Enhancing Capacities for Building Climate and Disaster Resilient Cities: Lessons Learned from Four Asian Cities

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Introduction: planning resilient cities

• Rapid urban growth, climate change and natural disasters pose a huge risk to quality of life, economic and social stability of cities, especially in developing countries where one out of seven people are living in informal urban settlements (IPCC, 2012; Mitlin and Satterthwaite, 2013).

• Understanding risks and building resilient cities is therefore critical than ever before and international development community is negotiating important frameworks and agreements to address them (e.g. the Sustainable Development Goals (SDGs), the new United Nations Framework Convention on Climate Change (UNFCCC) and the post 2015 framework for Disaster Risk Reduction (DRR).
**Aims of the study**

IGES is involved in reviewing the experience of four Asian Cities (Cebu, Nonthaburi, Ho Chi Minh, Shanghai) and identify progress, challenges and key recommendations in planning and implementation of resilient cities.

- **Shanghai**
  - Population: 24.4 million (2013)
  - Density: 3,800 person/sq.km
  - The largest Chinese city is also largest city by population in the world
  - Vulnerable to both natural and man made disasters
  - Cyclones, floods, un-planned high-rise development and energy constraints

- **Nonthaburi**
  - Located next to Bangkok, it is one of the fast growing economic, trade and social hub in the Central Region
  - Vulnerable to storms, floods, food security and energy

- **Ho Chi Minh**
  - Population: 8.1 million (2014)
  - Density: 3,909 person/sq.km
  - The largest economic center in Vietnam
  - A tropical coastal city located on the estuary of Saigon–Đông Nai River, is regularly flooded due to a combination of tides, storms, rains, and man made structures.

- **Cebu**
  - Density: 7,753 person/sq.km
  - The second largest growth center in the Philippines
  - Vulnerable to floods, typhoon, landslides, and fires

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**Analytical framework: resilient city building**

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Research methodology

- Engaging the city (select case study city, briefing local leaders/stakeholders, and formation of technical group)
- Conduct the climate/ disaster risk and capacity analysis (focus group discussion and key informant interviews)

- Development of measures and strategies for building resilient city (focus group discussions and city consultation)
- Organise training and capacity building for city officials

Phase 3 (2015-2016): Evaluate, lessons learned and policy adaptation
- Ensure political support to integrate resilient measures into local policies and development plans
- Networking and knowledge sharing with other cities and international platforms

Case study city analysis

**Absorptive capacity**
ability to minimize exposure to shocks and stresses where possible and to recover quickly when exposed (Frankenberger et al., 2012).

**Adaptive capacity**
making proactive and informed choices about alternative strategies based on changing conditions (Frankenberger et al., 2012).

**Transformative capacity**
system-level changes that enable more lasting resilience and often challenge the status quo in a substantial way (Béné et al., 2012).

- **(Disaster Risk Reduction Measures)**
  - Early warning system
  - Information and education campaign
  - Organisation of community-based disaster response (volunteers and training)
  - Procurement of emergency equipment

- **(Climate Change Adaptation)**
  - Plan and preserve eco-systems
  - Building regulations, housing codes
  - Planning green infrastructure
  - Improve human capital and diverse livelihood options
  - Social protection system

- **(Governance)**
  - Institutional capacity
  - Strengthen governance mechanisms (partnership and transparent)
  - Regulatory and financial allocation
Thank you