

TIDINGS

NIDM Newsletter-16/2022
(July-September, 2022)



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

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About NIDM

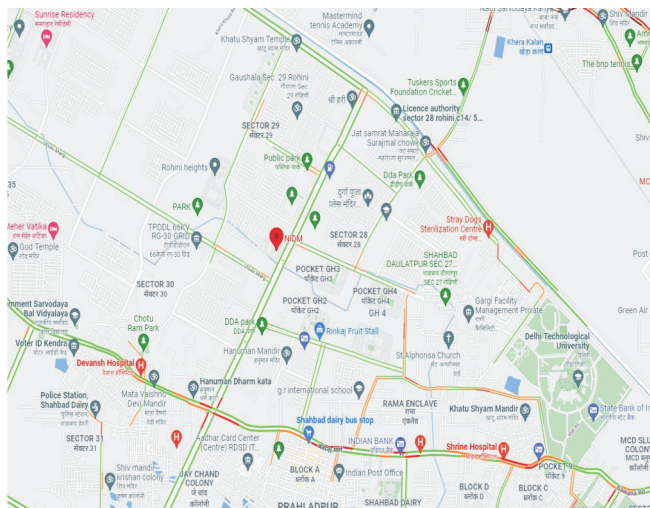
The National Institute of Disaster Management (NIDM) was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management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

We all wait for the monsoons to bring relief from the sweltering heat during this time of the year. However, with climate change, the monsoons, which are the backbone of Indian agriculture also unleash their fury across the country causing more damage than respite through floods. The flooding in Assam during May was followed by floods in Maharashtra, Himachal Pradesh, Gujarat, Telangana and Madhya Pradesh along with urban flooding in Bengaluru. This has resulted in loss of precious human lives, submerging of houses along with damage to crops and lands across the country.

We have made considerable progress in reducing fatalities due to cyclones with increased effectiveness of our early warning systems and timely evacuation in the coastal areas. However, we still have to work towards flood mitigation in our country. Improving our drainage systems, avoid building on water bodies or in flood plains, increasing the absorption of rain water through increase in green cover and building flood resilient houses in vulnerable areas are some of the ways in which we can contribute apart from the structural mitigation measures undertaken by the authorities.

I would take this opportunity to request all of you to avoid building houses and infrastructure in flood prone areas in future. You may incorporate resilience measures in the already existing infrastructure to lessen the impact of the hazard.

Let us take small steps to build flood resilience in the country.

Shri Rajendra Ratnool, IAS
Executive Director

Face to Face Training Programmes

(Organized from July- September 2022)

Technical Support to States: Addressing Child Centric Vulnerability, Enhancing Capacity & Promoting Resilience, 04-08 July, 2022

Key Takeaway/Recommendations

- Understanding of the pivotal concepts i.e., risk, capacity, mitigation, preparedness, and prevention.
- Recognition of emotional physical needs of the children by their parents.
- Mechanism of stress management and maintaining health of children in the time of emergency.
- Approach for addressing the needs and requirements of children.
- Child centric Disaster risk reduction training programme highlighted that the loss of lives for children has been higher than adults. Thus, adequate preparedness activities should be there in places delivering services to children.
- Various safe school operations to be ensured by the school authorities and other stakeholders.
- Sharing of information with care givers and other stake holders, providing updated information on disaster management, including prevention and control efforts at school for trust building is very essential.



ToT/ PDP on Urban Flooding and Mitigation, 11-15 July, 2022

Key Takeaway/Recommendations

- Structural and non-Structural Mitigation measures to be taken by ULBs for urban flooding.
- Need to develop proper drainage system in urban areas.
- Emphasizing the need for river basin management.
- During flooding, IRS can be used for better management.



Training of Trainers Programme on School Safety, 11-15 July, 2022

Key Takeaway/Recommendations

- Expert suggested giving a safe protected and enabling environment to all students without any discrimination, all stakeholders from state govt., parents, care providers and community need to come together for child's rights.
- School safety plan should be incorporated and taught to all educational staff members as per the NDMA guidelines. This should form a clear planning with defined role and responsibilities for

headmasters and teachers including safety measures for COVID-19.

- c) Fire safety should be at highest priority for planning school safety management. Simple mock drills like how to use fire extinguisher, evacuation procedure and how to end small fire through various methods should be taught at all level from students to school staffs.
- d) Rural areas awareness and training to artisans and demonstrative constructions can help them for replicating resilient structures in their area especially for earthquake prone areas.
- e) Retrofitting measures should be adopted for identified old and weak structures such as for columns and joints to provide additional safety to old school constructions from earthquake hazard.
- f) Make school safe from non-structural point of view as well.
- g) School teachers play an important role in guiding the parents as well to maintain their physical and mental health balance.
- h) Training of teachers is must for additional school safety during COVID-19 times. These should include humanitarian considerations, triage education, stress management, management of violence and planning in case of disaster.
- i) Maintaining a file on School Disaster Management and School Safety as part of School Management and Educational agenda.
- j) Emphasize on creation and formation of an active School Disaster Management and School Safety Advisory Committee.



Disaster Resilient Healthcare Infrastructure, 11-15 July, 2022

Key Takeaway/Recommendations

- a) Safe and resilient hospital should remain functional during any disaster to aid the sick; hence the equipment and infrastructure should be accordingly designed and planned.
- b) Hospital should be self-reliant to remain functional during a disaster with its backup electricity and medical gas supply.
- c) Design team should carry out a thorough site survey to determine the flood and earthquake or other relevant zones of the site. This will help in site selection, design, and construction.
- d) Earthquake resistant design should be implemented early in the design, particularly the columns, façade, and layout. The grade of concrete and column sections is paramount in hospital resilience to earthquakes.
- e) Design of HVAC system post pandemic must be modified to have filtration systems, increased air flows and more operable windows to reduce infections.
- f) Hospital corridors should be round instead of linear to allow multiple exits in the event of a fire or an unplanned event.



- g) Designers should take a modular approach to allow for flexibility and adaptability of the plan to allow for expansion.
- h) Post pandemic changes in the functionality of hospitals, the designers must provide electrical and medical gases connection lines in various forms for usage during a surge.
- i) Building management systems in hospitals should integrate pandemic resilience and warning systems. This can help issue warnings to patients, staff and government bodies during a disaster or infection outbreak.
- j) Daylight and natural ventilation are critical in pandemic resilience and wellbeing of patients. Hence, operable windows are encouraged in wards.

Integration of Disaster Risk Reduction (DRR) with Gram Panchayat Development Plan (GPDP) for Rural Development Sector PM Agenda 8 & 9, 18-20 July, 2022

Key Takeaway/Recommendations

- a) Parameters of disaster that need to be comprehended well before even de-coding disasters.
- b) Disaster Management Act, of 2005 saw a remarkable transition when there was a paradigm shift from relief-response to prevention-mitigation measures.
- c) Localizing the Disaster Management measures is the best way to have an inclusive and effective action in a disaster scenario.
- d) Communities as the first responders know and understand their struggles and pain more than anyone else hence the DRR framework must always be community-based, in a related situation.
- e) When a disaster strikes, damage and loss is more than expected it is, therefore, important to understand how PRIs and various schemes can help.
- f) India's diversity in terms of topography, ecology, and culture demands tailor-made solutions for specific spaces and communities. A village development management plan facilitates communities in the villages to tailor make solutions and to follow them during emergencies.



Children in Disasters and Emergency, 18-22 July, 2022

Key Takeaway/Recommendations

- a) Understand the basic child centric disaster risks and their preventive measures.
- b) Promoting preventive measures in all forms of natural disasters.
- c) Including all stakeholders private as well as government in formulating measures for mitigating child centric disasters.
- d) Development of school emergency backup plans for securing smooth safety of children.
- e) Promoting awareness regarding child psychology and remedial actions post disaster.



