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Resilient India - Disaster Free India

TIDINGS

NIDM Newsletter – 6/2019
(October – December 2019)

Theme: Rehabilitation and Recovery



NATIONAL INSTITUTE OF DISASTER MANAGEMENT
(Ministry of Home Affairs, Govt. of India)

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Content

1.	Activities	02
2.	Thematic Views	24
3.	Projects Details	40
4.	Details of Proposed Training Programme	42

Editorial Board

Editor-In–Chief
Maj. Gen. Manoj Kumar Bindal, VSM
Executive Director

Editor
Dr. Ajinder Walia

Editorial Assistant
Karanpreet Kaur Sodhi

Technical Support
S.K. Tiwari



About NIDM

The National Institute of Disaster Management (NIDM) was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its redesignation as the National Institute of Disaster Management (NIDM) for training and capacity development.

Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

Both as a national Centre and then as the national Institute, NIDM has performed a crucial role in bringing disaster risk reduction to the forefront of the national agenda. The Institute believes that disaster risk reduction is possible only through promotion of a "Culture of Prevention" involving all stakeholders. The Institute works through strategic partnerships with various ministries and departments of the central, state and local governments, academic, research and technical organizations in India and abroad and other bi-lateral and multi-lateral international agencies.

NIDM is proud to have a multi-disciplinary core team of professionals working in various aspects of disaster management. In its endeavour to facilitate training and capacity development, the Institute has state-of-the-art facilities like class rooms, seminar hall and video-conferencing facilities etc. The Institute has a well-stocked library exclusively on the theme of disaster management and mitigation.

NIDM provides Capacity Building support to various National and State level agencies in the field of Disaster Management & Disaster Risk Reduction. The Institute's vision is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedness.

From the NIDM

Executive Director's Desk



Dear Readers,

It gives me immense pleasure to bring forth our newsletter of the last quarter of 2019. The theme of this 'Tidings' is 'Rehabilitation and Recovery'. My colleagues in the Institute join me in conveying greetings and gratitude to the readers and writers of the newsletter who have supported the initiative directly and indirectly and contributed to its success. We continue to accentuate the principle that managing of disasters management is not merely a one-time activity undertaken during disasters but a way of life, to be practiced by each individual for a resilient society.

As we wait for the dawn of the next year, we can almost feel the impact of evolution. We have received many encouraging responses from our readers, which has strengthened our belief that regular interaction and exchange of ideas among all the stakeholders will be a mutually beneficial process. We believe that vibrant dialogue and discussion is enriching and provides solutions to many problems that seem difficult at individual levels.

Not limiting itself to being just a newsletter, Tidings represents a network of organizations and institutions, individuals and communities working for disaster risk reduction. The network has come a long way from the first initial steps towards working together for a vision and mission. It is encouraging that the network is slowly but surely taking the shape of a vibrant platform to bring forth various issues, discuss them and find ways to deal better with them.

We have tried to assimilate the poignant but significant lessons learnt from past disasters in our capacity building endeavours. Documentation of the disasters along with the lessons learnt from them is under way and we hope that we learn the lessons well enough to not repeat the follies, leading to more disasters and loss of generations.

We at NIDM believe that networking is the key to solutions in disaster management. The aim of the newsletter is to create an atmosphere of mutual learning to help us on our way to fulfill our mandate and achieve our goal of building an India that is prepared to face disasters.



Major General Manoj Kumar Bindal, VSM
Executive Director, NIDM

Orientation Training Programme on Child Centric Disaster Risk Reduction 3-4 October, 2019, ILDM Kerala

National Institute of Disaster Management, South Campus conducted 'Orientation Training Programme on Child Centric Disaster Risk Reduction' in collaboration with Institute of Land and Disaster Management on 3-4 October, 2019 at ILDM, Trivandrum, Kerala. The programme was supported by UNICEF. Aim of the Training Programme was to build the capacity of participants on the concept of Child Centric Disaster Risk Reduction among the officers of Department of Health, Education, Women and child welfare, Social Justice, Revenue and Police department and also professionals of civil society working in the field. From seven sector, 48 participants participated in this training programme.

Sri. P. G. Thomas, IAS (Rtd), delivered welcome address followed by that Dr. Kumar Raka, Programme Officer, NIDM South campus shared the purpose of the programme. Major General Manoj Kumar Bindal, Executive Director, National Institute of Disaster Management delivered special address. He mentioned that prevention is better than cure so we need to prepare our community for disaster risk reduction. NIDM and its team also learn from Kerala through their flood management and new initiatives of the state. During flood, Kerala was bounce back better and it's a good lesson for other states. During disaster, worst affected are more neglected so we need to focus on inclusive disaster risk reduction. A child friendly space needs to be created for the betterment of children.

He also requested the participants to incorporate their learning into their work. Dr. V. Venu IAS, Principal Secretary, Revenue & Disaster Management delivered inaugural address. He appreciated NIDM effort for organizing CCDRR training programme. During disaster, the children were affected by psycho socio trauma. Further he shared the initiatives of Kerala. School safety auditing has been done and Disaster Management plan is regularly being updated. Kerala is the first state in a country which completed the village disaster management plan in all the villages. Dr. Amalraj, Assistant Professor, ILDM was present in the programme. Sri. E. Muhammed Safeer, Deputy Collector delivered Vote of Thanks.



Training programme on Village Disaster Management Plan 3-5 October, 2019, Goa



In order to build the capacity of the community for prevention, mitigation and effectively responding to any kind of emergencies, a training programme on "Development of Village Disaster Management Plan" was conducted by NIDM from 3-5 October, 2019 in collaboration with Goa Institute of Public Administration and Rural Development, Ella, Old Goa. The aim of the programme is to develop skills amongst the participants of the state of Goa to frame their village disaster management plans. A total of 43 participants from various departments of the state attended this programme.

Training programme on Hospital Disaster Management Plan 9-11 October, 2019, HP SDMA

A training programme on Hospital Disaster Management Plan from 9-11 October, 2019 was organized by the institute in collaboration with Himachal Pradesh State Disaster Management Authority (HPSDMA) at Dr. Rajendra Prasad Government Medical College Tanda at Kangra. The aim of the training programme was to facilitate the creation of requisite capacity of the stakeholders involved with schools and to prepare and effectively implement the school disaster management plan. In addition, the creation of requisite capacity within the hospital staff to prepare and effectively implement the hospital disaster management plan. This training programme was primarily designed for people across the humanitarian to development spectrum, who in some capacity be involved in disaster risk mitigation activities for hospitals at different levels.

The broad methodology adopted during the programme was based on presentations and interactive sessions. During the training programme, a variety of training methods like power point presentations, group discussions, demonstration, field visit to the hospital were attached with the Dr. Rajendra Prasad Government Medical College Tanda at Kangra. During the visit, various facets of disaster management plan like structural/ non-structural aspects, emergency management and other requirements for a well-functioning hospital work evaluated. Based on the field visit, two groups finalized the SWOT analysis of the hospital.

The SWOT analysis presentation was discussed in presence of the Principal of the Medical College. The programme resulted in a thorough understanding of the issues related to disaster and emergency management aspects of the hospital preparedness.



There were 23 participants, mostly senior doctors, representing different medical colleges of the state of Himachal Pradesh. All the participants were also

involved with disaster management and emergency management/safety aspects of the hospitals. Most of the participants were well versed with the needs and requirements for making disaster safe hospitals. All of them had shown skills necessary to develop carry forward the work of making disaster safe hospital and to prepare hospital disaster management plan at their place. NIDM faculty was intervened for the programme.

Training Programme on Disaster Management for officials of Indian Railways 14-16 October, 2019, Bengaluru

With the aim of mainstreaming DRR into sectors under the mandate of capacity building, NIDM conducted a programme for officials of Indian Railways at their Institute of Disaster Management, Bengaluru from 14-16 October, 2019. This is the second programme of this kind for officials of Indian railways and first of its kind at their newly established institute of Disaster Management. The programme was attended by 110 officials representing all the divisions of Indian railways. Programme was inaugurated by Maj. Gen. Manoj Kumar Bindal, Executive Director, NIDM. During the discussion on mainstreaming DRR into railway functioning, participants came up with few points such as:

1. Pasting of do's and don'ts of disasters in every compartment as there has been for fire accidents.
2. On-board train staff must be trained in basic life support techniques as they are the first responders in terms of mishaps in running trains.
3. Doctors travelling in the train who are willing to serve in case of emergencies on running trains can be tapped through their telephone numbers by Ticket checking staff for utilization of golden hour in case of any emergency.
4. A discussion may be initiated for implementing IRS in Indian railways.
5. Railways must get itself equipped to tackle the Mahalaxmi Express incident in Maharashtra.
6. Equipments available with Indian Railways must also be included in the India Disaster Resource Network.



Training Programme on Flood Risk Management and Water Sector DRR 14-18 October, 2019, NIH, Roorkee

National Institute of Disaster Management conducted a five day national training programme on "Flood Risk Management and Water Sector DRR", 14-18 October, 2019 at NIH, Roorkee. The training program was inaugurated by Dr. Rakesh Kumar Scientist-G & Head, Surface Water Hydrology Division, NIH Roorkee along with Course Directors of NIDM team i.e. Dr. A.D. Kaushik, Sr. Faculty & Centre Head, Forest & Bio-diversity DRR, ECDRM Division and Dr. Anil Kumar Gupta, Associate Professor and Head, ECDRM Division. 40 participants from different states of the country attended the training program. The training focused on various emerging issues on flood related to disaster preparedness and mitigation strategies particularly the urban areas.



Themes like Basic Concepts of Disaster Management and Disaster Risk Reduction with reference to flood, Geo-informatics applications in flood & Disaster Risk Reduction, Health aspects during flood, Climate Change and Hydro-meteorological disasters: Disaster Risk Reduction (DRR) and Climate Change were discussed during the programme. Lectures were delivered by the faculty members of NIDM, New Delhi, IIT Roorkee, CSE Roorkee and NIH Roorkee. Most of the lectures delivered during the training program were highly appreciated by the participants. One day field visit for the participants was conducted to flood affected areas of Haridwar district of Uttarakhand State. The field experienced was highly appreciated by the participants.

Consultative Meeting on Capacity Building for Disability-inclusive DRR: A Framework for Action Organized by Ministry of Social Justice & Empowerment, Govt of India, Department for Empowerment of Persons with Disabilities, 18 October 2019, New Delhi



The National Institute of Disaster Management (NIDM) and the Department for Empowerment of Persons with Disabilities (DEPwD), Govt of India, collaborated to work for Disability Inclusive DRR (DiDRR) through capacity building, research and advocacy.

As the first step of the collaborative process, a Consultative Meeting on the way forward was organized on 18 October 2019. The meeting aimed at brainstorming and arrive at a framework for inclusive DRR and identify specific actions for ensuring inclusivity in DRR. The consultative meeting was attended by 30 participants. The consultation included deliberations on barriers faced by PwD's during disasters and inclusion issues in risk management, charted out a plan of action in Disaster inclusive DRR and capacity building for DiDRR.

Post Disaster Needs Assessment (PDNA) & Long Term Recovery 21-23 October 2019, HCM RIPA



A three day training programme on Post Disaster Needs Assessment and long term recovery was conducted jointly with Rajasthan Institute of Public Administration, Govt. of Rajasthan from 21-23 October, 2019. 45 participants from different sectors- Rural Development, Water and Sanitation, Roads and Bridges, Education, Health, Irrigation, Agriculture, Power, IT etc participated. From NIDM, Prof. Santosh Kumar and Dr Anuradha coordinated the program. During the day, along with the Rajasthan risk profile, importance of PDNA in long-term recovery and development planning were discussed and detailed unfolding of PDNA framework, conceptual issues and other technical sessions were handled by the program director. The published PDNA SOP, Handbook and Manual was formally handed to HCM RIPA by Prof. Santosh Kumar.

Regional Consultation Workshop on Health Resilience and Capacity Building 01 November, 2019, Lucknow, Uttar Pradesh

Under the National Action Plan on Climate Change, a new mission on Health has been added considering the central significance of health aspects in human well being. A National Climate Change Adaptation Plan for Health is being developed wherein NIDM is steering the Action Plan and Roadmap for Health Adaptation Plan w.r.t. Disaster Related Illnesses including public health, communicable and non-communicable diseases, environmental health, occupational, industrial health etc., under the Centre of Excellence on Climate Resilience (CECR) at its ECDRM Division, jointly with WHO and Ministry of Health & Family Welfare, Govt. of India. A Northern Regional Consultation Workshop was organized at Hotel Fairfield by Marriott, Lucknow, UP on 1 November 2019, participated by around 30 delegates from experts from domains of climate change, environment, health, epidemiology, community medicine, disaster risk



management, general administration, from state Departments and UTs, National institutions, NIOH, CEPT University, Medical Colleges, NGOs, UNICEF, International agencies, NDMA, IMD, VMMC & Safdarjung Hospital, etc. The programme was organized jointly with the WHO and NCDC, GEAG (Gorakhpur Environmental Action Group). The Health Adaptation Planning (HAP) would be followed by a compendium of case studies, a training toolkit and series of policy papers on key issues of Health Resilience and Capacity Building.

Regional Consultation Workshop on Health Resilience and Capacity Building 04 November, 2019, West Bengal, Kolkata

Under the National Action Plan on Climate Change, a new mission on Health has been added considering the central significance of health aspects in human well being. A National Climate Change Adaptation Plan for Health is being developed wherein NIDM is steering the Action Plan and Roadmap for Health Adaptation Plan w.r.t. Disaster Related Illnesses including public health, communicable and non-communicable diseases, environmental health, occupational, industrial health etc., under the Centre of Excellence on Climate Resilience (CECR) at its ECDRM Division, jointly with WHO and Ministry of Health & Family Welfare, Govt. of India.



