



Climate Resilient Cities

A Primer on Reducing Vulnerabilities to Disasters

Urban Learning Days
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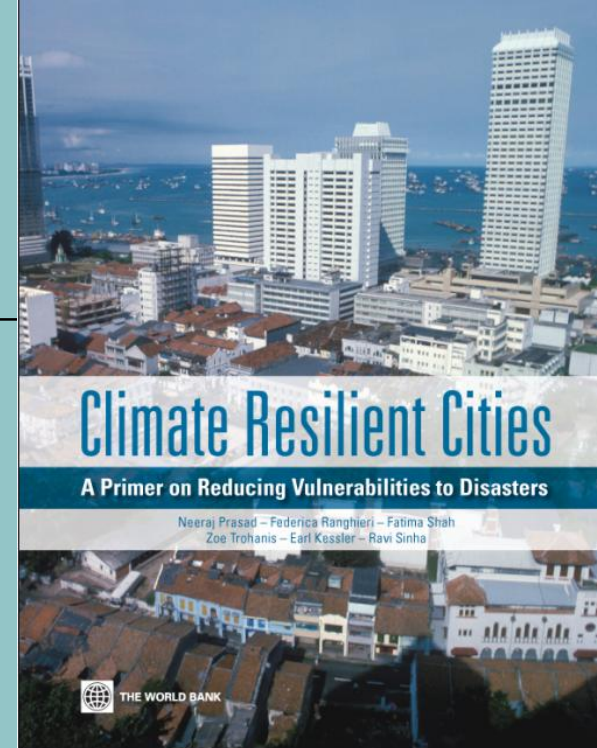
Overview of presentation

- What is the “Primer”?
- How relevant is it for East Asia?
- Sound practice lessons for “proofing”
- Getting started
- Using the Primer tools to go further
- Relevance to other regions
- Developing “local resilience action plans”
- Next steps

What is the “Primer”?

A **PRACTICAL** guide to help national and local government policymakers understand:

- impacts of climate change and natural disasters
- how to systematically take proactive actions in reducing vulnerabilities through mainstreaming resilience



