.9	51.6
Exchange rate (Rp./$ At year end)	7,100	9,595	10,400	8,940	8,425	9,327	9,830	9,020	9,419	10,950
Trade Balance (US$ Billion)	24.7	28.5	25.3	25.7	28.6	25.1	28.0	39.6	39.6	7.97
Interest Rate (SBI 3M, At year end)	12.6%	14.3%	17.6%	13.1%	8.3%	7.4%	12.75%	9.5%	7.8%	11.08%
Credit Rating (S&P, at year end)	CCC+	B-	CCC	CCC+	B	B+	B+	BB-	BB-	BB-

Source: BPS, BI, S&P

5. Key Issues 1. High Unemployment Rate

- "Unemployment Rate" is high compared to other countries.
- "Credit Rating" has improved but is still lower than Thailand, Malaysia and China.

Comparison of Economic Performance with Other Countries (in 2007)

Economic Indicators	Indonesia	Thailand	Vietnam	Malaysia	China
Nominal GDP (US$ Billion)	432.94	245.66	70.02	186.48	3,250.82
Real GDP Growth Rate (05-07 Av.)	5.8%	4.8%	8.4%	5.7%	11.0%
GDP per capita (US$)	1,947	3,737	818	6,948	2,461
Unemployment Rate	9.11%	1.5%	2.0%	3.1%	4.2%
Foreign Reserve (US$ Billion)	56.9	87.5	19.9	101.3	154.0
Foreign Debt (US$ Billion)	136.6	61.5	21.3	54.5	345.9
Import Cover Ratio (Month)	9.2	7.5	4.9	8.3	19.3
Ratio of Foreign Debt to GDP	31.6%	25.0%	30.4%	29.2%	10.6%
Debt Service Ratio	19.2%	11.1%	5.5.%	3.8%	2.0%
Credit Ratings (Moody's/S&P)	Ba3/BB-	Baa1/BBB+	Ba3/BB	A3/A-	A1/A

Source: IMF, IBRD, CEIC
Note: "Import Cover Ratio" is the ratio of how many months of foreign reserves are available for monthly imports.
"Debt Cover Ratio" is the ratio of foreign debt service (including principal and interest) to export amount.

6. Key Issues 2: High Poverty Rate

- Poverty is another important issue to tackle.

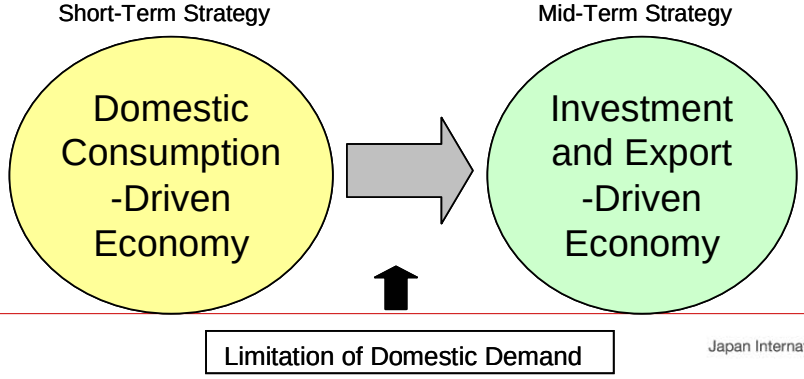
Status of Achievement of MDGs in Indonesia

	1990 Status	Current Status (2006)	Target
Mortality Rate of Children under 5 years old (person/1,000 person)	97	40	32
Primary School Enrollment Rate	88.7%	94.7%	100.0%
Nutrition Deficiency Rate of Children under 5 years old	35.5%	28.0%	18.0%
Population with continuous access to improved water resources	30.9%	68.0%	65.5%
Poverty Rate	15.1%	16.6%	7.5%

Source: JICA

7. Strategy for Further Growth

- Indonesian economy is driven by strong domestic consumption, thus, stimulating domestic demand is effective for short-term growth.
- There will be a limit of domestic demand unless consumer confidence is secured and disposable income is increased.
- Economic structure needs to be shifted towards export-oriented economy in the mid-term.



8. Bottleneck for Further Growth

- Competitiveness of infrastructure is ranked low, which hinders further economic growth of Indonesia.

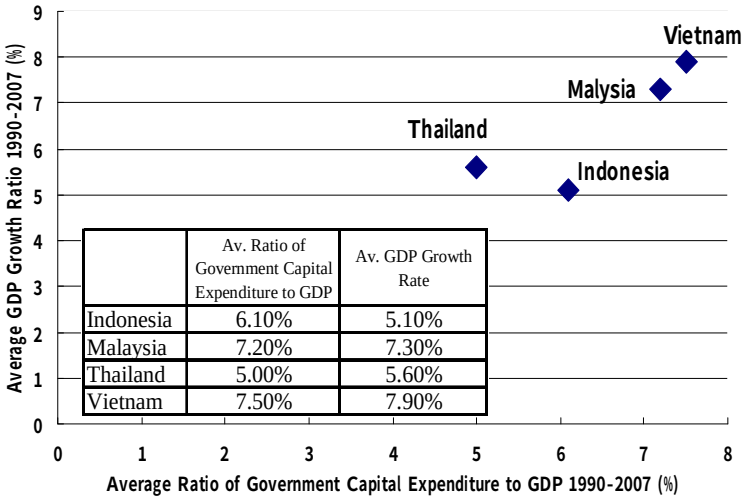
Indicator	2008	2009	Thailand	Malaysia
Infrastructure	96	84	41	27
Electrification Rates	82	96	41	39
Fixed Telephone Lines	100	79	84	72
Road Quality	105	94	35	24
Quality of Railroad Infrastructure	58	60	52	19
Quality of Port Facilities	104	95	47	19

Source: * World Economic Forum, ranking out of 134 countries. Ranking of 2009 for Thailand and Malaysia

9. Infrastructure is the Key to Further Growth

- Indonesia's average investment (1990-2007) in infrastructure (% to GDP) is low compared to other countries.

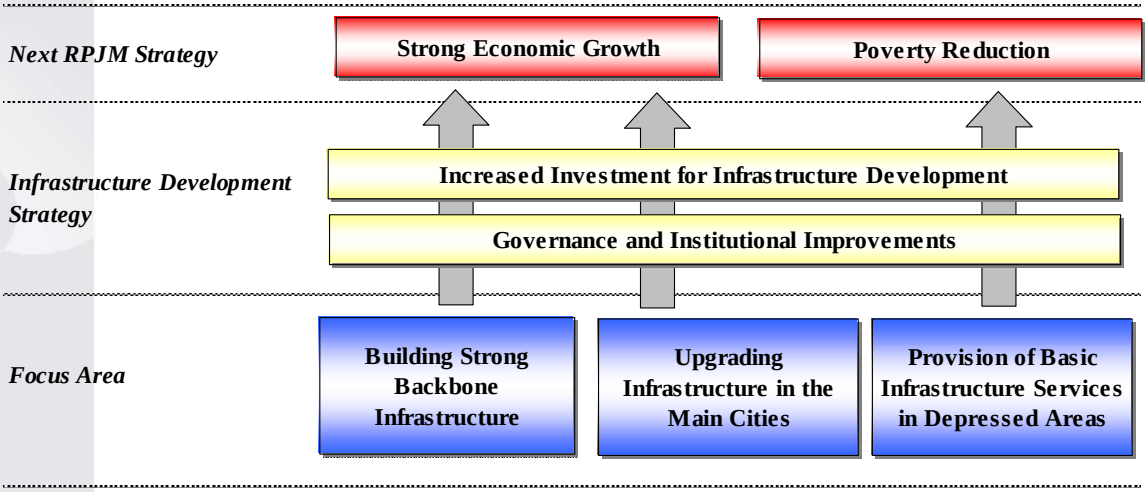
Relation of Capital Expenditure and GDP Growth



	Av. Ratio of Government Capital Expenditure to GDP	Av. GDP Growth Rate
Indonesia	6.10%	5.10%
Malaysia	7.20%	7.30%
Thailand	5.00%	5.60%
Vietnam	7.50%	7.90%

Source: ADB "Key Indicators for Asia and the Pacific 2008"

10. Strategy for the Next Five Years



The Republic of Indonesia
Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 3

Infrastructure Financing Strategy

March 2010

Key Messages

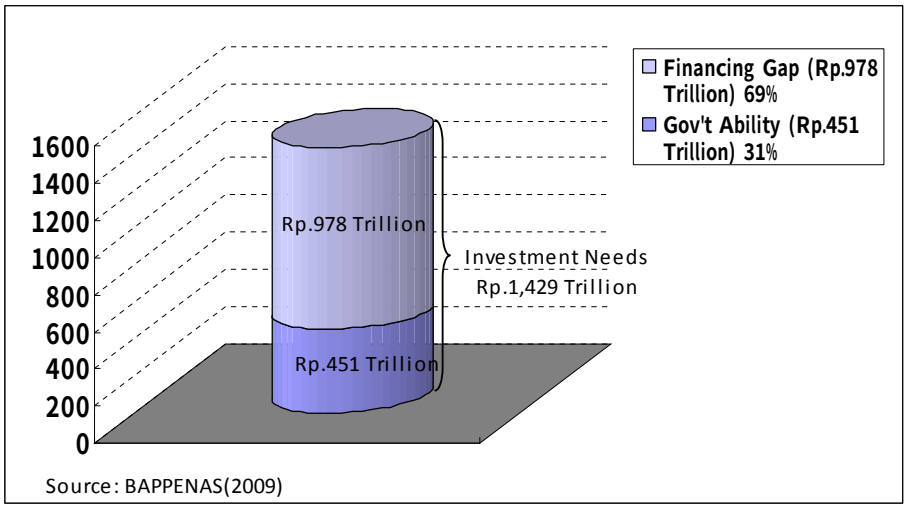
- Economic growth at 7% would require infrastructure investment at 6-7% of GDP. GOI's budget for capital investment is only one-third at 1-2% of GDP.
- To fill the investment gap, the Study Team recommends the following three measures:

  ✓Rationalize Expenditure, including review of subsidies
  ✓Improve coordination with sub-national governments
  ✓Strengthen Financing Strategy, including PPP

- Realistic expectation for PPP: It takes time to realize active investment climate.
- Rationalization of subsidies and improved coordination with sub-national governments are the primal focus to increase infrastructure investment.

1. Limited Government Investment Budget

- Rp.1400 Trillion is needed for infrastructure in the next five years (GOI estimates), but government does not have sufficient budget.



Source: BAPPENAS(2009)

2. Infrastructure Financing Method

- The annual budget of Rp.285 Trillion is needed, but APBN allocates only Rp.90 Trillion.
- The gap is to be filled through other means, such as foreign direct investments (FDI), public private partnerships (PPP), Corporate Social Responsibility (CSR)

Infrastructure Needs and Financing Methods

Infrastructure Needs (per year (Av.))	Infrastructure Financing by Government Budget (per year (Av.))	Infrastructure Financing by other means (per year (Av.))
Rp. 285.0 Trillion	Rp. 90.2 Trillion	Rp. 195.6 Trillion

Source: BAPPENAS (2009)

- Infrastructure investment budget for 2010 is Rp.93.3 Trillion, over 4% down from Rp.97.6 Trillion in 2009.

3. Necessary Investment Amount

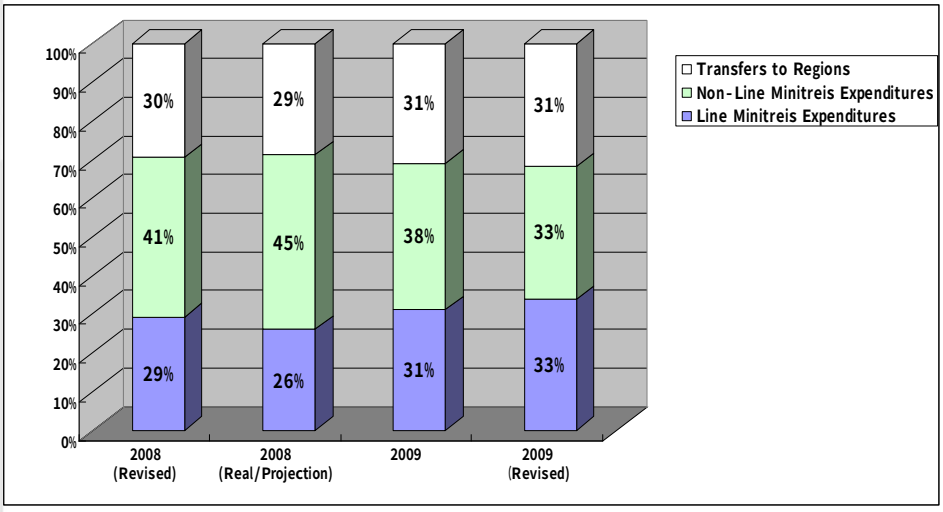
- Various studies argue that more infrastructure investment is needed for Indonesia.

Averting an Infrastructure Crisis in Indonesia	5% of GDP to sustain a 6% growth
Connecting East Asia	6.2% of GDP (65% for new investment and 35% for maintenance of the existing assets)
I. Chatterton et al.: Estimation of Infrastructure Investment Needs in the South Asia Region, the World Bank	7% of GDP for 7.5% GDP growth
M. Fay et al.: Investing in Infrastructure, the World Bank	7% of GOP (5% for new assets and 2% for capital replacement)

- Annual infrastructure investment of 6-7% of GDP (Rp.230~280 trillion) is needed to attain the PRJM strong growth target.
- Perhaps more, if the backlog of the last ten years is considered.

4. Analysis of Budget Structure

- A large amount is allocated to subsidies and transfers to regions from APBN. The Central Government controls only one-third of the national budget.



5. Budget Estimation by GOI

- Investment budget for infrastructure is badly squeezed.

Items	2010	2011	2012	2013	2014
GDP	5,723.8	6,067.2	6,431.3	6,817.1	7,226.2
Growth Rate of GDP(%)	6.0%	6.0%	6.0%	6.0%	6.0%
A.State Revenue and Grants	952.8	1,057.4	1,223.6	1,426.8	1,668.6
I. Domestic Revenue	951.2	1,055.3	1,221.6	1,425.0	1,666.9
		10.9%	15.8%	16.7%	17.0%
1.Tax Revenue	742.7	846.5	992.2	1,171.1	1,390.4
2.Non-Tax Revenue	208.5	208.8	229.5	253.8	276.4
II. Grants	1.5	2.0	2.0	1.8	1.7
B. State Expenditure	1,074.1	1,185.0	1,343.5	1,544.8	1,783.5
I. Central Government Expenditur	751.7	820.3	916.4	1,042.0	1,191.9
a. Line Ministries Expenditure	340.1	409.1	470.6	560.1	652.6
Mandatory	139.9	149.4	165.9	184.6	205.4
- Personal Expenditure	87.8	96.2	108.6	123.0	140.0
- Goods&Services Expenditure	31.6	35.8	38.7	41.8	45.0
- Plafond Use of PNBP & BLU	20.5	17.4	18.6	19.8	20.4
Discretionary	200.2	259.7	304.7	375.6	447.2
- Goods&Services Expenditure	50.4	52.1	56.4	61.4	66.9
- Capital Expenditure	83.2	113.9	138.3	180.5	219.3
Capital Expenditure Ratio (% to GDP)	1.5%	1.9%	2.2%	2.6%	3.0%
- Social Assistance	66.6	93.7	110.0	133.6	161.0
b. Non-Line Ministries Ependitur	411.5	411.1	445.8	481.9	539.3
Subsidies	161.0	151.6	147.6	137.9	133.9
Others	250.5	259.5	298.2	344.0	405.4
II Transfer to Region	322.4	364.7	427.0	502.8	591.6
C. Primary Balance	-3.9	1.7	25.3	41.2	61.3
D. Overall Balance (A-B)	-121.3	-127.6	-119.8	-118.0	-114.9
E.. Financing	121.3	127.6	119.8	118.0	114.9
Financing (% to GDP)	2.1%	2.1%	1.9%	1.7%	1.6%

6. Simulation Results (1)

- The High Growth Case (at 7.5% for 2010-14) is still insufficient to generate infrastructure budget of Rp.280 trillion, if the same allocation pattern is kept.

