

Disaster Management in India

By

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Country and Climate

- Area : 3.2 million Sq.kms-7th largest country in the world
- Common border with Afghanistan,Pakistan,
- China,Bhutan,Nepal, Myanmar and Bangladesh.
- Four Regions: Great mountain Zone, Plains of the Ganga and Sindhu, Desert and Southern Peninsula

Country and Climate

- Climate :Four seasons-
 - Winter(January-February)
 - Hot weather,summer-March-May
 - Rainy season-monsoon-July-September
 - Post monsoon period-October-December

Country and Climate

- Population: over 1000 million
- Average population density:about 300 persons per Sq.km
- Literacy rate: 53.00 percent

Country and Climate

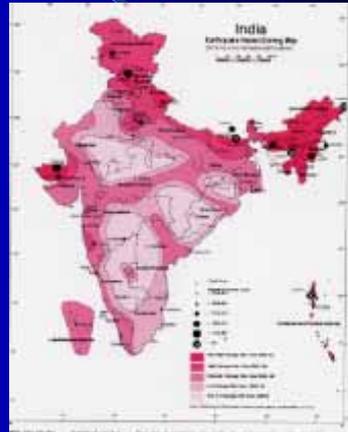
- Urbanization : about 26 percent
- Administrative Set Up:
- 28 States and 7 Union Territories
- District Collectors
- Tehsils/Blocks
- Villages

VULNERABILITY TO NATURAL DISASTERS

- India vulnerable to major disasters of floods, cyclones, drought and earthquakes
- 40 million hectares prone to floods
- 68% area vulnerable to drought
- 56% area exposed to seismic activities
- Over 8000 Kms coastline prone to cyclones
- Hailstorm, landslides, avalanches fire too occur frequently

EARTHQUAKE ZONING MAP

- 27 earthquakes of 5.0 magnitude or more between 1819 to 2001(10 of between 7 and above)
- Largest magnitude of 8.7 in 1897(Assam) and 8.6 in (Assam) 1950
- Rivers changed their courses, ground elevations got changed and stones were thrown upward



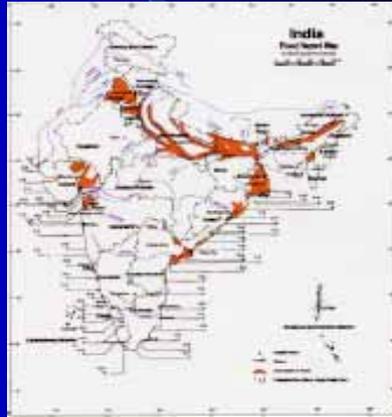
CYCLONE HAZARD MAP

- 1891-1990: 262 cyclones (92 severe) in 50 KM wide strip on the East Coast
- Less severe cyclonic activities on West Coast(33 cyclones)



FLOOD HAZARD MAP

- About 80% of annual rainfall received within four months (June-September)
- On an average 8.0 million hectares affected, over 2000 persons killed and damage Rs.9720.0 million
- 40 million hectares area prone to floods, over 14 million hectares protected



EXTENT OF DAMAGE AND DESTRUCTION

(average annual)

- Human loss-3600
- Cropped area affected- 1.42 million hect.
- Number of houses damaged : 2.36 million

RESPONSE MECHANISM

- Basic responsibility of State Governments
- Union Government supplements the efforts by extending logistics and financial support as well as coordinate efforts at national and international levels

GOVERNMENT OF INDIA-NODAL MINISTRIES FOR DISASTER MANAGEMENT

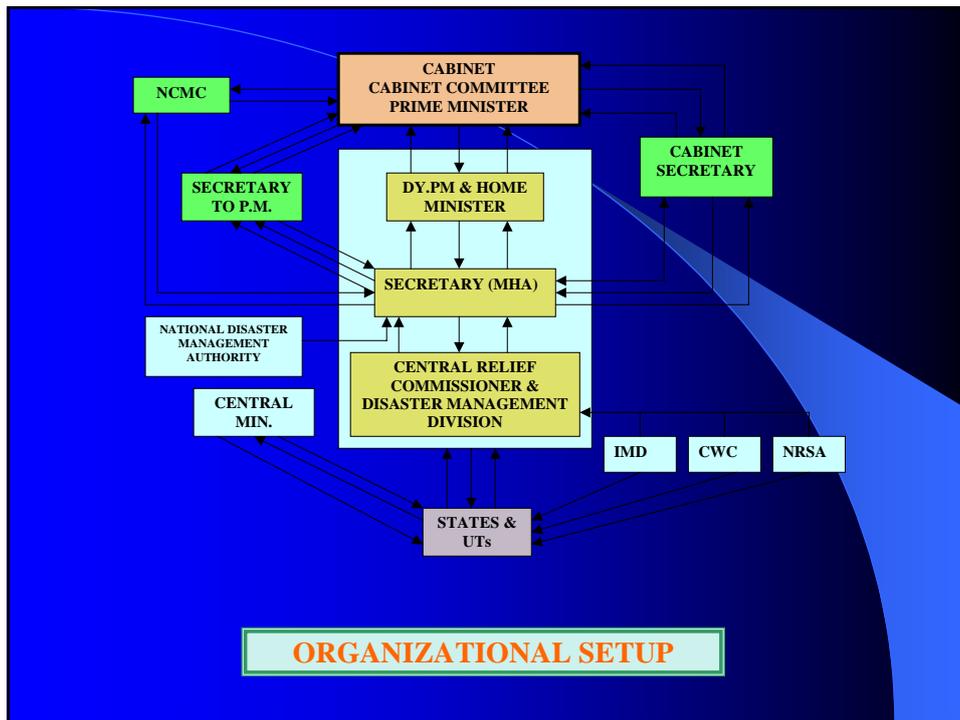
<u>Disaster</u>	<u>Nodal Ministry</u>
● Natural (except drought)	Home Affairs
● Air Accidents	Civil Aviation
● Civil Strife	Home Affairs
● Railway Accidents	Railways
● Chemical Disasters	Environment
● Biological	Health
● Nuclear Accident	Atomic Energy