A Eastern and North-Eastern Regional Consultation Workshop was organized at Hotel Taj Vivanta EM Bypass, Kolkata, West Bengal on 4 November 2019, participated by around 30 delegates from experts from domains of climate change, environment, health, epidemiology, community medicine, disaster risk management, general administration, from state Departments and UTs, National institutions, NIOH, CEPT University, Medical Colleges, NGOs, UNICEF, International agencies, NDMA, IMD, VMMC & Safdarjung Hospital, etc. The programme was organized jointly with the WHO and NCDC, ADAMAS University. The Health Adaptation Planning (HAP) would be followed by a compendium of case studies, a training toolkit and series of policy papers on key issues of Health Resilience and Capacity Building.

Workshop on Broadcast Management During Disaster jointly organized by NIDM, MHA and NABM, Parsar Bharti 4-6 November, 2019, New Delhi

NIDM conducted a three day National level training workshop on "Broadcast Management During Disaster" at National Academy of Broadcasting and Multimedia (P), Kingsway, Radio Colony, New Delhi with the collaboration of National Academy of Broadcasting and Multimedia (NABM), Parsar Bharti from 4-6 November 2019. The programme has been coordinated by Dr Surya Parkash, Head, Geo-Meteorological Risks Management Division, NIDM and facilitated by Dr. Umashankar Singh, Programme Executive, NABM

(P) with academic assistance from Mr. Raju Thapa and Miss Harjeet Kaur Young Professionals, NIDM. The participants in the workshop were the training executives and programme executives from All India Radio (AIR) and Doordarshan (DD). There were 22 participants belonging to 16 States and Union Territories of India including New Delhi, Nagaland, Meghalaya, Assam, Uttarakhand, Jammu & Kashmir, Uttar Pardesh, Madhya Pardesh, Maharashtra, Bihar, Jharkhand, Tripura, Punjab, Kerala, Karnataka, Agartala. The workshop was inaugurated by Shri Ashok Nigam (ADG, NABM) and Major General Manoj Kumar Bindal (ED, NIDM) in the presence of Shri Das, DDG (Training) and Shri Dipen Mazumdar, Programme Executive, NABM.



The workshop discussed about the basic of Natural Disaster & Standard Operating Procedures, Pre-disaster Strategic Emergency Response: Planning as a First Response Radio (FRR), National Disaster Communication Guidelines & Ethical advisories for Disaster coverage, effective implementation of media related to disaster situations, challenges and Risk & Techniques for Impactful Disaster Communication, standard Operating and Coordination Mechanism & Prioritizing Broadcast Schedules during Disaster. During the programme, a table top exercise on role of media before, during and after disaster has been conducted by the participants. Experts who were involved with the programme included Dr Surya Parkash; NIDM, Shri Rajeev Kumar Shukla, OSD to DG AIR; Prof. K.G. Suresh, Professor Emeritus, Apeejay Satya University; Dr. R. K. Bhandari, Chairman, INAE Forum for Disaster Mitigation and Management and Air Coomodore Ranjan Mukherjee, Former ADG (Operations) & ADG, DCD-CRD, Doordarshan.

Training Programme on Forest Fire Risk Management and Emergency Response 4-8 November 2019, Forest Research Institute (FRI), Dehradun

NIDM, New Delhi in collaboration with Silviculture Division of FRI, Dehradun organized a five day national training programme on "Forest Fire Risk Management and Emergency Response" from 4-8 November 2019 at FRI, Dehradun. The objective of this training programme was to sensitize the participants with the consequence of the forest fires on the forests and



biodiversity and how it can be mitigated through management techniques. 35 participants (Forest officers, DDMOs and CISF officers) from different states of the country were invited for this programme.

The course was designed for DFOs/ DCFs/ ACFs/FRO of State Forest Departments and Officers of Army and Paramilitary Forces and other organizations. Topics like Forest Fire Risk Management- Integration with Holistic Framework, Role of Geo-informatics for predicting Forest Fire Risk Modeling, Group formation and Exercise, Forest Fire pre-warning alert systems, Assessment of Forest Fire using Remote Sensing, Impact of Climate Change on forest fires etc. This training program was found very useful for the participants in disaster mitigation through forestry activities. The training programme was inaugurated by Shri SD Sharma, DDG, ICFRE along with Dr. AD Kaushik, Sr. Faculty & Centre Head, Forest & Bio-diversity DRR, ECDRM Division, NIDM.

National Training Programme on Community Based Disaster Risk Management 6-8 November 2019, APHRDI, Vishakhapatnam

A three day National Training Programme on "Community Based Disaster Risk Management" has been organized by National Institute of Disaster Management (NIDM) in collaboration with Andhra Pradesh Human Resource Development Institute (APHRDI) at Vishakhapatnam from 6-8 November 2019. This programme is an initiative for mainstreaming community participation and involvement in Disaster Risk Management. 106 participants from various states like Odisha, Uttarakhand, Uttar Pradesh, Chhattisgarh and Andhra Pradesh have attended this training programme. The major sessions of the programme focused on the concepts underlying CBDRM, key elements of disaster risk management strategy, methods and tools for participatory facilitation for risk assessment, methodology for social inclusion and designing of effective community disaster awareness initiatives.



Training Program on Integrating Disaster Risk Reduction (DRR) into Rural Development (RD) Policies and Programmes 6-8 November, 2019, HIPA, Shimla

NIDM conducted a three day Training Programme on "Integrating Disaster Risk Reduction (DRR) into Rural Development (RD) Policies and Programmes" at Himachal Institute of Public Administration (HIPA), Shimla. Dr. Sushma Guleria was the course coordinator. A total of 42 participants attended the training program. The course was



designed based on the module developed on rural development as part of the National Cyclone Risk Mitigation Projects: phase-I component of training and capacity building initiative. The objectives of the programme included discussion about the basic concepts of disaster management and institutional framework, engaging in analysis of different stages of the disaster management cycle and their interrelations, examining critical linkages cross development, disasters and climate change in the context of rural development, explaining strategies for mainstreaming disaster risk reduction into ongoing schemes and future developmental activities in Panchayati Raj sector, examining the shift in focus and perspective from risk resilience within disaster management approaches, particularly policy implications and assessing the current policy perspective and practice to make the development process DRR inclusive.

People's Republic of China–Coordination meet with NIDM 07 November, 2019, New Delhi

Delegation from People's Republic of China comprising 7(2 out of which were the officials from China Embassy in India) members had visited NIDM for interaction and discussion on future collaboration with the organization on 7 November 2019. Major General Manoj Kumar Bindal, ED, NIDM and Mr. Zheng Guoguag, Vice Minister, Ministry of Emergency management, People's Republic of China gave the opening remarks for the meeting. Dr. Anil Kumar Gupta, Head ECDRM & Associate Professor made a presentation about NIDM. Mr. Zheng Guoguang, Vice Minister, Ministry of Emergency Management, People's Republic of



China detailed about Ministry of Emergency Management and its activities. He briefly highlighted the purpose and objective of Ministry of Emergency Management and DRR Centre in China. He further discussed on the functioning of Disaster management system along with the operation of Disaster Management Division at different levels. The meeting ended with a vote of thanks and felicitation of the delegates with mementos.

Workshop on Disaster Risk Awareness
09 November, 2019, Vijayawada

Disasters threaten the lives, constitutional rights and needs of people worldwide. In past two decades, India has faced devastating disasters such as Latur Earthquake (1993), Odisha Super Cyclone (1999), Bhuj Earthquake (2001), Indian Tsunami (2004), Jammu & Kashmir Earthquake (2005), Bihar Floods (2008), Uttarakhand Floods (2013), Cyclone Phailin (2013), Chennai Flood (2015), Kerala Flood (2018) and Cyclone Fani (2019). Droughts are slow onset disasters, adversely affecting population alike. Karnataka (16 districts) and Andhra Pradesh (4 districts) experienced at least 10 droughts between 2001-2015. During these emergencies, children are especially vulnerable to diseases, malnutrition, violence and trafficking.

Keeping in view the increasing vulnerability of people from climate change and natural disasters, National Institute of Disaster Management, South Campus conducted 'Disaster Risk Awareness Workshop' in collaboration with Kakaraparti Bhavnarayan College on 9 November, 2019 at Conference Hall, KBN College, Vijayawada for NCC and NSS students in which 107 students participated.

Training Programme on Management of Crowd at Large Congregations
11-13 November, 2019, Institute of Land & Disaster Management, Kerala

A three day Training Programme on Management of Crowd at Large Congregations of National Institute of Disaster Management was organized at Institute of Land & Disaster Management (ILDM), Thiruvananthapuram, Kerala from 11-13 November, 2019. The main objective of this training programme was to acquaint the participants with various concepts of crowd management, issues related to management of crowd, legal provisions for crowd management and IRS as a tool for crowd management. The course was designed to sensitize the administrative officers/police personnel/disaster management persons on basic concepts of Crowd Management especially at large congregations, as well as on methodology & important techniques of reducing the risk of stampede like situations. A total of 54 officials from departments of Revenue, Police, State Disaster Response Force and from state Government of Kerala and Uttarakhand participated in the training programme.

Training Programme on Mainstreaming Disaster Risk Reduction for Resilient Infrastructure
In collaboration with Chhattisgarh Academy of Administration
13-15 November, 2019, Raipur

Training Programme on Mainstreaming Disaster Risk Reduction for Resilient Infrastructure was organized by the institute in collaboration with Chhattisgarh Academy of Administration (CAA), Nimora from 13-15 November, 2019 at Raipur. The aim of the programme was to facilitate creation of requisite capacity, of the stakeholders involved with construction, maintenance and running the infrastructural facilities to appreciate the concept of resilient infrastructure. The following objectives of the programme:

1. To identify the concept and issues involved in making infrastructure resilient;
2. To describe different activities involved in making infrastructure resilient;
3. To develop administrative capabilities to plan and implement infrastructure resilient programmes and strategies at state level;
4. To enhance the skills of the participants to organize similar training programmes; and
5. To provide a forum for inter-changing of ideas and views pertaining to disaster risk mitigation of infrastructure.

This training programme was primarily designed for professional engineers working at different levels with State Government Departments of PWD, Urban and Rural Development, Panchayati Raj, Housing, Public Health Engineering, Irrigation, Water Resources, Municipal Corporations and faculty from Engineering Colleges of the state. The programme was also useful for administrators and senior professionals and engineers working in the areas related to disaster management.

The broad methodology adopted during the programme was based on presentations and interactive sessions. During the training programme, a variety of training methods like power point presentations, group discussions, demonstration, field visit to a hospital building undergoing retrofitting work and group work based on the under repair hospital visit, which was presented by participants, were used. 25 participants attended the programme, comprised of mostly senior engineers representing various departments of the State Government and who were involved with making infrastructure facilities resilient at their respective places of engagement. All the participants were well versed with the needs and requirements for making infrastructure facilities disaster safe and resilient. All of them had shown skills necessary to develop and carry forward the work of making disaster safe and resilient infrastructure at the state level. The programme involved the NIDM faculty and faculty from the ATI and external resource persons as well.



Workshop on Disaster Risk Awareness
14 November, 2019, Acharya Nagarjuna University, Andhra Pradesh

Disasters threaten the lives, constitutional rights and needs of people worldwide. In past two decades India have faced devastating disasters such as Latur Earthquake (1993), Odisha Super Cyclone (1999), Bhuj Earthquake (2001), Indian Tsunami (2004), Jammu & Kashmir Earthquake (2005), Bihar Floods (2008), Uttarakhand Floods (2013), Cyclone Phailin (2013), Chennai Flood (2015), Kerala Flood (2018) and Cyclone Fani (2019). Droughts are slow onset disasters, adversely affecting population alike. Karnataka (16 districts) and Andhra Pradesh (4 districts) experienced at least 10 droughts between 2001-2015. During these emergencies children are especially vulnerable to diseases, malnutrition, violence and trafficking.

Keeping in view the increasing vulnerability of people from climate change and natural disasters, National Institute of Disaster Management, South Campus conducted 'Disaster Risk Awareness Workshop' in collaboration with Acharya Nagarjuna University on 14 November, 2019 at Auditorium Acharya Nagarjuna University for NSS students in which 180 students participated.

Regional Consultation Workshop on Health Resilience and Capacity Building
14 November 2019, Hyderabad

Under the National Action Plan on Climate Change, a new mission on Health has been added considering the central significance of health aspects in human well being. A National CC Adaptation Plan for Health is being developed wherein NIDM is steering the Action Plan and Roadmap for Health Adaptation Plan w.r.t. Disaster Related Illnesses including public health, communicable and non-communicable diseases, environmental health, occupational, industrial health etc., under the Centre of Excellence on Climate Resilience (CECR) at its ECDRM Division, jointly with WHO and Ministry of Health & Family Welfare, Govt. of India. A Southern



Regional Consultation Workshop was organized at Hotel Mercure, Hyderabad KCP on 14 November, 2019, participated by around 30 delegates from experts from domains of climate change, environment, health, epidemiology, community medicine, disaster risk management, general administration, from state Departments and UTs, National institutions, NIOH, CEPT University, Medical Colleges, NGOs, UNICEF, International agencies, NDMA, IMD, VMMC & Safdarjung Hospital, etc. The programme was organized jointly with the WHO and NCDC. The Health Adaptation Planning (HAP) would be followed by a compendium of case studies, a training toolkit and series of policy papers on key issues of Health Resilience and Capacity Building.

National Stakeholder-Consultation Workshop on Disaster Resilient Agriculture in India & National Agriculture Disaster Management Plan Organized at ICAR- Central Research Institute for Dryland Agriculture, CRIDA, Hyderabad 15 November, 2019, Hyderabad

National Consultation Workshop on Disaster Resilient Agriculture in India, organized by the Centre for Excellence on Climate Resilience, National Institute of Disaster Management, New Delhi (CECR-NIDM) jointly with ICAR-CRIDA, Hyderabad, under the NADMP (National Agriculture Disaster Management Plan) Project, on 15 November, 2019. The workshop was attended by more than 100 delegates from scientific, professional, government, central and state departments, SDMAs, NDMA, IMD, ICAR-IARI, ISRO/MNCFC, CRRI, NAARM, UNDP, GIZ, NGOs, etc. The workshop aimed to discuss the draft NADMP, besides the roadmap for resilient agriculture in India, towards a strategic programme for disaster resilient agriculture under the CECR-NIDM, in a consortium mode in collaboration with the related national and international institutions



and experts, which would include UNCCD goals, SDGs, doubling farmers income, 5 trillion economy by 2024 and ease of living of the people.

