

Vulnerability of Urban Poor to Climate Change in North East / South East Asia

D.Parthasarathy

Department of Humanities and Social Sciences
Indian Institute of Technology, Bombay, India

Climate Insecurities, Human Security and Social Resilience Conference

27 to 28 August 2009

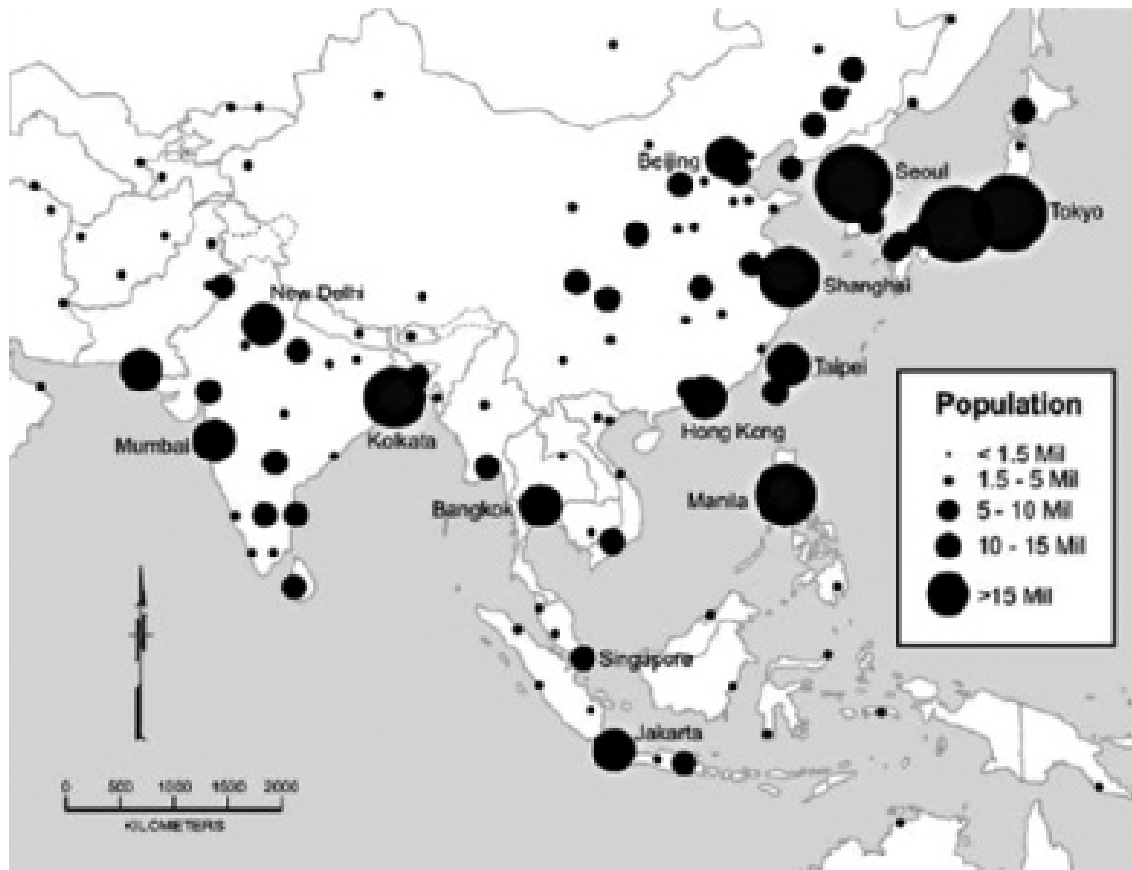
RSIS Centre for Non-Traditional Security Studies, NTU, Singapore

Asian Cities: politics of hope and despair

- economic growth, FDI inflows
- migration and population densities
- rural urban nexus and flows
- transnational flows
- disasters and vulnerability: climate events, epidemics, conflicts
- infrastructure development and vulnerability
- poverty, inequality, health, sanitation

