



Quarterly Newsletter of
SAARC
Disaster Management Centre
New Delhi

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2008 Disasters in Numbers

Centre for Research on the Epidemiology of Disasters (CRED), Leuven, Belgium has recently released the global data of disasters for 2008 which shows that the total number of disasters in which 10 or more persons got killed or 100 or more were injured has declined slightly from 399 in 2007 to 321 in 2008. However the number of persons killed in disasters has registered a sharp increase from 73931 in 2007 to 235816 in 2008. This was mainly due to two mega disasters of 2008 – the cyclone Nargis that consumed 138366 lives in Myanmar and the Sichuan earthquake that killed 87476 persons in People's Republic of China.

Contrarily South Asia had a relatively quiet year in 2008 with only 25 disasters which was probably the lowest in a single year since 1995. The number of persons killed in disasters in South Asia also declined by more than half of what it was the year before. In 2007 South Asia figured among the first three as also the last three in the global list of Top Ten Disasters. In 2008 South Asia appears thrice in the list – June-August flood of India (1963 deaths), cold wave of Afghanistan (1317) and September flood of India (173).

Comparison of disaster data of a few years may not indicate any trend, for which it may be necessary to look into the data sets of a few decades. As per the CRED data base, 218 countries of the world faced as many

as 8393 disaster events during 1974-2008, Asia took the burden of 40% of these events, followed by the Americas (25%), Africa (17%), Europe (13%) and Oceania (5%). Within Asia it is the South Asia that faced the maximum (30%), followed by South East Asia (28%), East Asia (27%), Central Asia (8%) and West Asia (7%).

The impact of the disasters in terms of number of persons killed and affected presents a much sharper contrasts between the South Asia and the rest of the world. Out of the total number of 1.5 billion disaster victims of the world (both killed and affected) between 1974 and 2003, more than 580 million (41.4%) belonged to the eight countries of South Asia, which is disproportionate either to its share of population or area.

No wonder therefore that South Asia is considered as the most critical global hotspot of disasters. Layers of hazards, vulnerabilities and risks are embedded in the geology, climate social, economic and living conditions of the people in South Asia, which make deadly recipes of disasters. It is necessary to address to the conditions in a systematic and cost effective manner to reduce to the risks of disasters. While some good works have been done lots more remain to be done. The SAARC Disaster Management Centre is committed to work with the countries of the region and the stakeholders across sectors in a multi-pronged strategy to reduce the risks of disasters in the region.



Agenda for 2009

The Governing Board of SDMC in its third meeting held in New Delhi on 06-07 November 2008 approved the programs and activities of SDMC for the year 2009. These are summarized below:

Natural Disaster Rapid Response Mechanism

The 15th SAARC Summit in Colombo entrusted SDMC to develop a Natural Disaster Rapid Response Mechanism (NDRRM) for having a well coordinated and planned approach to meet emergencies in South Asia. The SDMC is organizing an Expert Group Meeting of representatives from the Ministries of Foreign Affairs, Defence and National Focal Points on disaster management to discuss the detailed modalities for setting up the NDRRM. Based on the recommendations of the Meeting, SDMC will develop the draft agreement and Standard Operating Procedure on NDRRM.

Implementation of Regional Road Maps

The SDMC had organized five regional workshops during 2007-08 to develop the roadmaps in the priority areas. The sixth workshop on earthquake is due in Islamabad, Pakistan. The following action items identified under the Road Maps were approved for implementation during 2009.

- a) *Application of Science and Technology for Disaster Risk reduction and Management in South Asia:* i) Sharing of Data Products from Earth Observation Satellites for Disaster Risk Reduction in South Asia; ii) Development of Regional Protocol for Sharing of Tsunami and Cyclone Early Warning.
- b) *Coastal and Marine Risk Mitigation Plan:* i) Development of Template for Harmonization of Coastal and Marine Risk Management Plans in South Asia; ii) Development of Regional Coastal and Marine Risk Mitigation Plan.
- c) *Integration of Disaster Risk Reduction and Climate Change Adaptation in South Asia:* i) Development of Guidelines for Integrating Disaster Risk Reduction

with Climate Change Adaptation in respect of Flood, Cyclone, Drought and Glacial Lake Outbursts. ii) Technology Need Assessment for Integrating Adaptation to Climate Variability and Change into Disaster Risk Reduction.