- f) Work with officials to guarantee schools are not used as shelters, treatment units etc.
- g) Consider cancelling any community events/meetings that usually take place on school premises based on risk.
- h) Provide an overview of CCDRR with an emphasis on Life Cycle Approaches and Risk Informed Programming.
- i) Development of modules to involve children in DRR activities.
- j) Inculcate knowledge among community regarding safety in school.

Disaster Risk Mitigation for Telecommunication Sector, 18-22 July, 2022

Key Takeaway/Recommendations

- a) Emergency Control rooms are mandated to be set up at National and State levels with requisite facilities as per the DoT SOP 2020.
- b) Redundancy is the key while disseminating disaster warning through various channels as some may be more effective than the rest.
- c) Telecom Service Providers (TSPs) should prepare their Disaster Management Plan and submit the same to DoT HQ Nodal officer i.e. DDG (DM).
- d) TSPs should come into agreement in form of MoU with private partners present in their area to help each other during the time of emergencies and disasters.
- e) Technological advancements and innovations create new possibilities for supporting disaster resiliency and risk reduction actions.
- f) Developments in the area of AI, IoT and fifth generation (5G) wireless, network, Big Data, and innovations in such areas as robotics and drone technology are transforming many fields, including disaster risk and management.
- g) Preventive and mitigation aspects will continue to be weak for disaster management in the country until the development practices are made better.
- h) Community involvement and participation is rhetoric which hampers the idea of building resilient society/ communities.
- i) Hazard resistant building bye laws notified, but standard of implementation is dismal everywhere.
- j) Meteorological Information from IMD can be used in several ways for Disaster Risk Reduction such as Hazard Monitoring and Assessment, Early warning and mitigation.



Engaging Youth & Adolescents in DRM & CCA, 25-29 July, 2022

Key Takeaway/Recommendations

- a) Understand basic information about corona virus disease (COVID-19), including its symptoms, complications, how it is transmitted and how to prevent transmission and A to Z activity to avoid

and reduce the spread of Covid-19 among the people.

- b) Provide awareness related to Disaster Management and measurement of Disaster Risk Management (DRM).
- c) Know the importance of the youth organisations in disaster risk management in the form of creating awareness and assisting the community acting as a change maker.
- d) Enumerate the role of youths can play in mitigating the climatic challenges or disasters and importance of youth movement for climate action.
- e) Explain the strategies to tackle the psychological related issues of youth and adolescents in the time of disaster.



Cyclone Risk Mitigation and Erosion Control by Bio-Engineering Measures, 25-29 July, 2022

Key Takeaway/Recommendations

- a) Program gave an insight into the field implementation of the erosion control measures by Bio-engineering technology.
- b) Limited awareness and understanding of how specific tools such as vetiver grass can be used more widely in transportation projects. Also, mitigate on-site and offsite pollution.
- c) Demand for local knowledge and integration of social, cultural, and environmental assets to manage risk and to address not only damage repair, but to build more just, sustainable, and resilient communities.
- d) Vetiver grass has been used for ecological engineering and environmental restoration. Vetiver grass can protect the soil from rain, runoff, and slippage. It also reduces the risk of wildfire.
- e) Knowledge about reinforcing non-engineered buildings should be shared with the community. Local engineers and craftsmen can participate in the construction and retrofitting of buildings in their locality and demonstrate disaster-resistant construction methods to the public.
- f) NIDM demonstrated the bio-engineering measurements techniques by Vetiver plantation to protect the erosion-affected areas.



Mainstreaming DRR & CCA into Rural Development Schemes for Resilient Infrastructure, 26-29 July, 2022

Key Takeaway/Recommendations

- a) Need to take structural and non-structural measures for preparedness.
- b) DRR should be integrated into all developmental activities to create a more resilient India.
- c) Responsible for planning, coordination and implementation of disaster management and taking

such measures for disaster management as provided in the guidelines.

- d) Awareness has developed among the local people regarding the bio-engineering measures with vetiver grass plantation.
- e) Ensured that risk reduction is a national and a local priority with a strong institutional basis for implementation.
- f) Build understanding and awareness- innovation and education to build a culture of safety and resilience at all levels.
- g) Strengthen disaster preparedness for effective response at all levels.



Foundation Course on Public Health Emergency and Disaster Management, 28-30 July, 2022

Key Takeaway/Recommendations

- a) Strong decisions for resilience of health care system.
- b) Strengthen the coordination, communication, and collaboration among line departments.
- c) Alignment of Incident Management System (IMS) with Incident Response System (IRS).
- d) Community is the first responder. Need to enhance the involvement and partnership of communities.
- e) Imparting the knowledge to save own life during any emergency, crisis or disaster.
- f) Health component in District Disaster Management Plan.
- g) Cascade this training using the module as a resource document.



Technical Support to States: Addressing Child Centric Vulnerability, Enhancing Capacity & Promoting Resilience, 01-05 Aug, 2022

Key Takeaway/Recommendations

- a) Loss of lives for children has been higher than adults. Thus, adequate preparedness activities should be there in places delivering services to children.
- b) Various safe school operations to be ensured by the school authorities and other stakeholders.
- c) Understand the type of disaster and resulting public health emergencies and affecting children especially.
- d) Understand the emotional physical needs of the children by their parents.
- e) Mechanism of stress management and maintaining better mental health of children in the time of emergency should be propagated.

- f) Life cycle approach awareness for addressing the needs and requirements of children.
- g) Sharing of information with care givers and other stake holders, providing updated information on disaster management, including prevention and control efforts at school for trust building is very less.



Faculty Development Training Programme on Disaster Risk Reduction, 01-05, Aug, 2022

Key Takeaway/Recommendations

- a) Every institution should have key personnel trained in disaster risk reduction for understanding, analysing and predicting the risks associated with hazards.
- b) Disaster risk reduction is an interdisciplinary and dynamic concept which has to be understood in relation to geography, history, psychology, sociology etc.
- c) Disaster risk reduction related governance should be participatory, inclusive, agile and sensitive to the vulnerable and victims.
- d) Institutions should prepare an action plan for disaster risk reduction to reduce the risk of injuries, casualties, and loss of wealth when a hazard or disaster occurs.
- e) School and Hospital safety plan should be incorporated and taught to all institutional staff members as per the NDMA guidelines.
- f) University campuses should have regular disaster related audits to identify hazards.
- g) Construction practices and building codes as per the standards set by government should be adhered for risk preparedness.
- h) Encouragement of fire-resisting building materials and fire extinguishers with water pumps within the building, awareness on evacuation and exit routes to the people.
- i) Disaster management authorities should collaborate with the academicians to gain greater insight and reap benefits of research.



Regional Training Programme on Environment Sector & Disaster Management, 02-04 Aug, 2022

Key Takeaway/Recommendations

- a) Disaster effects, whether they are man-made or natural, affect both the environment and humans. Disasters can be made worse by environmental factors, and vice versa; disasters can also have an impact on the environment.

- b) Effective management of our natural resources also lowers the risks that natural and man-made hazards.
- c) Necessity of sound resource management as a strategy to avert disasters or decrease their effects on people, their homes, and livelihoods highlighted and strengthened the relevance of environmental issues in disaster management a crucial objective.



Children in Disasters and Emergency, 08-12 Aug, 2022

Key Takeaway/Recommendations

- a) Enforce regular hand washing with safe water and soap, alcohol rub/hand sanitizer or chlorine solution and, at a minimum, daily disinfection and cleaning of school surfaces.
- b) Ensure water, sanitation and waste management facilities and follow environmental cleaning and decontamination procedures.
- c) Understand basic information about corona virus disease (COVID-19), including its symptoms, complications, how it is transmitted and how to prevent transmission.
- d) Stay informed about COVID-19 through reputable sources such as UNICEF, WHO and national health ministry advisories.
- e) Aware of fake information/myths that may circulate by word- of-mouth or online.
- f) Update or develop school emergency and contingency plans.
- g) Work with officials to guarantee schools are not used as shelters, treatment units etc.
- h) Prepare and maintain hand washing stations with soap and water, and if possible, place alcohol-based hand rub (hand sanitizers) in each classroom, at entrances and exits.
- i) School safety, including safety of school infrastructure is important from point of view of life and safety of children.