The NADMP would also lead to a specialized institutional network for implementing disaster resilient agriculture and also integrate with the other flagship programmes. ED, NIDM, Mr. Manoj Kumar Bindal was the Guest of Honour, whereas Ms Jayalakshmi, DG of ICAR-MANAGE was the Chief Guest.

Training Programme on Incident Response System (IRS): Operations Section Chief 18-20 November, 2019, New Delhi



NIDM conducted the training programme on Incident Response System (IRS): Operations Section Chief at its campus in New Delhi during 18-20 November, 2019. The objective of this programme was to acquaint the participants about the roles of Operations section chief and its importance during conduct of any disaster response operations. 13 participants from different parts of the country participated in this programme.

Orientation Training Programme on Child Centric Disaster Risk Reduction (CCDRR) 21-22 November, 2019, Port Blair



National Institute of Disaster Management, South Campus has successfully conducted 'Orientation Training Programme on Child Centric Disaster Risk Reduction' in collaboration with Directorate of Disaster Management, A&N Administration at Conference Hall, Megapode Resort, Port Blair. Aim of the Training Programme was to orient the concept of Child Centric Disaster Risk Reduction among the officials of Department of Health, Education, Revenue, Panchayati Raj & Rural Development, Women & Child Welfare and Disaster Management Department. About 75 participants participated in the programme.

The Secretary (Disaster Management), Dr. Angel Bhati Chauhan, Programme Officer, Dr. Kumar Raka, Programme Officer, Dr. I. Balu from NIDM and the Director (Disaster Management), Shri Govnid Ram were present on the occasion. The Secretary (DM), in her inaugural address lauded the role of different agencies/departments who are involved in the safety of children especially through schools safety programme in these islands and urged the participants to involve enthusiastically in making the programme a grand success particularly in view of the fact that the islands are highly vulnerable to various kinds of natural disasters.

Post Disaster Needs Assessment (PDNA) & Long Term Recovery
21-23 November, 2019, ATI Nainital, Uttarakhand

A three day Post Disaster Needs Assessment training workshop was held at Nainital. There were about 110 participants from diverse backgrounds from various hill states, as the main focus of this workshop was on hill state specific PDNA.





The workshop focused on the evolution and on the basic conceptual framework of PDNA followed by an exercise on the assessment of damage and loss. There was a recollection of PDNA with an understanding of the Standard Operational Procedures while conducting PDNA. Later, a case-study of the Nepal earthquake was explained. A full-fledged PDNA sector-based exercise was also given to the participants. In addition, there was a field visit to a landslide affected area of Balianala along with a visit to Raj Bhawan (Governor House).

The last day of the workshop started with the exercise on Sector based PDNA and later covered the disaster risk of the hills and its management aspect.

Seminar on Climate Resilience through Understanding & Innovations
25 November, 2019, New Delhi

A seminar on Climate Resilience through Understanding and Innovations has been organized at YMCA Auditorium on 25 November 2019, by the Centre of Excellence on Climate Resilience (CECR) of the National Institute of Disaster Management, New Delhi, in collaboration with the School of Administrative Studies, York University, Toronto, Canada. ED, NIDM, Major General Manoj Kumar Bindal gave the welcome address while Prof. Santosh Kumar and Major Gen. (Rtd). V K Naik gave their remarks. Prof. Nirupama Agrawal, faculty of Disaster & Emergency Management program of York University delivered the special talk which comprised of the scientific knowledge and public perception aspects of climate change and mitigation issues.



She discussed several examples and illustrations of climate resilience and environmental friendly development issues for disaster resilience, from Canada, USA and developing countries including India. The

seminar was coordinated by Dr. Anil K Gupta, Programme Director, CECR-NIDM and Ms. Thinles Chondol, Young Professional-CECR. The seminar was attended by around 50 delegates from various Ministries, Institutions, NGOs, Private Sector, Academicians, DRR and climate change professionals, research and PG students etc. from more than 5 states and UTs. NIDM and York University also discussed the avenues of academic and research cooperation and long term relations.

National Training Workshop on Supply Chain Management in Disasters 26-28 November, 2019, New Delhi



A three day National Training Workshop on "Supply Chain Management in Disasters" is organized by the National Institute of Disaster Management (NIDM), coordinated by Prof. Santosh Kumar and Dr. Chandrani Bandyopadhyay at YMCA, New Delhi during 26-28 November 2019. The programme aimed at orientation of participants with nuances of supply chain management and also flag certain issues related to coordination amongst stakeholders and stacking and distribution of materials received. The workshop was inaugurated by Shri Ajit Seth, former Cabinet Secretary. 50 persons participated from various states and union territories like Odisha, Assam, Uttarakhand, Madhya Pradesh, Rajasthan, Haryana, Maharashtra, Tamil Nadu, Punjab, Andaman & Nicobar Islands and Lakshadweep for the workshop.

Regional Consultation Workshop on Health Resilience and Capacity Building 27 November, 2019, Ahmedabad

Under the National Action Plan on Climate Change, a new mission on Health has been added considering the central significance of health aspects in human well being. A National CC Adaptation Plan for Health is being developed wherein NIDM is steering the Action Plan and Roadmap for Health Adaptation Plan w.r.t. Disaster Related Illnesses including public health, communicable and non-communicable diseases, environmental health, occupational, industrial health etc., under the Centre of Excellence on Climate Resilience (CECR) at its ECDRM Division, jointly with WHO and Ministry of Health & Family Welfare, Govt. of India. A Western



Regional Consultation Workshop has been organized at Hotel Pride Plaza, Ahmedabad, on 27 November 2019, participated by around 50 delegates from experts from domains of climate change, environment, health, epidemiology, community medicine, disaster risk management, general administration, from state Departments and UTs, National institutions, NIOH, CEPT University, Gujarat University, Medical Colleges, NGOs, UNICEF, International agencies, NDMA, IMD, VMMC & Safdarjung Hospital, etc. The programme was organized jointly with the WHO, NCDC and Gujarat University. The Health Adaptation Planning (HAP) would be followed by a compendium of case studies, a training toolkit and series of policy papers on key issues of Health Resilience and Capacity Building.

Training of Trainer Programme on Mainstreaming DRR into Decentralized Governance Level 27-29 November 2019, Lucknow, Uttar Pradesh

In order to mitigate and prepare for Disaster, its management requires coordinated efforts from existing administrative set up and all other stakeholders. The activities involved in the management of disasters would depend on nature and type of disaster. If the disaster management efforts are planned and stakeholders are trained, there will be no scope for adhoc measures and disaster management would be smooth and effective. The paradigm shift has changed and focus of all stakeholders is towards disaster risk reduction, which includes mitigation, preparedness and prevention efforts. This implies that the efforts are being made towards preparation of plan, which is also mandatory requirement as per the Disaster



Management Act 2005, hence there is a need of mainstreaming the Disaster Risk Reduction into development. As revenue department is the nodal department in management and response and relief of disaster in state of UP Institute has invited nominations of Tehsildar/Nayab Tehsildar to be master trainer who can further provide training and guidance to Lekhpals, who are the first responder in Village/panchayat level. NIDM conducted the training Programme on "ToT Programme on Mainstreaming DRR into Decentralized Governance Level" from 27-29 November, 2019 in collaboration with Deen Dayal Upadhyay State Institute of Rural Development, Lucknow with the objective to acquaint with the new and emerging issues like climate change adaptation and mainstreaming across sectors at state, district and local levels. 37 officials attended this programme.

1st International Conference on Landslides Risk Reduction and Resilience–2019 28 November, 2019, The Ashok Hotel, New Delhi

The 1st International Conference on Landslides Risk Reduction and Resilience was organized by National Institute of Disaster Management, Ministry of Home Affairs at The Hotel Ashok, New Delhi on 28 November 2019. The conference was inaugurated by Hon'ble Minister of State for Home, Shri G. Kishan Reddy. Two documents "Landslide Preparedness Guidelines for Safety of Buildings on Slopes" and "Abstract Volume" of the International Conference were also released by the Hon'ble Minister during the inaugural session. The



inaugural session was honoured by the presence of Member Secretary, NDMA, Shri G.V.V. Sarma; Joint Secretary (DM) MHA, Shri Sanjeev K. Jindal; Members of NDMA, Lt Gen (Retd.) N. C. Marwah, PVSM, AVSM and Shri Kamal Kishore along with Executive Director, NIDM, Major General Manoj Kumar Bindal, VSM and other dignitaries from various international and national organizations/ institutes/ universities.

The Hon'ble Minister of State for Home, highlights the unpleasant impacts of the landslide disasters on the community, infrastructures and structure. He emphasized the need of developing technology to anticipate disasters like landslides and develop infrastructure to quickly respond to minimize the damage. Further, he exhorted the International and National delegates for extensive collaborating network to disseminate information, experiences and innovations to develop proper technology and preparedness for landslides risk reduction and resilience. He also highlights the interventions taken by the government after the inception of Disaster Management Act 2005 to strengthen the resilience capacity of all the stakeholders at different levels.

The International Conference convoyed about 200 participants from various prestigious International and National organisations/institutes/universities working in the field of landslides mitigation and management.

Training Program on Integrating Disaster Risk Reduction (DRR) & Climate Change Resilience (CCR) into Rural Development (RD) Policies and Programmes 4-6 December, 2019, UIRD, Rudrapur

NIDM conducted a training programme on Integrating Disaster Risk Reduction (DRR) & Climate Change Resilience (CCR) into Rural Development (RD) Policies and Programmes from 4-6 December 2019 at Uttarakhand Institute of Rural Development & Panchayat Raj (UIRD), Rudrapur. The program has been customized for women participants who are middle level professionals from various line departments dealing with Rural development, Agriculture and allied sectors, Revenue, Health and Family Welfare, Women and Child Development, Panchayati Raj Institutions, NGOs, etc. and other related stakeholders. There were 42 participants who attended this training program. The objectives of the programme were to explain the basic concepts of disaster management, to Illustrate the analysis of different stages of the disaster management cycle and their interrelations, to examine critical linkages cross development, disasters and climate change in the context of rural development, to explain the strategies for mainstreaming disaster risk reduction into ongoing schemes and future developmental activities in Panchayati Raj sector, to inspect the perspective from risk resilience within disaster management approaches, particularly policy implications, to explore the current policy perspective and practice to make the development process DRR inclusive.

Training Programme on School Safety Plan and Safety Audits 4-6 December, 2019, ATI, Mysuru



A training programme on School Safety Plan and Safety Audit from 4-6 December, 2019 was organized by the institute in collaboration with the ATI Mysore at Mysuru. The aim of the training programme was to facilitate the creation of requisite capacity of the stakeholders involved with schools and to prepare and effectively implement the school disaster management plan.

This training programme was primarily designed for senior teachers and people who were involved in disaster risk mitigation activities for schools at different levels. The programme was useful for administrators and senior teachers involved in the school safety.

The broad methodology adopted during the programme was based on the presentations and interactive sessions. During the training programme, a variety of training methods like group discussion, demonstration, field visit and group work with presentation by participants were used. There were 30 participants (mostly Principals/Senior Teachers working with the government schools within the state of Karnataka) representing various districts of the state attended the programme.

All the participants were well versed with the needs and requirements for disaster management and safety aspects of schools. All of them have shown skills necessary to develop school safety (disaster management) plans. NIDM faculty, faculty from the ATI and external resource persons were involved.

Orientation Training Programme on CCDRR 5-6 December, 2019, Shillong, Meghalaya

Keeping in view the increasing vulnerability of children from climate change and natural disasters and to enhance the capacity towards child centric disaster management preparedness, a two day Orientation Training Programme on Child Centric Disaster Risk Reduction (CCDRR) was conducted by NIDM South Campus in collaboration with Meghalaya Administrative Training Institute (MATI) at Shillong, Meghalaya on 5-6 December, 2019. About 40 officials of Department of Health, Education, Revenue, Panchyat Raj & Rural Development, Women & Child Welfare and Disaster Management Department attended the training programme to build their knowledge, skill and perspectives towards child centric disaster risk reduction and to understand and prepare for risk informed planning, sectoral readiness and preparedness for emergencies so that children are not deprived of basic amenities.

Training Programme on Climate Change, Hill Area Development and Landslides Management 5-7 December, 2019, IIT Roorkee

NIDM conducted a three day National Level Training Programme on "Climate Change, Hill Area Development and Landslides Management" at CoEDMM, IIT Roorkee, Uttarakhand with collaboration with Centre of Excellence in Disaster Mitigation and Management (CoEDMM), IIT Roorkee, Uttarakhand from 5-7



December 2019. The programme has been coordinated by Dr Surya Parkash, Head, Geo-Meteorological Risks Management Division, NIDM and Prof. Mahua Mukherjee, Head CoEDMM, IIT Roorkee with academic assistance from Mr. Anil Kathait, Young Professional, NIDM, Ms. Dipti Dwivedi, CoEDMM and Ms. Neha Gupta, CoEDMM. The programme involved 49 participants from various relevant departments of Central and State Governments, including NDRF, AIR, CSIR-CBRI, IIRS-ISRO, UKSDMA, RWD, Panjab University, Kumaun University, GGSIPU and IIT Roorkee. The programme has been inaugurated by eminent Geotechnical Scientist and Varnes Medal Awardee Dr. R. K. Bhandari.

The programme discussed about the basic concept of Landslides Risk Reduction and Resilience, Climate Change Linkages among Development, Urbanization and Disaster Management in Hilly Area and National Landslide Risk Management Strategy. A field visit to the landslide site at km 18.50 on Rishikesh-Dharasu Road NH-34, Uttarakhand was organized during the programme to sensitize the participants about the landslides features, causes, associated risks and the appropriate remedial measures to mitigate and stabilize the slope failures. The distinguished experts involved with the programme included Dr. R. K. Bhandari, eminent Scientist and Former Director CSIR-CBRI, Dr. Surya Parkash, Head, GMRD, NIDM, Dr. P. K. Champati Ray, Group Head, Geoscience and Disaster Management Group, IIRS-ISRO, Prof. M. Mukherjee, Head, CoEDMM, Er. A. Gharpure, Managing Director, Genstru and Dr. J. Das, Associate Professor, CoEDMM.

