Urbanization Trends and Disaster Risk Management
Urbanization Trends

Urban and rural populations of more developed regions and less developed regions: 1950-2030

Links into the ongoing conference

- Walter Amman:
  - „Urban Risks have become a plenary issue“…manifest on local level
  - Goal 2008: „rise awarness for integrated approach to risk reduction“…on local level
  - „need a change of mind“…on local level and amongst governments and finance institutions

- Ian Burton:
  - We need a „Global migration convention“… to reduce urban centres under flood threats
  - „adaptation of national and global desaster risk plans“…to the local level
  - „sub-sovereign lending“ towards local governments
link clima change mitigation to desaster risk reduction

- urban areas
  - Flooding
  - Chemical accidents
  - Earthquakes
  - Hurricanes
Urbanization and Trends

Source: The Dynamics of Global Urban Expansion (World Bank, 2005)
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Source: The Dynamics of Global Urban Expansion (World Bank, 2005)
implications of increased built up area of fast growing cities

- increased flooding threat
- low building standard in informal areas increase earthquake damage threat
- longer distances and difficult access for fast emergency evacuation
- reduced news coverage for information chains on possible threats
- aggravated spatial planning in informal settlements
Urbanization Trends

Built up area projections by region

Source: The Dynamics of Global Urban Expansion (World Bank, 2005)
Implications of Urbanization

Megacities in Asia

Disaster Risk in Asia
Earthquake and Tropical Strom

Natural Hazards: Seismic and Climatic
This map shows areas at risk from earthquake activity, volcanic eruptions and tropical storms according to established risk studies.

Earthquake intensity risk is shown using the 1956 revision of the Modified Mercalli Scale (MM), describing the effects of an earthquake on the surface of the earth. The zones indicate where there is a probability of 20% that degrees of intensity shown on the map will be exceeded in 50 years.

Tropical storm risk is taken from the Munich Reinsurance Company’s World Map of Natural Hazards and shows tropical storm intensity based on the five wind speeds of the Saffir-Simpson Hurricane Scale. The zones indicate where there is a 10% probability of a storm of this intensity striking in the next 10 years.

Volcanic risk is indicated by the locations of active volcanoes, defined as having shown activity within the past 10,000 years up to 2002.

Source: OCHA – Regional Office for Asia and the Pacific (Issued: 8. August 2006)
Climate Change and Megacities
The risk of sea level rise

Source: IHDP Update, Issue 2 (UNU-IHDP, 2007)
Climate Change and Megacities

Linking consequences and sectors with potential impacts and climate change mitigation and adaptation options

Source: Climate Resilient Cities (World Bank, 2008)
Disaster Risk and Megacities
The natural hazard risk index for megacities

Source: Megacities – Megarisks (Munich Re, 2005)
Hyogo Framework for Action

Hyogo Framework for Action (2005-2015) as the key instrument for disaster risk reduction urges governments to address the issue of disaster risk in their key sectors. Urban risk reduction is one of the key activities of the implementation of the action plan.

Following tasks among others are recommended:

- Physical planning: Establish measures to incorporate disaster risk reduction in urban and land-use planning.
- Structures: Strengthen mechanisms for improved building safety and protection of critical facilities.

Conceptual and strategic approach is needed to integrate disaster risk management into urban development planning.
Thank you for your attention
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