

Editorial Board

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HIGHLIGHTS

Sikkim Earthquake

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Message

One of the most devastating earthquakes in recent years hit Sikkim on September 18, 2011. The earthquake resulted in death of at least 91 and caused enormous loss of property. Many buildings and infrastructure essential for rescue operations were badly affected by the earthquake and subsequently by heavy rains and landslides. In the hilly regions of Gangtok, 90% of concrete structures had developed cracks. The Secretariat building in Gangtok was also damaged.



A team of experts from NIDM visited the affected area and carried out detailed study of the damage and loss. The report also identifies the type of vulnerabilities of roads on hill slopes as well as portending scenarios of road widening works, multi-storey buildings juxtaposed on steep slopes with little or no breathing space and dwindling lifeline infrastructures in hilly terrain as relevant issues. The main reason for this damage is unscientific development, without giving due consideration to safety measures. Risk sensitive development, therefore should be the key word for safety in vulnerable areas.

As we move ahead to create better tomorrow, we cannot afford to ignore the risk due to various natural and human induced hazards. It is the time for the authorities, community and individuals to awake and start re-building safer homes, clean environment and initiate preparedness measures at all levels that can go a long way in saving many lives and limiting damages and destruction in future. It is time not to mourn and repent but to learn a few lessons for ourselves and the generations that will follow "building homes that are safe and quake proof".

Satendra
(Satendra)

Second Training Programme on Comprehensive Disaster Management for Officials of African Countries

(19-30 September 2011)



Dignitaries at the Inaugural Function; Shri Gurjit Singh, Additional Secretary (E & SA), Shri R. K. Srivastava, Joint Secretary (DM), MHA and Shri Lokesh Jha, Joint Secretary (PP), MHA and Dr. Satendra, Executive Director, NIDM

NIDM organized the second "Training Programme on Comprehensive Disaster Risk Management" from September 19-30, 2011 for the officials of African countries under Indo-African collaboration. Twenty five participants from thirteen countries participated in the programme. H.E. Ms. Nimisha Madhvani, High Commissioner, Uganda High Commission and Shri Gurjit Singh, Additional Secretary (E & SA), Ministry of External Affairs were

the Chief Guests of the function. Other dignitaries included Shri R.K. Srivastava, Joint Secretary (DM), Ministry of Home Affairs and Shri Lokesh Jha, Joint Secretary (PP), Ministry of Home Affairs. The training also included visits to National Emergency Control Room, Ministry of Home Affairs, India Meteorological Department, National Disaster Response Force. A two day field visit was also organized to Rajasthan for direct exposure to Drought Management.

Incident Response System Training Programmes



Resource Persons from USFS taking session during the Incident Commander course

Three Training of Trainers Course on Incident Response System were organized at NIDM during July –September 2011

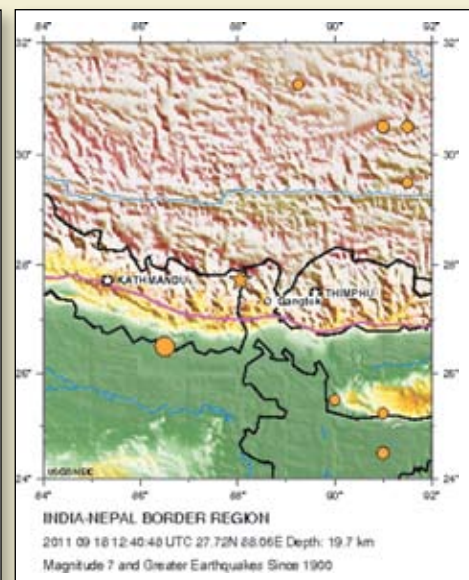
- ◆ Training Programme on "Basic & Intermediate under Incident Response System" was conducted from 4-8 July, 2011. Trainers from State ATIs/State Governments attended the Course.
- ◆ Training Programme on Integrated Planning Section under Incident Response System was conducted from 18-22 July, 2011. Trainers from State ATIs/State Governments attended the Course.
- ◆ Training Programme for Incident Commander under Incident Response System was conducted from 1-3 August, 2011 in collaboration with United States Agency for International Development (USAID) and United States Forests Services (USFS). Two Resource Persons from USFS conducted the course which was attended by 15 trainees (faculty members) from State ATIs/State Governments.

