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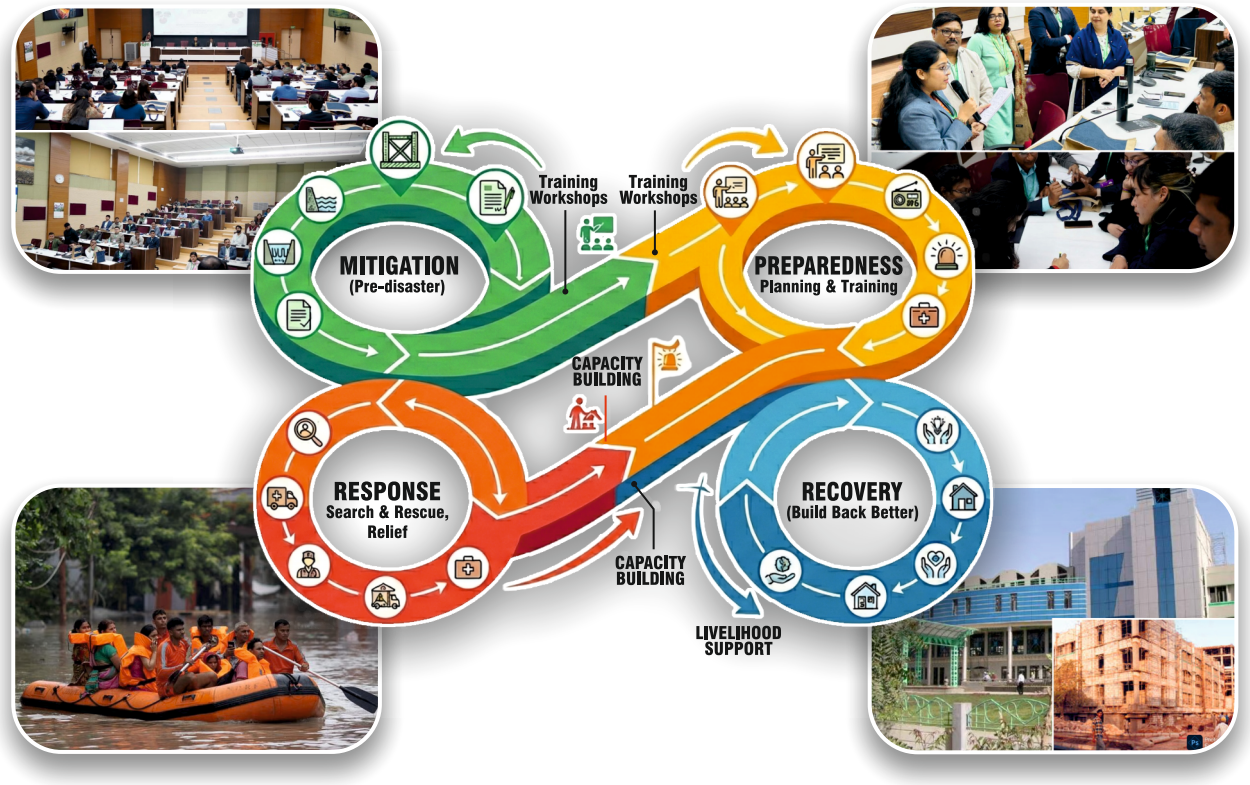
Resilient India - Disaster Free India

COMPREHENSIVE COURSE
ON
DISASTER RISK MANAGEMENT

TRAINING MODULE



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

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National Institute of Disaster Management
(Ministry of Home Affairs, Government of India)

Comprehensive Course on Disaster Risk Management (Training Module)

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Resilient India - Disaster Free India

मधुप व्यास, भा. प्र. से.
कार्यकारी निदेशक
Madhup Vyas, IAS
Executive Director

सत्यमेव जयते

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Foreword

In the present era, the discourse around disaster risk management (DRM) has shifted from response-centric approach to a proactive approach of risk reduction and preparedness. India's diverse geographical and socio-economic landscape subjects it to a wide spectrum of hazards from floods, seismic threats, cyclones, landslide to anthropogenic risks, including chemical, biological, radiological, and nuclear (CBRN) emergencies. Addressing this reality demands not just robust infrastructure and policy framework, but a deep, nationwide commitment to capacity building and mitigation.

National Institute of Disaster Management (NIDM) is happy to present this training module for the Comprehensive Course on Disaster Risk Management. This document is a critical step in fulfilling NIDM's mandate to serve as the premier national resource center for training and research in disaster management. It represents a systematic effort to synthesize cutting-edge knowledge, practical field experience, and the strategic direction outlined by the National Disaster Management Authority (NDMA) and global frameworks, such as the Sendai Framework for Disaster Risk Reduction and Sustainable Development Goals.

This module is designed to ensure that disaster management professionals, first responders, policymakers, and community practitioners are equipped with the technical competence needed for the entire cycle of disaster management. By

integrating foundational principles with specialized topics ranging from risk analysis and vulnerability mapping to the details of public health emergencies and inter-agency coordination in disaster scenarios, it fosters a holistic understanding of resilience. It moves beyond theoretical concepts, offering trainers a structured, user-friendly manual to deliver actionable impact-driven knowledge. I am confident that this training module will not only elevate the professional standards of our disaster management workforce but will also contribute significantly to creating a true culture of safety and resilience across the nation.

I commend the dedicated team of authors whose relentless commitment and contributions have brought this vital resource to fruition. I hope that this module is utilized across training institutions and disaster management departments, shaping the disaster managers and ultimately strengthening the national capacity to protect development gains.

Madhup Vyas
(Executive Director, NIDM)

Acknowledgement

This training module symbolizes extensive collaborations, dedication, and support of individuals and institutions who contributed to conceptualizing, structuring, and successfully conducting the 'Comprehensive Course on Disaster Risk Management' by the institute. Designed to bridge the gap between theoretical knowledge and field-level application, this module reflects a collective commitment to enhancing institutional capacity and fostering a culture of disaster resilience.

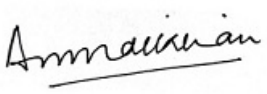
I extend my sincere gratitude to Shri Madhup Vyas, Executive Director, NIDM, for his insightful guidance and unwavering encouragement throughout the preparation and finalization of this module. My deep appreciation to Sh. Manoram Yadav, Joint Director, NIDM, for his support. A special note of thanks to Shri Randeep Rana, Senior Advisor, for his support and persistent interest in ensuring the successful completion of this work.

I gratefully acknowledge Shri Safi Ahsan Rizvi, IPS (Retd.), Advisor (Mitigation), NDMA, and former Executive Director of NIDM. His support, encouragement, and insightful suggestions were instrumental in shaping this module. I specifically recognize that this training module is his brainchild. I take this opportunity to thank NDMA for their support in reviewing the document and constructive suggestion during the preparation of the module.

I would also like to thank the team of expert reviewers, especially Shri Vivekanand Gupta, Visiting Faculty, SPA, Delhi, who have contributed to the refinement of this training module.

Furthermore, this module would not have been possible without the scholarly contributions of my team, Dr. Preeti Soni, Ms. Azra Mahwash, Dr. Prateek Roshan, Sh. Shreyash Dwivedi and Sh. Dev Kumar. Their specialized knowledge,

meticulous research, and dedication to ensuring the module's technical accuracy and practical relevance are deeply appreciated. I also express my appreciation to Dr. Ravinder Singh (Senior Consultant and Publication Incharge), the publication team (Sh.Vishal) and all other stakeholders who supported the development of this module.



(Prof. Amir Ali Khan)
Head, RID & GMRD , NIDM

Executive Summary

The training module on 'Comprehensive Course on Disaster Risk Management' has been developed to strengthen the institutional and human capacity in managing disasters in India through a structured, multidisciplinary, and practice-oriented approaches. The module responds to the growing complexity and frequency of disasters driven by the climatic, environmental, and socio-economic factors, and aims to equip professionals with the knowledge, tools, and skills necessary to effectively address the disaster risks across all phases of the disaster management cycle.

India's geographical diversity and large population make it highly vulnerable to a wide range of natural and anthropogenic hazards, including the floods, cyclones, earthquakes, droughts, landslides, and industrial accidents. Climate change is further intensifying these risks by increasing the frequency and severity of extreme weather events such as heatwaves, erratic rainfall, and sea-level rise. These evolving risks necessitate a shift from reactive disaster response to proactive risk reduction and resilience-building strategies.

The module is designed as a two-week residential training programme, targeting mid- to senior-level professionals from government departments, academic institutions, and non-governmental organizations. It emphasizes on capacity building in disaster preparedness, mitigation, response, and recovery, aligned with global frameworks such as the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals (SDGs). The programme aims to develop skilled professionals capable of integrating disaster risk considerations into development planning and governance processes.

COURSE OBJECTIVES AND OUTCOMES

The primary objective of the training is to enhance participants' understanding of disaster risk, vulnerability, and resilience. It seeks to build competencies in hazard

risk and vulnerability assessment (HRVCA), disaster management planning, and the use of technological tools such as Geographic Information Systems (GIS) and Remote sensing. The participants are expected to develop the ability to formulate risk-informed disaster management plans, strengthen inter-departmental coordination, and contribute to resilient development practices.

The expected outcomes of the course include an improved understanding of disaster risks in India, enhanced capacity for risk assessment using both qualitative and quantitative methods, and to strengthened institutional coordination for implementing disaster risk reduction (DRR) strategies.

MODULE STRUCTURE AND THEMATIC COVERAGE

The training programme is organized into eight submodules, progressing from foundational concepts to advanced applications. The initial submodule introduces basic concepts of disaster management and climate change, emphasizing the interconnected phases of the disaster management cycle- mitigation, preparedness, response, and recovery. It also highlights the importance of community awareness and preparedness through the interactive methods such as role-play and group exercise.

The subsequent submodule cover the global and national disaster risk reduction frameworks, including the Sendai Framework, SDGs, and Disaster Management Act, 2005. Participants will gain insights into institutional structures and governance mechanisms at national, state, and district levels, enabling them to understand policy alignment and coordination challenges.

The submodule on risk assessment and technology introduces participants to methodologies for identifying hazards, vulnerabilities, and capacities. It emphasizes on the use of advanced tools such as GIS, remote sensing, satellite data, and disaster management support systems for real-time monitoring and decision-making. The practical exposure through case studies and demonstrations enhances participants' ability to apply these tools in real-world scenarios.

The disaster mitigation submodule addresses both structural and non-structural measures, including resilient infrastructure, building codes, and land-use planning. It also examines sectoral risks such as urban flooding and earthquake vulnerability, highlighting the need for proactive planning and risk-sensitive development.

The preparedness and response submodule focuses on emergency planning, early warning systems, communication tools, and coordination mechanisms. It integrates the aspects such as public health emergencies, psychosocial support, and community engagement, recognizing the importance of human-centered approaches in disaster response.

Recovery and reconstruction submodule addresses the visits to key institutions such as NDMA, disaster response forces and meteorological agencies. The participants will gain practical understanding of early warning systems, forecasting tools, and recovery planning processes, including the principle of "Build Back Better."

The submodule on risk financing and insurance explores financial mechanisms for disaster recovery and resilience-building, including insurance systems and public-private partnerships. It emphasizes long-term planning and resource mobilization for sustainable recovery.

TRAINING METHODOLOGY

The training adopts an integrated and experiential learning approach, which combines the theoretical knowledge with practical application. It includes expert lectures, case studies, simulations, group exercises, and field visits to enhance learning outcomes. The technology-enabled sessions and live demonstrations further strengthen participants' technical competencies. The continuous assessment is the key feature of the programme, with pre- and post-training evaluations, daily feedback, and follow-up assessments to measure knowledge gains and practical application. This ensures that the training remains adaptive, relevant, and outcome-oriented.

GUIDANCE ON LOGISTICS AND CLOSING

The module provides a detailed guidance for organizing the training, including venue requirements, participant selection, logistics, and coordination mechanisms. It emphasizes the role of host organizations, course coordinators, and faculty in ensuring effective delivery. The programme encourages the inclusivity, gender balance, and participation from diverse regions and sectors.

The evaluation mechanisms include the formal assessments, feedback forms, field exercise evaluations, and follow-up studies to measure long-term impact.

The module also recommends maintaining a database of trained professionals to support future capacity-building initiatives and create a network of master trainers.

