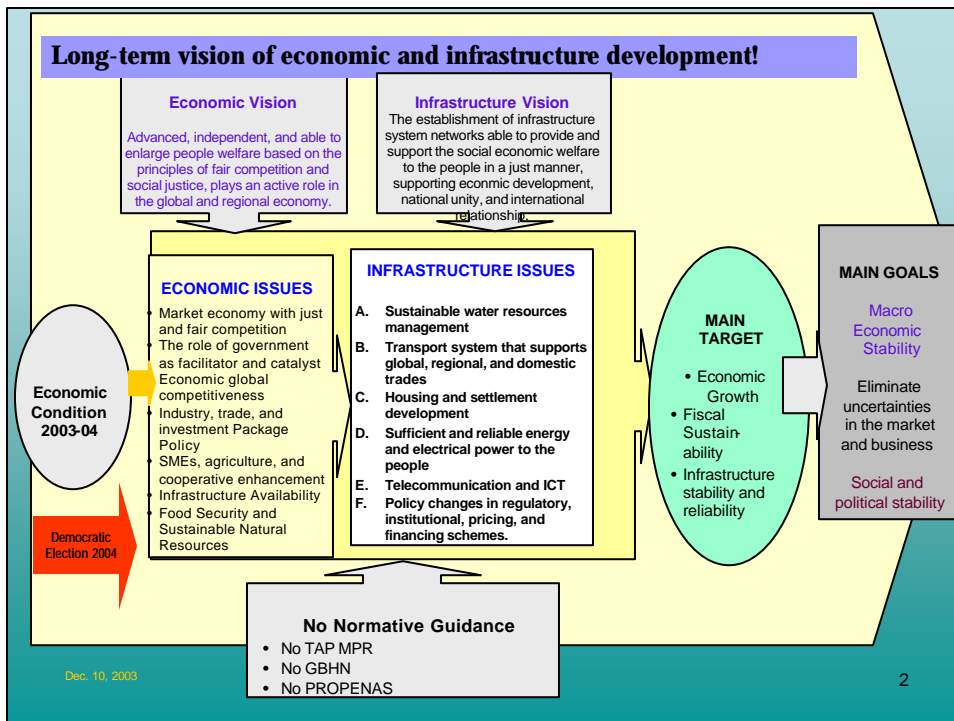


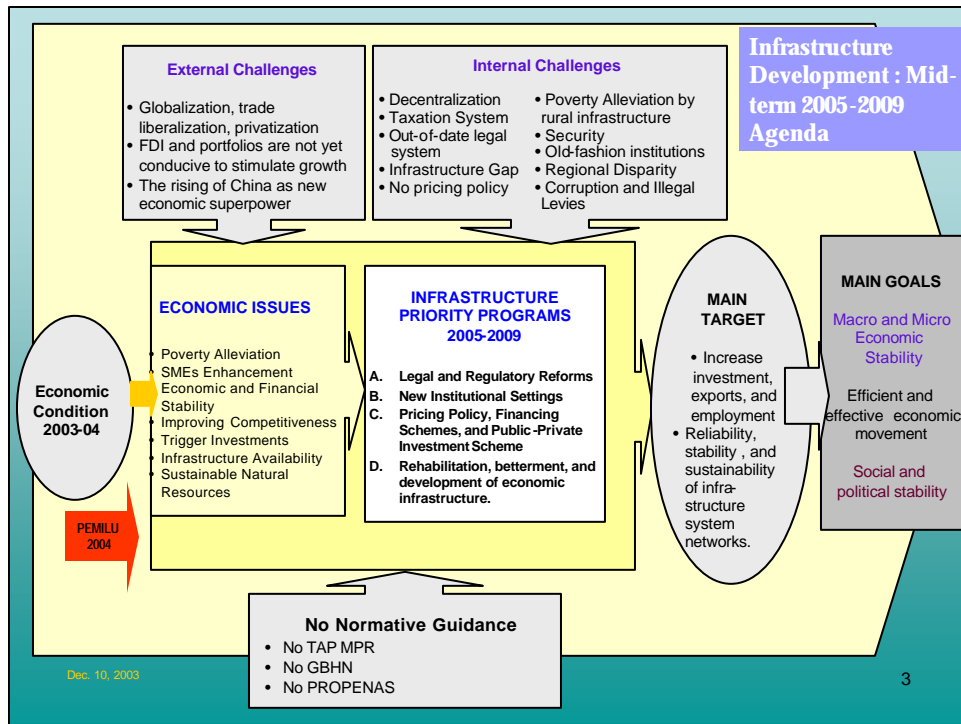
# REBUILDING THE INDONESIA INFRASTRUCTURE