Items	2010	2011	2012	2013	2014
GDP	5,832.3	6,269.7	6,740.0	7,245.5	7,788.9
Growth Rate of GDP(%)	7.5%	7.5%	7.5%	7.5%	7.5%
A.State Revenue and Grants	1,000.3	1,110.1	1,284.8	1,497.9	1,751.8
I. Domestic Revenue	998.8	1,108.1	1,282.8	1,496.1	1,750.1
1.Tax Revenue	779.8	888.8	1,041.8	1,229.7	1,459.9
2.Non-Tax Revenue	218.9	219.2	241.0	266.5	290.2
II. Grants	1.5	2.0	2.0	1.8	1.7
B. State Expenditure	1,111.1	1,222.9	1,399.4	1,613.9	1,868.7
I. Central Government Expenditur	772.6	840.0	951.0	1,085.9	1,247.5
a. Line Ministries Expenditure	361.1	428.9	505.2	604.0	708.2
Mandatory	139.9	149.4	165.9	184.6	205.4
- Personal Expenditure	87.8	96.2	108.6	123.0	140.0
- Goods&Services Expenditure	31.6	35.8	38.7	41.8	45.0
- Plafond Use of PNBP & BLU	20.5	17.4	18.6	19.8	20.4
Discretionary	221.2	279.5	339.3	419.4	502.8
- Goods&Services Expenditure	52.9	54.7	59.2	64.5	70.2
- Capital Expenditure	98.3	126.4	164.6	214.7	263.5
Capital Expenditure Ratio (% to GDP)	1.7%	2.0%	2.4%	3.0%	3.4%
- Social Assistance	69.9	98.4	115.5	140.3	169.1
b. Non-Line Ministries Ependitur	411.5	411.1	445.8	481.9	539.3
Subsidies	161.0	151.6	147.6	137.9	133.9
Others	250.5	259.5	298.2	344.0	405.4
II Transfer to Region	338.5	382.9	448.4	527.9	621.2
C. Primary Balance	0.0	0.0	0.0	0.0	0.0
D. Overall Balance (A-B)	-110.8	-112.9	-114.6	-115.9	-116.8
E..Financing	110.8	112.9	114.6	115.9	116.8

7. Simulation Results (2)

- Even in the High Growth Case (7.5%) GOI can not afford infrastructure investment of Rp.1400 trillion from the budget.
- Measures to increase infrastructure investment need to be taken to achieve the PRJM growth target.

Simulation Result-1 Difference of Capital Expenditure

Unit: Rp. Trillion

Case		2010	2011	2012	2013	2014	Total
	Average. Growth Rate						
Base Case	6.0%	83.2	113.9	138.3	180.5	219.3	735.2
High Growth Case	7.5%	98.3	126.4	164.6	214.7	263.5	867.5
Low Growth Case	4.5%	72.4	95.3	123.4	161.9	197.2	650.2

Source: Study Team

8. How to Increase Infrastructure Investment?

- The Study Team proposes the following three measures for increase in infrastructure investment.

1) Rationalize Expenditure, including review of subsidies

2) Improve coordination with sub-national governments

3) Strengthen Financing Strategy, including PPP

9. Recommendation1: Rationalize Expenditure

- ☐ Improve budget allocation and efficiency
- ☐ Critical review of subsidies:

- ✓ Energy subsidies occupy a very large share of the government budget and this shrinks infrastructure investment. (about 5% of GDP in 2008)

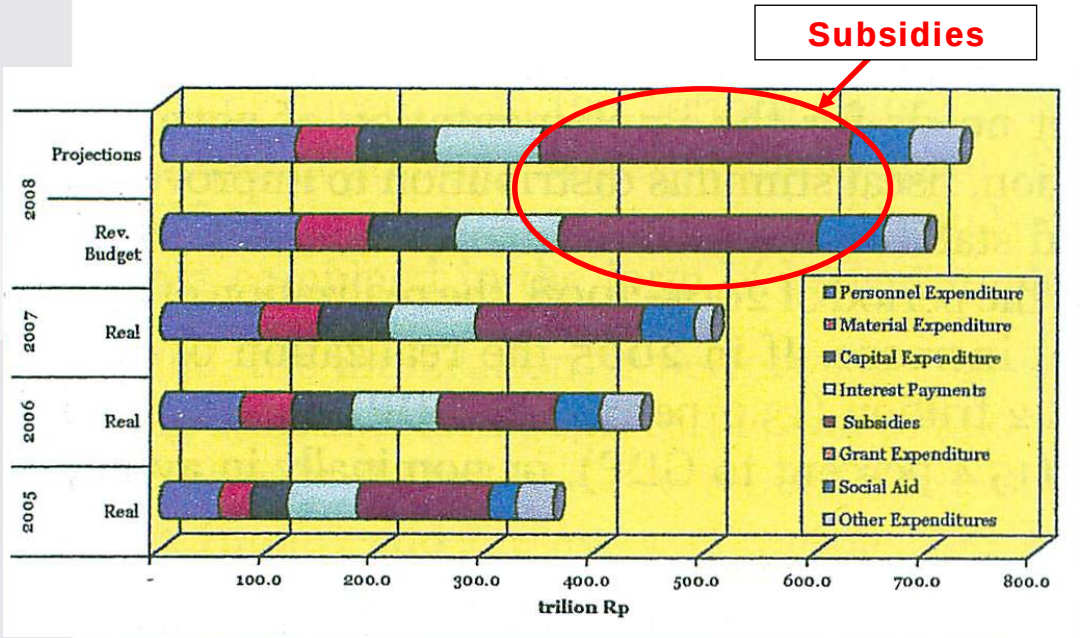
- ✓ Review of subsidies, including electricity and water tariff structures, is required to properly target the vulnerable populations.

10. Amount of Subsidies in Recent Years

(trillion rupiah)

Description	2005		2006		2007		2008	
	Realization	% to GDP	Realization	% to GDP	Realization	% to GDP	Realization	% to GDP
I. Energy Subsidies	**104.4**	**3.8**	**94.6**	**2.8**	**116.9**	**3**	**222.6**	**4.8**
1. Fuel Subsidies	95.6	3.4	64.2	1.9	83.8	2.1	146.6	3.1
2. Electricity Subsidies	8.9	0.3	30.4	0.9	33.1	0.8	76	1.6
II Non Energy Subsidies	**16.3**	**0.6**	**12.8**	**0.4**	**33.3**	**0.8**	**59.1**	**1.3**
1. Food Subsidies	6.4	0.2	5.3	0.2	6.6	0.2	12.0	0.3
2. Fertilizer Subsidies	2.5	0.1	3.2	0.1	6.3	0.2	15.2	0.3
3. Seed Subsidies	0.1	0.0	0.1	0.0	0.5	0.0	1.0	0.0
4. PSO	0.9	0.0	1.8	0.1	1	0.0	1.7	0.0
5. Programmed Credut	0.1	0.0	0.3	0.0	0.3	0.0	3.2	0.1
6. Cooking Oil Subsidies	-	-	-	-	0.0	0.0	0.5	0.0
7. Soy Bean Subsidy	-	-	-	-	-	-	0.5	0.0
8. Tax Subsidy	6.2	0.2	1.9	0.1	17.1	0.4	25.0	0.5
9. Other Subsidies	-	-	0.3	0.0	1.5	0.0	-	-
Total	**120.70**	**4.3**	**107.4**	**3.2**	**150.2**	**3.8**	**281.7**	**6.0**

11. Review of Subsidies (1)



12. Review of Subsidies (2)

- The Study Team estimates improved fiscal space through a reduction of subsidies.

Impact of Decrease of Subsidy and Fiscal Space

Unit: Trillion Rupiah

	2010	2011	2012	2013	2014	Total
(a) State Expenditure	1074.1	1185.0	1343.5	1544.8	1783.5	-
(b) Subsidy (Plan)	161.0	151.6	147.6	137.9	133.9	-
(c)Subsidy (Reduced)*	107.41	118.5	134.35	77.24	89.175	-
(d) Fiscal Space (=(b)-(c))	53.59	33.1	13.25	60.66	44.725	205.325

Source: Study Team

Note (*): 10% for APBN 2010-2012, 5% for APBN 2013-2014

13. Recommendation 2: Improved Coordination with Sub-National Governments

- GOI needs to improve coordination with sub-national governments and to strengthen its function to advise and monitor budget planning and implementation by the sub-national governments.

- ✓ Large share of GOI budget goes to “Transfer to Regions”.
- ✓ Infrastructure investment by sub-national governments is becoming more critical for equitable growth.
- ✓ Transferred budget is not necessarily spent timely and effectively on infrastructure.
- ✓ Central government does not control or monitor sub-national governments’ spending.

14. Suggestions to Improve Coordination

a) The ministries shall develop guidelines on infrastructure investment for the sub-national governments.
b) Coordinating functions of Provincial Governments (i.e. guiding and advising to municipal governments, and submission of consolidated fiscal reports to the ministries) shall be strengthened.
c) Closer consultation between the ministries and the sub-national governments shall be held when the sub-national governments prepare their development plans.
d) MOHA and MOF shall strengthen assessment functions when they calculate DBH and DAU to the sub-national governments.
e) MOHA and MOF should evaluate the spending status of the transferred money.
f) Performance-Based Budget (Incentive System) shall be introduced.

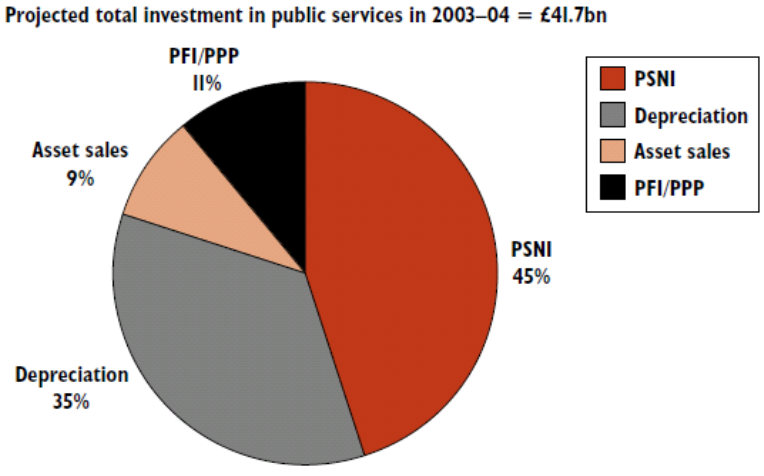
15. Recommendation 3: Promotion of PPP (1)

- PPP is a powerful tool to invite private investment to build infrastructure with less government expenses. But 10-20% of total infrastructure investment needs could be covered by PPP, based on experience in UK and South Korea.
- The following actions should be taken for PPP promotion.

✓Improve Regulatory Framework
✓Strengthen P3CU and develop effective network
✓Develop PPP-Specific Planning and Procurement Procedures
✓Review and Formalize basic Risk Sharing
✓Improve PPP Project Management knowledge
✓ and skills

16. Recommendation 3: Promotion of PPP (2)

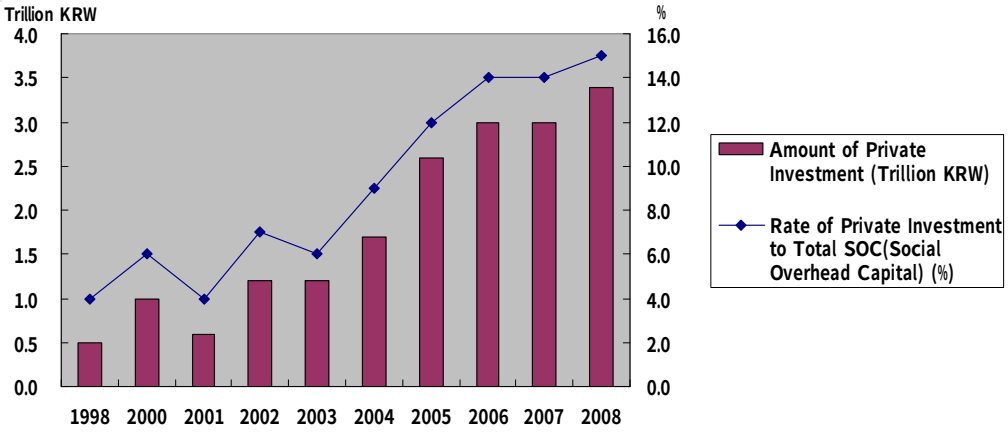
- In UK, 11% of public expenditures is covered by PFI/PPP.



Source: Budget 2003. PFI figures are for deals signed to date and report capital investment expected under signed contracts in the year that investment takes place.

17. Recommendation 3: Promotion of PPP (3)

- In South Korea, approximately 15% of public expenditures is covered by PPP.



The Republic of Indonesia

Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 4 Outlines of Each Sector

Section 4.1
Transportation Sector

March 2010

1. Current Issues of Transportation Sector

- ***Insufficient budget allocation*** for infrastructure development to meet minimum service standards
- ***Low quality of transportation infrastructures***, such as less efficiency of operation and insufficiency of maintenance, and lack of safety aspects
- ***Poor traffic integration*** in the view of sub-sector coordination and regional integration
- ***Inadequate legal and regulatory framework*** for enhancement of private sector participation,
- ***Far from global/international corridor*** development framework

2. International Competitiveness of Indonesian Transportation Infrastructure

Global Competitiveness Index		Country	Key Indicators			Ranking for Infrastructure Quality				
Rank	Score		Population (millions)	GDP (bil.US$)	GDP/capita (US$)	Overall	Roads	Railway	Port	Air
5	5.5	Singapore	4.4	161.3	35,162.9	2	3	10	1	1
9	5.4	Japan	128.3	4,382.8	34,312.1	16	19	3	25	49
11	5.3	Hong Kong	7.2	206.7	29,649.5	8	5	5	2	2
13	5.3	Korea	48.1	957.1	19,750.8	18	13	7	29	26
17	5.2	Taiwan	22.7	383.3	16,606.0	22	20	9	18	32
21	5.0	Malaysia	26.2	186.5	6,947.6	19	17	17	16	20
30	4.7	China	1,331.4	3,250.8	2,460.8	58	51	28	54	74
34	4.6	Thailand	65.3	245.7	3,736.8	35	32	48	48	28
50	4.3	India	1,135.6	1,098.9	977.7	90	87	21	93	66
51	4.3	Russia	141.9	1,289.6	9,075.1	78	104	32	76	88
55	**4.3**	**Indonesia**	**228.1**	**432.9**	**1,924.7**	**96**	**105**	**58**	**104**	**75**
64	4.1	Brazil	191.3	1,313.6	6,937.9	98	110	86	123	101
70	4.1	Vietnam	86.4	70.0	818.1	97	102	66	112	92
71	4.1	Philippines	85.9	144.1	1,624.7	94	94	85	100	89
109	3.5	Cambodia	14.6	8.6	600.0	82	80	97	91	87

- Overall Ranking of Indonesia is 55th out of 134 countries, but only 96th of the infrastructure quality.
  - Quality of transportation infrastructure is poor compared with the Indonesian overall competitiveness.
- 96th of Infrastructure Quality is less competitiveness
  - Malaysia (19th), Thai (35th), China (58th), Cambodia (83th), India (90th), Philippines (94th)
- Road (105th) and Port (104th) are seriously poor quality in Indonesia

3. RPJM: Policy for Transportation Sector

- RPJM2005-2009
  - ***Development*** of transportation infrastructure and means
  - Increasing ***safety*** in an integrated manner
  - Enhancing national mobility and distribution
  - ***Integration*** of transportation and ***regional development***
  - Increasing data and information for auditing
  - Development / consolidate national, regional, local ***transportation system***.
  - Continuing the restructuring of institutions and laws
  - Development of a ***commercial transportation industry***
  - ***Restoration*** the distribution and mobility channels in regions with ***disaster affected***

- RPJM2010-2014
  - Improvement of the ***facility and infrastructure standards***
  - ***Support*** for the improvement of ***real sector*** competitiveness
  - Improvement of the ***government and private partnership***

