

The ADB and Asia's Cities in the 21st Century

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Overview

Issues for Asia's Cities

ADB's Initiatives and Projects

Financing Infrastructure to Address Climate Change

Roadmap suggestions

Asia's Urban Challenge

Cities on average provide 80% of the economic base – but as much of the noise and environmental impact including contamination of air and water.

Large disparities have emerged as poverty has urbanized – over 200 million people live in poverty in Asia's cities

and many more are vulnerable to economic and environmental shocks.

Managing cities in this context requires a new approach:
> New forms of engagement
> New forms of finance and
> The flexibility to adapt to the circumstances of each city

Sector Trends and Conditions

KEY ASIA URBANIZATION INDICATORS



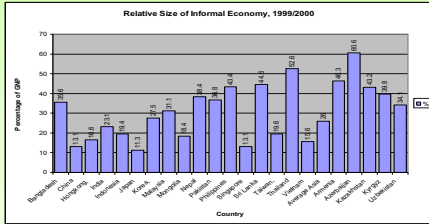
- ✉ Asia accounts for:
 - 60% of the world's population
 - 46% of its urban residents
 - 59% of world urban population increase 1980-1994

- ✉ Asia's level of urbanization – 3% annual growth
 - 27% in 1980 - 38% in 2000 - 50% in 2020
- ✉ Rural urban migration accounts for 40% of Asia's urbanization
- ✉ Number of megacities of 10 million or more population:
 - World: 17 in 2008 - 27 in 2015
 - Asia : 12 in 2008 - 18 in 2015

Informal Economic Giants

City	Country	Population '000s 2005	Economic Product \$m 2004
Shanghai	China	12,665	89,980
Mumbai	India	18,336	83,528
Jakarta	Indonesia	13,194	24,592
Manila	Philippines	10,677	32,277
Bangkok	Thailand	6,604	63,088
Tokyo	Japan	35,327	740,000
	Sweden	8,855	255,400
	Denmark	5,300	174,400
	Cambodia	13,107	26,990
	Bangladesh	136,600	56,600

Megacities are nation-sized in population and economic product



But they contain a large informal economy

Climate Change Background and Challenges

City Region Economies and the Energy System

- Cities use about 85% of energy and generate about 75% of GHGs to produce almost 80 % of the GDP
- CO₂-emissions are per capita in many third world cities as high as in cities of the western hemisphere

Asian Cities

- show an enormous population growth (average 3 %/a) compounding their global impact
- are especially vulnerable to climate change

Rise in pollution and sea levels puts trillions in economic output and hundreds of millions of people at risk



Urgent need for efficiency gains, reduction in pollution and GHGs and integrated planning for adaptation



Urban Management Issues – the need for systemic approaches

Management Issues

- Economic planning and linkage to infrastructure insufficient given the importance of cities
- Planning for efficient city form
 - largely non-existent and not enforced
- Pollution legislation largely in place
 - not enforced
- Incentives for energy efficiency
 - not in place
- Poverty issues insufficiently addressed leading to glaring inequalities and contrasts in wealth

Few global incentives for global public goods

- no incentives for developing megacities to change investment patterns and consumption behavior

Capacity to handle these issues is inadequate

Environmental Management Issues – Integrated approaches needed

Mitigation

Asian cities will contribute over half the GHG increment over the next 20 years

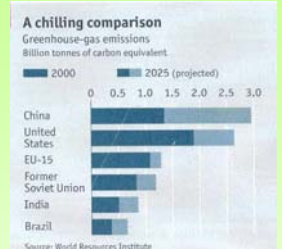
Global Environment (GHGs) Issues

- Public transport
- City form and car usage
- Energy inefficient buildings
- Solid waste/ methane generation
- Industry-specific mitigation activity

Adaptation

Asian cities are predominantly on the coast and on large rivers

- Flood protection
- Storm surge/ sea rise proofing
- Food supply assurance



Example: Tianjin Eco-city integrated transport and land use

Green Transportation

An efficient and easily accessible public transport system focusing on 'Green trips', which include public transportation, cycling and walking. The target is for at least 90 per cent of the trips within the Eco-city to be via walking, cycling or use of public transport.