Poverty – Inequality - vulnerability

- 70% of the world's poor live in Asia
- Urban poverty levels of upto 60%
- 800 million urban poor in Asia
- Majority live in environmentally dangerous areas
- High density levels



Mega Cities in Asia

Asian Cities: Exposure and Vulnerability to disasters

- Economic / commercial / Administrative importance (finance, banking)
 - GDP, Employment, Government revenues
 - Increasing global links
 - FDI flows
- }
- New economy centres: (high risk, high losses, 65-90 of economic activities)
 - Magnets for rural and small town migrants: primacy
 - Population size and density: home to large no. of world's mega cities (mortality impacts)
 - Education, health facilities

Asian Cities: Exposure and Vulnerability to disasters (contd.)

ASIA as the most disaster prone region: 40-50 of world's natural hazards

57% of the world's disaster casualty is from Asia, live in Asia, while 88% of the affected people live in Asia (Regional Task Force on Urban Risk)

- Climate change related events: sea level rise, coastal erosion, marine eco-systems, cyclonic storms, extreme weather conditions and climate variability
 - Location of major Asian cities, greater exposure to hazard risks; urban populations more affected by cyclones, typhoons, earthquakes, tsunami, disease / epidemics
 - Urban communities: no adequate recognition of climate risks

Regional responses to disaster mitigation

- Asian Network Major Cities 21 (2008): work and formulate measures for flood prevention and disaster mitigation
- ADB Regional Technical Assistance Project: Sustainable Urban Development in Asia
- World Bank and United Nations International Strategy for Disaster Reduction signed agreement to ASEAN): strategy to deal with disasters and effects of climate change
- Regional Task Force on Urban Risk

“ASEAN has been criticized for a lacklustre response to disasters in the region”, ASEAN joint agreement never came into force”

Key issues / questions:

Are 'western' approaches on risk and vulnerability valid in Asian contexts?

Satisfactoriness / adequacy of 'state preparedness' and of technocratic / technological approaches

How to factor in rural urban and transnational flows and networks?

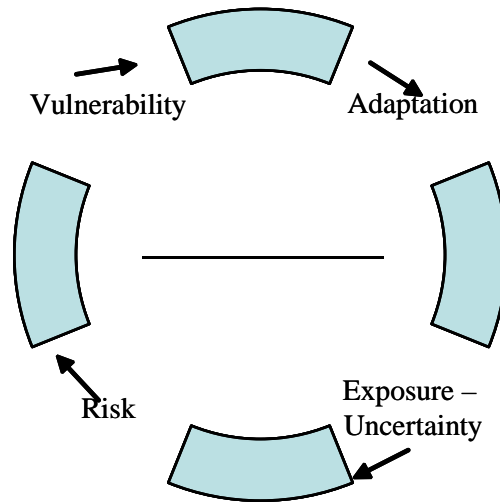
Importing / imitating models of disaster mitigation, disaster management, adaptation: problems of institutional isomorphism?

**Implications of inequality, social divisions and hierarchies, and discriminatory practices / social exclusion:
onset, impact of disaster, strategies for prevention,
mitigation, rehabilitation**

ACCUMULATION OF RISKS: Populations choose between types of risks

Sociology of risk and vulnerability

Risk, uncertainty, vulnerability and adaptation



Key sociological insights on risk and vulnerability

Mary Douglas: Risk and social aspects of cognition:

- social relations and cultural contexts shape the ways in which we perceive the world
- culture and ideology influence societal definitions of danger
- Risks not just reflections of objective reality but cultural phenomena that reflect societal and group values
- Social and cultural factors shape characterization of risks, and risk management strategies
- risks are meaningful, determined by perceptions influenced by socially embedded beliefs and values
- Why some risks are ignored and some emphasized and why different groups perceive and tackle risk in different ways
- 'cultural bias' of actors and social groups define attitudes towards hierarchy, egalitarianism, fatalism, individualism, autonomy, and attune individuals and households to address and manage risk in specific ways