Key Words for the Next RPJM

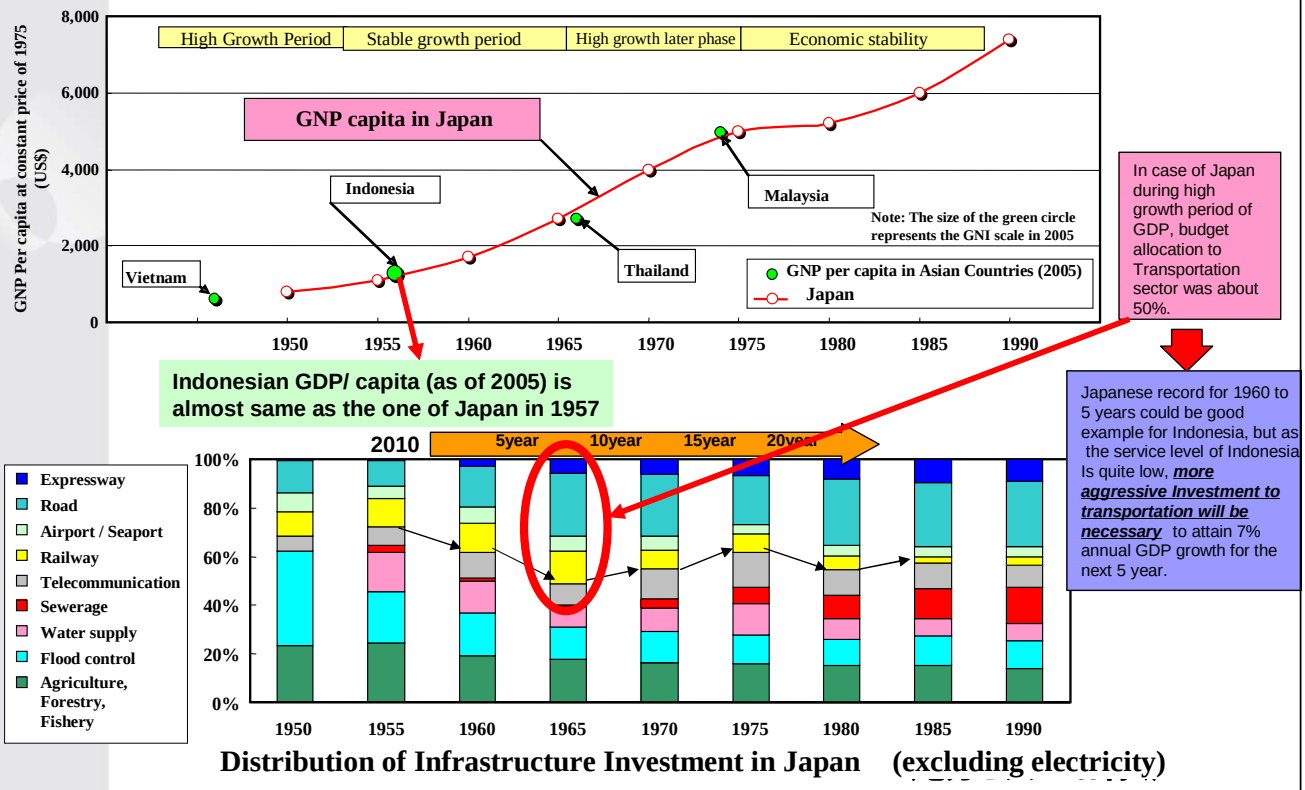
Real Sector Support and ***PPP***

4. Next RPJM (2010-2014): Budget Allocation

No.	Sector	Budget (Request Base 2010 - 2014)			Share		
		Public (bil.Rp.)	Private (bil.Rp.)	Total (bil.Rp.)	Public	Private	Total
1	Water Resources and Irrigation	114,649	0	114,649	11.6%	0.0%	8.0%
2	Transportation	470,954	299,802	770,756	47.7%	67.9%	53.9%
	(1) Road	226,873	182,260	409,133	23.0%	41.3%	28.6%
	(2) Land Transportation (River/Ferry)	23,445	258	23,703	2.4%	0.1%	1.7%
	(3) Railway	96,726	100,491	197,217	9.8%	22.8%	13.8%
	(4) Sea Transportation (Port)	90,640	6,425	97,065	9.2%	1.5%	6.8%
	(5) Air Transportation (Airport)	33,270	10,368	43,638	3.4%	2.3%	3.1%
3	Water Supply, Sewerage and Housing	100,590	7,735	108,325	10.2%	1.8%	7.6%
4	Energy, Telecommunication and Information	301,875	134,093	435,968	30.6%	30.4%	30.5%
	(1) Energy and Electricity	272,834	134,093	406,927	27.6%	30.4%	28.5%
	(2) Communication and Information	29,041	0	29,041	2.9%	0.0%	2.0%
5	TOTAL	988,068	441,630	1,429,698	100.0%	100.0%	100.0%

- Total allocated budget for Infrastructure is about ***1.8% of GDP*** in Indonesia.
- Allocation to Transportation Sector is about ***48% of the government infrastructure budget***, and 54% of total infrastructure budget including private finance.

5. Japanese Example of Infrastructure Investment



Source: "Research paper on economic and social long-term view and infrastructure development (March 1999)" Ministry of Construction of Japan
GNP per capita of Asian country : United Nations

6(1) Regional Development Strategy (Transportation)

Issue / Condition

- High potential as Gateway to Asian Industrial Corridor but lack of infrastructures (Road and Port).

Development Policy

- Northern Sumatra: Industrial develop. for leading national economy
- Southern Sumatra for domestic market to Java and Northern Sumatra

Issue / Condition

- High potential for coal and other minerals, but lack of infrastructures.

Development Policy

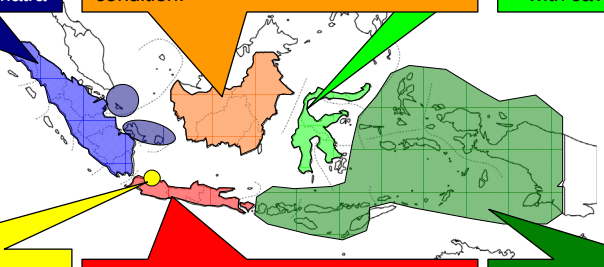
- Regional development by mineral resources through PPP activities.
- Road and River network connecting urban and rural area for improve living condition.

Issue / Condition

- Agriculture oriented industry, but no market in Sulawesi

Development Policy

- Agro-based regional development, and access improvement between production area and urban center
- Strengthening transport capacity with Java as the main market.



Issue / Condition

- Insufficient infrastructures for transportation, flooding, sewerage and electricity for sustainable economic growth

Development Policy

- Integrated urban development approach.
- Strengthen logistic capacity &network development as national gateway.

Issue / Condition

- High GRDP for leading national economy, but poverty and high un-employment due to heavy population

Development Policy

- Industrial development with strengthening transportation network → targeting domestic market.
- Technology renovation for upgrading quality of products.

Issue / Condition

- Very high poverty rate, and low level of per capita GRDP.
- Far from national center

Development Policy

- Regional development with strengthening transportation / communication network.
- Small scale agriculture / community development activities.

6(2) *Key Words of* Regional Development Strategy

- Sumatra
  - ***Industrial Oriented*** Development
- Java (excluding DKI Jakarta)
  - Create ***"Java Megalopolis"*** by Trans Java Highway Corridor, and Java High Speed Railway Corridor
- DKI Jakarta
  - Integrated urban development for New Jakarta Metropolitan City based on ***MRT Network***.
- Kalimantan
  - Using ***Rich Mineral Resources*** for Regional Development with Road and River Transportation Network Development
- Sulawesi
  - ***Makassar Growth Pole*** and Agro-Industrial Regional Development
- East Indonesia (Nusa Tenggara, Timor, Maluku, Papua)
  - Transportation Development under ***Regional Development Approach***

7(1) Action Plan: DKI Jakarta / Java

Region	Building Strong Backbone Infrastructure	Upgrading Infrastructure in the Main Cities and Regional Growth Poles	Provision of Basic Infrastructure Services in Depressed Areas
DKI Jakarta	➢New Hub Port development ➢New International Airport / Upgrading Soekarno-Hatta International Airport ➢Access road to main seaports ➢Jakarta MRT Network Development ➢International Airport Access Railway	➢Jakarta 2nd Outer Ring Road ➢Improvement of heavy congestion interchanges and intersections.. ➢Installation of ITS system in Jakarta ➢Construction of DDT of Jabodetabek Circular Railway ➢Upgrading/modernization of JABODETABEK Railway System, including development of urban centers around the Junction Stations. ➢Improvement /upgrading Tanjung Priok Port	➢Resettlement activities for the illegal settlers within the ROW limit along railway (for safety purpose)
JAVA	➢Improvement and Upgrading Java North / South Railway Lines. ➢Trans Java High Speed Railway Development (Jakarta – Semarang – Surabaya) ➢Trans Java Highway Corridor Network (PPP Projects) ➢Upgrading / Improvement of Tanjung Perak (Surabaya) port as gateway of Eastern Indonesia.	➢Improvement of highway network in the main cities (Bandung, Surabaya and Semarang) ➢Development of Urban Railway system (MRT / LRT) in Bandung and Surabaya ➢Installation of ITS in main cities ➢Upgrading / improvement of Tanjung Eman (Semarang) Port.	➢Development of rural road network access from production area to market

7(2) Action Plan: Sumatra / Kalimantan

Region	Building Strong Backbone Infrastructure	Upgrading Infrastructure in the Main Cities and Regional Growth Poles	Provision of Basic Infrastructure Services in Depressed Areas
SUMATRA	➢ Super long span bridge between Java and Sumatra ➢ Trans-Sumatra Highway corridor development ➢ Upgrading of Belawan and Dumai Port as Western Gateway ➢ Access Road to main seaports and airport ➢ Construction of New Medan International Airport as Western Hub Airport ➢ Improvement of coal transportation railway in Sumatra (together with Musi River transportation development).	➢ Urban road network improvement in main cities (Medan and Palembang) ➢ Installation of LRT/MRT in Medan	➢ Feeder road network development
KALIMANTAN	➢ Trans Kalimantan road development (West – Central – South – East Kalimantan) ➢ Central Kalimantan Coal Transportation Railway ➢ Construction of Deep Seaport in South / East Kalimantan	➢ Access road to main seaport and airport ➢ Major bridges construction for improvement of regional road network	➢ Sea port development in West and South Kalimantan ➢ River transportation network development ➢ Feeder road network development

7(3) Action Plan: Sulawesi / Bali & East Indonesia

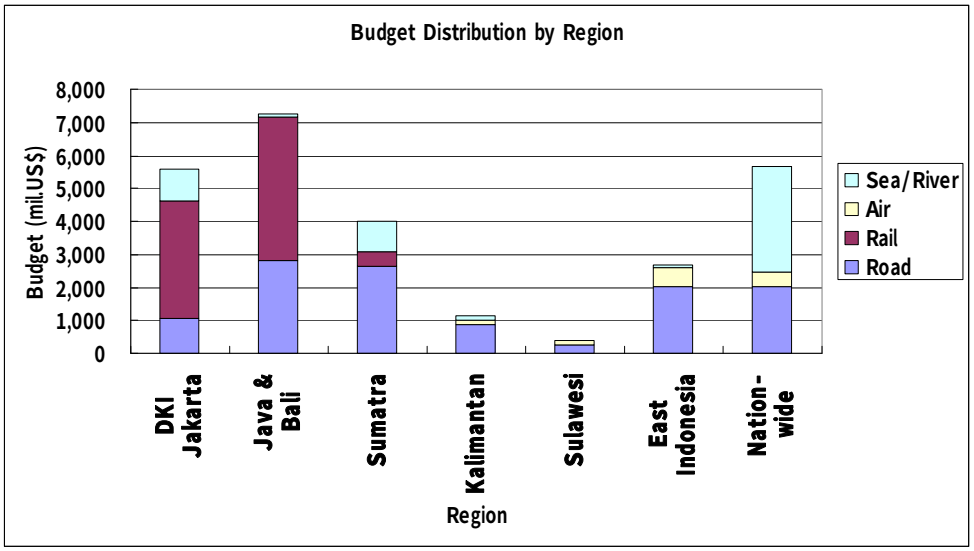
Region	Building Strong Backbone Infrastructure	Upgrading Infrastructure in the Main Cities and Regional Growth Poles	Provision of Basic Infrastructure Services in Depressed Areas
SULAWESI	➢ Improvement of Makassar Port as Eastern Hub Port of Indonesia ➢ Improvement of Bitung Port as Easter Gateway to international corridor ➢ Trans Sulawesi Road corridor development (South – Central – North Sulawesi)	➢ Upgrading Makassar International Airport ➢ Urban road network development in Makassar	➢ Rural fishery port improvement activity ➢ Market access road for agriculture sector
BALI & NUSATENGGARA And MALUKU and PAPUA	➢ Super long span bridge between Java and Bali	➢ Road Network Development in Papua ➢ Upgrading airport for tourism development	➢ Upgrading ferry terminal and sea port ➢ Access road to seaport and airports in each island.

8(1). Candidate Projects

Sub-Sector	Project Assistance		Technical Assistance		Total		Share in Amount
	No.	Amount (mil.US$)	No.	Amount (mil.US$)	No.	Amount (mil.US$)	
Road	45	11,666	23	114	68	11,780	43.4%
Rail	24	8,384	11	90	35	8,474	31.3%
Air	10	1,760	6	13	16	1,773	6.5%
Sea / River	15	5,046	7	39	22	5,085	18.8%
Total	94	26,856	47	256	141	27,112	100.0%

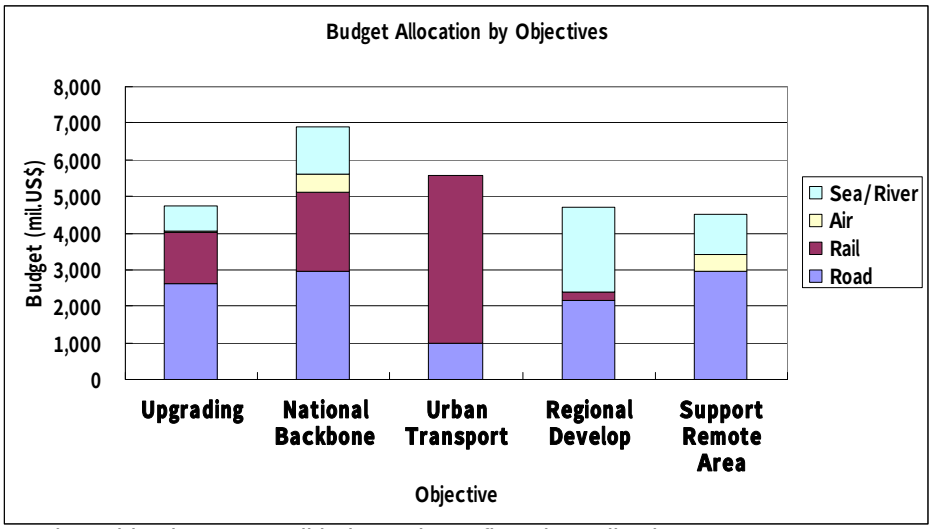
- 141 projects, of which 94 for Implementation, and 47 for technical assistance are nominated by Line Ministries, BAPPENAS, and JICA Study Team.
- Total amount with 27 billion US$, which is more than 5 times larger than the draft budget allocation with about 5 billion US$ (only for public fund as of Dec.2009).

8(2) Candidate Projects: Regional Distribution



- Road projects well balanced in the region.
- In Java, the railway sector investment is remarkable, but the modal share is only 7.3% for passenger transportation. ***→ Major part of Road investment in Java depends on BOT schemes and reduced national budget portion.***
- In Jakarta, the MRT project and New International Hub Port Development are focused, which could be National Backbone Projects.
- ***Allocation to East Indonesia is high*** ***compared with the population (6%) and the GRDP (3%)***, which reflected presidential instruction to Papua investment.
- Nation-wide Projects mainly upgrading safety, management and technology aspects are focused in Sea, Air and Road Transportation Sectors.

