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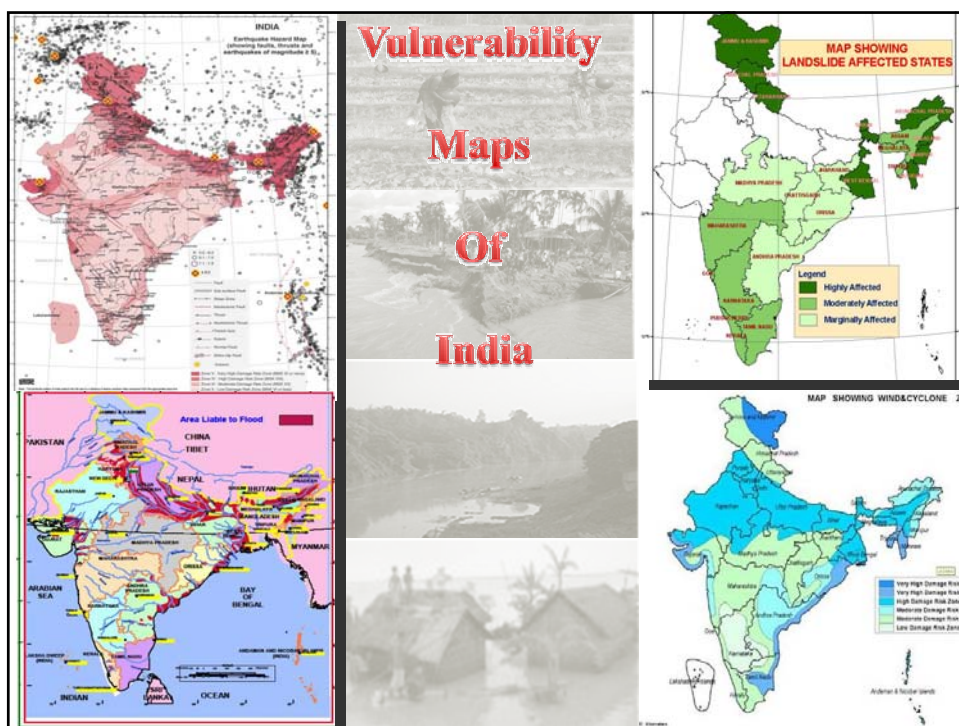
VULNERABILITY PROFILE OF INDIA:



- India is vulnerable in varying degrees to a large number of natural as well as man-made disasters.
- Over 40 million hectares (12 per cent of land) is prone to floods and river erosion.
- 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity.
- Of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis.
- 68 per cent of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches.
- Further, the vulnerability to Nuclear, Biological and Chemical (NBC) disasters and terrorism has also increased.