Sikkim Earthquake

(18 September 2011)

An earthquake of M6.8 on Richter scale occurred on September 18, 2011 at 18.10hrs in the Sikkim-Nepal border (27.723°N, 88.064°E) region. It was widely felt in Assam, Meghalaya, Northern parts of West Bengal, Bihar, parts of other Eastern and Western regions of India, including capital city Delhi. The earthquake claimed about 91 human lives in India, including 16 at the Teesta Stage III Hydroelectric power project site, 719 injured and also caused substantial loss to livestock. Large scale damages were reported from neighbouring countries like Nepal, Bhutan, Tibet and Bangladesh.

The earthquake was widely felt in Assam, Meghalaya, northern



parts of West Bengal, Bihar, parts of other eastern and northern regions of India. The main shock was followed by several aftershocks of low intensity and a few significant aftershocks ($M \geq 4.0$) located by the network. The earthquake caused multiple landslides cutting access to

many areas. Many areas in the region like Mangan, Dikchu, Lachung, Chungthang were majorly destroyed and even now accessibility to areas like Lachung and Chungthang is difficult. The houses have developed cracks, base of the houses have completely shaken which have made them unsafe to live in. Lifeline infrastructure i.e. hospitals, bus terminals, radio station transmitter, telephone exchange and mobile-phone towers were damaged that temporarily cut off all communication with the affected areas. The earthquake also led to the destruction of safe drinking water sources in the region. Majority of the population in the affected areas rely on the water streams and waterfalls, which have become muddy due to landslides and affected the mainstream water source of the people. The earthquake's impact on lives and livelihoods appears to have been more severe on the most rural, agricultural and remote areas of Sikkim. The four groups that were



Damaged School building in Sikkim (Photo: Seedsindia)



Two buildings at Baluakhani developed excessive tilt on 23rd Sept 2011. Special team from Hyderabad was engaged for demolition. Several buildings in Gangtok have been declared unfit and they are being demolished one by one. However, there is a need to look into the safety of these buildings by experts.

most affected by the disaster, in terms of income, included farm labourers, non-farm labourers, farmers and factory workers. Most of the farms in Sikkim are step farms on hills which are destroyed due to landslides and earthquake cracks. The shop buildings and small agro industries near Gangtok and Singtam are shut down for repair or to demolish the damaged buildings, which severely affected the lives of the people.

Schools and educational buildings have suffered extensive damage. The Scheduled Caste Girls' Hostel of Sikkim Government College, situated in Gairigaon, Tadong, has developed numerous cracks mostly on the second and third floor of the building. The Sikkim University Boys hostel located near Smile Land, Marchak, which houses around 60 students, has also suffered severe damage. In West Sikkim, the ground floor of the Soreng Secondary School's Girls hostel has been completely damaged. Tashi

Namgyal Academy in Gangtok has developed numerous cracks, on the floor and almost all the walls of the ground floor. All the three school buildings of Katuk Vidhyasagar Primary School at Lingdum basti under Martam-Rumtek constituency have been declared unsafe. The devastating earthquake destroyed 30 Hospital buildings in Sikkim. (Source: Corporate Disaster Resource Network Report of Sikkim Earthquake).

NIDM team visited the affected areas during 21-25 September 2011. The purpose of this visit was to study the damage and loss pattern and response mechanism; coordination mechanism among search and rescue teams; procurement, storage and distribution of relief materials; evacuation and relief camp management; emergency operation centre (EOC) and control room functioning; coordination with NGOs and civil societies; press briefing, etc. and identify the key

issues for risk management.