MANAGEMENT MECHANISM

- **Integrated Administrative Machinery**
- **National Contingency Action Plan- identifies role of different players**
- **Ministry of Home Affairs-Nodal Ministry**
- **Central Relief Commissioner-Chief Nodal Officer**
- **State/District Contingency Plans and Relief Manuals**

NATURAL DISASTER RESPONSE– UNION GOVERNMENT LEVEL

- **National Crises Management Committee under Cabinet Secretary**
- **Crises Management Committee under CRC**
- **Group of Ministers, Task Forces, Group of Secretaries and High Level Committees – Need based**



NATURAL DISASTER RESPONSE- STATE LEVEL

- State Cabinet
- States Crises Management Group-headed by Chief Secretary
- Relief Commissioner-State Nodal Officer
- District Collector- the key role player

FINANCIAL ARRANGEMENTS

- Based on recommendations of Finance Commission- Constituted after every five years
- Calamity Relief Fund for each State-Allocation for 2000-05 Rs.110,075 million against Rs.63042 million for 1995-2000
- Additional assistance from National Calamity Contingency Fund-need based- for severe calamity

RECENT MAJOR DISASTERS

- Super Cyclone – October, 1999-Orissa
- Human live lost: 8913
- Population affected: 18.97 million
- Houses damaged: 02.03 million
- Livestock perished: 00.44 million
- Trees felled: 90.00 million
- Cropped area affected: 01.84 million
- School buildings damaged :13443

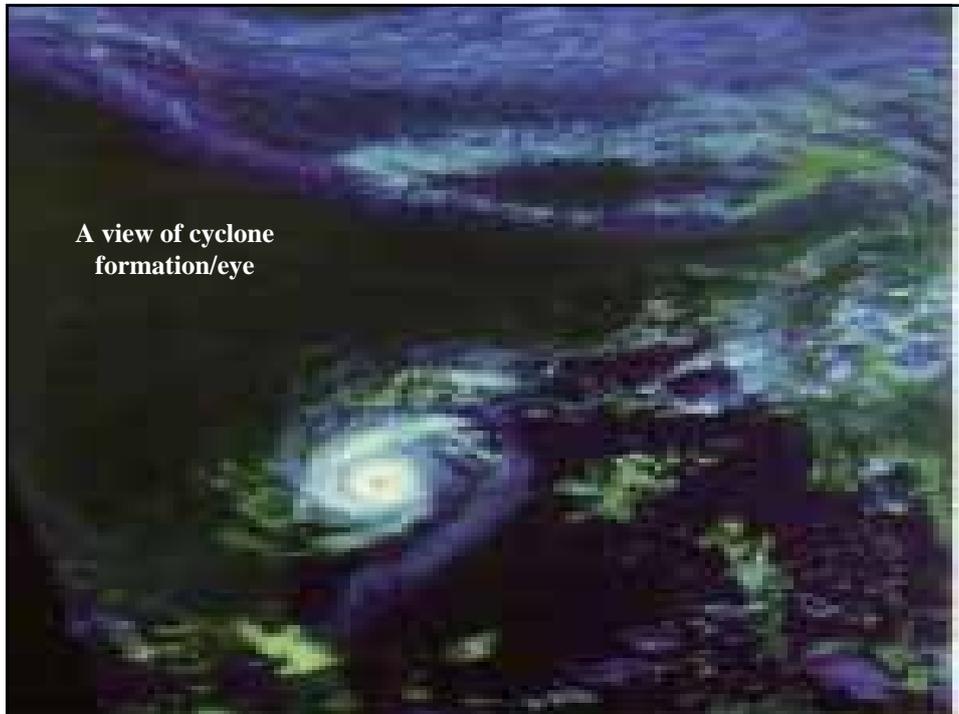
RECENT MAJOR DISASTERS- CONTD.