Training Program on SDG 11: Building Resilience of Cities and Communities 11-13 December, 2019, YASHADA, Pune

A three day Training Program on "Sustainable Development Goal 11: Building Resilience of Cities and Communities" has been conducted by National Institute of Disaster Management (NIDM) in collaboration with Yashwantro Chavan Academy of Development Administration (YASHADA) during 11-13 December 2019 at Pune, Maharashtra. 50 Chief Officers, Town planners and Engineers from urban local bodies and line departments of Maharashtra have attended this programme. The major objective of the training programme was mainstreaming the global agenda of sustainable urban development in disaster risk reduction.



Training Programme on Disaster Management for First Responders 11-13 December, 2019, Bhubaneswar, Odisha

NIDM conducted the Training Programme on Disaster Management for First Responders in collaboration with Odisha State Disaster Management Authority (OSDMA) during 11-13 December, 2019 at Bhubaneswar, Odisha. The objective of the programme was to find ways to mainstream DRR into first responders activities. Further, to sensitize by providing information on concepts of disaster management and on disaster risk in India and its implication on sustainable development. 40 officials from Odisha Disaster Response Action Force (ODRAF), Fire and Emergency services and Civil Defence participated in the programme.



Faculty Development Training on CCDRR at Hyderabad, Telangana 12-13 December, 2019, Hyderabad, Telangana



National Institute of Disaster Management, South Campus conducted two day 'Faculty Development Programme' on Child Centric Disaster Risk Reduction in collaboration with Dr. Marri Channa Reddy Human Resource Development Institute of Telangana (MCRHRDIT) on 12-13 December, 2019 at MCRHRDIT, Hyderabad, Telangana. Aim of the Training Programme was to build the capacity of faculties on the concept of Child Centric Disaster Risk Reduction among the faculties of Department of Health & Education and also professionals of civil society working in the field. 35 professionals participated in this two day Faculty Development Programme from five different states.

Training Programme on Psychosocial care in Disaster Management 16-18 December, 2019, Yashada, Pune

In order to develop a pool of human resources to respond to the psychosocial needs of the disaster survivors, National Institute of Disaster Management conducted a training programme on "Psychosocial care in Disaster Management" in collaboration with the Yashada, Pune on 16-18 December, 2019. The programme was organized for the participants from various departments of Maharashtra at Centre of Disaster Management, Yashada, Pune. The aim of the programme was to equip the participants with necessary skills to provide psychosocial care to the community in the aftermath of disasters to fasten the process of normalization of individual and group reactions to disaster experiences. A total of 38 participants attended the course.



Training Programme on School Disaster Management Plan 17-19 December, 2019, Telangana

A training programme on School Safety Plan and Safety Audit from 17-19 December, 2019 was organized by the institute in collaboration with the Dr. MCR HRDI of Telangana at Hyderabad. The aim of the training programme was to facilitate the creation of requisite capacity of the stakeholders involved with schools and to prepare and effectively implement the school disaster management plan. This training programme was primarily designed for senior teachers and people who were involved in disaster risk mitigation activities for schools at different levels. The programme was useful for administrators and senior teachers involved in the school safety.



The broad methodology adopted during the programme was based on the presentations and interactive sessions. During the training programme, a variety of training methods like group discussion, demonstration, field visit and group work with presentation by participants were used. There were 31 participants representing various districts of the state attended the programme (mostly Principals/Senior Teachers working with the government schools within the state of Telangana). All the participants were well versed with the needs and requirements for disaster management and safety aspects of schools. All of them have shown skills necessary to develop school safety (disaster management) plans. NIDM faculty, faculty from the ATI and external resource persons were involved.

Training Programme on Disaster Management for First Responders 18-20 December, 2019, HCM RIPA, Jaipur

NIDM conducted a Training Programme on Disaster Management for First Responders in collaboration with Odisha State Disaster Management Authority (OSDMA) during 18-20 December, 2019 at Harish Chandra Mathur Rajasthan Institute of Public Administration (HCMRIPA), Jaipur, Rajasthan. The objective of the programme was to find ways to mainstream DRR (Disaster Risk Reduction) into first responders activities. Further, to sensitize by providing information on concepts of disaster management and on disaster risk in India and its implication on sustainable development. 23 officials from State Disaster Response Force (SDRF), Fire and Emergency services and Civil Defence participated in the programme.



Training workshop on Good Governance and DRR 18-20 December, 2019, Hyderabad



A three day training workshop on Good Governance and DRR was held at Dr. MCR HRD Institute, Hyderabad from 18-20 December 2019.The programme started with a welcome address by the training coordinator Prof. Santosh Kumar, followed by a special address by Mr. Rajinder Nimje, DG, CCG. A special address was delivered by Mr. Manoj Kumar Bindal, ED, NIDM and Shri Mohan Kanda, CS, Govt. of Andhra Pradesh. Lastly, a vote of thanks was given by the director of Centre for Good Governance, Dr Devi Prasad. The technical sessions were largely on Disaster and Development: A New paradigm for governance, Sendai Framework, P.M 10 Point agenda, the institutional structure for governing disasters, challenges on governance in disaster management etc. Group activity was conducted by Prof. Santosh Kumar and Dr. Anuradha Maurya along with a field visit to Indian National Centre for Ocean Information services (INCOIS).

Training Programme on Disaster Management 26-28 December, 2019, MGSIPA, Chandigarh

To develop capacity of the state Government for Disaster Management, NIDM conducted Training Programme on Disaster Management at Mahatma Gandhi State Institute of Public Administration, Punjab (MGSIPA) from 26-28 December, 2019. This programme was attended by 51 officials from Department of Home Affairs, Defence Services Welfare, Local Government, Education, Revenue, Health & Family Welfare, PWD (B&R), Animal Husbandry, Fisheries & Dairy Development, Water Resources, Water Supply & Sanitation, Municipal Corporation and various districts of state of Punjab who are engaged in management of disasters.



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Unfolding Challenges of Inclusive Disaster Recovery

Prof. Santosh Kumar

Writing about post disaster and capturing stories is not easy. Disaster affects differently to different people. People are not homogeneous especially when it is discussed about Indian situation where diversity is enormous. I am deeply involved in post disaster long term recovery now and also when I was working with the World Bank as a disaster management specialist. We were covering four post disaster scenarios for long term recovery, namely, Orissa Super Cyclone 1999, Gujarat Earthquake, popularly known as kuccha earthquake 2001, Andhra Cyclone and planning for activities to be identified for National Capacity Building Project for Govt. of India and recently in Cyclone Fani, Orissa and Kerala flood 2018.

All the Indian states are different with each other and so are the people. While planning for post disaster relief and recovery, heterogeneity of the country is a real challenge. People are the composition of men and women. Men as a category are also not homogenous and all over and same as the women in the country. Both belong to different class, culture, religion, caste, region, social and economic status etc. Other than the biological construct of male and female, both are also constructed differently by social-cultural practices as Men and Women. This construct determines their differential vulnerability. Recently, I was in Orissa for studying Cyclone Fani 2019 where I found that men and women who were weak, poor, lower in social hierarchy had different impact than of those who were economically and socially highly placed in the society. This is not new in Cyclone Fani and in the state of Orissa. This is happening everywhere in almost all the affected states and in all the disaster situations happening all over the world. To focus on India, I travelled across almost all the various disasters situations like Bihar floods, eight Tsunami affected states in southern states of India, Latur earthquake (Maharashtra), droughts and floods, Drought affected states of Rajasthan, Orissa, Gujarat, Chhattisgarh, Telangana flash floods, land slide in the hills and Uttarkashi, Chamoli earthquakes etc. The point I am trying to bring out is that the people have differential vulnerabilities and hence our policy and action should be designed accordingly that the vulnerable groups are well taken care of.

Old aged population are also increasing in our country. In the new development, urbanization and migration in the urban areas, they are differently located than in the rural areas. Rural old aged people are having differential vulnerability than in the urban areas. In many of the recent disasters situations it was found that amongst all the affected senior citizens had different challenges. Someone may be confined to the bed, someone had different health requirements and care, someone might be physically disabled and confined to the wheel chairs, trapped loneliness and vulnerable to violence etc.

Person with differential disabilities or differently abled have not been in the minds of the people engaged in relief distribution and long-term recovery. Their needs are entirely different. Persons with physical disabilities will have different requirements than those who are mentally challenged or visually impaired. Amongst differently abled or Dibyang as Prime Minister addresses them male and female, old and young, children (1hrs-18years) will have differential need at the time of disasters. When we refer in most of the discussions about the spirits of the constitution of India, we find there is a huge gap in policy and practice. Inclusiveness has not been understood in its true spirit in the development planning process and hence output and outcomes have been very sketchy. Facilities created over the years by making development investment across the sectors have been gender, caste, class, and disabilities blind. Hence, the consequences are grim and very disturbing. For correcting or reducing vulnerabilities one size fit to all policy will not work. We need to revisit our programmes at micro level and design interventions according to the

individuals need. Constitutional rights have been given to the individuals not to the groups, communities, caste, gender or by making class distinction. Similar arguments hold true for the children as well. They need special attention when it comes to the risk reduction. They are the future and needs to be protected and groomed differently.

Long term disaster recovery is being ignored in the wake of fund crunch with the states. But it has deep and long-term impacts. In India, few states have undertaken long-term recovery. Gujarat and Andhra Pradesh (undivided), Tamil Nadu, Bihar, Orissa and Uttarakhand are few proactive states. Kerala and Orissa (2020) are currently struggling for funding, filling the funding gaps that have emerged for undertaking long-term recovery. Recovery has always been a beneficial proposition. The evidence of success is tangible and can be compared on the scale of cost benefit analysis. Conventional way of doing disaster management is fine but it is not giving any long-term benefits. Hence, planning for funding long-term recovery is a greater challenge amongst all. In the light of uncertainties and exposure of the states to various hazards, pre-disaster planning for recovery is the need of the hour for funding long-term recovery.

Inclusive Blind approach has to be revisited and a friendly framework has to be initiated with strong institutional mechanism, funding system, recovery framework, build back better, inclusiveness, gender equity, LGBT etc. by keeping the agenda on priority for making development sustainable and equitable.

Rehabilitation and Recovery after Landslides

Prof. Surya Parkash

The "**International Mountain Day**" is celebrated every year on 11th December since 2003. Mountains occupy 24% of the globe's total landmass area and accommodate 26% of the total human population of the world (ICIMOD, 2010). A wide range of the hazards, namely, earthquakes, floods, landslides, cloudbursts, avalanche, flash floods, glacial lake outburst floods and so on, have immense potential to smash the picturesque terrains, inhabitants and socio-economy developments of the mountains. Therefore, rehabilitation and recovery is critical and strategic phase of disaster management to reinstate the pre-disaster status quo of the affected population and the region. The fourth priority action of the Sendai Framework also emphasizes to enhance disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction. According to the "**UNISDR Terminology on Disaster Risk Reduction, 2009**", recovery and rehabilitation are defined as:

Recovery: The restoring or improving livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.

Rehabilitation: The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

The duration of rehabilitation and recovery after any disaster is directly proportional to the quantum of the devastation and availability of human resources along with financial aid besides proper prior rehabilitation and recovery planning. Landslides are contrasting to other disasters that adversely impact mountains, dwellers and socio-economic developments. The first difference is that unlike other disasters, landslides, with exhaustive scientific research are predictable, preventable and controllable. Secondly, they differ in planning and strategies for rehabilitation and recovery. The losses due to landslides not only engulf the landmass along with the infrastructures and structures in and around failed slopes but also impact the livelihoods and livestock, inter alia, the mental trauma of losing dear/near ones and deserting the traditional and native place. Landslides lay constraints in achieving 3 Bs of the Sendai Framework. For example, in the year 2009, landslide buried two villages namely La and Jhekhla in Munsyari tehsil of Pithoragarh district, Uttarakhand state. Reconstruction on that debris cover is not feasible as it has the

potential to fail again in the future. Similarly, Malin village landslide (2014) in Pune, Maharashtra is another instance where landslide hampered the rehabilitation and recovery strategy. Identifying stable slopes on elevated terrains for shifting the affected community is tricky in rehabilitation and recovery phase. Livelihoods of hill communities are another concern in the recovery phase. The main source of income of the hill dwellers are agriculture, livestock and tourism. Landslides do destroy the fertile agriculture lands which are the prime source of livelihood of the rural population. Livestock fatalities are another hole in the income. Thus, providing them alternative options of the livelihoods are fret to the administrators and recovery planners. Road networks, the life line of connectivity in hill areas are also victim of landslide disasters. The blockade or damaged roads/bridges influence the tourism sector as well as price of the daily necessitates commodities. The landslides induced due to Kedarnath tragedy in 2013 stranded thousands of the tourists/commuters at different locations and also hampered the progress of tourism sector in the region. The most important concern aftermath of the landslide disasters is to persuade local community to vacate the place to which they have affection. Kaliasaur landslide at km 147 on NH-58, Uttarakhand is a major threat to the village upslope. Cracks due to the activity of landslide are visible on walls and floors of the houses in the village but still they are not psychologically prepared to shift from their native land to any other place.

The conclusions for landslides rehabilitation and recovery are to provide alternative options of livelihoods for the communities, psychological consultations to overcome from the mental trauma and to adopt a holistic approach of build to last rather than build better back.