Digitized Vulnerability Atlas of South Asia:

A Digitized Vulnerability Atlas of South Asia integrating spatial data on physical, demographic and socio-economic features of different regions of each country on a GIS format shall be developed. An eight member Advisory Panel comprising of experts to be nominated by the National Focal Point of each country shall be constituted to oversee the project. Each country shall designate a nodal person for assisting the SDMC in accessing data from various sources. The project shall be implemented over a period of two years starting from January 2009 with financial assistance from SAARC-Japan Special Fund.

South Asia Disaster Knowledge Network:

Towards setting-up South Asia Disaster Knowledge Network, the Governing Board approved the following strategy for the implementation of the project.

- i) The National Focal Points of the member countries shall designate an appropriate agency for the development of national level Disaster Knowledge Network (DKN).
- ii) The designated agencies shall submit their technical and financial proposals for development of national DKN, in accordance with the standards and guidelines issued by the SDMC.
- iii) Funds shall be released to the designated agencies as per the guidelines.
- iv) Simultaneously SDMC shall work on the regional portal having state-of-the art features which would be integrated with the national portals as and when these are developed.

UN/ISDR has agreed to provide financial assistance for the implementation of this project.

Capacity Building Activities:

On capacity building fronts, SDMC has planned 6 Regional Workshops, 9 Training Programmes and 4 research projects in 2009.

Release of New Publications



Exchange of data, information and knowledge has been recognized as an important component for disaster management. In South Asia, there have been critical gaps in enabling these resources to diverse community of disaster management practitioners. Towards addressing the existing gaps, SDMC brought out the following publications:

Journal of South Asian Disaster Studies

SAARC Disaster Management Centre has brought out the first issue of the Journal of South Asian Disaster Studies with the main aim and objective of reporting original research/review articles on all aspects of disaster risk assessment, mitigation and management including policies, strategies in South Asia.

The first issue of the Journal, published in November, 2008, contains eleven invited papers contributed by experts from the member countries. The topics covered in this issue include various aspects

of earthquake, tsunami, cyclone, flood, school safety and use of space data for disaster management. Scientists/ researchers and decision makers from South Asia are encouraged to contribute original research/ review articles in the journal.

A quick and efficient process has been envisaged with prime aim of reducing the time gap between cutting edge research and its dissemination to the stake holders for implementation.

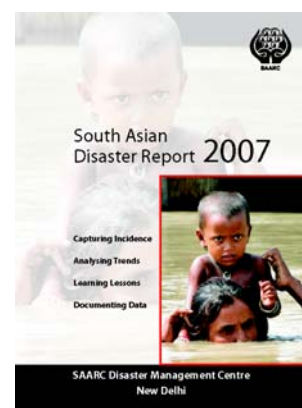


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South Asia Disaster Report 2007

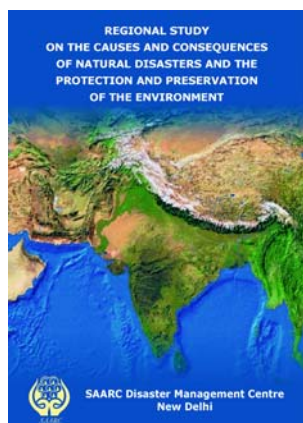
SAARC Disaster Management Centre has published South Asia Disaster Report 2007. The report is based primarily on the International Disaster Database (EM-DAT) maintained by the Centre for Research on the Epidemiology of Disasters (CRED) Leuven, Belgium, which is considered as the most credible global database of disasters. This has been supplemented by information available at other credible government, inter-government and non-government sources.

The report has been structured in three main parts. Part I covers the hydro-meteorological disasters of cyclones, flood, drought, glacial lake outburst, heavy snow fall, avalanche, heat and cold wave and forest fire, Part II includes the geological disasters of earthquake and landslides, while Part III captures the manmade and biological disasters. The introductory chapter analyzes the overall disaster trends during the year and the concluding chapter summarizes the main findings.



This report has emerged as the most comprehensive compilation of facts, figures and analysis of hazards in South Asia. The valuable information including spatio-temporal distribution of disaster events can contribute immensely to knowledge bank of the region which can be utilized for various mitigation measures including awareness generation, capacity building, development of research guidelines and national policy framework.