TOT on Psychosocial Care in Disaster Management, 16-18 Aug, 2022

Key Takeaway/Recommendations

- a) Acute shortage of skilled service providers both in psycho-social support and mental health care services. Even professionals lack adequate training for PSSMHS during disasters.
- b) Need to integrate and co-ordinate the various kinds of PSSMHS provided by different agencies. It will avoid duplication of services and ensure appropriate delivery of services.
- c) Lack of inventory on the availability of skilled and trained personnel at district or state levels.
- d) Psychosocial care to promote emotional healing of the disaster-affected population with the rebuilding of other amenities of life is most important from the initial phase. Incorporating the learning from the different disaster interventions and ensuring the dissemination of information is the need of the hour.

- e) Mental Health Professionals from the mental health institutions and psychiatric departments in hospitals are engaged in providing specialized mental health services in the state. An evolving trend has been seen wherein besides psychiatrists, other mental health professionals like clinical psychologists and psychologists and psychiatric social workers and social workers from other disciplines may also been involved in providing services.
- f) State governments may deploy a few mental health professionals immediately after the disasters. These professionals have taken the initiative to provide mental health services and psychosocial care in different disasters.
- g) Government Institutions like NIMHANS, Institute of Human behaviour and Allied Sciences (IHBAS) and Meghalaya Institute of Mental Health and Neurological Sciences (MIMHANS) etc., have been actively involved in providing PSSMHS (Psycho-Social Support and Mental Health Services in Disasters).
- h) Encourage involvement of International agencies, especially UN agencies like Office for Coordination of Humanitarian Action (OCHA), World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations High Commissioner for Refugees (UNHCR) and United Nations Population Fund (UNFPA) in PSSMHS activities during disasters.



Comprehensive Disaster Management, 22-26 Aug, 2022

Key Takeaway/Recommendations

- a) Jawahar Navodaya Vidyalaya (JNV) are a closed entity as they are residential schools with staff, family and students residing within the campus. This creates the need of disaster management and risk reduction awareness.
- b) Every JNV must constitute disaster management teams such as Evacuation, First Aid, Psycho-social counselling, shelter, food, etc. and get them trained.
- c) Regular fire safety drill is must in every such school.
- d) Regular meetings with district officials and intra school will eliminate coordination issues.
- e) Need to mainstream disaster risk reduction in entire JNV family. Hence there must be a session on disaster risk reduction in every meeting involving JNV commissioners, Dy commissioners, Principals and other such officials being conducted by Navodaya Vidyalaya Samiti.



ToT Programme on Engaging Youth & Adolescents in DRM & CCA, 22-26 Aug, 2022

Key Takeaway/Recommendations

- a) Understand basic information about corona virus disease including its symptoms, complications,

how it is transmitted and how to prevent transmission and A to Z activity to avoid and reduce the spread of Covid-19 among the people.

- b) Know the importance of the Youth organizations in disaster risk management in the form of creating awareness and assisting the community acting as a change maker.
- c) Recognize the link between volunteerism and mental wellbeing. The role of volunteerism in enhancement of their skills.
- d) Enumerate the role of youths can play in mitigating the climatic challenges or disasters and importance of youth movement for climate action.
- e) Explain the strategies to tackle the psychological related issues of youth and adolescents in the time of disaster.



Faculty Development Training Programme on Disaster Management, 22-26 Aug, 2022

Key Takeaway/Recommendations

- a) Innovative insurance mechanisms for low-income groups: risk transfer mechanisms for those that cannot access individual insurance for their assets.
- b) Having a Disaster Management plan comes with benefits which will minimize recovery time & possible delays, prevent potential legal liability, Improve security and avoid potentially damaging last-second decision-making during a disaster.
- c) Know the basics of coordination mechanism and its importance during emergencies.
- d) Roles of university in disaster management include disaster education, relief and support to the affected community, and to grasp the situation from a research perspective.
- e) Introducing Disaster Management in the curriculum of schools, colleges and universities will make the educated youth address these crises with their knowledge, self-confidence, and survival skills in lesser times.
- f) Human capacity development (public education and literacy, empowerment of local governments and community leaders, and media briefings) by adequately addressing the local knowledge and wisdom is a necessity for future policy frameworks.
- g) Effective disaster preparation, warning, response, and recovery are best made when local governments and organizations work well together and coordinate with organizations on the national level.
- h) Implementation of International Health Regulations (IHR) includes involvement of the entire health system and the broadest possible intersectoral and inter-institutional collaboration by



developing policies and plans, and executing activities that reduce the public health impact of emergencies and disasters.

- i) Emergency plans drawn up behind closed doors are not enough. A much more intricate and continuing process of community asset and wants assessment, stakeholder involvement, and public consciousness and commitment is vital.
- j) Promoting ecological industry, agriculture, fishing and livestock farming, food sustainability, responsible consumption and the 3Rs rule (reduce, reuse, recycle) is needed for Mitigating and Adapting to Climate Change.

Post Flood Reconstruction Measures using Nature Based Solutions, 23-27 Aug, 2022

Key Takeaway/Recommendations

- a) Training cum field implementation program is the 2nd in the series of taking up with university students, teachers and community to showcase a very critical landslides area along the Guwahati-Shillong NH, near toll gate, in which Vetiver grass are planted.
- b) Bioengineering can be considered as one of the most suitable geo- hydrological risk mitigation measures to be employed in areas of high environmental and cultural value.
- c) Adoption of bioengineering methods can help avoid landslides since they increase slope stability and preserve natural ecosystem.
- d) Nature Based Solutions are mostly appropriate for usage in developing nations because to their affordability and environmental friendliness.
- e) Vetiver grass has multiple applications in ecological engineering and environmental restoration, such as slope stabilization, erosion control, rainfall runoff and moisture capturing.



Disaster Management with focus on Water Resource Management during and after disasters, 29-31 Aug, 2022

Key Takeaway/Recommendations

- a) Delhi is on the verge of collapse in terms of water-resource demand and supply and proper actions to address the challenges should be one of the most important developmental parameters.
- b) Certain tools/assessments used in the Disaster Management realm may require proper understanding of basic concepts and methodology. Training and capacity building activities for as micro as block level must be made mandatory.
- c) Understanding basic concepts related to resilient infrastructure may help even a layman to ask questions to a mason regarding strong built, disaster resilient and safe homes.
- d) Disaster Risk Reduction (DRR) and Disaster Risk Management (DRM) do not fall under the same



box. While DRR aspects may be used in a pre-disaster scenario, DRM is used in a post-disaster.

- e) Hazard-Risk-Vulnerability and Capacity Assessment in any given disaster scenario, help rapidly to chalk out the most useful and accessible solutions as well as facilitates the use of DRR aspects.
- f) Delhi's diversity in terms of topography, ecology and culture demands tailor made solutions for in terms of water supply and quality for diverse needs.

Building Risk Assessment and Disaster Resilient Construction Technologies: Focus on Earthquakes and Fires, 29 Aug-02 Sept, 2022

Key Takeaway/Recommendations

- a) Awareness about building by-laws, National Building codes, earthquakes, and the importance of earthquake-resilient structures are very important, especially in highly prone areas like Delhi, northeast and north India.
- b) Perfect blend of Modern and Traditional solutions can help us to achieve more resilient and sustainable infrastructure.
- c) Building health infrastructure should be a top priority for any organization. It should fulfil the norms / codes of fire and earthquake standards.
- d) Role of structural and civil engineers in the field of building audit, fire safety measures, retrofitting etc. is very crucial.
- e) Follow an integrated approach as part of fire and life safety where all the stakeholders including occupant/ citizens/ community has equal role to play.
- f) Understanding the performance criteria for fire-resistance-rated and/or smoke resistant assemblies is important since it gives the code user a better appreciation of the level of protection.
- g) Post installed rebars form an integral part of the original structural system and the load transfer mechanism.
- h) Importance of long-term engagement with community-sensitive policymakers, services and organizations, if the initiatives are to promote the desired positive outcomes.
- i) Qualified independent inspectors must perform special inspections of key elements to ensure that the construction is performed in accordance with the design intent.