SIGNIFICANCE AND STRATEGIC IMPORTANCE

This DRM training module addresses the critical gaps in disaster management capacity in India by fostering a holistic understanding of risks and promoting integrated approaches to risk reduction. It aligns with the global frameworks and national priorities and supports the transition towards resilient and sustainable development. The module emphasizes the importance of collaboration across sectors, levels of governance, and communities. It highlights the role of technology, data-driven decision-making, and community participation in enhancing disaster preparedness and resilience.

CONCLUSION

In conclusion, the training module serves as a strategic capacity building initiative aimed at strengthening disaster governance and resilience in India. It equips; participants with practical skills, technological knowledge, and policy insights, the programme contributes to building a proactive, coordinated, and resilient disaster management system. It not only enhances individual competencies but also supports institutional strengthening and long-term sustainable development in the face of increasing disaster risks.

Table of Contents

Chapter 1
Introduction

1.1 Background

India's unique geography and large population make it highly vulnerable to disasters. In recent decades, the frequency and intensity of both natural and anthropogenic disasters have significantly increased, posing critical threats to human life, infrastructure, and the environment. The country remains susceptible to many hazards, including floods, cyclones, earthquakes, droughts, landslides, and industrial accidents. This necessitates a strengthened focus on disaster preparedness, mitigation, response, and recovery across all sectors. Climate change is significantly amplifying the severity of disasters in India, increasing the country's vulnerability to extreme weather events. Rising temperatures have led to more frequent heat waves, erratic monsoon patterns, and intense rainfall, resulting in urban flooding in major cities. Coastal regions are experiencing rising sea levels and more intense cyclones due to the warming of oceans, resulting in erosion, displacement, and infrastructure loss. In the Himalayas, rapid glacial melting is triggering flash floods, landslides, and glacial lake outburst floods. Agriculture is under threat from unseasonal rains and prolonged droughts, impacting food security and livelihoods. Additionally, the health of vulnerable populations is at risk due to a rise in vector-borne diseases. These changes necessitate the urgent adoption of climate and disaster-resilient strategies, including early warning systems, adaptive infrastructure, and community preparedness *(Source: Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

Table 1: Hazard Types, Major Events, and their Impacts

HAZARDS	EVENTS	IMPACTS
Earthquakes (59.6% of the country's land vulnerable to earthquakes)	Major earthquakes: 2001 Bhuj earthquake (M7.7), 2005 Kashmir earthquake (M7.6), etc. Moderate earthquakes occur every few years in the Himalayan region.	Thousands of deaths occurred and several people got displaced.
Floods and Urban Flooding (12 percent of land is prone to floods; 5161 ULBs are prone to urban flooding)	17 events per year on average; increasingly frequent extreme rainfall events in recent years.	1,600 deaths per year on average (deadliest: 2013 Uttarakhand 6,054 deaths). 7.5 million hectares flooded annually; 345 million total affected 2000–2019.
Cyclones (5,700 kms coastal line is vulnerable to cyclones)	India was impacted by 41 cyclones between 2012 and 2020. Peak season May–Nov	Cyclone Amphan (2020) affected 2.4 million people and destroyed 2.8 lakh houses in West Bengal and Odisha. There is a considerable reduction of deaths owing to cyclonic storms due to improved evacuation procedures and improved early warning systems.

HAZARDS	EVENTS	IMPACTS
Landslides and avalanches (15% land exposed)	Seasonal or episodic events, especially in monsoons. Dozens of significant landslides occur per year in vulnerable districts.	Landslides and avalanches cause 2% of disaster deaths (except when occurring along with floods, as in Kedarnath, 2013). Thousands are affected annually (mostly in hill regions).
Droughts (68% of cultivable land is drought-prone)	India experienced major droughts in 2002, 2009, and 2015, whereas localized droughts occurred intermittently.	Impacts on agriculture and livelihoods, though not counted as disaster fatalities.

Sources: NDMA, 2024; BIS, 2025; IMD reports

1.2 Need of the Training Module

Managing disasters has become a complex and multidisciplinary task, involving coordination across sectors such as health, infrastructure, and environment, as well as the use of advanced technology like GIS and remote sensing, etc. Many regions in the country lack sufficient human resources to effectively carry out these tasks, leading to gaps in preparedness and response. Additionally, global commitments like the Sendai Framework and the Sustainable Development Goals underscore the importance of strengthening institutional capacity, which includes recruiting and training more human resources. There is a need to develop professionals who can play a critical role not only during emergencies but also in long-term recovery and development, ensuring that affected areas can rebuild as safer and sustainable communities. Considering these aspects, the purpose of this training module is to develop a guidance resource for the two-week training programme to develop the capacity of the participants in various phases of the disaster management cycle, i.e. preparedness, response, and recovery.

1.3 Aim

To equip the trainees with the knowledge, skills and methods to effectively manage and reduce disaster risks for building safer and resilient communities.

1.4 Learning Objectives

- To develop understanding of the concepts of disaster risk management and climate change.
- To develop basic skills to assess hazard risk vulnerability.
- To develop understanding of the key national and international disaster risk reduction frameworks, including the principles and priorities of the Sendai Framework for Disaster Risk Reduction.
- To enable the trainees to develop comprehensive disaster management plans for effective disaster preparedness, response, and recovery.
- To develop understanding about the concepts of post-disaster need assessment, reconstruction, and recovery as well as financial mechanisms.

1.5 Target Audience

The course is designed for senior and mid-level disaster management professionals who hold at least a graduation degree. The course is suitable for the following:

- Officers (Group A and B) entry to mid-level professionals from Central Ministries, States/UTs and line departments involved in disaster management.
- Senior to mid-level faculties and research associates or fellows from training and research institutes, universities, colleges, and schools.
- Other stakeholders like senior and mid-level professionals from NGOs, private organisations and community-based organisations.

The course acknowledges the differential training needs of the stakeholders at different levels of administration. The table below provides a glimpse of variations in roles and challenges across various aspects.

Table 2: Differential Administrative Roles and Challenges at State and District Levels

Challenges/ Issues	*State DM Authorities*	*District DM Authorities*
Scale and Methods of Risk Assessment	To conduct comprehensive risk assessment using state-wide data, hazard mapping and risk modelling.	To undertake localized and detailed risk assessments based on district hazards, exposure and community vulnerabilities.
Pre-Disaster Planning and Coordination	State to organise high level consultations, develop guidelines and SOPs for policy guidance, DM planning, resource allocation, and coordination among state departments and agencies.	Emphasizes operational preparedness, mitigation, coordination with line departments, local bodies, and implementation of risk reduction measures.
Data Use and Updating Responsibilities	To maintain consolidated disaster databases, develops guidelines, and integrate data received from districts using online portals such as NDMIS, IDRN etc.	To collect and regularly update ground-level data and reports to state authorities.
Capacity Building	To sort out challenges such as inter-departmental coordination, institutional strengthening, knowledge management through capacity building.	To develop trained resources and operational capacity upto last-mile delivery through local capacity strengthening and improved field coordination.

1.6 Scope of the Course

The course will address the urgent need for developing disaster management capacity across the country. The course will adopt a multidisciplinary, multi-hazard and multi-sectoral approach drawing from the latest global frameworks, including the Sendai Framework and the Sustainable Development Goals and institutional mechanisms of disaster management in the country.

1.7 Expectations from the Participants and Trainers

- **Participants**: Participants are expected to actively engage in sessions, share their field experiences, participate in discussions, group exercises, case studies, and apply the learning to strengthen disaster risk management practices in their respective institutions/ regions.
- **Faculty and Trainers**: Faculty trainers are expected to facilitate interactive and practical learning by combining theoretical concepts with real-world examples, case studies, and participatory methods. They will guide discussions, clarify concepts, and encourage knowledge exchange among participants.
- **Course Director / Coordinator**: The course director or coordinator will ensure smooth implementation of the programme, provide academic and administrative guidance, coordinate between faculty and participants, and ensure that the course objectives are achieved effectively within the training schedule.

Expected Outcomes

- Improved understanding of disaster risk and vulnerability in India.
- Enhanced capacity to conduct HRVCA by using quantitative (data and technological tools) and qualitative methods (Venn Diagram, Problem Tree & Risk Matrix etc.) at various levels.
- Strengthened capacity in developing inter-departmental coordination matrices, sectoral convergence action plans & monitoring templates to implement DRM strategies.
- Enhanced capacity for the formulation of risk-informed state disaster management plans and district disaster management plans at various administrative levels.

Chapter 2
Module Structure and Delivery Methodology

This chapter presents an overview of how the training programme will be organised, highlighting the sequence of submodules, the key thematic areas covered, and the overall approach used to deliver the course. It introduces the purpose of the modular format and explains how participants will progress from foundational concepts to advanced topics in disaster risk management. This also outlines the training approach, methodology, and key requirements essential for delivering the programme.

2.1 Module Structure

The course is designed as a two-week programme divided into eight submodules, starting with a submodule on the basics of disaster management that includes an introduction, context setting, ice-breaking activities, and pre-training assessments. The subsequent submodules will address areas such as disaster management fundamentals, policy frameworks, preparedness, mitigation, response, recovery, and cross-cutting themes like gender, health, and inclusion.

Figure 1: Submodules covered under the training module

Source: Author interpretation

The details of Submodules and the topics covered are given below:

Submodule 01: Basics of Disaster Management and Climate Change	This submodule serves as a foundation of the training program with an ice-breaking activity and an introduction to the key concepts of disaster management. It sets the tone for the course, ensures structured feedback mechanisms, and enables outcome-based learning through continuous evaluation. Participants will learn about the disaster management cycle. The submodule sets a strong foundation for understanding risks, promoting awareness, and encouraging active participation in disaster risk reduction and preparedness.

Submodule 02: Global Policies and Institutional Framework	This submodule introduces the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (SDGs), and the Paris Agreement, along with national legal instruments such as the Disaster Management Act, 2005 and Amendment Act, 2025 to explain the disaster governance in India. The submodule elaborates upon clear linkages with the preparation and implementation of State and District plans Disaster Management Plans (SDMPs/ DDMPs). It further explains how states and district need to align with the National Disaster Management Plan (NDMP) 2019. Through presentations, case studies, and discussions, participants gain a clearer understanding of institutional roles, coordination mechanisms across different levels of government. It also help to gain practical insights and strengthen the quality, usability and effective implementation of SDMPs and DDMPs.
Submodule 03: Risk Assessment and Role of Technology	This submodule introduces participants to risk assessment methodologies, focusing on hazard, vulnerability, exposure, and capacity. It explores the use of GIS, Remote Sensing, and qualitative technique for data collection and analysis. Participants will learn to identify multi-hazard risk indicators for schools, communities, and institutions through interactive activities. This submodule builds competence in risk-informed, inclusive, and evidence-based planning.
Submodule 04: Understanding Disaster Mitigation	This submodule focuses on long-term strategies to reduce disaster risk through structural and non-structural measures. Participants will learn about resilient infrastructure, building codes, and retrofitting practices with emphasis on earthquake risk mitigation. Case studies of cyclone will illustrate how communities and institutional systems can reduce damage through proactive planning. Urban flood risks and solutions will be explored, considering rapid urbanization and climate change.

Submodule 05: Disaster Preparedness and Response	This submodule enhances understanding on how to prepare for and respond to disasters. It includes aspects like health emergencies, epidemic response, and the importance of psychosocial support. It also incorporates group activity, through which participants will explore how to mainstream DRR into key sectors like health, housing, and education. The session will also address key aspects such as institutional preparedness, SOPs, early warning systems, and response coordination. A panel discussion with experts from NDMA, NDRF, and MHA will provide practical insights based on field-level experience. An interactive session on psychosocial care through role-play builds skills for community engagement and mental health support in disaster situations. The main intent of this submodule is to teach about emergency communication tools such as the Sachet App, Common Alerting Protocol (CAP), and platforms like the IDRN and NDMIS.
Submodule 06: Disaster Recovery and Reconstruction	This submodule, through the field-based approaches offers practical exposure through visits to key disaster response and early warning agencies. At NDRF, participants witness demonstrations of search and rescue operations, equipment use, and team coordination. A field visit to the India Meteorological Department (IMD) and National Centre for Seismology (NCS) provides insight into multi-hazard early warning systems, forecasting tools, and communication protocols. These visits reinforce classroom learning and enable participants to engage directly with professionals working in disaster forecasting and emergency response. The experience strengthens their understanding of how early warnings can save lives and reduce disaster impacts.
Submodule 07: Risk Financing and Insurance	It will cover topics like the post-disaster phase, including recovery, reconstruction, and disaster financing, with a focus on the Build Back Better principle for resilient infrastructure development. The submodule includes an experts panel from NDMA, UNDP, and the insurance sector. The key intent of this submodule is to strengthen capacity for long-term recovery planning.