Re-production of 'South Asian Regional Study on the Causes and Consequences of Natural Disasters and the Protection and Preservation of Environment',



Originally, the Regional Study on close linkage of environment, disasters and development was published by the SAARC Secretariat way back in 1992. Indeed a monumental study which triggered key activities at the SAARC level viz., SAARC Plan of Action on Environment, establishment of Regional Centres etc, is much in demand, but not available in print. Taking into account its close relevance even today, the SDMC GB had taken a decision to reprint this report and hence the publication. Basically, the report has 18 Chapters illustrating at regional level the natural resources capitals such as land, forests, biological diversity, water and air in conjunction with human health, habitat and the natural disasters. Priority areas of concern of Member States as well as common areas of regional concern and regional-level measures and programmes for strengthening disaster management capacities and for promotion and preservation of environment are highlighted.

Participation of SDMC in 3rd Asian Ministerial Conference on Disaster Risk Reduction



The 3rd Asian Ministerial Conference (AMC) on Disaster Risk Reduction, was organised

to review the implementation of the HFA in the Asia and Pacific countries. The conference was held on 02nd – 04th December 2008 in Kuala Lumpur, Malaysia. The underpinning theme of the conference was '**Multi-stakeholder Partnership for Disaster Risk Reduction: From National to Local**', while the overarching goal was to exchange the knowledge on practical ways of implementing disaster risk reduction efforts affectively at national and local levels.

The SAARC Disaster Management Centre made the following specific contributions in AMC:

(i) **The Pre-Conference Side-event on Operationalizing SAARC Comprehensive Framework on Disaster Management (SCFDM)**, the SAARC Disaster Management Centre (SDMC) in association with the United Nations International Strategy for Disaster Reduction (UN-ISDR) organised this event on 1 Dec. 2008.

Ms Helena Molin Valdes, the Deputy Director, UN/ISDR Secretariat in Geneva, was the session facilitator. Mr PG Dhar Chakrabarti, Director, SAARC Disaster Management Centre (SDMC), in his presentation briefed about the Framework, the role what SDMC has been playing in implementation of the Framework and also on-going efforts on regional cooperation as well as the road maps taken up for the future activities.



Mr K.H. Masud Siddiqui, Director General, Disaster Management Bureau (DMB), Ministry of Food and Disaster Management (MoFDM), Govt of Bangladesh

made a presentation on 'Disaster Management in South Asia: A Comprehensive Regional Framework for Action 2006-2015' and highlighted the role that Govt of Bangladesh played in evolution of SCDMF as well as SDMC. Mr O. Ravi, Joint Secretary to Govt. of India, Ministry of Home Affairs, in his presentation, gave an account of HFA/SCDMF implementation in India. Mr Lalith Chandrapala, Secretary, National Council for Disaster Management, Colombo, Sri Lanka, in his presentation on Operationalizing SAARC Comprehensive Framework for Disaster Management in Sri Lanka, dealt at length the steps taken by Govt. of Sri Lanka after Indian Ocean Tsunami 2004.

Ms Vishaka Hidellage, from Duryog Nivaran and Practical Action, Sri Lanka, made a presentation on 'Livelihood Development and Disaster Risk Reduction' with the backdrop of implementing SCDMF in South Asia. She highlighted while DRR is recognized as important precondition to achieve sustainable development, systemic integration of DRR into development continues to be a challenge. Mr Amod Mani Dixit, National Society for Earthquake Technology – Nepal focused on centralized planning and decentralized action for implementing SCDMF highlighting the example of community based initiatives in Nepal.

The Key Recommendations of the Session were:

i) Efforts are required to promote tools and guidelines which could integrate sustainable livelihood with long-term recovery and coping strategies.

ii) Maldives and the regions extremely vulnerable to the climate change require more specific and special attention and SCDMF should be prioritised to address these issues.

iii) More emphasis is required to be placed on children, women and elderly people, while pursuing SCDMF.

iv) SDMC has to take necessary steps including broadening the base of stakeholders by engaging Private Sector, NGOs/CBOs etc to harness regional cooperation for DRR.

v) SDMC has to take necessary steps in promoting indigenous knowledge of vulnerable communities in South Asia for risk reduction.