VULNERABILITY TO VARIOUS NATURAL DISASTERS



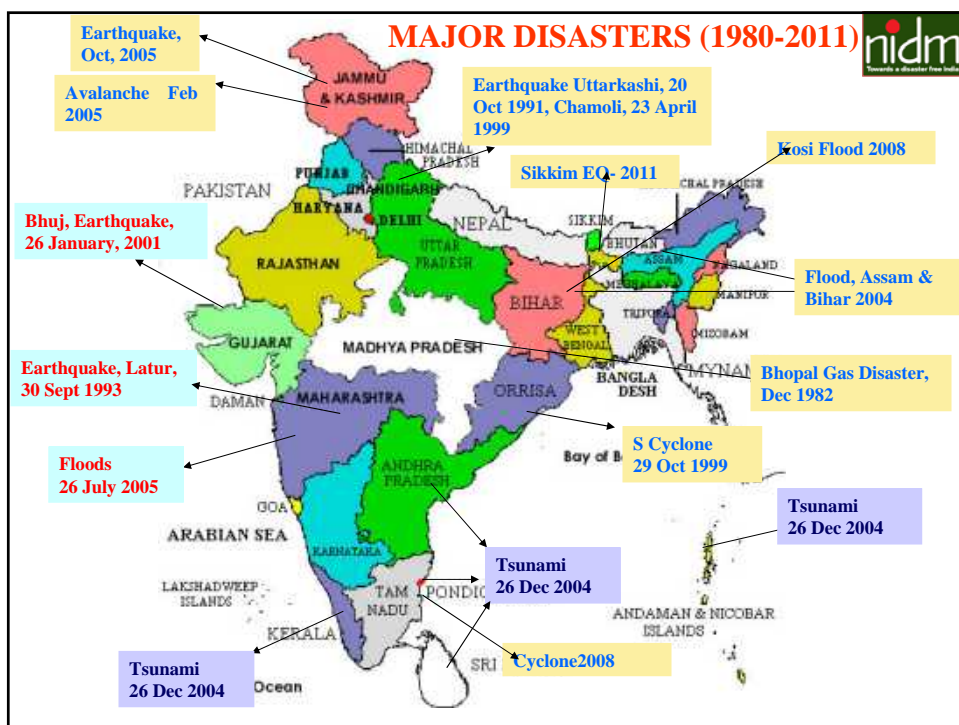


MAJOR DISASTERS IN INDIA (During the LAST 40 YEARS)

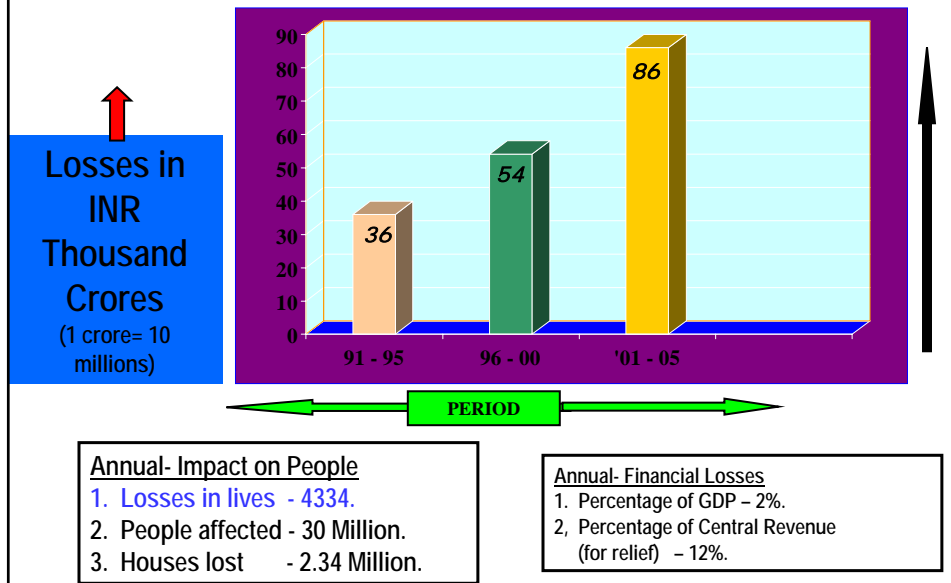


Sl. No.	Name of the Event	Year	State & Area	Fatalities
1.	Drought	1972	Large part of the country	200 million people affected
2.	Cyclone	1977	Andhra Pradesh	10,000 deaths hundreds of thousands homeless 40,000 cattle deaths
3.	Drought	1987	15 States	300 million people affected
4.	Cyclone	1990	Andhra Pradesh	967 people died, 435,000 acres of land affected
5.	Latur Earthquake	1993	Latur, Marathwada region of Maharashtra	7,928 people died 30,000 injured
6.	Cyclone	1996	Andhra Pradesh	1,000 people died, 5,80,000 houses destroyed, Rs. 20.26 billion estimated damage
7.	Orissa Super Cyclone	1999	Orissa	Over 10,000 deaths
8.	Gujarat Earthquake	2001	Gujarat State	13,805 deaths 6.3 million people affected

