URBAN DISASTER AND RISK MANAGEMENT

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Learning objectives

At the end of the training, participants will be able to:

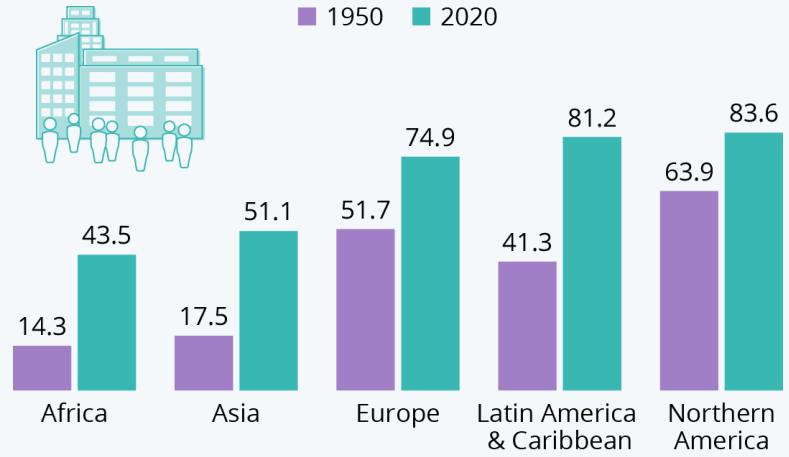
- Explain the approaches and methods for disaster management and their implementation in the context of urban risk management and development.
- Describe the nature, extent of threat and significance of countermeasures required for urban risk mitigation
- Identify the disaster management interventions required to deal with urban risks in order to achieve the goals of prevention, preparedness, response and mitigation.
- Explain the need and nature of integration of urban risk concerns into the urban development process to achieve the goal of sustainable development
- Describe the future strategies for disaster risk reduction in an urban context for a sustainable future.

Unprecedented Urban Growth: A Global Challenge

- 1950 -2006: Urban population of the world has increased from 739 million to 3.2 billion
- By 2025, around 65% of world's population is expected to live in cities
- By 2010, more than 75% of world's urban population will live in poorer countries (State of the World 2007)
- More than 40% of the world's children are expected to be living in polluted cities of the developing world (WHO)

Then & Now Urban Population Worldwide

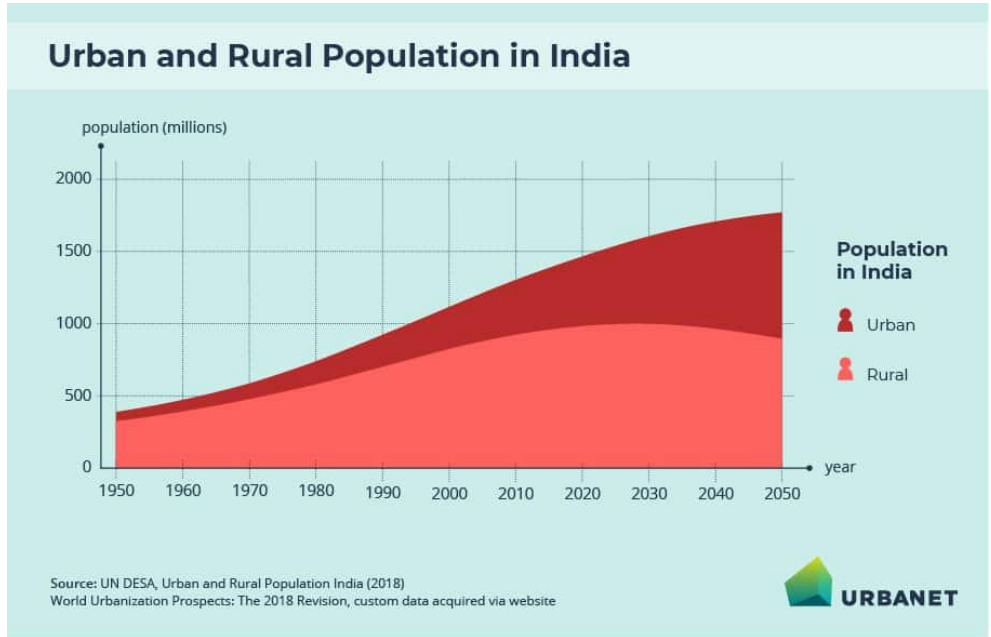
Share of the urban population by continent in 1950 and 2020 (in percent)



