Financing for Sustainable Urbanization

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This presentation has benefited from detailed discussions with Sekhar Bonu and inputs from Christine Ablaza.

Outline

1. Infrastructure needs

2. Managing urban infrastructure needs

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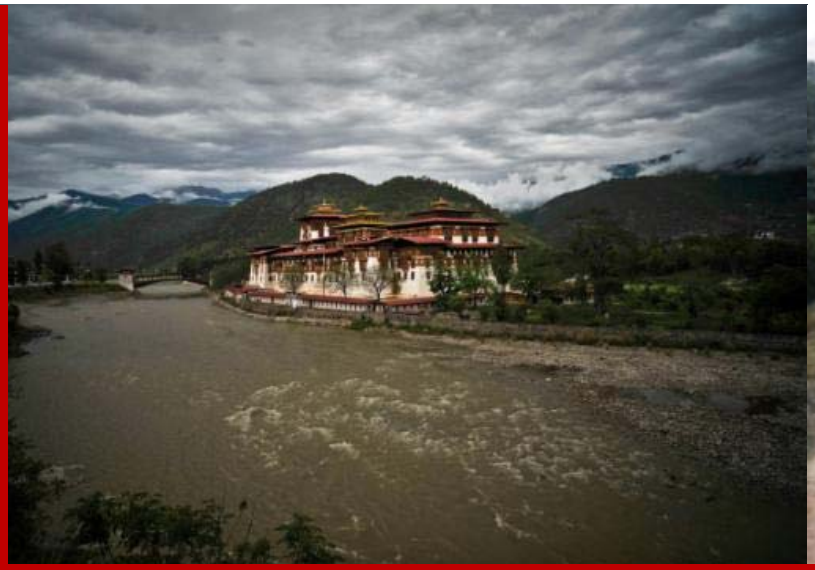


Infrastructure Needs

Infrastructure Needs in Developing Asia

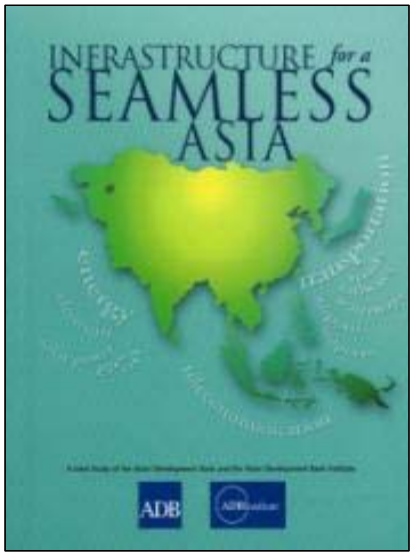
The situation:

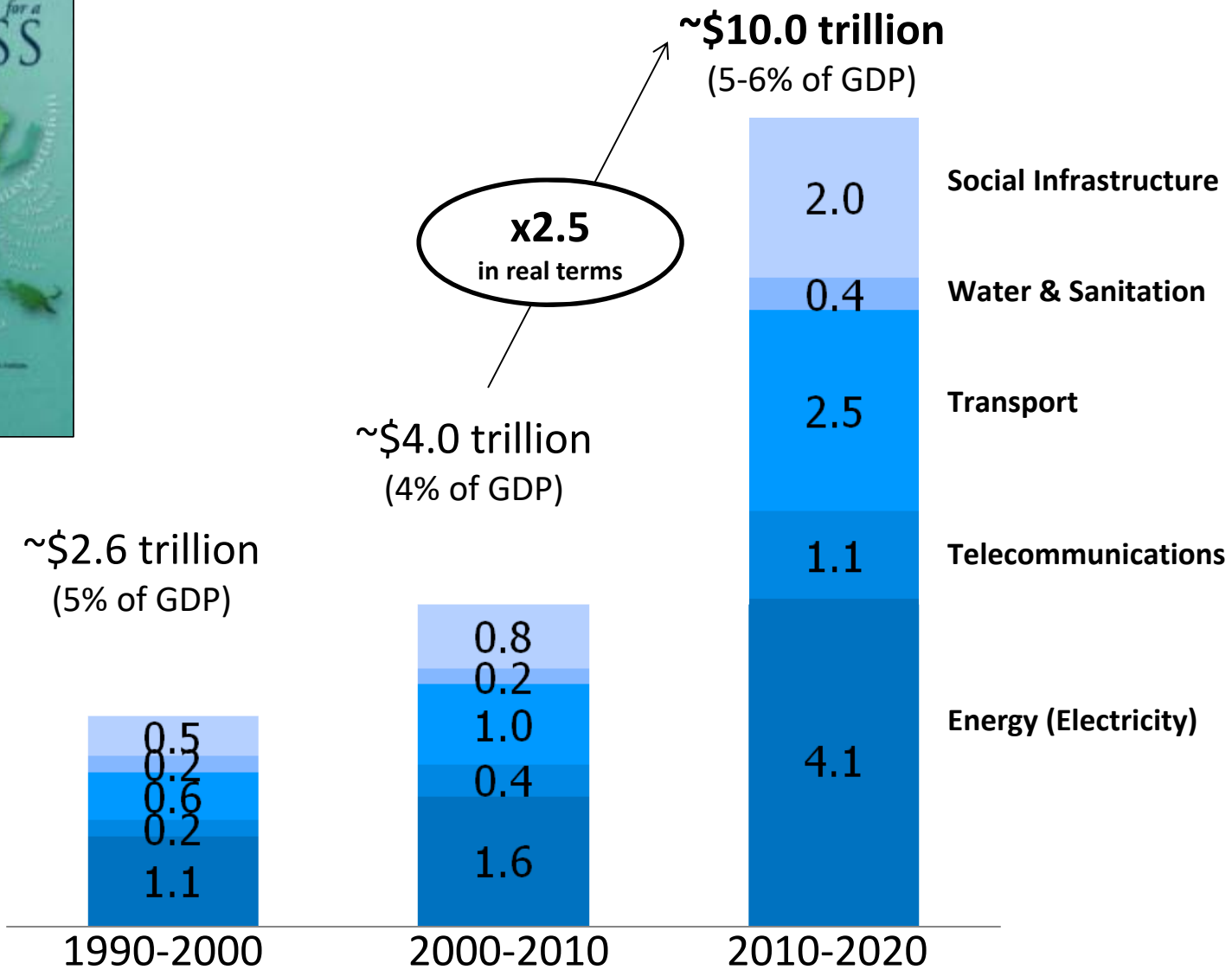
- 427 million people in the region lack access to **electricity**.
- 700 million people still do not have access to **clean water**.
- 1.7 billion people lack access to **basic sanitation**.
- 360 million lack access to **safe drinking water**.
- About 523 million people live in **urban slums** across the region.
- In Metro Manila, severe **traffic congestion** problems cost the economy an estimated $52 million per day in lost productivity.

