

## 7. REGIONAL & INTERNATIONAL COOPERATION

**7.1** India being a big country and having experience of managing different types of natural disasters almost every year, intends to play a vital role in the regional and global activities for natural disaster reduction. India has accepted the membership of the Asian Disaster Reduction Centre which has been established by the Government of Japan as a part of regional cooperation. Regular interaction is being maintained with the Asian Disaster Preparedness Centre in Bangkok.

**7.2** A number of learned societies, institutions and organisations in India are already having fruitful exchange and data sharing programs with sister international organisations and bodies in various subjects including disaster related activities. India encourages such initiatives through bilateral and multi-lateral protocols and exchange programs.

As a founding member of WMO, IMD has been playing significant role in the following activities:

- i. It is recognised as the Regional Meteorological Training Centre by WMO and imparts professional training in

meteorology to the candidates of foreign origin. Candidates from South-east Asian, African and Middle-east countries have availed the training facilities.

- ii. Cyclone Warning Division of IMD functions as Regional Meteorological Specialised Centre for tropical cyclones and implements the regional cyclone operational plan of WMO/ESCAP panel. It issues daily tropical weather outlook and cyclone warnings in the regions.

**7.3** India is committed to continue making efforts at national, regional and international levels to achieve the goals, set by the IDNDR, beyond the Decade. The areas of regional and international cooperation can be considered broadly in the sectors of hazard and vulnerability analysis, human resource development, exchange of information through internet, disaster management network and networking of different institutions.

**7.4** In most Asian countries there is a lack of appropriate implementation mechanism, effective regulatory framework and legal instruments. Whereas developing countries

prone to disasters would continue to depend on the international financial institutions, a change from the current state of affairs is essential. NCDM instituted during the Decade should serve as a regional centre for SAARC as well as the Asia region for various activities in the field of

natural disaster reduction especially human resource development, creation of data base, networking of the institutions, public participation and community awareness, disaster relief and rehabilitation mechanism, preparation of relief manuals/codes.

## CONFERENCES AND SYMPOSIA

1. Symposium on Preparedness Mitigation and Management of Natural Disasters, organised by Central Water Commission, New Delhi, August 2-4, 1989.
2. 9th Symposium on Earthquake Engineering, organised by DEQ-UOR and ISET, November, 1990.
3. National Policy Analysis - Workshop on Natural Disaster Reduction, organised by Administrative Staff College of India, Hyderabad, December 16-20, 1991
4. Workshop on Uttarkashi Earthquake, organised by DEQ-UOR, December, 1991
5. World Congress on Natural Hazard Reduction, organised by The Institution of Engineers (India), New Delhi, January 10-14, 1992.
6. 4th Session of the Scientific and Technical Committee of IDNDR, organised by Ministry of Agriculture, Govt. of India, February 1-5, 1993, New Delhi.
7. National Seminar on Hydrological Hazards - Prevention and Mitigation, organised by DH-UOR, March, 1993.
8. Workshop on Natural Disaster Reduction in the South Asia Region, New Delhi, March 30- April 2, 1994.
9. 10th Symposium of Earthquake Engineering, organised by DEQ-UOR and ISET, November 1994
10. Seminar on Comprehensive Flood Loss Prevention and Management organised by ESCAP hosted by Govt of India, 28-29 September, 1994, New Delhi.
11. International Conference on Wind Engineering, organised by Indian Society for Wind Engineering, Roorkee, at New Delhi, January 9-13, 1995
12. IDNDR-Day celebrations on given theme on regular basis since 1995, on Second Wednesday of October every year, organised by NCDM
13. Workshop on Himalayan Eco-development and Natural Disaster Reduction, organised by NCDM, New Delhi, November, 1995
14. International Seminar on Mathematical Modelling of Atmospheric and Oceanic Processes, organised by Department of Mathematics, Berhampur University Berhampur, December 18-21, 1995.
15. International Conference on Disasters and Mitigation, organised by Anna University, Chennai, January 19-22, 1996
16. Workshop on Safety from Forest Fire - Courses and Remedies, organised by Uttar Pradesh Academy of Administration, Nainital and Forest Panchayat Training Institute, April 16-17, 1996.
17. PIARC G2 Group Seminar, Natural Disaster Reduction for Roads, organised by Central Road Research Institute, New Delhi, January 29-31, 1997
18. International Seminar on Coping with Natural Disasters . Aspects of Risks, Crisis and Development, organised by Natural Disasters Management Cell, Agro-Economic Research Centre, Visva Bharati, Shantiniketan, February 28-March 2, 1997
19. Workshop on Earthquake Disaster Mitigation, organised by DEQ-UOR, October, 1997.
20. Seminar on Natural Hazards in Urban Habitat, organised by Central Building Research Institute, Roorkee at New Delhi, November 10-11, 1997
21. International Symposium on Asian Monsoon and Pollution over the Monsoon Environment, organised by Indian Meteorological Society, New Delhi, December 2-5, 1997.
22. Third Annual Convention of Indian Building Congress on Built Environment & Natural Hazards, New Delhi, February 7-8, 1998
23. International Conference on Disaster Management, organised by Tezpur University, Guwahati, Assam, April 23-26, 1998
24. Workshop on Geohazard & Related Societal Issues, organised by Indian Society of Engineering Geology, Lucknow, November 26, 1998
25. 11th Symposium on Earthquake Engineering, organised by DEQ-UOR and ISET, December, 1998
26. Policy Forum on Future of Mitigation of South Asian Disasters, organised by Disaster Management Institute and Durvog Nivaran, New Delhi, February 5-6, 1999.
27. National Symposium on Tropical Meteorology, organised by Indian Meteorological Society, Regional Meteorological Centre, Chennai, February 16-19, 1999
28. National Advisory Group Meeting on Managing and Measuring the Vulnerability, organised by Disaster Management Institute, New Delhi, June 12, 1999.