Source: U.N. Population Division

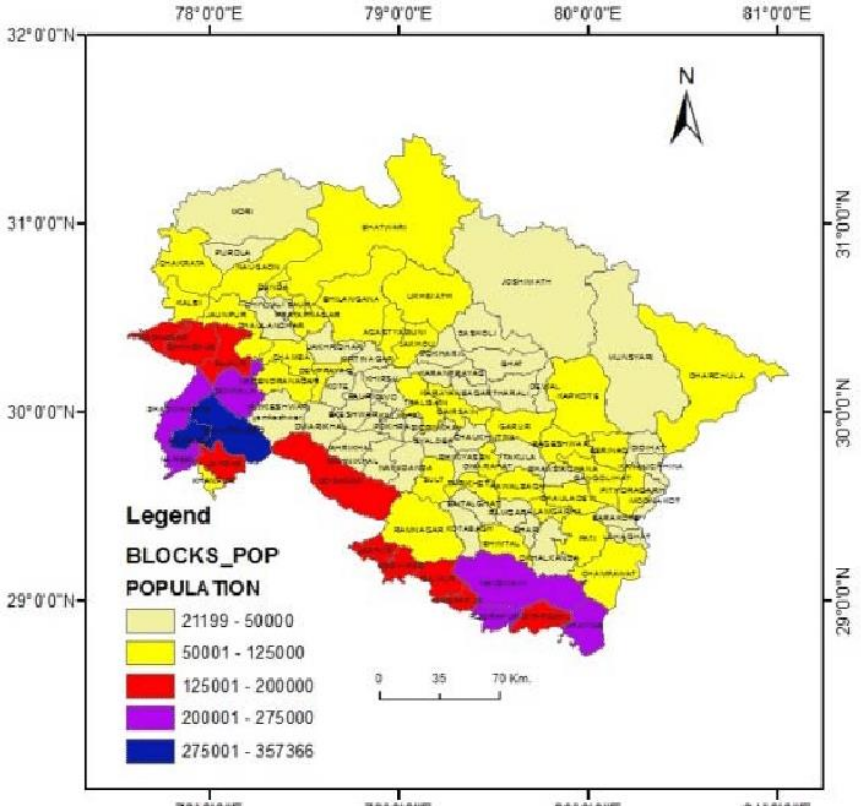
An Overview

- 31.2 per cent of India's population (377 million) live in urban areas as per 2011 census.
- Proportion of urban population is low, as compared to many other developed countries
- Urban population growth in metro cities in the past decade has been reflected higher
- By 2025 more than 50 percent of the country's population would be urban
- In India and most of the developing countries, urban development is mostly uncontrolled and unplanned.



Why Uttarakhand poses so many challenges?

- Does the climate remains the same throughout Uttarakhand?
- What is the population density in different regions?
- What is the water availability in different regions
- The extent of forest cover?
- The problems related to land availability for urban Mobility?
- The extent of floating population?
- The sanitation facility challenge?



Challenges in Urban Area: A source of Disaster

The Solid Waste Management Challenge:

Cities consume a lot.

Why towers of waste were created?

What is the challenge these towers create?

How to get rid of them?

The Philippines Trash slide - Vulnerability of Poor?

An example of an urban environmental disaster was the "trash-slide" caused by heavy rains killing hundreds of poor people in Barangay Lupang Pangako, Payatas, Quezon City, Metro Manila, Philippines in July 2000.

The accident claimed at least 85 lives in the small community known as Lupang Pangkao, or the Promised Land. At least 68 people - and possibly hundreds - remained missing.

The Gazipur dumpsite and the September 2-17 incident!!!

We are creating more such disaster sites!!!