Reference:

Macchi, M; ICIMOD (2010) Mountains of the World–Ecosystem Services in a Time of Global and Climate Change Kathmandu: ICIMOD

Disaster Resilience in Sectoral Governance and Business Continuity

Prof. Anil K. Gupta

Preamble

More than 40% small businesses never recover from a disaster and several large and medium businesses suffer long and complex impairments. History tells that despite all the literature and precautionary tales, there are still an overwhelming amount of businesses that choose not to prepare for a disaster until it's too late. Disasters are the case where environment poses risk to development process, and is exacerbated by changes viz. climate change, land-use and natural resource degradation, compounded by anthropogenic and demographic influences. The high pace of chemical, technology and energy intensive development further adds to complexity of challenges. Starting from earthquakes in Chinda, Bhuj, Indian Ocean Tsunami, Cyclones – Super-cyclone to recent ones like Phailin, Hudhud, Phani, Floods in Uttarakhand, Srinagar, Chennai, Guwahati, Droughts and fires, presented significant cases for study where businesses and their infrastructure across public and private entities. Risk and vulnerability contexts in developing countries, particular in Asia-Pacific and Africa, vary significantly from the developed countries.

Disaster Crisis Contexts

Businesses and corporate organizations have been taking 'risk management' seriously but in the context of financial and market risks. Emerging risk contexts for entire business cycle calls for greater focus on following dimensions of disaster risks, which affect input and output supplies (production, packaging and sales), corporate image and employee satisfaction, CSR and corporate sustainability paradigm:

(a) Environmental-natural hazards

(b) Industrial-chemical accidents and Na-techs

(c) Climate change induced risks/vulnerabilities

The emerging field of 'climate and disaster resilient business continuity management' also goes beyond the business cycle to 'extended producer liability' contexts and looks at systemic risks and solutions from short, medium and long-term perspectives. Concepts of 'industrial-ecology' and resource-efficiency are critical to present time management and planning strategies for 'smart' organizations. Business management contexts seldom covered Municipal Corporations, Industrial Estates/Parks, Forests and Protected Areas, Tourism Projects, but is the need of the time to focus these integrated business systems for resilience and emergency risk management.

Systems, Agents and Institutions

While institutions attempted to design disaster resilience business sustainability approaches at industrial units and corporate organizations, the perception needs significant evolution to cover the following facets. 'Infrastructure' cannot be seen as static entity but as 'dynamic' and 'system' with input-output and functional resilience, which largely relates to environmental supplies, limitations, anthropogenic and social contributors. Risk management would consider the range of systems across environment/ecosystems, infrastructure, human organizations, local governance, and planning units.

1. Industrial Organizations: (a) Corporate Houses (b) Industrial Units/Sites (c) Industrial Estates.

2. Urban Local Bodies: Municipality/Corporations including the input-output relations with Industrial areas and Peri-urban resources/ecosystems and CSR sites.

3. Infrastructure Systems: Ecosystem services towards supportive and assimilative capacities, and functional support system for safety and resilience.

4. Regional Planning/Development (including SEZ, Special Area Development, Area Specific Notifications, etc.)

5. Resource Management and Green Growth (including circular economy, resource efficiency, Natural based solutions and Ecosystem based DRR).

6. Government/Regulatory Agencies: Dealing with License and permits, Clearances, Law-making, Monitoring and Enforcement, etc.

Approaches and Pathways

There has been ambiguity among the policy makers and business management professionals on how to plan and implement disaster resilience and crisis emergency preparedness into their sectors. On the other hand, there are significant lessons and case studies across local development sectors from developed and developing world both, including from industrial sectors, to help in delineation of approaches and pathways fundamental to strategic management. Following are the key sub-sections for enabling environment towards this goal:

(a) Public Policies and Laws: Environment, Land and urban development, Energy, DRR, Industrial promotion, Factories/Safety, Local/area specific and Sectors specific policies.

(b) Human Resource Management – Occupational and Industrial: That related to skills and performance, Safety, Health, Absenteeism, Organizational growth, etc.

(c) Strategic Management: Adaptation to experienced changes and projected changes, w.r.t. climate risks, disaster risks, S&T, and integration of anticipatory measures.

(d) Tools and Methods: Strategic Environmental Assessments/Environmental Impact Assessments, including site risk assessment, health risk assessment, ecological risk assessment, Auditing (Safety, Health, Environment, Material), Life Cycle Analysis, (Natural) Resource Accounting, Footprint, Cost Benefit Analysis, Risk and Vulnerability Analysis, Project Finance Tools like EFC/SFC, PDNA, etc.

(e) Plans and Programmes: On-site/Off-site Disaster Management Plan, Emergency Preparedness & Crisis Management Plans, District Level-Environment Plans (DEP) and DDMP, Departmental developmental plans and programmes/schemes, etc.

Interdisciplinary and Trans-disciplinary Curriculum

Interestingly, some of the 'smart' business schools have recently diversified their expertise and curriculum/programmes and included green growth, resilient agriculture, health, industrial/chemical safety, natural resource management, social and special needs and inclusivity issues and policy tools, along the customary fields to adapt to changing needs of the time. Environmental changes, in particular climate change, land-use and natural resource changes, and the pace of S&T applications, automation and artificial intelligence in all fields of life, calls for holistic and inclusive approach for dealing with climate and disaster risk in business systems. This requires for inter-disciplinary focus along with trans-disciplinary expertise covering the dimensions of environment, law, industrial, health, S&T, emotional and social inclusiveness, etc.

Warehousing: Rehabilitation and Recovery

Lt. Col. Dinesh Chander Vashista

Disaster preparedness involves arranging for logistics and supply of essential commodities during the time of crises. For effective disaster relief measures, it is essential to procure, store, transport and distribute across the spectrum of disaster affected geographical boundaries. During the Tsunami of 2004 at Andaman and Nicobar Islands, one of the major lessons learnt towards disaster risk resilience was forward placement of relief and rescue material. In order to achieve forward placement and maintain these reserves and emergency supplies, storage and warehousing needs to come up on a war footing .The warehousing could be permanent or temporary. Permanent warehousing may be worked out by the states and distributed at regional level with provisions of temporary warehousing requirements to include provisions for shelter as part of the response and a mitigation effort.

Stockpiling and warehouse requirements must be worked out in detail in advance and should not be planned after dumping of stores. The warehouse should have following parameters:

- A warehouse should have storage to cater for all types of essential stores required for disaster relief.
- A warehouse must provide proper secure and safe storage in terms of capacity and the preservation of the quality and quantity of the items stores. Cool, dry storage facilities are optimal. The storage conditions should be arranged in a way that warmth and dampness can be controlled. The warehouse must have measures to control infestation and growth of microorganisms, rodents and pests. Every effort should be made to prevent supplies from being exposed to sun, rain, humidity or high temperature.
- Open storage areas should not be used, except for very short duration for goods that will not be affected by exposure.

- The necessary capacity for a proposed warehouse depends upon the number of beneficiaries to be served and the quantity of goods to be stored and distributed. Provision for anticipated reserve and buffer stocks must be catered for.
- Consumption rates and shelf life must be maintained with the inventory management principles.
- A single large building is better than several small ones.
- The warehouse must be secure against theft, with adequate fencing, lighting, and security personnel and should have adequate Fire prevention measures.
- The area surrounding the warehouse should be cleared and made to provide good drainage and easy access.
- Special storage area for small, high-value items must be duly segregated and guarded.
- The warehouse should be well connected on communication network and must have parking, loading/unloading area adjacent to the warehouse.

Temporary shelters should be planned with the expertise from specialized agencies, local wisdom and traditional coping mechanisms for. It is quite probable that traditional systems for temporary shelters are available in the area. Also, using the traditional system will be cheaper than an external design altogether. In any case, it will be useful to consult the community.

In India, there is a huge area under warehousing, which however is under control with varied ownerships, which during disaster must be taken into account while planning relief, rehabilitation and recovery operations. Various types of warehouses available in India are as follows:

Types of Warehouses: Traditionally, warehouses were broadly classified into public-private, bonded, government and co-operative warehouses. Lately, cold chains, Container Freight Stations (CFS) and Inland Container Depots (ICD) are gaining importance.

Private Warehouses: These warehouses are owned by private entities or individuals and are used exclusively for the goods owned, imported by or on behalf of the license. The warehouses are usually constructed at strategic locations to cater various manufacturing, business and service units. They are flexible enough to be customized in terms of storage and placement, according to the nature of the products.

Public Warehouses: These warehouses are licensed by the government to private entities, individual or cooperative societies to store goods of the general public. They are rented out against a fee and usually set up at transportation points of railways, highways and waterways, providing the facilities of receipt, dispatch, loading and unloading of goods. The government also regulates the functions and operations of these warehouses used mostly by manufacturers, wholesalers, exporters, importers, government agencies, etc.

Bonded Warehouses: These warehouses are licensed by the Government to accept imported goods for storage until the payment of customs duty. They are located near the ports. They are either operated by the Government or work under the control of customs authorities. The warehouse is required to give an undertaking or 'Bond' that it will not allow the goods to be removed without the consent of the custom authorities. The goods are held in bond and cannot be withdrawn without paying the customs duty. These depots equipped with warehousing space, adequate handling equipment and IT infrastructure.

Cold Storage: A cold storage is a temperature controlled storage space catering mainly to agriculture and food industries. Cold stores are used for the storage and distribution of perishable goods such as fruits and vegetables, dairy products; frozen foods such as meat and temperature-sensitive pharmaceutical products.

Government Storage: The primary objective of any government storage is to ensure food security and enable trade movement both within and out of the country. The Central Warehousing Corporation operates 431 warehouses (storage capacity of 100.28 lakh MT) including 44 custom bonded warehouses, 29 CFSs/ICDs, 3 Air Cargo Complexes (ACCs) (5,961 MT) and 3 cold storage warehouses (2,419 MT). Further, various State Warehousing Corporations (SWC) manage a total capacity of 283.34 MT across 1,831 warehouses. The Food Corporation of India (FCI) works for holding agricultural produce to meet the requirements of various government schemes. FCI has its own storage capacity but also hires capacities from CWC, SWCs and the private sector.

For warehousing and stockpiling, proper selection, supervision and control of warehouse and storage facilities, all officials in the field or attached to the operation must assume an active role to ensure that the supplies stored are adequately protected until they reach the beneficiaries. Warehouse protocols should be scientifically laid down and implemented. Serviceability and usability of the stores and other essential commodities required for Rehabilitation and Recovery post disaster is solely dependent on the warehousing conditions and effectiveness of supply chain grid. The warehousing, being the most important entity in the Disaster preparedness framework, therefore needs a proper planning to keep the warehousing and storage requirements as the fulcrum in the entire gamut of relief operations.

Reference: CARE Ratings, October 2018

Post-earthquake Reconstruction Programmes in India - lessons learnt

Dr. Amir Ali Khan

India has been facing devastating earthquakes on regular intervals. In recent past, few of the major earthquakes faced by the country had resulted in death of people, huge economic losses and sufferings to the affected communities. A list of earthquakes that had occurred in last three decades, with their location, has been shown in Figure 1.

The earthquakes generally result in high damages to built-environment causing tremendous suffering to the affected community and also necessitating need for post-earthquake reconstruction programmes. However, there are only few of the damaging earthquakes at national level where effective post- earthquake reconstruction programmes have been initiated by the affected state governments. The two famous post-earthquake reconstruction programmes had been initiated by the respective state governments after Latur and Bhuj earthquakes.

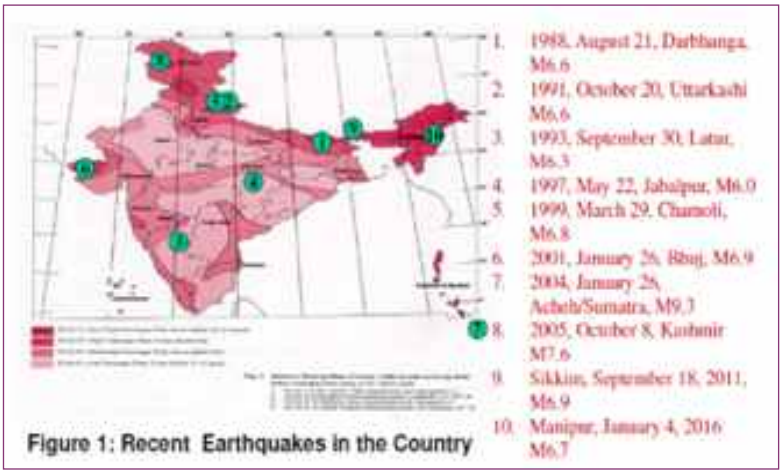


Figure 1: Recent Earthquakes in the Country

The Latur (Killari) earthquake, 6.4 Magnitude, occurred on September 30, 1993 around 3.45 AM on the eve of Ganesh Chaturthi festival. This earthquake not only caught local community unprepared but also surprised the earth scientists at national level. About 8000 people killed due to falling of stone houses like pack of cards. About 50 villages were severely affected. Many of such villages were relocated to different locations under reconstruction programme.

The Bhuj earthquake, 7.9 Magnitude, occurred on January 26, 2001 at 8.46 AM, when India was about to start the celebrations of 51st Republic Day. About 21000 people killed due to this earthquake. The epicenter of the earthquake was near Bhuj town. Four major urban areas of Bhuj, Anjar, Bachau and Rapar had

received huge devastation, in addition to several other urban areas in the region as well as Ahmedabad city which is about 250 km from the epicenter of the earthquake. The earthquake impacted rural areas very severely, as well, completely destroying about 800 villages in the region. The earthquake is famous for exposing the construction practices followed in urban/rural India, which were found deficient to face the earthquakes of this level.

