EAST ASIA AND PACIFIC INFRASTRUCTURE STRATEGY
PART A: THE EAST ASIA INFRASTRUCTURE CHALLENGE

1. Infrastructure, growth and poverty reduction: The East Asia story
2. Emerging infrastructure challenges: A new environment
3. Infrastructure needs and financing
4. A new framework for policy makers

PART B: THE EAP BUSINESS STRATEGY

1. Overview
2. Program characteristics, emerging trends and implementation of the new analytical framework
PART A. THE EAST ASIA INFRASTRUCTURE CHALLENGE

1. Infrastructure, Growth And Poverty Reduction: The East Asia Story

• The East Asia development model – NICs led the way
• Strong aggregate growth supporting impressive poverty reduction
• Virtuous cycle of savings, investment and infrastructure expenditures, enhancing competitiveness
• But significant variation remains in service access
From infrastructure to poverty reduction, through growth and service access

Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
The East Asia development model

NICs led the way...

Growth in infrastructure stocks, East Asian NICs, 1960 - 2000

- Export led model supported by
  - Strong levels of investment and savings
  - Strong centralized vision and co-ordination by effective planning agencies
  - Directed savings through development banks
  - Infrastructure as integral part of the model

- High growth helped maintain policy consensus
- Much of the inner-workings hidden from public view
- Under increasing stress from the 1990s

Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
Strong aggregate growth, supporting impressive poverty reduction …

250 million lifted out of poverty in the last 5 years

Average annual growth (%), 1994-2003

Poverty headcount index ($2 / day) %

Source: World Development Indicators, 2004

Source: Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
... supported by a virtuous cycle of savings, investment and infrastructure expenditures

Savings and investment (% GDP) 1993-2002

<table>
<thead>
<tr>
<th>Country</th>
<th>Investment</th>
<th>Savings</th>
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<td>Malaysia</td>
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<td>SSA</td>
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Source: World Development Indicators, 2004

Infrastructure investment (% GDP)

<table>
<thead>
<tr>
<th></th>
<th>0-3%</th>
<th>4-7%</th>
<th>Over 7%</th>
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<tr>
<td>Cambodia</td>
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Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank

Expansion of infrastructure stocks, 1990 – 2000

Total road network

<table>
<thead>
<tr>
<th>Country</th>
<th>0%</th>
<th>50%</th>
<th>100%</th>
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<td>Vietnam</td>
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Electricity generation capacity

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<thead>
<tr>
<th>Country</th>
<th>0%</th>
<th>50%</th>
<th>100%</th>
<th>150%</th>
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<td>Vietnam</td>
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Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
East Asia infrastructure compares well with the rest of the world and accounts for a growing share of world exports ...

Note: Rankings are shown for developing East Asian economies (darker bars), and advanced East Asian economies (lighter bars). Vertical line is the average for all 102 surveyed countries, both within and outside of East Asia.

Source: IMF, Direction of Trade Statistics
... but with significant variation in service access

Service Access (Bars in blue = outcomes above low and middle income country average)

Source: World Development Indicators, 2004; IEA 2003; Connecting East Asia: A New Framework for Infrastructure, The World Bank
2. EMERGING CHALLENGES: A NEW ENVIRONMENT

• Rapid urbanization
• Growing inequalities and disparities in access
• Changing governance model
• Increased regional integration
• Growing environmental concerns
Urbanization is the new driver for productivity and infrastructure

... in 20 years, East Asia will be an urban region

Urban population (% total population)  Growth in number of cities over one million inhabitants


Inequality – A contrasted picture

Poor provinces in the hinterland, but concentration of the poor along the coast ...