Challenges in Urban Area: A source of Disaster

Cities consume a lot.
Why water bodies and wetlands have got wiped out?
Why there is a growth of algae and water Hyacinth?
How to get rid of them?
The waste water: Is it a boon or bane?

Challenges in Urban Area: A source of Disaster

The Urban Mobility Challenge:

The problem of Traffic Congestion: The carrying Capacity of town

The Parking Issues!!

Land Issues in road widening in hills.

Road Accidents

Natural Disaster and Urban Development: The Storm Water Drainage and Urban Flooding

How does the built up area contribute to disaster?

Why do our cities get choked with water?

Do we need wetlands?

Why Nainital got flooded?

Pollution Epidemics and Urban Health

What ails the citizen of Urban Areas?

Why diseases spread so fast in Urban Centres?

Is Air pollution an Issue?

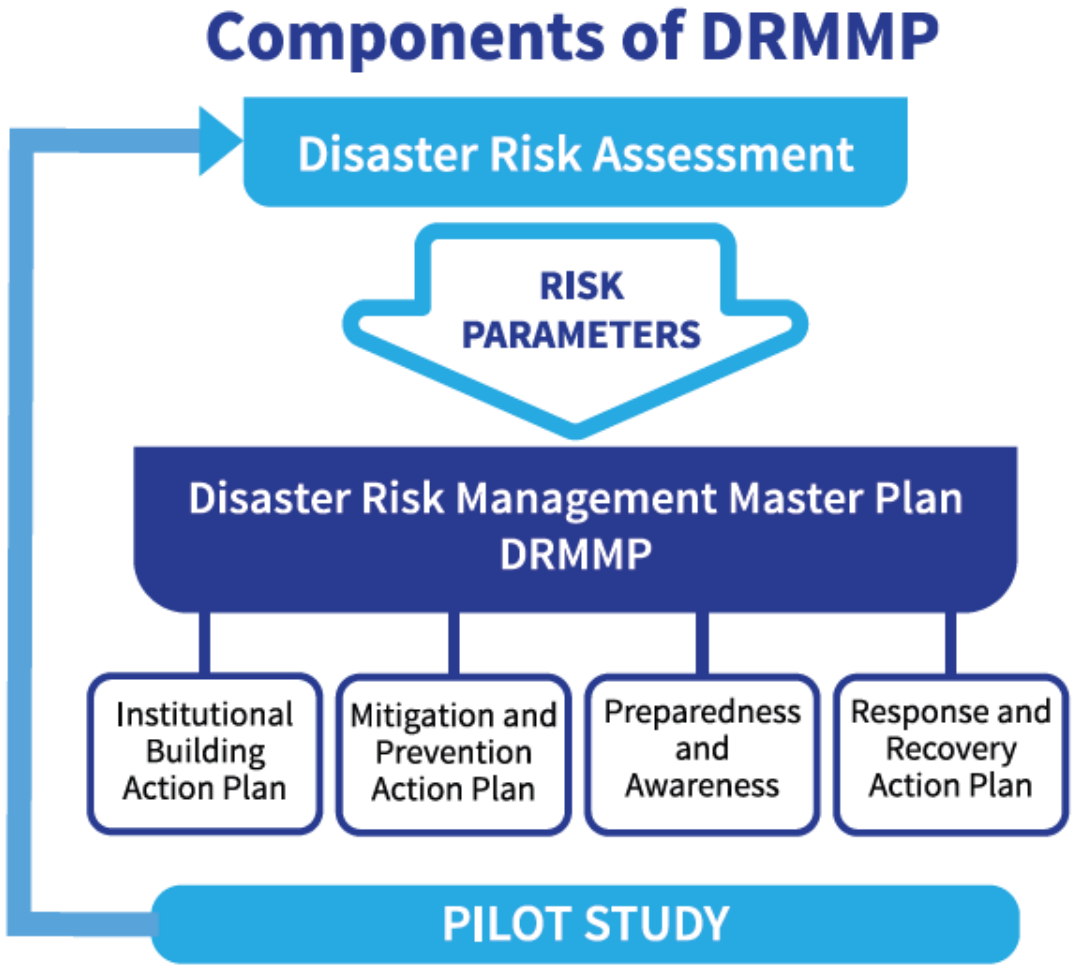
Are cities turning into thermal hotspots?