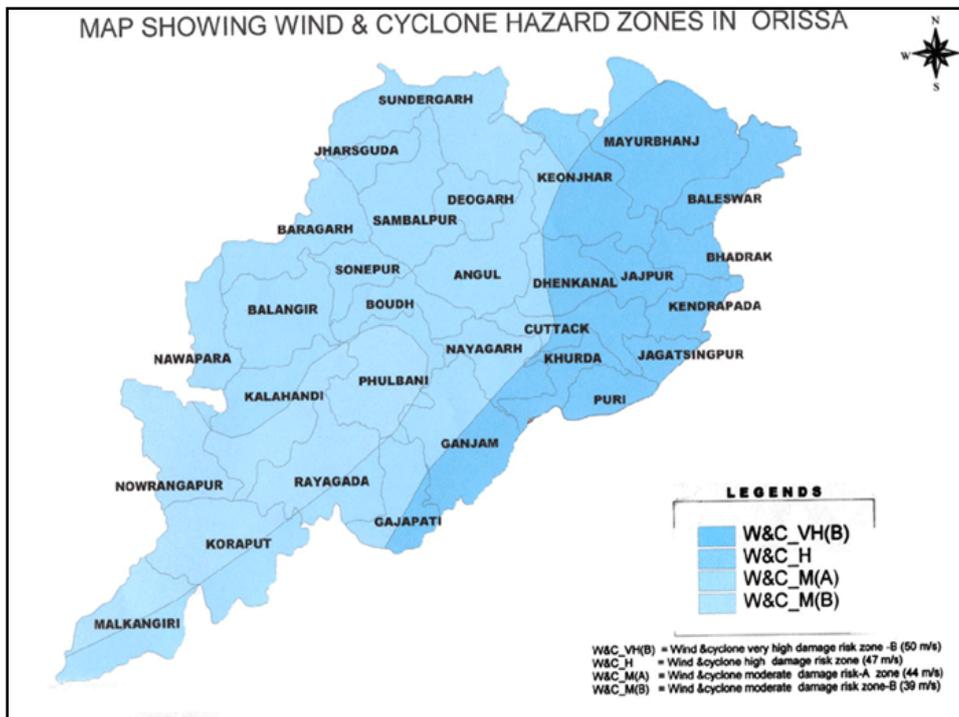
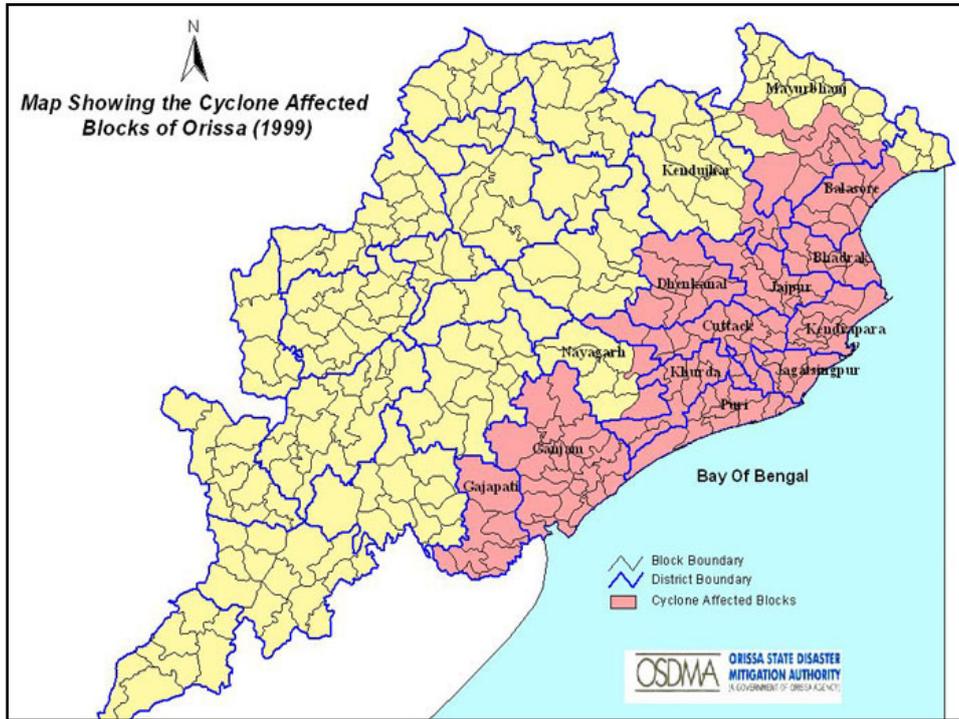
Orissa super cyclone-contd.