Ulrich Beck:

- emergence of risk society
- society today faces new and unprecedented forms of technological risk different in nature from those associated with industrial phase of economic change
- new risk society that emerges as a consequence of new technologies such as genetic engineering, or nuclear technologies
- constitute a new stage of human development; production and distribution of risk create inequalities whose logic is quite different from those of earlier periods
- global endangerment and replacement of earlier organizing principles of society such as class, gender, nation
- risk as omnipotent, pervasive, and affecting every aspect of our every day lives, makes problem solving and decision making tougher, requiring scientific support to a greater level than before
- Individuals required to become 'experts' and constantly reflect upon diverse forms of expert knowledge before taking decisions about day to day problems
- ongoing processes of modernization result in risk societies become self-reflexive or self critical, i.e. societies are undergoing reflexive modernization

Questions

Go beyond the 'perception of risk' argument?

Risks are concrete and measurable, need to understand processes by which risk estimates and risk are socially constructed and how risk (and hence vulnerability) is socially produced

How to assess the role of power?

Groups having less power lack access to resources (public, private, or common), but also unable to determine public perceptions regarding what constitutes risk, and who are exposed to risk and vulnerability. Public policy responses are shaped by those who are powerful, rarely reflect needs of less powerful and articulate sections

Questions (contd.)

Beck's discussion: rarely uses or assumes an understanding of the concept of vulnerability

Unintended outcome of jettisoning “nineteenth century categories of industrial society” (class, gender, nation, state)?

How does one differentiate between those who are less or more vulnerable to various kinds of hazards and risks?

How can sociologists explain differences in ways in which risks are experienced, managed, and coped with by diverse social actors, without an appropriate understanding of vulnerability and its relation to risk?

In many Asian cities: risk overlaps with categories of race, gender, class, and ethnicity, and the socially marginalized are more likely to be risk prone and unable to adapt to risks

Questions (contd.)

Unaware of spatial distribution of risk, in many Asian cities, socially marginalized are also the ones pushed to the environmentally more risky spatial margins of society

Lack of sociological understanding of institutions and state and non-state agencies in risk reduction and disaster mitigation (valorization of technocratic, techno centric approaches)

A sociological imagination for vulnerability of Urban Poor in northeast / southeast Asia: Three approaches

1. Prismatic vulnerability:

unravel how environmental insecurity arises, social processes by which environmental risk is translated into vulnerability, inter-meshing of social and environmental vulnerabilities, why certain groups are forced to choose between different forms of vulnerability as a risk management and mitigation strategy

2. Urban rural and transnational networks and flows:

better understand and manage disasters and sustainability issues

3. State preparedness, techno-centric and technocratic approaches, and institutional isomorphism

why an understanding of social hierarchies, social diversity, social divisions and inequality is important

Prismatic Vulnerability



Different social cleavages and axes of inequality and discrimination (gender, class, caste, regional origin, ethnicity) – combine with elite and middle class domination of the public sphere, and governance failures to get refracted through a disaster and result in unique forms of vulnerability

Different types of disasters refract diverse axes of inequality in distinct ways

Disasters, Vulnerability, and Social / Environmental Risk

- Ecological degradation and ecologically risk prone areas
- Settlements (forced and 'voluntary') in risk prone areas; (Indonesian and Thai cities)
- Flaws in disaster management plans
- Risk, uncertainty and the question of choice
- The question of reflexivity: environmentalists vs the vulnerable

“Disaster vulnerability is socially constructed, i.e., it arises out of the social and economic circumstances of everyday living. Certain categories of people, such as the poor, the elderly, women-headed households and recent residents, are at greater risk throughout the disaster response process”. Morrow, 1999

“Disasters are an unequally distributed public “bad” that is more likely to affect poorer, more vulnerable sub-populations with the least political influence”, Sherbinin, Schiller and Pulsipher, 2007

