

# **SEISMIC RISK & RESILIENCE :** **Bangladesh Perspective**

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# Key Challenges

- Dhaka is among the 20 major world cities greatest risk of Earthquake
- The historical seismicity and recent tremors in Bangladesh and its adjoining areas denotes that this country is at high seismic risk.
- Densely Populated, haphazard and unplanned development, Vulnerable Building Infrastructures
- Not Experienced any major Earthquake for more than 100 years
- Community preparedness, Mainstreaming DRR is lagging behind



# VULNERABLE CHARACTERISTICS IN DHAKA CITY



**Timber and Bamboo Houses**



**Un-Reinforced Masonry (URM) Construction**



**Soft Story**



**Flat Slab**

# VULNERABLE CHARACTERISTICS IN DHAKA CITY continue....



**Heavy Overhang**



**Torsional Irregularity**



**Slender column**



**Short column**

# VULNERABLE CHARACTERISTICS IN DHAKA CITY continue....



**Non-parallel system**



**Non-redundant structure**



**Poor concrete**



**Insufficient gap**

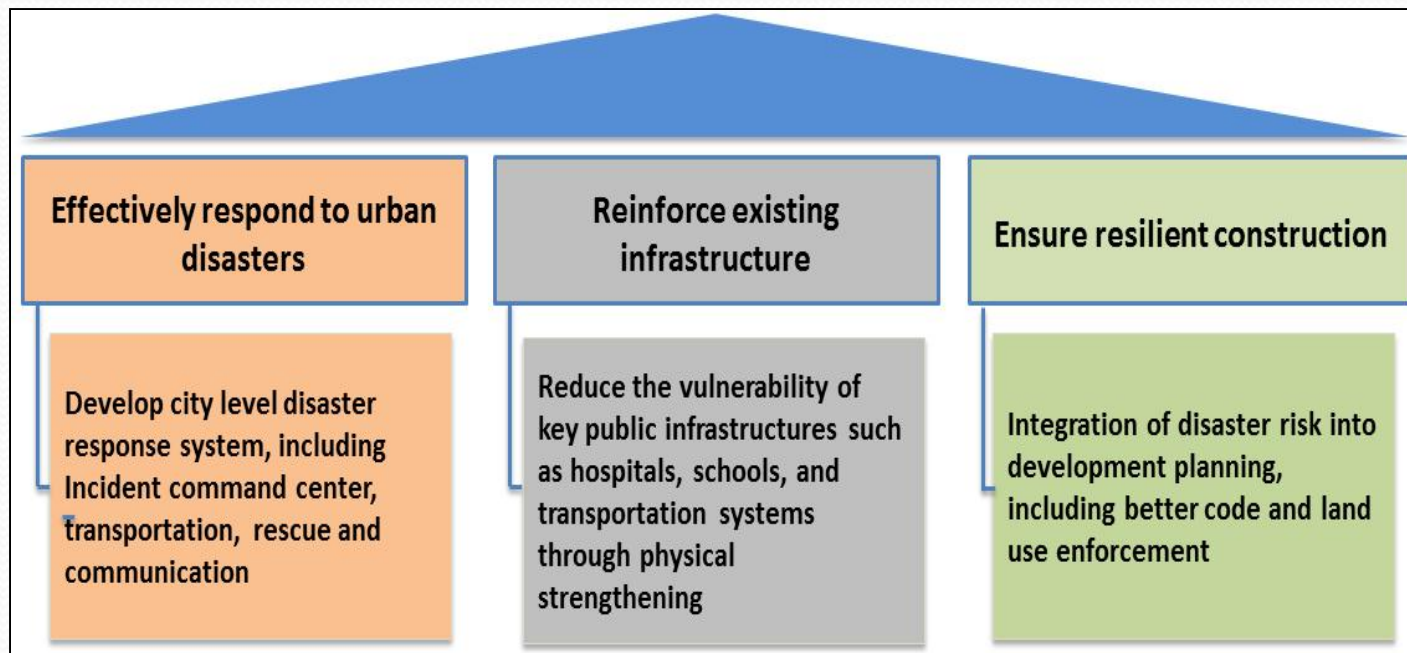
## Risk Assessment under Comprehensive Disaster Management Programme (CDMP) 2009 reveals that

- If an earthquake occurred at Madhupur Fault with magnitude 7.5
  - About 166,570 buildings will be moderately damaged of which 75,218 buildings will be damaged beyond repair.
  - Economic losses are estimated more than 6,000 million USD.
  - Total of 30,599 million tons of debris will be generated, it will require 122,39,60,000 truckloads (@25 tons/truck) to remove.