**A Road Map  
From Economic Recovery to Investment  
The 2005-2009 Agenda**

**National Committee for the Acceleration of Infrastructure Development  
Sub-Committee for Planning and Investment  
BAPPENAS**

Paper Presented at The Special Session of CGI Meeting  
Jakarta, December 10, 2003





## The Political Economy of Infrastructure

The political and economic unity of this archipelagic nation is sustained by efficient and reliable infrastructure networks : free communication of thought, easy transportation of people and goods, easy access to information, power and clean water, provision of healthy sanitation, and sufficient irrigation networks across the country. Together, the uniting forces of our integrated infrastructure system networks are dynamic elements in the very name we bear : Nusantara. Without them, we would be a mere alliance of many separate islands. (SD, inspired by Eisenhower, 300602)



The Archipelago

### But our infrastructure is deteriorating.....

- On top of inefficiency, low quality of civil works, excessive overloading, insufficient maintenance funding, and natural disaster, prolonged economic crisis has aggravated infrastructure condition in such a way that level of service and capacity have declined significantly, resulting in bottlenecks, increased price of commodity, hindered economic mobility, and high cost of the economy.
- Backlog maintenance and infrastructure damage has resulted in extremely high costs of users, much higher than investment costs by the government and privates. The social and political costs of infrastructure failure would also be unbearable to the society. This seemingly intangible is often disregarded by decision making process.
- Rehabilitation, maintenance, and reconstruction of infrastructure facilities will require extremely high investment costs that cannot be borne by government budget alone.
- Due to financial crisis and heavy debt burden, the current condition of State Budget (APBN) will not be able to fully finance basic infrastructure maintenance and rehabilitation, let alone building new facilities.
- All those difficulties are occurring in the middle of global movements of the new economy, trade liberalization, privatization, democratization, and decentralization. And yet there is no clear and decisive policies to overcome those challenges.

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## Indonesia is internally and externally faced with new challenges .....

Indonesia : A Nation in Waiting

- Long and bumpy road to democracy,
- Lingered danger of disintegration : political and economic unity is at stake,
- Heavy external and internal debt burdens : debt trap?,
- Poverty incidents remain high,
- A full swing and abrupt, “big bang” decentralization,
- Rapid deterioration of natural resources,
- Rising open and disguised unemployment,
- Rampant corruption and corrupted minds,
- Low rank of Human Development Index,
- Investment is in steady decline,
- Gradually losing its identity as a civilized society and growing its cruel society (?).
- WTO, AFTA, APEC, MDGs, ASEAN market integration, and other trade liberalization, world market compliances, and international regulations,
- Building up of new, networked, and knowledge-based economy with global e-commerce and intelligent infrastructure systems are in rising,
- Vulnerable to the maneuvers of the “*electronic herd*” of global financial collusion,
- Geo politic and geo economy : emerging China superpower, developed economies of Malaysia, Singapore, and Thailand....., and global politic against terrorism,
- Global and regional infrastructure ownership and compatibility.....

While 5 year long government efforts to restructure financial and banking sector with extreme high costs have not so far been so successful to bring economy back to the pre-crisis level, it is only logical to take an alternative means.....

We must have a convergence vision on addressing the issues.....

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## Understanding of where we should go necessitates us to know well on where we currently stand .....

Indonesia : A Nation in Waiting

- We are in the crossroad ; make up our mind : want to stick to the old, out-of-date systems or embrace new initiatives to achieve better lives; want a status quo and declining or reform ?
- Clear, decisive, and far-reaching policies on many different strategic issues have not yet in place, creating unnecessary uncertainties,
- Economic crisis and insufficient government funding have resulted in deteriorated infrastructure services,
- Deteriorated infrastructure had increased prices of commodities and hindered economic development,
- Government has not enough funding to even maintain and rehabilitate the facilities, e.g. : roads, irrigation, power, and railroads,
- Quality of services keeps declining while user costs have increased exponentially,
- A full democratic election in 2004, the non-existence of GBHN, Proenas, and Repeta in 2005 put additional uncertainties into the public policy decision making process .....

The future infrastructure economic landscape should facilitate us to go to the right direction.....

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## Then we are faced by the following questions.....

Indonesia : A Nation In Waiting

- Can infrastructure be an important part of any solution? Yes, it can, but .....
- What is the likely immediate action plans to help recover the economy by means of infrastructure development?
- What would be the role of infrastructure in the future economy of Indonesia?
- How can the action plans and the vision be implemented?
- What are the strategic policies- legal and regulatory frameworks, institutional setting, pricing policy, and financial schemes- that need to be established and put in order to speed up infrastructure development and to boost investment?
- What would be the balancing of relationship between infrastructure and the macro economy policy?
- Who will be championing and take the leadership to all of these undertakings?