8(3) Candidate Projects: Objectives of the Projects



- The project objectives are well balanced to reflect the policy in RPJM 2010-2014
- Strengthen national backbone are to be realized by road, rail and sea transportation infrastructures

  → Java and Sumatra Backbone Infrastructure Development
- Urban railway is focused for the future transportation measures in Indonesia.

  → Modal shift from Road to MRT in major cities such as Jakarta, Surabaya, and Bandung are promoted.
- Regional Growth Pole development to be conducted by Port and Access Road Development.

  → Dumai, Belawan, Makassar, Surabaya, and other major ports.
- ***High consideration on Government Support to Remote Areas***, by Road, Air and Sea Transportation Sectors.

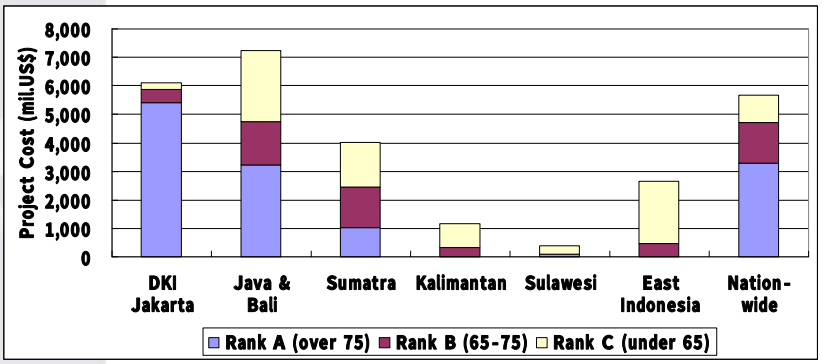
8(4) Project Evaluation: Consistency of RPJM2010-2014

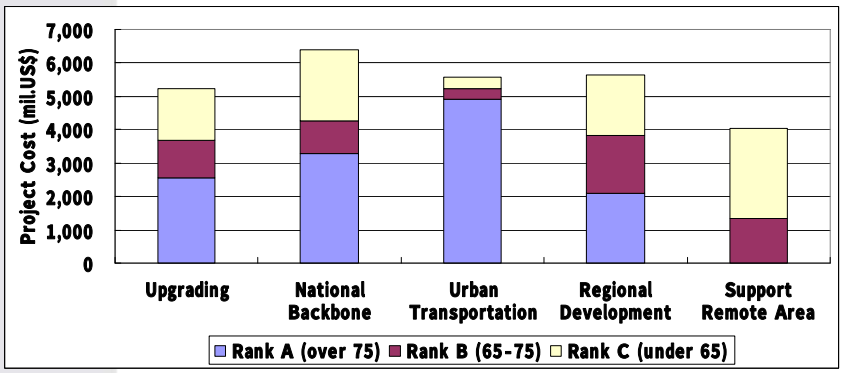
- **Improvement of the facility and infrastructure standards comply with minimum services standard**
  1. Reducing the maintenance backlog
  2. Improving road condition with minimum service standards
  3. Improving safety and quality of transportation service
  4. Enhancing the professionalism of human resources
  5. Sustainable transportation to tackle with global warming issues
  6. Improvement of urban public transport management
  7. Increasing the capacity of rescue victims of accidents/disasters
- **Support of the improvement of real sector competitiveness**
  8. Supporting development of tourism, agriculture and industry
  9. Encouraging efficient transportation of goods and passengers
  10. Improving transportation services more competitive in among-mode.
  11. Strengthening the connectivity of land in the island and inter-island
  12. Developing rail-based urban mass rapid transit in the metropolitan areas
  13. Developing technologies to meet international conditions
- **Improvement of the Government and Private Partnership**

8(5) Evaluation: Evaluation Criteria and Weight

No.	Category	Weight	Notes
1	Consistence to regional and sector development plan	27%	Most important criterion as the goal of the projects is to attain the objectives of Upper plans
2	Economic viability	25%	RPJM aims 7% of GDP growth for the next 5 years. The project should be high viability of national economy.
3	Urgency of the project	5%	Weight is set rather low with 5% as this category is also considered in economic viability.
4	Implementability	20%	Difficulty of land acquisition, resettlement, and capability of implementing agency are key factor whether the project is realized timely or not.
5	Appropriateness for international cooperation	23%	Technical difficulties, financial viability and accessibility are concerned.

8(6) Results: Summary





- Most Projects in **Jakarta are Rank A** because of economic viability, urgency, and appropriateness for international cooperation.
- **Many of nation-wide projects are also Rank A**, which are for upgrading quality, safety, and maintenance capabilities.
- Many of **the projects in Kalimantan, Sulawesi and East Indonesia are Rank C** due to lower economic viability, less urgency, and less appropriateness for international cooperation.
- **More Projects to be promoted in Kalimantan and Sulawesi**.
- Urban Transportation Projects tends to be high score, on the other hand **most of the poverty reduction projects are evaluated lower.**

8(7) Results: List of Rank A Projects

	No.	Activity Name	Region	Cost ('000USD)	Recommended Agency: Line Ministry	Recommended Agency: BAPPENAS	Recommended Agency: JST	Score
1	RW-P06	Jakarta MRT South-North Line	Java	840,000	○	○	○	86.6
2	RD-P08	Cileunyi - Sumedang - Dawuan Toll Road	Java	318,810	○	△		85.2
3	RD-P41	Tanung Priok Access Road (Phase-3)	Java	318,810		○	○	84.0
4	RW-P23	Jakarta MRT East-West Line	Java	1,100,000	○	○	○	83.6
5	RD-P30	Additional Loan for Suramadu Bridge	Java	77,000	○			82.2
6	RD-P15	Trans Sulawesi Maminasata Arterial Road	Sulawesi	85,016	○	○	○	81.6
7	RW-P07	Jakarta MRT South - North Line Extension	Java	1,000,000	○	○	○	80.6
8	RW-P05	Urban Railway Electrification in Surabaya	Java	500,000	○	○	○	80.4
9	SE-P13	International Hub Port in Greater Jakarta	Java	1,000,000			○	80.2
10	AR-P01	New CNS/ATM System	Nation-wide	213,400	○	○	○	79.4
11	SE-P08	Public Ship Finance for Domestic Ship Industry	Nation-wide	300,000	○	○		79.2
12	RD-P43	Jakarta Urban Road Network Flyover	Java	300,000			○	79.2
13	AR-P06	Procurement / Installation of Security Equipment	Nation-wide	14,337	○	○	○	79.0
14	AR-P10	Multiple Airport for Jakarta Metropolitan Area	Java	500,000			○	78.8
15	RW-P16	JABODETABEK Bogor Line Capacity Expansion	Java	450,000	○	○		78.6
16	RD-P16	Medan-Kualanamu Toll Road	Sumatra	140,000	○	△		78.4
17	RD-P22	Batam - Bintan Bridge	Sumatra	584,485		○		78.2
18	RD-P44	Pandan-Malang Toll Road	Java	184,803			○	78.0
19	RD-P06	Solo-Kertosono Toll Road	Java	106,270	○	△		77.8
20	RW-P01	Railway to Soekarno Hatta Airport	Java	120,000		○	○	77.6
21	PW-P08	Manggarai -Cikarang Double-double Track	Java	468,000	○	○	○	77.4
22	RW-P13	JABODETABEK Circular Rail Line Improvement	Java	160,000	○	○	○	77.0
23	RW-P04	Urban Railway Electrification in Bandung	Java	175,000	○	○	○	76.8
24	RD-P13	Pekanbaru - Kandis - Dumai Freeway	Sumatra	318,810		△	○	76.8
25	RD-P17	Bandung Intra Urban Toll Road	Java	318,810	○	○	○	76.2
26	RW-P09	Java South Line Double Track (Cirebong - Kroya)	Java	360,000	○	○	○	76.0
27	RW-P24	Central Station Development in Dukhu Atas	Java	80,765		○	○	76.0
28	RW-P10	Java South Line Double Track (Kroya - Kutoarjo)	Java	266,000	○	○	○	76.0
29	AR-P04	Airport for Disaster Measure and Border Region	Nation-wide	158,200	○	○	○	75.8
30	RD-P38	Asset Management Loan (Road) Project	Nation-wide	1,000,000	○			75.8
31	SE-P10	Strategic and Local Ports Project (29 listed ports)	Nation-wide	1,588,735		○		75.4

13,047,250

8(8) Results: List of Rank B Projects

	No.	Activity Name	Region	Cost ('000USD)	Recommended Agency: Line Ministry	Recommended Agency: BAPPENAS	Recommended Agency: JST	Score	
32	AR-P05	Development of Airport in Papua	Papua	280,057	○	○	○	74.8	
33	SE-P02	Indonesian Ship Reporting System	Nation-wide	20,395	○	○		74.6	
34	SE-P05	Vessel Traffic Services System	Nation-wide	67,641	○			74.6	
35	RD-P39	Intelligent Traffic System in Jabodedabek	Java	217,853		○	○	74.4	
36	SE-P04	Development of Jayapura Port Facilities	Papua	17,400	○	○		74.4	
37	RW-P20	Procurement of 24 Unit (3set) Electric Railcars	Java	37,000	○			73.8	
38	RW-P21	Procurement of 160 Unit Electric Rail Car	Java	207,000	○			73.8	
39	RD-P45	Sukabumi - Ciranjang - Padalalan Toll Road	Java	461,079			○	73.6	
40	RD-P10	Tayan Bridge	Kalimantan	95,643	○	○		73.2	
41	RD-P29	Padan Bypass Capacity Expansion & Duku Flyover	Sumatra	58,000	○			72.4	
42	RD-P27	Manado Bypass II	Sulawesi	17,003	○			72.2	
43	SE-P15	Development of Dumai Port (III)	Sumatra	300,000			○	72.0	
44	SE-P11	Improvement of River Transportation	Suma / Kali	170,032		○		71.4	
45	SE-P12	Development of Ferry Port	Nationwide	239,107		○		71.4	
46	RD-P34	Eastern and Middle Trans Sumatra Project	Sumatra	200,000	○			70.8	
47	RD-P05	Regional Road	Nation-wide	212,540		○		70.4	
48	RW-P19	Track Construction and Mainteance Machinery	Java	74,750	○	○		70.2	
49	RD-P21	Selat Sunda Bridge	Java-Sumatra	531,350		○		69.6	
50	RD-P18	Pasir Panajam Bridge Construction	Kalimantan	85,016	○	○		69.0	
51	RW-P15	Procurement of Locomotive Diesel (30 units)	Java/Sumatra	144,000	○	○		69.0	
52	AR-P03	Safety for Air link to Eastern Indonesia	East	50,000	○	○	○	69.0	
53	RW-P18	Regional Railway System of Central Java Region	Java	250,000	○			68.8	
54	SE-P01	Development of Indonesia Aids to Navigation	Nation-wide	31,200	○	○		68.6	
55	SE-P09	Passenger Vessel and Pioneer Ship	Nation-wide	1,089,267		○		68.6	
56	RD-P11	Musi Bridge	Sumatra	318,810	○	○		68.2	
57	AR-P02	Procurement of Landing Facility	Nation-wide	25,000	○	○	○	66.0	
58	RW-P14	Railway Level Crossing System	Java /	31,280	○			66.0	
59	RD-P35	Construction of Keloks 9 brigdes in West Sumatra	Sumatra	39,400	○			65.6	
60	RD-P40	Intelligent Traffic System for Three Cities	Java /	191,286		○		65.6	
61	RD-P23	Galala-Poka Bridge	Maluku	42,508	○	○		65.2	
62	SE-P07	Patrol Boat to Enhance Maritime Safety	Sumatra	120,000	○	○		65.0	5,624,616

8(9) Results: List of Rank C Projects

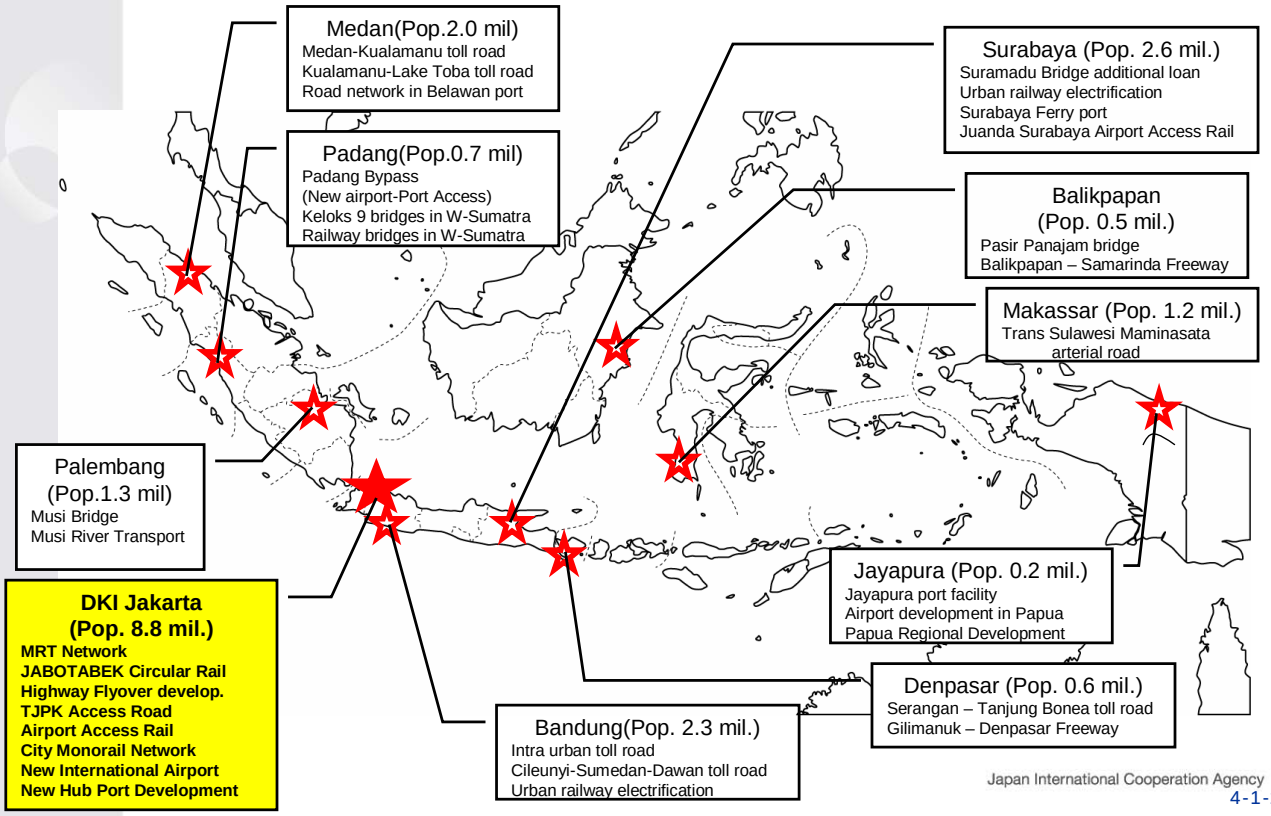
	No.	Activity Name	Region	Cost ('000USD)	Recommended Agency: Line Ministry	Recommended Agency: BAPPENAS	Recommended Agency: JST	Score	
63	AR-P09	Procurement of aircraft for Pioneer Flight	East	480,000	△	○		64.8	
64	RD-P07	Serangan - Tanjung Benoa Toll Road	Bali	159,405	○	△		64.6	
65	SE-P03	Special Vessel for Navigation Aids	Nation-wide	113,290	○	○		64.4	
66	SE-P06	Indonesia Coast Guard Patrol Boats Retrofit	Sumatra	46,800	○	○		64.4	
67	RW-P02	Railway to Juanda Surabaya Airport	Java	150,000		○		64.2	
68	RW-P17	Tracks Material and Turnouts	Java /	117,300	○	○		64.2	
69	RW-P03	Double Track Rialway in South Sumatra	Sumatra	240,000		○		64.0	
70	RD-P12	Gorontalo-Djalaludin Airport Access Road	Sulawesi	21,254	○	○		63.8	
71	RD-P01	Road Rehabilitation Project	Nation-wide	212,540		○		63.6	
72	SE-P14	Development of Batam Port	Sumatra	300,000			○	63.4	
73	RD-P25	Balikpapan - Samarinda Freeway	Kalimantan	531,350		○		63.4	
74	AR-P08	Airport Rescue and Fire Fighting Equipment	Nation-wide	31,700	△	○	△	63.2	
75	RD-P03	Rural Transportation	Nation-wide	212,540		○		62.4	
76	RD-P04	Bridge Material	Nation-wide	159,405	○	○		62.2	
77	AR-P07	National Aeronautical Information System Centre	Nation-wide	7,200	△	○		62.0	
78	RD-P36	South Coastal Highway in Yogjakarta	Java	117,989	○			62.0	
79	RD-P31	Kalimantan Boarder Road Development	Kalimantan	250,000	○			61.0	
80	RD-P02	Provincial-Local Road Improvement	Nation-wide	212,540		○		60.6	
81	RD-P37	Java Corridor Railway Corssing Flyover	Java	81,818	○			60.2	
82	RD-P19	Eastern National Road Improvement Program	East	177,864	○			59.8	
83	RD-P33	Metropolitan Freeways and Toll Road	Java	213,000	○			59.8	
84	RW-P11	Java South Line DT and Signal (Solo - Surabaya)	Java	716,000	○	○	○	58.0	
85	RD-P28	Bridge Construction in West Nusa Tenggara	East	195,000	○			58.0	
86	RD-P09	Kendari Bridge	Sulawesi	63,762	○	○		57.4	
87	RD-P26	Kualanamu - Toba Lake Freeway	Sumatra	531,350		○		57.0	
88	RD-P14	Gilimanuk - Denpasar Freeway	Bali	132,837		○		56.8	
89	RD-P20	Western National Road Improvement Program	Java /	80,000	○			56.4	
90	RW-P12	Java North Line DT and Signal (Sumarang-	Java	817,000	○	○	○	55.6	
91	RD-P42	Road Network in Belawan Port	Sumatra	53,135		○		54.2	
92	RD-P32	South Java Regional Road Development	Java	250,000	○			54.0	
93	RD-P24	Papua Strategic Road Development	Papua	1,786,822		○		49.2	
94	RW-P22	Railway Bridge Rehabilitation in West Sumatra	Sumatra	80,000		○		46.2	8,541,900