A report has been submitted to the Ministry of Home Affairs, Govt. of India, explaining the type of vulnerabilities of roads and building constructions on hill slopes. The report also identifies alarming scenarios of road widening works, multi-storied buildings juxtaposed on steep slopes with little or no breathing space and dwindling lifeline infrastructures in hilly terrain. It gives simple guidelines for crack repair and treatment along with name of products and companies, restoration and strengthening; format for detailed damage assessment; and introduction of some sustainable technology in landslides mitigation, including bioengineering methods for slope stabilisation, anchored earth and geosynthetics application etc. Finally the report explains about classified information to be maintained as essential component of documentation of this earthquake.

India Floods

(July - September 2011)

In Assam, a breach of an embankment near Bhogdoi river was reported in first week of July, 2011 inundating many villages in Jorhat West and Teok revenue circles. Continuous rains during first week of July 2011, have led to rise in water levels of river Brahmaputra and its tributaries, inundating many low-lying areas in various districts of Assam. Floods were also reported in Sonitpur and Dhemaji districts due to incessant rains in many parts of Assam and the upper reaches of neighbouring Arunachal Pradesh. Incessant rains in Arunachal Pradesh and Assam during the third week of July has affected Sonitpur, Lakhimpur and Dhemaji districts of Assam. The Ranganadi embankment was reported to be breached at Kharkati in Lakhimpur district inundating many villages.

Floods were reported in parts of Uttar Pradesh during fourth week of July, 2011 and Banda district was affected due to rise in water level. During First week of August, 2011 floods were reported in Barabanki district due to rise in the water level of Ghagra river. The Ghagra river embankment breached, leading to flood in the district and its adjoining areas. Due to heavy rainfall and release of flood waters from Nepal, the situation aggravated in many districts. More than two hundred villages were flooded in Gonda & Barabanki districts due to Ghaghara flood.

Incessant rainfall since first week of August 2011 has caused major rivers to



PERILOUS CROSSING: People make use of a wrecked railway track to negotiate the flood waters at Tokobari, in Dhemaji district of Assam. Photo: www.thehindu.com, 19 Aug 2011.

flow above the danger level. River Ganga at Malda in West Bengal was flowing above danger mark and flooding was reported in several low lying areas. Due to heavy rains and water releases from reservoirs around 25 lakh people have been affected in the state. About 14 districts are reported to be affected by inundation.

During the first week of September a cyclonic circulation over the Orissa coast triggered flash floods in some parts of northern Orissa as rivers were in spate following persistent rains. Balasore, Mayurbhanj and some parts

of Keonjhar districts were affected by floods on the banks of Subarnarekha, Budhabalanga and Baitarani rivers. Major rivers including Mahanadi, Brahmani, Kathajodi, Baitarani, Subarnarekha, Budhabalanga, Bansadhara and Jalaka were in spate following heavy downpour triggered by a low pressure. Floods triggered by heavy rains and the release of large amount of water from Hirakud dam during September first week has affected 19 of the 30 districts. The districts worst-hit include Puri, Jagatsinghpur, Kendrapada, Cuttack, Bhadrak and Nayagarh.



September 24, 2011, villagers wade through floodwaters in Sathipur village, about 125 km Bhubaneswar. The deaths due to the floods went up to 27 (The Hindu, 27 Sep 2011)

NIDM in International forum

Fourth Russia-India-China Trilateral Experts Meeting on Disaster Management was organized by the Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters during September 6-9, 2011

the five member Indian Delegation led by Shri R.K. Srivasvata, Joint Secretary, (DM), Ministry of Home Affairs. Other experts included Shri P.K. Tripathi, Joint Secretary (Mitigation), National Disaster Management Authority, Dr. M. Mohapatra, Scientist,