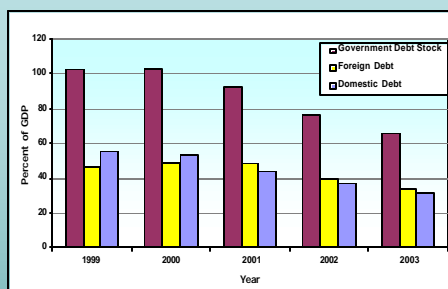
The future infrastructure economic landscape should facilitate us to go to the right direction.....

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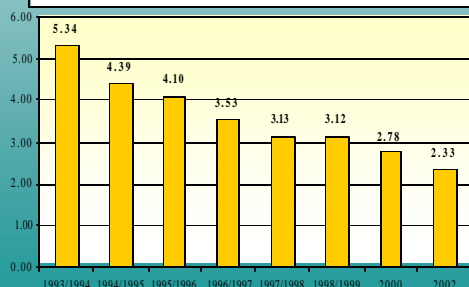
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## The Rationales



Even though debt stock to GDP ratio has declined over the last 5 years, the ratio of government investment to GDP in infrastructure continues to decrease consistently. While it was 5.34 percent in 1993, in 2002, it has become 2.33 percent.



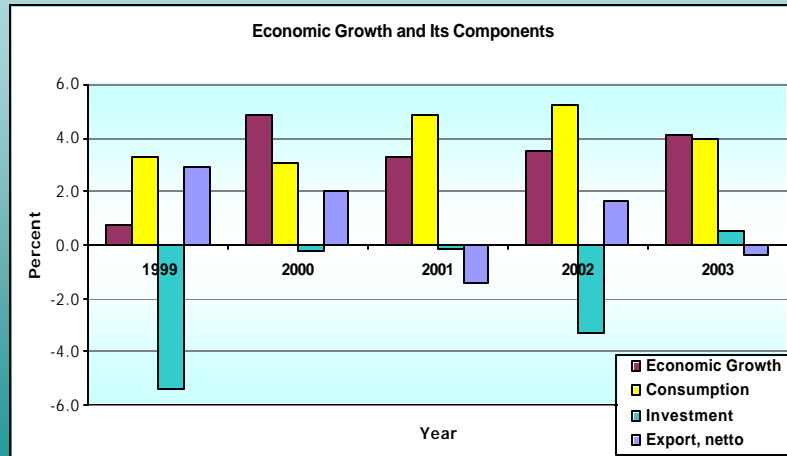
When times are hard, capital spending on infrastructure is the first item to go, and operations and maintenance are often close behind. Despite the long-term economic cost of slashing infrastructure spending, governments find it less politically costly than reducing public employment or wages. Studies of fiscal adjustment and expenditure reduction find that capital expenditures are cut more than current expenditures, with infrastructure capital spending often taking the biggest reduction. Cutbacks in operations and maintenance expenditure are worisome (World Bank, 1994).

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**Economic growth during the last 5 years has been heavily supported by consumption, far from sufficient to absorb 2.5 million labor force per year, and has resulted in 9.7 million open unemployment (9.4% from total labor force).**

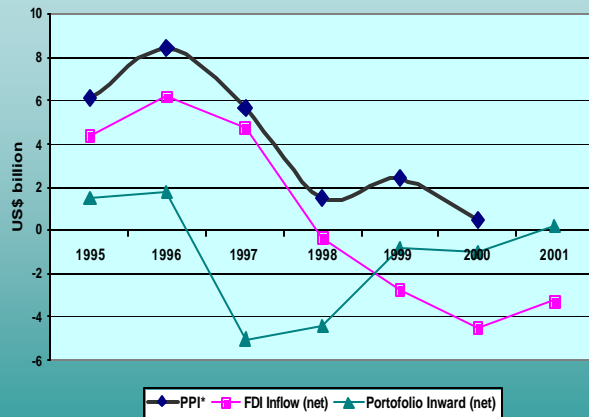


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**Capital inflow in the past 5 years have also declining.....**



**Global investment of Indonesia infrastructure will have a significant impact on increasing capital inflow.**

\*Private Participation in Infrastructure, Steer 2002, UNCTAD 2001 & 2003, World Bank 2003

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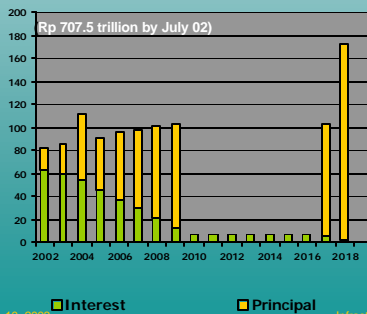
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## Internal & External Debt

USD 73.6 billion = Rp 662.5 trillion  
(Dec 2001, Rp 9000 per USD)

- Total debts of Rp. 1.370 trillion (about 80% of 2002 GDP of Rp. 1.716,5 trillion) threatens fiscal sustainability and made it very difficult for APBN to finance basic infrastructure maintenance and rehabilitation such as roads, railways, and irrigation system.