Sl. No.	Name of the Event	Year	State & Area	Fatalities	nidm Towards a disaster free India
9.	Tsunami	2004	Coastline of Tamil Nadu, Kerala, Andhra Pradesh, Pondicherry and Andaman & Nicobar Islands of India	10,749 deaths 5,640 person missing 2.79 million people affected 11,827 hectares of crops damaged 300,000 fisher folk lost their livelihood	
10.	Maharashtra Floods	July 2005	Maharashtra State	1094 deaths 167 injured 54 missing	
11.	Kashmir	2005	Mostly Pakistan, Partially Kashmir	1400 deaths in Kashmir (86,000 deaths in total)	
12.	Kosi Floods	2008	North Bihar	527 deaths, 19,323 livestock perished, 2,23,000 houses damaged, 3.3 million persons affected	
13.	Cyclone Nisha	2008	Tamil Nadu	204 deaths	
14.	Drought	2009	252 Districts in 10 States	_____	
15.	Krishna Floods	2009	Andhra Pradesh and Karnataka	300 people died	
16.	Cloudburst	2010	Leh, Ladakh in J&K	257 people died	
17.	Sikkim Earthquake	2011	North Eastern India with epicenter near Nepal Border and Sikkim	97 people died (75 in Sikkim)	
18.	Landslides / cloudburst	2012	Uttarakhand in Himalaya	Hundreds died and huge economic loss	
19.	Flood	2012	Assam, Madhya Pradesh, Rajasthan etc.	Hundreds died and damage to property and agriculture.	



ECONOMIC LOSSES DUE TO DISASTERS



CLIMATE CHANGE AND DISASTERS:

- Increase in frequency and intensity of hydromet. Disasters.
- Sea level rise posing threat to coastal region.
- Change in Monsoon leading to uneven pattern of rainfall (both frequency and time).
- Glacial melting in Himalayan region leading to flood in one region and drought in other.
- Change in humidity and sun shine duration- adverse impact on crop production and diseases.



DISASTER MANAGEMENT: A PARADIGM SHIFT:



1. Paradigm shift after 1999: from Response and relief to prevention, mitigation and preparedness.
2. High Powered Committee set up in August 1999.
3. OVERALL CAPACITY BUILDING: Thrust Areas:
 1. Policy and Legal Framework
 2. Institutional set up
 3. Mitigation Projects
 4. Mainstreaming DM in Development
 5. Training, Education & Awareness
 6. Effective response mechanism
 7. Research and Development



I. POLICY AND LEGAL FRAMEWORK:



- **DM POLICY:** To build A SAFE AND DISASTER RESILIENT INDIA by developing a holistic, proactive, multi-disaster and technology-driven strategy through a culture of prevention, mitigation, preparedness and efficient response."
- **DM ACT- 2005:**
- **Approach:**
 - Paradigm Shift from Response Centric to a Holistic and Integrated Approach.
 - Backed by – Institutional Framework and Legal Authority.
 - Supported by Financial Mechanism Creation of new Funds i.e.

II. INSTITUTIONAL FRAMEWORK:



DM STRUCTURE

- NDMA set up as the Apex Body with Prime Minister as Chairperson.
- National Executive Committee (NEC) - Secretaries of 14 Ministries and Chief of Integrated Defence Staff Function as Executive Committee of NDMA.

At the Centre

- Central Ministries; National Disaster Management Authority, National Institute of Disaster Management
- National Disaster Response Force (NDRF).

State Level

- SDMA headed by Chief Minister.
- State Executive Committee (SEC).

District Level

- DDMA headed by District Magistrate.
- Interface between Govt. and Public.

OTHER MINISTRIES RESPONSIBLE FOR DM:



(i)	Drought -	Ministry of Agriculture.
(ii)	Epidemics & Biological Disaster-	Ministry of Health.
(iii)	Chemical Disaster -	Ministry of Environment.
(iv)	Nuclear Accidents & Leakages-	Dept. of Atomic Energy.
(v)	Railway Accidents -	Ministry of Railways.
(vi)	Air Accidents -	Ministry of Civil Aviation.
(vii)	Natural Disasters & Civil Strife -	Ministry of Home Affairs.

