

# *Sustainable Urban Development, Land & Resilience in Asia and the Pacific*

**Donovan Storey**

Chief, Sustainable Urban Development, Environment & Development Division



**UN-GGIM-AP/UN-ESCAP/UN-HABITAT-GLTN**

**Joint Workshop on Land Management**

5<sup>th</sup> October 2015, 14:00 – 18:00,

International Convention Centre, Jeju Island, Republic of Korea



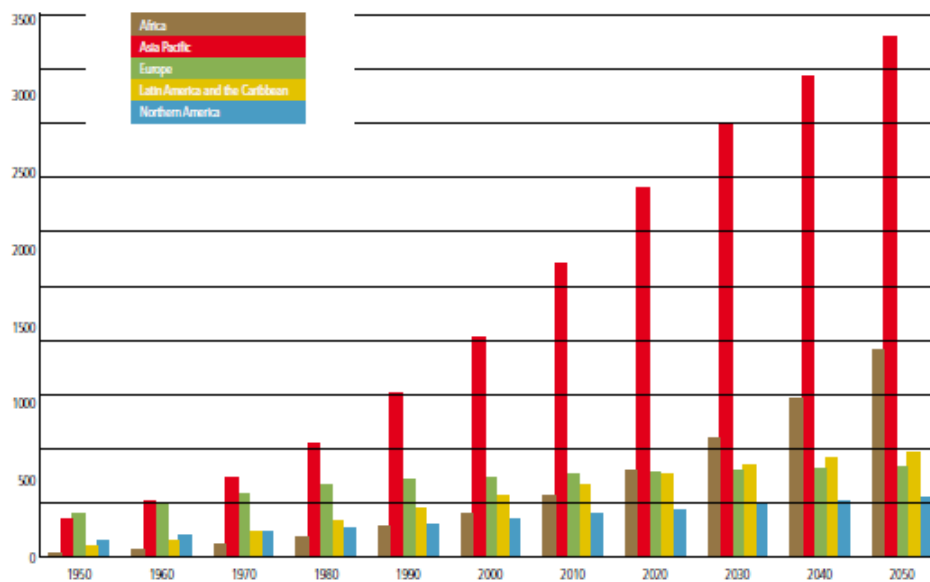
# ESCAP : The regional arm of the UN for Asia-Pacific

- Part of UN Secretariat: 62 member states - 58 are regional members
- ESCAP covers the world's most populous region - two thirds of humanity
- Based in Bangkok, with 4 Sub-regional offices
- ESCAP fosters:
  - regional cooperation to promote social & economic development
  - normative, analytical & technical cooperation at the regional level
  - a platform for South-South dialogue / exchange of practices



# The Urban Context

Graph 0.2 Urban Population at Mid-Year, 1950-2050 (thousands)



Source: World Urbanization Prospects: The 2014 revision, File F03

- Between 1980 and 2010 Asia-Pacific cities grew by 1 billion people
- By 2050, nearly 2 out of 3 people in the region will live in urban areas
- High levels of vulnerability: Sea-level rise, and extreme events, such as storms, floods or droughts are interacting with human impacts, such as degraded and altered biophysical environments
- Creates complex and distinctly urban patterns of risk and impact, to which cities and their populations need to respond.

# Spatial patterns of urban development

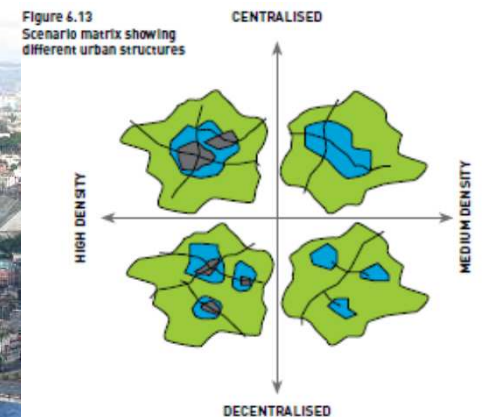
- Urban growth patterns in Asia-Pacific 'radiate-out' & 'regionalize' rather than concentrate.
- Weaker planning & regulation in outer rings
- Cities – megacities - mega-urban regions
- Density and Sprawl: implications for land
- The 'resource map' of cities is very different from administrative boundaries