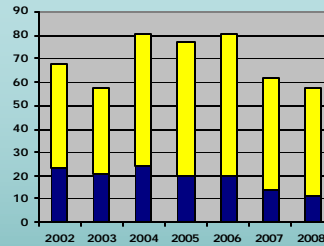
Internal Debt (Rp trillion)



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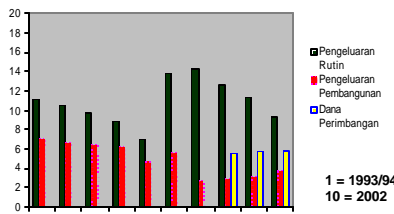
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External Debt (Rp trillion)



Interest Principal

Ratio of Routine and Development Expenditures and Balancing Budget to GDP (%)



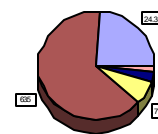
1 = 1993/94  
10 = 2002

11

- Infrastructure gap, has been one of the factors triggering the regional economic disparity. This is understandable because the more developed economy will require more infrastructure.
- Infrastructure, however, can also be used as an instrument for reducing poverty, breaking the isolation of a region, and narrowing the regional gap.
- Infrastructure gap, however, cannot be overcome technocratically by thinking that because there is less demand then there is no need to provide supply. A blending between technocratic and political thinking is necessary to build infrastructure in less developed regions. After all, infrastructure supply will create its own demand.
- Government investment should be focussed on the less developed regions since the developed economy has its own capability to finance its infrastructure development by presumably involving private sectors and by the users who have willingness to pay for good quality services.

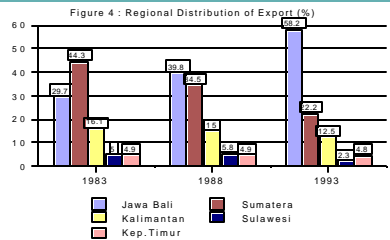
## Poverty

Figure 3 : Distribution of GFI (%)

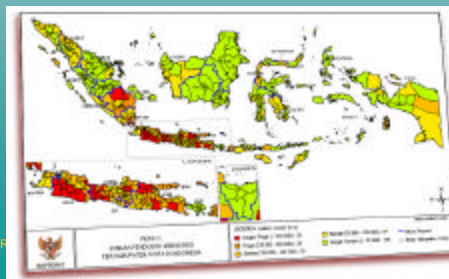


Sumatera Jawa Bali  
Kalimantan Sulawesi  
Kep.Timur

Figure 4 : Regional Distribution of Export (%)



Infrastructure R



## Indonesia GDP growth : comparable with other countries

Year	Indonesia	Malaysia	Thailand	Korea	China
1993	6.50	9.89	8.25	5.49	13.50
1994	7.54	9.21	8.99	8.25	12.60
1995	8.22	9.83	9.24	8.92	10.50
1996	7.82	10.00	5.90	6.75	9.60
1997	4.70	7.32	-1.37	5.01	8.80
1998	-13.13	-7.36	-10.51	-6.69	7.80
1999	0.79	6.14	4.45	10.89	7.10
2000	4.92	8.33	4.65	9.33	8.00
2001	3.44	0.45	1.94	3.10	7.30
2002	3.66	4.21	5.22	6.35	8.00

### Average

93 - 96	7.52	9.73	8.09	7.35	11.55
97 - 02	0.73	3.18	0.73	4.67	7.83

### percent change YoY

Source: Danareksa Research Institute

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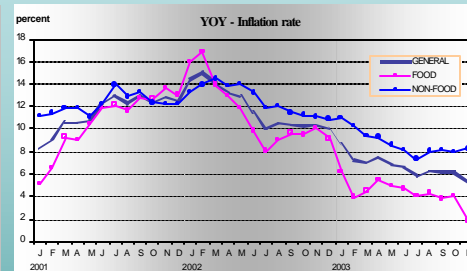
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## Exchange Rate