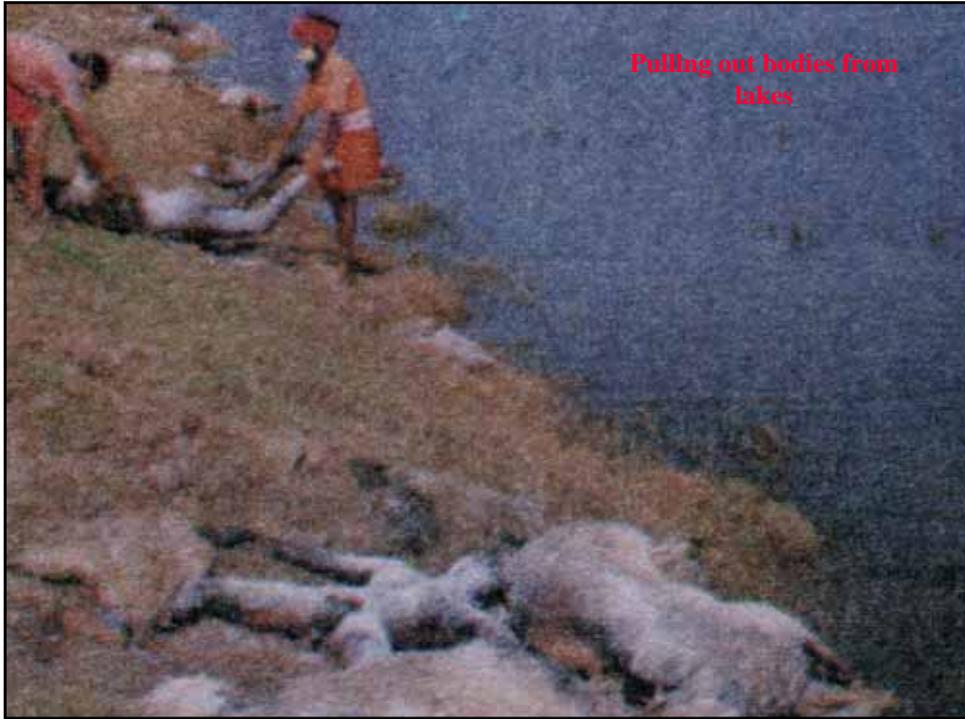
Relief and Rehabilitation work is over

Reconstruction work is going on(School-cum-cyclone Shelters, Health Institutions,Houses,Buildings)

DFID and World Bank assisting (School buildings,supply of essential drugs,livelihood restoration,lift irrigation point rehabilitation project,Road work,water supply)