School Disaster Management Plan, 12-15 Sept, 2022

Key Takeaway/Recommendations

- a) Schools are soft targets of any external exigencies, hence needed special attention in this regard.
- b) Safety of stakeholders of schools should be the utmost priority of administration.
- c) School must take responsibility of safety of all its stakeholders which include staff, school



administration, teachers and students

- d) Critical part with respect to fire of almost all schools in J&K are canteen, mid-day meal centre and Home science lab. It must be ensured that fire extinguishers in sufficient numbers must be available at these places and people incharge of such places must be duly trained in use of such extinguishers.
- e) Special attention must be taken during the parent's teachers meeting, with the entry allowance of only genuine stakeholders.
- f) School must ensure regular mock drills for evacuation through fire and emergency services.
- g) School must constitute different committees such as first aid, evacuation, assembly, liaison, etc. and get them trained.
- h) School must identify critical points within their schools and ensure safety measures for them.
- i) School must prepare their School DM Plan and get it approved by DDMA and share a copy to all stakeholders.
- j) School must have a provision of regular interaction with district/ sub-district administration to share ideas of school safety and to know procedure of obtaining their help during emergencies and new schemes/ innovations in the relevant field.

IRS: Basic & Intermediate, 19-23 Sept, 2022

Key Takeaway/Recommendations

- a) Well-designed module based course with a combination of theory and exercises to not only gain knowledge but also to perform overcome challenges associated.
- b) Notions of the participants about disasters, disaster response, capacity and coordination of industries and civil authorities were clarified during the course.
- c) Course module may be translated into Hindi for better understanding of participants in Hindi belt.
- d) IRS system strengthens coordination, establishes clear roles and responsibilities and safeguards responders and hence leads to less expenditure by avoiding duplication of efforts.
- e) Resources must be identified according to their capabilities so that right kind of resources reach the site for effective response.



ToT Programme on District Disaster Management Plans, 20-23 Sept, 2022

Key Takeaway/Recommendations

- a) Disaster management Plans (DMP) are important on every level because they establishes effective tools, methods and techniques for how the emergency procedures would be directed.
- b) Assessing the Hazard, Risk and Vulnerabilities is crucial before planning any DMP. In the process of



planning, risk assessments, risk-based planning, and resilience are tightly linked.

- c) Early Warning Systems and Geospatial Tools can play a major role for creation of vulnerability profile for any region.
- d) Perfect blend of Modern and Traditional solutions can help us to achieve more resilient and sustainable infrastructure.
- e) Community should be prepare for, respond to, and then recover from a disastrous occurrence with effective planning.
- f) Integrating key players and forming collaborative relationships during the development of DMPs, can actively prevents or mitigates problems before they happen.

ToT Programme on Engaging Youth & Adolescents in DRM & CCA, 26-30 Sept, 2022

Key Takeaway/Recommendations

- a) Enriching knowledge and perspectives of the participants from schools, colleges, NGOs and other volunteers regarding disasters issues with special emphasis on engaging youth in DRR and CCA.
- b) Participants specifically learnt about basic and introductory concepts in context to Disaster Risk management and Hazard and Risk profile of India and J&K.
- c) Impact of disasters on young populations and the ways, means and importance of engaging youth in DRR.
- d) Youth involvement in climate change adaptations and its impact on ground.
- e) Sustainable strategies for mainstreaming DRR and CCA among youth.
- f) Lessons on public health, mental health and strategies to deal with related issues during and after disasters and emergencies.
- g) Learning on correlations between gender and complex emergencies and why it is important to be gender sensitive during and after disasters.
- h) Role and involvement of multi-stakeholders including Govt agencies, NGOs and other organizations in DRR and CCA.



ToT/PDP on Post Disaster Needs Assessment for Long Term Recovery, 26-30 Sept, 2022

Key Takeaway/Recommendations

- a) Understanding the methodology for a sector-wise assessment covering productive sectors (agriculture, livestock); social sectors (housing, health, food security and nutrition, education and housing), infrastructure (roads and bridges, WASH) and cross-cutting sectors (gender and social inclusion and DRR).

- b) Estimation of recovery needs has to be done meticulously.
- c) Assist government to understand the full extent of a disaster's effect and impact, and the needs of the affected population.
- d) PDNA ensures that the housing and settlement response is appropriate to the needs of affected communities.
- e) Rapid and comprehensive multi-sectoral assessment of an event, provides the required overarching approach and orientation to initiate the recovery planning process.
- f) Building humanitarian assessments conducted in the early aftermath of disasters.
- g) Objective of the sector assessment is to assist the government at all levels in understanding the effects and impact of the event on the housing sector.



Multi-Hazard Risk Management Solutions for Cities, Industries and Business, 26-30 Sept, 2022

Key Takeaway/Recommendations

- a) Understanding of the matrix of activities to be taken up by Urban local bodies as the significance of the urban disaster management along with industries and businesses.
- b) Understanding the evaluation of the economic disaster and its impact on the supply chains, industries, and businesses due to the COVID-19 pandemic is needed.
- c) Traffic management and Disaster management rules and regulations that must be followed, should be known by all the citizens to assist the local government in making the best preparedness, response, and recovery in different phases of disaster.
- d) Understanding for Disaster risk and resilience scorecard development for incorporating all the multi-hazards risk for cities, industries, and business should be disseminated for all.
- e) Significance of big data collection, assessment, and its utilization for generation of the early warning systems and improving the efficiency of disaster management practices.
- f) Field visit for Ujjain smart city provides onsite experience regarding city administration performs Multi-Hazard Risks Management for cities, industries, and businesses.
- g) Lifesaving exercise and equipment demonstration by the state disaster response force, the government of Madhya Pradesh assists the participants to get the experience for responding any person during disaster or extreme conditions.
- h) Significance of radiation, biohazard, and clean energy gives new insights to the participants for assessing the medical facilities, buildings, and associated accessories in order to avoid medical disaster and pandemic in our surroundings.



ToT on Integration of DRR into Gram Panchayat Development Plan (GPDP) PM Agenda 8 & 9, 26-30 Sept, 2022

Key Takeaway/Recommendations

- a) Methods and Approaches for including CC & DRR into Development Planning were discussed in detail and it was learned that it should be kept in mind by each and every departments while planning for achieving their goals was understood by the participants.
- b) Legal Policy Framework for Disaster Management and Climate change related issues were well be understood by the participants.
- c) Inclusion of DRR into Development Schemes and Projects was well discussed while field visit was practically assessed and understood by the participants.
- d) Lessons was learned in view of existing Schemes/Projects on Disaster Management & Climate Change in present scenario.
- e) Training was conducted to get the participant know about the National Action Plan for Climate Change in reference of our country.
- f) Lesson learnt by the participants in the field of Reducing Risk through Local Adaptation Practices with proper and practical examples.
- g) Participants were able to understand the importance of climate change adaption by providing training to various stakeholders and Sendai framework and its agenda.
- h) Restoration of wetlands for flood mitigation and local development was well understood by the participants.



Post Disaster Stress Management for First Responders of Disasters, 27-29 Sept, 2022

Key Takeaway/Recommendations

- a) Educate the local people about the vulnerability, exposure and disaster risk.
- b) Train the first responders through awareness programme.
- c) Potential strategies include improving workflow management, organizing services focused on reducing workload should be highlighted.
- d) Focus on your health and the health of others in your family should be stressed upon.
- e) Handling the stress through self or consult the specialist to overcome the stress.
- f) Identify the positive and negative qualities that could change. Manage work life balance.
- g) Identify the mental disorder at the early recognition and finding the optimal referral.