Percentage population living below $2 / day (by region)

Percentage population living below $2 / day (each dot = 50 000 people)

Source: Poverty Reduction and Economic Management Unit, The World Bank, 2004
Inequality – The rural-urban challenge

Disparities between rural and urban access are large and growing

Access to electricity

Access to telecommunications (2003)

Access to improved water source (2002)

Access to improved sanitation (2002)

Source: World Development Indicators, 2004; Demographic and Health Surveys 1990-2001
The governance challenge

A host of new actors are coming to the fore

Key issues:

- Democratization
- Increased complexity in service delivery
- Corruption
- Decentralization

Corruption Perception Index 2004

Source: Transparency International

Note: The CPI score ranges between 10 (highly clean) to 0 (highly corrupt).
Decentralization

Adapting the role of the state to a new reality

Key challenges:

• Managing spillovers in service provision
• Fragmentation
• The missing middle
• Implementation of integrated vision

Expenditure decentralization – sub-national expenditure (% total national expenditure)

Source: East Asia Decentralizes—Making Local Government Work, The World Bank
Increased regional interdependence

East Asia’s growing intra-regional trade places increasing demand on regional access

Interdependence of auto-manufacturing in ASEAN

Indices of trade openness and accessibility in East Asia

Source: Nomura Research Institute, Reprinted in Connecting East Asia: A New Framework for Infrastructure, The World Bank

Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
Infrastructure and the environment

Exponential increases in the demand for energy and its uses will have major environmental consequences

Actual and projected growth in energy demand in EAP, by fuel type, 1990-2030

Projected no. of automobiles, China 2000 - 2020

Source: World Bank RAINS - Asia Database

Source: International Energy Agency, 2005; World Bank Staff Estimates
3: INFRASTRUCTURE NEEDS AND FINANCING

• East Asia needs are large and increasing
• At the macro level, financing is not a constraint
• But infrastructure needs vary significantly across countries
• Finance mobilization
  - Private sector – the bubble has burst, but sentiment remains positive
  - Public Sector – there is a need to create fiscal space
  - International donors – play a small role in most of the region
• Getting the priorities right: financial engineering is no substitute for sound project design (tax payers and users must pay)
East Asia’s infrastructure needs are large and increasing

East Asia, estimated infrastructure expenditure, actual and projected, 1996 – 2010 ($ billion / year)

* Based on econometric simulations consistent with projected regional growth, and efficiency prices. Due to data limitations, the simulation excludes a number of key infrastructure services, notably ports and airports, and all but major roads.
At the macro level, financing is not a constraint in East Asia ...

... but, infrastructure needs vary significantly across countries

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**Selected macroeconomic indicators 2004 (US$ billion)**

<table>
<thead>
<tr>
<th></th>
<th>Foreign exchange reserves</th>
<th>Current a/c surplus</th>
<th>Gross domestic savings</th>
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</thead>
<tbody>
<tr>
<td>China</td>
<td>623</td>
<td>46*</td>
<td>757</td>
</tr>
<tr>
<td>Japan</td>
<td>845</td>
<td>172</td>
<td>1100*</td>
</tr>
<tr>
<td>S. Korea</td>
<td>199</td>
<td>28</td>
<td>193*</td>
</tr>
<tr>
<td>Malaysia</td>
<td>67</td>
<td>13*</td>
<td>49</td>
</tr>
</tbody>
</table>


* Numbers for 2003

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**East Asia, estimated infrastructure expenditure, 2006-2010, % GDP**

- **China**: 6.9%
- **Low income**: 6.3%
- **Middle income**: 3.6%

Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
Finance mobilization – The private sector

The private sector bubble has burst... ... but sentiment is positive

... with new regional actors emerging

The private sector investment in infrastructure ($ billion)

Source: World Bank PPI Database, 2005

Does your company expect to increase, sustain, or decrease your total sector investment in the region in the next two years?

