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# Strengthening Urban Resilience - Integrated Planning

## From Risks, Barriers to Results: Managing the social, political and environmental risks of urban infrastructure

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# Outline

- The Challenges of urbanization – a resilience perspective
- What to think about when thinking about building resilience?

# A new '*vulnerability context*'

Urbanization and climate change represent a new, rapidly changing context – *a moving target*

- Future Uncertainty and Risk
- Moving from 'predict and act'
- Requires new ways of working

# How do we understand urbanization

- Urbanization = more than cities
  - Not just about a place
  - A process of rapid change - linking urban and rural, across regions
  - Flows of resources & people, goods and services
- Increasing significance of complex systems (and services)
  - water, food, energy, transportation, communication
  - Inter-linked and inter-locked
  - Dependence on physical infrastructure and institutions

# Regionalization



# Urban vulnerabilities & risks

- As well as social & economic opportunities...
- The way in which much urbanization occurs contributes to changing profile of vulnerabilities and risks
  - Urban design - Urban Heat Islands (UHI), pollution etc
  - Moving into hazardous space
  - Land conversion – changes to ecological landscapes, hydrology
  - Shifting concentration of assets
  - Interdependent systems & cascade effects

# Rethinking urban poverty

- Urban poverty has long been overlooked & underestimated (Mitlin & Satterthwaite 2013)
- Lack tools, methods, indicators for assessing urban poverty
- Even so, assumptions that urbanization (shifts from rural economies) & bigger cities lead to less poverty (World Bank 2012)
- But – urbanization creates a new ***vulnerability context***

# Fundamental Governance Challenges

- More complex systems – interlinked and interlocked
- Multiple scales – different tiers of government, stakeholders
- More complex infrastructure – growing demands, high stresses, costs
- Winners and Losers? Distributional challenges – people, space, time
- Future uncertainty and risk

# SECTION 2

- What to think about when thinking about building resilience

# Resilience

- ***Resilience as buzzword*** (w connotations) versus ***Resilience as a concept*** (complex social-ecological systems)
- Resilience does not address social values – justice, equity, poverty. Therefore need additional concepts & values
- Resilience analysis of complex systems can add to our understanding of poverty and vulnerability

# Resilience Characteristics

- Capacity to Learn
- Access to Information
- Transparency & Accountability
- Diversity
- Flexibility
- Modularity & Redundancy
- **Safe Failure**

# Urban Land Use Planning

- Huge challenge of weak implementation – tremendous economic pressures on land
- Requires bringing different agencies and stakeholders together
- *(Against harsh political and economic realities)*
- Investment time-frames and risk assessments do not always fit with a resilience agenda

# Urban Futures

- Currently zoning – painting by numbers – update to accommodate on the ground change
- Most cities are just copying what has happened (no-one wants to be like Bangkok....but no alternative vision)
- ***Shared Vision Planning & Scenario exercises (M-BRACE)***

# Calculating Risk

- Different spatial and temporal scales
- How do we factor in climate, cascading impacts?
- Whose risk? Where? When?
- Thinking in terms of thresholds – rather than impacts
- ***How much room for maneuver around key systems?***

# Fail safe to safe to fail

- Much urban infrastructure was designed for a different climate regime (risk profile) and different demands
- Designed at site – not at systems - level
- Assume it will not fail - *the levee effect* –
- But all infrastructure can fail....***will it do so safely, or catastrophically?***

# Resilient Institutions

- Flexible, adaptive and learning-oriented
- Dealing with uncertainty and risk
- Dealing with diverse interests and pressures
  - eg managing reservoir storage and release
- Actions for policy and practice
  - At multiple scales,
  - Different entry points
  - Different administration

# Inclusive governance

- Rather than mainstreaming resilience – where there are fundamental governance gaps
- Often we are creating the conditions for informed public dialogue (agent inclusion) that would support climate resilient strategies, policies, actions
- Public demands on the state – access to information, promoting transparency, and accountability (e.g. Gorakhpur - institutions)

# Examples - Reliable access to critical services

- Drainage in Gorakhpur
- Storm resistant housing in Danang
- Early Warning Systems to river basin/landscape planning – Hat Yai

# Reliable access to critical services



# Transparency & accountability



# Rethinking Urban Climate Resilience

- Not just about protecting a space
- Need to look at systems and how people turn these into services/benefits
  - Addressing existing gaps
  - social protection – not just point/group of direct impact
- Need to consider existing and emerging vulnerabilities
  - Patterns of urbanization
  - Safe failure
  - Scrutinize assumptions about the future

# *Resilience for whom and by whom?*

- How do we support processes that can allow for urban futures that are socially just and resilient to climate and other sources of disruption?

*Resilient, accessible, well governed and designed systems and institutions?*



**THANK YOU!**

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