School Safety Plan and Auditing, 27-29 Sept, 2022

Key Takeaway/Recommendations

- a) Safe protected and enabling environment to all students without any discrimination, all stakeholders from state govt., parents, care providers and community need to come together for child's rights.
- b) School safety plan should be incorporated and taught to all educational staff members as per the NDMA guidelines.
- c) Fire safety should be at highest priority for planning school safety management. Simple mock drills like how to use fire extinguisher, evacuation procedure and how to end small fire through various methods should be taught at all level from students to school staffs.
- d) Rural areas awareness and training to artisans and demonstrative constructions can help them for replicating resilient structures in their area especially for earthquake prone areas.
- e) Retrofitting measures should be adopted for identified old and weak structures such as for columns and joints to provide additional safety to old school constructions from earthquake hazard.
- f) Training of teachers is must for additional school safety during COVID-19 times. These should include humanitarian considerations, triage education, stress management, management of violence and planning in case of disaster.
- g) Food safety is an emerging alarm for residential school in Telangana with numerous cases of food poisoning reported in government run schools.
- h) Important to consider the social contexts in which risks occur therefore, do not necessarily share the same perceptions of risk and their underlying causes.



Disaster Management with emphasis on COVID-19 Protection, 29-30 Sept, 2022

Key Takeaway/Recommendations

- a) Inclusion of more practical/fieldwork aspects such as exposure visits to disaster sites in order to give the participants first-hand experience of identifying problems and providing solutions to them.
- b) Need to focus on micro containment and monitoring and responding to the progression of pandemic leveraging on real time data and community testing.
- c) Physical activity and relaxation techniques can be provided to remain calm and continue to protect your health during this time.
- d) Self-quarantine can also cause additional stress and challenge the mental health of citizens.
- e) Promote the use of Earth observation technology assess the risks from multi-hazards.
- f) Promote research on monitoring & management of risks by employing all-hazard approach.

- g) Develop multi-hazard early warning systems by involving multi-stakeholders.
- h) Longer duration training programmes that should include participants across India to discuss best practices.
- i) Focus on providing an overview of disaster management. It entailed basic knowledge of key terminologies, its governance, and the institutional structure for management in India.
- j) Impact assessment of surveys of dams, reservoir, and river catchment etc. should be undertaken to map the areas.

Conference/Workshop/Seminar (Organized from July- September 2022)

Disaster Management of Museums and Heritage Buildings for Rashtrapati Bhavan, 07-08 July 2022

Key Takeaway/Recommendations

The programme started with the welcome address of Prof. Santosh Kumar, Head GIDRR Division. In his address, he emphasised the preservation and conservation of cultural heritage in current times. Cultural heritage has the potential to promote access to and enjoyment of cultural diversity. Furthermore, he discussed the Sendai Framework, whose goals are on lowering carbon and other greenhouse gas emissions, improving governance for disaster risk reduction, which includes policies, plans, guidelines, etc., and managing disaster risk at the sectoral level. The primary objective of this workshop was to integrate the specific needs of cultural heritage within the framework of disaster risk reduction within the historic site of Rashtrapati Bhawan. The participants were then given a brief documentary that represented life in Odisha following the arrival of Cyclone Fani in 2019. Due to the uprooting of millions of trees, the storm substantially reduced the amount of vegetation. While the evacuation was successful, a significant amount of infrastructure was lost.



In the valedictory session, Shri Ajay Bhadoo, IAS, Joint Secretary to the President of India, Rashtrapati Bhavan, concluded that the workshop was an eye opener for creating awareness in Rashtrapati Bhavan regarding disaster preparedness.

Workshop on Disaster Management, 21 July 2022

NIDM proposed a collaborative one day workshop on Disaster Management held at Rafi Ahmed Kidwai National Post Academy (RAKNPA), Ghaziabad. The program was chaired by Dr. Surya Parkash, Professor & Head, GMRD, NIDM and Sh. Ambesh Upmanyu, Additional Director, RAKNPA. It was organised for the officers of the postal service to share and exchange knowledge/ information on Disaster Risk Reduction and Resilience to ensure the capacity enhancement of the community. The participants also consulted collaboration and strengthening mechanisms for effective implementation of disaster management related activities at national, state as well as local level.

Workshop on Wetlands as Nature-based Solutions to Reduce Disaster Risks, 12-13 Sept 2022

National Institute of Disaster Management in collaboration with Wetlands International South Asia and the United Nations Convention to Combat Desertification has organized a two day consultation workshop to build an understanding of NbS for integration within disaster management plans. The convenors of the workshop were Prof. Anil K Gupta, Head, ECDRM Division, NIDM and Dr Ritesh Kumar, Director, WI South Asia. The aim of the workshop was to mainstream NbS Calls for an urgent need to educate disaster professionals on this approach's concepts and principles and recognize both central and state-level policies, plans and schemes that can facilitate convergence.



Expert Dialogue on Climate Risk Assessment Approaches for India, 14 Sept 2022

National Institute of Disaster Management organized a workshop to enable the exchange of experience in conducting Climate Risk Assessments (CRA) in India that caters to the information needs of public and private stakeholders. The workshop highlighted similarities and differences, gaps and limitations and recommended a means for strengthening the application of CRA methods and tools. CEOs of esteemed organizations, Professors of IITs, Sector experts from UN organizations and other bilaterals joined the programme.



Online Training Programs (Organized from July- September 2022)

S No	Name of the program	Date
1	Capacity Building on Ecosystem Restoration and Disaster Management	05-07 July 2022
2	Engaging Youth and Adolescents in DRM & CCA	14-16 July 2022
3	Impact of Climate Change on Natural Hazards	16-20 July 2022
4	Public Participation for Disaster Risk Management	18-20 July 2022
5	Building a Sustainable Resilient Disaster Waste Management System	19-21 July 2022
6	Engaging Youth and Adolescents in Disaster Risk Management & Climate Change Adaptation	20-22 July 2022
7	Resilience Measures of Buildings with Special reference to floods and cyclones	20-22 July 2022
8	Observing Geohazards from Space	25-27 July 2022
9	Recurring Heat Waves: Risk, Impact and the way forward for Resilience	26-28 July 2022
10	Implementing Rainwater Conservation: Practitioners' Perspective on Rainwater Harvesting and Efficient local water governance and resilience	02-04 Aug 2022
11	Engaging Youth and Adolescents in DRM & CCA	03-05 Aug 2022
12	Multi-stakeholder - Multisector Coordination for Response and Resilience: Assam	22-24 Aug 2022
13	ToT Programme for the faculties on Disaster Risk Management and Climate Change	22-24 Aug 2022
14	Geospatial Technologies for Disaster Management	23-25 Aug 2022
15	Community Based Disaster Risk Reduction for Biomedical Waste Management	23-25 Aug 2022
16	Communication on Infrastructure Resilience in Rural and Tribal Communities in India	23-25 Aug 2022
17	Child Centric Disaster Risk Reduction	24-26 Aug 2022
18	Disaster Risk Assessment and Management	29-31 Aug 2022
19	GIZ on DM Concept & Urban Resilience	13-15 Sept 2022
20	Women as Agents of Change for Disaster Risk Reduction and Resilience Building	14-16 Sept 2022
21	Multi Sector Coordination for Response and Resilience Building for Tamil Nadu State	14-16 Sept 2022
22	Basics of Disaster Management	19-21 Sept 2022
23	Multi Sector Coordination for Response and Resilience Building	20-22 Sept 2022
24	Disaster Risk Reduction	21-23 Sept 2022
25	Wetlands in Cities- Spatial Planning for Disaster Risk Reduction	27-29 Sept 2022

Webinars

(Organized from July- September 2022)