Source: Danareksa Research Institute

## Inflation Rate

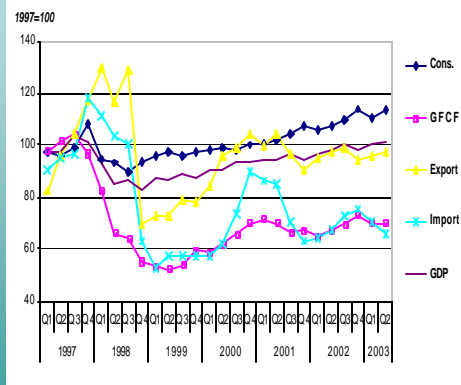


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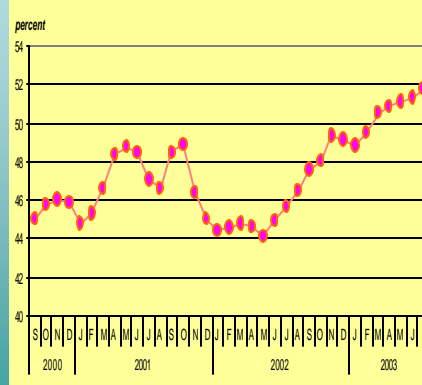
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.... but gross fix capital formations are still below the pre-crisis level



.... and Loan to Deposit Ratio remains low



Source: Danareksa Research Institute

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**Short Term Investment (2005-2009) for Indonesia Infrastructure is Predicted to Reach US\$ 72,14 billion (Rp 613,2 trillion)**

Infrastructure	Additional Capacity	Investment Costs
Public Roads (km)	93.700	20.83
Power Generation (MW)	21.900	28.44
Fixed Line Telephone (million SST)	11.0	11.02
Cellular Telephone (million subscribers)	18.7	7.48
Drinking Water (million people served)	30.5	2.16
Sanitation (million people served)	46.9	2.21
<b>Total US\$ billion</b>		<b>72.14</b>

In order to achieve and maintain an economic growth of 6 percent during the next 5 years (2005 - 2009), Indonesia will need to maintain, rehabilitate, and develop its infrastructure facilities with an estimated investment cost of about US\$ 72.14 billion (Rp 613,2 trillion). It could be much more than that if transport, housing, energy, and irrigation infrastructure are taking into account. This is a huge costs given the number of 2002 Indonesia's GDP of only US\$ 189.41 billion (Rp 1.610 trillion current price).

Note : excluding irrigation and water infrastructure, transportation, Energy, and housing. Exchange rate : Rp 8,500/US\$

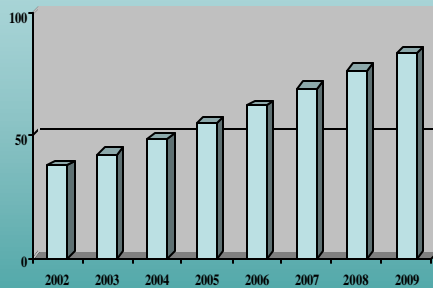
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**Financing gap is inevitable, infrastructure investment need has been and is always beyond government financial capacity to provide.....**

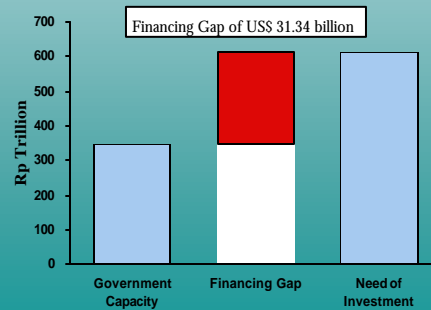
**Projection of the GoI's Infrastructure Investment (Rp. trillion)**



**Cumulative 2005-2009:  
Rp 346.5 trillion or US\$ 40.8 billion**

**Assumption:  
GoI's investment 2005-2009  
equivalent to 2.33% of PDB.**

**But government is predicted to be able to invest only in the amount of US\$ 40.8 billion due to its fiscal capability, equivalent to 2.33 percent of its GDP, leaving about US\$ 31.34 billion in the average to be open to private investors and other financing schemes.**



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**TRANSPORTATION : 2005-2009 Agenda**

- **Maintenance, rehabilitation and improvement programs for national, provincial and kabupaten roads networks**
- **Development for Trans Kalimantan, Trans Sulawesi and other strategic roads to support economic growth centres, national borders as well as toll roads**
- **Maintenance and rehabilitation of bridge construction programs**
- **Program to handle overloading**
- **Railway restructurisation program for management operation and institutional**
- **Program to manage backlog in maintenance of road infrastructure and railway bridges in Jawa and Sumatra**
- **Program to manage backlog in maintenance facilities, signalling, telephone and electricity**
- **Double track program for North and South Jawa Corridor**
- **Rehabilitation program and construction of facilities for river, lake and ferry transport**
- **Development of mass transit system in urban areas**
- **Development and rehabilitation of port and airport facilities**
- **Development of safety and navigational facilities for road, sea and air transport**
- **Development of pioneering routes and facilities for land, ferry, sea and air transport especially in remote areas**

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## TOLL ROAD Program

- During the next 5 years, toll road industry will have an independent authority to deal with regulatory frameworks, pricing policy and tariff setting, financial scheme, public-private partnership scheme, and other strategic issues regarding toll road development.
- Within 1-2 years, government will have to determine the best scenario for building Trans Jawa Toll Road System, including the greater role of government funding for “green-field” sections based on regional economy and island-wide economic mobility.
- Proposed interim policies
  - Jasa Marga temporary retain its authorization function, backed with full guarantee and necessary compensation by government (Law No. 19/2003 concerning state owned corporation)
  - Tariff setting by Presidential Decree on signing of the concession agreement
  - New regulations regarding land acquisition is urgently required
  - Government should establish a land price cap where land cost is included in the investment.