These two earthquakes are famous for highly commendable post-earthquake reconstruction programmes, which had been trendsetters in post-earthquake reconstruction programmes at national/international levels. Various lessons have been learnt while implementing these two post-earthquake reconstruction programmes. Few of the learning are as follows:

- Post-earthquake reconstruction is a complex issue with several dimensions, which require thorough planning and execution.
- Post-earthquake reconstruction programmes require huge money to reconstruct the affected areas. Both the programmes mentioned above had been initiated with the financial assistance from the funding agencies like the World Bank and/or the Asian Development Bank besides other agencies.
- Due to strict implementation mechanism established, performance of the reconstruction programmes was found quite satisfactory.
- These reconstruction programmes were trendsetters in terms of empowering communities and emphasizing much on structural and non-structural mitigation efforts for mitigation of disaster risks in the region.
- The communities at large got sensitized about the earthquake hazard and earthquake-resistant construction practices at local level by incorporating earthquake safety features like plinth, lintel and roof bands, etc. However, overall quality control and improvement of quality of the construction practices is still much needed.
- The rural areas covered under the reconstruction programmes have demonstrated better preparedness to face future earthquakes.
- The post-earthquake programmes had resulted in improved monitoring of earthquakes and revision of earthquake hazard map and building codes for earthquake safe construction practices.
- High emphasis had been accorded to post-earthquake management at national level. Several mock drills have been organized involving various states for a scenario of 8 + magnitude earthquake (Northeastern India and northern Himalayan regions have high probability of an 8+ magnitude earthquake to occur).
- Government, non-governmental and international organizations have their own stakes in disaster recovery programs, and links must be established among them, as well as with the community.

Issues in Disaster Recovery for Cultural Heritage Sites and Museums

Dr. Chandrani Bandyopadhyay

Cultural heritage is the living manifestation of the evolution of human society and knowledge. The United Nations Educational Scientific and Cultural Organization (UNESCO) defines heritage as “the product and witness of the different traditions and of the spiritual achievements of the past and … thus an essential element in the personality of people.” The seat of an ancient civilization, India is a rich store-house of cultural heritage, both tangible and intangible. This heritage is constantly at risk from natural hazards and

human redundancy and apathy. Countless historic monuments and sites have seen significant damage due to natural disasters or man-made causes.

The International Council of Museums Statute defines museums as "a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment." Museums serve as repositories of heritage and history. It is through museums that current society has information about its own past and human history. Museums in India show a great range and diversity in display of artifacts and antiquities, keeping with the rich history and heritage of the country. In acknowledgement of the importance of this sector, Priority Action 3 of the Sendai Framework for DRR urges nations to "Protect or support the protection of cultural and collecting institutions and other sites of historical, cultural heritage and religious interest…".

The interface between cultural heritage and natural disasters are evident in most high intensity disasters around the world. Countless structures have fallen prey to natural hazards like floods, cyclones, tsunamis, earthquakes etc. Natural disasters pose a great threat to museums and the antiquities they store. The damage to Bhuj Museum during Gujarat earthquake underlines the need for concerted efforts towards reducing disaster risks to cultural heritage sites as well as exhibits.

In the aftermath of a disaster, recovery of damaged monuments and artifacts are crucial to maintain their cultural significance. Recovery of cultural heritage plays a critical role in the recovery process of an affected community by restoring cultural identity and overcoming the sense of loss. The restoration process should aim towards maintaining authenticity and value of the damaged structural element on the one hand and building back better on the other, with the help of state-of-the-art technology and innovative approach.

Disaster recovery of cultural heritage entails a process of site stabilization, assessment, salvage, protection, treatment and recording (National Guidelines, NDMA, 2017). The momentum of response created by a disaster and the urge to save lives leads to more damage and destruction of heritage elements, if enough attention is not paid to sensitize responders to their universal value and significance. The affected site needs to be stabilized first, by cordoning and restriction of entry after evacuation of people. Once the site is stabilized, a team of experts should assess the situation and perform a rapid assessment according to a format decided upon before the disaster. Salvage operations, again under supervision of a joint team of response professionals and heritage experts form the subsequent stage of recovery. A detailed listing and documentation of the damage to all heritage elements and assessment of specific recovery actions needs to be initiated to identify the possible extent of recovery. Heritage sites in disasters are open to pilferage or organized theft and need protection from these elements. In addition, a disaster may lead to complex situations like fires following earthquakes or extended flooding after cyclones, making recovery more difficult. Therefore, detailed recovery planning, based on worst case scenarios should be prepared in the pre-disaster phase itself. Many museums are located within heritage structures, thereby doubling the risk of loss/damage to structures as well as loss of antiquities.

The treatment or restoration of antiquities depend upon a variety of factors like material, age and the stage at which it was in before the disaster. While restoration of paper and textiles proves to be more of a challenge, structural materials like stone etc can be treated and restored in many cases. In the reconstruction process, local skills and practices should be given due emphasis, though appropriate retrofitting and structural strengthening measures should be undertaken under expert guidance.

Protection of cultural heritage structures and antiquities should be considered as an integral part of the disaster risk management process. Cultural heritage plays a crucial role in fostering economic and community resilience through nurturing the local skills, practices and economic activities. Quick restoration of heritage helps the community to regain confidence. In this context, recovery planning before the disaster strikes becomes critical to disaster risk reduction and resilience.

Engendering Rehabilitation and Recovery

Dr. Ajinder Walia

The process of rehabilitation and recovery is essentially seen as a window of opportunity which can turn a disaster into a development agenda. As Amartya Sen points out, development should not be limited to economic development only but it covers a gamut of spheres like social, political etc. When we talk of social development, gender inevitable assumes a vital space within the sphere. Recovery is not a simple process of reposition; but an opportunity to build a better society. Recovery planning presents great opportunities for introducing vulnerability reduction and hazard mitigation measures, which can create more risk resilient communities. After the Latur earthquake in 1993 which killed about 10,000 people, women were taught the basic construction techniques used for adapting and strengthening traditional village houses and learned how this type of construction would protect residents from future tremors. Women were involved women in planning and designing their houses and interacted with government agencies on behalf of their communities. The women groups received training in earthquake-safe techniques along with the local masons **(Yonder, Akcar and Gopalan, 2005)**. Hence; it becomes imperative that the recovery planning aims to reduce vulnerability of social groups and increase gender equality must be included in the recovery proposals. Without this as a priority, in post-disaster situation development gains as to the process towards gender equality will be erased.

Mainstreaming gender into disaster management strengthens the resilience of entire communities, cuts recovery time, and leads to more efficient recovery and reconstruction. It can be achieved by taking into account the needs, concerns and capacities of gender groups in planning and implementing disaster reduction and risk management activities. Women's local knowledge and expertise are essential assets for households and communities struggling to rebuild. In order to capture their capacities, disaster responders need to work closely with them in ways that empower and develop their self-determination.

To start engendering the recovery process it is essential to map the recovery needs as well as services required by the community with a gender sensitive approach. Subsequently, a long term vision plan needs to be developed and shared with the men and women of the affected community. Special interaction sessions can be organized with the women to receive their inputs by creating an environment where they can express themselves freely. Finally specific monitoring mechanisms can be established to ensure that women can access resources, participate publicly in planning and decision-making associated with post disaster recovery. The recovery window can empower women through simple principles at the grass root level like joint ownership of all physical assets including multi hazard resistant houses in the name of husband and wife, challenging gender stereotypes though employment generation for the affected community, promoting the creation of Self Help Groups in recovery planning and implementing the reconstruction and recovery projects involving the affected men and women as it will also bolster the local economy.

Reference:

Ayse Yonder with Sengul Akcar and Prema Gopalan. (2005). Women's Participation in Disaster Relief and Recovery http://www.popcouncil.org/pdfs/seeds/SEEDS22.pdfreduce the amount of damage when disasters struck (Ayse Yonder, 2005).

Panchayati Raj Institutions: Role in Disaster Recovery

Shekher Chaturvedi

Panchayati Raj Institutions (PRIs) came into existence as a potent force after the 73rd amendment of Indian Constitution. They play a major role during every phase of disaster, be it pre, during or post disaster phases. Acting as a bridge between Government and the community, PRIs can lead to a revolution in terms of community preparedness, response and recovery phases of disasters. Recovery not only encompasses

bringing affected community to normal life but also make them mentally strong for long-term sustenance.

PRIs being closest to the community know the behaviour and needs of the community. They can play a major role in post disaster needs assessment of the affected community. They can also compile the needs and project the same to the care givers and also to the government for further action. They can also play a role in receiving of the relief material and also its distribution. The proper distribution will lead to more satisfaction in terms of aggrieved community.

In terms of providing them assistance in the relief camps for food, medical etc. They also play a major role in terms of monitoring the human trafficking of children especially girl child by constant vigil. Head count, engagement of children in various activities can be ways to do the same.

The concept of Mamta Grih that was adopted during Odisha Super Cyclone in 1999 was a successful attempt to rehabilitate orphaned children and aggrieved mothers. PRI can replicate the same in cases of orphaned children and mothers who have lost their children in order to rehabilitate them psycho-socially. They can also be counselors during post disaster phase.

Hence, there is an imperative need to involve PRIs in entire gamut of activities pertaining to the management of disasters and play a pro-active role at grassroots level.

References:

1. Building PRI Capacities for Disaster preparedness and Management – A Training Manual --- A GoI-UNDP publication

2. Role of Panchayati Raj in Disaster Management – Dr. Kamal Taori

Reconstruction and Rehabilitation: Holistic approach for sustainable livelihoods

Dr. Sushma Guleria

Natural disasters along with development projects lead to large scale impacts on life, property, infrastructure, and social and cultural relationships. Disasters and their adverse impacts set societies back by decades and leave them vulnerable to physical, social and economic hardships. Reconstruction and Rehabilitation programs can put forward a post disaster response strategy to rebuild lives and livelihoods in a manner that paves a way for long term sustainable development. Unsafe building practices that result in large scale damage are, in fact, a resultant of a fatal combination of lack of know-how about safe building practices, lack of technological options for safer building and a fatalistic attitude regarding the possibility of a disaster.

A Holistic Approach: The process of reconstruction involves partial or complete relocation and rebuilding the essential physical infrastructure and shelters so that vulnerability levels are reduced. Reconstruction therefore paves the way for long term rehabilitation. Rehabilitation primarily addresses the new or increased poverty levels that have emerged due to the disaster. Jobs and income generation measures in the construction sector provide an immediate and emergency boost to the local economy. This is followed by long term improvement in land and water management and economic opportunities that seek to upgrade local economies and reduce community vulnerability in a sustainable manner. For the process of sustainable development to take off in continuation with reconstruction, it is important that the end objective is not limited to only getting people back up-to the base line levels prior to the quake or cyclone. The intervention over a longer term should resultant improved quality of life and reduced levels of vulnerability. While families are tuned to picking up the pieces of their life, concepts of improved building practices, sanitation, sewerage, rainwater harvesting, improved land and water management etc. can be gradually introduced. Time and again, it has been seen that people will revert back to their earlier

unsustainable practices very soon if timely inputs are not made and systems that ensure long term continuity of material and skill availability are not set in place. A reconstruction program is the first step towards restoring and upgrading local habitat. It introduces improved systems of building, sets up basic building element supply, builds up the skills and management capacity of families, local agencies and village artisans in a restricted area and sets up local information and knowledge systems so as to enable "better building". To ensure reconstruction, efforts are able to target the social and economic sectors that need help the most, it must be seen that socio-cultural factors are included in all assessment methodologies, equal representation and participation of ethnic minority communities in planning and implementation is done along with use of cultural sensitive methodologies and materials, languages, approach, choice of material, ensuring that all agencies are sensitized on gender, culture and rights issues as per specific communities.

Sustainable Livelihood Approach: Sustainable livelihoods are achieved through access to a range of livelihood resources (natural, economic, human and social capitals) which are combined in the pursuit of different livelihood strategies (agricultural intensification or intensification, livelihood diversification and migration). The basis for Disaster Resistant Sustainable Livelihood lies in developing the crucial asset base of every community - this includes financial resources, livelihood infrastructure, social networks, natural resources (land, water, forests) and governance structures order to lift communities out of poverty and heightened disaster risk. At every stage, disaster proofing takes precedence. Principles for livelihood approaches can be as follows:

a. *People-centered*: focusing on poor people's priorities, understanding the differences between groups of people and working with them in a way that is appropriate to their current livelihood strategies, social environment and ability to adapt at a practical level.

b. *Responsive and participatory*: listening and responding to the livelihoods priorities identified by affected community themselves.

c. *Multi-level*: working at different levels to reduce poverty-ensuring that micro level reality informs development of policy and an effective enabling environment, and macro level structures support people to build on their own strengths.

d. *Conducted in partnership*: with the public and private sector.

e. *Sustainable*: balancing economic, institutional, social and environmental sustainability.

f. *Dynamic*: recognizing the dynamic nature of livelihood strategies and responding flexibly to people's changing situations.

g. *Building on strengths*: working to develop poor people's strengths - their skills, knowledge and resources, rather than focusing solely on their needs.

h. *Holistic*: understanding the complex reality of poor people's livelihoods rather than taking a purely technical or sectoral approach.

References:

1) Reconstruction and Rehabilitation: A response strategy for creation of sustainable livelihoods; Zeenat Niyazi; https://www.devalt.org/newsletter/may01/lead.htm

2) Supporting Livelihood in Disaster Recovery: Knowledge for Recovery Series Info Kit Livelihoods 2; International Recovery Platform:

https://www.recoveryplatform.org/assets/tools_guidelines/How%20to%20Support%20Livelihood%20Recovery.pdf

Rehabilitation and Recovery

Dr. A.D. Kaushik

Every year, disasters kill millions of people worldwide and lead to even greater economic losses. Recovery phase is a long-term process and it deals with the assessment of damage, rehabilitation, and restoration of pre-disaster environment. Recovery measures are of two types: short and long-term, include the return to minimum operating levels for critical life support systems; temporary housing; public information; health and safety education; reconstruction; advisory services and economic impact studies. Rehabilitation is a post- disaster stage and is a part of recovery process. The recovery of disasters is a very important stage in the disaster management cycle. However, rehabilitation aims to restore the positive elements of its pre-disaster environment for people and their communities. So, recovery from disaster offers opportunities for national development.



Pictures showing the comparison of Kedarnath Temple situation between 'after disaster' and 'after recovery'. (Source: India today and Rajya Sabha TV)

"Recovery is the process by which communities and the nation are assisted in returning to their pre-level of functioning following a disaster."