S No	Name of the program	Date
1	Lightweight Construction Technologies	05 July 2022
2	Building the Public Health Emergency and Disaster Management Workforce	06 July 2022
3	Flood Disaster and Risk Reduction	12 July 2022
4	Orientation Programme on Online Courses of NIDM	12 July 2022
5	Flood Monitoring and Management Using Remote Sensing	13 July 2022
6	Advocacy in WASH Advocacy for Health Sustenance	13 July 2022
7	Cyclone Monitoring and Forecasting Using Earth Observation Technologies	15 July 2022
8	Health Emergency of Climate Change and Extreme Weather Events	20 July 2022
9	Pros and Cons of Mask Usage during Pandemic	22 July 2022
10	Disaster Management in Horticultural Crops	26 July 2022
11	Sustainable Resilience Development	26 July 2022
12	Training and Psychosocial Impacts of Public Health Emergencies in context of COVID-19	27 July 2022
13	Disaster Resilience and Sustainability in Business Startups	27 July 2022
14	Flash Drought: Understanding Risk and Developing Resilience	28 July 2022
15	Role of Stakeholders and Coordination in Response and Relief	29 July 2022
16	Online Roundtable workshop on "Role of Panchayati Raj Institutions in COVID19 Response: Key Lessons for Long Term Impact	29 July 2022
17	Integrating Public Health Interventions and Strategies in Disaster Risk Reduction (DRR)	03 Aug 2022
18	Human Resources Capacity Development for Public Health Emergency and Disaster Management	10 Aug 2022
19	Innovations in Solar Tree & Tsunami Belt	12 Aug 2022
20	Youth for Climate Action	17 Aug 2022
21	Funding in Disaster Risk Reduction: 15th Finance Commission & Guidelines (Relief, Mitigation and Reconstruction)	17 Aug 2022
22	Glacial Lake outburst Flood (GLOF) Hazard Assessment	17 Aug 2022
23	Urban Fire Risk Mitigation: Experiences and Initiatives	17 Aug 2022
24	Best Practices in CBRN Waste Management	17 Aug 2022
25	An Interaction and experience sharing session with the Pondman of India Shri Ramveer Tanwar	24 Aug 2022
26	Leveraging Advance Technology in Public Health Emergency and Disaster Management	24 Aug 2022

S No	Name of the program	Date
27	Importance of DM Plans in DRR	26 Aug 2022
28	Emergency Operations Centre	29 Aug 2022
29	Urban Resilience: A Pathway for DRR	29 Aug 2022
30	Mental Health and Disasters	31 Aug 2022
31	Geospatial Methods and Tools for Landslide Management	31 Aug 2022
32	'Community & Climate Change: Impacts, Adaptation and Vulnerability– Challenges & Solutions'	31 Aug 2022
33	Bio-Engineering for Kangsabati Riverside Erosion	31 Aug 2022
34	Understanding One Health Concept in Context of the Covid-19 Pandemic	31 Aug 2022
35	'Designing and Management Techniques to Mitigate Natural Disasters'	01 Sep 2022
36	Flood Disaster Management	05 Sep 2022
37	Training workshop cum Webinar on 'Cash & Voucher Assistance'	10 Sep 2022
38	Chemical Disaster in Industries- causes and impact	14 Sep 2022
39	Public Health Emergency and Disaster Management and Edging Forward	14 Sep 2022
40	Application of Earth Observation Data for Disaster Mitigation and Management	17 Sep 2022
41	Mainstreaming Heritage Conservation in Disaster Risk Reduction	20 Sep 2022
42	Post-earthquake Reconstruction Programme in India: Experiences and Initiatives for Build Back Better	20 Sep 2022
43	Role of Remote Sensing and GIS in Metrological Hazards	23 Sep 2022
44	Disaster Resilient Agriculture	23 Sep 2022
45	2047: Disaster Risk Reduction	23 Sep 2022
46	Nature-Based Solutions for Disaster Risk Reduction	23 Sep 2022
47	Role of Early Warning and Communications in Disaster Management	30 Sep 2022
48	School Safety Disaster Risk Reduction	30 Sep 2022
49	Bio-Engineering Method for Landslide Mitigation: A Field Experience Sharing	30 Sep 2022

Upcoming/Proposed Face to Face Training Programmes (October - December 2022)

S No	Name of the program	Date
1	Integration of Village Disaster Management Plan with Gram Panchayat (GPDP)	17-19 Oct 2022
2	River Rejuvenation, Climate Resilience and DRR: Plans, Perspectives and Policies	17-21 Oct 2022
3	Developing DMPS by the line Organizations/Offices of the Ministry of Labour and Employment	17-21 Oct 2022
4	PM Agenda No. 6, 8 & 9: Earthquake Risk Mitigation & Management	17-21 Oct 2022
5	Mainstreaming Disaster Resilience Measures into Development Planning	19-21 Oct 2022
6	TOT Community Based Disaster Risk Management	26-28 Oct 2022
7	Addressing Child Centric Vulnerability, Enhancing Capacity & Promoting Resilience	31 Oct-4 Nov 2022
8	Incident Response System (IRS): IC and PSC	31 Oct-4 Nov 2022
9	Integration of Disaster Risk Reduction (DRR) with Gram Panchayat Development Plan(GPDP)	31 Oct-4 Nov 2022
10	Workshop on Coastal Erosion Control by Bio-engineering Measures	03-05 Nov 2022
11	ToT/PDP on Post Disaster Needs Assessment for Long Term Recovery	07-11 Nov 2022
12	Workshop Programme on Satellite Earth Observation and Artificial Intelligence Role in Development of Disaster Resilient Infrastructure (EOAIDRI)	11-13 Nov 2022
13	ToT on Earthquake Risk Mitigation and Awareness: A Community Based Approach	14-18 Nov 2022
14	Incident Response System (IRS)	14-18 Nov 2022
15	Addressing Child Centric Vulnerability, Enhancing Capacity & Promoting Resilience	14-18 Nov 2022
16	ToT Programme on Engaging Youth & Adolescents in DRM & CCA	14-18 Nov 2022
17	Training Programme on School Safety	14-18 Nov 2022
18	Disaster Risk Reduction Measures for Urban Resilience	14-18 Nov 2022
19	Psychosocial Care in Disaster Management	15-17 Nov 2022
20	ToT on Integration of Disaster Risk Reduction (DRR) With Gram Panchayat Development Plan (GPDP) and CSR initiatives	21-25 Nov 2022
21	TOT on Gender and Disaster Management	21-25 Nov 2022
22	Child Centric Disaster Risk Reduction	21-25 Nov 2022
23	General Disaster Management for Serving Officers of Indian Railways	21-25 Nov 2022
24	Disaster Management and its Mitigation	22-24 Nov 2022
25	Incident Response System with Spl. Ref. to Hospital & Doctors	29 Nov-1 Dec 2022

S No	Name of the program	Date
26	Post Disaster Stress Management for First Responders of disasters	06-08 Dec 2022
27	ToT/PDP/FDP on Chemical Leakages and Industrial DRR	12-16 Dec 2022
28	National ToT on Integration of Disaster Risk Reduction (DRR) With Gram Panchayat Development Plan (GPDP) and CSR initiatives	12-16 Dec 2022
29	Psychosocial Care in Disaster Management	13-15 Dec 2022
30	Nature Based Mitigation Measures to tackle Climate Change Impact in Sundarbans	15-17 Dec 2022
31	ToT Programme on Critical Infrastructure Resilience to the Disasters	19-23 Dec 2022
32	Engaging Youth & Adolescents in DRM & CCA	19-23 Dec 2022
33	ToT Programme on Coastal Community Resilience	27-29 Dec 2022
34	Management of Crowd at Large Congregations	27-29 Dec 2022

Upcoming/Proposed Online Training Programs (October - December 2022)

