

A Conceptual Framework for Sustainable Urban Development





An Implementation Framework for Sustainable Urban Development





Asia's Urban Challenge

Cities provide up to 80% of the economic base

— but 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.

Addressing the needs of these cities requires:

- > New forms of engagement
 - > New forms of finance and
- > The flexibility to adapt to the circumstances of each community



Asia's Surging Cities

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		Population (Thousands)
1	Tokyo	35,676
2	Mexico City	19,028
3	New York-Newark	19,040
4	São Paulo	18,845
5	Mumbai	18,978
6	Delhi	15,926
7	Shanghai	14,987
8	Kolkata	14,787
9	Buenos Aires	12,795
10	Dhaka	13,485
11	Los Angeles-Long Beach-Santa Ana	12,500
12	Karachi	12,130
13	Rio de Janeiro	11,748
14	Osaka-Kobe	11,294
15	Cairo	11,893
16	Beijing	11,106
17	Manila	11,100
18	Moscow	10,452
19	Istanbul	10,061

: Cities located near a large water body (sea, river or delta)

Source: UN-HABITAT 2008

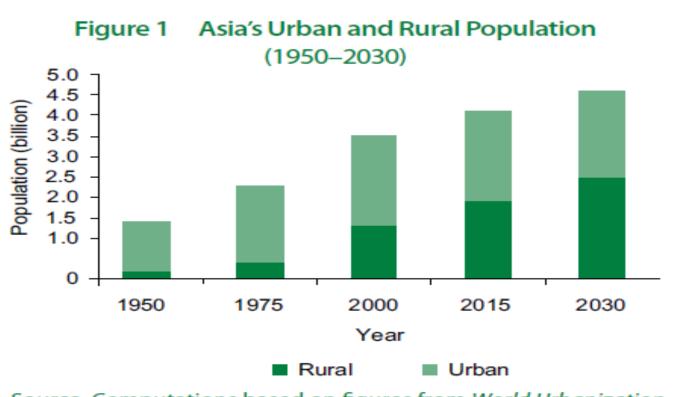
2025

		D 1.1 27
		Population (Thousands)
1	Tokyo	36,400
2	Mumbai	26,385
3	Delhi	22,498
4	Dhaka	22,015
5	São Paulo	21,428
6	Mexico City	21,009
7	New York-Newark	20,628
8	Kolkata	20,560
9	Shanghai	19,412
10	Karachi	19,095
11	Kinshasa	16,762
12	Lagos	15,796
13	Cairo	15,561
14	Manila	14,808
15	Beijing	14,545
16	Buenos Aires	13,768
17	Los Angeles-Long Beach-Santa Ana	13,672
18	Rio de Janeiro	13,413
19	Jakarta	12,363
20	Istanbul	12,102
21	Guangzhou, Guangdong	11,835
22	Osaka-Kobe	11,368
23	Moscow	10,526
24	Lahore	10,512
25	Shenzhen	10,196
26	Chennai	10,129

: New megacities



The Scale of Urbanization

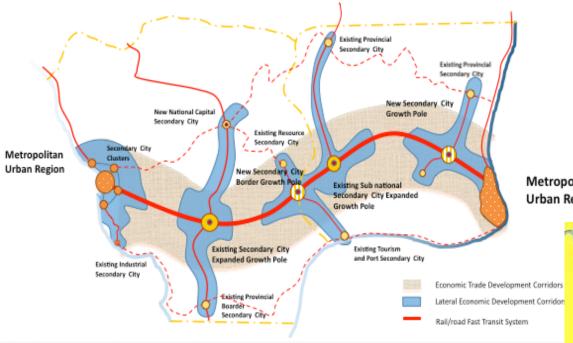


Source: Computations based on figures from World Urbanization Prospects: The 2003 Revision. United Nations. 2004.

- ♦ This means 44 million more people every year: 120,000 each day
- ♦ Requiring over 20,000 new dwellings, 250 km of new roads and more than 6 megalitres of potable water EACH DAY.



Mega Trends - the rise of the urban region



Metropolitan **Urban Region**







Asia's Urban Environmental Challenges

City Region Economies and the climate issues

 Cities use about 85% of energy and generate about 75% of GHGs to produce about 80 % of the GDP – over half the global BAU increment will come from Asia's cities

• CO₂-emissions are per capita in many third world cities as high as in cities of high

income countries and pollution is much worse

Asian Cities

• show an enormous population growth (average 3 %/a) compounding their global environmental 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



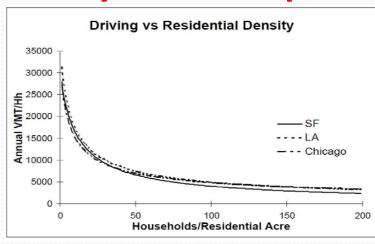
Urgent need for efficiency gains, reduction in pollution and GHGs and integrated planning for adaptation and mitigation