CONSEQUENCES

SEA LEVEL

TEMPERATURE

PRECIPITATION

EXTREME EVENTS

AFFECTED SECTORS

WATER

ECOSYSTEMS

FOOD

COASTS

HEALTH

INFRASTRUCTURE

TRANSPORT

ENERGY

IMPACTS

Air & water quality degradation

Increased diseases

Lower water availability

Increased flooding

Increased heating & cooling demand

Increased migration of people

Inundation of coastal regions

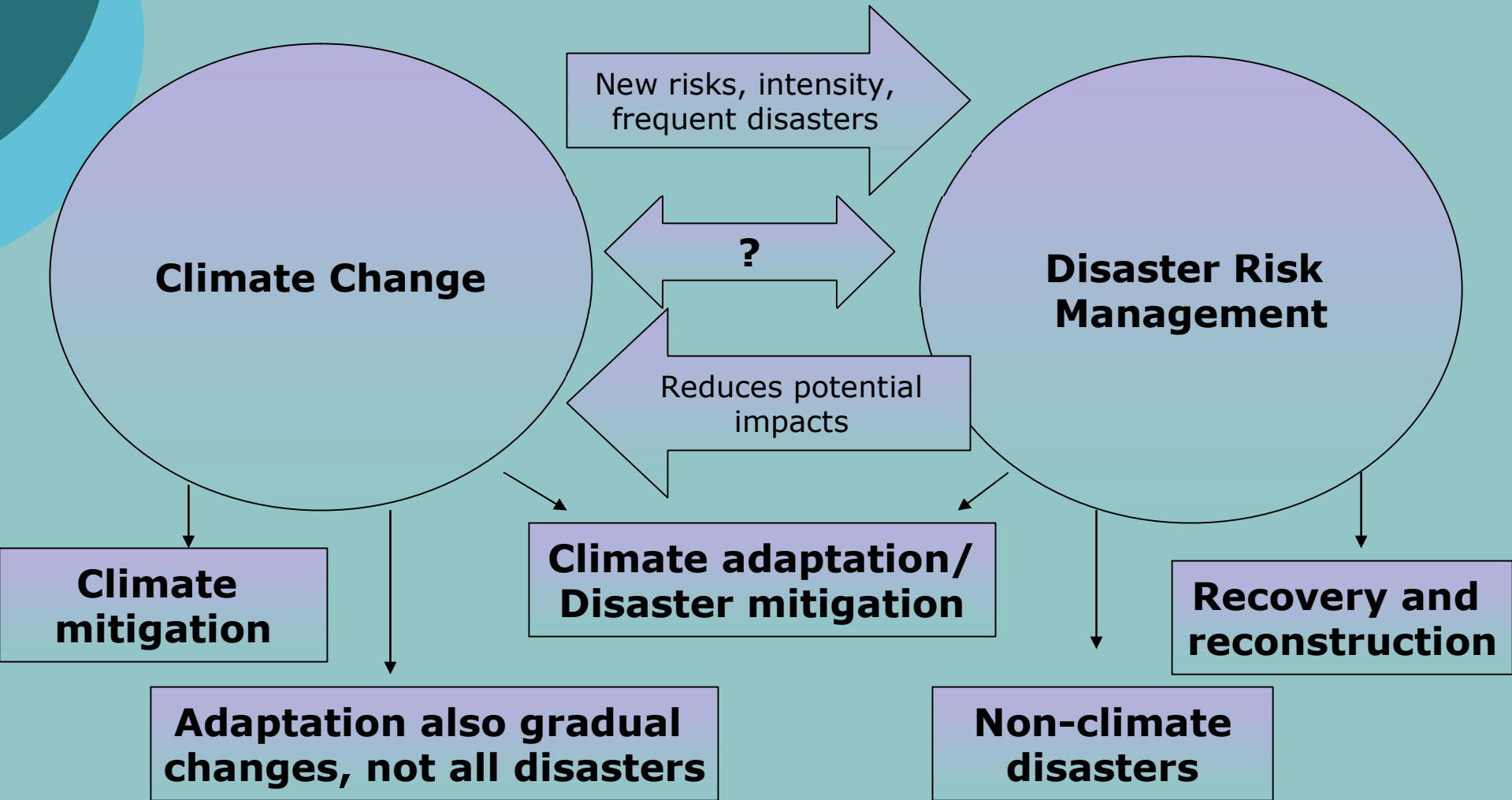
Economic disruptions

Increase peak energy loads

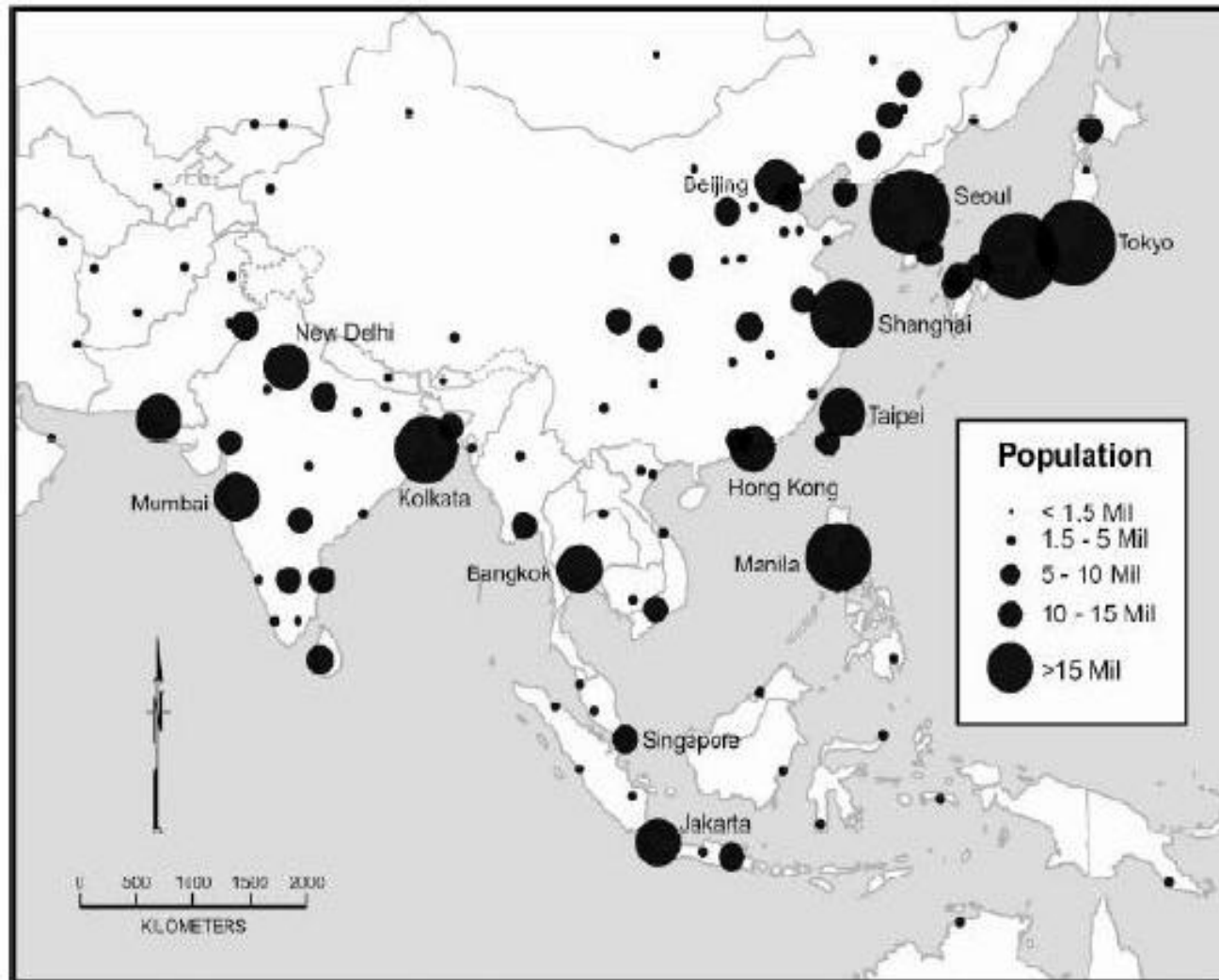
Loss of cultural heritage

What are impacts of climate change?

What is the link between climate change and disaster risk management?



Is the Primer relevant to East Asia?



(Source: ESRI, 1998 and World Gazetteer 2005)



Building resilient cities: Learning from experience

City	Geography	Population
Tokyo	Coastal, Very High EQ Hazard	34,250,000