Submodule 08: Cross-Cutting issues	The submodule will cover the themes including leadership roles in disaster management, gender and inclusive dimensions of disaster risk management, the role of media in disaster management, and public health resilience in DRR. It will also include group activity focusing on the psychosocial aspects of disaster management and essential skills required for effective response. The primary objective of this submodule is to enhance participants' understanding of inclusive, people-centered approaches and strengthen leadership and communication capacities in disaster management.
Assessment and Conclusion	This concluding submodule focuses on review, reflection, and assessment. Participants will present their group assignments and take part in a post-training assessment. The course concludes with feedback collection, review, and a valedictory session, marking the participants' readiness to act as trained master trainers in disaster risk reduction and management.

2.2 Training Approach & Methodology

The training programme adopts an integrated and practice-oriented training approach that combines conceptual learning with real-world application. The methodology features expert- led sessions, and case studies analyses in order to build a strong theoretical foundation. This is complemented by experiential methods such as simulations, group exercises, and hands-on activities that strengthen decision-making and problem-solving skills. Technology-enabled sessions using GIS, remote sensing, and digital platforms enhance participants' technical capabilities. The training programmes include field visits and live demonstrations at specialized agencies/organizations that are working in the areas of disaster risk reduction. It provides practical exposure to operational systems and response mechanisms. The persistent assessments and structured feedback will improve the quality of future trainings. This comprehensive approach helps participants in gaining both strategic understanding and operational competence in the area of disaster risk management. Annexure III provides details of different types of training approaches and methodologies.

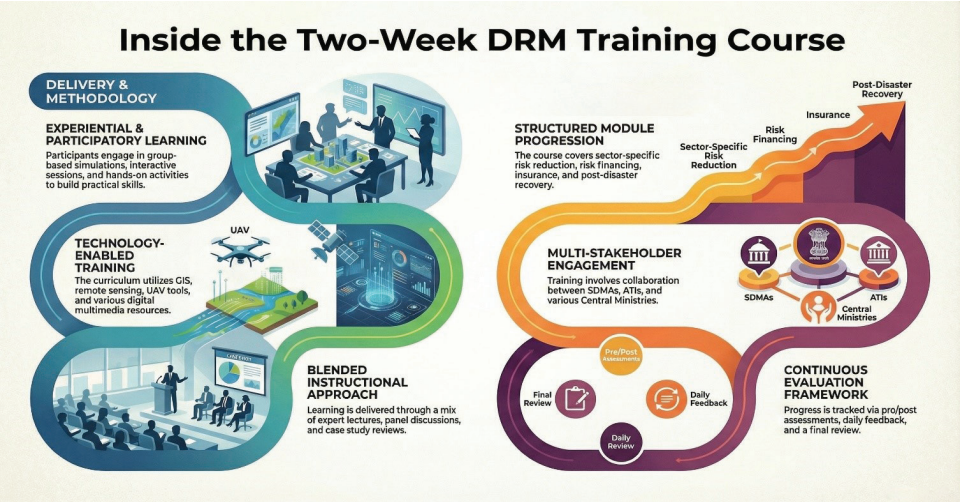


Figure 2: Diagram depicting training approach and methodology

Source: Authors Interpretation

2.3 Training Requirements

Table 3: Training Requirements

Activities/ Items	***Description***
Venue arrangements	Adequate space to host participants, equipped with seating arrangements and basic training facilities. Training programmes can be organized at NIDM (Delhi and Vijayawada campuses), SDMAs, Administrative Training Institutes, universities and other research or training institutions equipped with hostel facilities, and necessary amenities.
Event Host organization/ Collaborations	Host organizations play an important role in organizing the training programme. In case of a large-scale event, other government partners may be involved for smooth planning and execution.

Course Coordinator and organizing team	• A course coordinator ideally should be a senior faculty member or professional who has attained a PhD or postgraduate degree and devoted a minimum of 10 years of experience in the field of disaster management. • Disaster Management or concerned allied subject faculty from NIDM/NDMA/MHA/SDMAs/ATIs or academic institutions. ***Other desired skills:*** • Strong management, coordination, and communication skills. • Ability to link global frameworks with local contexts. • Ability to foster an inclusive and participatory learning environment. The course coordinator should constitute an organizing team with 1-2 faculty members (as co-coordinators), research associates, training assistants, and other relevant professionals for organizing the event successfully.
Training Equipment	Smart classroom, laptops, projector, laser pointer, whiteboard, mike and speaker, camera, video recorder, printer, pen drive, chart papers, etc.
Publicity, Registration and Coordination	The host organization can use various applications or make an email group with all participants for proper coordination and communicate easily for the tenure of the training programme.
Registration Form	Registration forms need to be prepared in advance and are filled out at the registration desk or through on-line forms for ensuring the participation and certification of the participants. It includes basic information such as Salutation, Name, Designation, Organization & its address, Group, Level, Phone Number, and email address. *(Note: These details will help to maintain the resource pool and multi-stakeholder lists working in the areas of Disaster Risk Management. It also aids in maintaining an alumni network.)*

Course Material	NDMA guidelines, NIDM manuals, presentations, and supplementary reading material to support conceptual and practical learning.
Audio-Visual Aids	Projectors, videos, multimedia presentations, digital content to enhance clarity and participant engagement.
Evaluation & Feedback	Pre/post assessments and structured feedback mechanisms to evaluate learning outcomes and improve training delivery. The detailed Course Feedback at Annexure-I.
Number of Trainees	The ideal number of trainees for this training programme is between 30 and 80. *Eligibility:* • Minimum graduate degree in any discipline (preferably in disaster management, environment, public administration, engineering, or social work) with working knowledge of English and Hindi. • Demonstrated interest or professional commitment to working in disaster management or applying DRM knowledge in current roles. • Participation from diverse regions, women, and underrepresented groups is encouraged.
Training Language	English is the primary medium of instruction for national-level programmes. However, when required, the facilitator or coordinator may be able to translate the content into Hindi or other regional languages to ensure effective understanding.
Timeframe	The comprehensive course on disaster management has been designed as a 2-week residential course covering 10 to 12 working days.
Logistics related requirements	Travel Allowances and Dearness Allowances for individuals/ resource persons/trainers, training kits, stationery costs, field visit expenses, hostel facilities, local transportation charges, certificate printing, and cost of boarding and lodging and other miscellaneous and administrative charges.

Certification and group photograph	A certificate may be awarded to each participant upon successful completion of the programme, based on the attendance and performance criteria established by the host organization. It is advised that the host organization maintain the database of trained professionals. The database may be placed at an official website for utilizing the trained professionals as master trainers by their respective states/UTs and organizations.

2.4. Evaluation and Validation

The evaluation approach combines formal methods, such as assessments, presentations, and questionnaires, with informal methods, including daily feedback and discussions. It ensures continuous improvement of content and methodology through regular participant feedback while assessing both knowledge acquisition and the practical application of skills.

Table 4: Evaluation and Validation

Evaluation Method	*Description / Purpose*
Pre-Training Assessment	Measures baseline knowledge of participants before the programme begins. Medium/Mode: Pre-training assessment forms may be circulated among participants through hard copies or on-line forms or the host institute's app or dashboard.
Post-Training Assessment	Measures knowledge and skill gains immediately after the training. Medium/Mode: Post-training assessment forms may be circulated among participants through hard copies or on-line forms or the host institute's app or dashboard.

Evaluation Method	*Description / Purpose*
Attendance Monitoring	Recorded twice daily; minimum 80% attendance required for certificate eligibility. Medium/Mode: The attendance list may be circulated amongst participants through hard copies, Google forms or the host institute's app or dashboard.
Daily Recapitulation & Feedback	Facilitator-led recaps of previous day sessions address queries and improve teaching methods.
Field Exercises & Visits	Practical exercises and field visit outcomes are assessed through presentations and discussion, evaluating skill application.
Questionnaires & Feedback Forms	Includes session-wise feedback and overall course evaluation covering content, resource persons, exercises, field visits, demonstrations, logistics, and food quality.
Final Review & Recommendations	Summarizes findings, evaluates course effectiveness, and provides recommendations for sustaining and expanding DRM initiatives.
Follow-Up Assessments	Conducted quarterly for one-year post-training to monitor performance, capacity-building outputs, behavioral changes, and contributions in disaster management.

2.5 Guidance Notes for organising the training

Table 5: Guidance Notes for organising the training

Phases	*Key Tasks / Checklist*
Preparatory phase (timeline-3 months)	
Planning stage (2 weeks)	• Form an organizing team: coordinator, co-coordinators, academic, logistics, content. • Preparation of a Concept Note (theme, objectives, scope, audience, duration, outcomes). • Establish selection criteria of trainees based on professional needs and organizational mandate. • Develop programme schedule (topics, sessions, faculty, and evaluation points).
Coordination stage (2-6 weeks)	• Send nomination letters and concept note to relevant organizations. • Request gender-balanced and inclusive nominations. • Coordinate with the organizations for suitable nominations. • Make an online group for coordination with participants. • Share training course outline and background reading. • Collect participant details: work experience, learning objectives, and special needs. • Administer pre-training assessment questionnaire. • Ensure training venue accommodates full-group and small-group activities. • Review participant profiles and expectations. • Prepare training materials: presentations, slides, handouts, flip charts, resource lists. • Assemble training kits for participants (concept note, timetable, stationery, logistics, and participant list).
Before training (Two days before)	• Test all technical equipment: lighting, adapters, plugs, laptops, projectors. • Verify all digital content and documents are compatible. • Use laptops with LCD projectors to minimize technical issues.

Phases	*Key Tasks / Checklist*
	Delivery Phase
During the training	• Facilitation of the training as per the programme schedule • Evaluation and certification
	Post-training Phase
Collection & Analysis of Participant Feedback	• Gather feedback forms or survey responses evaluating training quality, relevance, and learning outcomes. • Analyze to identify strengths, gaps, and opportunities for improvement.
Preparation of Training Report	• Summarize objectives, day-wise proceedings, participation, outcomes, and recommendations to document the event for stakeholders and future reference. • Ensures comprehensive coverage and transparency.
Dissemination of Training Outcomes	• Share key findings, lessons learned, and results with participants, partners, and authorities via presentations, emails, or meetings to enhance organizational learning and accountability.
Follow-Up or Refresher Sessions	• Design and facilitate targeted refresher courses/ short e-learning modules or videos for continuous professional development.
Impact Assessment / Evaluation	• Compare pre-training and post-training assessments to evaluate effectiveness and contribution to organizational goals.
Training Needs Assessment for Future Courses	• Utilize insights from pre- and post-training assessments to guide the development of a Training Needs Assessment (TNA), informing the design of future training programmes.

Chapter 3
Submodule 01- Basics of Disaster Management and Climate Change

The first Submodule will provide the foundational knowledge and skills essential for effective learning throughout the remaining Submodules of the programme. It will familiarize participants with the course structure, learning sequence, and overall expectations. It includes orientation activities, ice-breaking sessions, and pre-training assessments to facilitate continuous feedback and support outcome-based learning. The module will further cover the fundamental concepts of disaster management, the disaster management cycle, and an overview of disasters as well as impacts of climate change in India. Group activities such as ice-breaking exercises and role-play exercises on Do's and Don'ts during disasters will reinforce key concepts and encourage active participation.

3.1 Introduction

Disaster Management encompasses all phases of disaster management including-prevention, mitigation, preparedness, response and recovery, to minimise the adverse effects of natural and human-induced hazards. As disasters often overwhelm the coping capacity of affected communities, disaster management aims to build resilience by reducing vulnerabilities, strengthening institutional capacities and ensuring timely and efficient response mechanisms. Through this training, participants will learn that disaster management is not limited to

emergency response; but requires continuous and integrated actions before, during and after disasters.

This submodule will emphasize the need of adopting risk reduction strategies such as climate resilient infrastructure, early warning systems, community participation and sustainable development practices for reducing the disaster risks. Knowledge of these strategies will prepare participants to integrate climate considerations into disaster management planning effectively, making vulnerable regions more disaster-resilient in the future.

3.2 Learning Objective

To develop an understanding of the basic concepts, principles, phases of the DM cycle and impacts of climate change in India.

