

A Holistic approach to Disaster Management

- India has adopted a **holistic model of disaster management** covering pre disaster prevention and mitigation (disaster risk reduction) and post disaster relief and rehabilitation (disaster response)
- It proceeds from the conviction that development cannot be sustainable unless disaster mitigation is built in the development process.













- 2. Identify, assess and monitor disaster risks and enhance early warning.
- A digitized Vulnerability Atlas of India has been developed on the basis of satellite imageries and ground surveys
- All the major natural hazards have been mapped
- Further vulnerability mapping has been done on the basis of Census data on demography and housing conditions
- Detailed micro-zonation studies of specific hazards are carried out



Priorities for Action 2005:15

2. Identify, assess and monitor disaster risks.....contd.

- India has developed an elaborate early warning system through a network of satellite, ground and ocean monitoring stations
- Chain of doppler radars along coasts monitor weather depressions and track cyclonic storms
- Network of flood forecasting centres monitor water and sediment loads of major river systems and issue warnings for timely evacuation of people
- Broadcasting and community radio network system to disseminate warnings to the last mile



Government of India

- 2. / Identify, assess and monitor disaster risks.....contd.
- State-of-the-art Emergency Operation Centre established in Ministry of Home Affairs for data, video and audio up-linking with States/Districts & remote areas
- EOCs being set up in all State, Union Territory and District hqrs.
- Country wide instant alert messaging system
- National Disaster Communication Plan
 - Satellite-based network terminals for communication between National, State and districts
 - Multiple networks of POLNET, NICNET and SPACENET to ensure high reliability
 - Mobile communication terminals from disaster sites
 - Global Mobile Personal Mobile System terminals for voice / low speed data links
 - Transportable Very High Frequency (VHF) radio terminals for short distance comm. links
 - HAM radio links and amateur radio networks

- 3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
- Disaster Management introduced in curriculum
 - In schools- classes VIII through XI.
 - In post-induction and in service training of All India Services, Para Military Police Forces
- Course curricula in structural safety developed
 - For engineers and architects at under graduate level
- Introduction of hospital preparedness for emergencies and mass casualty management in doctors curriculum



- 4. Reduce the underlying risk factors.
- 1960's: Comprehensive food security prevented famine recurrent prior to Independence.
- 1980's :Integrated poverty reduction strategies reduced adverse impact of natural disasters
- Various disaster mitigation programmes such as DPAP, DDP, Watershed Management, crop insurance.
- Micro credit through self groups mostly of women enhanced resilience of communities
- Devolution of powers to rural and urban self governing institutions empowered local communities

Priorities for Action 2005:15

- 4. Reduce the underlying risk....contd.
- Model building byelaws, town and country planning legislation, land use zoning regulations and development control regulations taking into account various hazards developed for adoption by the States.
- Revised National Building Code developed.
- Standards developed/ updated for hazard resistant construction.
- Ministries of Civil Aviation, Railways, Telecommunication, Power and Health to undertake detailed evaluation and retrofitting of lifeline buildings.
- A pilot project in Delhi for detailed evaluation of 5 public buildings under implementation.
- Houses being constructed under Tsunami Rehabilitation Programme to be insured-risk transfer

5. Strengthen disaster preparedness for effective response....contd.

- National Disaster Response Force 8 battalions
- Each battalion -18 Specialist Response Teams
 - Each battalion has a Diving and Water Rescue Team
 - Aircraft, helicopter, vehicles and boats provided for mobility
 - NDRF trained and equipped as per international standards
- Voluntary preparedness measures
 - Reorientation of Civil Defence set up
- Enhancing local capacity in preparedness
 - Strengthening of fire and emergency services

Priorities for Action 2005:15

5. Strengthen disaster preparedness for effective response at all levels.

- India is implementing largest Community Based Disaster Preparedness program in the world.
- Covers nearly 300 million people in 169 multihazard districts in 17 States
- Under this program community prepares and implements Village Disaster Management Plan
- VDMP is integrated vertically with District and State Disaster Management Plans and horizontally with sectoral plans.



- Growing economy and rapid urbanization are exposing more areas, assets and people to risks
- Increasing glacial melts, desertification and atmospheric depressions due to global warming and climate change
- Huge gap in capacity building at all levels
- Effective dissemination of early warning to the last mile
- Weak enforcement of building codes and zonal regulations in rural and urban areas