In this meeting, reports of each country's experts were presented with the aim of sharing of experiences in dealing with major emergencies, recent disasters and the lessons learned from these disasters including the international response. Brief Indian report and presentation was done by the ED, NIDM which included brief hazard profile of India, losses due to disasters, impact of climate change, approach to disaster management in India, institutional framework for DM, recent major disasters and lessons learnt from these disasters, challenges for managing disasters etc. Experts of Fourth Trilateral Meeting expressed their determination to work toward strengthening cooperation in the field of disaster management and discussed various important issues as assessment of potential risk of various disasters, space monitoring and assessment of floods and droughts damage etc. New Fields for cooperation in disaster management were also explored. It may be forest fire detection and suppression and strengthening early warning system for timely response etc.



Dr. Satendra ED, NIDM, Mr. R.K. Srivastava JS DM, Dr. Mohapatra from IMD and Shri V. Bhanumurthy, NRSC attending the fourth Russia-India-China Trilateral Experts Meeting on Disaster Management

at St. Petersburg, Russia. Dr. Satendra, IFS, Executive Director, NIDM was deputed by the Ministry of Home Affairs, Govt of India as member of

Indian Metrological Department and Shri V. Bhanumurthy, Head, Disaster Management System Division, National Remote Sensing Centre.

Dr. Satendra, IFS, Joined as Executive Director



Dr. Satendra, an Indian Forest Service officer of 1986 batch took charge as executive director of NIDM on 16th August 2011. He obtained his Ph. D. from Delhi University and M.B.A. with specialization in Disaster Management from University of Hull, United Kingdom. He carries with him 25 years of experience including Department of Disaster Management, Government of Bihar, Ministry of Rural Development and Forest Fire Division of Ministry of Environment and Forest, Government of India. He also worked as International Expert on Disaster Management and Climate Change with Food and Agriculture Organization, UN in several countries. Dr. Satendra has authored several books, research articles and has publications on Disaster Management, Forestry and other related issues.

Major Activities of NIDM

(July - September 2011)

Training Programmes

- ◆ Basic/ Intermediate IRS Course, NIDM, 4-8 July
- ◆ Application of Geoinformatics in Disaster Management, NIDM, 12-14 July
- ◆ IRS: Integrated Planning -Section Chief,NIDM 18-22, July
- ◆ Disaster & Disabilities NIDM, 18-22 July
- ◆ Earthquake Risk Mitigation & Management, NIDM, 25-29 July
- ◆ Disaster Management for Police Officials,Police Training College, Kishangarh, Ajmer, 25-30 July
- ◆ Cyclone Risk Mitigation & Management, MCRHRD, AP, 1-5 August
- ◆ IRS: Incident Commander Course, NIDM, 1-3 August
- ◆ Climate-change & Flood Disaster Management, NIDM, 8-12 August
- ◆ Comprehensive Landslide Risk Management, UAOA, Uttarakhand, 23-26 August.
- ◆ Urban Risk Management, NIDM, 5-9 September
- ◆ Earthquake Risk mitigation and management, GBPIHED, Sikkim, 5-9 September
- ◆ Integrated Drought Risk Mitigation Management, NIDM, 12-16 September
- ◆ Coastal Risk Management GIDM, Gujarat, 12-16 September
- ◆ Programme on Role of Police in DM, NIDM, 19-23 September
- ◆ Training of Trainers Programme on Comprehensive Disaster Risk Management for officials of African Countries, NIDM, 19-30 September
- ◆ Disaster Database Management, National Academy of Statistical Administration, Noida, 21-23 September
- ◆ Cyclone Risk Mitigation & Management (National Course), MCRHRD Institute, AP, 26-30 September
- ◆ Gender & Disaster Management, NIDM 26-30 September

Online Training Programme with WBI

- ◆ Earthquake Risk Mitigation and Management: 24th July, to 19th August
- ◆ Risk Analysis, 29th August, to 23rd September

Papers

- ◆ Gupta, A. K. and Agarwal, D. (2011). Role of traditional knowledge to combat climate-change. Ailaan (NCRI News) 2(7), 25-27.
- ◆ Gupta, A.K., Nair, S.S.,& Sehgal, V.K.(2011). Hydro-meteorological disasters in milieu of Climate Change: Risk Management Adaptation and data needs. In Satish C. Tripathi, V.P. Dimri and L.S. Chamyal (Eds.), Advances in Earth Sciences, (2)339-360. Delhi: Satish Serial Publishing House.