S No	Name of the program	Date
1	Pre and Post Disaster Management Strategies for Built Environment	06-10 Oct 2022
2	Child Centric Disaster Risk Reduction	12-14 Oct 2022
3	Bengal Training Programme on Flood Risk and Resilience Strategies: A Transdisciplinary Approach	17-19 Oct 2022
4	Multi Sector Coordination for Response and Resilience Building for Uttarakhand	17-19 Oct 2022
5	Community Based Disaster Risk Management	26-28 Oct 2022
6	Occupational Safety and Disaster Management	27-29 Oct 2022
7	Role of Disaster Management Plans to enhance the Resilience of Educational Institutional buildings	27-29 Oct 2022
8	Air Pollution and Health Impacts: Disaster Management	02-11 Nov 2022
9	Building Resilience of Health Facilities	09-11 Nov 2022
10	Vulnerability and Risk Assessment in Gangetic Plains	16-18 Nov 2022
11	Business Sustainability Climate Change and Disaster Resilience	21-23 Nov 2022
12	Cultural Heritage Disaster Risk Reduction	23-25 Nov 2022
13	Changes in infrastructure, livelihood and ecosystem services in Indian Sundarbans due to frequent disasters	28-30 Nov 2022
14	Remote Sensing applications in Disaster Risk Management	28-30 Nov 2022
15	ToT Programme on Policy Governance and Climate Change Law	01-03 Dec 2022
16	Disaster Resilient Housing and Built Environment Imperatives for Better Policy, Planning and Sustainable Cities	13-15 Dec 2022
17	Technologies on Industrial Safety and Disaster Risk Management	20-22 Dec 2022
18	Community Based Climate Change Adaptation	20-22 Dec 2022
19	Flood Disaster Risk Reduction and Resilience	21-23 Dec 2022
20	Disaster Risk Reduction and Resilience	27-29 Dec 2022

Upcoming/Proposed Webinars (October - December 2022)

S No	Name of the program	Date
1	Snow Avalanche and Glacial Hazard in Indian Himalaya	12 Oct 2022
2	Hybrid Event on India Resilience Dialogue 2022: Reimagining Disaster Risk Reduction	13 Oct 2022
3	International Day for Disaster Risk Reduction 2022 Theme- Early Warning and Early Action for all	13 Oct 2022
4	Advocating Geoethics for SFDRR, SDGs and CCA	13 Oct 2022
5	Disaster Risk Reduction (DRR) of Built Heritage	17 Oct 2022
6	Urban Planning for the Aggravating Urban Risks	17 Oct 2022
7	Disaster Mitigation in India: A Financial viewpoint under the 15th Finance Commission	21 Oct 2022
8	DRR and S&T Policy: Research and Capacity Building in Disaster Management, Climate Resilience, and integration with mainstream development, in India and its implications for Asia Pacific	25 Oct 2022
9	Orientation Programme on Online Course of NIDM	26 Oct 2022
10	Chemical Disaster Safety and Prevention	28 Oct 2022
11	Health Assessment of Critical Infrastructures	28 Oct 2022
12	Leveraging Technology and Innovation for Landslide Mitigation and Management	28 Oct 2022
13	The 15th Finance Commission and Disaster Risk Management	28 Oct 2022
14	Resilience and Sustainability Summit: Vision 2047 (RSS: 2047)	31 Oct 2022
15	Reflection and Road Map for Resilience	04 Nov 2022
16	Cyber Attack Disaster Management	04 Nov 2022
17	Inclusive Participation in DRR (Gender, Elderly, Differently abled)	15 Nov 2022
18	Community Radio Technology for Disaster Risk Reduction	22 Nov 2022
19	Geospatial Technologies for Disaster Management	25 Nov 2022
20	Emergency Operations Centre	25 Nov 2022
21	Legal Framework of Disaster Management in India	25 Nov 2022
22	Life for Resilience Case Studies and best Practices Conference: An Online Prevent of the Resilience and Sustainability Summit: Vision 2047	28 Nov 2022
23	Forest Hazards	29 Nov 2022
24	Indigenous knowledge and Disaster Risk Management	30 Nov 2022
25	Emergency Communication for Disaster Management	30 Nov 2022
26	Climate Change Adaptation and DRR in Himalayan Region	07 Dec 2022

S No	Name of the program	Date
27	Cultural Heritage Disaster Risk Reduction	07 Dec 2022
28	Combating Air Pollution in National Capital Region	07 Dec 2022
29	Resilience and Sustainability Summit: Vision 2047	08 Dec 2022
30	PM Agenda No 2 - Financial Resilience against Disasters	14 Dec 2022
31	Safety and DRR in Tunnels	15 Dec 2022
32	Effects of Climate Change on Cultural Heritage	16 Dec 2022
33	Global Outreach Programme of Mission life for Building Community Resilience	23 Dec 2022
34	Tsunami Awareness and Preparedness	26 Dec 2022
35	Disaster Management Using Geospatial Technology	26 Dec 2022
36	Combating Air Pollution in National Capital Region	27 Dec 2022

Thematic views

महत्वपूर्ण बुनियादी ढांचे और आपदा जोखिम न्यूनीकरण

Shreyash Dwivedi, Jr. Consultant

विभिन्न मानवीय गतिविधियों की तीव्रता तथा संवेदनशीलता के परिणाम स्वरूप जलवायु परिवर्तन और ग्लोबल वार्मिंग जैसे प्रभावों में लगातार वृद्धि हो रही है जिसके कारण विश्व स्तर पर आपदा का जोखिम बढ़ रहा है। संयुक्त राष्ट्र आपदा जोखिम न्यूनीकरण (यूएनडीआरआर) द्वारा हालिया वैश्विक मूल्यांकन रिपोर्ट 2022 इंगित करती है कि यदि वर्तमान वृद्धि इसी प्रकार से होती रही तो विश्व स्तर पर प्रति वर्ष आपदाओं की संख्या जो 2015 में 400 थी, से बढ़कर 2030 तक प्रति वर्ष 560 हो सकती हैं। आपदा से लड़ने की क्षमता विकसित करने, जलवायु परिवर्तन से निपटने और सतत विकास करने की हमारी प्रतिबद्धताओं के बावजूद, हमारे पर्यावरण के महत्वपूर्ण प्रणालियों और बुनियादी ढांचे को नुकसान जारी है, जिस पर मानव जीवन और अर्थव्यवस्था निर्भर करती है।

जोखिम में कमी और न्यूनीकरण की दिशा में हमारे प्रयासों को बढ़ाने की आवश्यकता है। यदि सही दिशा में, सही कदम और संसाधनों का समयबद्ध तरीके से निवेश किया जाए तो आपदाओं को कम किया जा सकता है। भारत में आपदारोधी सतत विकास प्राप्त करने के लिए, आपदा जोखिम न्यूनीकरण और जलवायु परिवर्तन अनुकूलन के उपायों को देश भर के विकास कार्यक्रमों में समावेशित करके मुख्य धारा में लाने की आवश्यकता है।

आपदा के बाद पहले तथा बाद की प्रतिक्रियाओं को प्रभावी ढंग से प्रबंधित करने में परिवहन, बिजली, दूरसंचार, जल आपूर्ति और अस्पताल जैसे महत्वपूर्ण बुनियादी ढांचे प्रभावाशाली भूमिका निभाते हैं। ये सभी महत्वपूर्ण बुनियादी ढांचे, एक दूसरे से अन्तर्सम्बन्धित हैं, तथा आपस में एक दूसरे के सम्पूरक के रूप में कार्य करते हैं। आपदाओं से होने वाले हानि और प्रभावों के शमन हेतु, हमें इन महत्वपूर्ण अवसंरचनाओं को नवीनतम तकनीकी नवाचारों की सहायता से आपदारोधी तथा सुदृढ़ बनाने की आवश्यकता है। आश्रय स्थल, स्कूल, विद्युत् गृह, अस्पताल, इंटरनेट, दूरसंचार एवं सड़क जैसी महत्वपूर्ण अवसंरचनायें समुदायों को विभिन्न खतरों से बचाने, ऊर्जा और पानी जैसी आवश्यक सेवाएं प्रदान करने, समुदायों को परिवहन और संचार नेटवर्क के माध्यम से जोड़ने तथा माल और सूचना के प्रवाह को नियोजित करने में महत्वपूर्ण भूमिका निभाती हैं।