The challenge:

- How do we step up the quantum of infrastructure investment while ensuring that these support **sustainable and shared growth**?

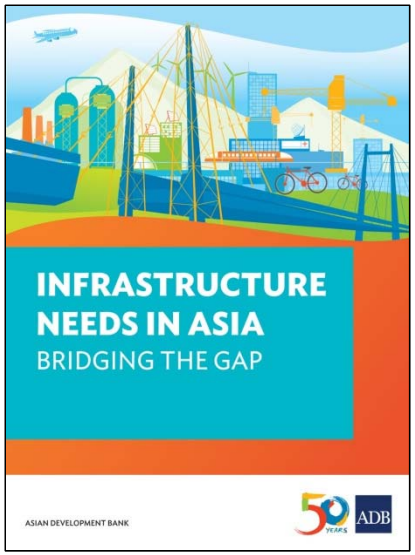
Infrastructure Needs: The Numbers

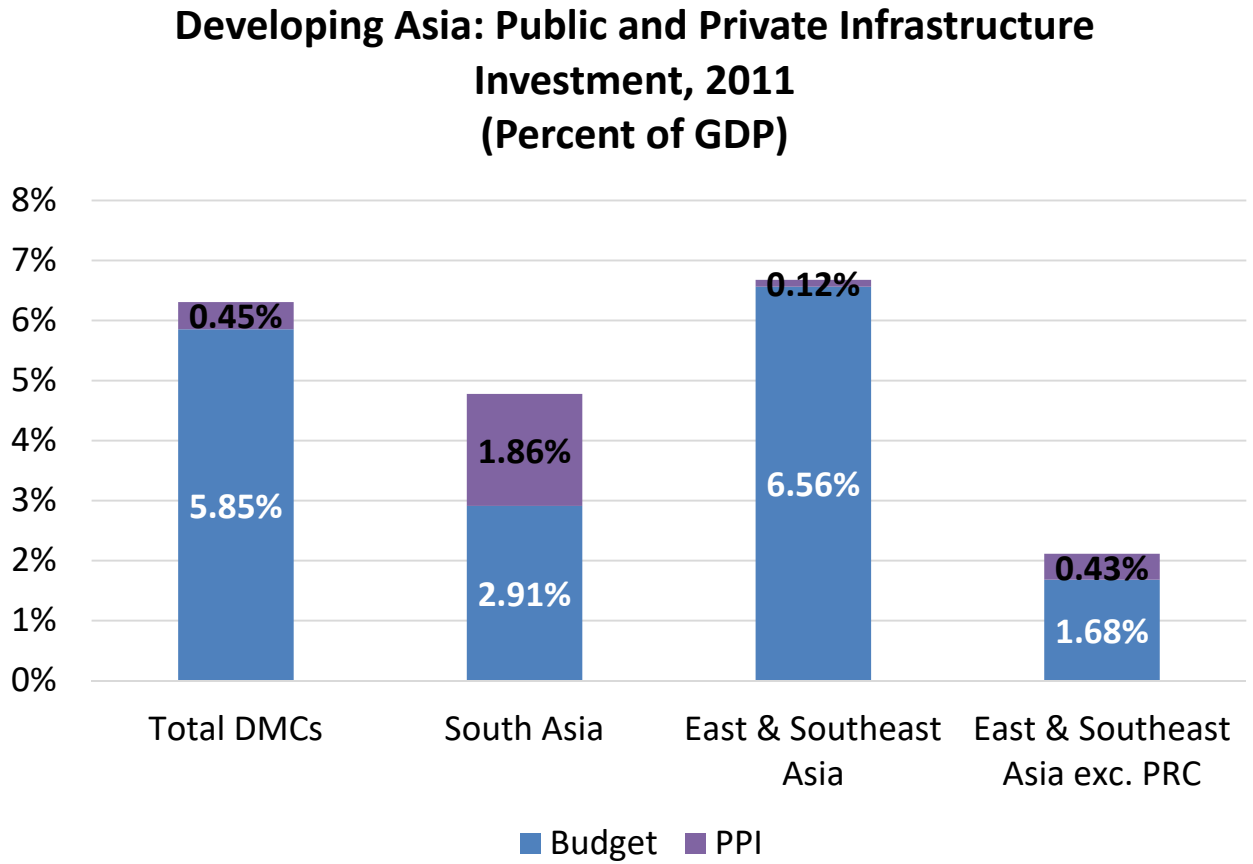




Source: ADB, *Infrastructure for a Seamless Asia*, 2009; ADB's estimates (Asia ex-Japan, all data in 2008 US$)

