

# Earthquake Risk Mitigation

## - ASDMA initiatives

(Dated: 1<sup>st</sup> May, 2018)



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## A Brief Background

- ✓ Assam State Disaster Management Authority (ASDMA) was **notified in the year 2007**
- ✓ ASDMA Secretariat become functional in the **year 2010**.
- ✓ ASDMA notified the **District Disaster Management Authority in 33 districts** and placed officials for carrying out disaster management activities at the district and revenue circle level



## Glimpse Of Activities

- ✓ Preparation of **Disaster Management Plans** for State, Districts and Departments (16 Nos)
- ✓ Strengthening **Techno Legal Framework**
- ✓ Capacity Building, Training and Awareness Generation
- ✓ Strengthening of **State Disaster Response Force (SDRF)**
- ✓ **Scientific studies and projects with knowledge institutions** for decision support system
- ✓ Hazard Risk and Vulnerability Assessment
- ✓ Operationalization and strengthening of **Control Rooms**
- ✓ Development of SOPs, Manual, Rules and Policies

# Earthquake Risk Reduction

## Techno Legal Regime:

- ✓ **Uniform Building Bye** laws implemented in 2014
- ✓ **Guwahati Building Bye** laws amended in 2006 & 2014

## Risk Assessment

- ✓ **600+ schools and 35 hospitals** in Guwahati city
- ✓ **Non Destructive Test (NDT)** in 27 Deputy Commissioners office & 11 DEOC (Control Room)
- ✓ **324 (G+4 ) Apartments** of Guwahati and shared the report with the Apartment Societies for corrective measures
- ✓ **40 Health institutions**



## Collaborative Studies

### 1. 'Earthquake Damage Estimation Of Guwahati City For Scenario Earthquakes' (On-going)

- ✓ Development of **Inventory database** including high-priority buildings
- ✓ Seismic hazard assessment and identification of **potential earthquake scenarios** within the region of Guwahati
- ✓ Development of GIS-based **exposure, vulnerability, socio-economic models**
- ✓ Report on earthquake scenarios-based risk assessment

## Collaborative Studies

### Contd....

- ✓ Generate Ward-wise Information at sub-ward level
- **Damageability of Building** with damage distribution map
- **No of Buildings expected to get damaged** for various earthquake scenarios
- No of buildings in different **damage states** (Slight / Moderate / extensive / collapse)
- **Casualty status at various time window**
- **Expected Economic Loss**
- **Replacement Cost** (Repair / Rehab /Rebuilding Cost)
- **Extent of Debris and Removal Cost**

**The project will help in deployment & optimum utilization of limited resources in Post-Earthquake Scenario**

## Collaborative Studies

### 2. 'Cost – Effective Retrofitting Solutions For Open Ground Storey Apartment Buildings in Guwahati' (On-going)

- To develop cost effective solution, which can be implemented in a reasonably **short time** to enhance the seismic safety of apartment buildings with open ground storey
- Exercise systems like bracings, strategically positioned RC shear walls or **appropriately designed masonry walls** to provide less-interventional / non-interventional solutions
- To demonstrate **cost-effective** seismic retrofitting /upgrading solution which can be further implemented in **large scale**

**The project will suggest cost-effective retrofitting solution to the Apartment Societies**

# Earthquake Preparedness

## Capacity Building

- ✓ Earthquake Resistant Technology
- ✓ Rapid Visual Screening (RVS)
- ✓ Earthquake Resistant Construction Practices for Masons
- ✓ Search & Rescue
- ✓ First Aid
- ✓ Emergency Health Management for Doctors & Paramedics
- ✓ Workshops
  - ✓ Orientation Workshop for Builders, Developers, Contractors
  - ✓ Differently-abled & Old-aged people

## Awareness

- ✓ Advertisements: Print & Radio
- ✓ Apartment Societies Sensitization: **600 Apartments** in Guwahati and **150 Apartments** in 5 district HQ
- ✓ All Assam Quiz Competition
- ✓ Richter 8.1: Beat the Quake



# Preparedness for Post - Earthquake Response

## Earthquake Response Plan

- ✓ Incident Response System
- ✓ IRS adopted and IRTs notified at State and District level

## Earthquake Mock Drills

- ✓ Mega Mock Drill
- ✓ School Shakeout Programme
- ✓ All DC Offices
- ✓ State Secretariat

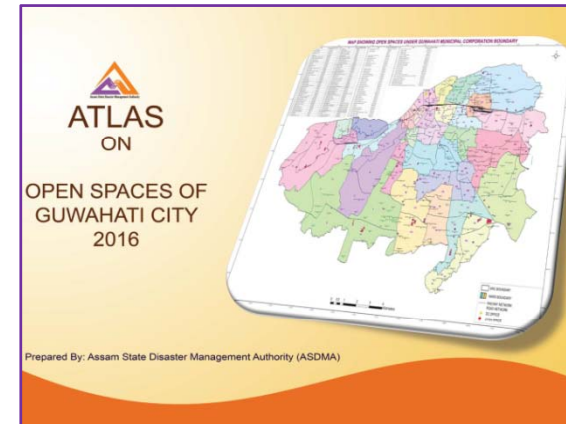


## Emergency Management Exercises

- ✓ City / Town level: 6 Nos, District HQ Level: 10 Nos, Sub-div Level: 10 Nos
- ✓ Gaon Panchayat Level Emergency Management Exercises (Four rounds) covering 2000+ GP

# Preparedness for Post - Earthquake Response

- **Mapping of Open Spaces**
- ✓ ASDMA mapped all the open spaces within Guwahati City to be used for evacuation / makeshift shelter places



- **Management Information System (MIS) on Search & Rescue Equipment**
- **Utility Mapping of all Critical Infrastructures & Services**
  - ✓ Helipads
  - ✓ Hospitals
  - ✓ Open Spaces
  - ✓ Highlands, etc

**Emergency Toll Free Numbers-**

State Emergency Operation Centre: **1070, 1079**

District Emergency Operation Centre: **1077**

**[www.asdma.gov.in](http://www.asdma.gov.in)**



**Thank you**