Mumbai

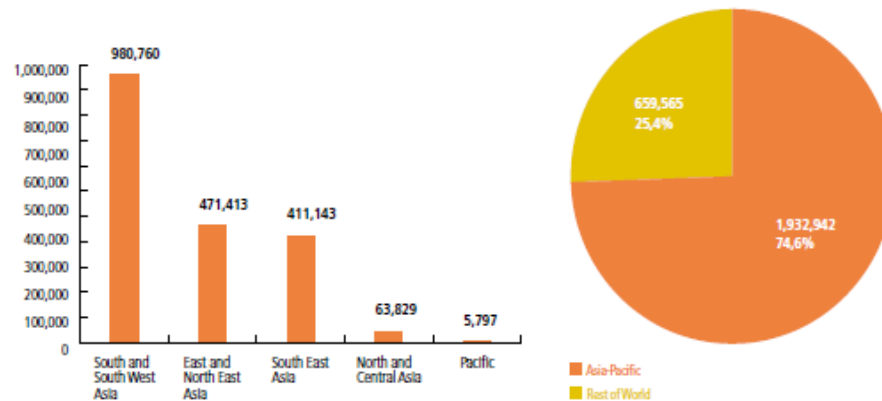


Manila



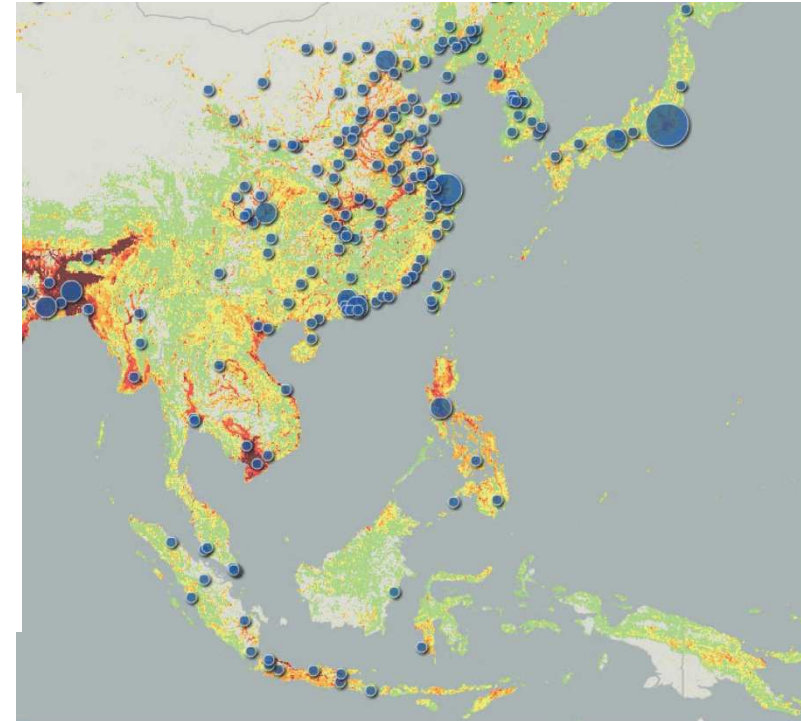
# The Urban Context: growth with vulnerability

Figure 4.1 Global and Asia-Pacific disaster fatalities, 1970-2011  
Number of people killed in the Asia-Pacific by subregion



Source: UNISDR analysis based on data from the Centre for Research on the Epidemiology of Disasters, EM-DAT, the International disaster database, version: v12.07, Brussels: Université Catholique de Louvain; www.emdat.be (accessed 28 August 2017).

Note: The hazards considered in this analysis are earthquakes and tsunamis (seismic activity), temperature extremes, floods, wet and dry mass movements, storms, volcanoes and wildfires.