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## Water Resources Program



- Full scale implementation of Water Resources Sector Adjustment Policy Reform Agenda under the forthcoming new water resources law.
- Establish database and data management center for irrigation facilities, water buildings, dams, reservoirs, and river basins.
- New arrangements and redefinition of responsibility among government levels : central, provinces, kabupaten, and villages according to decentralization and regional autonomy. This includes budgeting and financial arrangements and public accountability.
- Minimize or eliminate irrigated and fertile land conversion particularly in Jawa, Sumatera, and Sulawesi and develop more agricultural land in outer islands.
- Effective river basin conservation and preservation programs
- An urgent need to change water resources sector focus from physical infrastructure development and its premature rehabilitation to environmentally and socially sustainable water resources and irrigation management.
- The new paradigm in the policy reform of water resources should be getting stronger that is emphasized on the principle of sustainable development principle, water as a part of human right, democracy, regional autonomy and globalization of water resources problems..

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## Drinking Water

- Amend the laws and regulation in the drinking water sector
- Develop the nature, environmental and water resources conservation and protection program to maintain reliability of the raw water through Water Board Authority
- Recompose water tariff structure based on the principle of restoring investment and operational cost
- Increase private sector and community participation in drinking water industry
- Strengthen PDAM corporate professionalism and separation between regulator and operator
- Tariff setting based on cost recovery, social equity, and conservation cost.
- Management and efficiency improvement of PDAMs
- Financial engineering through municipal bonds guaranteed by local governments or by securitization.
- Demand responsive infrastructure development
- Increase rural community participation and ownership in rural drinking water facilities through sharing investment approach
- Prepare action plans and investment plan to meet MDG requirements to provide safe drinking water for 50 percent of population
- Delegate the right to determine tariff structure to the regulator, taking into account drinking water as an economic entity.

## ENERGY PROGRAMS

No	Program	Target	Scope
1	Energy Intensification	The energy availability based on the development and population	Intensification to find fossil energy and the increasing of non fossil potential energy, and the increasing production of fossil energy and non fossil
2	Energy Diversification	To achieve the increasing utility of coal, gas and renewable energy	The increasing of access to coal, gas, and renewable energy
3	Energy Conservation	Energy efficiency	The Development and utilization economical energy from source to downstream
4	Energy Infrastructure Development	To achieve energy infrastructure network that can increase energy availability and access for community to energy source	The arrangement of Energy Infrastructure Master Plan and the development of gas infrastructure, coal, and electricity

No	Program	Target	Scope
5	Market Mechanism	Energy allocation based on efficiency through competition and transparency	Restructuring energy sector and energy pricing based on the economic value
6	Environment aspect	Minimization environment l effect to develop energy sector	The integration of energy development to control impact for environment
7	Joint Scheme among Government and private sector	To achieve private sector partisan to develop energy sector	Mechanism for private sector partisan

## Electricity Program

- **Development of new generations**
- **Conservation of power energy**
- **Increase efficiency of generation, transmission, and distribution lines**
- **Efficiency program for electricity corporations**
- **Restructure power sector and corporations**
- **Maintain the Level of Service for Electricity Sector Infrastructure**
- **Rehabilitate existing electricity power plant to overcome electricity Crisis**
- **Improve national transmission and distribution Network “Grid Nusantara” in the form of High and/or Ultrahigh voltage transmission networks**
- **Establishing the Electricity Market Supervisory Board (BPPTL) in the regions and implement regional electricity planning (RUKD)**
- **Developing supervisory business segments for competitive market of power generation and electricity *bulk* sales, but still maintaining natural monopoly in transmission and distribution grids**

## ICT Program

- Finalize early termination and its compensation scheme in telecommunication sector
- Revise the Government Blue Print of telecommunication by providing competition platform and preparing natural migration
- Prepare supporting regulations for competition, tariff setting, interconnection, numbering, USO, licensing/permits, and independent regulatory body
- Develop the concept of community telecenters for the rural community to get easy access to information with affordable price
- Develop the use of other infrastructure such as Power Line Communication with alternative technology such as wireless, VOIP, etc. to support ICT development
- Explore new means in public-private sector cooperation in telecommunication
- Speeding-up the completion of sector reform including reform agenda heading for competitive, multi operator environment
- Increasing the intensity and synergy of infrastructure usage and development
- Finalize Cyber Law and its related regulations including Cyber Crime.
- Establishing e-government.

