

Gaps and challenges of science based decision making

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Science and Technology Status in India

- 666 Universities (central/State/Private)
- 168 Scientific/Technical Institutes working in DRR
- IITs
- Regional Engineering Colleges
- Technical Institutions
- Central/National institutes only for specific research
 - NGRI
 - Wadia Institute of Himalayan Geology
 - Indian Institute of Remote Sensing
 - CRRI
 - CBRI
 - Commissions like CWC, etc

Science and Technology in Disaster Risk Reduction

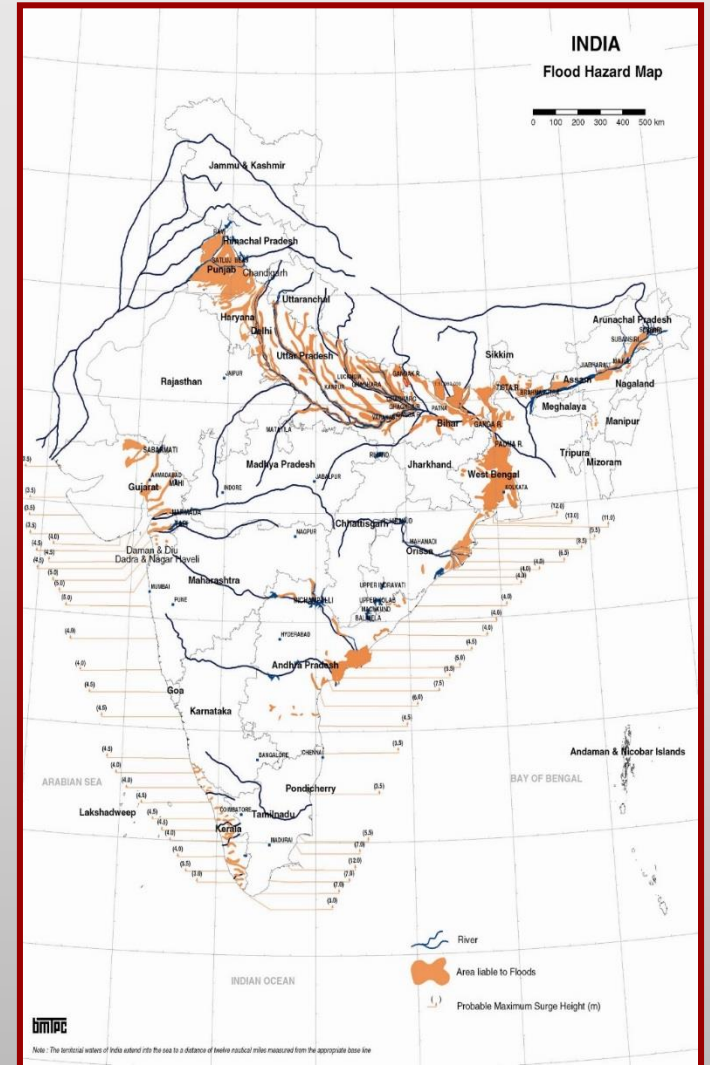
- Preparedness
 - Vulnerability
 - Risk
 - Forecasting
 - Warning System
- Mitigation
 - Structural
 - Non Structural
- Rehabilitation and Recovery
 - New Technologies in construction
- Sustainable Development

Science and Technology use in DRR in India

- Ministry of Earth Sciences
- Ministry of Science and Technology
- Ministry of Human Resource Development
- Department of Technical Education
- Ministry of Home Affairs
- Ministry of Defence / DRDO
- Ministry of Water Resources
- Ministry of Agriculture

Floods- Forecasting and Warning System

- Central Water Commission
- Forecasting at 168 stations-99% accuracy
- Warning system
- Central Ground Water commission
- Water Research Institutes
- Universities
- Local Civil organization's efforts
 - Rajasthan
 - Maharashtra