1. Shanghai: the poor, rural migrants; inequality, ageing

Flood induced risks

2. Bangkok: urban poor and vulnerability

“Climate change is making poverty alleviation work harder... because as soon as there is a disaster in those places where the environment is very fragile, these return to poverty,”

“More than 70 per cent of Chinese cities and over 50 percent of the population are located in areas susceptible to serious meteorological, seismic or oceanic disasters,”

Xu Yinlong - Academy of Agricultural Sciences

Rural-urban and transnational networks and flows

Migration, discrimination, planning biases, spatial marginalization

Transnational flows: foreign workers and tourists: “In this day of rapid cross-border travel, Singapore, just like other countries, is at risk from the importation of viruses,” Ng Lee Ching, head of Singapore’s Environmental Health Institute.

Who are the poor? Migrant workers and disasters: Sichuan quake

Transnational urbanism: workers from rural areas within the country and from outside

- Diversity within the urban poor: gender, race /ethnicity, income, housing, education, location
- Differential citizenship

Rural urban flows and links: politics of mitigation / adaptation

Migrants and planning for mitigation / adaptation: involvement, participation

Population flows and disease / epidemics: burden of climate-sensitive disease

- Chikunguniya / Dengue in Singapore

- "The principal drivers of the re-emergence or emergence of epidemic dengue and dengue hemorrhagic fever are a combination of uncontrolled urbanisation and movement of viruses and vectors not necessarily in this region, but around the world by people in airplanes."

- Director, Programme on Emerging Infectious Diseases, Duke-NUS Graduate Medical School, Dr Gubler

- Dengue hotspots in Singapore 'slums': 30-55% foreign workers

- Health Minister Khaw Boon Wan: 'I don't think it's the mosquitoes crossing borders but patients do cross borders.'

Different cultures of assessing and managing risk



Institutional isomorphism:

Looking beyond state-preparedness in disaster mitigation

- Environmentalists: Ecological fundamentalism? False humanism? 'Civil society' and disasters.
- Disaster management plans: what is in, what is out
 - Problems with disaster management plans in Tokyo
 - Homeless of Tokyo don't count (Wisner, 1998): Kobe, 1995
 - Children living in urban poverty (Bartlett, 2008)
- "Composition and needs of vulnerable populations differ according to the location and nature of each disaster. Vulnerable groups include: the poor, women, children, the elderly, the handicapped, and people with preexisting mental disorders", "Cities and Calamities: Learning from Post-Disaster Response in Indonesia" Josef Leitmann, 2004

Social vulnerability of special needs groups and improvement of disaster planning and management in Tokyo, Uitto, 1998

Implications for disaster mitigation and post-disaster relief and rehabilitation

Technocratic approaches and discourses:

Central role of remote technology: “hegemonic representational tools” appropriated to serve new democratic agendas (Indonesia)

Thank God for the Tsunami (?!)

“A narrow focus on remotely sensed data is not strictly a methodological but also a political choice, one which obscures alternative experiences of disaster and produces solutions that do not address long term social and political processes leading to disasters”. What is missing ... from remote assessments in general, is a textured understanding of social landscapes and the role they play in creating Hazards”

“The philosophical and methodological bases of urban disaster vulnerability analyses are presently underdeveloped. Few such analyses incorporate social data, partly because urban disaster managers and other potential user groups do not fully appreciate the value of this information, and partly because techniques for including it in existing vulnerability analyses have not been worked out.” Wisner, 1998

Urban Resilience in northeast / southeast Asia

World Bank Primer: Climate Resilient Cities

Resilient to what?

“Need to assess the resilience of a socio-ecological system in the face of bundles of stresses that are partly related to hazards and partly related to fragilities in the system itself” Sherbinin, Schiller and Pulsipher, 2007

Urban Poor and Climate related disasters

Need for intervention and policy that support a heterogeneous response to a wide range of disasters, based on a better understanding of vulnerabilities and a better appreciation of local, regional, national, and transnational contexts and flows

Security implications: increased political, rural-urban, and ethnic/communal conflicts