## Housing Program

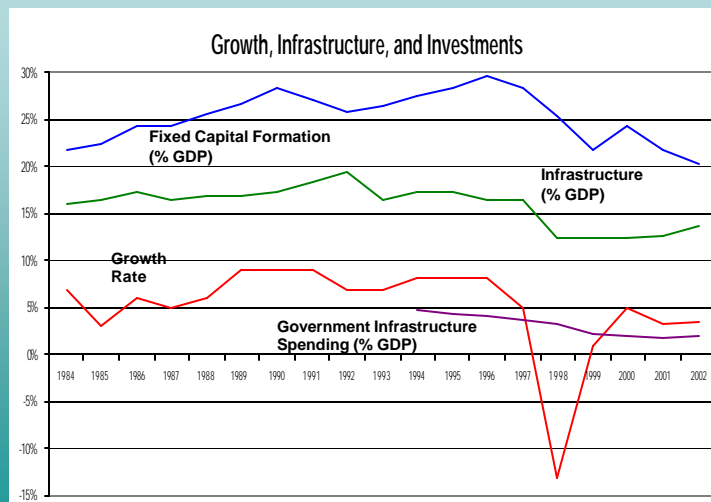
- Land reform policy to prevent land speculation and monopoly
- Establish National Housing Agency and National Housing Financing
- Develop Secondary Mortgage Facilities (SMF) for housing investment plan
- Tax increment for commercial land and property owner who enjoys the rise of their land values, and earmark the revenue for low-income housing complex
- Tax incentives for industry providing housing for their labors and workers
- Review current housing subsidy scheme through policy changes to provide more just and transparent treatments for those who do not access to bank credit and land
- Encourage the development of Kasiba and Lisiba at the regional level
- Supporting urban renewal and low-cost housing improvement program with private sector and community involvement through community-based housing development programs in order to alleviate poverty.

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## Infrastructure is key to growth and has played a critical role in Indonesia's growth



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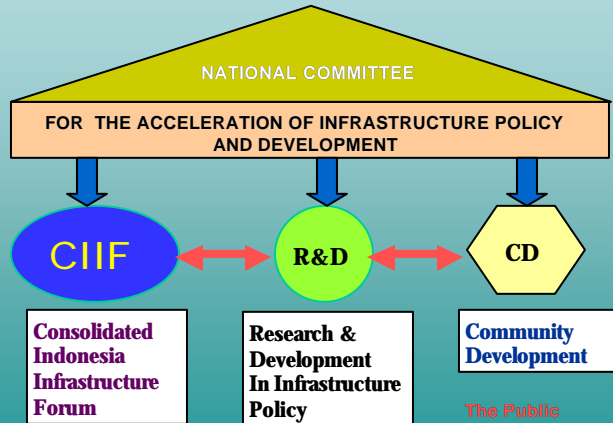
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Source: WBI, 2003

# CHAMPIONING THE INFRASTRUCTURE MAINSTREAM

**KKPPI**

Presidential Decree 81/2001



Dec. 10, 2003

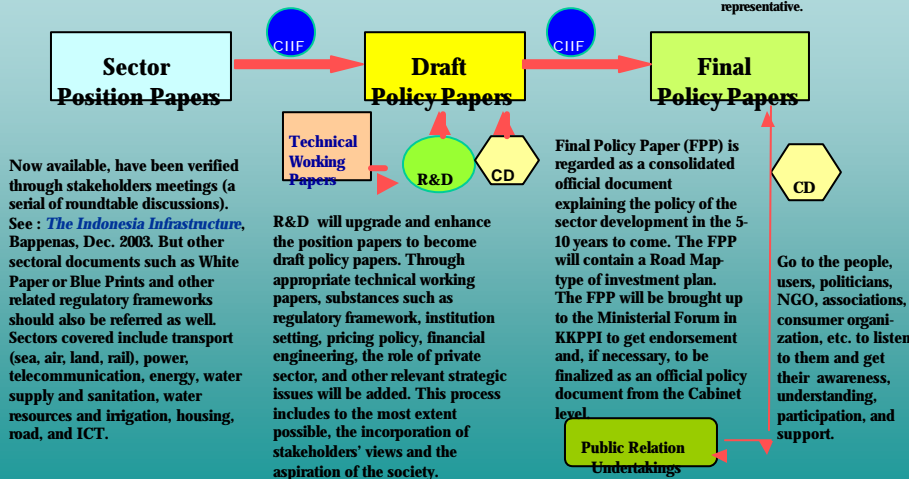
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# CHAMPIONING THE INFRASTRUCTURE MAINSTREAM

The mechanic of linking the policy and political decision making process.....