Use of Clean, Renewable Energy and Ecologically Friendly Waste Management

Particular emphasis on the "3Rs" of waste management - Reduce, Reuse and Recycle.



Balance of Economic and Social needs - Preservation of Heritage

Conservation through adaptive reuse or partial rebuilding.



ADB's Response under Strategy 2020

Addressing the core management issues

- Planning and supplying infrastructure for inclusive economic development
- Developing and implementing environmental infrastructure
- Pro-poor interventions in basic infrastructure and slum upgrading

Main Responses under Strategy 2020

- Urban infrastructure for climate change mitigation and adaptation
- Livable cities

City Cluster Development - understanding environmental /energy implications of development patterns

Process:



Clusters in the Delhi Metro

Manufacturing concentration - DMA

	NCT	Gurgaon	Fridabad	Sonapat	Schaziabad
Food Products, beverages & Tobacco Products	low	low	low	low	low
Textiles	high	low	low	low	low
Leather & leather products	low	low	medium	low	low
Basic Chemical & chemical products	low	low	low	medium	high
Rubber/plastic, petroleum and coal pdts	low	high	high	low	medium
Other non-metallic mineral pdts	low	high	low	high	low
Basic metals & metal products	medium	low	high	low	high
Machinery & Equipment	high	high	high	high	high
Transport equipment & parts	high	high	high	high	high
Other manufacturing industries	low	medium	high	high	medium

ADB's Urban Poverty Reduction Initiatives

- local environmental infrastructure and vulnerability

Social issues are both integral to addressing economic and environmental problems and are badly impacted these problems:

- In respect of environment, poor water supply and sanitation are the major cause health problems in many cities, and the poor are most vulnerable to climate change impacts, but community collaboration is essential

There are two key areas of focus for urban managers in respect of social development:

- Develop local basic physical and social infrastructure such as schools and health facilities efficiently and target subsidies on the poor, and
- Provide low income and vulnerable groups with the means to start enterprises and to link to employment opportunities in growing urban economies

STEP-UP in Philippines

Strategic Private Sector Partnerships for Urban Poverty Reduction (STEP-UP) in Metro Manila, Philippines

STEP-UP is important for Government's response to urban poverty. Implemented by the Philippine Business for Social Progress, an NGO supported by the CSR contributions, the project had 3 components:

- strategic partnership building, focused on coalescing three groups deemed critical to urban poverty reduction: business; local government and the homeowners associations

- housing improvement; microenterprise support; upgrading of community infrastructure (roads, drainage, water supply, multipurpose centers, and access to health/ sanitation)

- risk reduction and management issues relating to natural and artificial disasters.



Environmental Management

Key projects

(structured with Carbon Fund, GEF and/or bilateral grant assistance).

- **public transport**
integrated approaches including non-motorized transport
- **solid waste**
include established formal and informal groups where possible in new investments in collection, transport of waste, recycling and disposal. involve communities affected by waste water treatment investments
- **energy conservation**
encourage local government to provide incentives for the adoption of appropriate technologies to conserve energy and, where appropriate, generate it.
- **sanitation**
adopt appropriate sanitation technologies, involve communities affected by waste water treatment investments

Songhua Basin Improvement in China

Progressively Deepening Engagement

The Songhua River Basin (SRB) is the third largest river basin in the People's Republic of China (PRC) after the Yangtze and Yellow river basins.

Contains a number of known and suspected pollutants.

Classified as a class IV body of water (unsuitable for domestic water sources) falling to class V in the low-flow winter season

ADB provided technical assistance (TA) for planning and building capacity in water quality and pollution control in the Songhua river basin.

The \$100 million Jilin Water Supply and Sewerage Development Project (2005) was the first major ADB investment to directly address pollution control issues in the SRB. The Jilin Urban Environmental improvement Project (2007) of \$100 million followed. The \$200 million Songhua River Basin Water Pollution Control and Management Project (2008) is now under Implementation.