III. MITIGATION PROJECTS:



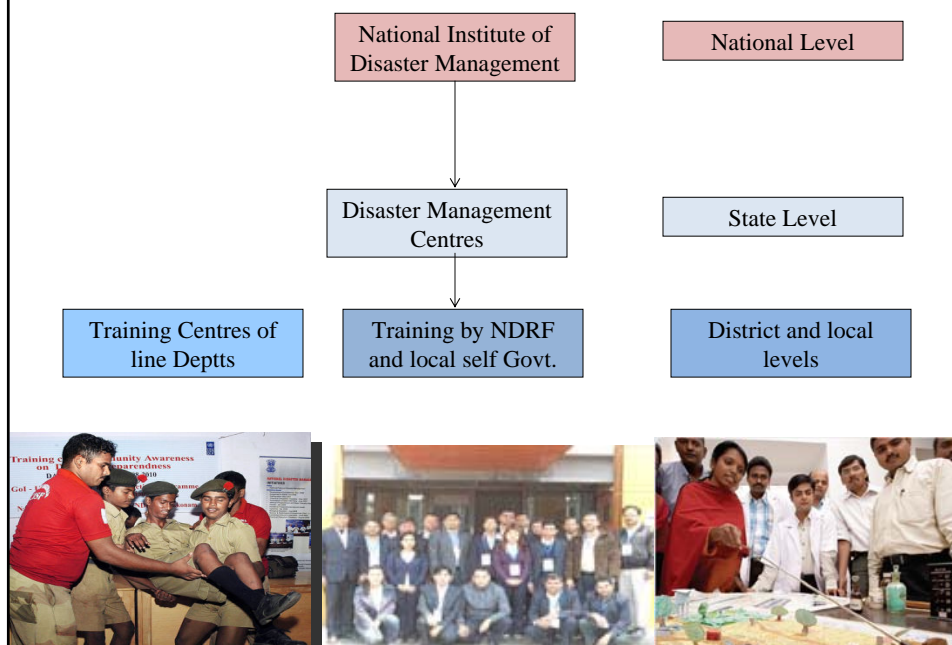
- **Cyclones: World Bank Project : 308.6 Million US \$.**
- **Earthquakes : Rs. 1597.79 Cr.**
- **Pilot Project for School Safety : Rs. 48 Cr).**
- **National Disaster Information and Communication Network : Rs. 821 Cr.**
- **Landslides.**
- **Floods.**
- **Medical Preparedness.**
- **Creation of National Disaster Response Reserves**
(for 400,000 Personnel, including 150,000 Personnel)

IV. MAINSTREAMING DM IN DEVELOPMENT:



1. All new Projects/ Programmes will mandatorily have DM resilience inbuilt (at times of conceptualization itself).
2. Planning Commission and the Ministry of Finance to give approval to the projects only if disaster resilience self certification is provided.
3. Ongoing Projects to be revisited to include disaster resilience audit.
4. Infrastructural loans to be sanctioned by the Banks only after due diligence on DM resilience audit.
5. Existing Lifeline Projects to be selectively revisited and retrofitted.
6. Reporting Item in the National Development Council – the Highest National Planning Body.