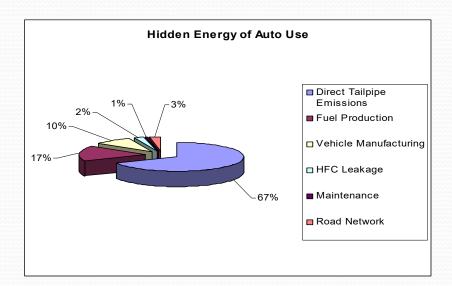


Metro Manila

Cities and Climate Change: Density and Transport

The association between density and energy use is striking transportation fuel consumption per capita declines by one-half to two-thirds as urban densities rise from 16 to 48 persons per hectare.





Canadian research shows that fuel production, vehicle manufacturing, vehicle maintenance, road construction and maintenance, and leakage of refrigerants, account for fully half again the emissions of tailpipes.

The problem is that Asian cities are becoming LESS dense and car dependent – rapidly (World Bank - Angel)



Urban Economic Giants

- Agglomeration economies ever more important

City	Country			City Population - mill 2012		Percentage National GDP
Shanghai	China	1360.8	8358.4	18.6	516.5	6.18%
Mumbai	India	1239.8	1841.7	21.9	227.0	12.33%
Jakarta	Indonesia	249.9	878.0	19.2	224.7	25.59%
Manila	Philippines	99.1	250.3	20.7	153.7	61.41%
Bangkok	Thailand	65.9	365.6	10.1	262.4	71.77%
Tokyo	Japan	127.2	5959.7	37.7	1520.0	25.50%
Sydney	Australia	23.4	1520.6	4.C	203.0	13.35%
	Denmark	5.6	314.2		Re	elative Size of Informal

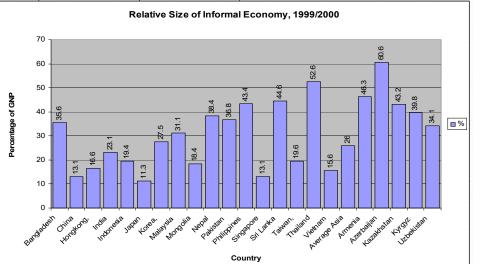
115.6

152.5

Megacities are nation-sized in population and economic product

Bangladesh







What Cities Can Do for Inclusive, Resilient 'Planet Positive' Growth?

- ♦ Local land use and transport. City land use and public and private transportation planning decisions directly influence whether all citizens and businesses will have mobility choices that allow them to save energy and money.
- ♦ Building construction and energy efficiency. Through zoning codes, infrastructure provision, building codes and the permitting process, cities can encourage building designs that are affordable, save energy and resources.
- ♦ Local economic activity. City initiatives can encourage, and catalyze, inclusive economic development in low-energy, zero-carbon directions, by both incentive and example.



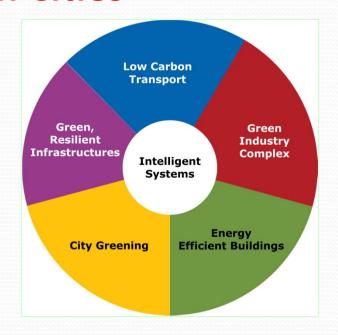




Investments for Green Cities

Sample Investments are:

- **☑** Low Carbon Transport
- **☑** City Greening (park, etc)
- **☑** Green, Resilient Infrastructure
- **☑** Eco-industrial Complexes
- **☑** Energy Efficient Buildings
- **☑** E-governance systems



What are the investment priorities for the urban environment?

What institutions do we need to make them happen?



Green Cities Example: Low Carbon Transport

Case study: Guangzhou Bus-Rapid Transit (BRT) system

- Integrated with metro system and other nonmotorized transport means
- o Integrated with surrounding buildings
- o Pedestrian-friendly and accessibility features
- Passenger information services







What About Poverty?





With growth and urbanization, poverty also urbanizes

- ♦ Over 240 million urban dwellers live on less than \$1/day in asia
- Poverty has income, access, and power dimensions
- ◆ The poor are most vulnerable to environmental problems and the effects of climate change
- ◆ The Asia-Pacific region remains host to over half of the world slum population: in 2010 this amounted to an estimated 505.5 million people of world slum population of 828 million people.
- > Vulnerability to Climate Change

Prevalence of slums in Asia's cities (% of urban population)





Investments in Inclusive Cities

Sample Investments are:

- ☑ Land development, housing and settlement upgrading
- **☑** Support to livelihood and commerce
- **☑** Local Transport links/non-motorized transport
- ☑ Community facilities (health, basic education
- **☑** Local infrastructure, eg., water, sanitation



What are the investment priorities for the urban social development?

What institutions are needed to implement these investments?