- If Earthquake occurs at day time, will kill about 16 thousand people immediately after the earthquake.
- About 8 thousand people will require hospitalization
- There will be severe damage to essential facilities like hospital, schools, and police stations. It will cause moderately to complete damage at about 250 hospital or clinics, 1,300 schools as well as 30 police and 4 fire service stations.
- During this period there will be around 80 leaks and 270 breaks in water supply system, 100 leaks & 350 breaks in waste water system and 60 leaks & 200 breaks in gas supply network

# Urban Resilience Project (URP)

## Strengthening Institutions and Capacities respond to Urban Disasters





# URP STRATEGIC PILLARS

HAZARD VULNERABILITY AND  
RISK ASSESSMENT

RISK SENSITIVE LAND USE PLAN

ELECTRONIC PERMITTING

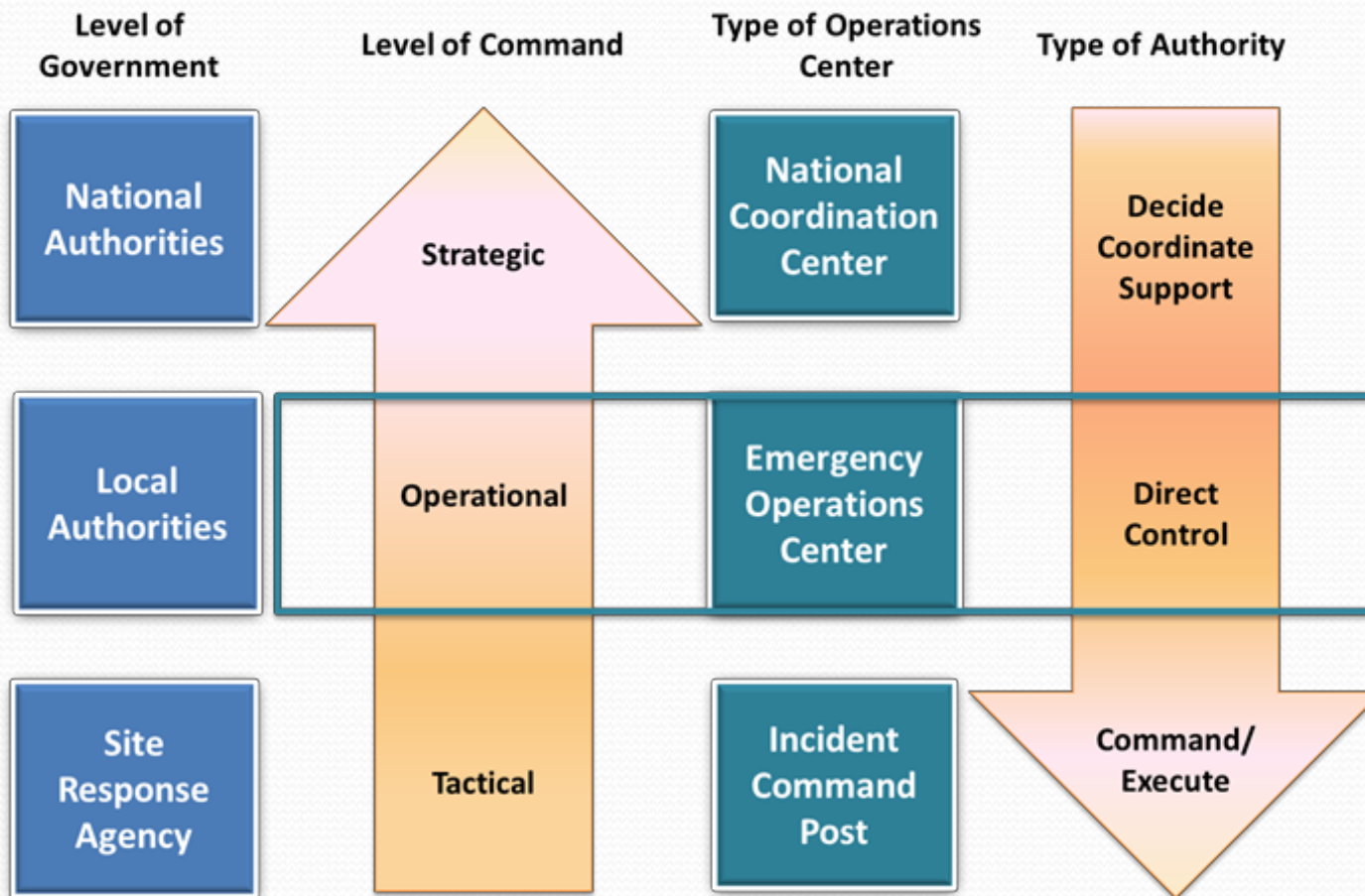
ACCREDITATION PROGRAM

BUILDING CODE ENFORCED

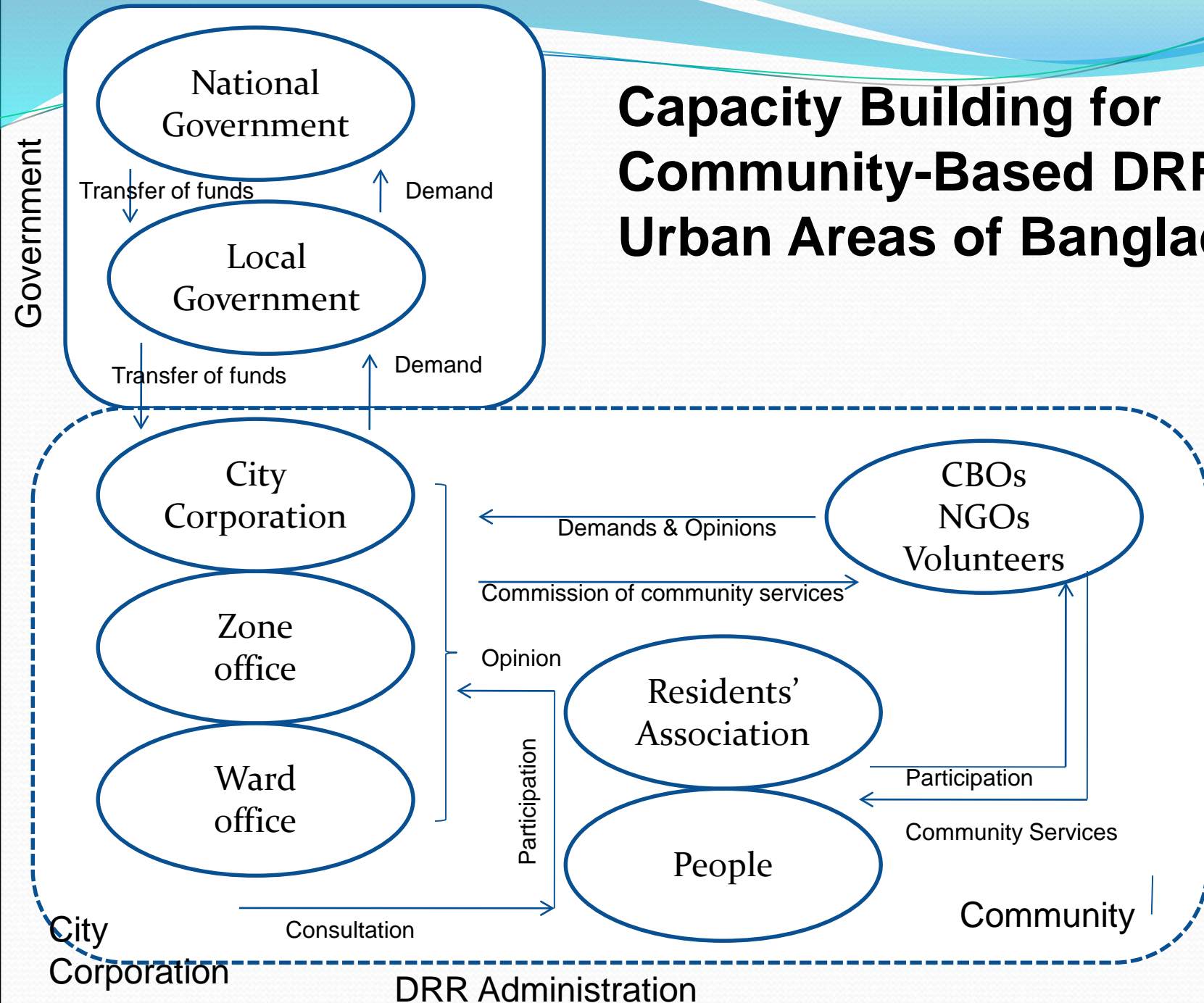
URBAN RESILIENCE  
DIVISION

NEED ASSESSMENTS

# Integrated Emergency Management System



# Capacity Building for Community-Based DRR in Urban Areas of Bangladesh



Thank you