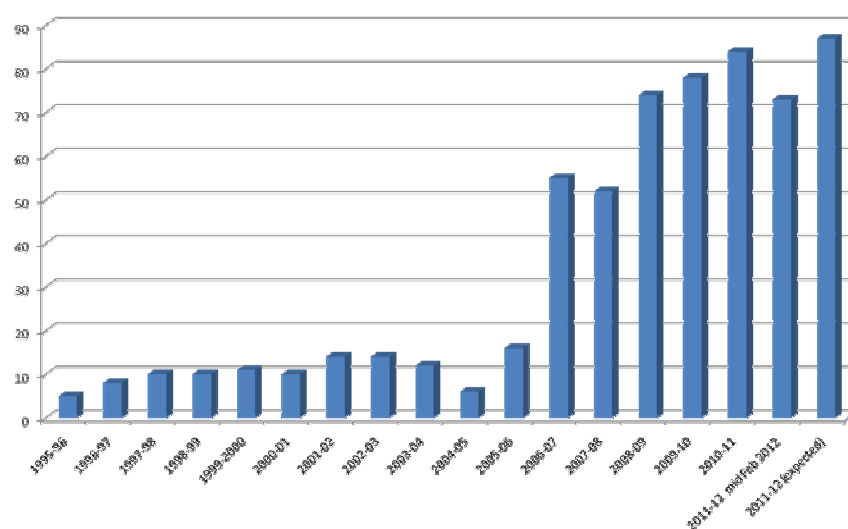
V. TRAINING, EDUCATION AND AWARENESS GENERATION



NATIONAL INSTITUTE OF DISASTER MANAGEMENT

Face to Face Training Programmes at NIDM

(numbers of programmes year wise)



Web based Online Courses:



Name of Course	Duration
Comprehensive Disaster Risk Management Framework (CDRMF)	6 weeks
Community based Disaster Risk Management(CBDRM)	4 weeks
Earthquake Risk Reduction (ERR)	4 weeks
Risk Identification Assessment & Analysis (RA)	4 weeks
Safer Cities (SC)	4 weeks
Climate Change and Disaster Risk (CLC)	4 weeks
Financial Strategies for Managing the Economic Impacts of Disasters (FSMEIS)	4 weeks
Risk Sensitive Land Use Planning	4 weeks
Gender Issues	4 weeks

Satellite Based Programme:



- **Satellite based demonstration cum Training Programme on Disaster Management** conducted through **EduSAT Network**

Self E- learning Course:

- Consists of 10 courses: out of which 3 launched and seven in final stage, to be launched in April, 2011.
- Course is to open for all who wish to have basic knowledge in DRM and don't wish to attend regular or other course.

Miscellaneous:

- In addition NIDM also engaged in providing HRD support to various state and Central Govt and other departments like –Universities, Municipal Committees etc.

OTHER ACTIVITIES



A. Documentation

- India Disaster Report
- National Response Plan and National Human Resource Development Plan – under finalization
- Directory of Disaster Management Institutions and Resource Persons: under publication
- Best Practices in DRR
- Archives of various common natural disasters & lessons learnt:

B. Training modules

- 17 training modules - 10 of NIDM and 7 under GOI-UNDP DRR programme

C. Education and Awareness generation

- DM in course curricula of school and university level education
- Observe Disaster Risk Reduction Environment Day and Day for Disabled Persons at National and state level.
- IEC Material developed: leaflets, brochure and other IEC material for awareness.
- Developing Posters and Documentaries on themes related to DRR
- E- learning and self learning courses – being publicized

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TRAINING AT COMMUNITY LEVEL

• Capacity Building Project

(in Partnership with National University and Ministry of Rural Development)

- States. : 11.
- Districts. : 55.
- Training of PRI/ ULB Representatives.: 12,375 (225 Per District).
- Training of Government Functionaries: 4,125 (75 Per District).

• PANCHAYATS Raj Institutes: PRI (local self Govt):