Pulling out bodies from lakes



Linemen repairing snapped wires

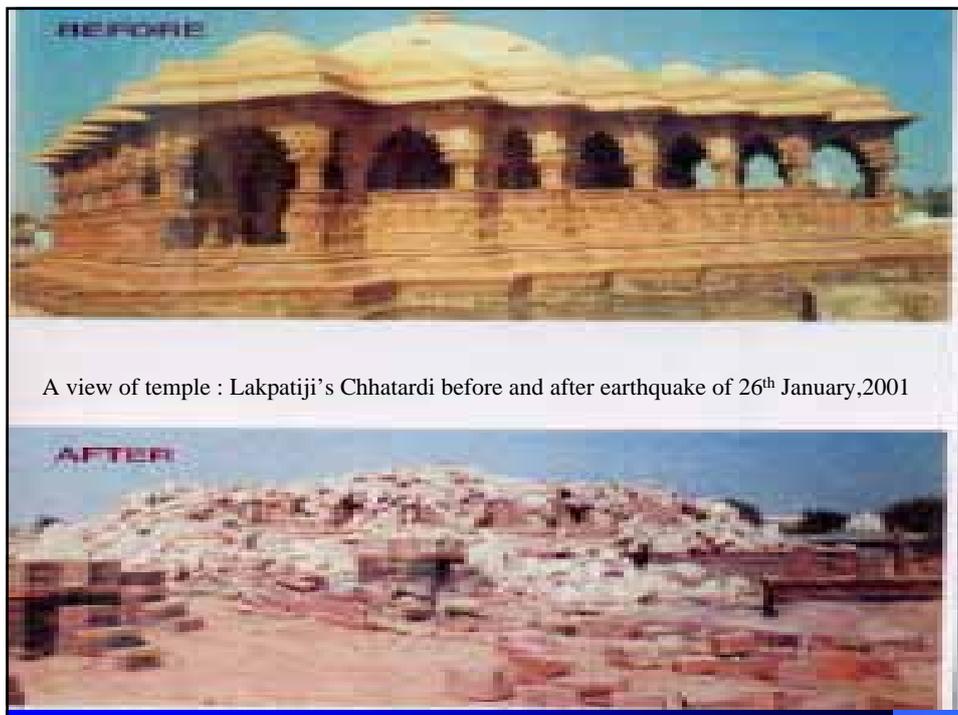


RECENT MAJOR DISASTERS- CONTD

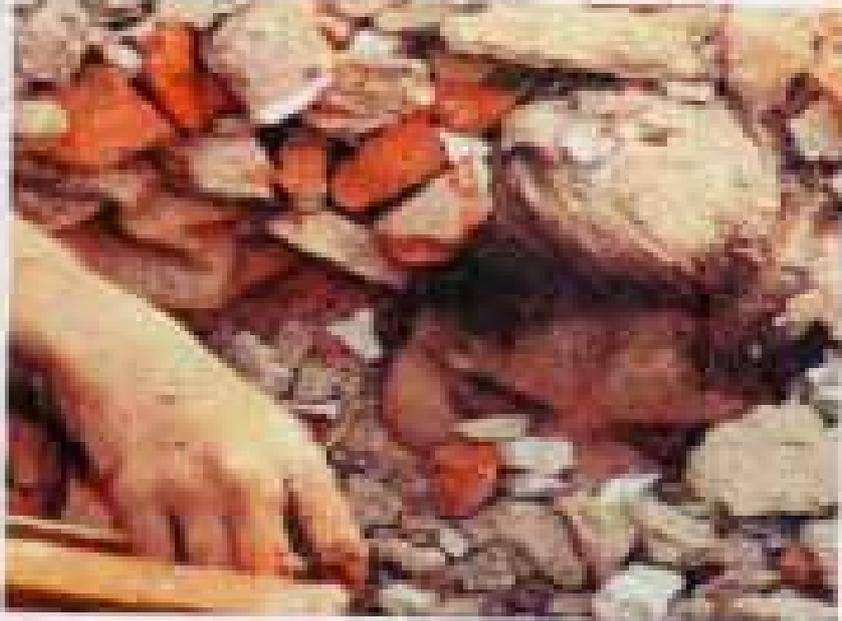
- Gujarat earthquake – January,2001
- Human lives lost:13805
- Persons injured :20,747
- Villages affected: 7633
- Houses affected: 1.2 million
- Loss to public and
Private properties : Rs 150,000 million

RECENT MAJOR DISASTERS-