Global firms

East Asian firms

Source: East Asia and Pacific Private Investors in Infrastructure Perception Survey 2004
Finance mobilization – The public sector

Vanished fiscal space in Indonesia

Infrastructure expenditure (1996-2001), $ billion

Total public expenditure (1994-2002) $ billion

Finance mobilization – The international community

Donors are small players in most of the region

Aid (% of GDP and % of investment, 2003)

For the region as a whole, aid is only a small portion of infrastructure needs

Estimated regional infrastructure needs (percentage of GDP) – 6.2 %

Source: World Development Indicators, 2004
Financing infrastructure
Getting the priorities right

• Capital markets development and local currency funding often needed for large-scale infrastructure
• But financial engineering never substitutes for sound project design
• In the end, it is always the taxpayers and users who pay

Source: Connecting East Asia: A New Framework for Infrastructure, The World Bank
4: A NEW FRAMEWORK FOR POLICY MAKERS

- Inclusive development
  - Coordination
  - Accountability
  - Risk management

- Operationalization: A model on three levels
A new analytical framework for policy makers

Inclusive development: A stool with three legs – coordination, accountability and risk management

- Reconciling need for central vision with decentralization and market forces; getting expenditures right; managing fiscal space
- Clarifying rules of the game and social objectives; improving competition, regulation, and oversight mechanisms
- Economic growth, plus sharing the benefits of growth to reduce poverty
- Establishing public-private partnership frameworks; sharing risks and managing contingent liabilities

Coordination

Inclusive Development

Accountability and Risk Management
Operationalization: A model on three levels

• New role of central agencies
  - Fiscal space and priorities
  - PPP framework
  - Modalities for government support
  - Risk management

• Clarity of sector development plans and reform agenda
  - Predictability and clear rules of the game
  - With incentives for efficiency and sustainability

• Appropriate pipeline of complementary quality transactions
PART B: THE EAP BUSINESS STRATEGY

1. Overview

• Sustained engagement over time

• But reliable partner?

• Recent resumption in infrastructure lending, but accounting only for a fraction of total infrastructure needs

• Focus on leverage and impact
World Bank lending for infrastructure in East Asia & Pacific region 1951-2005

Sustained engagement over time

Total lending for Infrastructure in East Asia & Pacific (1951-2005): Over $60 billion
But reliable partner?

EAP infrastructure: New projects and commitments: 1995-2005

- 105 projects with net commitments of $12.0 billion
- Lending doubled over three years to $1.7 billion
- Sustainable pipeline of around 18 projects, approximating $2 billion / year
- 60 percent of EAP net commitments

Note: No projects for 1994-2004 = PE+GEF+SF; FY05 includes also two operations postponed to FY06

World Bank Group lending, EAP Region, 1995 to 2005 ($ million)
IFC business trends in EAP

New projects and commitments, 1998-2004 (US$ million)

Note: IFC Commitments = IFC Loans, Equity, Quasi equity, Syndication & Guarantees
Recent resumption in infrastructure lending, but only accounting for a fraction of infrastructure needs.

Leveraging (financing, policy advice, best practice) is key for impact.

World Bank focus shifts from infrastructure in the 1990s.

Re-establishment of EAP Infrastructure lending to approximately $2 billion annually.

However, even in a high scenario, the WB could provide only a few percent of East Asia’s $200 billion annual needs.
Leveraging large volumes of private flows

Example: Nam Theun 2, Laos

- $1.45 billion hydro project (incl. contingent financing) exporting energy to Thailand

- Leveraged private sector financing of $1.2 billion through IDA grant of $20 million and combination of IDA and MIGA guarantees up to $100 million, matched by ADB.

- Entailed partnership with other donors and consortium of international and Thai Banks.
The evolving role of Bank Group enhancement

Example: Phu My 1, 2, 3, Vietnam

1996

Phu My 2-1 Power

- Public financed project
- 336 MW gas-fired power plant (with subsequent expansions)
- Bank Group supported the development of first phase - IDA:
  - US$ 180 M equivalent Credit

2002

Phu My 2-2 Power

- Private sector with IDA guarantee
- 715 MW gas-fired power plant
- Total project cost: US$ 400 million
- Bank Group Support - IDA:
  - US$ 75 M Partial Risk Guarantee

2003

Phu My 3 Power

- Fully private supported by MIGA guarantee
- 716 MW combined cycle gas-fired power plant
- Total project cost: US$ 412 million
- Bank Group Support - MIGA:
  - US$ 48 M Equity
  - US$ 90 M Debt (P&I)
2. PROGRAM CHARACTERISTICS, EMERGING TRENDS & IMPLEMENTATION OF NEW ANALYTIC FRAMEWORK