3.3 Session outline under this module

This module will include four sessions for delivering the contents, as follows:

1. Introduction and Ice-Breaking Session
2. Overview of Prevailing Disasters, Extreme Events, and Climate Change Events in India
3. Understanding of basic concepts and the Disaster Management Cycle
4. Group Activity 1– Role Play Activity based on Do's and Don'ts of various disasters

3.4 Expected Outcome

Participants will understand the dynamics of prevailing disasters, extreme events, and climate change phenomena in India; the key stages of the Disaster Management Cycle; and the appropriate actions for disaster preparedness and response.

3.5 Session-wise Facilitator's notes

The estimated time required for all the session is about 270 min. (4 hours and 30 min.). The technical session-wise facilitator's notes are as given below:

3.5.1 Introduction and Ice-Breaking Session

Ice-breaking activities are designed to encourage interaction among participants at the start of the training, helping to build rapport and foster a collaborative environment. These activities promote trust and create a positive atmosphere for learning. This opening session is important, as it sets the tone for the entire

programme and should be planned carefully. It allows participants to introduce themselves, share their experiences, and express what they expect from the training. It also gives the course coordinator a chance to explain the purpose and objectives of the programme, go through the agenda, and establish basic ground rules for smooth participation.

Key features

Duration: 45 min. (0.75 hours)
Objectives: • To build communication, trust, and comfort among participants • To introduce the course purpose, objectives, agenda, and ground rules
Materials Needed • Flip chart / Whiteboard/ Laptops • Markers
Facilitator Tips • Promote open and respectful sharing • Keep the atmosphere friendly yet focused on disaster management • Note participant inputs for linking experiences with theory

The table below outlines two ice-breaker exercises that can be used at the beginning of the training session. Each activity is presented with clear steps and time allocations to help the facilitator organize the session smoothly and engage participants effectively.

Table 6: Ice-breaker Exercises – Steps and Activities

Ice-Breaker Exercise	*Step*	*Activity Description*	*Time*
Exercise 01	Step 1	Briefing by the course coordinator / facilitator highlighting an overview of the programme and the session	05 min
	Step 2	Group Formation: Divide participants into groups of 5–7 using count-off or pre-assigned numbers; assign creative/disaster-related group names; groups sit/stand together in circles.	05 min

Ice-Breaker Exercise	*Step*	*Activity Description*	*Time*
	Step 3	Team-Building & Networking: Groups prepare short biographies of members; each group introduces their team; promoting interaction, listening, and trust-building for collaborative learning.	05 min
Exercise 02	—	Simple introductions within groups; suitable for 35–50 participants.	05 min
	Step 1	Group selects a Team Leader (TL) and Co-Leader (CL); facilitator provides three discussion questions (Box 01).	—
	Step 2	Individual Sharing: Each member responds to all three questions (1–2 min. each); TL/CL manages time and facilitates.	15 min
	Step 3	Group Sharing with Plenary: Each group presents key takeaways or insights from the discussion.	10 min
	Step 4	Facilitator Summary: Highlight diversity of risks, themes, and relevance across regions and roles.	—

3.5.2 Overview of Prevailing Disasters, Extreme Events, and Climate Change Events in India

This session will provide an overview of India changing disaster risks. It will explain how traditional hazards like floods, heatwaves, cyclones, and landslides are becoming more frequent and severe, along with newer threats such as urban flooding, GLOFs, and forest fires. Moreover, it will also showcase how climate change is increasing these risks. Using information from sources like the IPCC and IMD, it will highlight that extreme weather events are now happening more often and more intensely, with a reported 40% rise in disasters over the last decade.

Objectives:

- To introduce participants to the common types of disasters, extreme weather events, and climate change-related events prevalent in India.

Suggestive questions for Ice-breaking Session

This activity will help participants to understand the difference between risk and preparedness. Suggestive questions for introducing concepts of hazards, vulnerability, preparedness, and resilience are as given below:

- Linking Personal Experience to DRM (Focus: Recognition of Hazard)
  a. What disasters or hazards are most common or impactful in their region?
  b. If you had to immediately warn a new neighbour about the most likely significant hazard in your city/region (e.g., flash flood, heatwave, seismic activity, industrial accident, etc.), what would it be?
  (Immediately identifies the local risk landscape and the different concerns of the participants.)
  c. Briefly describe a time you felt genuinely caught off-guard or unprepared by a sudden event (it could be weather, power outage, or a minor office crisis). What was the biggest lesson you took away?
  d. Share one personal or professional experience related to a disaster or emergency.
  (Introduces the concepts of preparedness and vulnerability through a non-disaster personal story.)
  e. Other than your mobile and wallet, what is the single most essential non-perishable item you would grab to keep yourself and your family comfortable for the first 72 hours if you had to evacuate your home immediately?
  (Puts them in a practical, planning mindset and links directly to emergency kit concepts.)
- Focusing on Resilience & Teamwork (Focus: Community & Systems)
  a. Outside of formal government agencies, who or what (e.g., a community group, a specific skill of a neighbour, a local business) do you think is the strongest "pillar of resilience" in your immediate community?
  (Focuses on social capital and community resilience, which is a core theme in DRR.)
  b. What is one skill or piece of knowledge you possess (personal or professional) that you believe would be surprisingly useful to a group of colleagues facing a crisis? (e.g., first aid, map reading, calming people down, finding resources online, fixing things).
  (Highlights the diverse capabilities within the training group, fostering respect and reliance on each other's expertise.)
  c. If you had to summarize what "resilience" means to you in the context of a disaster, using just one word, what would it be? (e.g. adaptation, learning, unity, strength, speed).
  (A quick and easy starter that provides a great word cloud/collective definition for the training to build upon.)

- To explain the fundamental concepts of disaster management and its cyclical phases.
- To enable the learners to recognize the interconnections between climate change and the increasing frequency and intensity of disasters.
- To develop an understanding of appropriate actions to take before, during, and after a disaster by identifying and applying "Do's and Don'ts" for various events.
- To explain the need for proactive planning and community-based approaches in disaster risk reduction.

Key Features:

Duration: 75 min. (1.25 hours)

Objectives

- To build awareness of India's disaster profile through key past and recent events.
- To highlight how environmental changes influence disaster risks and the need for proactive adaptation.

Materials Needed

- Flip chart / Whiteboard
- Markers

Facilitator Tips

- Promote open and respectful sharing
- Keep the atmosphere friendly yet focused on disaster management
- Note participant inputs for linking experiences with theory

Method Used

- Interactive lecture using PowerPoint presentation
- Discussion
- Question & Answer Session

Key approach elements for the facilitator

- Promote active participation by encouraging discussions, group activities, and the sharing of disaster-related experiences.
- Incorporate case studies and recent events to make concepts relatable and easier to understand.
- Adapt the content and level of detail to the participants' backgrounds and experience for better clarity and relevance.
- Use visual aids such as presentations, hazard maps, and infographics to communicate key concepts effectively.
- Highlight practical strategies such as hazard zoning, risk mapping, early warning systems, and nature-based solutions to improve understanding of disaster risk reduction.

Expected Outcome

Participants will understand the growing risks posed by climate change and cascading hazards. They will also be equipped with knowledge of causes, actions, and the need for planning to strengthen future disaster preparedness and resilience.

3.5.3: Understanding of Disaster Management and its Cycle

This session will provide an overview of the disaster management cycle, explained as a continuous process consisting of four phases: mitigation, preparedness, response, and recovery. It will also emphasize that all phases are interconnected and that effective disaster management requires proactive planning and continuous improvement, not just reactive measures.

Figure 3: Disaster management cycle

Source: UNDRR, 2022

Key Features

Duration: 75 min. (1.25 hours)

Objectives

- To equip participants with a fundamental understanding of disaster management principles and the interconnected stages of the disaster management cycle.

Materials Needed • Flip chart / Whiteboard • Markers
Facilitator Tips • Promote open and respectful sharing • Keep the atmosphere friendly yet focused on disaster management • Note participant inputs for linking experiences with theory
Method Used • Interactive lecture using PowerPoint presentation • Discussion, Video clips, Infographics • Question & Answer Session

Expected Outcome

By the end of the session, participants will be able to connect theory with practice, recognizing how timely investments and coordinated action across sectors can reduce losses and support faster recovery.

3.5.4 Group Activity 1- Role Play based on Do's and Don'ts of various disasters

This session helps participants to learn disaster preparedness and response through role-play. The activity turns theory into practice by acting out real-life emergency situations such as earthquakes, floods, cyclones, fires, and landslides. The detailed Suggestive Group Activities for session are placed at Annexure-V. The role-play activity overview is as follows:

Table 7: Role Play Activity based on Do's and Don'ts of various disasters

Section	*Description*
Introduction	Facilitators give a short briefing on the purpose of the activity and the importance of safe behaviour during disasters.
Group Formation	Participants will form small groups. Each group gets one disaster scenario from the Do's and Don'ts booklet. Members will take roles like community members, first responders, volunteers, or local authorities.

Section	*Description*
Role-Play (5–7 min.)	Groups will prepare a short enactment showing correct actions during and after the disaster. They may also show common mistakes for later discussion.
Facilitator Focus	Facilitators will observe teamwork, communication, leadership, and decision-making under pressure.
Debrief & Reflection	After each role- play, facilitators will lead a discussion on what went well, what can be improved, and how it relates to real disaster situations.
Learning Tools	Flip charts, whiteboards, or visual aids can be used to highlight key safety messages.
Learning Environment	Facilitators will ensure a positive, engaging, and participatory space where everyone can learn and share.

Key Features

Duration: 60 min. (1 hour)

Objectives

- To help participants practice disaster preparedness through interactive role-play simulating real emergencies.
- To improve understanding of key safety protocols and strengthen decision-making under pressure.

Materials Needed

- Flip chart / Whiteboard
- Markers

Facilitator Tips

- Conduct a group activity to promote open and respectful sharing
- Keep the atmosphere friendly yet focused on disaster management
- Note participant inputs for linking experiences with theory

Handouts

- NIDM's Do's and Don'ts for common disasters booklet

Expected Outcome

The session is expected to equip participants with a practical understanding of readiness, enabling them to appreciate the roles of various stakeholders to respond to disasters more effectively while fostering collaborative problem-solving skills.

3.6 Suggested Web-links

- *https://bmtpc.org/topics.aspx?mid=56&Mid1=180*
- *https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf*
- *https://nidm.gov.in/journal/PDF/Journal/1_Dec_2012/1_Dec_2012e.pdf*
- *https://www.un.org/sites/un2.un.org/files/unsg_call_to_action_on_extreme_heat_for_release.pdf*
- *https://www.ipcc.ch/report/ar6/wg2/*
- *https://nidm.gov.in/PDF/Disaster_about.pdf*
- *https://www.mha.gov.in/sites/default/files/NPDM-101209.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/LBSNAA/JSPP_NDMA.pdf*
- *https://egyankosh.ac.in/bitstream/123456789/25910/1/Unit-2.pdf*
- *https://cbseacademic.nic.in/web_material/publication/archive/natural%20hazards%20&%20disaster%20management.pdf*

Chapter 4:
Submodule 02-
Global Policies and Institutional Framework

4.1 Introduction

Global policies and institutional frameworks form the backbone of effective disaster risk management in the country. Participants will learn about major international frameworks like the Sendai Framework for Disaster Risk Reduction (2015-2030), which will emphasize on reducing disaster risk through understanding hazards, enhancing governance, investing in resilience, and preparing for effective response and recovery to "Build Back Better." This module will highlight how these global agendas align with the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change, reflecting a unified commitment to sustainable, resilient development. The module further examines India's institutional framework under the Disaster Management Act, 2005, explaining the roles of the national, state, and district disaster management authorities. Special focus will be placed on horizontal and vertical convergence mechanisms, including coordination between SDMAs/DDMAs and line departments, integration with development planning instruments such as State Plans and State Action Plan on Climate Changes (SAPCCs), and alignment with sectoral policies, such health, urban development, irrigation, transport, and environment. This will help participants to understand how institutional coordination strengthens disaster risk governance and implementation.

4.2 Learning Objectives

- To understand and analyse the key principles of global disaster risk reduction frameworks.
- To familiarize participants with the legal and institutional frameworks governing disaster management in India

4.3 Session Outline under this submodule

Three sessions are planned for delivering the Submodule, namely:

1. Global and National Disaster Risk Reduction Frameworks
2. Legal and Institutional Frameworks of Disaster Management in India
3. Awareness Activity 1- Short Films - After Shock by SRM University; and Stay back by Mizoram University (Awarded films by NIDM)

4.4 Expected Outcome

By the end of this submodule, participants will master the core principles of the Sendai Framework for Disaster Risk Reduction and thoroughly understand its crucial alignment with global agendas such as the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change. Participants will be familiar with India's foundational legal structure, specifically the Disaster Management Act, 2005, and will understand the institutional coordination required among the national, state, and district disaster management authorities. This comprehensive knowledge will provide them with the capacity to contribute effectively to disaster policy-making and implementation processes, thereby fostering innovation and driving resilient development efforts.