9(1) Recommendations:
Strengthening Java-Sumatra Corridor

- This is one of the most important issues for leading national economic growth in future
  1. Acceleration of toll road projects in Java under PPP scheme,
  2. Promotion of High Speed Rail corridor to formulate the Java Megalopolis → F/S to be conducted (Huge Investment: 21 bil.US$)
  3. Selat Sunda Bridge and Trans Sumatra Highway Corridor → F/S to be conducted (Huge Investment: 13 bil.US$)

Trans Java Highway Corridor

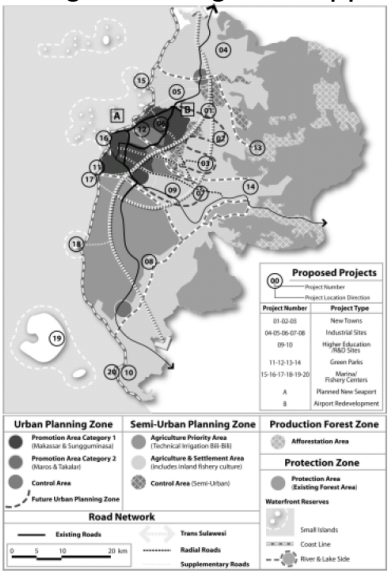
9(2) Recommendations:
Program Approach in Major Cities/Growth Poles



9(3) Recommendations: Regional Development Approach for East Indonesia

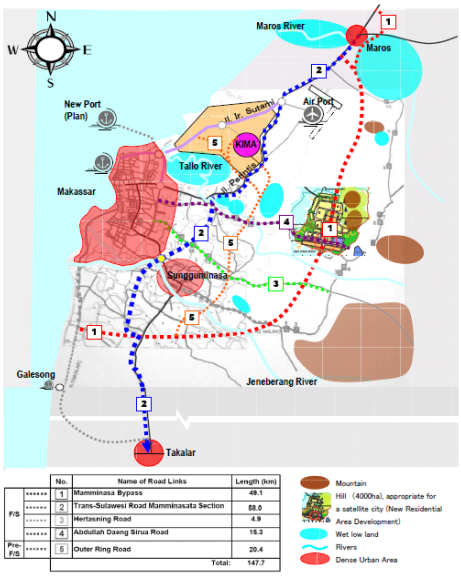
- Single transportation project will not be effective in depressed area, such as Kalimantan, Sulawesi, Nusa Tenggara, Maluku, and Papua

- Integrated Regional Approach should be taken



Land Use Plan

Regional development plan will formulate direct linkage between land use plan and Infrastructure development Plan



No.	Name of Road Links	Length (km)
1	Mamminasa Bypass	49.1
2	Trans-Sulawesi Road Mamminasata Section	88.0
3	Hertasning Road	4.9
4	Abdullah Daeng Sirua Road	16.3
5	Outer Ring Road	20.4
	Total:	147.7

Infrastructure Development Plan

Example of Integrated Spatial Plan for Maminasata Metropolitan Area, Sulawesi

9(4) Recommendations: Special Attention for Poverty Reduction Projects

- All the projects for poverty reduction are evaluated as Rank C

  → Special attention need to be made to support depressed Area

- The following projects are recommended to consider for implementation in the view of supporting to depressed area and poverty reduction.

List of the Projects for Poverty Reduction and Supporting Depressed Areas

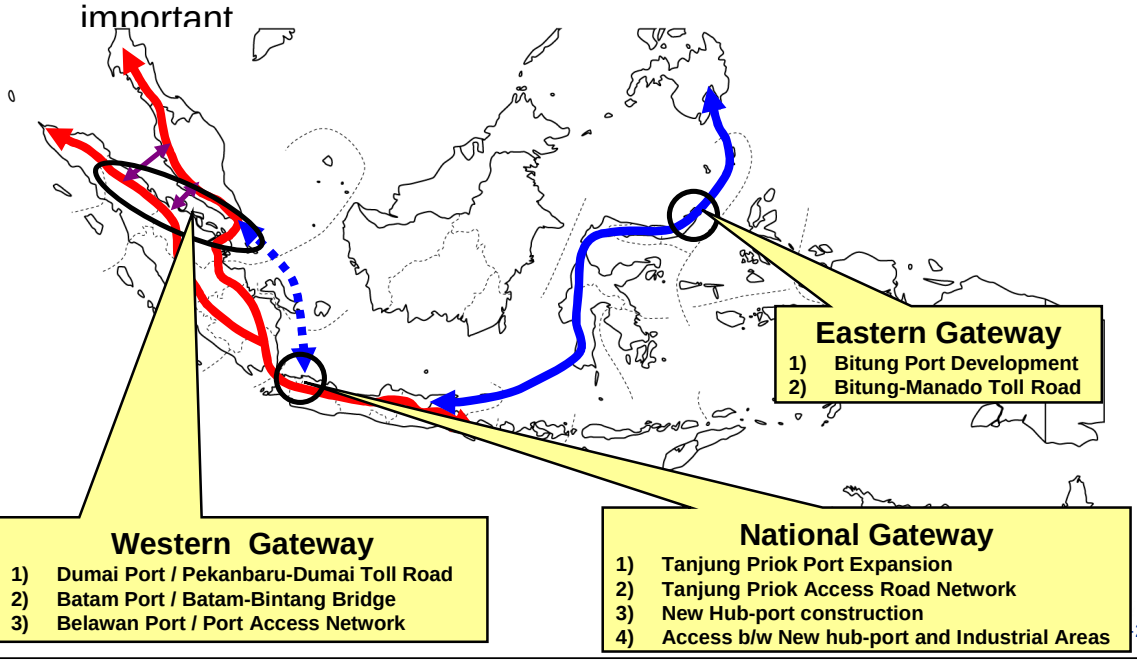
Rank	Activity Name	Region	Cost (1000 US$)	Project Evaluation: Fit to upper Plan	Ecomomic Viability	Urgency	Implement ability	International Cooperaton	Total	Rank
47	Regional Road	Nation-wide	212,540	21.6	20.0	3.0	12.0	13.8	70.4	**B**
55	Procurement of Passenger Vessel and Pioneer	Nation-wide	1,089,267	21.6	14.2	3.0	18.0	11.8	68.6	**B**
61	Galala-Poka Bridge	Maluku	42,508	22.2	14.0	3.0	11.4	14.6	65.2	**B**
75	Rural Transportation	Nation-wide	212,540	21.6	17.0	4.0	8.6	11.2	62.4	**C**
79	Kalimantan Boarder Road Development Project	Kalimantan	250,000	16.2	17.4	3.0	10.8	13.6	61.0	**C**
85	Bridge Construction in West Nusa Tenggara	East	195,000	21.6	11.6	3.0	14.2	7.6	58.0	**C**
92	South Java Regional Road Development Project	Java	250,000	16.2	15.6	3.0	9.4	9.8	54.0	**C**
93	Papua Strategic Road Development	Papua	1,786,822	16.8	11.6	2.0	8.6	10.2	49.2	**C**

9(5) Recommendations:

Gateway for Global Market Access

- Huge potential in domestic market exists, but strengthening linkage with the global market is necessary for its sustainable economic growth

- Gateway Development for Global Economic Corridors will be important



The Republic of Indonesia

Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 4 Outlines of Each Sector

Section 4.2
Power Sector

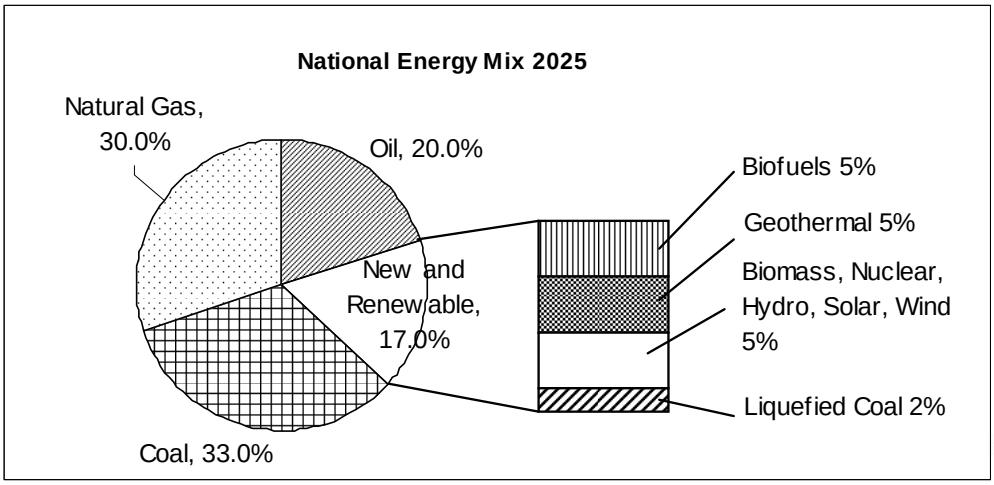
March 2010

Current Development Program (1/3)

- RPJM 2004-2009
  - Development target
    - Additional installation
      - Java-Madura-Bali system
        - 6,100 MW of generating capacity
        - 3,720 km of transmission line
        - 14,276 MVA of substation capacity
      - Outer Islands
        - 4,400 MW of generating capacity
        - 3,720 km of transmission line
        - 4,120 MVA of substation capacity
    - Rural electrification
      - Village electrification rate: 97% in2009

Current Development Program (2/3)

- National Energy Policy (in 2004)
- National Energy Blueprint
  - Target energy mix was announced.
    - To reduce oil dependency
    - To promote coal and renewable energy development

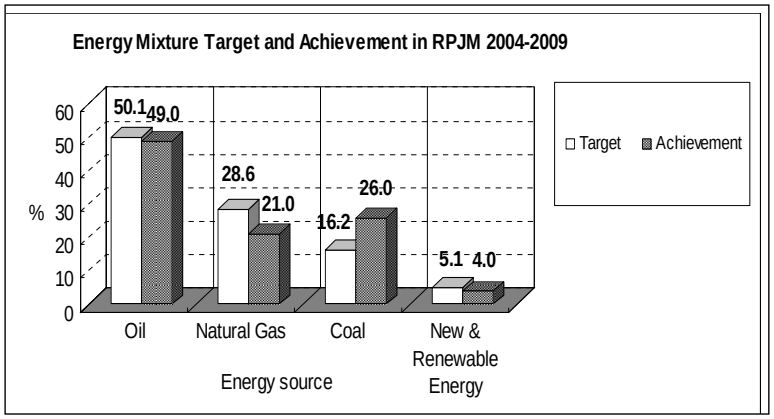


Current Development Program (3/3)

- Additional Power Development Programs
  - Fast Track Program -1
    - Non-oil based power development promotion project announced in 2006
    - 10,000 MW of additional power supply capacity
    - Through construction of coal-fired power plant
  - Fast Track Program -2
    - Another 10,000 MW development program announced in 2009
    - Mainly by renewable energy
      - Hydropower
      - Geothermal
      - Natural Gas
      - Coal etc.

Progress of Development (1/2)

- Generating capacity
  - Target: more than 10,000 MW development
  - Progress: less than 4,000 MW
- Energy mix



Progress of Development (2/2)

- Electrification rate
  - Household electrification rate: 64.3% (2007)
    - Low as 30% in NTT, NTB and Papua
    - 50 to 80% in Java and Sumatra
  - Village electrification rate: 91.9% (2007)
    - More than 90% except:
      - Papua 30.2%, Maluku 79.9%, NAD 86.8%, North Sumatra 83.6%
    - 71,555 villages in total
    - 65,776 villages (92%) electrified
    - 5,779 villages (8%) without electricity
- Transmission line and substations
  - Transmission line: about 5,000 kmc installed against the target of 7,440 kmc
  - Substation capacity: only about 4,300 MVA installation (2003-2007) against the target of 18,000 MVA

Remaining Issues (1/2)

- **(RI-1)** Critical Power Supply Regions
  - Regions with "Supply Capacity < Peak Load"
    - Sumbagut (NAD & North Sumatra) : -138.70 MW
    - Tg. Pinang (Kep. Riau) : -8.10 MW
    - Barito (South Kalimantan) : -46.00 MW
    - Sampit (Central Kalimantan) : -0.05 MW
    - Gorontalo (Gorontalo) : -0.45 MW
    - Jayapura (Papua) : -0.73 MW
    - (as of Sept. 2008)
- **(RI-2)** Waiting Users
  - 1 million waiting users with 3,500 MW in capacity

    (Source: PLN Statistics 2007)
- **(RI-3)** Tariff and Subsidy Issues
  - Electricity tariff is too low.
    - Electricity tariff does not cover the production cost
    - IPP developers hesitant to invest
      - Difficult to recover the investment
    - Low tariff may encourage overuse of electricity.
  - Large Amount of Subsidy from the Government
    - Rp. 37.5 trillion (in 2007)
    - More than 30% of production cost subsidized.
      - Average production cost: Rp. 1,000/kWh
      - Average tariff: Rp. 600~700/kWh
    - All type of users subsidized.
    - Amount of subsidy is nearly 2% of GDP in 2008.
    - Puts pressure on national budget

Remaining Issues (2/2)

- **(RI-4)** Lack of Policies for Rural Electrification
  - No roadmap prepared to determine/estimate:
    - Areas to electrify
    - Type of energy sources for electrification
    - Necessary fund for electrification
- **(RI-5)** Lack of coordination between central and local governments
  - Issuance of development permission takes time to coordinate between central and local governments

    → Delay in implementation
- **(RI-6)** Less Development of Energy Mix
  - Delay in development of natural gas
  - Less development of renewable energy
    - Less than 5% of primary energy use.
- **(RI-7)** Regulatory Issues
- **(RI-8)** Consideration for global warming and climate changes

Action Plan to Address Issues (1/6)

- **(RI-1)** Critical Power Supply Regions
- **(RI-2)** Waiting Users

- **(AP-1)** Enhancement of Power Supply Capacity
  - Acceleration of Power Development
    - With due consideration to Energy Mix
  - Acceleration of Development for
    - Backbone Transmission Line Networks
    - Substations
    - Distribution Line Networks
- **(AP-2)** Application of Demand-Side Management
  - Use of less energy consuming electronic appliances (LED etc.)
  - Management for Energy Efficiency and Conservation (EE&C)

Action Plan to Address Issues (2/6)

- **(RI-3)** Tariff and Subsidy Issues

- **(AP-3)** Revision of Tariff Table that can cover the generation cost
  - To increase revenue for:
    - Sound operation of PLN and other electricity suppliers
    - Attractive investment environment for investors
- **(AP-4)** Reduction of Subsidy
  - Subsidize only low income customers
  - Cross subsidize development cost for remote areas electrification, if the fund sources are available
- **(AP-5)** Acceleration of Power Development that contributes to:
  - Reduction of the power generation cost
    - For example, coal-fired, geothermal and hydropower development

Action Plan to Address Issues (3/6)

- **(RI-4)** Lack of Policies for Rural Electrification

- **(AP-6a)** Preparation of Roadmap for Rural Electrification
  - To determine/estimate:
    - Regions to electrify
    - Energy source for electrification
    - Cost for electrification
    - Organization for Operation and Maintenance
- **(AP-6b)** Implementation of the development programs presented in the Roadmap

Action Plan to Address Issues (4/6)

- **(RI-5)** Lack of coordination between central and local governments

- **(AP-7a)** Close coordination between central and local government
- **(AP-7b)** Clarification of roles between central and local governments in terms of development projects related to the power sector
- **(AP-7c)** To fill gaps of understandings between central and local government

  → Development Coordination Meeting etc.