New York	Coastal	19,712,000
Jakarta	Coastal, Moderate EQ Hazard	18,200,000
London	Coastal	8,300,000
Milan	Inland Plateau	5,000,000
Singapore	Coastal	4,400,000
Hanoi	Inland, River	1,800,000
King County/Seattle	Coastal, EQ	570,000
Makati	River, EQ, volcanic	500,000*
Albuquerque	Inland Plateau	472,000
Venice	Coastal	270,000
Rockville	Inland Plain	54,000
Dongtan	Coastal, Moderate EQ Hazard	--

Sound practices and lessons

1. Information Base
2. Institutional mechanism
3. Ownership by line departments
4. Climate change strategy
5. Public awareness
6. Accounting and reporting of GHG inventory
7. Hazard risk financing
8. DRM system considering CC impacts

+ 8 sector-specific lessons

The Primer approach



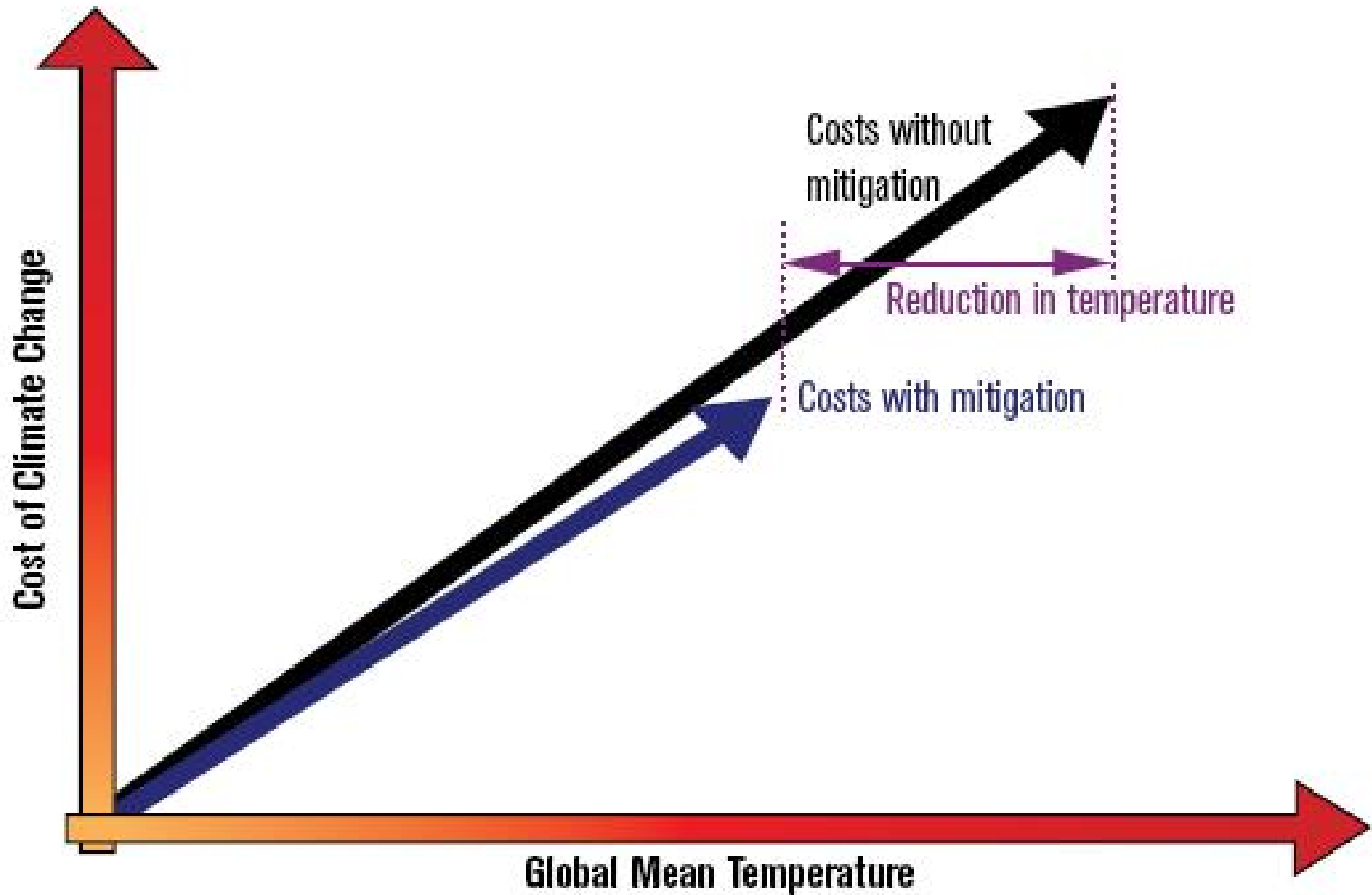
Already stressed urban systems most vulnerable: poor suffer most