Infrastructure Investment in Developing Asia





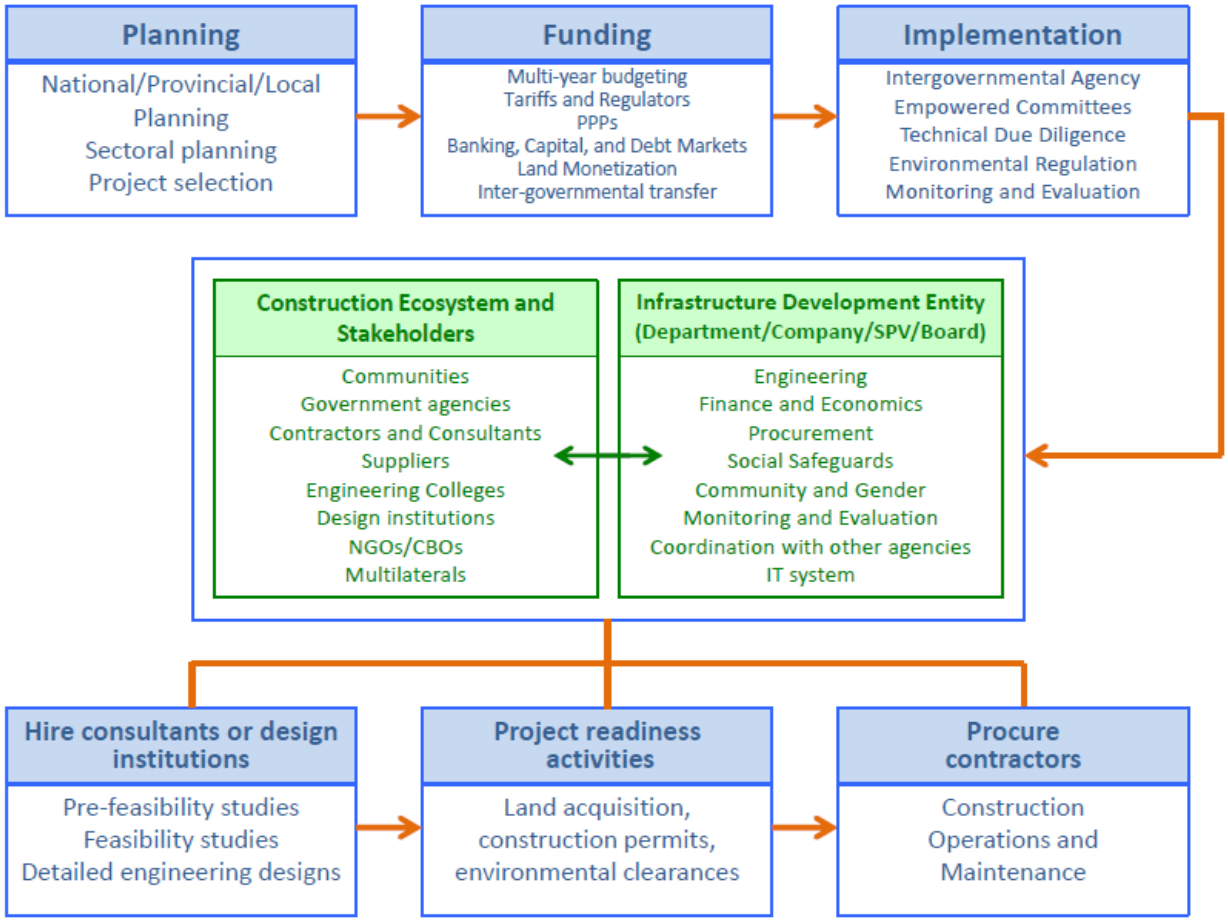
Notes: Total DMCs includes Armenia, Bangladesh, Bhutan, Fiji, Georgia, India, Indonesia, Malaysia, Maldives, Mongolia, Nepal, Pakistan, Philippines, PRC, Singapore, Sri Lanka, Thailand, and Viet Nam. South Asia includes Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka. East & Southeast Asia includes Indonesia, Malaysia, Mongolia, Philippines, PRC, Thailand, and Viet Nam. Public is obtained from Government Budget; Private is obtained from PPI, covering projects with at least 50 percent of private financing. Government Budget data are authors' calculations based on national budget for expenditures from national sources. PPI data from World Bank PPI database. Current GDP in LCU and in US $ from World Bank WDI database.

Sources: World Bank Private Participation in Infrastructure (PPI) Database; country budget offices; staff calculations.

Scope to Expand Fiscal Space for Infrastructure Investments

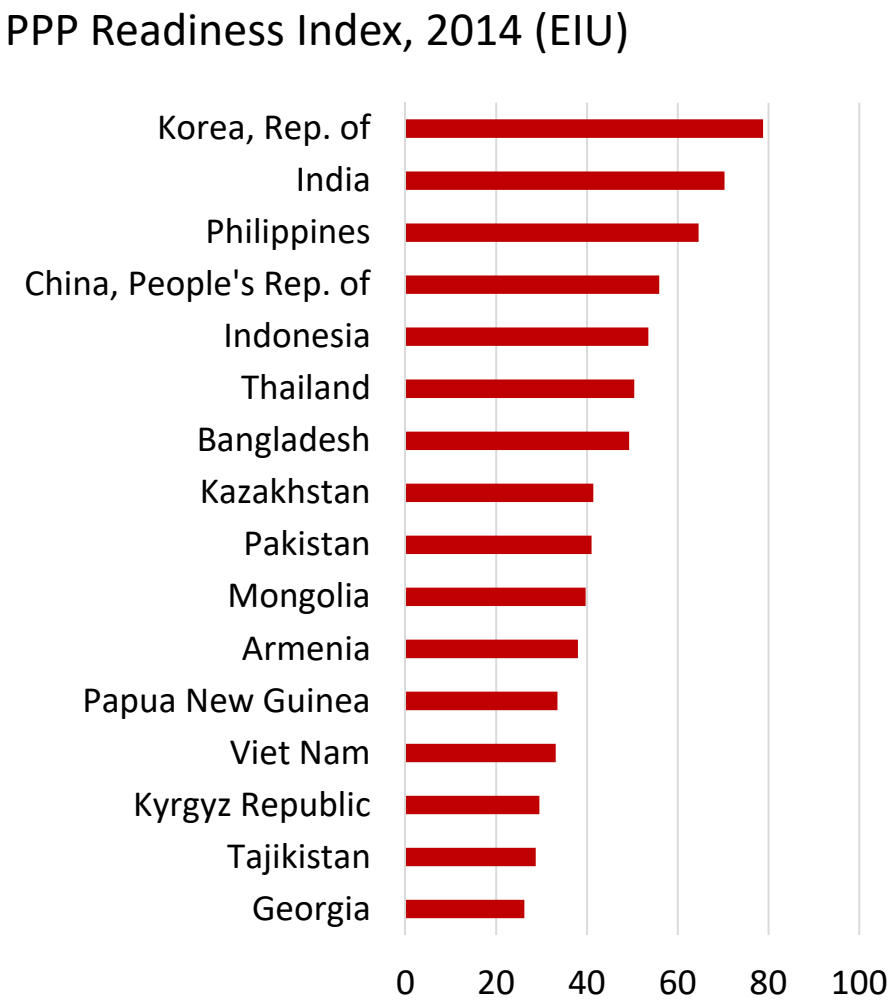
- Depending on country circumstances, several possibilities are available:
  - Increase government revenues through tax and other reforms
  - Reorient public spending toward infrastructure
  - Expand spending while keeping public debt sustainable
- Other issues:
  - User charges
  - Land value capture