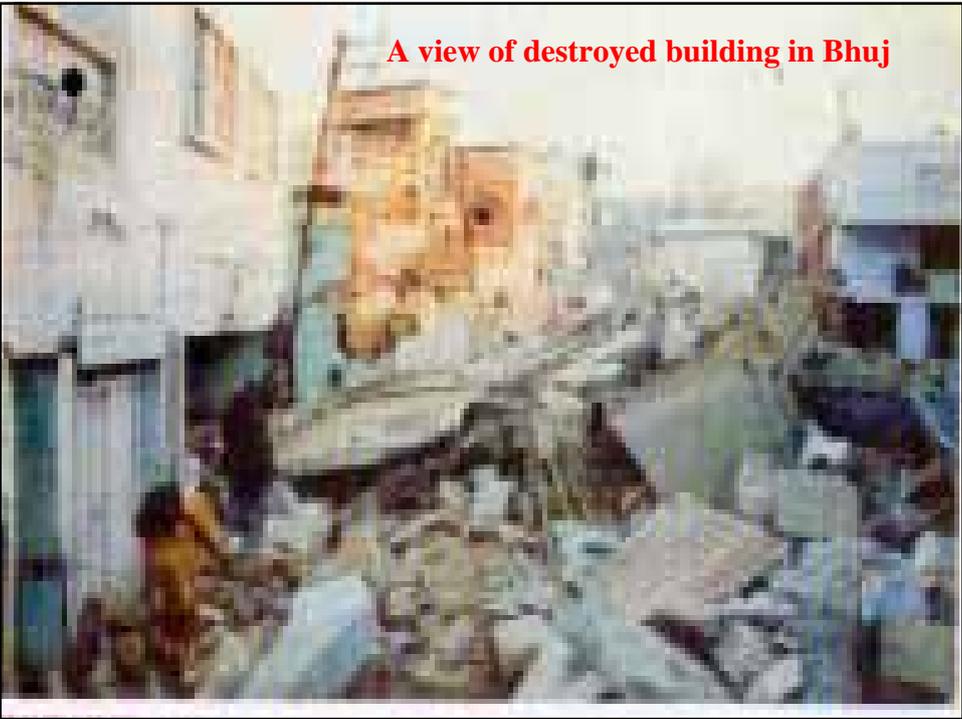
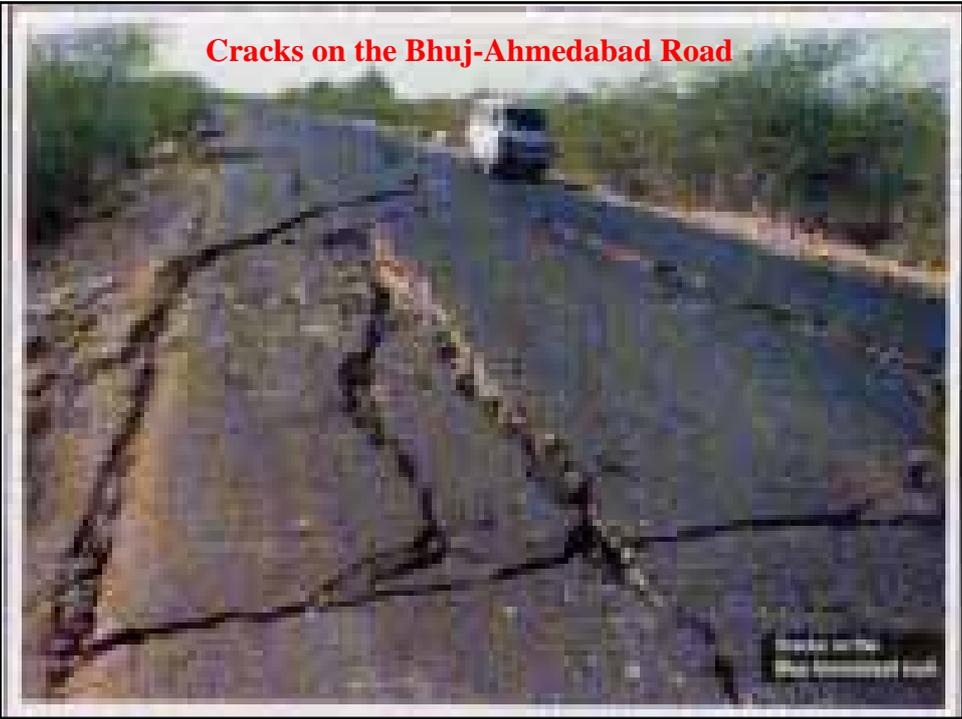
- Gujarat Earthquake-2001-contd.
- Emergency relief work completed
- Process of reconstruction and rehabilitation is going on- expected to be completed by 2002
- Rs. 17,730 million spent till June,2002
- Rehabilitation Sectors include Housing, Livelihood,Social rehabilitation,Health,Education,Public buildings and Industries