4.5 Session-wise Facilitator's notes

The estimated time required for above session is about 180 min. (3 hours). The technical session-wise facilitator's notes are as given below:

4.5.1. Global Disaster Risk Reduction Frameworks

The facilitator should introduce the key global frameworks for disaster risk reduction and explain how these guidelines will help in effective disaster management. The discussion that follows will explore the gap between global policies and local implementation, highlighting the challenges faced by different states/UTs across the country. The session will also focus on adapting global principles that suit to local needs and contexts.

Key Features of the Session

Duration: 75 min. (1.25 hours)
Objective • To enable participants to comprehend and analyze the key principles, priorities, and targets of the global disaster risk reduction framework.
Materials Needed • Flip chart / Whiteboard • Markers & Case Studies/Best Practices
Method Used • Interactive lecture using PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Emphasize the purpose and relevance of major global DRR frameworks.
- Clearly link global principles to practical disaster management actions.
- Guide participants in understanding the gap between global policies and local practice.
- Highlight state-specific challenges within India to encourage contextual thinking.
- Encourage discussion on adapting global frameworks to local needs for better outcomes.

Expected Outcome

By the end of the session, participants will learn how to adapt global principles to local needs for more effective disaster risk reduction.

4.5.2 Legal and Institutional Frameworks of Disaster Management

The facilitator should explain the Disaster Management Act, 2005, and NDMA, SDMAs, and DDMAs as the main institutions for disaster governance in India. Other important bodies like NDRF and NIDM should also be introduced. The session should highlight the need for coordination across all administrative levels and the importance of integrating disaster risk reduction into regular development planning. Short discussions or examples may be used to help participants understand institutional roles and community involvement in disaster management.

Key Features

Duration: 75 min. (1.25 hours)
Objectives • To help participants understand India's legal and institutional frameworks for disaster management. • To strengthen their ability to support proactive disaster risk management across all administrative levels.
Materials Needed • Flip chart / Whiteboard • Markers & Case Studies/Best Practices
Method Used • Interactive lecture using PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Emphasize the Disaster Management Act, 2005, as the legal foundation for disaster governance.
- Explain the DM related institutional framework and its hierarchical structure.
- Stress the importance of coordination across all administrative levels.
- Show how disaster risk reduction can be integrated into development planning.
- Encourage understanding of community engagement and local-level implementation.
- Use examples and discussions to link legal frameworks and institutional roles to practical disaster management.

Expected Outcome

Participants will understand the legal framework of disaster management in India and the roles of key institutions such as NDMA, SDMAs, DDMAs, NDRF, and NIDM. They will recognize the importance of coordination across administrative levels and integrating disaster risk reduction into development planning. By the end of the session, participants will have a clear understanding of how India's disaster management system functions.

4.5.3 Awareness Activity 1 – Short Film Screening

The facilitator can showcase disaster-management-related short films such as "After Shock" (SRM University) and "Stay Back" (Mizoram University), illustrating

disaster impacts and the need for preparedness, and community resilience. After screening the films, guided discussions should be conducted to reflect on the narratives, content, and lessons learned. The facilitator should emphasize the human dimension behind disasters, encourage sharing of personal insights, and connect the stories to local contexts. Attention should also be given to the role of educational institutions in promoting disaster awareness. Questions and exchanges should be facilitated to reinforce how media and visual storytelling can enhance understanding and proactive behavior in disaster risk reduction.

Key Features

Duration: 30 min. (0.5 hours)
Objectives • To improve participants' understanding of disaster management through short films on real-life disasters and community resilience. • To promote reflection, proactive attitudes, and knowledge sharing for effective disaster risk reduction and response.
Materials Needed • Audio-visual aids • Smart screens
Method Used • Screening of selected short films • Group Discussion • Question & Answer Session

Key approach elements for the facilitator

- Visual storytelling effectively conveys the human impact of disasters.
- Short films can deepen empathy and engagement in disaster education.
- Participants learn the importance of disaster preparedness, response, and community resilience.
- Educational institutions play a critical role in promoting awareness and a culture of safety.
- Relating film narratives to local contexts enhances relevance and practical application.
- Media can be a powerful tool to develop proactive attitudes and enhance sharing of knowledge on DRR.

Expected Outcome

Participants will understand how disasters affect people and the importance of being prepared. They will develop empathy for those affected and see how education can help build a culture of safety. By the end of the session, participants will be encouraged to use the lessons from the films in their own communities to improve disaster preparedness and response.

4.6 Suggested Handouts/Web-links

- *https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030*
- *https://www.unicef.org/disaster-risk-reduction-and-recovery*
- *https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf*
- *https://ndmindia.mha.gov.in/ndmi/npdrr-constitution*
- *https://www.mospi.gov.in/sites/default/files/publication_reports/SDG-NIF-ProgressReport-FullFile-v4N.pdf*
- *https://www.niti.gov.in/sites/default/files/2024-07/SDG_India_Index_2023-24.pdf*
- *https://ndma.gov.in/national-dm-policy*
- *https://ndmindia.mha.gov.in/ndmi/images/262126.pdf*
- *https://ndmindia.mha.gov.in/ndmi/images/262343.pdf*
- *https://ndmindia.mha.gov.in/ndmi/viewUploadedDocument?uid=NEW732*
- *https://ndma.gov.in/Reference_Material/PM_Ten_Agenda*
- *https://nidm.gov.in/pdf/pubs/hpc_report.pdf*
- *https://youtu.be/f5G0FFhW2B4?si=ki53Amd2swcOGMNy*
- *https://youtu.be/tM0Yq120ZyA?si=y_4rjjysHyISddES*
- *https://youtu.be/f-cOHiXfGNU?si=OjwWPu52icCc758b*
- *https://youtu.be/PQToQqBCNEk?si=fK0RowzBahz7vNTR*
- *https://youtu.be/HwByN-npGqE?si=hWOpxx57dIRvbiHO*

Chapter 5
Submodule 03- Risk Assessment, Disaster Management Planning and Role of Technology

This chapter outlines the contexts like risk assessment, disaster management planning, and the use of technology in disaster resilience. It covers steps and tools for multi-hazard risk assessment. Participants will learn to develop comprehensive disaster management plans for communities with defined objectives and stakeholder roles. The submodule will also highlight the use of technologies such as GIS, remote sensing, drones, and satellite-based disaster databases, which can be used for issuing early warnings, risk assessment, and damage & loss assessment. Case studies and practical exercises will demonstrate how these tools support informed decision-making for effective disaster risk reduction.

5.1 Introduction

Risk assessment and disaster management planning are essential components for building community resilience and minimizing the impact of natural and human-made hazards. This submodule provides a comprehensive overview of the processes involved in identifying risks, analyzing vulnerabilities, and developing disaster management plans to effectively prepare for, respond to, and recover from disasters. Participants will gain practical knowledge about the tools to conduct scale-appropriate risk assessments. This may include hazard-specific scale suitability such as earthquake risk at regional scale, floods at basin/ district

scale, urban flooding at ward/ ULB scale, etc. It will provide a scientific basis to develop risk maps for robust disaster management plans that integrate modern technologies and best practices. This submodule attempts to enable learners who in turn can help prepare communities capable of managing evolving disaster risks.

5.2 Learning Objectives

- To enable participants to understand, analyze, and map complex risks involved in interacting hazards at various scales.
- To familiarize participants with the various qualitative & quantitative methods, tools, and technologies employed in risk assessment.
- To enable participants to understand the steps involved in the preparation of a Disaster Management Plan (DMP).

5.3 Session Outline under this Submodule

This module will include sessions for delivering the contents, as follows:

1. Hazard Vulnerability Capacity Risk Assessment (HVCRA) Framework
2. Multi-Hazard Risk Assessment and Step-by-Step process and overview of Disaster Management Support (DMS) Programme
3. Quantification of risk (probabilistic & deterministic approach), use of historical loss databases, and scenario-based risk assessment
4. Linkages of risk outputs with prioritizations of mitigation actions and preparation of disaster management plan
5. Group Activity 2 – Identify different sets of indicators for multi-hazard risk assessment in a community/ school/ hospital/ institution

5.4 Expected Outcome

Participants will familiarize themselves with using appropriate tools and technologies, conduct comprehensive flood risk assessments, and apply the HVCRA framework to identify multi-hazard risk indicators in diverse settings.

5.5. Session-wise facilitator's notes

The estimated time required for this session is 375 min. (6 hours and 15 min.). The technical session-wise facilitator's notes are as given below:

5.5.1 Preparation of Disaster Management Plan

The facilitator will guide learners on the various steps involved in the preparation of a disaster management (DM) plan covering contextual risk factors, government guidelines, HVCRA tools, and cross-cutting issues. The participants will be equipped to set clear objectives covering mitigation, preparedness, response, and recovery phases and establish roles and responsibilities of all the stakeholders, as envisaged in NDMA guidelines and the DM Act, 2005 and as amended. The participants will learn on prioritising risk while developing an action plan (phase-wise) and need to include regular review and updation of the plan to incorporate lessons learned.

Key Features

Duration: 75 min. (1.25 hours)
Objective • To enable learners to develop comprehensive disaster management plans that provide an actionable road-map for various phases of disaster management.
Materials Needed • Flip chart / Whiteboard • Markers & Case Studies/Best Practices
Method Used • Interactive lecture using a PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Explain the steps for preparing a Disaster Management (DM) Plan.
- Highlight contextual risk factors and relevant government guidelines.
- Introduce ~~HRVA~~ tools and cross-cutting issues that influence planning.
- Guide participants in setting clear objectives for mitigation, preparedness, response, and recovery.
- Clarify roles and responsibilities of all stakeholders as per NDMA guidelines and the DM Act, 2005 (and amendments).
- Help participants learn how to prioritize risks and develop a phase-wise action plan.

- Stress the importance of regular review, updating, and integrating lessons learned into the DM Plan.

Expected Outcome

Participants will be able to understand the complete process of preparing a disaster management plan, from analysing risks to setting objectives and defining stakeholder roles. They will gain the skills to prioritize key risks, organize actions across different phases of disaster management, and ensure that the plan remains updated and effective over time. This will enable them to contribute to stronger, more practical, and regularly improved DM plans in their respective institutions or communities.

5.5.2 Tools and Technologies for Risk Assessment in India

This session will introduce participants to the practical use of geospatial technologies in disaster management. The facilitator will briefly explain GIS, remote sensing, and drone applications, followed by a live demonstration of the National Database for Emergency Management (NDEM) portal. Simple visuals and real case studies will be used to make the concepts easy to understand. The facilitator should adjust the technical level based on participants' backgrounds and encourage questions for better clarity.

Duration: 75 min. (1.25 hours)

Objectives

- To introduce participants to the major tools and technologies used in India for risk assessment.
- To build their ability to apply geospatial, remote sensing, and data analytics techniques for effective disaster management.

Materials Needed

- Flip chart / Whiteboard
- Markers & Case Studies/Best Practices

Method Used

- Interactive lecture using a PowerPoint presentation
- Discussion
- Question & Answer Session

Key approach elements for the facilitator

- Support participants in understanding GIS, remote sensing, and drone applications through simple explanations and relatable examples.

- Create awareness about the NDEM portal by showing how it assists in real-time monitoring and planning.
- Enhance learning by sharing helpful visuals such as maps, satellite images, and drone outputs.
- Enrich the session with case studies from ISRO and NRSC to connect concepts with real-world use.
- Promote clarity by simplifying technical terms and adjusting the level of detail to match participant needs.
- Encourage open discussion and address practical challenges that participants may face while using geospatial technologies.

Expected Outcome

Participants will gain a basic understanding of how geospatial technologies support disaster preparedness, response, and recovery. They will learn how tools such as GIS, remote sensing, and drones improve decision-making and enhance disaster management operations. It will also help to understand how NDEM portal help in real-time monitoring and coordination.