Vientiane Urban Infrastructure

– Participation in Action

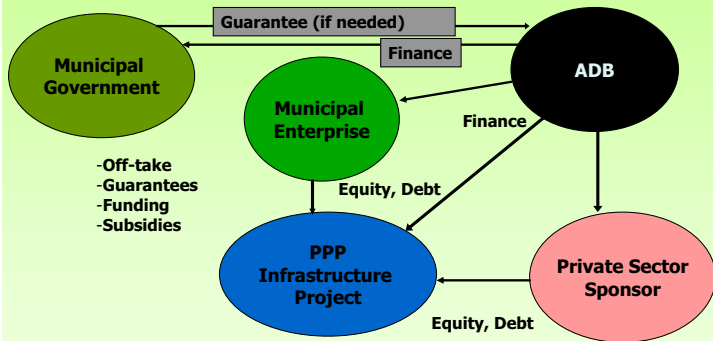
The \$37 million Vientiane Urban Infrastructure Services Project supported decentralization, strengthened urban governance and management, and provided sustainable urban services.

The project funded investments in roads, in drainage and flood protection facilities, and in solid waste collection and disposal services.

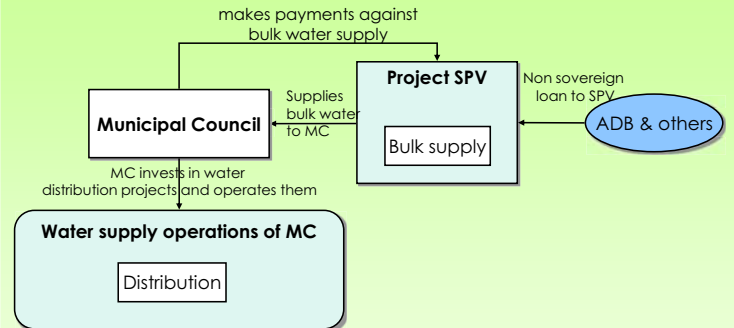
For these improvements to be sustainable, it was imperative that the community support operation and maintenance. For this reason, the project focused on community participation in project planning, design, and implementation, and on strengthening the local government in this process.



ADB Financing Options - Subsovereign



Preferred Option for Nagpur Water Supply



Capital Markets and Environmental Infrastructure

Asia's capital markets are highly liquid, but short term:

- Asia has high levels of savings, banks and other financial institutions have money, BUT investments tend to be short term
- With no clear regulatory structure – high transaction costs
- Limited mechanisms to encourage institutions holding long term funds, such as pension funds and life insurance companies, to invest in infrastructure
- Lack of mechanisms for public sector debt finance and for public/private Special Purpose Vehicles
- Issues of inter-jurisdictional coordination make project formulation and structuring difficult

Developed country pension funds and life insurance companies are highly liquid and seek long term investments, BUT they are highly risk averse and have unrealistic expectations of returns

Thus the capital markets need support to fund the required investments
– ADB has several windows

ADB's Existing Initiatives

Mitigation	Adaptation	Both
Clean Energy Financing Partnership Facility (\$95 m)	Small Grants for Promoting Climate Change Adaptation (\$1.2 m)	Climate Change Fund (\$40 m)
Carbon Market Initiative Funds • Asia-Pacific Carbon Fund (\$151 m) • Future Carbon Fund (target \$200 m)	Water Financing Partnership Facility (target \$65 m, including adaptation)	
	Poverty and Environment Fund (\$3.6 m, including adaptation)	