How climate change impact cities?

Natural Disaster and Urban Development: The role of urban planning

Why do we need a master plan?

What should be the role of ULBs and Parastatal Organisations?

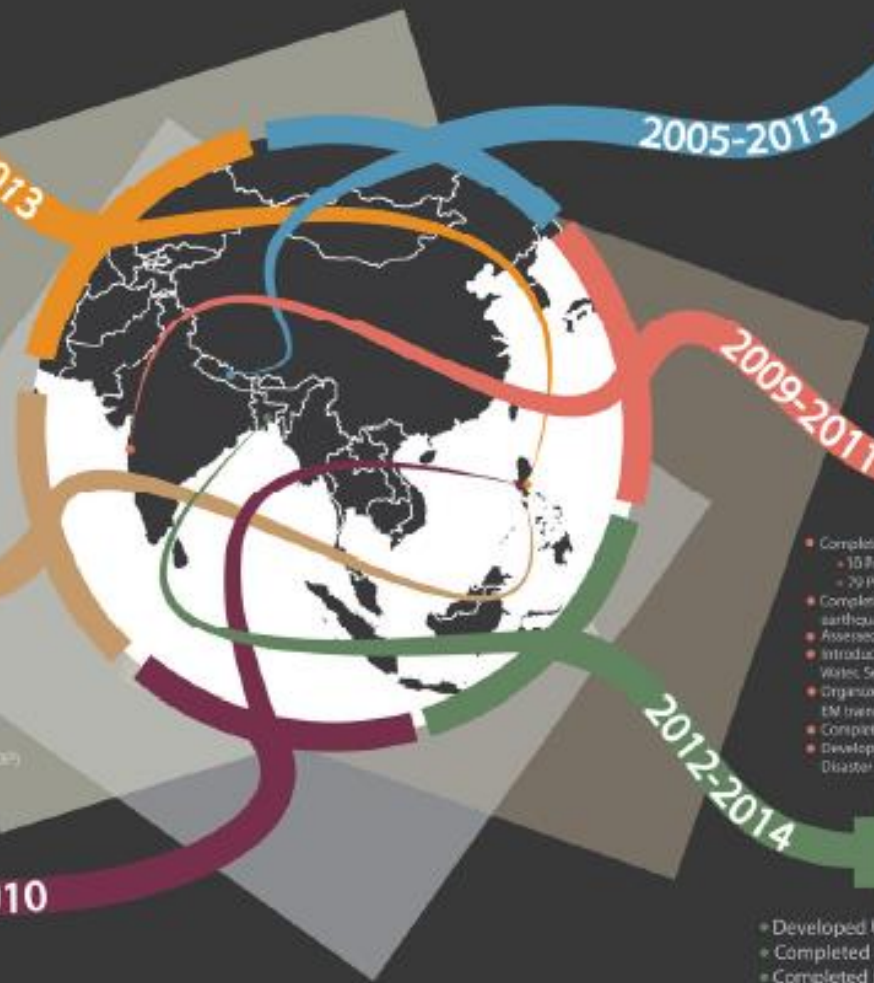


The Metro Manila DRMMP process resulted in the development of a menu of actions to be prioritized. This menu, through a stakeholder validation, was further streamlined and organized into ten (10) action plans which comprise the overall master plan for disaster risk reduction. These ten action items are:

1. Strengthen Metropolitan Manila Disaster Coordinating Council;
2. Promote Adoption of Disaster Management Ordinance by each City and Municipality;
3. Promote the reorganization and revitalization of city/municipal and barangay (county/ward) Disaster Coordinating Councils;
4. Institutionalize Local Government Framework and Financing for Disaster Management;
5. Enhance lateral and vertical inter-agency and inter-governmental communication and coordination;
6. Enhance legal basis for Disaster Risk Management at national level by updating/replacing Presidential Decree 1566;
7. Promote policies that encourage implementation of disaster risk reduction measures; identify mechanisms for mainstreaming DRM into key city functions;
8. Promote local government mitigation planning through use of existing planning tools;
9. Conduct training needs assessment and develop capacity building programs; and
10. Strengthen barangay level preparedness for disaster response and relief.