…Scope to Improve Planning and Implementation of Projects



…Scope to Improve Regulatory and Institutional Framework to Attract Private Participation

- Identified pipeline of well-prepared projects
- Fair return for risk taken
- Parties able to manage construction and O&M risks
- Investment grade contractual agreements
- Enforceable dispute resolution
- Regulator that ensures competition and rational user charges
- Deepen capital markets



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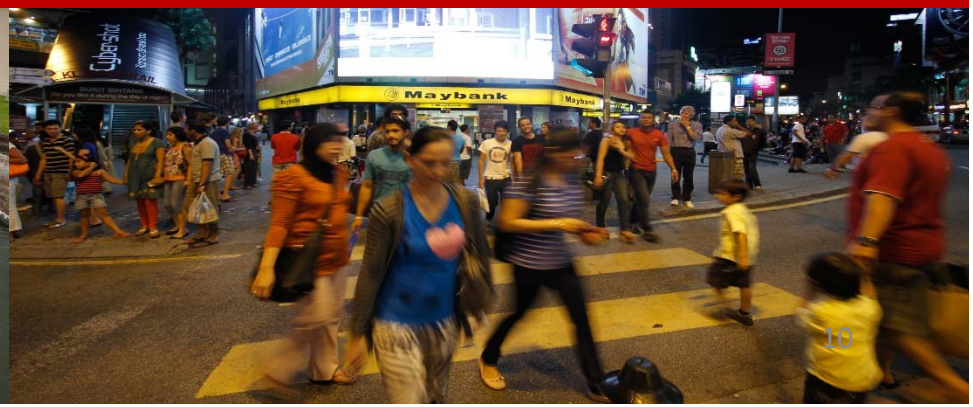
Managing Urban Infrastructure Needs



Urbanization: A Snapshot

- More than 80 percent of **global GDP** is generated in cities, creating significant jobs and tax revenue.
- Cities also consume two-thirds of the **world's energy** and account for more than 70% of **global greenhouse gas emissions**.
- Cities are key in tackling climate change and generating jobs!

Source: ADB staff estimates based on UN-Habitat. 2016. State of the World's Cities 2016: Urbanization and Development. Nairobi.

Urbanization in Asia

Projected urbanization rates for selected Asian countries

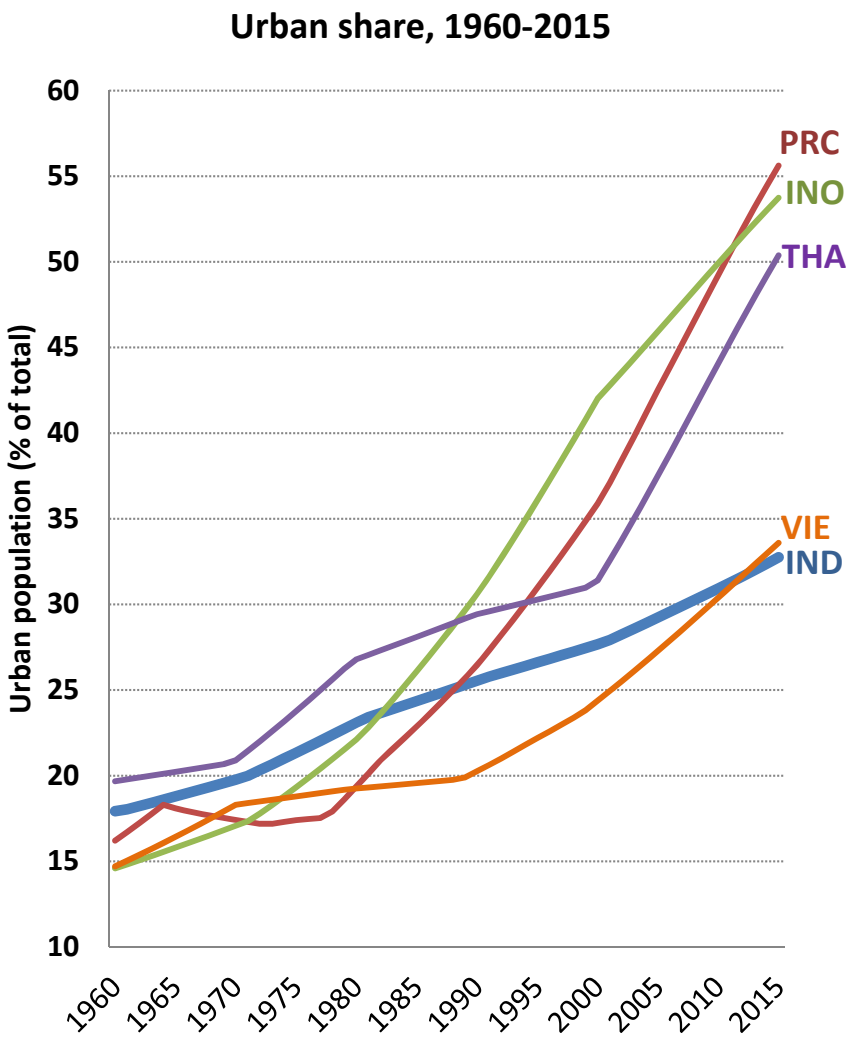
	Urban Population (thousands)		Urbanization Rate (%)	
	2030	2050	2030	2050
PRC	998,925	1,049,948	68.7	75.8
India	583,038	814,399	39.5	50.3
Brunei Darussalam	403	458	80.7	84.0
Cambodia	4,900	8,167	25.6	36.2
Indonesia	184,912	227,770	63.0	70.9
Lao PDR	4,479	6,435	50.9	60.8
Malaysia	30,182	36,163	81.9	85.9
Myanmar	25,095	32,206	42.8	54.9
Philippines	59,220	88,381	46.3	56.3
Singapore	6,578	7,065	100.0	100.0
Thailand	43,135	44,335	63.9	71.8
Timor-Leste	638	1,007	41.0	48.3
Viet Nam	43,743	55,739	43.0	53.8