Inclusive Cities

Example: 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.





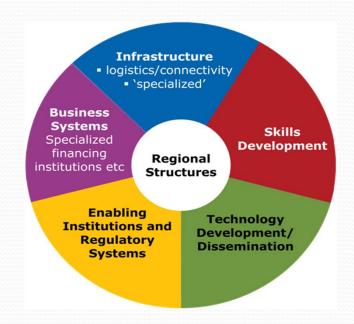
Competitive Cities – Growing a City's Assets



Investments for Urban Economic Infrastructure

Sample Investments are:

- **☑** Economic Infrastructure (eg. logistics)
- **☑** Skills Development
- **☑** Technology Development/
 Dissemination
- **☑** Enabling Institutions and regulatory systems
- **☑** Business systems (specialized financing institutions, etc)



What are the investment priorities for the urban economic infrastructure?

What institutions are needed to build such infrastructure?



Investments in Green and Inclusive Growth: 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.

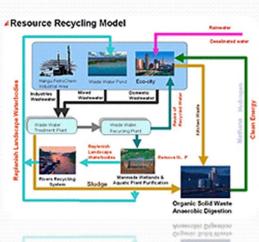
Use of Clean, Renewable Energy and Ecologically Friendly Waste Management Particular emphasis on the "3Rs" of waste management - Reduce, Reuse and Recycle.

Balance of Economic and Social needs

- Preservation of Heritage

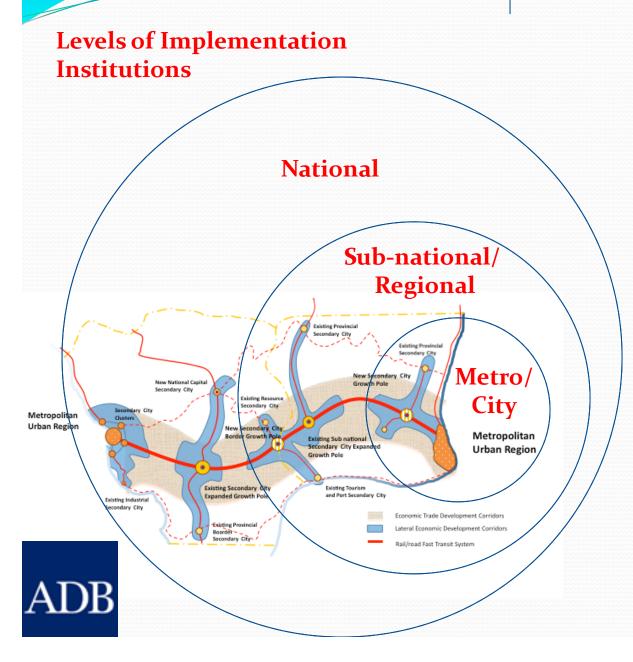
Conservation through adaptive reuse or partial rebuilding. Cross subsidy of low income housing. But needs incentive finance.







Needed: Integrated Multi-Level Implementation Framework



A best practice infrastructure framework:

- Policy and planning providing effective coordination across levels, sectors and jurisdictions
- Defines agency responsibilities and funding for project development and performance-based implementation
- Integrated with appropriate government and capital market financing mechanisms

Policy and Planning Practice

Framework needs to provide an enabling environment:

- Form of the strategy/ plan:
 - includes agency responsibilities
 - matches responsibilities with budget allocations
 - embody mechanisms for involving both the private sector and the community;
- Effective 'nesting' set of strategies/ plans:
 - national strategy complements strategies of other levels of government,
 - provides mechanisms to enhance collaboration between agencies in preparing strategies
- The cross-sectoral reach:
 - encompasses all types of infrastructure
- Guidance on implementation of other strategies through the strategy/ plan
- Effective linkages with other relevant strategies.

In addition to exhibiting these characteristics, best practice frameworks for planning:

- Are cross-jurisdictional in reach
- Are flexible, performance-based and responsive to changing circumstances
- Are enforced.



Project Development Practice

Framework needs to provide an enabling environment:

- **For small scale projects** which need:
 - An adequate planning context
 - An asset management plan identifying the investment and a budget for it
 - To be subject to cost benefit analysis.
- For large scale projects determining urban economic, social and/or environmental outcomes, which need:
 - Concepts developed in the context of comprehensive socio-economic assessments
 - Performance criteria developed so investment solutions are not predetermined
 - Prefeasibility studies done to assess investment options and potential implementation and financing structures
 - Feasibility study and due diligence processes which preserve the potential for options for innovative project solutions from contractors and financiers
 - Market sounding and bid preparation processes responsive to market conditions
 - Bid processes which are efficient and effective ensuring competition but providing incentives for physical and financial innovation
 - Transparent bid assessments based on defined performance criteria and including cost benefit analysis.



Thank You