Action Plan to Address Issues (5/6)

- **(RI-6)** Less Development of Energy Mix

- **(AP-8)** Promotion of development of renewable energy and natural gas infrastructure development
  - Hydropower, Geothermal
    - Need of timely implementation of F/S, D/D and related studies
      - to confirm the potential
      - to be ready for construction
    - Application of “Feed-in-tariff” system (Geothermal)
  - Promotion of natural gas supply infrastructure development

Action Plan to Address Issues (6/6)

- **(RI-7)** Regulatory/Institutional Issues

- **(AP-9)** Regulations in revision/transformation
  - New electricity law
    - Preparation of detailed regulations
  - Acceleration of renewable energy development
    - Application of “Feed-in-tariff” system for geothermal

- **(RI-8)** Challenges as the first developing country that declared a “National Climate Change Action Plan”

- **(AP-8)** Promotion of development of renewable energy and natural gas infrastructure development

Indicators for the next five years (2010-2014)

- Power Development: 30,000 MW
- Transmission Line Development: 28,000 kmc
- Transmission Loss: < 10%
- Rural Electrification Ratio:
  - 80.4% of household electrification ratio by 2014
  - 98% of village electrification by 2014
- Improvement of energy efficiency:
  - Energy elasticity: < 1.44 by 2014

Relationship between Indicators and Action Plans (1/2)

	Indicators	*Major Action Plans*	*Supportive Action Plans*
1	Power Development: 30,000 MW	**(AP-1)** Enhancement of Power Supply Capacity **(AP-5)** Acceleration of Power Development that contributes to lower the generation cost	**(AP-3)** Revision of Tariff Table **(AP-4)** Reduction of Subsidy **(AP-7)** Close coordination between central and local governments **(AP-9)** Regulations in revision/transformation
2	Transmission Line Development: 28,000 kmc Transmission Loss: < 10%	**(AP-1)** Enhancement of Power Supply Capacity	**(AP-7)** Close coordination between central and local governments
3	Rural Electrification Ratio by 2014 80.4% of household electrification ratio 98% of village electrification ratio	**(AP-6a)** Preparation of Roadmap for Rural Electrification **(AP-6b)** Implementation of the development programs presented in the Roadmap	**(AP-3)** Revision of Tariff Table **(AP-4)** Reduction of Subsidy **(AP-7)** Close coordination between central and local governments

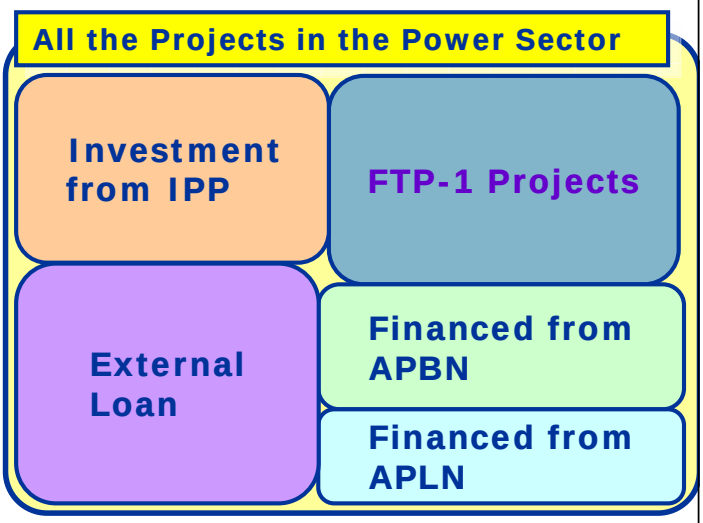
Relationship between Indicators and Action Plans (2/2)

	Indicators	*Major Action Plans*	*Supportive Action Plans*
4	Energy elasticity: < 1.44 by 2014	**(AP-2)** Application of Demand-Side Management	
5	Energy Mix Target	**(AP-8)** Promotion of renewable energy and natural gas supply infrastructure development	

Priority Projects 2010-2014

- Priority Projects to achieve the target indicators
  - Power Development Project
  - Transmission Line
  - Substations
  - Distribution Line
  - Rural Electrification
  - Technical Assistance

Candidate Projects for External Loan/Grant



Summary of Power Development Projects for External Loan

Java-Bali	19,003 MW
	11,628 MW by PLN
	7,375 MW by IPPs
Outside Java-Bali	10,039 MW
	6,450 MW by PLN
	3,589 MW by IPPs
Total	29,042 MW

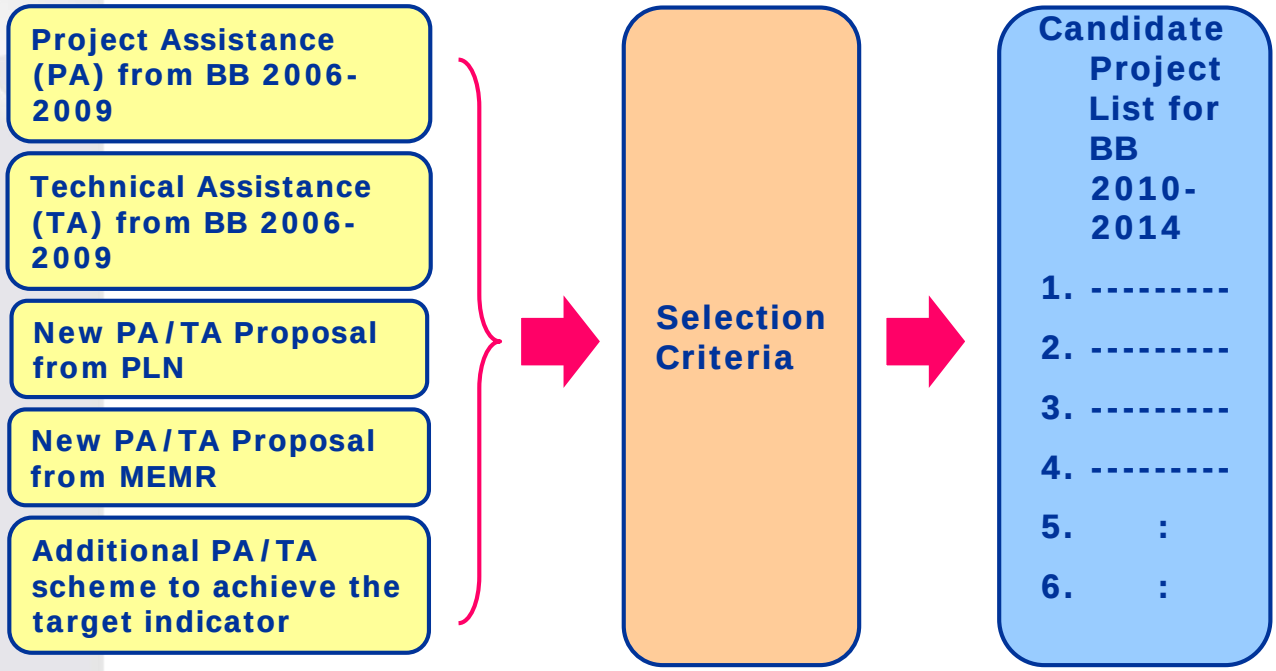
18,078 MW developed by PLN (including FTP-1)
10,964 MW by IPPs

Of 18,078 MW, 10,000 MW by FTP-1.
Remaining 8,078 MW possibly by External Loan.

Selection Criteria for Projects for External Loan (Blue Book Candidate)

- Consistent with national development plan (RPJMN, Renstra, RUKN, RUPTL)
- Project Cost > 10 million USD
  (Suitable size for external loan)
- Readiness/Maturity of the project
  (Feasibility Study or Detailed Design completed)
- Committed by possible donors
- Project EIRR > 12%
- To Further Accelerate:
  - Energy mix target
    - Renewable Energy (Hydro and Geothermal)
  - Lowering of generation cost
  - Achievement of key performance indicators of the sector
  - Energy efficiency and conservation
- Application of:
  - Environmental friendly technologies
  - Cutting-edge technologies
- Technical Assistance to support above objectives

Procedures for Preparation of Candidate Project List for Blue Book 2010-2014



Considerations & Recommendations

- To achieve the target indicator and further accelerate the development, the following considerations should be made:
  - Further acceleration of renewable energy development
    - More candidate projects for Hydro and Geothermal Power Development
    - Studies to confirm the potential and readiness to develop
    - Important and Urgent Projects from IPP to Government
  - Further acceleration of transmission line development
  - Further acceleration of environment friendliness and efficient energy use
  - Further acceleration of achievement of target electrification ratio

Candidate Project List for Blue Book and their preliminary evaluation (1/2)

No.	TA/PA	Criteria / Candidate Project	Consistent with national development plan (RPJMI Renstra, RUKN, RUPTL)	Project Cost > 10 million USD	Readiness/Maturity of the project (feasibility study detailed design completed)	Committed by possible donors	Project EIRR > 12%	To Further Accelerate: Energy mix target	To Further Accelerate: Renewable Energy Development (Hydro and Geothermal)	To Further Accelerate: Lowering of generation cost	To Further Accelerate: Achievement of key performance indicators of the sector	To Further Accelerate: Energy efficiency and conservation	Application of: Environmental friendly technologies	Application of: Cutting-edge technologies	Supportive Technical Assistance	Status
1	PA	Steam Coal Fired Power Plant Indramayu Baru	0	0	0	0	0	0		0	0	0	0	0		Proposed from PLN to BAPEPNAS (Dec. 2009)
2	PA	Merangin Hydropower Project in Sumatra (Jambi)	0	0	0	0	0	0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
3	PA	Geothermal Power Plant Hululais 1&2	0	0		0		0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
4	PA	Geothermal Power Plant Kotamubagu 1, 2, 3 &4	0	0		0		0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
5	PA	Geothermal Power Plant Sungai Penuh 1 & 2	0	0		0		0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
6	PA	Geothermal Power Plant Tulehu	0	0		0		0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
7	PA	Geothermal Power Plant Mataloko	0	0		0		0	0	0	0		0			Proposed from PLN to BAPEPNAS (Dec. 2009)
8	PA	HVDC Java – Sumatra		0		0					0			0		Proposed from PLN to BAPEPNAS (Dec. 2009)
9	PA	Interconnection of West Kalimantan-Serawak		0		0					0					Proposed from PLN to BAPEPNAS (Dec. 2009)
10	PA	Scattered Transmission Lines & Substations in Indonesia		0		0					0					Proposed from PLN to BAPEPNAS (Dec. 2009)
11	PA	Electrification Development Program in Sumatra		0		0					0					Proposed from PLN to BAPEPNAS (Dec. 2009)
13	TA	Geothermal Power Plant Hulu lais	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
14	TA	Geothermal Power Plant Kotamubagu	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
15	TA	Geothermal Power Plant Sungai Penuh	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
16	TA	Geothermal Power Plant Sembalun	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
17	TA	Geothermal Power Plant Ulumbu	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
18	TA	Master Plan Study for Scattered Geothermal in Indonesia	0						0	0	0		0		0	Proposed from PLN to BAPEPNAS (Dec. 2009)
19	TA	Detailed Master Plan Study for Greater Jakarta													0	Proposed from PLN to BAPEPNAS (Dec. 2009)
20	TA/PA	Malea Hydropower project in Sulawesi		0						0	0		0		0	
21	TA/PA	Peusangan-4 Hydropower project in NAD		0						0	0		0		0	

Candidate Project List for Blue Book and their preliminary evaluation (2/2)

22	TA/PA	Bonto Batu Hydropower Project in Sulawesi		0				0		0			0		0	
23	TA/PA	Bakaru Rehabilitation and Bakaru II Hydropower project in Sulawesi		0				0		0			0		0	
24	TA/PA	Isal-2 Hydropower project in Maluku (Seram)	0					0		0			0		0	
25	TA/PA	Grindulu Pumped Storage Power Project		0					0				0		0	
26	TA/PA	Matenggeng Pumped Storage Power Project		0					0				0		0	
27	TA/PA	Pugar Sea Water Pumped Storage Power Project		0					0				0		0	
28	TA/PA	Karaha Geothermal Project						0	0	0	0		0		0	
29	TA/PA	Ulubelu 3,4 Geothermal Project						0	0	0	0		0		0	
30	TA/PA	Lahendong 5,6 Geothermal Project						0	0	0	0		0		0	
31	TA/PA	Lumut Balai 3,4 Geothermal Project						0	0	0	0		0		0	
32	TA/PA	Kamojang 5 Geothermal Project						0	0	0	0		0		0	
33	TA	Technical assistance for rehabilitation/improvement of existing coal fired steam power plant by applying Clean Coal Technologies (CCTs)										0	0	0	0	
34	PA	Upgrading Transmission Capacity of 500 kV Line in West Java		0						0	0					
35	PA	Java-Sumatra Interconnection Transmission Line Project II & III		0						0	0			0		
36	PA	Malay-Sumatra Interconnection Transmission Line Project		0						0	0			0		
37	TA	Technical assistance related to energy efficiency and conservation									0	0		0		
38	TA	Technical assistance for rural electrification master plan									0				0	

0 : Candidate project which may satisify the criteria

(Blank) : Information not available / Candidate project which may not satisfy the criteria

The Republic of Indonesia

Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 4 Outlines of Each Sector

Section 4.3
Water Supply and Sewerage Sector

March 2010

Japan International Cooperation Agency

I. Issues to be Followed up in RPJMN 2010-2014 (1/6)

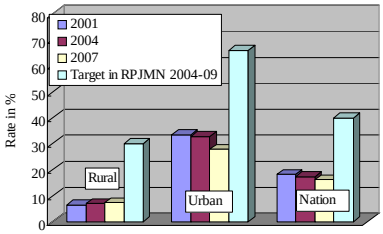
Low Progress of Development in Water Supply Sector (1/2)

Institutions and legislation

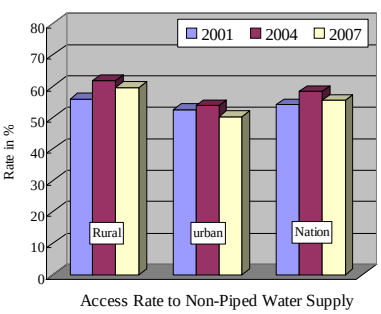
1. Poor institutional capacity and human resources,
2. Low level of approach and insufficient function of organizations, task forces, and authorities,
3. Insufficient activities of SPAM, and
4. Strengthening of SPAM/PDAM management.