Source: World Urbanization Prospects: The 2014 Revision

- Greater urbanization will increase the demand for key infrastructure in areas such as transport, water and sanitation, power, and telecoms.

The Indian Context

- Urban population share of 31.2% in 2011 and comparatively low
- Ahluwalia et al (2014):
  - Urbanization has been slow and largely unplanned
  - Underinvestment in urban infrastructure and public service delivery
  - These are taking a toll on urban agglomerations' ability to play their "engine of growth and prosperity" function



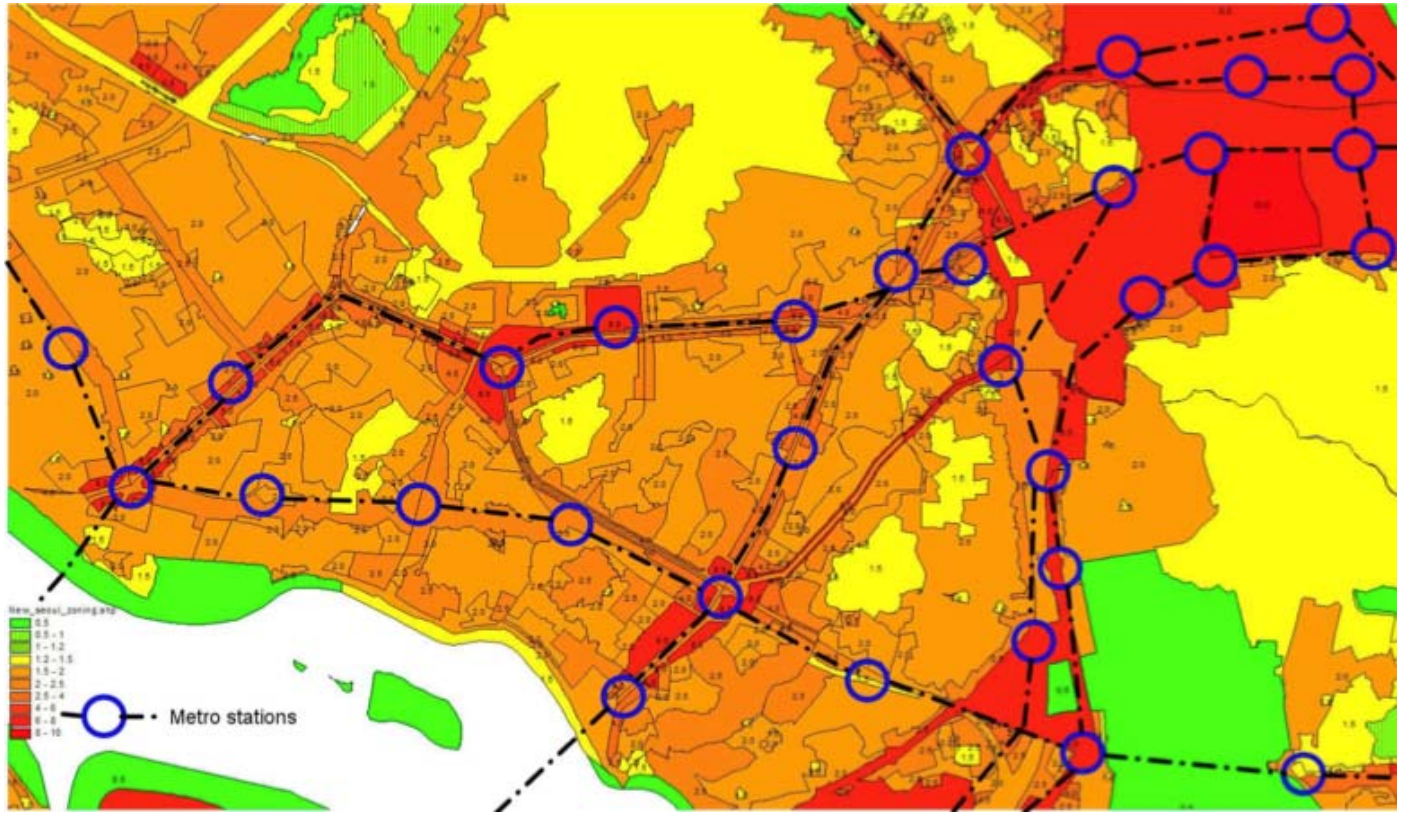
Source: World Development Indicators Database.