Climate Initiatives Globally

Mitigation	Adaptation	Both
Global Environment Facility (GEF) Climate Change Focal Area (\$250 m/ year)	Least Developed Countries Fund (GEF as administrator) (\$189 m)	Special Climate Change Fund (GEF as administrator) (adaptation priority, target \$75 m; mitigation, target \$15 m)
Clean Technology Fund of the Climate Investment Funds (WB as Trustee) (target \$5 b)	Strategic Priority on Adaptation (part of GEF Trust Fund) (\$50 m)	Strategic Climate Fund of the Climate Investment Funds (WB Trustee) Target: - Pilot Program for Climate Resilience \$500 m - Forest Investment Prog. \$500 m - Greening Energy Access \$500 m
	Adaptation Fund (GEF as administrator in cooperation with UNFCCC Secretariat) (\$100 m by 2009)	

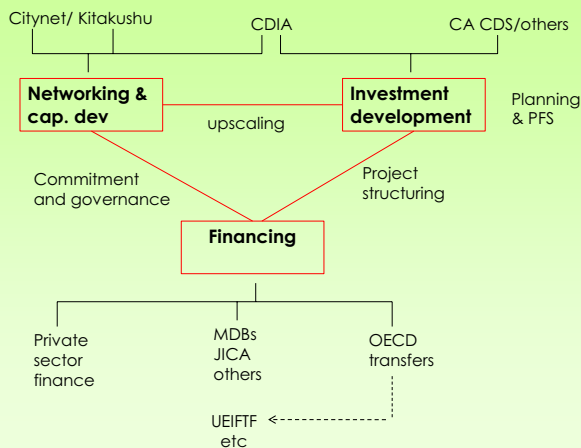
Systemic change – what is it then?

Key actions

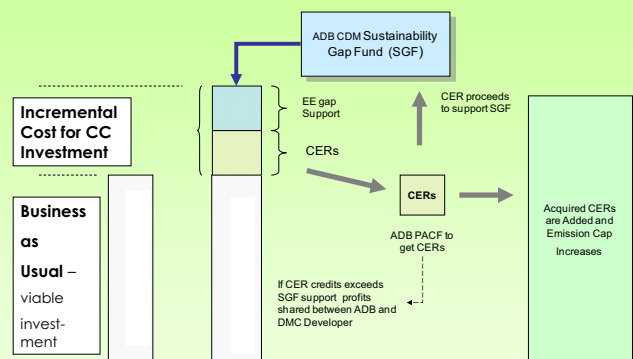
1. Knowledge management, planning capacity and networking > includes development of accessible, flexible 'approved methodologies', monitoring frameworks etc.
2. More concessional finance available to developing cities to bridge current levels of carbon credits and investment cost for climate friendly infrastructure eg busways – a 'sustainability gap' financing mechanism is needed – ADB piloting with Urban Environmental Infrastructure Trust Fund
3. Improved investment formulation capacity to link plans to finance – current initiatives such as Cities Development Initiative for Asia enhanced and upscaled

Link actions to organizations and funds flows

So what is the System?



Urban Environmental Infrastructure Trust Fund - addressing Sustainability Gap issues





Scope and Approach of the Cities Development Initiative for Asia

- Assist cities in ADB's DMCs linking them and their investment proposals to investment financiers – both local and international, both public and private
- Project prioritization and prefeasibility assistance
- Demand-driven (application based) and flexible approach
- Start with pilot cities in the ADB region, scale up to 25 by end 2009
- Currently in 22 cities in 15 countries with pipeline of \$4 billion in environmental infrastructure

An example: solid waste for Philippines and Pakistan > Recycle and Reuse



Waste resources dumped in landfill.

Potential for recycling and co-generation

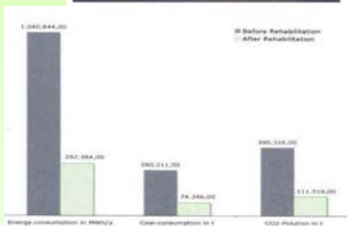
The Savings
– energy, coal and CO2

The Financing
– ADB/CDM, JICA? and local banks



An example: energy savings for Mongolian housing > Retrofitting the Mega City

The Building – before and after



The Savings
– energy, coal and CO2
– ability to close one out of three power plants

The Financing
– ADB/CDM, KfW and local banks

Thank You