• 5 platforms of engagement

• EAP infrastructure business: by country, by sector, and by instrument

• Emerging trends

• Implementation of the new analytical framework
EAP BUSINESS STRATEGY

Five platforms of engagement

- GEF and carbon financing: Xiaogushan Hydro; Mongolia District Heating
- GEF land pollution and air quality programs
- International Privatization experience (AAA for Malaysia)
- Bulk of EAP lending
- Indonesia, Philippines, Vietnam Infrastructure strategies (REDS)
- Kabubatan Development Project
- Vietnam rural roads

- NT2
- Infrastructure regulator’s Forum
- Marine Electronic Highway (Singapore-Indonesia-Malaysia)
- GMS partnership - transport and energy
- East Asia Flagship
- Pacific Island Infrastructure strategy (REDI)
- Shanghai Urban Environment Program
- Laos Provincial Infrastructure
- Small town development in China (AAA)
EAP infrastructure business by country ...

• In savings-rich fast-growing countries, focus on introducing best practice, or scaling up and supporting existing policies and programs (Vietnam, China)

• In countries faced with fiscal constraints, focus on leveraging private sector finance (Philippines, Indonesia)

• In IDA countries, focus on meeting financing needs for basic infrastructure and on partnerships (Laos, Mongolia, Pacific Islands)
• Strong transport portfolio across countries
• Fast growing portfolio in urban infrastructure
• Fluctuations in energy following sharp reductions in 1990s
• Growing multisectoral approaches
... and by instrument

- Covering access and growth requirements
- Major focus on capacity expansion (Category A projects)
- Environmental management (water & sanitation) and renewable energy
- Growing GEF and PCF programs
Portfolio management

Overall portfolio is strong due to strong country ownership of projects

EASIN portfolio performance, 2004, 2005
Analytical work

• Strong AAA and R&D crucial to support value added, relevant policy advice, sharing of experiences, and operational impact
  - 12% of BB budget and 3-4 times leverage of Bank’s BB with trust funds over last 3 years

• Increasing focus on integrated cross-sectoral work
  - Infrastructure strategies (Indonesia, Philippines, Vietnam, Pacific Islands, Mongolia)
  - PPP frameworks
  - Infrastructure finance
Analytical work (Cont.)

• Increasing focus on partnerships and regional engagement
  - ADB/JBIC/WB flagship study
  - Engagement with GMS, ASEAN, APEC
  - East Asia & Pacific Infrastructure Regulatory Forum (EAPIRF)
  - Infrastructure database

• Analytical work on three levels
  - Research, analytical pieces
  - Just-in-time policy notes
  - Advice and dialogue on on-going basis

  Majority country-based, and closely linked to on-going projects
Emerging trends

• The infrastructure program is not constrained by demand, but by country borrowing requests, creditworthiness issues and IDA constraints.

• New priorities
  - Public-private partnerships agenda (cross-sectoral)
  - Subnational and infrastructure finance
  - Regional: GMS and regional GEFs
  - GEF and PCF
  - Renewed demand for energy (and hydro) generation
  - Cross-sectoral reform agenda.
Emerging trends (Cont..)

• Instruments
  - Majority will remain investment lending
  - Increased integration of policy agenda in DPLs, & PRSCs
  - Emerging SWAPs, cross-sectoral urban projects
  - Combination of WBG investments to support PPP agenda
  - Subnational window?
EAP BUSINESS STRATEGY

Implementation of the New Analytical Framework

Institutional Analysis: from public implementation to coordination in decentralized environments

Economic Analysis: from project returns to estimate of overall impact

Technical Analysis: from “brick and mortar” to accountability (competition, regulation, community participation, environmental & social assessments)

Financial Analysis: from financial returns to innovative risk sharing (public-private; users-tax payers)

Coordination

Inclusive Development

Accountability and Risk Management