For any sector policy paper, CIIF will convene at least twice in an iterative fashion. CIIF participants will consist of competent and legitimate professional and specialists. They could originate from industry, NGO, association, private investors, government official, academy, and users representative.



Now available, have been verified through stakeholders meetings (a serial of roundtable discussions). See : *The Indonesia Infrastructure*, Bappenas, Dec. 2003. But other sectoral documents such as White Paper or Blue Prints and other related regulatory frameworks should also be referred as well. Sectors covered include transport (sea, air, land, rail), power, telecommunication, energy, water supply and sanitation, water resources and irrigation, housing, road, and ICT.

R&D will upgrade and enhance the position papers to become draft policy papers. Through appropriate technical working papers, substances such as regulatory framework, institution setting, pricing policy, financial engineering, the role of private sector, and other relevant strategic issues will be added. This process includes to the most extent possible, the incorporation of stakeholders' views and the aspiration of the society.

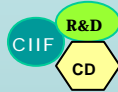
Final Policy Paper (FPP) is regarded as a consolidated official document explaining the policy of the sector development in the 5-10 years to come. The FPP will contain a Road Map-type of investment plan. The FPP will be brought up to the Ministerial Forum in KKPPI to get endorsement and, if necessary, to be finalized as an official policy document from the Cabinet level.

Go to the people, users, politicians, NGO, associations, consumer organization, etc. to listen to them and get their awareness, understanding, participation, and support.

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# Tentative Agenda 2004-2005

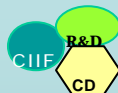
## Finishing up Sector Policy Papers

STRATEGIC ISSUES	SUBSTANCE COVERED
TOLL ROAD AND THE NEW ROAD LAW	New regulatory framework, new financial scheme, market failure, the new role of government under special circumstances, market restructuring, financial design of Jawa Toll Road System.
TELECOMMUNICATION AFTER DUOPOLY	Market structure after duopoly, rural telecommunication, USO Scheme, greater role of private sector, new technology, pricing policy, financial engineering.
POWER SECTOR AFTER THE NEW ELECTRICITY LAW	Market structure under new electricity law, pricing policy, new design of Independent Power Producers (IPPs), role of government.
URBAN TRANSPORT REFORMS	New institutional setting, urban transport management, urban economy, new design of urban public transit, pricing policy, financial engineering, public transport trust fund.
ROAD SECTOR REFORM	Road Fund and the Role of Users In Road Asset Maintenance, consolidation of road funding mechanism including Road User Charges, management reform.
GAS SUBSTITUTION TO OIL AND ENERGY MIX POLICY	Energy audit, energy balance, market critical review, balancing export and domestic demand, optimization of Sumatera West Jawa Gas Pipeline : The National Interest.

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# Tentative Agenda 2004-2005

## Finishing up Sector Policy Papers

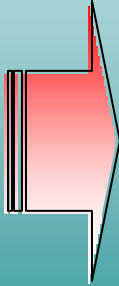
STRATEGIC ISSUES	SUBSTANCE COVERED
JAWA PARADOX AND WATER DEFICIT	Implication of new water law on the supply and demand of raw and clean water, pricing policy, Jawa Water Balance, restructuring of PDAM, community based water supply and sanitation program.
HOUSING FOR LOW INCOME PEOPLE AND THE POOR	The new roles of central and local governments, housing financial engineering, secondary mortgage facilities (SMF), National Housing Agency.
MRT AND JABODETABEK RAIL CORPORATION	Concept and strategies of Jabodetabek Rail Corporation in relation with Jakarta MRT and other public transport modernization, Jabodetabek Transport Authority, incorporation with Jabodetabek Transport Master Plan.
RAILWAY MODERNIZATION	Rail transport restructuring and reform programs, possibility of horizontal, vertical, and spatial unbundling, legal and regulatory reform, new institutional setting, new operators, the advancement of freight and container transport.
ICT INFRASTRUCTURE	Building up new financial scheme involving public sector, private investors, industry, and experts, fiscal incentives for ICT development, and optimization of current infrastructure facilities.
SEWERAGE AND SANITATION PROGRAMS FOR BIG CITIES	Feasibility of building sewerage and sanitation facilities in big cities, economic analysis, environmental assessment, financial scheme, regulatory framework..

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*Book of  
Indonesia  
Infrastructure  
Published by  
Bappenas to be  
Launched on  
Dec. 23, 2003*



Dec. 10, 2003

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