Securing the Gains from Urbanization

- Funding and financing issues are critical
- But, urbanization itself must be underpinned by:
  - Integrated land policy
  - Improved connectivity
  - Improved delivery of infrastructure services
  - Coordinated economic and spatial planning

Coordinated Planning

Seoul: variations in FSI are linked to the location of metro stations and to the network of main streets



Source: Bertaud (2008)

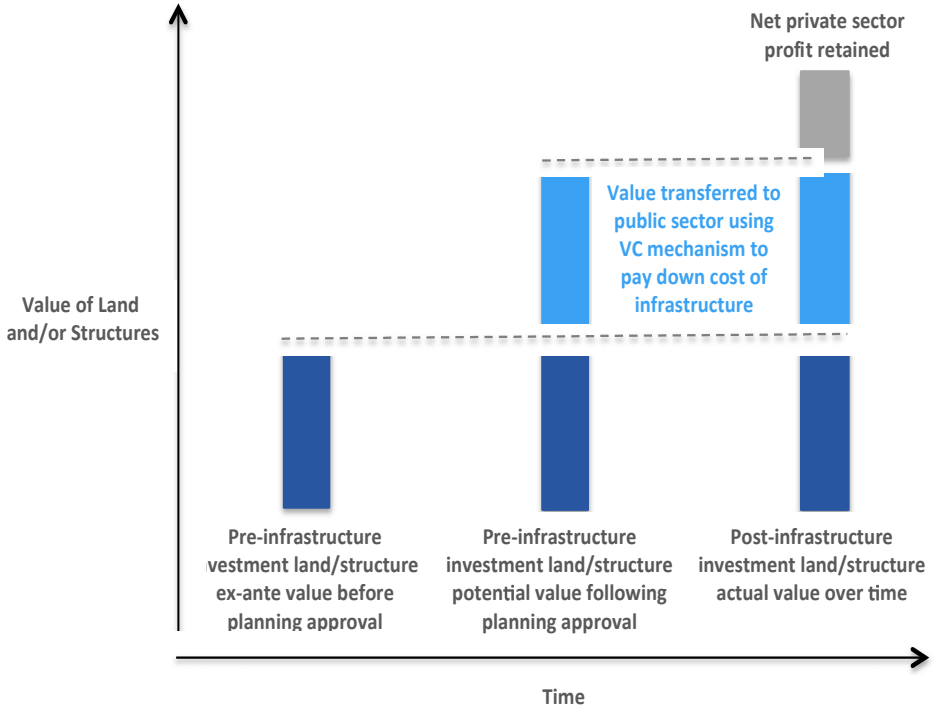
Challenge: Translate Revenue Flows into Finance for Urban Infrastructure

TAXES	GRANTS	USER CHARGES	LEASE INCOME
Property taxes License fees Entertainment tax Sales tax, etc.	From national, provincial, or state governments	Water Sewerage and drainage Tolls Fares, etc.	Lease rental from land Lease rental from markets Lease rental from projects, etc.

Source: KPMG Analysis, Linking Cities to Finance: Overcoming Bottlenecks to Financing Strategic Urban Infrastructure Investments

Underutilized Source of Funds: Land Value Capture?

Land value capture monetizes the expected land appreciation from infrastructure investments.



Source: *Accelerating Infrastructure Delivery: New Evidence from International Finance Institutions*, World Economic Forum (2014).

Infrastructure funding in urban India

- Primary sources of funding for infrastructure:
  - Annuity
  - User charges or tariffs
  - Land value capture or land monetization
- Infrastructure funding faces significant challenges:
  - Inadequate revenue sources for cities
  - Unpredictable nature of state transfers
  - Extremely low user charges/tariffs
  - Land value capture promising, but most opportunities lie outside cities' jurisdiction

Areas of reform and way forward

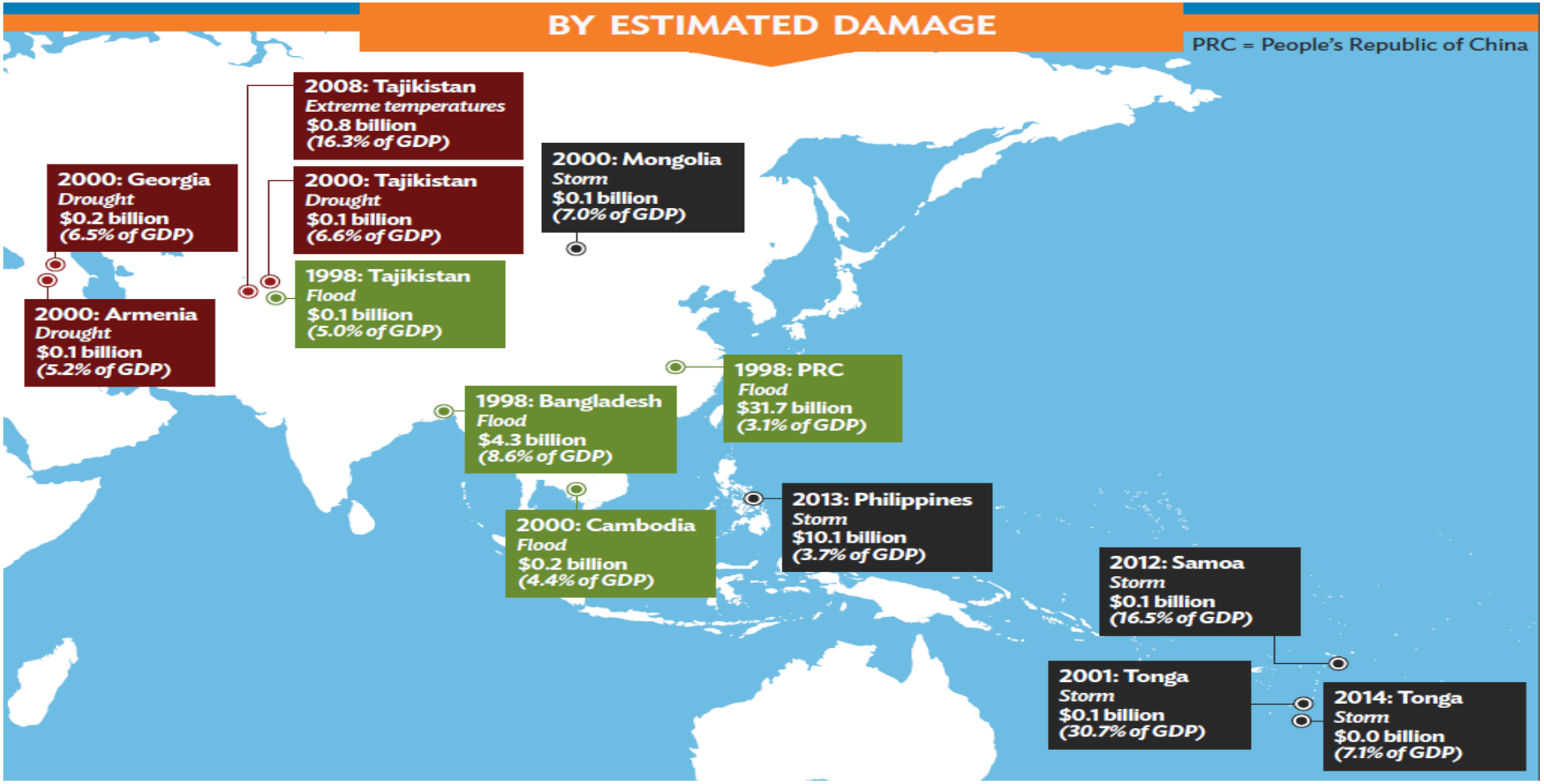
- Improving the sources of infrastructure funding will entail hard reforms such as:
  - Increasing user charges through better targeting of subsidies
  - Implementing rule-based revenue transfers from states to cities
  - Improving cities' revenue sources
- Moving forward, the following principles need to be considered:
  - Keep the cost of borrowing competitive.
  - Keep it simple: avoid the project finance route for now.
  - Keep it local: work with local banks on financing.
  - Reduce financial intermediation.