## SOME RESOURCE PUBLICATIONS

1. Uttarkashi Earthquake, October 20, 1991, *Special Publication No. 30, Geological Survey of India, 1992*
2. Disaster Management, V.K. Sharma, NCDM, New Delhi, 1993.
3. Impact of Natural Disasters on the Environment and Development . Examples from Himalaya and Eastern and Western Ghats. 1994. *Chandi Prasad Bhatt, Himalayan Research Centre, Dehradun*
4. Applicability of Long Range Forecast of South-west Monsoon Rainfall in Different parts of India with Special Reference to Andhra Pradesh, 1994, *B.V Ramana Rao et al., Central Research Institute for Dryland Agriculture, Santoshnagar, Hyderabad.*
5. Killari Earthquake, September 30, 1993, *Special Publication No. 37, Geological Survey of India, 1996*
6. Current Science, Volume 62, Number 1&2, Special Issue. Seismology in India - An Overview
7. Current Science, Volume 67, Number 5, Special Issue: Strong Ground Motions and Engineering Specifications.



## ABBREVIATIONS

<b>AIR</b>	All India Radio
<b>ATI</b>	Administrative Training Institute
<b>AVRC</b>	Audio Visual Resource Centre
<b>BARC</b>	Bhaba Atomic Research Centre
<b>BIS</b>	Bureau of Indian Standards
<b>BMTPC</b>	Building Materials and Technology Promotion Council
<b>CWC</b>	Central Water Commission
<b>CBRI</b>	Central Building Research Institute
<b>CRF</b>	Calamity Relief Fund
<b>CRRI</b>	Central Road Research Institute
<b>CSIR</b>	Council for Scientific and Industrial Research
<b>CAPART</b>	Council for Advancement of Peoples Action & Technology
<b>DMI</b>	Disaster Mitigation Institute
<b>DST</b>	Department of Science and Technology
<b>DEQ-UOR</b>	Department of Earthquake Engineering, University of Roorkee
<b>DES-UOR</b>	Department of Earth Science, University of Roorkee
<b>DH-UOR</b>	Department of Hydrology, University of Roorkee
<b>DGSM</b>	Dasholi Gram Swarajya Mandal
<b>DWS</b>	Disaster Warning Systems
<b>GIS</b>	Geographic Information System
<b>GPS</b>	Global Positioning System
<b>GSI</b>	Geological Survey of India
<b>HUDCO</b>	Housing and Urban Development Corporation
<b>IMD</b>	Indian Meteorological Department
<b>ISCT</b>	Indian Society of Earthquake Technology
<b>IDNDR</b>	International Decade for Natural Disaster Reduction
<b>IITs</b>	Indian Institutes of Technology
<b>JAC</b>	Joint Assistance Centre
<b>MOA</b>	Ministry of Agriculture
<b>NCDM</b>	National Centre for Disaster Management
<b>NDM</b>	Natural Disaster Management
<b>NFCR</b>	National Fund for Calamity Relief
<b>NGRI</b>	National Geophysical Research Institute
<b>NRSA</b>	National Remote Sensing Agency
<b>NGO</b>	Non Government Organisation
<b>RRL</b>	Regional Research Laboratory
<b>SERC</b>	Structural Engineering Research Centre, Chennai
<b>WIHG</b>	Wadia Institute of Himalayan Geology
<b>WMO</b>	World Meteorological Organisation