Lack of Funds

1. Lack of funds for development and O&M due to low water tariff and large debts accumulated,
2. Investment for the development of SPAM, which shall depends on foreign loans rather than developing domestic alternative funding sources, and
3. Low commitment and priority of funding source by the local government.



Access Rate to Piped Water Supply System



Access Rate to Non-Piped Water Supply System with Protection

Japan International Cooperation Agency

I. Issues to be Followed up in RPJMN 2010-2014 (2/6)

Low Progress of Development in Water Supply Sector (2/2)

Decreased quantity and quality of water

1. Deterioration of river basins due to limited watershed management with increased community activities and industry without any environmental protection,
2. Deterioration of water quality due to water pollution by waste water without proper treatment,
3. Water use licensing which is inconsistent with the regulations, causing conflicts among water users, and
4. Lack of stringent rules or regulations of water allocation to water users.

Minimum coverage and low quality of services

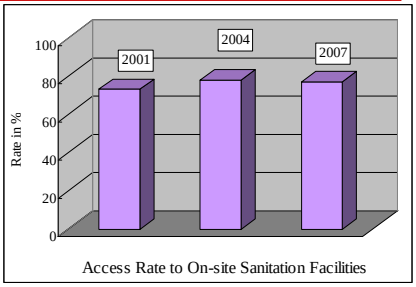
1. Large water losses in the piped system through piped system,
2. Low pressure of water distribution network, mainly due to lack of water, and
3. Production cost higher than water tariffs.

Lack of ownership of community in planning, development and O&M of the water supply system.

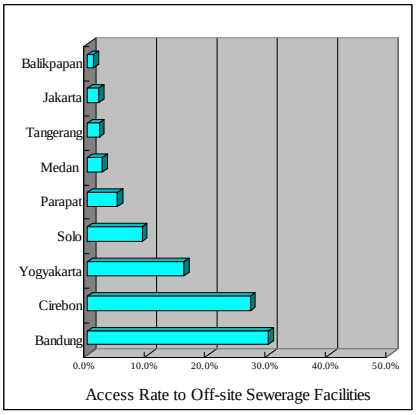
I. Issues to be Followed up in RPJMN 2010-2014 (3/6)

Low Progress by On-site and Limited Development by Off-site Wastewater Treatment and Management

1. Strengthening of institution and legislation for development of sewerage facilities and O&M performance other than article of Law No. 7 of 2004 on Article 21 paragraph (2) of Water Resources,
2. Limited sources of investment funds for the sewerage sector due to low priority in development,
3. Improvement of worsened quality of water sources, specially in large urban areas,
4. Lack of a master plan for waste water management, defining a goal of development of facilities and water quality,
5. Low levels of management organizations for O&M of sewerage facilities without proper treatment for waste water and full cost recovery for services, and
6. Low awareness of nations for importance of sanitation, and
7. Cooperation of private sector on funding for wastewater management including development and O&M of facilities.



Access Rate to On-site Sanitation Facilities

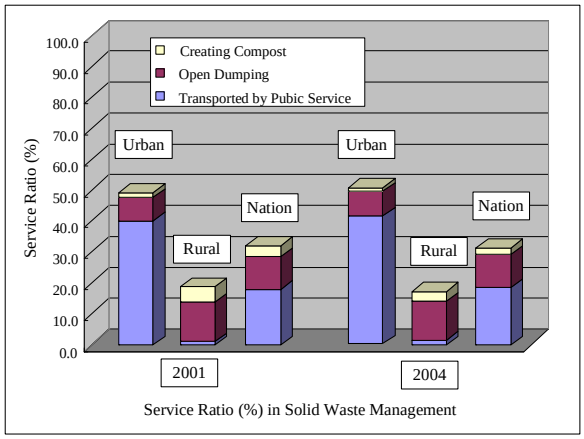


Access Rate to Off-site Sewerage Facilities

I. Issues to be Followed up in RPJMN 2010-2014 (4/6)

Solid Waste Management

1. Strengthening of regulation, norms, standards, guidelines, manual and operation procedures under the Law No. 18/2008 on solid waste management,
2. Development of funds for solid waste management other than the government budget, including public funds, private cooperation, both private investment and CSR funds,
3. Reduction of volume of solid waste by strengthening of 3R principles (Reduce, Reuse, Recycle), and transportation services provided by the local government,

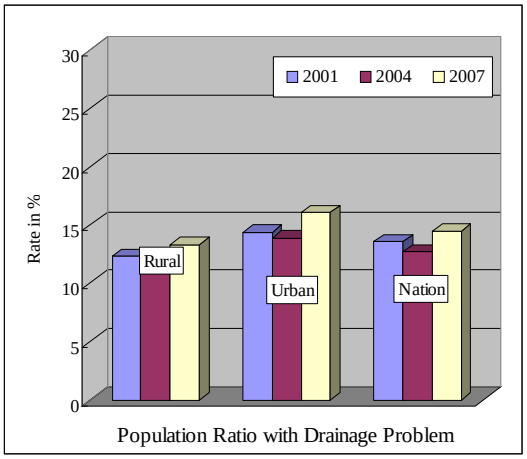


4. Lack of human resources in solid waste management such as personnel of local governments and related stakeholders, adverse effects to environment in the surrounding area caused by open dumping of solid waste without proper treatment (controlled or sanitary landfill), and technology for final disposal sites.
5. Difficulties on acquiring land for new final disposal sites.

I. Issues to be Followed up in RPJMN 2010-2014 (5/6)

Increase of Claims in Drainage Stagnation

1. Restricted O&M of drainage systems in the habitual inundation areas due to insufficient funds,
2. Scarcity of solid waste disposal system and low public awareness to dump garbage into drainage channels
3. Expansion of inundation area due to lack of consideration for natural drainage flow from new housing development,
4. Lack of a master plan for integration of the existing drainage networks, considering global climate change, and,
5. Obstruction of drainage flow by illegal settlements and restricted control by the local governments.



I. Issues to be Followed up in RPJMN 2010-2014 (5/6)

Responsibility of Governments in PPP Scheme

1. Formulation of the model projects through implementation of these projects in water and sanitation sector, especially related to improvement of performance of PDAM,
2. Execution of feasibility studies on the PPP candidate projects in PPP book 2009, in order to identify the most effective framework of each project for public and private investors,
3. Enhancement of risk sharing procedure between the governments and investor, and other stakeholders, and
4. Capacity development of personnel to be involved into planning and execution of PPP schemes.

II. Policy and Strategy in RPJMN 2010-2014

Policy	Strategy
I. Improvement of Social Welfare	1. Improvement of infrastructure and settlement facilities with priority of poor areas 2. Community-based infrastructure development 3. Improvement of inter agency cooperation
II. Improvement of Environmental Quality	1. Development of infrastructure 2. Development of infrastructure against climate change 3. Promotion of public campaigns
III. Boosting of Economic Growth	1. Development of infrastructure for enhancing competitiveness 2. Increase of participation and cooperation of state enterprises and other enterprises/private sector 3. Improvement and development of infrastructure for economic development 4. Strengthening and development of linkage between region, urban and rural areas
IV. Capacity Building of Regional Government	1. Revision of laws and regulations related to the minimum service standard 2. Increase of participation and cooperation of state enterprises and other enterprises 3. Establishment of coordination and control mechanisms to realize the national policies and strategies in urban areas, 4. Increase of the role of government and provinces in improvement of performance of infrastructure and settlement facilities

III. Program/Activity under Policy and Strategy in RPJMN 2010-2014 (1/5)

Policy	Strategy	Program/Activity
I. Improvement of Social Welfare	1. Improvement of Infrastructure and settlement facilities with priority of poor areas	Water supply 1. Development of facilities in urban area/IKK 2. Development of facilities in rural areas, border areas and islands, the depressed areas, and low income areas 3. Development of SPAM in rural area
	2. Community-based infrastructure development	Water supply 1. Development of facilities in rural area 2. Provision of facilities in rural area
		Sanitation 1. Development of SANIMAS 2. Development of an integrated waste disposal 3R 3. Development of drainage network
	3. Improvement of Inter Agency Cooperation	Water supply 1. Promoting cooperation between local governments in the implementation of SPAM 2. Provision of basic water infrastructure

III. Program/Activity under Policy and Strategy in RPJMN 2010-2014 (2/5)

Policy	Strategy	Program/Activity
II. Improvement of Environmental Quality	1. Development of infrastructure	Water supply 1. Execution of pilot project for recycling and reuse of waste water
	2. Development of infrastructure against climate change	No program/activity in water supply and sanitation
	3. Promotion of public campaigns	Water supply 1. Public campaign to stakeholders and to communities in water resource protection and improvement of water utilization behavior

III. Program/Activity under Policy and Strategy in RPJMN 2010-2014 (3/5)

Policy	Strategy	Program/Activity
III. Boosting of Economic Growth	1. Development of infrastructure for enhancing competitiveness	Water supply 1. Piped water supply in areas of national strategic/economic zones
		Sanitation 1. Development of off-site sewerage systems 2. Establishment of the system by private investment
	2. Increase of participation and cooperation of state enterprises and other enterprises/private sector	Water supply 1. Facilitation of PPP scheme 2. Development of piped water supply system
	3. Improvement and development of infrastructure for economic development	Water supply 1. Technical guidance and management for PDAM 2. Provision of drinking water in strategic areas by PDAM
		Sanitation 1. Waste water infrastructure development with on-site system 2. Development of drainage network
	4. Strengthening and development of linkage between region, urban and rural areas	No program/activity in water supply and sanitation

III. Program/Activity under Policy and Strategy in RPJMN 2010-2014 (4/5)

Policy	Strategy	Program/Activity
IV. Capacity Building of Regional Government	1. Revision of laws and regulations related to the minimum service standard	Water supply 1. Drafting the presidential law and regulation of drinking water 2. Formulation of NSPK (norm, standard, procedure and criteria) 3. Implementation and development of SPAM 4. Development of rural drinking water facilities (PAMSIMAS system)
		Sanitation 1. Formulation of NSPK for sewerage, drainage, and solid waste management
	2. Encourage cooperation between institutions to strengthen the financial and technical capacity of local government to achieve the development goal	Water supply 1. Facilitating the development of piped system 2. Technical assistance for capacity building to local stakeholders
		Sanitation 1. Development of financial sources and the patterns of investment in sewerage, solid waste management and drainage 2. Technical assistance and guidance in sewerage, solid waste and Drainage

III. Program/Activity under Policy and Strategy in RPJMN 2010-2014 (5/5)

Policy	Strategy	Program/Activity
IV. Capacity Building of Regional Government	3. Establishment of coordination and control mechanisms to realize the national policies and strategies in urban areas	Water supply 1. Facilitation of PDAM debt restructuring
	4. Increase of the role of government and provinces in improvement of performance of infrastructure and settlement facilities	Water supply 1. Realization of NSPK and various policies to local stakeholders in improving the capacity for implementation and development of water supply 2. Technical assistance for capacity building to the local stakeholders in development of SPAM related to implementation of NSPK 3. Monitoring, evaluation and supervision of the development of SPAM, and execution of regional joint programs in developing SPAM
		Sanitation 1. Monitoring and evaluating the performance of development of infrastructure for sewerage, solid waste management and drainage

IV. Outcome Indicators in RPJMN 2010-2014

Targets in RPJMN 2010-2014

1. Access rate to drinking water for 70 % of the population at the end of 2014, with the access to piped drinking water supply by 32 % and to non-piped water by 38 %,
2. Availability of access to sewerage system (off-site) for 10 % of the total population through a system of centralized waste water management for urban areas by 5% and communal system of 5% and provision of access to on-site system for 90 % of the total population,
3. Availability of access to solid waste management for 80 % of households in urban areas, and
4. Reduction of habitual inundation area of 22,500 ha in 100 strategic urban areas.

V. Candidate Projects for Blue Book 2010-2014 and PPP Book

Status of Projects in Blue Book 2006-2009 and PPP Book, as of Sept. 2009

Cipta Karya/Ministry of Public Works		
Project Assistance (PA)		
Water and Sanitation Projects	5	
Water Supply Projects	4	
Sanitation Project (Sewerage, Solid Waste, or Drainage)	8	
Total	17	➡ need Fund
Technical Assistance (TA)		
Water and Sanitation Projects	0	
Water Supply Projects	4	
Sanitation Project (Sewerage, Solid Waste, or Drainage)	22	
Total	26	➡ need Assist
PPP Scheme/BAPPENAS		
Projects in Ready for Offer in Water Supply	1	
Priority Projects in Water Supply	8	
Priority Projects in Solid Waste Management	2	
Candidate Projects	11	
Total	22	➡ need Assist

Need Most Beneficial Framework of PPP Scheme for Stakeholders

VI. Candidate Projects for Blue Book 2010-2014 and PPP Book (1/3)

Priorities for Candidate Projects

1. **Water supply** projects shall improve performance of **PDAM in urban areas**, especially on **UFW reduction and increase of connections to support restructuring of PDAM**, and develop community-based water supply facilities with sustainable operation and maintenance capacity of communities for **realizing the MDG**.
2. **Sewerage** project shall **strengthen the existing sewerage facilities** in the metropolitan or large urban areas on served population and quality of service in order to **create better water environment** and to maintain water sources for drinking water supply in terms of water quality. On-site facilities shall be further developed in rural areas for realizing the MDG.
3. **Solid waste management** project shall develop final disposal site for **fulfilling the requirement of Law No. 18 2008**, and with regional cooperation for construction of final disposal site.
4. **Drainage** project shall include the **public awareness campaign for environment and sanitation** as well as improvement of drainage network.
5. **The remaining candidate projects in RPJM 2006-2009** shall have high priority excluding projects which is not realized for 3 years.

VI. Candidate Projects for Blue Book 2010-2014 and PPP Book (2/3)

Major Evaluation Categories in the Criteria:

1. Fitness for Regional and Sector Development Policy/Strategy
2. Urgency and Necessity
3. Financial Issues
4. Economic Issues
5. Issues on Implementation
6. Appropriateness for international cooperation in technical difficulty.

It is noted that the data on the candidate projects are not available for evaluation of those projects by using the scoring matrix in the next page, during the Study Period.