Rehabilitation, which is a transition period between immediate relief and substantial long-term development, ensures that pre-disaster status can be systematically restored. It involves the actions undertaken after a disaster to allow basic services to continue to operate, aid survivors' self-help efforts to repair or rebuild community infrastructure, stimulate economic activity and promote survivor's psychological and social well-being. This focuses on the restoration of more or less usual ways of life of the affected population. It may include the replacement of temporary structures formed for the emergency response or the upgrade of pre-disaster facilities and systems. In the wake of the disaster, it may take longer to go back to 'normalcy' or full recovery. Since a comprehensive recovery plan is based on personal, cultural, economic and political factors, three main rehabilitation options are to be deduced: physical, social and psychological.

Physical Rehabilitation: It is a very important facet of rehabilitation. This includes rebuilding of physical facilities such as houses, buildings, railways, highways, communications networks, water supply, power, etc. It also includes short-term and long- term strategy for the management of watersheds, irrigation of canals, social forestry, stabilization of crops and alternative farming, creation of jobs and environmental protection. The physical rehabilitation programs in the short and long-term will take into account: incentive requirements, farm implements, fertilizers, etc. Disaster resilient buildings etc. must be taken into account. It should include defining hazard-prone areas, evaluating buildings' vulnerability and threat, outlining disaster scenarios, practical recommendations for hazard- resistant construction, and implementing technical-legal arrangements.

Social Rehabilitation: It is an important part of disaster recovery, but in most post-disaster programs this element is often ignored considering a function of a community. As we all know, disasters will make some individuals, such as the disabled, orphans, single parents with young children, etc., much more vulnerable to the effects of disasters due to lack of adequate support. To survive the effects of the disaster, these vulnerable groups would need special social support. Building facilities such as community centres, day care centres, anganwadis, balwadis, old-age homes, etc. are the crucial part of social rehabilitation.

Psychological Rehabilitation: The emotional trauma of losing relatives and friends and the wounds of the disaster event's cumulative shock will take much longer to recover than the disaster management actors (planners, government agencies, Charities, international agencies, self-help groups, community) often assume. If the psycho-cultural setting of the impacted site is not established, a recovery plan will not work.

Social Capital in Rehabilitation and Recovery

Kumar Raka

Social resources are crucial to rehabilitation and recovery which have been undermined in overall disaster management gamut. Social Capital generally refers to the trust, networks and norms of a group, which influences its social, political and economic performance. Social capital and inter-personal networks are assistive to disaster management overcoming barriers to collective action and also in providing informal insurance and mutual aid. The focus is primarily on external factors to disaster affected communities and have paid little attention to the ways social relationships within the communities that inhibit the process of rehabilitation, recovery and rebuilding. Social capital and inter-personal relationships within a community greatly influences the process of recovery and rehabilitation. Research on social capital's role in post-disaster recovery has been building up gradually into a strong component of the broader field of disaster research.

Hirschman (1970) talks about 'exit' and 'voices'. Exit refers to the process of leaving one's own community and starting a new life over again in a new one. Alternatively, survivors of disaster may choose to return and stay in their communities even after extensive damage and hardship working collectively to rebuild, letting authorities know their preference. This is called 'voice'. Process of return is directly linked with individuals with more ties to their old communities through family, friends, a sense of belonging to place or jobs. Those who feel less connected to their communities or who feel that their inter-personal networks are not returning are more likely to select exit. After a disaster social capital assist overcoming of barriers to collective action. Post-disaster situations often have collective action problems that require maximum participation. For example, to deter looting, everyone in the community has to chip in and give up us some of their sleep or free time to walk on patrol. Areas with higher levels of trust and social capital can better overcome the barriers to collective action and mobilize their residents to participate. Post-disaster social capital also assists through the provision of mutual aid and informal insurance during recovery phase by providing information, fellowship and support during times of crisis. In their study of five affected districts in Sri Lanka, DeSilva and Yamao (2007) argued that poor social capital status makes communities more vulnerable and highly dependent on donors, while higher levels of social capital facilitate the entrepreneurial ventures among local farmers. People in need of resources after a disaster go to formal service providers, such as government welfare agencies, only as a last resort. Instead, through a separate investigation of how three rural communities in Manitoba, Canada handled the 1997 Red River Flood, researchers soon confirmed the role of stronger social capital in the recovery process (Buckland and Rahman 1999). In their focus on how the communities prepared for and then handled the disaster, they found that the social ties among residents profoundly influenced the trajectory of disaster response. They prefer to use their friends, family and network connections for support during crises. Data from the Gujarat and Kobe earthquakes in India and Japan, respectively, further demonstrated the importance of bonding, bridging, and linking social capital in furthering recovery and rehabilitation efforts (Nakagawa and Shaw 2004). While the two countries struck by earthquakes had very different cultures and levels of socio-economic development, at every stage of the disaster cycle (rescue, relief and rehabilitation), the

communities played the most important roles among other concerned stakeholders. In Bhuj, Gujarat, four case studies in different communities showed that trust in community leaders, networks, norms, and collective actions in the community were related to higher social capital of the group, thus enhancing smoother and faster decision-making. Comparative studies of Kobe and Bhuj show that higher the social capital, faster is the recovery rate, leading to a holistic rehabilitation process. In spite of the economic, cultural and social differences, the process of rehabilitation and its key elements for success are same in Kobe and Bhuj, viz. high social capital and strong leadership in community. (Nakagawa and Shaw 2004).

The recognition of the role of social capital in Sri Lankan recovery after 2004 Indian tsunami pushed international aid organizations, such as UN HABITAT to help affected communities to rebuild not only their homes but their social networks as well (see details on the intervention at **http://www.fukuoka.unhabitat.org/projects/sri_lanka/detail10_en. html**).

Social capital, inter-personal networks and leadership in the community are basic attributes that are universal in nature irrespective of the development stage of the country and focusing public policy on strengthening these informal social attributes in a planned manner which further strengthen the mechanism of rehabilitation and recovery in a post-disaster situation.

Manifest Success Story of Chief Minister's Relief Fund for Tsunami Orphan Home

Dr. Balu I

Introduction

We all remember that on December 26, 2004, the nation shocked when the aggressive waves of tsunami engulfed many places in the coastal areas of Tamil Nadu, Andhra Pradesh and Kerala. In Tsunami, Huts and pucca houses were flattened; fishing boats smashed, and buses, cars and big tankers were strewn around. An extremely high death toll occurred within a short span of time. Many lost their lives, majority of them were women and small children.

Tsunami impact on Children

Tamil Nadu was a severely affected by tsunami and the impact observed along coastal region of the state. Nagapattinam, Cuddalore and Kanyakumari Districts were noticed as severely affected districts in the state. Hundreds of children lost their homes, parents and family life. The children were also lost their school materials, friends and their teachers. Irrespective of the age, it was seen that the impact of tsunami among the children was incredible. Table 1 depicts the data of Tsunami Impact on children.

Sr. No.	Name of the District	Name of Children deceased	Name of Children orphaned	No. of Children Lost one parent
1.	Nagapattinam	1766	222	872
2.	Cuddalore	214	21	137
3	Kanyakumari	378	7	45
	Total	**2358**	**250**	**1054**

Source : http://www.thehindu.com/arts/magazine/children-of-the tsunami/article4220839.ece? homepage=true

Chief Minister's Relief Fund for promoting orphan home

International Agencies, Union Government and various state governments and Non Governmental organizations were worked for relief and rehabilitation of Tsunami affected people. Basic necessities like, food, water, dress and other household kits were also provided free of cost to the affected people.

Honourable Prime Minister, Narendra Modi who was a Chief Minister of Gujarat at the time of Tsunami, has provided Rs.10 Crore from Chief Minister's Relief Fund to Anbu Illam Trust, Nagapattinam District

promoted by Seva Bharathi Tamil Nadu said by Mr. Namasivayam, President, Anbu Illam Trust. Further he said that, 3,300 Sevabharathi volunteers involved into rescue, relief and rehabilitation activities. 15 relief centers were opened and more than 46,000 people were fed within the first week of disaster and 26860 family kits were distributed. About 1200 female volunteers visited 113 villages and they provided counseling to the children in psychological trauma. The volunteers found 37 orphaned children without any support. In this situation, Seva Bharathi planned to promote Orphan Home for children orphand by Tsunami and approached government agencies and mobilized fund from Gujarat Chief Minister's Relief Fund (GCMRF).

Finally with the support of Gujarat CMRF, Seva Bharathi has promoted Anbu Illam (Orphan Home) at Nagapattinam District of Tamil Nadu within three months of tsunami attack and the home was functioning from temporary shelter. GCMRF was used for construction of new building for orphan home and it was inaugurated on 15 September 2011. About 37 Children between the age group of 6-12 years old orphaned by Tsunami is benefitted.

Talents of Children Benefitted from CMRF

The orphan children accommodated at Anbu Illam and is cared by committed and dedicated volunteers. The children living at orphan home is trained with life skills and value education. The children living there is with multi skill personality. Children learned Sankrit, Hindi as an additional language. Each child has a talent like drawing, dancing, poet writing and yoga. The elder children were able to conduct personality development and leadership development training programmes for the younger children stayed with them. The entire home is self managed by the orphan children who stayed there. After 15 years of Tsunami attack now the children who orphaned by Tsunami were become Teachers, Nurses and Social Workers with the support of the Gujarat Chief Ministers Relief Fund and Anbu Illam Seva Bharathi Trust.

Giving Back to the Society

Ms. Santhini was seven years old at the time of Tsunami who lost her mother and brother in Tsunami waves. After that she was admitted in Anbu Illam brought up by orphan home. She has completed masters in commerce with the support of Seva Bharathi. After completion of masters she is serving as a volunteer in Seva Bharathi Trust. Ms. Santhini said that Seva Bharathi has given a life for me and with the support of this trust only I could be able to complete my masters degree even with the loss of my mother and brother. I thank Honorable Prime Minister Modi Ji for the given Chief Ministers Relief Fund to this orphan home. Today, I am happy with my life because of Modi Ji's support so I want give back to the society that I have dedicated my life as a volunteer in Seva Bharathi and serving for the betterment of poor people and Disaster affected community.

Besides that Ms. Santhini has coordinated the Cyclone Gaja relief work on Behalf of Seva Bharathi. She could able to mobilise about 21.60 lakh food packets, 12.50 lakh water bottles and distributed to the cyclone affected people. She had distributed relief kits to 1,75,250 houses with the support and network of Seva Bharathi.

Conclusion

It is a proud moment that a girl child who has orphaned by disaster and benefitted by Chief Ministers Relief Fund could able to coordinate the disaster relief works. There were many children who were benefitted from the CMRF has dedicated their life for the society and serving for the betterment of people who are in risk. This is an example that CM Relief fund indirectly serves the society beyond relief. Taking a lesson from this success story, the concept of giving back to the society should be promoted among the beneficiary of Chief Ministers Relief Fund.

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PROJECTS DETAILS

1. **Climate Adaptive Planning for Resilience and Sustainability Development in Multi-Hazard Environment (CAP-RES)**

   The Department of Science & Technology (DST), Govt. of India, under the National Knowledge Mission on Climate Change (NKMCC) has supported the programme Climate Adaptive Planning for Resilience and Sustainability Development in Multi-Hazard Environment (CAP-RES) to be implemented by CECR-ECDRM division of NIDM. The project CAP-RES focuses on five broad thematic areas which are significantly important for addressing the present and the future climate induced disaster risk.

2. **Health Adaptation and Resilience: Advancing Strategic Knowledge and Capacities (NIDM-WHO)**

   The ECDRM division of NIDM with support of World Health Organization (WHO) India is implementing the project "Health Adaptation and Resilience: Advancing Strategic Knowledge and Capacities" (HER-CAP). The main objectives of the project are as follows:

- Improving Climate change adaptation and disaster risk reduction of Healthcare systems.
- The integration of adaptation strategies by addressing knowledge, planning and capacity gaps in healthcare system resilience in India.

3. **National Agriculture Disaster Management Plan (NADMP)**

   Indian agriculture sector is greatly affected by natural and human induced hazards and disasters, like, Drought, Flood, and Cyclone etc. All these hazards have the potentials to create risks of disasters when exposed to vulnerable physical, economic, social and environmental conditions. ECDRM division of NIDM is preparing a National Agriculture Disaster Management Plan (NADMP) for Ministry of Agriculture & Farmers Welfare. The plan will be addressing the present and the future vulnerabilities and risk of agricultural systems in India towards disasters, and would provide a roadmap for managing the actual and potential events of disasters.

4. **Crisis Management Plan to deal with Contamination of Water Bodies**

   NIDM would cooperate with the Central Pollution Control Board (CPCB) in developing its Crisis Management Plan and allied capacity building endeavor to deal with contaminated water bodies, under a designated process framework. MoU was signed with CPCB-MoEFCC on 16th January 2020 for the same. The plan would cover all the phases of crisis management, preparedness, warning, detection & assessment, protection & mitigation, response and situation management, restoration and recovery, along with plan for capacity building and financial strategies.

5. **Child Centric Disaster Risk Reduction (CCDRR) Centre**

   The Child Centric Disaster Risk Reduction (CCDRR) Centre of National Institute of Disaster Management, Ministry of Home Affairs, Government of India, housed at NIDM South Campus, Vijayawada, Andhra Pradesh, is being jointly promoted by National Institute of Disaster Management (NIDM) and United Nations International Children's Emergency Fund (UNICEF) on last week of December 2018. This project is envisioned for three years with activities to be conducted in three phases. The centre is also working closely with Administrative Training Institutes (ATIs), State Disaster Management Authorities (SDMAs) of state governments and sectoral institutes in India. The major

components of CCDRR centre is training, research, advocacy and consultation on Child centric disaster risk reduction to address UNICEF four DRR goals as follows.