5.5.3 Flood Risk Assessment and Step-by-Step process and overview of Disaster Management Support (DMS) Programme

This session introduces the DMS programme and its use of satellite data for flood management in India. Facilitators should explain key satellite data and analysis tools, including RISAT-1A, and share case studies such as the Godavari and Kosi-Ganga floods. A live demonstration of the Bhoonidhi and National Remote Sensing Centre (NRSC) portals will show real-time flood monitoring and data visualization. Flood Hazard Atlases and GIS visuals should be used to illustrate practical applications. The session should encourage interaction, simplify technical terms, and adapt content as per the participants' capacities for clear and actionable learning.

Duration: 75 min. (1.25 hours)

Objectives

- To enable participants to understand and apply the step-by-step process of flood risk assessment.
- To provide an overview of the Disaster Management Support (DMS) Programme and its role in improving flood monitoring and response.

Materials Needed

- Handouts (GIS maps, satellite imagery examples of flood events), flipcharts, markers, PowerPoint presentation with case studies, and access to Bhoonidhi Portal and NRSC Portal (ndem.nrsc.gov.in) for live demos.

Method Used

- Interactive lecture using a PowerPoint presentation
- Discussion
- Question & Answer Session

Key approach elements for the facilitator

- Explain the role of the DMS Programme in flood management using satellite data.
- Introduce key satellite tools, including SAR, optical imagery, and RISAT-1A.
- Present real-world flood case studies like the Godavari and Kosi-Ganga floods.
- Demonstrate the Bhoonidhi and NRSC portals for real-time monitoring and data visualization.
- Highlight the use of Flood Hazard Atlases and GIS for mitigation planning.
- Encourage participant interaction, simplify technical terms, and adjust content to varying expertise levels.

Expected Outcome

Participants will understand how satellite and remote sensing technology supports flood management from preparedness to recovery. They will be able to use geospatial data and portals to monitor floods, assess risks, and support informed decision-making. The session will also enhance their ability to use Flood Hazard Atlases and GIS tools for effective planning and mitigation, strengthening disaster preparedness and response in their areas.

5.5.4 Hazard, Vulnerability, Capacity, and Risk Analysis (HVCRA)

This session introduces participants to the HVCRA framework for conducting community-level disaster risk assessments. Facilitators will demonstrate both qualitative and quantitative approaches for better understanding. The qualitative approach includes participatory tools such as seasonality calendars, transect walks, Venn diagrams, problem trees, and capacity mapping to help communities identify hazards, vulnerabilities, and local capacities. However, the quantitative approach includes quantification of risk (probabilistic and deterministic), use of historical loss databases, and scenario-based risk assessment. It also involves linkages of risk outputs with prioritizations of mitigation actions. This portion also involves real-world examples from Sikkim, Kerala, Himachal Pradesh, or any other states/UTs will illustrate how HVCRA methods can be adapted to local contexts. Participants

that will also engage in group exercises to prepare HVCRA profiles, enabling them to analyze community risks and capacities. The session will emphasize the integration of hazard, vulnerability, and capacity information to support the preparation of area-specific disaster management plans.

Duration: 75 min. (1.25 hours)
Objectives • To help participants understand HVCRA methodologies for disaster risk assessment at various levels. • To enable participants to apply participatory & analytical tools using practical examples and region-specific case studies.
Materials Needed • Handouts (case study), flipcharts, markers, PowerPoint presentation, sample maps, diagrams, and analytical worksheets/matrices.
Method Used • Interactive lecture using a PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Demonstrate participatory and analytical tools for HVCRA with clear explanations.
- Guide participants through practical exercises using seasonality calendars, transect walks, venn diagrams, problem trees, and capacity mapping.
- Use of historical loss databases and scenario-based risk assessment tools.
- Use real-world case studies from Indian states to contextualize the tools.
- Encourage group activities to promote hands-on learning and skill development.
- Showcase through visual aids like diagrams, charts, maps, and seasonal calendars for easy understanding.
- Emphasize the integration of hazards, vulnerabilities, capacities, and risks for comprehensive, community-based planning.
- Foster participant confidence in applying HVCRA methods.

Expected Outcome

Participants will gain practical skills and confidence to conduct systematic community-level disaster risk assessments using the HVCRA framework. They

will be able to apply participatory and analytical tools, develop risk profiles, and integrate hazard, vulnerability, and capacity information to support disaster risk reduction and resilience-building initiatives.

5.5.5 Group Activity 2 – Identify different sets of indicators for multi-hazard risk assessment in a state/ district/ community/ school/ hospital/ institution

This session develops participants' practical understanding of multi-hazard risk assessment by engaging them in identifying indicators for HVCRA in settings like schools, hospitals, and offices. The facilitator will start with a brief 10–15-minute introduction to HVCRA and example indicators. Participants will then work in small groups to identify hazard, vulnerability, and capacity indicators for assigned institutional contexts, using tools like flipcharts, diagrams, or problem trees. Each group will present their findings, followed by facilitator feedback emphasizing clarity, relevance, and practicality. The session will conclude with a plenary discussion on key themes and lessons learned, highlighting participatory approaches, localized data collection, and real-world examples to reinforce applied learning. The detailed Suggestive Group Activities for Ice-Breaking Session at Annexure-V.

Duration: 75 min. (1.25 hours)
Objectives • To help participants identify key indicators for multi-hazard risk assessment. • To enable participants to apply these indicators in assessing risks in a community, school, hospital or institution.
Materials Needed • Handouts on case studies, flipcharts, markers, PowerPoint presentations, etc.
Method Used • Interactive lecture using a PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Guide participants to link indicators with real-life community or institutional conditions.
- Promote teamwork and cross-group discussions to develop comprehensive indicator sets.
- Ensure indicators are measurable, realistic, and relevant to local risk scenarios.

Expected Outcome

Participants will be able to identify and classify multi-hazard risk indicators, apply HVCRA tools effectively, and use indicator-based assessments to support informed disaster management and resilience planning.

5.6 Suggested Handouts/Web-links

- *https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf*
- *https://nidm.gov.in/PDF/Modules/Handbook%20Labour_NIDM24.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines_for_Preparation_of_DMP_for_Ministry-Departments_of_Govt._of_India.pdf*
- *https://nidm.gov.in/PDF/Modules/Handbook%20Labour_NIDM24.pdf*
- *https://nidm.gov.in/PDF/guidelines/sdmp.pdf*
- *https://nidm.gov.in/PDF/modules/village.pdf*
- *https://nidm.gov.in/safety_earthquake.asp*
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- *https://nidm.gov.in/PDF/modules/flood.pdf*
- *https://nidm.gov.in/PDF/IEC/flood-15.pdf*
- *https://ndem.nrsc.gov.in/#/*
- *https://nidm.gov.in/PDF/pubs/Book_Archival%20Record%20Flood_2025.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/flood.pdf*
- *https://www.preventionweb.net/files/51114_capramethodsinfloodhazardandriskass.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/LBSNAA/HRVCA_NIDM.pdf*
- *http://www.hpsdma.hp.gov.in/Images/Building%20Vulnurability%20Assessment%20Technical%20Paper.pdf*
- *https://sdma.kerala.gov.in/wp-content/uploads/2018/11/HVATvm2016.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/NDMA%20DDMP%20Framework.pdf*

Chapter 6
Submodule 04- Understanding Disaster Mitigation

This chapter outlines the concept and importance of disaster mitigation, emphasizing proactive measures to reduce vulnerabilities and enhance resilience before disasters occur. It covers both structural strategies, such as flood control systems, earthquake-resistant buildings, and cyclone shelters, and non-structural approaches, including land-use planning, public awareness, and institutional capacity building. The submodule highlights how mitigation differs from response and recovery, focusing on prevention and long-term risk reduction. Participants will also explore the role of modern technologies in evidence-based decision-making and learn how to integrate mitigation funding into development planning in order to promote sustainable & resilient communities.

6.1 Introduction

Disaster mitigation involves proactive actions aimed at reducing vulnerabilities and building resilience against natural and human-induced hazards. It focuses on prevention and long-term risk reduction, unlike response or recovery. Mitigation strategies include structural measures such as flood control systems, earthquake-resistant buildings, and cyclone shelters, as well as non-structural approaches such as land-use planning, public awareness, updated building codes, and strengthened institutional capacity. Understanding hazards, exposure, and social vulnerabilities is key to effective planning. Integrating mitigation into development planning and using tools like IMD's meteorological forecasting and early warning systems enables

evidence-based decisions and development of human settlements. The submodule emphasizes the prioritisation of mitigation projects based on risk assessment findings and the identification of funding gaps that cannot be addressed through regular budgetary allocations. It highlights the importance of mainstreaming Disaster Risk Reduction (DRR) into flagship development programmes and schemes, ensuring that risk-informed planning becomes an integral part of development processes.

The submodule will also guide participants on translating mitigation priorities into implementable project proposals, enabling ministries, states, and districts to develop structured initiatives aligned with identified hazards. The participants will be oriented towards the available GoI's financing windows, including the National Disaster Response Fund (NDRF), State Disaster Response Fund (SDRF), National Disaster Mitigation Fund (NDMF), & State Disaster Mitigation Fund (SDMF). They will also be familiarized with the process of project preparation for using the available funding windows of GoI.

6.2 Learning Objectives

- To understand disaster risk mitigation and its significance in the context of resilient infrastructure.
- To learn different structural and non-structural mitigation measures for reducing risks of major disasters.

6.3 Session Outline under this submodule

Eight sessions are planned for delivering the Submodule. The details are as given below:

1. Resilient Infrastructure
2. Awareness Activity 2- Quiz on Disaster Management
3. Earthquake Risk Mitigation
4. Group Activity 3- DM Planning – Identification of different issues and mitigation solutions
5. Urban Flooding- Causes and Mitigation Strategies
6. Cyclone Risk Mitigation- Case Studies
7. Digital Tools for Disaster Management- Demonstrations
    - Demo 1- Use of Sachet App and Common Alerting Protocol (CAP)
    - Demo 2- NDMIS Portal- MHA
    - Demo 3- IDRN online platforms and other portals managed by NIDM
    - Workshop Mode Sessions- IMD and NCS

6.4 Expected Outcome

Participants will be able to apply their knowledge of disaster risk mitigation and use ICT tools and communication systems effectively. They will also be able to collaborate with institutions and communities to strengthen resilience and reduce the impact of future disasters.

6.5 Session-wise Facilitator's notes

The estimated time required for this session is 525 min. (8 hours and 45 min.). The technical session-wise facilitator's notes are as given below:

6.5.1 Resilient Infrastructure

This session will introduce participants to the need for and global efforts for infrastructure resilience, including advocacy, training, and technical support. Facilitator should explain that resilience includes adaptive design, reliable service delivery, and proper maintenance. These measures help keep infrastructure functional during disasters and climate impacts like floods, cyclones, and rising sea levels. Participants will learn to use tools to assess vulnerabilities and plan effectively. The session will cover service reliability aspects for both physical infrastructure and social infrastructure. Visual aids and group discussions will help participants understand resilience as a long-term, practical approach.

Key features

Duration: 75 min. (1.25 hours)
Objective • Build participants' capacity for resilient infrastructure against climate and disaster risk.
Methods Used • Interactive lecture using a PowerPoint presentation • Discussion • Question & Answer Session

Key approach elements for the facilitator

- Introduce the concept and importance of infrastructure resilience.
- Highlight core components: adaptive design, maintenance, and service reliability.
- Demonstrate risk assessment and planning using tools.
- Illustrate strategies with real-world examples and case studies.

- Use interactive discussions and use visual aids for better understanding.

Expected Outcome

Participants will gain a clear understanding of infrastructure resilience, learn to assess risks using tools like GIRI, and apply insights from case studies to plan and implement sustainable, and disaster-resilient infrastructure.

6.5.2 Awareness Activity 2- Quiz on Disaster Management

The session should create a fun, inclusive, and participatory environment, emphasizing that the quiz is for learning, not assessment. Facilitators should balance easy and challenging questions to encourage participation and critical thinking, promote teamwork, and use discussions for collective learning. Answers should include brief explanations to clarify concepts and correct misconceptions. Visuals like images, infographics, or short case scenarios can make the quiz interactive and practical. Key topics such as mitigation, preparedness, response, recovery, and the roles of institutions like NDRF, IMD, and NDMA should be highlighted throughout to reinforce disaster management knowledge.