(ii) SDMC Presentations during a) Plenary Discussions: Disasters Trends in Asia and the Pacific region, and b) Special Session: Accelerating Progress in Accelerating Progress in Implementing the Hyogo Framework for Action in South Asia: The presentations, made by Director, SDMC, placed focus on on-going and planned activities at regional level in support of HFA implementation as well as state of progress with regards to HFA implementation in SAARC member states. The catalytic roles played by SDMC in knowledge management and capacity development for disaster risk reduction in South Asia were also highlighted.

(iii) Co-organizer of side-event on Indigenous Knowledge: The SDMC joined Kyoto University and UN ISDR to organize a side-event on the role of Indigenous Knowledge (IK) for disaster risk reduction. The findings of on-going activities at SDMC on documentation and analysis of IK in seismic regions of Nepal, coastal-hazard prone areas of Sri Lanka and flood and drought-prone regions of India were presented. The action items emerged from the side-event include documentation and research, education, policy advocacy and special focus areas for IK viz., mountains, coast, river, water and housing.

SAARC Workshop on Mainstreaming Disaster Risk Reduction in Development



The SAARC Disaster Management Centre in collaboration with Disaster Management Centre, Govt. of Sri Lanka, organized the SAARC Workshop on

Mainstreaming Disaster Risk Reduction in Development in Colombo on 14-15 November 2008. The workshop was inaugurated by Honorable Minister of Disaster Management and Human Rights, Sri Lanka, Mr. Mahinda Samarsinghe, who highlighted the need of such workshop in SAARC region and emphasized on how economic development of the region is dependent on disaster mitigation measures and thus placing focus on mainstreaming disaster risk reduction measures in development planning. The Workshop adopted the following Roadmap for Mainstreaming Disaster Risk Reduction in Development (MDRRD).

a) *Development of Toolkits and Methodology for MDRRD:*

i) Taking into account the local needs, capacities and resources, SDMC shall develop regional standards, tools and methodologies for MDRRD in general and specific sectors in a systematic and sustainable manner through a participatory process; ii) The Tool Kits shall, inter alia, spell out multi-hazard specific entry-point activities in specific sectors

b) *Training and Technical Support:* SDMC shall provide technical support and capacity development services such as cross-sectoral risk analysis, area development programmes, viz., coastal zone management, hill area development, dry land and desert development etc, disaster risk auditing, public-private partnership and project management with focus on mainstreaming in the newer developmental activities,

c) *Disaster Impact Assessment of Trans-boarder Development Project:* SDMC shall develop a framework for Disaster Impact Assessment of trans-boundary development projects

d) *Networking and Technical Documentation:* i) Specific focus is to be laid on networking of training and knowledge institutions under South Asia Disaster Knowledge Network (SADKN) to promote



mainstreaming activities in South Asia; ii) Documentation and dissemination of best practices in general and specific sectors of development planning and practices.

SDMC - SAWF Workshop on Regional Cooperation for Flood Mitigation



South Asia Water Forum (SAWF) in association with SAARC Disaster Management Centre (SDMC) organized Regional Workshop on Flood Mitigation on 3rd November in Delhi.

With the backdrop of Kosi floods 2008, the workshop brought together all stakeholders to share the experiences and discuss the lessons learnt. Besides SDMC, other regional/international organisations viz. International Centre for Integrated Mountain Development (ICIMOD) and International Water Management Institute (IWMI) participated alongwith national organisation dealing with flood management from Pakistan, Nepal, India and Bangladesh. It was felt that flood management strategies should be visualized beyond water sharing and building the dams, reservoirs and embankments with the more active community involvement. Institutionalization of regional cooperation through SDMC was recommended. Dr Sanjay Srivastava, Dr P. K. Champati ray and Dr D. D. Joshi represented SDMC and also made presentations.

World Congress on Disaster Management at Hyderabad



Disaster Management, Infrastructure and Control Society (DMICS), in association with UN agencies,

central and state government organizations and NGOs, organized the World Congress on Disaster Management during October 21-24, 2008 at Hyderabad 500 081, Andhra Pradesh, India.