Thank you!

The Challenge of Sustainability

Risks from Climate Change Are Evident

Recent significant disasters



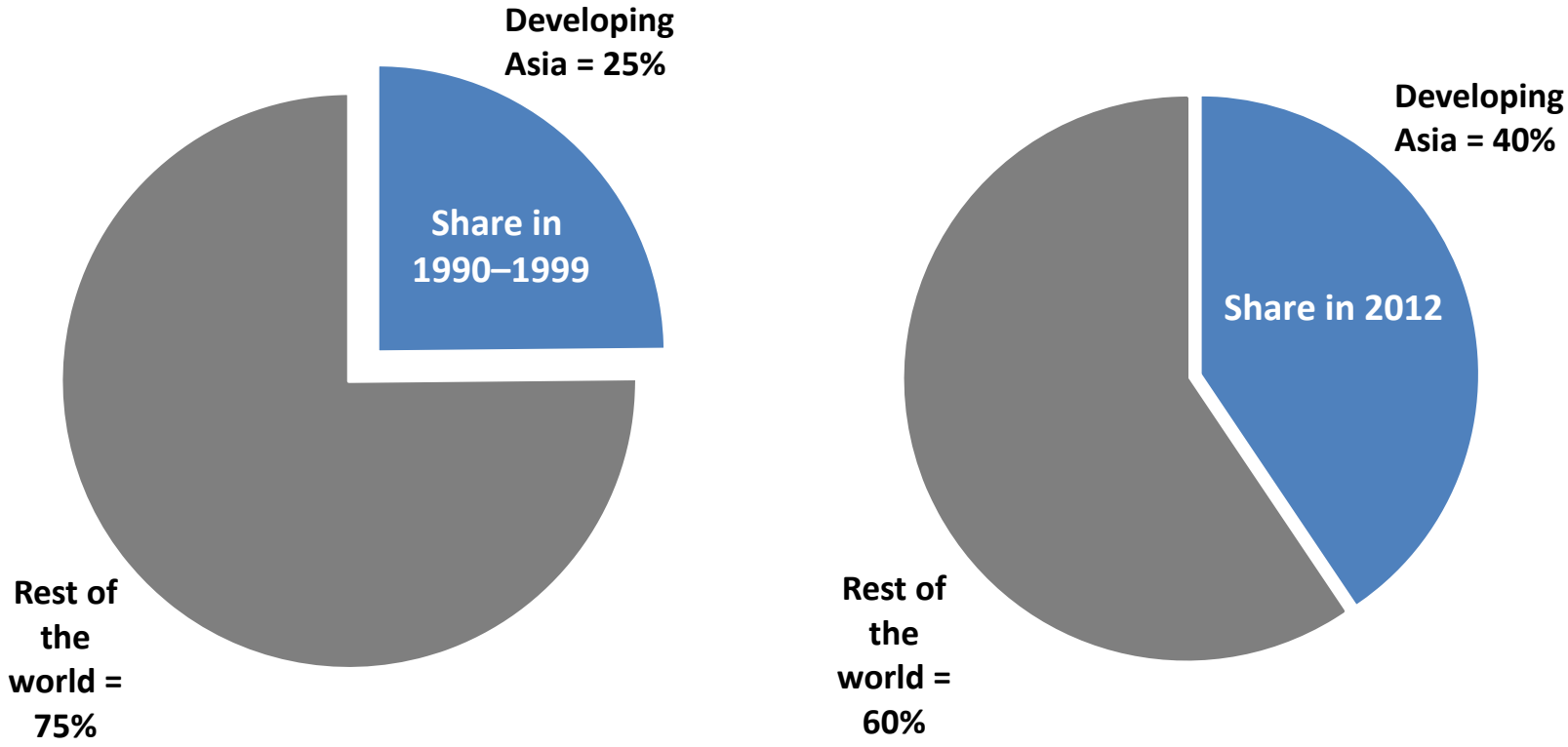
Source: ADB. 2016. Asian Development Outlook Update.