VI. Candidate Projects for Blue Book 2010-2014 and PPP Book (3/3)

Proposed Scoring Matrix for the Candidate Projects

Categories		Evaluation Items	Weight	Point: 1	2	3	4	5	Score
1. Fitness for Regional and Sector Development Policy/Strategy	25%	Regional Development Plan in RPJMN 2010-2014	15%	Not strategically developing area in RPJM	between items 1 and 3	Not strategically developing area in RPJM but the concept is applicable	between items 3 and 5	Strategically developing area in RPJM	
		Sector Development Plan in RENSTRA 2010-2014	10%	Not strategically developing area in RENSTRA	between items 1 and 3	Not strategically developing area in RENSTRA but the concept is applicable	between items 3 and 5	Strategically developing area in RENSTRA	
		Sub-total		–	–	–	–	–	
2. Urgency and Necessity	25%	Gap of Present Status and National or MDG Target of Outcome Indicator	15%	< 5%	5% to 10%	10% to 20 %	20% to 30%	> 30%	
		Contribution to poverty alleviation and equitable growth mechanism	10%	Not included into Project Components	between items 1 and 3	One of Project Components	between items 3 and 5	Main Purpose of the Project	
		Sub-total		–	–	–	–	–	
3. Financial Issues	20%	Financial IRR	5%	< 5 %	5% to 8 %	> 8%	8% to 12%	>12 %	
		Availability of Financial or Business Plan	5%	No preparation	under preparation	Prepared	Reasonable plan	Realistic Plan	
		Possibility of Full Cost Recovery	5%	Not possible	between items 1 and 3	Possible with conditions on governmental support	between items 3 and 5	Sufficiently autonomous by revenue	
		Application of Subsidiary Loan	5%	Applied	–	–	–	Not Applied	
		Sub-total		–	–	–	–	–	
4. Economic Issues	10%	Number of beneficiaries,	5%	< 10,000	10,000 to 50,000	50,000 to 100,000	100,000 to 200,000	>200,000	
		Economic IRR	5%	< 5 %	5% to 8 %	> 8%	8% to 12%	>12 %	
		Sub-total		–	–	–	–	–	
5. Issues on Implementation	10%	Maturity	3%	Master Plan	Preliminary Feasibility Study	Feasibility Study	Basic Design	Detailed Design	
		Capacity of responsible bodies for planning, implementation and O&M	5%	bad	between items 1 and 3	fair	between items 3 and 5	excellent	
		Social and environmental issues	2%	EIA is planned to be executed.	between items 1 and 3	EIA is being executed.	between items 3 and 5	EIA is completed.	
		Sub-total		–	–	–	–	–	
6. Appropriateness for international cooperation in technical difficulty.	10%	Technical Difficulty	7%	Conventional technology in Indonesia	between items 1 and 3	Necessity of foreign support in safety and reliability of applied technology	between items 3 and 5	Application of new/ high technology in Indonesia	
		Difficulty of Private Finance	3%	High FIRR	between items 1 and 3	Reasonable FIRR but need of Government Finance to part of the Project	between items 3 and 5	Low Possibility of Private Investment	
		Accessibility of Foreign Experts to the Project Site from the view points of culture, security, and so on	2%	bad	between items 1 and 3	fair	between items 3 and 5	excellent	
		Sub-total		–	–	–	–	–	
Total Score			100%						

The Republic of Indonesia

Basic Study for Mid-Term Infrastructure Development

Final Report

Summary

Chapter 4 Outlines of Each Sector

Section 4.4
Water Resources and Irrigation Sector

March 2010

1. Indonesia's Competitiveness of Water Resources Infrastructure

Indicator	Indonesia	Ranking
i) Available annual water resources per capita	12,400 m^3/year	3 out of 8
ii) Freshwater withdrawal ratio	3 %	6 out of 8
iii) Dam storage capacity per capita	69 m^3/person	4 out of 5
iv) No. of large dams (higher than 15 m)	96 dams	4 out of 8
v) Large dam density (No. of large dams per 1,000 km^2)	0.05 dams/1,000 km^2	5 out of 8
vi) Large dam density (No. of large dams per million persons)	0.47 dams/million person	5 out of 8

Countries considered are the ASEAN members including Cambodia, Malaysia, the Philippines, Thailand and Viet Nam, and BRICs members such as China and India.

2. Regional Issues and Development Direction for WR Sector (1/3)

Region	Major Issues	Direction
Sumatra (Population: 22%)	• Illegal logging and deforestation, critical catchment • Deteriorated irrigation facilities • Water conflict between irrigation and DMI (Medan, Padang) • Flooding and landslide	• WR development and management • Rehabilitation of deteriorated irrigation facilities • Water allocation and conflict resolution in urban areas • Flood management and disaster management
Java (58%)	• Illegal logging and deforestation, critical catchment • Degraded water environment • Severe water stress condition, increasing water conflicts • Deteriorated irrigation facilities • Flooding and landslide • Insufficient coordination/management of water resources	• WR development and management • Wastewater control and water quality management • Strengthening of integrated water resources management (IWRM) • Rehabilitation of deteriorated irrigation facilities • Flood management and disaster management • Institutional strengthening of river basin management organizations

2. Regional Issues and Development Direction for WR Sector (2/3)

Region	Major Issues	Direction
Kalimantan (6%)	• Illegal logging and deforestation, critical catchment • Deteriorated irrigation and swamp facilities due to poor maintenance • Inter-community conflicts • Poor water supply and sanitation coverage (well behind the MDG targets)	• WR development and management • Rehabilitation of deteriorated irrigation facilities • Provision of affordable access to water in remote areas
Sulawesi (7%)	• Deteriorated irrigation facilities • Severe water stress condition, increasing water conflicts (South Sulawesi) • Flooding	• Rehabilitation of deteriorated irrigation facilities • Strengthening of integrated water resources management (IWRM) for water stress basins • Flood management and disaster management

3. Regional Issues and Development Direction for WR Sector (3/3)

Region	Major Issues	Direction
Nusa Tenggara and Bali (5%)	• Deforestation of catchment • Deteriorated irrigation facilities due to poor maintenance • Severe water stress condition, increasing water conflicts (WNT and Bali) • Poor water supply and sanitation coverage (well behind the MDG targets)	• WR management • Water resources development with the focus on increasing of small water storage • Rehabilitation of deteriorated irrigation facilities • Raw water supply to remote areas
Maluku and Papua (2%)	• Deteriorated irrigation facilities	• Rehabilitation of deteriorated irrigation facilities

4. Goal of Water Resources Sector for RPJM 2010-2014

1. Increasing of water storage capacity supported by sustainable water resources (WR) management
2. Optimization of water allocation for basic needs of society and productive activities, and effective and efficient utilization of water
3. Disaster prevention for WR infrastructure, and reduction of impacts of disaster
4. Increasing of capacity of institutions in WR management and empowerment of stakeholder to improve the performance management of WR
5. Increasing of availability and transparency of data and information of water resources

5. Focused Investment Area for Water Resources Sector (1/3)

a. **Building Strong Backbone Infrastructure (mainly in Java, Sumatra and Sulawesi)**

- Sustainable WR development and management
- Development and improvement of raw water supply capacity
- Flood control and disaster management

b. **Upgrading Infrastructure in the Main Cities (mainly in Java, Sumatra and Sulawesi)**

- Upgrading of flood protection level of urban rivers
- Upgrading of drainage improvement in urban cities
- Upgrading of urban river environment

5. Focused Investment Area for Water Resources Sector (2/3)

c. **Provision of Basic Infrastructure Services in Depressed Areas for Improved Economic Opportunities (in the whole Indonesia especially in Nusa Tenggara)**

- Development of small scale reservoir and water storage facilities for irrigation and domestic water supply in the dry Nusa Tenggara area
- Rehabilitation of deteriorated river and water supply facilities with priorities for implementation in the whole Indonesia

5. Focused Investment Area for Water Resources Sector (3/3)

d. Climate Change Adaptation

- Upgrading of flood protection level of urban rivers in Java and Sumatra
- Flood control and disaster management for vulnerable areas based on damage potential (Nationwide)
- Coastal management by means of coastal protection and beach conservation in Java, Sumatra, Sulawesi, Bali and Nusa Tenggara

6. Priority Focus Areas for Irrigation Sector Development (as of Dec. 2009)

Priority Focus Area for Irrigation Sector

To support the National Food Security

Output Indicators for Irrigation Program (Renstra 2010-2014)

- **Development/increase of irrigation network to irrigate the area of 500 thousand ha**
- **Rehabilitation of irrigation network in the area of 1.34 million ha**
- **Improvement of O&M of irrigation network for the area of 2.315 million ha**

7. Prediction of Rice Consumption and Supply

Item	Unit	RPJM 1	RPJM 2		2020	2025
		2009	2012	2014		
Population	('000 persons)	231,370	239,688	245,022	257,791	266,988
Per Capita Rice consumption	(kg/person/year)	140.80	139.15	139.15	139.15	139.15
Emergency Rice Stock in BULOG	('000 tons/year)	1,500	1,500	1,500	1,500	1,500
Total Rice Supply Requirement	('000 tons/year)	34,077	34,853	35,595	37,372	38,651
Supply by Imported Rice	('000 tons/year)	0	0	0	0	0
Conversion Factor (Milling rate + Post-harvest losses)		0.566	0.566	0.566	0.566	0.566
Total Paddy Supply Requirement	('000 tons/year)	**60,207**	**61,577**	**62,888**	**66,028**	**68,289**
Upland Paddy Supply	('000 tons/year)	3,191	3,264	3,333	3,499	3,619
Seeds for Self-stocked	('000 tons/year)	903	924	943	990	1,024
Wetland Paddy Production Requirement	('000 tons/year)	**57,919**	**59,237**	**60,499**	**63,519**	**65,694**

- **Paddy Production Requirement (Paddy Demand) under the present production condition: Deficit in paddy production**
  - **2014 : 2.5 million ton**
  - **2020 : 5.6 million ton**
  - **2025 : 7.8 million ton**

8. Regional Development Strategy for Irrigation Sector (1/5)

Sumatra Region

- The rice production in the Sumatra Island is surplus, and this region fuctions as the rice-supplying region to Java and Bali regions.
- There remain some uncompleted irrigation systems for which the headworks and the head reaches in some parts have been completed.

- To effectively utilize the remaining irrigation development potential and to maintain/increase the productivity in the exisitng irrigation systems, rehabilitation/upgrading of those irrigation systems should be promoted.
- Also, the dam irrigation project should be promoted by use of available water and land resources (rainfed area).

8. Regional Development Strategy for Irrigation Sector (2/5)

Java Region

- The majority of rice production of Indonesia rests upon Java Island.
  - Paddy fields of irrigation service area and rainfed area **46.0 %** of the whole Indonesia paddy fields
  - Paddy production in Java **56.6 %** of the total Indonesia production
- The available water in the dry season is insufficient.
- The irrigation area reduces continuously with the average annual rate of 18,000 ha due to the urbanization.

- **Rehabilitation and upgrading of the existing irrigation system**, and management/improvement to maintain present high productivity and to improve the water use efficiency for preparing for the water use conflict.
- Water resources in Java is limited in the dry season. Effective utilization of the reservoir water is most important. So, **improvement and modernization of the large scale irrigation projects served from the dam reservoirs** should be promoted.

8. Regional Development Strategy for Irrigation Sector (3/5)

Bali & Nusa Tenggara Region

- Rice production in this area is insufficient to meet the consumption.
- Per capita income in this region is lowest in Indonesia, thus the percentage of people under the poverty line both in the rural and urban areas stands highest.
- Special attention should be given to this region for creating job opportunities in a sustainable way to improve poverty and regional gaps.

- **Upgrading/modernization of existing irrigation systems** to increase the self sufficiency rate of rice should be promoted.
- **Dam irrigation project to utlize the limited water resources** in the rainy season should be promoted.

8. Regional Development Strategy for Irrigation Sector (4/5)

Kalimantan Region

- The irrigation area in this region has not been widely developed, although the water resources and land resources are abundant.
- To increase the self sufficiency rate of rice, the development and improvement of irrigation system is required.
  - **Small to medium scale irrigation development, and upgrading/modernization** of the existing system should be promoted.

Sulawesi Region

- This region is playing an important part in supplying rice to the rice-deficit area like Java region.
- The available water is surplus in the dry season and the paddy fields under rainfed condition are still left extensively.

- **Dam irrigation projects and rehabilitation/upgrading** of the exisitng irrigation systems should be promoted to keep its position as the rice-supplying region.

8. Regional Development Strategy for Irrigation Sector (5/5)

Maluku and Papua Region

- Rice produced in this region is less than the amount needed.
- The percentage of people under the poverty line in the rural area is highest in Indonesia.
- The implementation of irrigation development is highly required to increase the self sufficiency rate of rice and to increase the farmers' income.

  - **Small to middle scale development** should be promoted to improve self sufficiency condition and to promote the rural economic development. Besides, large scale development is also promoted from the viewpoint of economy of scale.

9. Candidate Projects for Next Blue Book 2010-2014

As of December 2009, candidate projects for the next Blue Book 2010-2014 are under preparation by DGWR.

The following tables are nominated candidate lists for project assistance (PA) and technical assistance (TA) which are identified by the Study Team based on the collected information from DGWR (information purpose only).

PA: 21 Candidate Projects

10. Draft Candidate List of PA for Next Blue Book 2010-2014 as of Dec. 2009 (1/2)

No.	Project Title	Location	Loan (US$ 000)	Counterpart Funding (US$ 000)
1	Countermeasure for Sediment in Wonogiri Multipurpose Dam Reservoir Slice II	Central Java	51,133	?
2	Lau Simeme Multipurpose Dam Development Project	North Sumatra	11,200	?
3	Urban Flood Control System Improvement in Selected Cities Phase II	Nationwide	100,000	?
4	Bali Beach Conservation Project Phase II	Bali	?	?
5	Urgent Rehabilitation of Strategic Irrigation system in Indonesia	Nationwide	?	?
6	Paselloreng Dam of Gilirang Irrigation Project	South Sulawesi	?	?
7	Construction of Karalloe and Associate Structures	South Sulawesi	53,261	27,174
8	Padng Flood Control Phase III	Padang	79,512	-
9	Cisadane River Urgent Improvement Project, Stage I	West Java	?	?
10	Upper Citarum River Basin Tributaries Flood Management	West Java	40,000	4,000
11	Construction of Cipanas Multipurpose Dam	West Java	115,640	?
12	Urgent Construction on Jambi City Flood Control Mitigation	Jambi	7,092	1,064

10. Draft Candidate List of PA for Next Blue Book 2010-2014 as of Dec. 2009 (2/2)

No.	Project Title	Location	Loan (US$ 000)	Counterpart Funding (US$ 000)
13	Urgent Construction and Rehabilitation of Water Supply for Ambon City in Maluku Rovince	Maluku	11,600	1,740
14	Lower Solo River Improvement Project Phase II Stage 2	East Java	100,000	10,000
15	Integrated Pamukulu River Basin Development Project Phase I	South Sulawesi	63,000	?
16	Construction of Raknamo and Temef dams for Water Resources Development in NTT Province	NTT	86,000	?
17	Pandanduri Dam Irrigation Project	NTB	?	?
18	Rationalization and Modernization of Strategic Irrigation Schemes for Enhancing Food Security in Java (RAMSIS)	Central Java, East Java, West Java	?	?
19	Urgent Rehabilitation of Strategic Irrigation Schemes in Western Indonesia (URSIS)	South Sumatra, West Sumatra, North Sumatra, Lampung, Bengkulu Riau, South Kalimantan	?	?
20	Rentang Irrigation Modernization Project	West Java	?	?
21	Project for the Urgent Re-construction of East Pump Station of Pluit in Jakarta in the Republic of Indonesia	Jakarta	?	?

11. Selection Criteria for Evaluation of Candidate Projects (1/2)

- Urgency of project
- Number of people to be benefited
- Economic viability
  - for building strong backbone infrastructure and upgrading infrastructure in the main cities; EIRR higher than 12%
  - for provision of basic infrastructure services in depressed areas for improved economic opportunities; preferably EIRR higher than 12%
- Maturity of project (F/S or D/D have been finished or not)

11. Selection Criteria for Evaluation of Candidate Projects (2/2)

- Social issues due to project implementation (Number of affected people, EIA has been finished or not, LARAP has been finished or not)
- Aspects of contribution to:
  - Effective and efficient utilization of water
  - poverty alleviation and equitable growth mechanism
  - Climate change adaptation
- Appropriateness for international cooperation from the aspect of technical difficulty

12. Draft Criteria of Evaluation Items, Weight and Scoring for Selection of Candidate Projects

Categories		Weight	Point: 1	2	3	4	5
1	Urgency of project	30%	Low	Between items 1 and 3	Mid.	Between items 3 and 5	High
2	Number of beneficiaries	20%	< 1,000	1,000 to 10,000	10,000 to 50,000	50,000 to 100,000	> 100,000
3	Economic viability	10%	EIRR < 5 %	5% to 8 %	8% to 10%	10 % to 12 %	>12 %
4	Maturity of project	10%	Master Plan	Preliminary Feasibility Study	Feasibility Study	Basic Design	Detailed Design
5	Social issues	10%	EIA is planned to be executed.	between items 1 and 3	EIA is being executed.	between items 3 and 5	EIA is completed.
6	Aspects of poverty alleviation, effective utilization of water and climate change adaptation	10%	Not included	between items 1 and 3	Sub-purpose	between items 2 and 4	Main purpose
7	Appropriateness for international cooperation from the aspect of technical difficulty.	10%	Conventional technology in Indonesia	between items 1 and 3	Foreign support in reliability of applied technology	between items 3 and 5	Application of new / high technology