During the Congress, the SDMC and UN ISDR jointly organized a technical session on climate change and disaster risk reduction. The technical session, chaired by Mr P G Dhar Chakrabarti, Director, SDMC, witnessed the presentations on (i) Climate Resilient Cities by Mr Abhilas Panda, UN ISDR, (ii) Early Warning Systems and Disaster Risk Reduction in the Projected Climate Change Scenario by Dr KJ Ramesh, Ministry of Earth Sciences, Govt. of India, (iii) Reducing the Risk of Climate Disasters – Floods & Cyclone by Dr K M Reddy, Govt. of Andhra Pradesh, and (iv) Disaster Risk Reduction and Climate Change Adaptation in South Asia – From Practices to Policies by Dr Sanjay Srivastava, SDMC. The presentations on local, national, regional and global issues led to fruitful discussion and thus helped in information exchange and sharing of experiences on this topical issue.

Pakistan Earthquake of 29th October 2008

An earthquake of magnitude 6.4 on Richter scale struck the Balochistan Province of Pakistan on 29 October 2008 at about 04:10 hrs. The focal depth of the earthquake was 10 km and the epicentre was about 69 km NNE of the Quetta town.

Areas around Pishin, Ziarat, Qila Abdullah, Chaman, Loralai, Sibbi, Mastung were badly hit. According to



Geological Survey of Pakistan, the epicenter of the quake was in Chiltan mountains. The regionally persistent Chaman fault zone lies on the western side of the affected area. Analysis of aftershocks recorded by Pakistan Meteorological Department indicate that the rupture may have taken place along a NW-SE trending fault underlying the Ziarat area. Many houses collapsed during the quake and some were destroyed by seismicity induced landslides.

As per information received from NDMA Pakistan, the earthquake killed 164 and injured 173 persons. About 9,800 houses were partially or completely damaged.

Damages in a relatively low magnitude earthquake was mainly due to: i) poorly constructed mud houses; ii) landslides triggered by the earthquake; iii) Timing of the earthquake 2 hours before dawn (04:09:57 AM on 29th Oct.08) when most of the population remain asleep and iv) Shallow depth of focus of the earthquake.

Immediate response started from the army which sent troops and helicopters to the area and made sure that the affected area remains accessible for transporting relief material. The Prime Minister of Pakistan has directed Earthquake Rehabilitation and Relief Authority (ERRA) to help the Balochistan government in the recovery phase especially in providing shelters to the affected population. The Prime Minister has announced that the cost of the shelters will be borne by the government and that the shelters should be modeled on that used by ERRA in NWFP and Kashmir earthquake affected region.

SDMC Activities in 2009

Regional Workshops :

- i) Expert Group Meeting on Regional Natural Disaster Response Mechanism,
- ii) Earthquake Risk Assessment and Mitigation in South Asia,
- iii) Workshop on Flood Risk Management in South Asia,
- iv) Workshop on Emergency Health Preparedness in association with WHO,
- v) Workshop on Developing a Standard Natural Disaster Damage and Need Assessment System in South Asia,
- vi) Workshop on Developing Standard Manual on Emergency Relief and Management in South Asia jointly with UNICEF,
- vii) Workshop on Needs of Children in Disasters in South Asia.

Training Programmes :

- i) Application of Geoinformatics for Disaster Management,
- ii) Earthquake Hazard Mitigation for SAARC Region,
- iii) Bioengineering Methods for Landslide Hazard Mitigation,
- iv) Damage, Loss and Need Assessment,
- v) Emergency Relief Management,
- vi) Incident Command System,
- vii) Climate Change Adaptation and Disaster Risk Reduction,
- viii) Disaster Risk Management of Cultural Heritage in South Asia,
- ix) Emergency Health Preparedness.

Research and Documentation :

- i) Feasibility study for development of landslide early warning system using precipitation threshold and numerical weather prediction models,
- ii) A Review of the Seismic Vulnerability of the Himalayan-Hindukush Belt vis-a-vis the Regional Active Fault Zones,
- iii) Documentation of Best Practices and Tool Kits on Community Based Disaster Risk Management in South Asia, to be finalized in consultation with nodal points of member states,
- iv) Directory of Government, Private, Non Governmental and other organizations and individuals working on Various Aspects of Disaster Management in South Asia. It was noted that the Directory should be finalized in consultation with nodal points of member states.

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