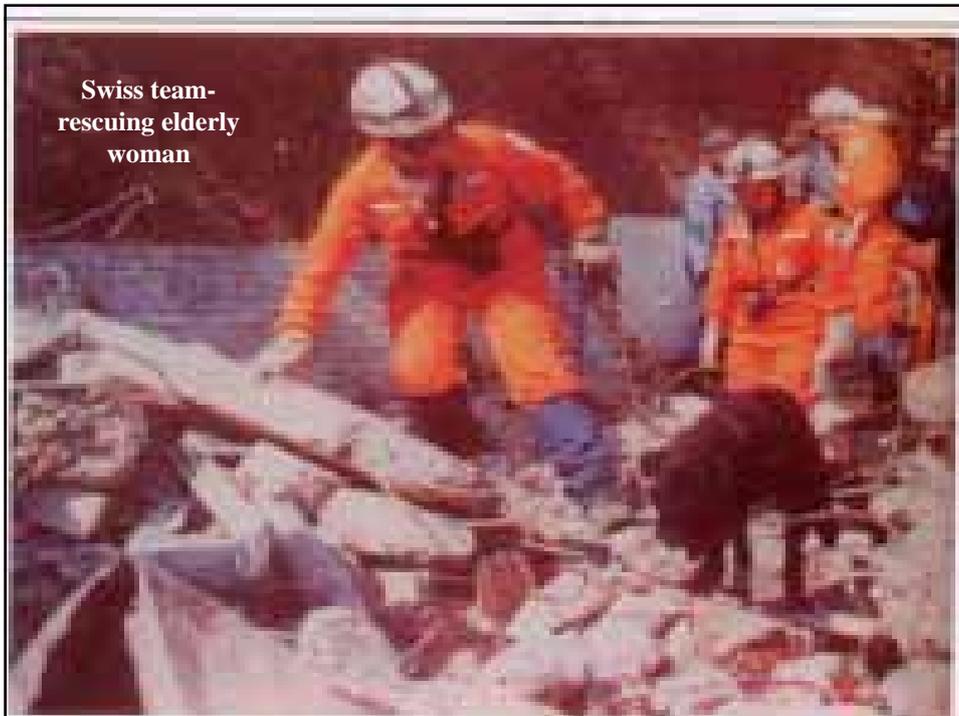
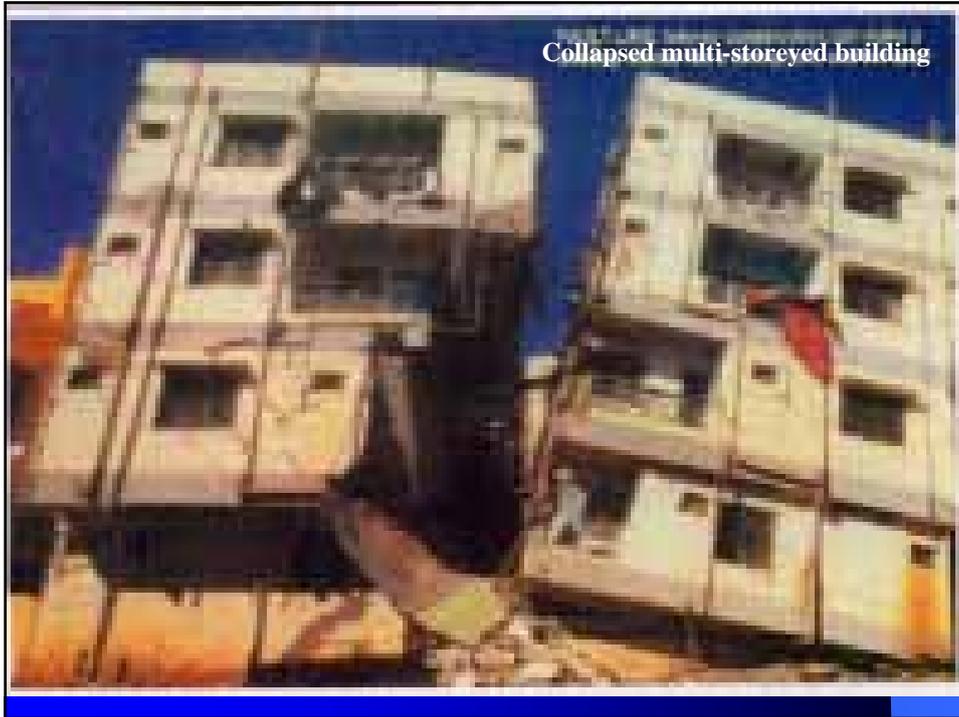
A student body in Ahmedabad School after earthquake