Online Training Programme with World Bank Institute

- ◆ 3rd Comprehensive Natural Disaster Risk Management Framework Course: 3rd October-11th November, 2011
- ◆ 4th Comprehensive Natural Disaster Risk Management Framework Course: 5th December -13th January, 2012
- ◆ Safe Cities: 3 October- 28 October, 2011
- ◆ Financial Str. For Managing Economic Impacts on Disasters: 7th November -2nd December, 2011
- ◆ Climate Change and Disaster Management: 17th October -11th November, 2011
- ◆ Risk Sensitive Land Use Planning: 13th December, 2011 -7th January, 2012

Upcoming Training Programmes

- ◆ IRS: Simulation Exercise, NIDM, 12-14 October
- ◆ Disaster Psycho social Care, NIDM 10-14 October
- ◆ Flood Risk Management & Mitigation NIDM 17-21 October
- ◆ Comprehensive Disaster Risk Reduction & Mainstreaming for SDMA/ DDMA Officers, NIDM, 17-21 October
- ◆ Landslides Mitigation by Geosynthetics, HIPA, HP, 31 Oct-4 November
- ◆ Formulation of District Disaster Management Plan, UPAAM, UP, 31 October – 4 November
- ◆ IRS: Area Command Course NIDM, 3-4 November
- ◆ IRS: Logistic Section Chief NIDM, 14-18 November
- ◆ IRS: Information & Media Officer Course, NIDM, 14-15 November
- ◆ IRS: Safety Officer course NIDM, 16-17 November
- ◆ IRS: Liaison Officer Course, NIDM, 18-19 November
- ◆ Reproductive & Child Health in collaboration with UNFPA, NIDM, 21-24 November
- ◆ Applications of Geoinformatics in Disaster Management, NIDM, 21-25 November
- ◆ Programme on DM for NCC and NSS officers, NIDM, 21-23 November
- ◆ Formulation of DDMP GAA, Odisha 21-25 November
- ◆ Drought Mitigation & Management NIDM, 28 November-2 December
- ◆ Industrial (Chemical) Disasters, AIM, Tamil Nadu, 28 Nov-2 December
- ◆ GIZ-NIDM Blended Learning Programme on Global campus (GC-21) Online Platform, NIDM 5-7 December
- ◆ Stampede Risk Reduction, NIDM, 8-9 December
- ◆ Ecosystem Approach to Disaster Risk Reduction, NIDM, 12-15 December
- ◆ IRS: Advanced IRS Course NIDM, 13-16 December
- ◆ Gender & Disaster Management, NIDM, 19-23 December

Upcoming Events

(October - December 2011)

Disaster Reduction Day

- ◆ NIDM will be observing the Day for Disaster Reduction on 12 October, 2011. This day offers an opportunity to focus national attention on this important issue and to create awareness about disasters and their management. Further to enhance awareness among the students and to sensitize them towards disasters and their management a number of activities will be organized at School and college levels.

International Day of Persons with Disabilities

- ◆ International Day of Persons with Disabilities will be observed by NIDM on 3 December 2011. The observance of the day aims to promote an understanding of disability issues and mobilize support for the dignity, rights and well-being of persons with disabilities. It also seeks to increase awareness of gains to be derived from the integration of persons with disabilities in every aspect of political, social, economic and cultural life.

We welcome comments / responses / articles from readers of our Newsletter

nidm
Towards a disaster free India

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