A 2-fold Role for Infrastructure

1. Adaptation: Managing risks
   - To infrastructure
     - Evaluate designs against worst-case scenarios
     - Seek robust rather than “optimal” designs
     - Build back better after disasters
     - Design for “safe-to-fail”
   - Through infrastructure
     - Flood protection, irrigation, coastal protection
2. Mitigating the effects of climate change…

Asia Is Critical to Achieving the 2°C Goal

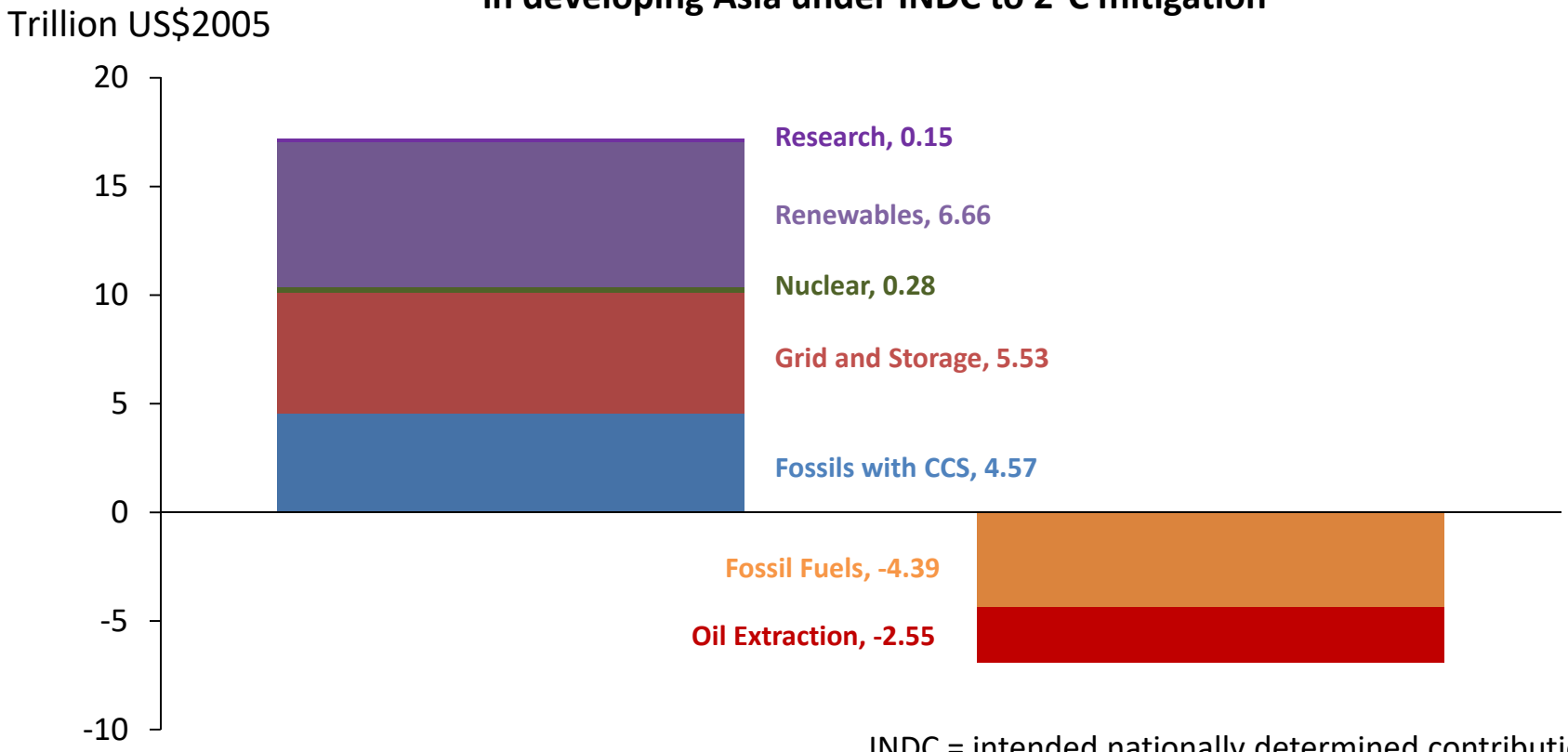
Developing Asia's share in global greenhouse gas emissions



Source: ADB. 2016. Asian Development Outlook Update.

Substantial Investment Needed for Energy Transition

Additional 2015–2050 energy supply investments in developing Asia under INDC to 2°C mitigation



INDC = intended nationally determined contribution

Additional $300 billion per year to 2050

Source: ADB. 2016. Asian Development Outlook Update and Reis et al., 2016

The Joint Challenges of Infrastructure Funding and Financing

- Infrastructure funding
  - commonly refers to the revenues collected over the life of the project, which are then used to pay for the costs of the infrastructure
- Infrastructure financing
  - turns the revenue inflows into financial capital which can be used to construct and develop the infrastructure
  - Without predictable sources of funding, financing infrastructure will be difficult.

Source: World Economic Forum (2014)

Types of value capture instruments

One-time charges on land value gains	Long-term revenue sources
Land value tax	Tax increment financing
Betterment tax	Special or benefit assessment districts
Project-related land sales	Land asset management
Negotiated exactions	Air rights
Development impact fees	Transportation utility fees
Joint development or PPPs	

Source: *Accelerating Infrastructure Delivery: Evidence from International Finance Institutions*, World Economic Forum (2014).

Infrastructure financing in urban India

- Existing players in the infrastructure financing sector are able to:
  - Provide short-term loan products to high investment grade borrowers
  - Provide short-term but relatively high cost loans to investment grade borrowers
  - Invest in bonds of high investment grade borrowers
  - Finance projects with private sector participation
- A clear gap exists in terms of providing a cost-competitive, long tenure loan product for low investment grade borrowers.