Duration: 60 min. (1 hour)
Objectives • To assess and strengthen participants' understanding of disaster risks, preparedness, response strategies, and institutional mechanisms. • To encourage active learning and engagement through interactive activities and discussions.
Materials Needed • PowerPoint presentation, flash cards, audio-visual tools.
Method Used • Interactive lecture using a PowerPoint presentation • Question & Answer Session

Table 8: Session Structure

Session Segment	*Duration*	*Details*
1. Introduction	10 mins	• Explain the purpose of the quiz. • Divide participants into teams or individual participants. • Provide a brief overview of the quiz format such as MCQs, true/false, scenario-based.

Session Segment	Duration	Details
2. Quiz Rounds	40–45 mins	• Round 1 – General Awareness: Basic questions on disaster types, terminology, and global facts. • Round 2 – Preparedness & Mitigation: Questions on risk reduction, community preparedness, resilient infrastructure, and early warning systems. • Round 3 – Response & Recovery: Scenario-based or case study questions on emergency response, coordination, and recovery planning. • Round 4 – Audio/Visual Round: Show an image, video clip, or infographic and ask related questions to test applied knowledge.
3. Scoring & Feedback	10 mins	• Teams/individuals share answers, and scores are tallied. • The facilitator provides correct answers with brief explanations to reinforce learning.
4. Conclusion & Key Takeaways	5–10 mins	• Recap key points learned through the quiz. • Emphasize the importance of knowledge for effective preparedness and response. • Acknowledge participation and encourage continued learning.

Expected Outcome

Participants will learn by applying their knowledge through interactive questions, improve teamwork and discussion skills, and gain confidence in using key concepts and institutional roles for better disaster planning and response.

6.5.3 Earthquake Risk Mitigation

This session familiarizes participants with earthquake risk mitigation in India, combining scientific understanding with practical strategies. Facilitators should explain India's seismic zones, hazard micro-zonation, and the three key dimensions

of risk, including hazard, vulnerability, and exposure. The session will cover safe building practices, retrofitting techniques, and their practical applications. It will also highlight proactive strategies for both urban and rural areas, including enforcing building codes, effective land-use planning, and strengthening local capacity. Finally, the five-step mitigation framework, including typology, education, safety, practice, policy should be presented as a structured, actionable approach for comprehensive earthquake risk reduction.

Key Features

Duration: 75 min. (1.25 hours)
Objective • To provide participants with an understanding of India's seismic risk profile and the basic principles of earthquake risk analysis.
Materials Needed • Presentation, seismic zone and micro-zonation maps, and handouts on retrofitting techniques and building codes
Method Used • Interactive lecture using a PowerPoint presentation • Discussion on seismic risk mapping and mitigation • Illustrative case studies and Q&A

Key approach elements for the facilitator

- Explain India's seismic zones and hazard micro-zonation to visualize localized risks.
- Highlight the three dimensions of earthquake risk: hazard, vulnerability, and exposure.
- Demonstrate safe building and retrofitting methods using practical examples or models.
- Emphasize proactive strategies in urban and rural planning, including regulations and capacity building.
- Introduce the five-step mitigation framework for actionable earthquake risk reduction.
- Encourage participant engagement through discussions, visuals, and scenario-based learning.

Expected Outcome

Participants will learn about earthquake risks, safe construction and retrofitting, the importance of proactive planning, and how to apply the five-step mitigation framework to enhance resilience and safety.

6.5.4 Group Activity 3 - Disaster Management Planning – Identification of different issues and mitigation solutions

This session helps participants apply DM planning concepts to real- life situations. The facilitator should begin with a brief overview of DMP components: prevention, mitigation, preparedness, response, and recovery along with PDNA and BBB principles. Divide participants into groups and assign themes such as early warning, communication, coordination, logistics, health, or community engagement. Each group should analyse a recent disaster scenario and identify key issues, gaps, challenges, and practical solutions. They will present their findings, and the facilitator should guide the discussion, encourage feedback, and connect the ideas to actual planning practices.

Duration: 90 min. (1.5 hours)

Objectives

- To enable participants to identify key challenges in disaster response and recovery.
- To encourage development of mitigation and preparedness strategies within a DMP.
- To promote collaborative thinking to integrate risk reduction and resilience into planning.

Materials Needed

- Flipcharts, markers, and PowerPoint presentation
- Handouts: Sample DDMP template, PDNA Framework Summary, BBB Guidelines

Methods Used

- Group Activity / Participatory Discussion
- Case-Based Analysis
- Presentation and Feedback

Key approach elements for the facilitator

- Encourage participants to draw from real disaster experiences to make the planning exercise realistic and context-specific.

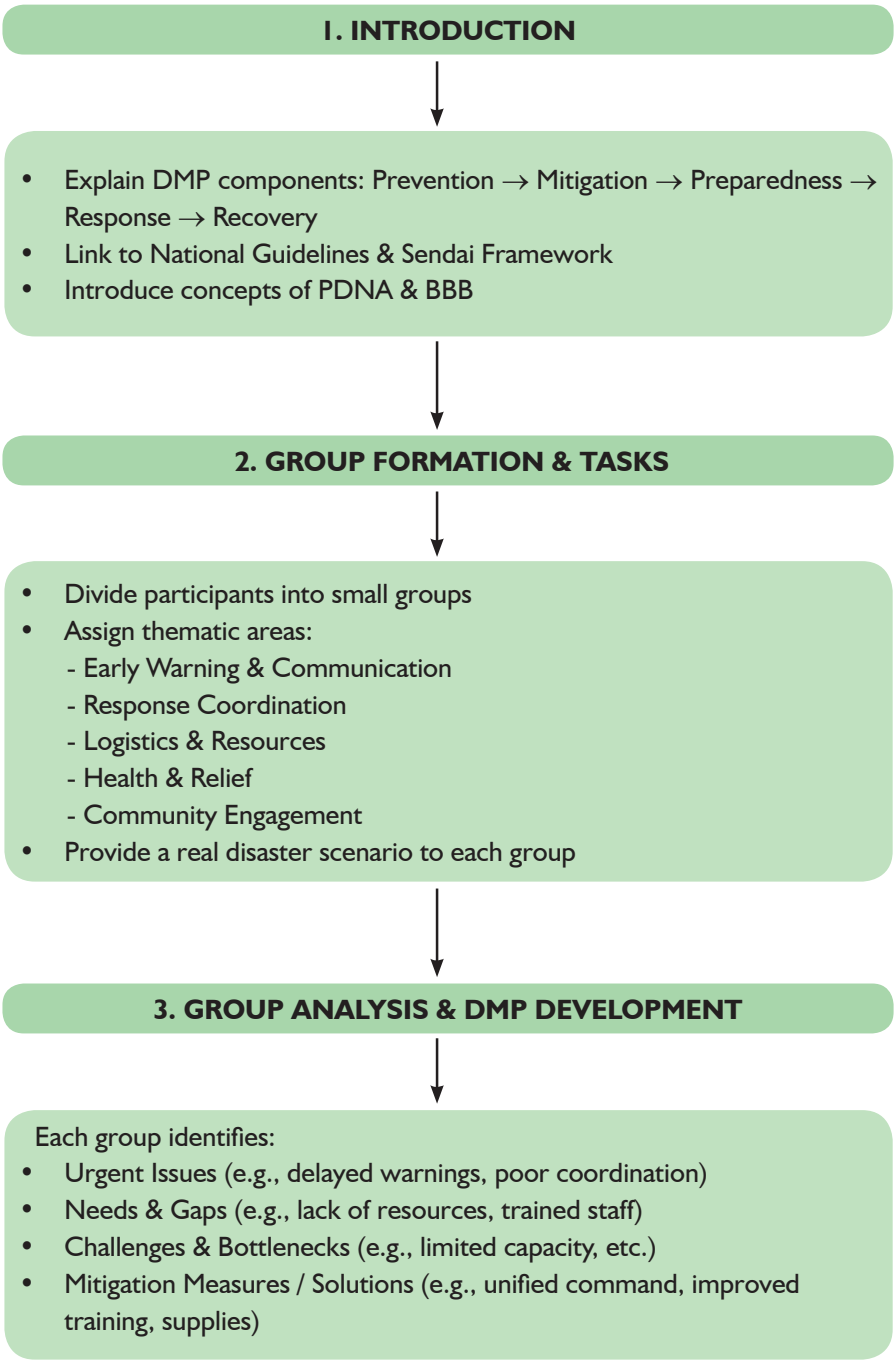

Figure 4: Disaster Management Planning – Identification of different issues and mitigation solutions

Source: Author interpretation

- Guide each group to clearly distinguish between issues, needs, and mitigation measures to ensure structured DMP formulation.
- Motivate participants to integrate community perspectives, gender considerations, and inclusion elements in their proposed plans.
- Emphasize the use of Post-Disaster Needs Assessment (PDNA) and Build Back Better (BBB) principles in developing actionable and sustainable solutions.

Expected Outcome

Participants will gain knowledge about effective strategic planning, enabling them to guide efforts that enhance local resilience and reduce the effects of disasters.

6.5.5 Urban Flooding: Causes and Mitigation Strategies

This session introduces participants to the causes, vulnerabilities, and solutions related to urban flooding in India. The facilitator should explain how unplanned urbanization, poor drainage, encroachment on water bodies, and climate-induced extreme rainfall increase flood risks in cities. Case studies such as Chennai (2015), Srinagar (2014), and Hyderabad should be used to show how planning failures worsen disasters. The session should highlight sustainable solutions, including blue-green infrastructure, sponge city concepts, stormwater harvesting, and wetland restoration. The facilitator should also demonstrate the use of GIS-based flood mapping and hazard zoning to support risk-informed urban planning. The core message to emphasize is that while floods are natural, their impacts are shaped by human decisions, and resilient cities depend on sustainable design, strong governance, and proactive planning. The session needs to highlight the prioritizing mitigation projects based on risk assessments and funding gaps and mainstreaming disaster risk reduction into development schemes. It also needs to guide participants in converting mitigation priorities into project proposals, utilizing SDRF and SDMF financing windows through a hazard-specific project drafting exercise.

Duration: 75 min. (1.25 hours)

Objectives

- To examine the key causes and vulnerabilities that contribute to urban flooding in major Indian cities.
- To introduce sustainable mitigation and adaptation strategies to reduce urban flood risks.

Materials Needed

- PowerPoint presentation on city-specific case studies, GIS-based flood mapping visuals, handouts on blue-green infrastructure and stormwater harvesting, and data sheets on urban flood risks and mitigation tools.

Method Used

- Interactive lecture using a PowerPoint presentation
- Case study discussion & group brainstorming
- Question & Answer Session

Key approach elements for the facilitator

- Highlight how human-driven factors worsen urban flooding.
- Use case studies to connect theory with real-world failures and lessons.
- Explain sustainable and nature-based mitigation options clearly.
- Demonstrate GIS-based flood mapping and risk zoning for practical learning.
- Emphasize the need for coordinated urban planning and enforcement of regulations.
- Reinforce that resilience depends on long-term planning, not only emergency response.

Expected Outcome

By the end of the session, participants will understand the key causes of urban flooding and the vulnerabilities linked to poor planning and weak infrastructure. They will learn practical and sustainable mitigation measures and gain basic skills in GIS for flood risk assessment. Participants will be better prepared to identify risk-prone areas, suggest appropriate solutions, and support more resilient urban development through preventive measures.

6.5.6 Cyclone Risk Mitigation- Case Studies

This session will highlight the successful case studies of cyclone risk mitigation. The facilitator should explain how Gujarat achieved strong cyclone preparedness during Cyclone Biparjoy through accurate forecasting, timely alerts, coordinated evacuations, robust communication, and community-level engagement. Facilitators should explain how IMD's frequent bulletins and CAP-based warnings enabled early action, how vulnerable groups were evacuated in advance, and how relief camps, healthcare services, and local governance worked together to ensure safety. The session should also emphasize the importance of multi-sectoral coordination,

lessons from past cyclones, and the integration of communication, logistics, and healthcare systems to achieve the goal of zero casualties. The facilitator need to provide the details of the authorities identified vulnerable coastal villages, restricted fishing activities, and secured boats at safe harbours. Pre-positioning of NDRF teams and ensuring resilience of critical infrastructure (power, telecom, water) minimized potential losses. Shelter homes, medical preparedness, and inter-agency coordination further reduced vulnerability.

Duration: 75 min. (1.25 hours)

Objective

- To examine case studies such as Gujarat's strategic approach to disaster resilience and its zero-casualty goal during Cyclone Biparjoy.

Materials Needed

- PowerPoint presentation covering the Cyclone Biparjoy timeline and interventions, IMD bulletin samples, handouts on CAP, evacuation and healthcare logistics data.