Getting started: “no regrets”

- Identify city priorities
 - E.g. Attracting investment
 - E.g. Historic/ cultural preservation
 - E.g. Social equity
- Identify windows of opportunity
 - E.g. New political transition
 - E.g. Recent disaster
 - E.g. Potential sources of new donor funds/ access to new markets
- Use an “add on” approach
 - E.g. Lengthen life of planned investments

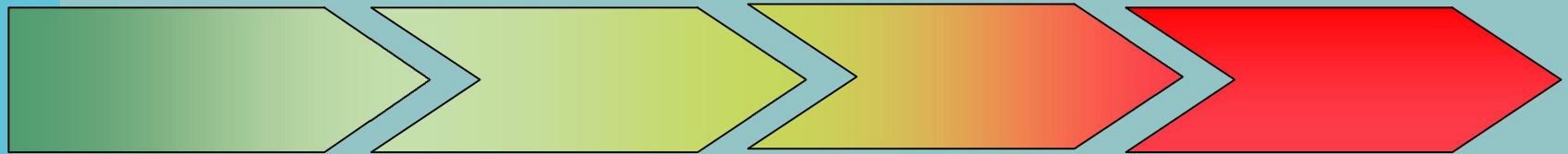
What about climate mitigation?



Going further: The “Hot Spot” assessment

RESILIENT

HOT



“Given”

- Geographic location
- City size and growth rate
- Governance structure
- Disaster history

“Influentiable”

- City management
- Financial resources
- Built environment
- Disaster response systems
- Economic impact of disasters

Relevance to other regions?

A “generic” approach that is useful to other regions and allows for modifications...

- MENA
- South Asia
- Africa?

The Climate Resilient Cities (CRC) Program

A program to support cities in East Asia to develop and implement their climate resilient strategies.

... Starting with Vietnam

... next is Indonesia

... requests from Philippines, China, Thailand

Local Resilience Action Plans

- How can resilience help the city achieve its vision?
- Populate Hot Spot risk assessment
 - Identify particularly vulnerable areas, populations, sectors, capacities
- Compile City Information Base – identify and fill information gaps
 - City masterplans/ “base map”
 - Socioeconomic profile
 - Hazard profile
 - Future growth map
- Identify priorities for action
- Design feasible programs with investment financing strategies

Next steps...

- Get interim results from pilots in Vietnam to feed into a more generic “Workbook”
- Confirm pilot cities and initiate process in Indonesia
- Identify linkages to mainstream into overall DRM work in the Philippines
- China, Thailand? Others?

Thank you

Climate Resilient Cities –

www.worldbank.org/eap/climatecities