The development of the DRMMP for Metro Manila brought to fore the importance of mainstreaming by focusing action and decision at local government level. It triggered subsequent policy discussions among the stakeholders and was critical in influencing the passage of Republic Act 10121 (RA 10121) or the Philippine Disaster Risk Reduction and Management Act of 2010. The said Act shifts action, decision, and resources on DRR from the national to the local government which is key to DRM mainstreaming.

Milestones



QUEZON CITY
PHILIPPINES

2012-2013

- Completed the Quezon City Disaster Risk Reduction and Management Plan (DRRMP)
- Conducted detailed risk assessments for earthquake and flood hazards
- Completed four Assessment Reports: 1) Legal and Institutional Arrangements (LIA); 2) Hazards, Vulnerability and Risk Assessment (HVRA); 3) Land Use Planning & Construction Codes and Standards (LUP-CCS); and 4) Geographic Information System (GIS) for DRRM
- Completed Quezon City Risk Atlas : 116-page publication that includes 78 maps and 53 figures
- Conducted a training program on Emergency Management (EM)

KATHMANDU
NEPAL

2005-2013

- Completed the Disaster Risk Management Master Plan (DRMMP)
- Completed the Kathmandu Metropolitan City Emergency Operations Plan (EOP)
- Developed the Kathmandu Risk Sensitive Land Use Plan (RSLUP)
- Developed the Framework for Making Kathmandu Valley Risk Sensitive
- Conducted training on RSLUP and EM

PASIG CITY
PHILIPPINES

2011-2012

- Completed the Pasig City Disaster Risk Reduction and Management Plan
- Completed Pasig City Risk Profile and Atlas : 139-page publication that includes 89 maps
  - Barangay-level ground shaking, liquefaction, heavily damaged buildings and fire following earthquake hazard and risk maps
  - Barangay-level flood susceptibility maps
  - Hotspot Barangays
- Designed Emergency Operations Center (EOC); Emergency Operations Plan (EOP)
- Provided Information, Education and Communication (IEC) Package

MUMBAI
INDIA

2009-2011

- Completed the Mumbai Disaster Risk Management Master Plan (DRMMP)
  - 10 Programs
  - 29 Projects
- Completed City Risk Atlas that includes 100 maps representing earthquake & flood hazards and risks profiles
- Assessed vulnerability of critical and essential facilities
- Introduced three project components namely: Shelter and DRR; Water, Sewage and Storm Drainage Systems; and Transportation
- Organized the Emergency Support Functions (ESF) and conducted EM training
- Completed the Mumbai EOP
- Developed the Urban Disaster Risk Index (UDRI) and Disaster Risk Reduction Indicators (DRRI)

MAKATI CITY
PHILIPPINES

2009 -2010

- Completed the Risk Sensitive Urban Redevelopment Plan (RSURP) for Barangay Rizal, Makati
  Pilot application demonstrating redevelopment planning as a tool to lessen the physical, social, and economic vulnerability of high-risk communities
- Completed Rapid Visual Screening for Seismic Vulnerability of 1,150 structures together with training of engineers
- Conducted Multihazard Risk Assessment (flood, earthquakes, and fire)

DHAKA
BANGLADESH

2012-2014

- Developed Urban Resilience Strategy for Dhaka
- Completed three Guidebooks on RSLUP, LIA, and HVRA
- Completed Dhaka Profile and Earthquake Risk Atlas
- Designed an Emergency Management System for Bangladesh
- Developed a road map for data-sharing platform
- Designed a multi-year Urban Resilience Investment Program for the country
- Delivered RSLUP Blended Training

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Thank You