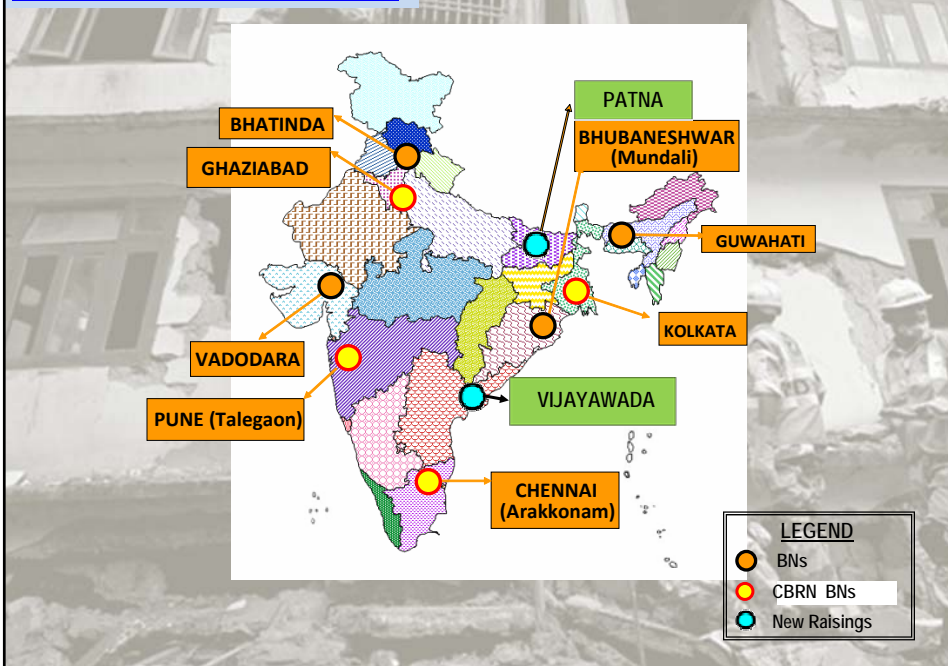
- Training in State Institutes of Rural Development and National Institute of Rural Development for PRIs is under active planning – with Ministry of Panchayati Raj.
- Awareness Generation and Preparedness through PRI Training Institutes.
- Disaster Resilience ensured in their Projects.

VI. RESPONSE AND RESCUE:

National Disaster Response Force (NDRF)

- **Composition:** 10 Battalions.
- **Tasks:**
 - Specialized Response during disasters.
 - Well equipped and trained in search and rescue operations
 - Assist in Community Training & Preparedness.
 - Impart basic and operation level training to State Disaster Response Forces (Police, Civil Defence and Home Guards).
 - Proactive Deployment during impending disaster situations.
 - Liaison, Reconnaissance, Rehearsals and Mock Drills.
- STATE DISASTER RESPONSE FORCE: at State level
- CAPACITY BUILDING OF FIRE SERVICE and CIVIL DEFENCE

NDRF BNs – LOCATIONS



NDRF IN ACTION



NDRF TEAM IN JAPAN HELPING IN TSUNAMI RESCUE OPERATION



INDIAN RELIEF & REHABILITATION TEAM T
28 MAR TO 08 APR 2011



MOCK DRILLS:

- Mock Exercises (Districts & Schools)
- Conducted so far 209 (including 80 Schools/ Colleges).
- Community and First Responders : Sensitized. Over 15.0 Lakhs.
- Commonwealth Games (All Competition/ Practice Venues, Games Village & Places of Stay) Conducted 55 mock drills.



CHEMICAL (INDUSTRIAL) DISASTERS.

- Mock Drill Exercises: 26.
- Major Accident Hazard (MAH) Units Exercised: 49.
- MAH Industries Sensitized: 120.
- On Site Workers Participated: 79,700.
- Off-Site People Sensitized: 2.03 Lakhs.
- On-Site Plans Prepared: 1833

IOCL PANIPAT, HARYANA, 21 MAY 2010

SURAT, HAZIRA, GUJARAT, 28 MARCH 2008



VII. RESEARCH AND DEVELOPMENT:

- Involvement of various Universities and Research Institutes to carry out research for DM
- Case studies and lesson learnt exercises by NIDM
- Preparation of Digital Maps.
- Preparation of Upgraded Hazard Maps.
- Development of GIS Platform for Vulnerability Analysis and Risk Assessment.
- Seismic Microzonation.
- Improved Modelling for Advanced Forecasting Capability (INCOIS and IMD).
- National Disaster Management Information System (NDMIS).
- National Resource Network