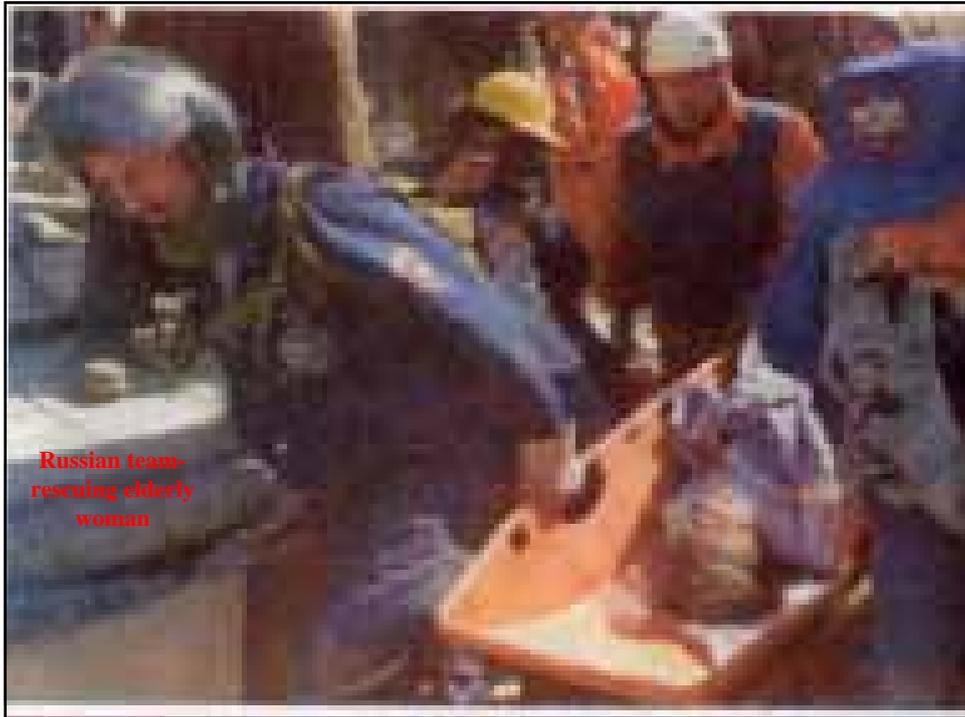


Rescue of 2 years old child

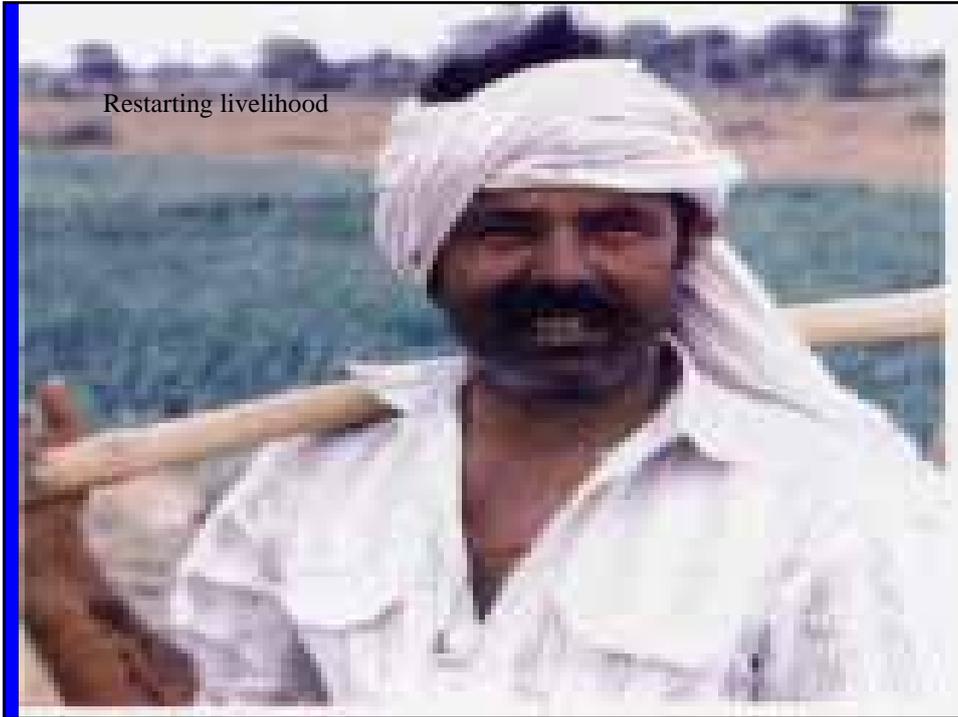








Restarting livelihood



UNION OF INDIA RESPONSE TO MAJOR DISASTERS

- Immediate Policy decisions
- Single authority for clearances
- Finances-no constraint
- Bureaucratic procedures simplified
- Red tape given a go away
- Resource pooled and channelised

UNION OF INDIA RESPONSE TO MAJOR DISASTERS

- National resources at the disposal of the State Government
- Necessary exemptions given to accelerate rescue and relief
- International assistance offered was accepted with gratitude
- Well coordinated responses/efforts

ONGOING INITIATIVES IN DISASTER PREPARED AND MITIGATION

- Setting up of National Committee on Disaster Management under Prime Minister with National and State level political parties as members inter alia to suggest institutional and legislative measures needed for effective long term strategy to deal with future major disasters
- Setting up of High Powered Committee on Disaster Management Plan
- Ministry of Home Affairs focal point for natural and manmade disasters

ONGOING INITIATIVES IN DISASTER PREPARED AND MITIGATION

- Creation of Search and Rescue Teams-at National and State Levels
- Setting of National Disaster Management Authority
- Setting up of National Institute for Disaster Management as an autonomous body
- Strengthening Institutional net work
- Four digits common telephone for Disaster Managers

ONGOING INITIATIVES IN DISASTER PREPAREDNESS AND MITIGATION

- Recently concluded UNDP Project On strengthening Disaster Management Capacity(1997-2001)
- Implementation of a new UNDP Project from July,2002-2007 for sustainable reduction in natural disaster risk by involving community in some of the disaster prone districts
- USAID-Programme for Enhancement of Emergency Response
- Preparation of Vulnerability Atlas of India for Flood,Cyclone and Earthquake

ONGOING INITIATIVES IN DISASTER PREPAREDNESS AND MITIGATION

- Setting up of Orissa State Disaster Mitigation Authority
- Setting up of Gujarat State Management Authority
- Working out legal framework
- Implementation of a Plan Scheme for HRD, institutional strengthening, public awareness and community participation, documentation, research and consultancy

OUR APPROACH/MISSION

- Preparedness rather than crises management
- Coordinated participatory approach rather than only State responsibility
- Technology up-gradation and deployment
- Information – a tool for disaster management

PRIORITY AREAS

- Quick damage assessment Technology
- GIS web enabled networking
- State of art control rooms
- Mobile onsite control rooms
- Human resource development
- Greater attention in North eastern region
- Regular review of Sectoral Emergency Support Functions

EXTERNAL ASSISTANCE - POLICY

- No formal appeal for external assistance made for relief
- External assistance, if offered as solidarity, accepted with gratitude
- Guajrat Earthquake –international response overwhelming
- Bi-lateral agreements suggested by some countries

INTERNATIONAL DISASTER RESPONSE COOPERATION

- Asian Region-Membership of ADRC and ADPC
- UNDP and USAID projects
- Member of UNDAC Team
- UNOCHA Regional office in Delhi(proposed)
- Organised ADRC/UNISDR/UNOCHA meeting in Delhi

NAMASKAR