1. DRR for children and women is a national and local priority.

2. Different risks faced by girls, boys and women are identified and addressed.

3. Safer and more resilient conditions for girls, boys and women.

4. Strengthened humanitarian preparedness, response and recovery through capacity development.

6. India University and Institution Network (IUIN) for Disaster Risk Reduction

Building on the Hyogo Framework for Action, which featured 'knowledge, innovation and education to build a culture of safety and resilience as a key priority, the Sendai Framework for Disaster Risk Reduction 2015-2030 identifies "Understanding Disaster Risks" as its first Priority for Action. Enhancing awareness including through formal and non-formal education, research, civic and professional education and training at all levels have been identified as some critical means to achieve this. Partnering with Higher Education Institutions (HEI), universities and other science and technology communities have been envisioned for promoting innovative technology and research, facilitate capacity development, and contribute to decision-making for addressing local risks and the needs of the most vulnerable. The background of this Network has emerged from Hon'ble Prime Minister's 10 point Agenda which was outlined by him before the leaders of the Asian Countries during the Asian Ministerial Conference conducted by Government of India in the year 2016 in New Delhi. The Agenda 6 of Hon'ble PM 10 point agenda stresses on the need to "Develop a network of universities to work on disaster issues in India".

In this network, besides NIDM, several esteemed Universities and Institutions will come together to share knowledge, resources related to disaster risk management amongst themselves and to the larger group of stakeholders working on DRR. This Network will also have representations from University Grants Commission, All India Council for Technical Education and Association of Indian Universities.

7. India Disaster Resource Network

IDRN was initiated by Ministry of Home Affairs (MHA) under the GOI - UNDP Disaster Risk Management (DRM) Programme, in the year 2003.

Considering the national importance of IDRN, Ministry of Home Affairs entrusted National Institute of Disaster Management (NIDM) with the responsibility of monitoring and maintaining IDRN since 2008.

IDRN is a very useful tool as it provides necessary information about equipment, human resources and critical supplies, which are available at district level with the line departments and agencies.

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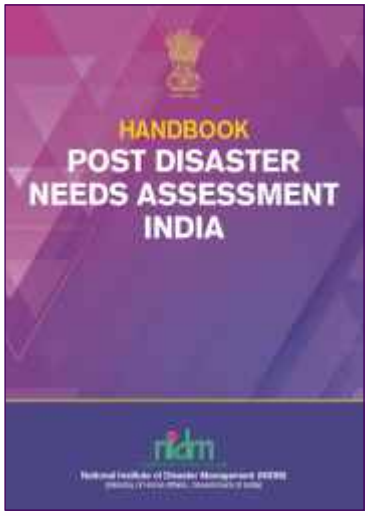
Proposed Training Programmes to be organize in month of January-March, 2020

Sr. No.	Name of Program	Venue	Date	Faculty
1	IRS: Intermediate for Southern region	MCHRDI, Hyderabad	06-10 January 2020	Shekher Chaturvedi
2.	Post Disaster Needs Assessment	ASDMA, Assam	06-10 January 2020	Santosh Kumar
3	Museum Management & DRR	NIDM, New Delhi	06-08 January 2020	Chandrani Bandyopadhyay
4	Coastal Disaster Risk Reduction & Resilience	Daman	06-10 January 2020	Surya Parkash
5	Main streaming Disaster Risk Reduction for Resilient Infrastructure	RIPA,Jaipur	06-10 January 2020	Amir Ali Khan
6	Consultative Workshop on CAPACITY BUILDING FOR ANIMAL inclusive DISASTER RISK REDUCTION (AiDRR)	The Ambassdor, New Delhi	09 January 2020	Anil K. Gupta, Ashish K. Panda
7	Training Programme on CCDRR	HCM-RIPA	07-11 January 2020	Kumar Raka
8	Climate Change and DRR w.r.t. Biodiversity and Livelihoods	Manipur Central University	13-17 January 2020	Anil K. Gupta, Ashish K. Panda
9	Training Programme on Urban Risk Mitigation: Making Cities Resilient	RCUES, Lucknow	14-17 January 2020	Chandrani Bandyopadhyay
10	Disaster and Health in Changing Climate: Prevention, Preparedness and Response	VMMC & Safdarjung Hospital & AOEH	20-24 January 2020	Anil K. Gupta, Ashish K. Panda
11	Early Warning and Communication	Lakshadweep	22-23 January 2020	Surya Parkash
12	Emergency Operation Centre & Emergency Communication	SDMA, UP	21-23 January 2020	Santosh Kumar, Shekher Chaturvedi
13	Training Programme on CCDRR	SIPARD, Agartala	27-31 January 2020	Balu I
14	Training Programme on Disaster Management	Vigyan Parsar	27-31 January 2020	Ajinder Walia
15	Integration of DRR and CCA RD	NIRD, Guwahati	27-31 January 2020	Sushma Guleria
16	Drought Resilience & Agriculture	Karnataka	Last Week of Januaury	Anil K. Gupta, Ashish K. Panda
17	Prime Minister's Agenda 10 on Disaster Risk Management: DM Plan of Sector/Ministries -National Training Workshop (NPDRR Preevent)	New Delhi	1st Week of Feb, 2020	Anil K. Gupta, Ashish K. Panda

Sr. No.	Name of Program	Venue	Date	Faculty
18	Urban Risk Mitigation-Making Cities Resilient	RCUES-OU	February	Chandrani Bandyopadhyay
19	National Conference on Disability-Inclusive DRR: Pathways for Inclusion and Action for Resilience	The Taj Ambassdor, New Delhi	5 February 2020	Chandrani Bandyopadhyay
20	Green Growth Strategies for Climate Resilience and DRR: Policies, Pathways and Tools	ISEC Bangalore	3-7 February 2020	Anil K. Gupta, Sushma Guleria
21	Training Programme on CCDRR	ATI, Mizoram	3-7 February 2020	Kumar Raka, Balu I
22	DRR in Forestry and Wildlife Sector	Gopabandhu, Academy, Bhubaneshwar	10-14 February 2020	Anil K. Gupta, Ashish K. Panda
23	Geo-Meteorological Harads Risk Management	DTU, New Delhi	10-14 February 2020	Surya Parkash
24	Hospital Disaster Management Plan	NIDM, New Delhi	10-14 February 2020	Amir Ali Khan
25	Training Programme on CCDRR	NIRD, Guwahati	10-14 February 2020	Balu I
26	Climate Change & DRR: Policy to Action	NIDM, New Delhi	10-14 February 2020	Santosh Kumar
27	IRS: Intermediate	ATI, Meghalaya	10-14 February 2020	Shekher Chaturvedi
28	Disaster Risk Financing Insurance and Risk Transfer	Insurance Institute of India, Mumbai	13 February 2020	Santosh Kumar
29	Island Specific DRR & New Challenges	Lakshadweep Administration	19-21 February 2020	Santosh Kumar
30	Disaster Resilient Urban Development	DDA New Delhi	3rd Week of Februray	Ashish K. Panda, Sushma Guleria
31	School Safety Plan and Safety Audit	Patna, Bihar	24-28 February 2020	Amir Ali Khan
32	Management of Crowd at Large Congregations	ATI, Jharkhand	24-28 February 2020	Shekher Chaturvedi
33	Training Programme on Skill Development for women of Disaster Affected Areas	NIESBUD, Gautam Budh Nagar	24-28 February 2020	Ajinder Walia
34	Regional H.E.L.P. (Health Emergencies in Large Populations) Course	IIHMR	24-06 March 2020	Anil K. Gupta, Ashish K. Panda
35	International Conference on Coastal Disaster Risk Reduction and Resilience	The Ashok Hotel, New Delhi	25 February 2020	Surya Parkash
36	Training Programme on CCDRR	DMI, Bhopal	25-29 February 2020	Kumar Raka

Sr. No.	Name of Program	Venue	Date	Faculty
37	Mainstreaming DRR into City-Level Planning & Development	SIUD, Maharashta	March	Chandrani Bandyopadhyay
38	International Conference on Cultural Heritage Risk Mitigation	Bodh Gaya	02-04 March 2020	Santosh Kumar, Chandrani Bandyopadhyay
39	Training Programme on CCDRR	Manonmaniya msundaranar University	02-06 March 2020	Balu I
40	Training Programme on Disaster Management	HRDC JNU (NIDM SCDR Collaboration)	02-07 March 2020	Sushma Guleria
41	University Network International Workshop	The Ashok Hotel, New Delhi	03 March 2020	Santosh Kumar, Shekher Chaturvedi
42	Animal Centric Disaster Risk Reduction	Veterinary University, Bikaner	09-13 March 2020	Anil K. Gupta, Ashish K. Panda
43	Lessons learnt from Cyclone 'FANI'	OSDMA, Odisha	13 March 2020	Santosh Kumar
44	Floods and Drought Management with special reference to climate change and development	NIH Roorkee	16-20 March 2020	Surya Parkash
45	Training Programme on CCDRR	APHRDI-Regional Centre	16-20 March 2020	Kumar Raka
46	Training Programme on CBDRM	MGSIPA, Chandigarh	16-20 March 2020	Ajinder Walia
47	DRR Mainstreaming into Agriculture and Allied Sectors (National Programme) NPDRR Pre-event	NIDM, New Delhi	18-20 March 2020	Anil K. Gupta, Sushma Guleria
48	Disaster Management for First Responders	Land & Revenue Department, Gangtok	18-20 March 2020	Shekher Chaturvedi
49	Island Specific DRR & New Challenges	Andaman & Nicobar Island Administration	18-20 March 2020	Santosh Kumar
50	Hydromet Disasters and stream events DRR	IIT, Indore	Last Week of March	Anil K. Gupta, Ashish K. Panda
51	Mainstreaming DRR for Resilient Infrastructure	Andhra University, Vishakhapatnam	23-27 March 2020	Amir Ali Khan
52	Training Programme on CCDRR	KILA	23-27 March 2020	Kumar Raka, Balu I
53	Psychosocial Care in Disaster Management	ATI, Chennai	23-27 March 2020	Ajinder Walia

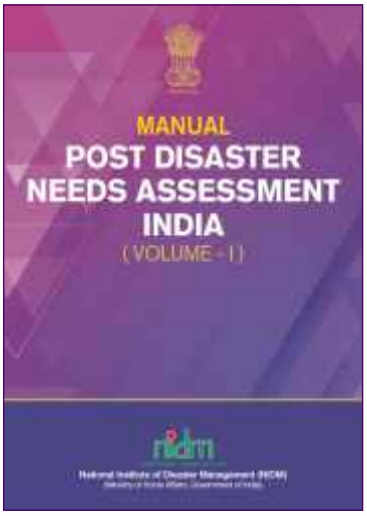
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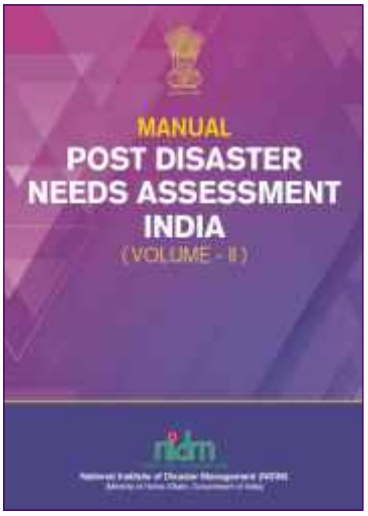
HANDBOOK PDNA



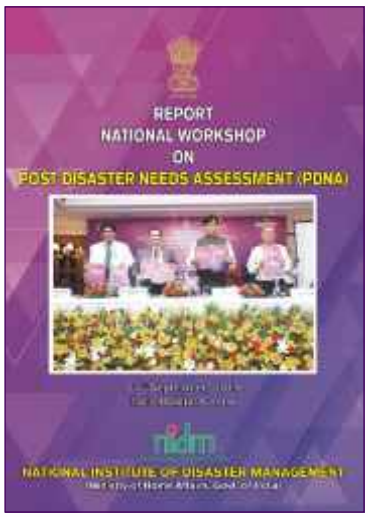
SOP PDNA



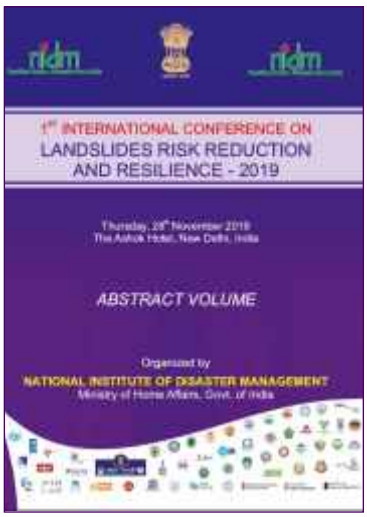
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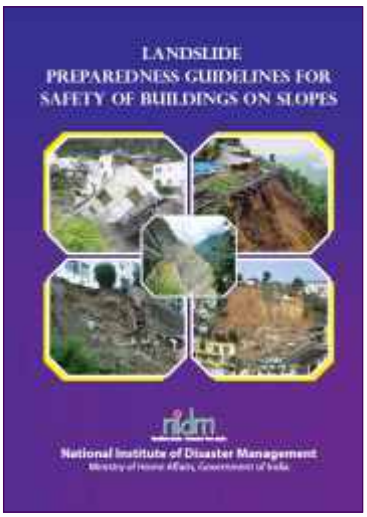
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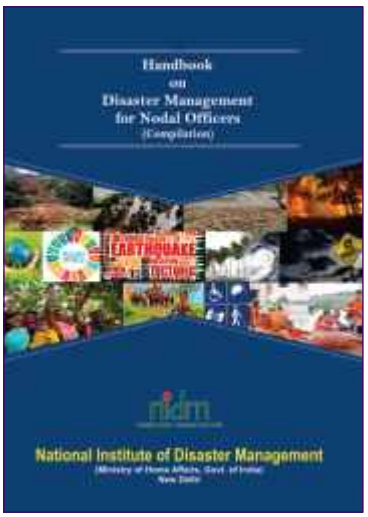
REPORT ON
POST DISASTER
NEEDS ASSESSMENT



ABSTRACT



LANDSLIDE GUIDELINES



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Resilient India - Disaster Free India

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

NIDM Newsletter - 6/2019 (October - December 2019)

Address for Communication

Executive Director,

National Institute of Disaster Management

(Ministry of Home Affairs, Govt. of India)

A wing, 4th floor, NDCC-II Building, Jai Singh Road, New Delhi - 110001

Phone: 011-23438286, Fax: 011-23438285

Email : ed.nidm@nic.in | Website: www.nidm.gov.in