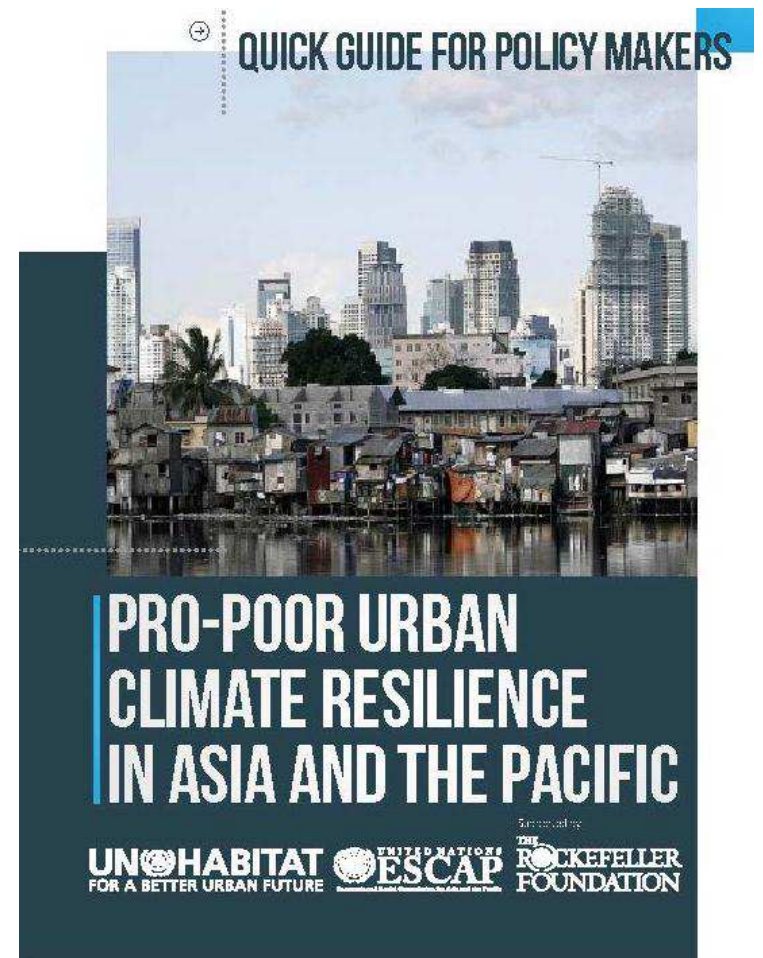


“Our struggle for global sustainability will be won or lost in cities” (Ban Ki-Moon, UN Secretary-General)

**SDG Goal 11: “Making Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable”**

# Urbanisation, Resilience, Land

- Climate vulnerability and climate change threaten to reverse poverty reduction and development gains
- Significant overlap between climate change vulnerability and urban poverty
- Need for integration of poverty reduction with resilience
- **This is not a trade-off**
- Holistic, flexible and participatory pro-poor approaches to urban climate resilience can be an effective tool to foster inclusive and sustainable development.
- Land is often at the cutting edge:
  - Urban growth patterns
  - Impacts
  - Vulnerabilities
  - And as entry point



# Thinking & acting beyond city boundaries

- Context of rapid and unplanned growth: agricultural land and peri-urban environments are frontlines of urban expansion
- Example: Est. 23% of Delhi's National Capital Region consumed by development/urbanisation from 1999-2012, incl. 32,769 hectares of green space
- Unmanaged land conversion: eliminates valuable ecosystems; degrades 'buffer' systems; undermines livelihoods & therefore resilience
- Impacts: destruction of mangroves and wetlands deprives cities of important environmental services; livelihood opportunities in farming, fishing and ecotourism
- Unmanaged conversion of agricultural land in/around urban areas can exacerbate the impacts of intense rainfall and flooding

# Vulnerability Defined

## III. FRAMING PRO-POOR, URBAN CLIMATE RESILIENCE

### 3.1 Vulnerability defined

Though there are shared characteristics, 'poverty' and 'vulnerability' are not the same thing. While poverty reflects a lack of economic and social assets, vulnerability additionally implies a lack of capacity, security, and exposure to risks.<sup>8</sup> Though the overlap is significant, not all poor are vulnerable and not all who are vulnerable are necessarily poor. This has important implications for policy - as does understanding the assets and capabilities even very poor populations possess in their resilience and response to either slow-onset climate change or disasters. Much can often be built from communities, especially once assumptions regarding their capacities are put aside.

IPCC defines vulnerability as consisting of 3 main components:

- Exposure
- Sensitivity
- Adaptive Capacity

**Vulnerability is not a static state, but changes over time**



# Framing Pro-poor, Urban Climate Resilience

## 3.2 What makes urban poor communities vulnerable?

Most extreme weather disaster deaths in urban centers are in low and lower-middle income nations, and risks are concentrated in informal settlements (IPCC 5th Report)

(Pictures by UN ESCAP)



**1) THE URBAN POOR ARE THE MOST EXPOSED TO CLIMATE CHANGE**

Due to their location in environmentally vulnerable



**2) SLUMS AND LOW INCOME COMMUNITIES ARE ESPECIALLY SENSITIVE TO THESE EFFECTS**



**3) THE URBAN POOR OFTEN LACK THE CAPACITY TO IMPROVE THEIR RESILIENCE**

The urban poor are most

## 3.3 Reducing community vulnerability by investing in different forms of capital

(Pictures by UN ESCAP)



### FINANCIAL CAPITAL

This comprises individual and community savings, access to credit and other available economic resources that can be used to invest in livelihoods or to support basic needs and rehabilitation following a storm or flood. Some urban poor communities have also experimented with disaster micro-insurance.



### PHYSICAL CAPITAL

This includes assets such as housing, but also smaller more portable forms of capital used for livelihoods, such as a motorcycle, a vending trolley or a sewing machine. While these resources are themselves vulnerable to loss through disasters, they are also an essential component in building up resilience through income generation.



### HUMAN CAPITAL

Comprises an individual's or group's skills and wellbeing, for example adequate nutrition and health care, impacting directly on their ability to handle climate change impacts, or equipping them better to take positive actions to reduce their vulnerability, such as skills training, education and professional development.

### SOCIAL CAPITAL

This comprises informal norms and responsibilities but also formal regulations, between individuals, households and at a wider level between communities, including informal settlements, and institutions.



### NATURAL CAPITAL

This resource is composed of local environmental assets, such as land, and eco-system services such as food and clean water.