क्षेत्रीय विकास योजनाओं में आपदा जोखिम न्यूनीकरण और जलवायु परिवर्तन अनुकूलन के उपायों को मुख्य धारा में शामिल करने से आपदा रोधी विकास कार्यों के निहितार्थों पर दीर्घकालिक प्रभाव पड़ेगा। विकास योजनाओं के माध्यम से इन महत्वपूर्ण अवसंरचनाओं को भविष्य में आने वाली आपातकालीन और विषम परिस्थितियों का सामना करने तथा उनसे उबरने की क्षमता प्रदान की जा सकती है, ताकि ये आवश्यकता के समय सुचारु ढंग से कार्य कर पाएं।

शहरी क्षेत्रों में भूकंप का प्रभाव

Yogita Garbhal, Young Professional

हाल के दशकों में, विकसित और विकासशील दोनों देशों के शहरी केंद्रों में भूकंप आपदा जोखिम बढ़ गया है। विकसित देशों में जोखिम के वृद्धि का कारण, बढ़ती शहरी प्रणालियों और जनसंख्या, प्रौद्योगिकी पर अधिक निर्भरता और जोखिम के संपर्क में आने वाले अधिक मूल्यवान तत्वों के कारण है। विकासशील देशों में भूकंपीय जोखिम में मुख्य वृद्धि को भीड़भाड़, दोषपूर्ण भूमि-उपयोग योजना और निर्माण, अपर्याप्त बुनियादी ढांचे और पर्यावरणीय गिरावट के लिए जिम्मेदार ठहराया जा सकता है। शहरीकरण ने उस सीमा को पार कर लिया जब दुनिया की आधी से अधिक आबादी ने शहर में रह रहे हैं, यह निकट भविष्य में भूकंप का एक भयानक खतरा पेश करता है। आजकल समाज के सामने जो महत्वपूर्ण मुद्दा है, वह मानव समुदायों और बुनियादी ढांचे की अतिसंवेदनशीलता की जबरदस्त वृद्धि का है। इसलिए, विभिन्न निर्मित वातावरण वाले शहरी क्षेत्रों में भूकंप की तैयारी, सामाजिक, आर्थिक विकास और सुरक्षा के संदर्भ में कहीं अधिक महत्वपूर्ण हैं।

शहर पारंपरिक रूप से अपने देशों की अर्थव्यवस्थाओं के विकास में प्रमुख योगदानकर्ता रहे हैं। विकासशील देशों में शहरी निवासियों की संख्या अगली पीढ़ी में दोगुनी होने की संभावना है, जो 2 अरब से अधिक बढ़ सकता है। यदि भूकंप से हो सकती तबाही के लिए तैयारी नहीं करी जायेगी, तो शहर से विकास और देशों की अर्थव्यवस्थाओं में योगदान को प्रश्न में लाया जा सकता है। शहरी भूकंप के विनाशकारी परिणामों को रोकना, मध्यम और निम्न आय वाले दोनों देशों में शहरों के विकास को बनाए रखने के लिए सर्वोपरि हो गया है।

भारत के शहर अत्यधिक घनी आबादी वाले हैं। यह संभावना है कि यदि देश के किसी भी शहर में भूकंप आता है, तो विनाश बड़े पैमाने पर होगा और पुनर्निर्माण की प्रक्रिया, जटिल, लंबी और महंगी। एनडीएमए की सितंबर 2019 रिपोर्ट में पेश भूकंप आपदा जोखिम सूचकांक पर, एक दर्जन से अधिक भारतीय शहरों में भूकंप की स्थिति में बड़े हताहतों का सामना करने का उच्च जोखिम है। रिपोर्ट में कहा गया है कि भारत में आए पिछले भूकंपों में 90 फीसदी से अधिक हताहतों की वजह इमारतें ढहना रही हैं। उन्नीस भारतीय शहर, जिनमें दिल्ली और नौ राज्यों की राजधानियां शामिल हैं, “गंभीर” से “बहुत गंभीर” भूकंपीय क्षेत्रों में आते हैं। दिल्ली, पटना (बिहार), श्रीनगर (जम्मू और कश्मीर), कोहिमा (नागालैंड), पुडुचेरी, गुवाहाटी (असम), गंगटोक (सिक्किम), शिमला (हिमाचल प्रदेश), देहरादून (उत्तराखंड), इम्फाल (मणिपुर) और चंडीगढ़ भूकंपीय क्षेत्र IV और V के अंतर्गत आते हैं। इन शहरों की संयुक्त आबादी तीन करोड़ से अधिक है। इसलिए वहां भूकंप के नतीजों का अहसास होना तय है। पूरे हिमालयी क्षेत्रों को 8 तीव्रता से अधिक के भूकंपों के लिए प्रवण माना जाता है – हिमालयी क्षेत्र में तीव्र भूकंपों की उम्मीद है जो देश में लाखों लोगों को प्रभावित कर सकते हैं। अरुणाचल प्रदेश की राजधानी ईटानगर, पूर्वोत्तर की पहाड़ियों का एक उदाहरण है, यह दर्शाता कि इस क्षेत्र के राजधानी शहर, और व्यापारिक शहर अपनी क्षमता के स्तर से परे पहुंच गए हैं। ऐसे पहाड़ी इलाकों में चिंता सिर्फ बढ़ती आबादी की ही नहीं है, बल्कि प्राकृतिक खतरों से जूझ रहे इको-सिस्टम की भी है। पूर्वोत्तर क्षेत्र के लगभग सभी राज्यों में अभूतपूर्व स्तर पर शहरीकरण का अनुभव किया जा रहा है।

भूकंप को रोकना असंभव है। यह भविष्यवाणी करना भी असंभव है कि कब और कहां कोई होगा। केवल निश्चितता यही है कि भूकंप आएंगे। यदि भूकंप की तैयारी करने से पहले, बड़े भूकंप, शहरों में होते हैं तो जीवन और संपत्ति को नुकसान भारी होगा। बड़े भूकंप के संभावित जोखिम के तहत शहरी केंद्रों के लिए, यह आवश्यक है कि भूकंप की स्थिति में और उससे पहले, कुछ तैयारियों और आपातकालीन प्रक्रियाओं को तैयार किया जाए, जो बदले में भौतिक और सामाजिक वातावरण पर भूकंप के प्रभावों को कम करने के लिए आवश्यक है। भूकंप के खतरे को कम करने और आपदा की रोकथाम के लिए राजनीतिक प्रतिबद्धता, पर्याप्त शर्तों पर वित्तीय स्रोतों तक पहुंचने के निर्णय और जागरूकता बढ़ाने के कार्य महत्वपूर्ण हैं। तकनीकी और संगठनात्मक मुद्दों के अलावा, यह महत्वपूर्ण है कि समकक्ष विधायी उपाय, और कानून मौजूद हों।

शिक्षाविदों, निर्माण उद्योग और सरकार से यह सिफारिश की जाती है कि मिलकर काम करें, भूकंप के बढ़ते प्रभाव के बारे में जागरूकता बढ़ाने और निर्माण मानकों को विकसित करने, बनाए रखने और लागू करने के लिए काम किया जाना चाहिए। भूमि-उपयोग योजना की बुनियादी आवश्यकता है कि बिल्डिंग कोड और उप-कानून प्रवर्तन को प्रशासनिक प्रोटोकॉल के साथ एकीकृत किया जाना चाहिए। खतरों के आकलन और शमन के लिए समाज और वैज्ञानिक समुदाय की भागीदारी आवश्यक है। “रोकथाम इलाज से बेहतर है” और रोकथाम जागरूकता के साथ शुरू होता है। इसलिये, सभी हितधारकों को तैयारी, बचाव, राहत, पुनर्वास, आदि के बारे में एकीकृत ज्ञान प्रदान करना होगा।



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