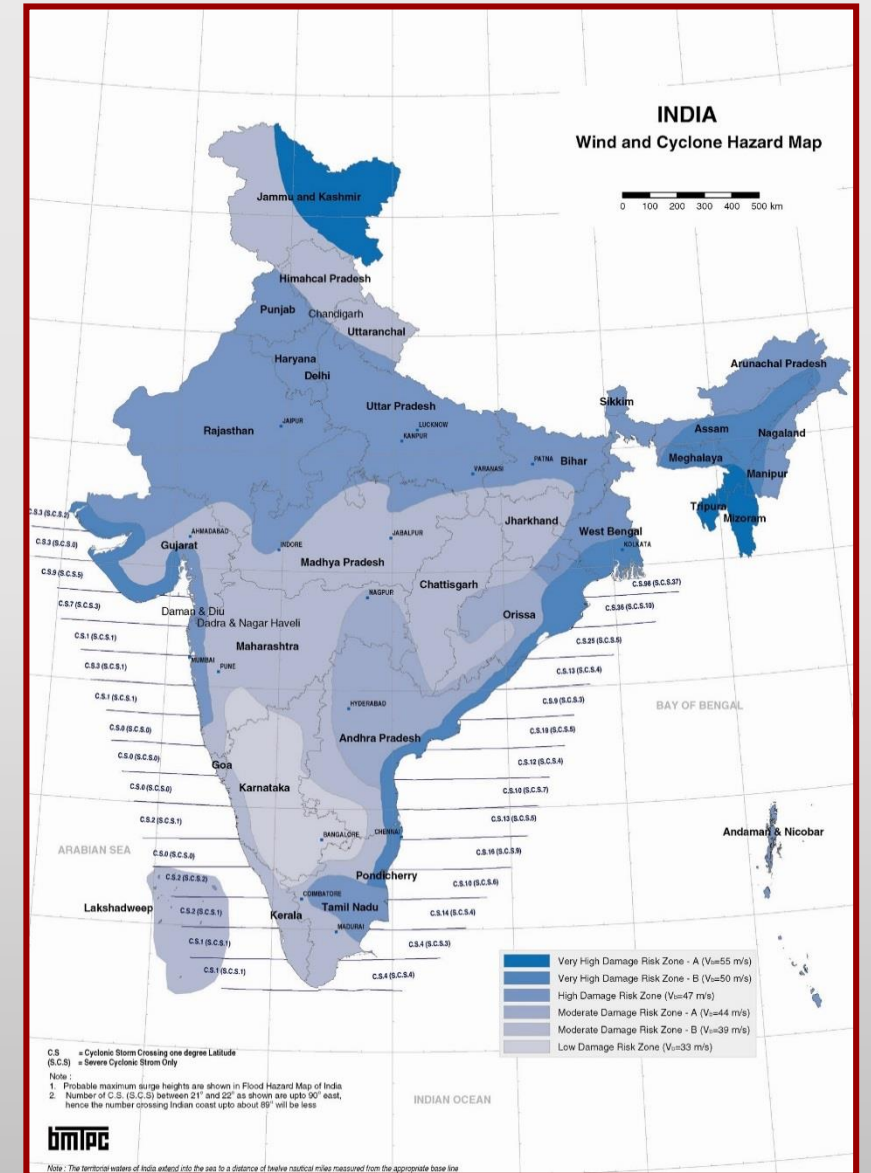
Drought: Ministry of Agriculture

- Indian Meteorological Department
- Weather Watch Group
- State Agencies (Karnataka/Andhra Pradesh)
 - Use of Remote sensing and GIS
 - Use of research in decision making
- Use of GIS and Remote Sensing