# Resilience Defined

The capacity of cities (individuals, communities, institutions, businesses and systems) to survive, adapt, and thrive in the face of stress and shocks, and even transform when conditions require it.



Resilience best understood as both an  
**ONGOING PROCESS** and **NORMATIVE GOAL**

**How should land be integrated into resilience frameworks?**

# Attributes of resilient cities

Five key elements of resilient cities:

- **Awareness** – knowing your strengths and assets, liabilities and vulnerabilities, threats and risks
- **Diversity** – includes the notion of redundancy, alternatives and back-ups, and a range of capabilities
- **Self-Regulating** – withstanding disruption
- **Integrated** – collaborative and concerted efforts
- **Adaptive** – capacity to adjust to changing circumstances



# Principles of pro-poor urban climate resilience: **The Do's and the Don'ts**

## **AVOIDING MALADAPTATION**

- Don't focus on a narrow or isolated outcome
  - Don't make your planning unnecessarily rigid and without taking account of risk
  - Don't sideline or disregard those who will be most affected
- 
- Focus on the whole (urban land) system
  - Embrace flexibility
  - Enable participation and promote partnerships

# Selected issue-based entry points

- Basic services and infrastructure
  - Housing
  - **Land-use planning and tenure security**
  - Livelihoods
  - Health
  - Food security, urban agriculture and ecosystems
  - Disaster risk Management
- What are the challenges?
  - Why is climate change making the situation worse?
  - How can we improve resilience?

# Land & resilient cities: today's challenges

- Capacity/resources to effectively plan and implement land use strategies
- Limited land + short-term economic interests = greater exposure to disaster risk through unplanned and inappropriate development in floodplains, watersheds etc.
- Urban land development and conversion commonplace & beyond formal/legal systems
- Most vulnerable likely to live in areas with the greatest levels of risk and exposure & have weakest tenure security: female-headed households, youth, older persons, persons with disabilities and migrant populations

# Land & Resilient Cities: future challenges

- Vulnerable land will be even more exposed to disasters and other threats
- It is likely that such risks will also spread
- Increased rural migration, a lack of land use planning and land conversion will all intensify pressure on urban and peri-urban land – and especially marginal land

# Strengthening resilience through land: some entry points

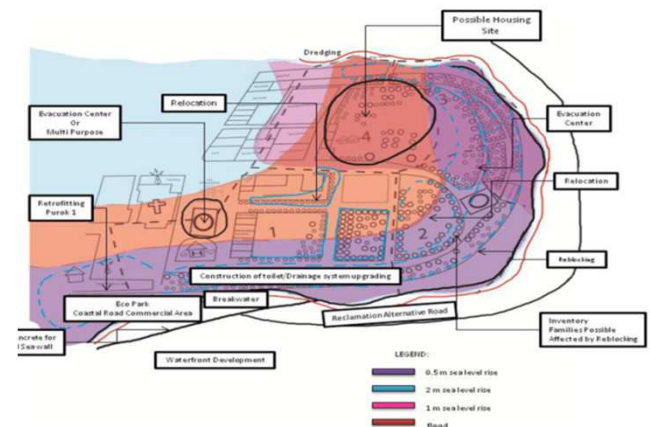
- Prioritise and promote land use planning inclusive of at-risk populations
- Embrace a holistic approach which balances regulation with incentives to change
- Integrate and mainstream climate projections and vulnerability assessments into future land use planning, including through innovative & inclusive methodologies & partnerships



# Some lessons from the field: Philippines

- Must understand vulnerability, needs, priorities & resources of urban populations
- Use of asset-based approach to increase poor communities' resilience
- A key asset is land: Improved policies on land-use and urban management has great impact on risk reduction and resilience building
- Partnerships key: Technical Information+ Political Will
- Innovative financing is needed

Source: Laidis Crea



# Closing the loop for pro-poor urban climate resilience

While much can be achieved through sector-based approaches, there are greater benefits of mainstreaming land into comprehensive city/national-wide approaches

## ▪ **Towards comprehensive land use planning and governance**

- Vertical coordination
- Horizontal collaboration
- Lesson learning
- Whole-of-system thinking



## ▪ **Developing holistic resilience strategies**

- Identifying climate & other vulnerabilities
- Developing and sustaining multi-stakeholder partnerships
- Promoting awareness and knowledge sharing
- Creating a supportive and empowering governance framework
- Strengthening the capacity of urban stakeholders

# Five opportunities for urban resilience through land

- Focus first on what is most cost effective and has most co-benefits
- Mainstream land into existing and emerging programs with a focus on the most vulnerable
- Pool resources: build partnerships
- Link resilience, land and policy to pro-poor outcomes
- Encourage all stakeholders, including the private sector, to be part of the process of identification, financing & implementation



**THANK YOU/Kamsahmnida!**

감사합니다

