



Training Program on “Earthquake Mitigation & Management”  
6 – 10 January, 2014

**Objectives of the Training Program**

1. To understand the concepts of disaster management
2. An overview of earthquake risk and elements at risk in Gujarat
3. Role of various agencies (IMD, ISR etc.) in seismology
4. Existing bye-laws and safety provisions for earthquake resistant structures
5. Earthquake risk reduction measures during response, recovery and mitigation phases of disaster management cycle

**Broad Technical Components of the Training Program**

***Topic 1: Understanding Earthquake Hazard***

- **Session 1: Introduction to Disaster Management Concepts**  
Basic terminology of Hazard, Risk, Exposure & Vulnerability; various phases of Disaster Management Cycle
- **Session 2: Understanding Basics of Earthquakes & Impact**  
Basic terminologies; plate tectonics; seismic zones; types of earthquakes; recording of earthquakes; impact
- **Session 3: Earthquake Vulnerability & Risk Assessment of Gujarat**  
Hazard & vulnerability assessment; exposure of various elements at risk; Vulnerability atlas; past earthquakes; micro-zonation in Gujarat

***Topic 2: Earthquake Risk Management during different phases of disaster***

**Response phase**

- **Session 4: Role of IMD in Seismology**  
Basic terminologies; instruments of forecast; forecasting and dissemination of warnings to departments; Interpreting warnings
- **Session 5: Case - study of 2001 Bhuj Earthquake Response**
- **Session 6: Damage & Loss Assessment post earthquake**  
Damage to different sectors; damage to infrastructure; Loss assessment
- **Session 7: Overview of Incident Response System**  
Different components of IRS; functioning of IRS in an emergency

- **Session 8: Visit to Institute of Seismological Research**
- **Session 9: Emergency Medical Response in Earthquakes**  
Types of injuries; Triage; Emergency Medical Plan

### Recovery Phase

- **Session 10: Concept of Recovery**
- **Session 11: Rapid Visual Screening of Buildings**  
Different building types in Gujarat; design structures; case studies of past earthquakes

### Mitigation Phase

- **Session 12: Structural & Non-structural measures for earthquake risk mitigation**  
Structural reduction measures, non-structural reduction measures, retrofitting of critical infrastructure; vulnerability reduction
- **Session 13: Preparation of Disaster Management Plan**  
DM plan for each department; components of DM plan; SOPs for various hazards for different phases of disasters
- **Session 14: Overview of Gujarat State Earthquake Management Plan**
- **Session 15: Legal framework: Laws, Regulations, Standards & Bye-Laws**  
Laws; provisions for seismic safety; responsibilities of authorities, professionals; compliance of building bye-laws
- **Session 16: Urban planning in earthquake mitigation**  
Cities in risk zones; assessment of building stock through GIS; retrofitting of infrastructure; role of ULBs
- **Session 17: Stress Management**  
Stress & Trauma; reactions of different groups; coping mechanisms
- **Session 18: Capacity building Initiatives & Awareness Generation**  
Different initiatives for seismic safety; trainings & evacuation drills for different groups
- **Session 19: Earthquake Management: A broader perspective**