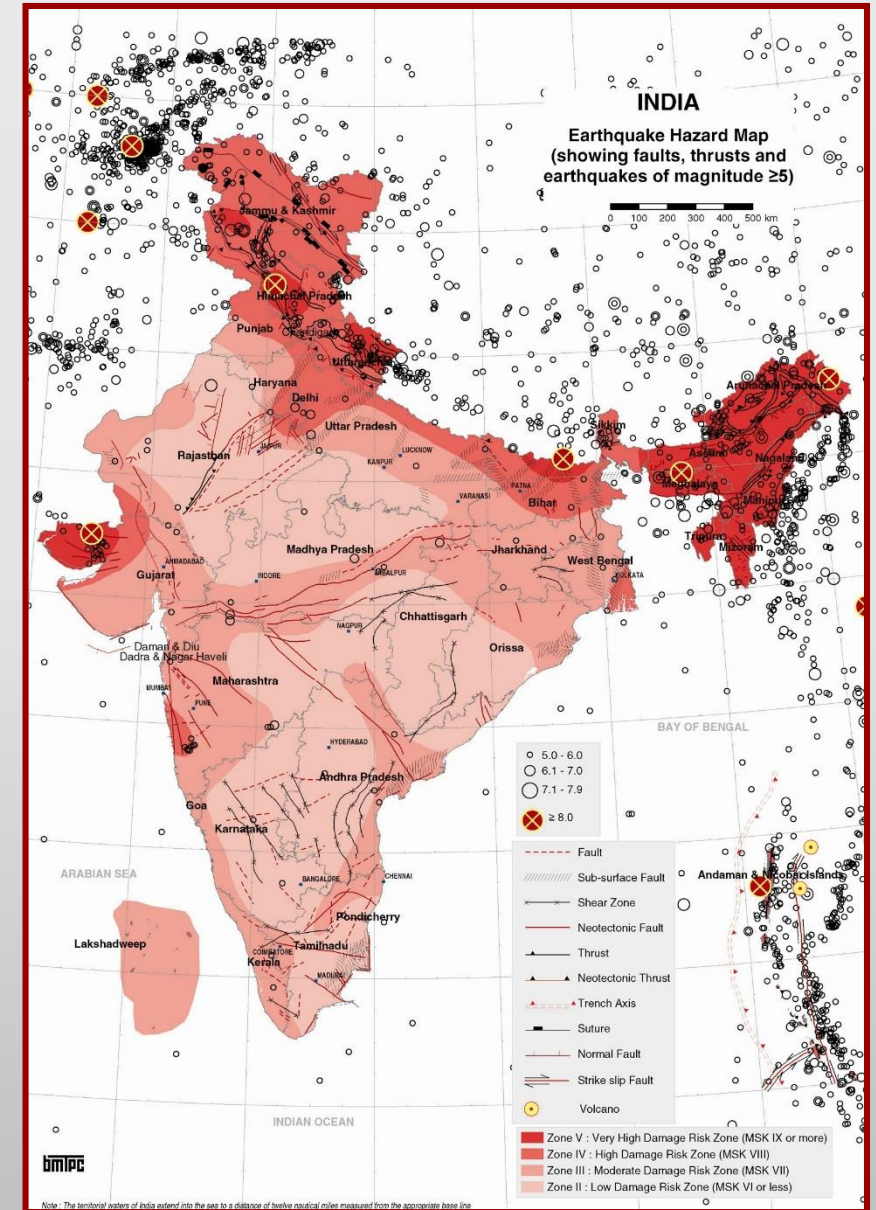
Wind and Cyclones

- IMD
- Warning
- Latest Technology use in Cyclone Tracking
 - Latest Technology
 - International Cooperation
 - Data Sharing
 - Many best practices from India



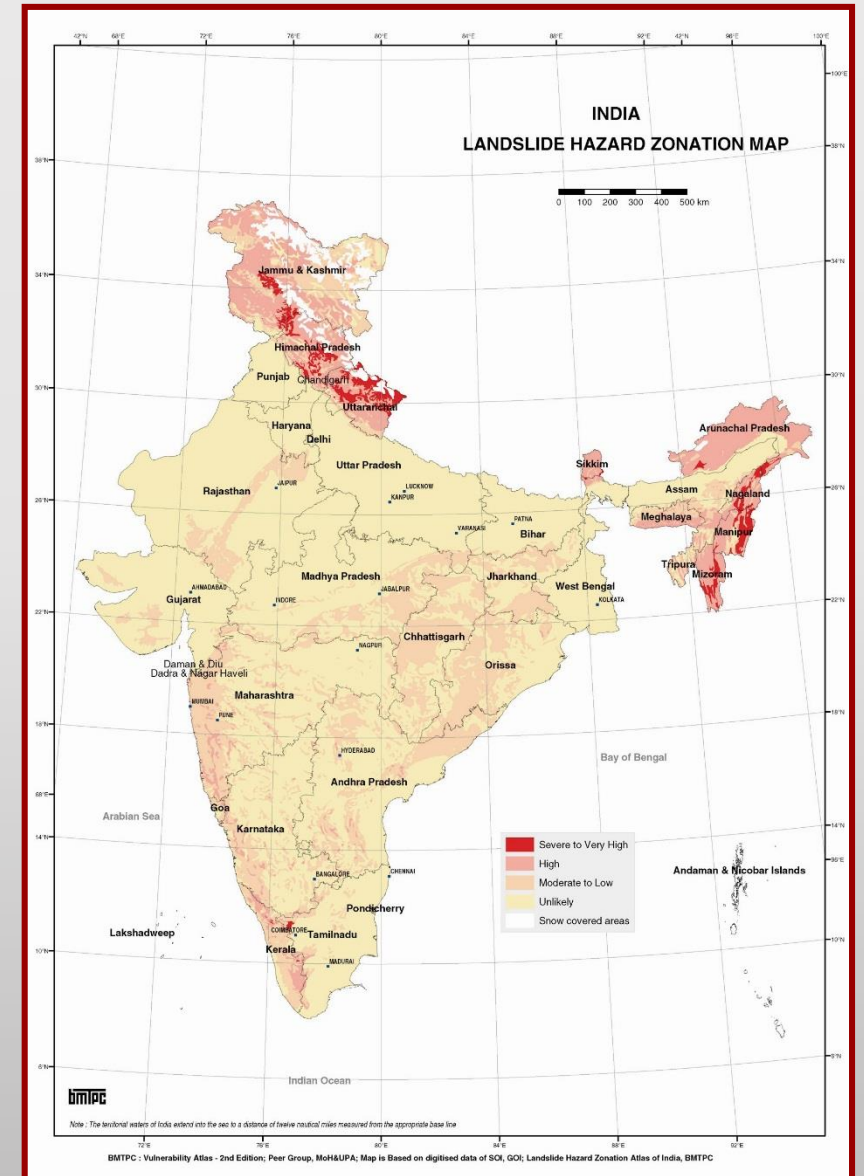
Earthquake

- IMD
- IITs
- IMD
- Seismic studies in India
- NGRI
- NDMA



Landslides

- Early Warning
- CRRI
- Amrita Univ.
- GSI
- Vulnerability Maps



Gaps

- Dissemination of Scientific Knowledge
- Science and Technology in Decision Making
- Role of Academic Institutions
- Role of NGOs
- Role of Private Sector
- Coordination between various role players
- New Research in DRR and funding
- Donors
- International Cooperation

Strengthening Science and Technology in DRR in Asia

- Sensitizing decision makers in understanding role of Science and Technology in DRR-CAPACITY BUILDING
- Identify institutions in Asia-Contribution in DRR
- Explore funding for DRR research and its dissemination
- Recognition of scientific research and setting bench mark
- Centre of Excellence in Asia
- Balance between Traditional wisdom and modern Technology for better DRR