Method Used

- Interactive lecture using a PowerPoint presentation
- Case Study Analysis & Group Discussions
- Question & Answer Session

Key approach elements for the facilitator

- Emphasize the value of early forecasting and IMD bulletins for proactive decision-making.
- Highlight the role of CAP-based alerts and reliable communication networks in reaching communities.
- Showcase effective evacuation planning and logistics for vulnerable populations.
- Explain the importance of integrating healthcare services into disaster preparedness.
- Reinforce the need for strong coordination between local bodies, state agencies, and communities.
- Use Odisha's and Gujarat's examples to inspire replication of best practices in other coastal regions.

Expected Outcome

By the end of the session, participants will understand how early warnings, strong coordination, and community engagement contributed to effective response during

cyclones. They will gain insights into practical strategies such as timely evacuations, healthcare integration, and reliable communication systems. Participants will be better equipped to adapt similar multi-sectoral approaches in their own regions to strengthen preparedness and move toward a zero-casualty goal during future cyclone events.

6.5.7 Digital Tools for Disaster Management

This session provides a practical, demonstration-based introduction to India's key digital platforms for disaster management. Facilitators should guide participants through live demos of the SACHET App/CAP, the NDMIS Portal, and the IDRN system, showing how these tools support timely alerts, track disaster losses and funds, and map emergency resources nationwide. The session should highlight how technology strengthens coordination, transparency, and preparedness across agencies. Facilitators must ensure participants clearly understand how these platforms work, why they are essential, and how they can be used in real disaster situations.

This sub-section entails the demonstration of the following:

- Demo 1- Use of Sachet App and Common Alert Protocol (CAP)
- Demo 2- NDMIS Portal- MHA
- Demo 3- IDRN online platforms and other portals managed by NIDM

Duration: 75 min. (1.25 hours)
Objectives • To acquaint participants with key digital tools used in India for real-time alerts, resource tracking, and data sharing. • To show how technology improves preparedness, response, and recovery in disaster management.
Materials Needed • PowerPoint presentation, devices for app and portal demonstrations, and user guides for digital platforms.
Method Used • Live demonstrations • Interactive presentations • Participant Q&A and hands-on exploration

Key approach elements for the facilitator

- Demonstrate each platform (SACHET/CAP, NDMIS, IDRN) in a simple, step-by-step manner.
- Emphasize how digital tools improve early warning, resource mobilization, and data transparency.
- Highlight inter-agency coordination enabled by integrated digital systems.
- Encourage participants to explore features hands-on for better familiarity.
- Reinforce the shift from reactive to predictive and technology-driven disaster management.

Expected Outcome

By the end of the session, participants will understand how key digital platforms strengthen early warning, resource tracking, and disaster data management. They will gain confidence in using tools like SACHET, NDMIS, and IDRN and be better prepared to apply these technologies in their work for more coordinated and resilient disaster management.

6.6 Suggested Handouts/Web-links

- *https://globalplatform.undrr.org/2022/sites/default/files/2022-05/UNDRR%202022%20Principles%20for%20Resilient%20Infrastructure.pdf*
- *https://cdri.world/upload/pages/G20_Brazil_Compendium.pdf*
- *https://www.mha.gov.in/sites/default/files/NPDM-101209.pdf*
- *https://cdri.world/upload/pages/178523228790651O_20231214050 3undrr_cdri_global_methodology_for_infrastructure_review.pdf*
- *https://nidm.gov.in/PDF/modules/urban.pdf*
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- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/retrofitting-guidelines.pdf*
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- *https://nidm.gov.in/PDF/pubs/SikkimEQ_ReconstuctionStrategy2011.pdf*
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- *https://ndma.gov.in/National-Disaster-Management-Plan*
- *https://www.undp.org/publications/post-disaster-needs-assessments-pdna-guidelines*
- *https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/management_urban_flooding.pdff*

- *https://mohua.gov.in/upload/uploadfiles/files/SOP%20Urban%20flooding_5%20May%202017.pdf*
- *https://documents1.worldbank.org/curated/en/099080123151036528/pdf/P1744620efe1180a20bc1b0ce287e74ff91.pdf*
- *https://nidm.gov.in/PDF/pubs/KeralaFlood_18.pdf*
- *https://nidm.gov.in/PDF/modules/flood3.pdf*
- *https://nidm.gov.in/PDF/pubs/CYCLONE_BIPARJOY_NIDM24.pdf*
- *https://nidm.gov.in/PDF/pubs/FloodRM_NIDM2022.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/cyclone/cyclones.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Floods/flood.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/cyclones.pdf*
- *https://sachet.ndma.gov.in/OnclickNotification/13522-AAA*
- *https://idrn.nidm.gov.in/About/Index*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines-of-IDRN.pdf*
- *https://ndmindia.mha.gov.in/ndmi/ndmis*

Chapter 7
Submodule 05
Disaster Preparedness and Response

This submodule examines the essential role of disaster preparedness and response in building resilient communities. It emphasizes the shift from response centric approach to proactive readiness frameworks. It will ultimately help in acquiring expertise in understanding the early warning systems mechanism, importance of its dissemination, importance of last mile connectivity, evacuation procedures, and coordinated response mechanisms. By utilizing the tools like GIS and real-time climate forecasting, participants learn to integrate preparedness into development planning for effective and timely action.

7.1 Introduction

Disaster preparedness and response include the steps taken before, during, and after a disaster to reduce loss of life, limit damage, and support quick recovery. Preparedness focuses on early warning systems, clear emergency plans, community awareness, and training responders so that all systems, including resources, communication, and coordination, are ready when an emergency occurs. "Response" refers to the immediate actions taken once a disaster strikes, including rescue efforts, evacuation, medical care, and distribution of relief supplies. Strong preparedness directly improves the speed and effectiveness of response. When communities are actively involved and institutions work together using timely information and technology, the overall capacity to manage risks and restore normal conditions improves. Together, preparedness and response

form key pillars of disaster management and help build safer and more resilient communities.,

7.2 Learning Objectives

- To develop understanding of disaster preparedness
- To build capacity for effective planning, coordination, and implementation of disaster response measures.
- To enhance skills in developing and executing emergency response plans.
- To understand communication and early warning systems for timely action during disasters.
- To promote community participation through education and regular preparedness drills.
- To understand integration of warning systems and response operations.

7.3 Session Outline under this Submodule

Technical Sessions: Ten sessions are planned for delivering the submodule. The estimated time required for this session is 1215 min. (20 hours 15 min.). The details are as given below:

1. Practical Aspects to Enhance Preparedness & Response during Disasters
2. Communication in Emergency Situations
3. Panel Discussion 1- Community Preparedness for Response - Experiences of Management of Floods, Cyclones, Landslides, and Earthquakes
4. Field Visit- Role of Capabilities of NDRF
5. Demonstration on CBRN / Rope / Rescue / Response
6. Equipment display/visit of USAR Rubble Field and museum visit
7. Fire Risk Mitigation and Live Demonstration
8. Field Visit- IMD and NCS (Workshop Mode)
9. Basic First Aid and Evacuation Techniques
10. Incident Response System and Role of Emergency Support Functions

7.4 Expected Outcome

Participants will gain knowledge and skills to effectively plan, coordinate, and respond to disasters. They will be able to implement preparedness strategies,

strengthen community resilience, utilize technology efficiently, and ensure timely, organized response actions to reduce disaster impacts.

7.5. Session wise Facilitator note

The technical session-wise facilitator's notes are as given below:

7.5.1 Practical Aspects to Enhance Preparedness & Response during Disasters

Duration: 75 min. (1.25 hours)
Objectives • To highlight the importance of community-based preparedness and the role of coordinated disaster response. • To introduce practical tools and innovative technologies that strengthen overall disaster readiness.
Materials Needed • PowerPoint presentation, handouts on preparedness protocols and coordination checklists, and visual aids showcasing technologies like HAM radios, public alert apps, and drones.
Methods Used • Interactive lecture using a PowerPoint presentation • Discussion • Question & Answer Session • Case study illustrations

Technical Notes

The facilitator will lead a session that highlights the importance of strong community-level preparedness and effective coordination among agencies during disasters. The session will explain how disasters create cascading impacts and why advance planning, rehearsals, stockpiling, and backup systems are essential. Participants will be introduced to early warning tools like the "Sachet" app, along with practical evacuation strategies such as timely SAR deployment, shelter management, and crowd control. The session will also showcase innovative practices like mobile kitchens, medical relief centres, drones for rapid assessment, and efficient inventory management. Throughout the session, the facilitator should encourage interactive discussions, demonstrate practical tools, and reinforce the need for technology integration, community engagement, and coordinated action.

Key approach elements for the facilitator

- Emphasize the importance of community-level preparedness and regular mock drills.
- Highlight multi-agency coordination and clear communication during disasters.
- Demonstrate the use of early warning tools and digital alert systems.
- Explain evacuation planning, SAR deployment, and shelter readiness.
- Introduce innovative technologies such as drones, mobile kitchens, and relief centres.
- Encourage use of visuals, demonstrations, and case studies to improve understanding.

Expected Outcome

By the end of the session, participants will understand how to strengthen community preparedness, use early warning tools, and support coordinated disaster response. They will be able to apply practical strategies for evacuation, communication, resource management, and inter-agency collaboration in enhancing disaster readiness and resilience.

7.5.2 Communications in Emergency Situations

Duration: 75 min. (1.25 hours)

Objectives

- To build clear and empathetic communication skills for high-stress disaster situations.
- To introduce tools to manage communication gaps and responder stress.

Materials Needed

- PowerPoint presentation, hand-outs on preparedness protocols and coordination checklists, and visual aids showcasing technologies like HAM radios, public alert apps, and drones.

Method Used

- Interactive lecture using a PowerPoint presentation
- Scenario-based discussions
- Question & Answer Session
- Practice exercises on communication techniques

Technical Notes

The facilitator will lead a focused session on the importance of clear, calm, and empathetic communication during disaster response. The session will explain how effective communication helps deliver timely information, reduce panic, and improve coordination among responders and communities. Participants will learn simple and practical techniques such as concise messaging, active listening, and checking for message clarity. The facilitator will also introduce backup communication tools like HAM radios and satellite phones to ensure continuity during network failures. Stress-management practices such as deep breathing and mental resets will be demonstrated to help responders maintain composure under pressure. Through short scenarios and discussions, participants will understand how strong communication skills and emotional control improve overall response effectiveness.

Key approach elements for the facilitator

- Emphasize clear, concise, and empathetic communication during emergencies.
- Guide participants to use active listening and message verification techniques.
- Ensure awareness of backup tools such as HAM radios, satellite phones, and mobile towers.
- Encourage scenario-based practice to strengthen real-time communication skills.
- Highlight stress-management methods to maintain calm and effectiveness under pressure.
- Promote a two-way communication culture for better coordination and reduced errors.

Expected Outcome

By the end of the session, participants will be able to communicate clearly and confidently during emergencies, use simple tools to avoid misunderstandings, and apply backup systems when networks fail. They will also learn ways to manage their stress and stay composed, helping them respond more effectively and support coordinated disaster operations.

7.5.3 *Panel Discussion 1- Community Preparedness for Response - Experiences of Management of Floods, Cyclones, Landslides and Earthquakes*

Duration: 90 min. (1.5 hours)
Objectives • To explain how strong and empowered communities serve as effective first responders. • To highlight coordination practices and India's growing role in national and global disaster response.
Materials Needed • PowerPoint presentation on case studies.
Method Used • Panel Discussion • Case study presentation • Interactive Q&A session

Technical Notes

The facilitator will lead a panel discussion on strengthening disaster resilience through community empowerment. The session will highlight that communities are the first responders during any disaster and must be trained through awareness programs, school safety initiatives, and regular drills. Experts will present disaster related case studies such as Operation Kaveri, Cyclone Fani response, and the Balasore train tragedy to showcase how agencies, disaster responders, and communities work together during emergencies. The panel will also discuss India's expanding role in global humanitarian missions, including Operation Ganga, Operation Ajay, and Operation Brahma, demonstrating the country's growing leadership in international disaster response. The discussion will stress the importance of building trust, strengthening local leadership, and using culturally appropriate communication to improve preparedness. The facilitator will guide interactions, encourage questions, and ensure participants clearly understand how empowered communities and strong coordination systems form the foundation of disaster resilience *(Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

Key approach elements for the facilitator

- Emphasize that communities are strong first responders through training and regular drills.
- Develop an understanding of multi-agency coordination using real case examples.
- Highlight India's growing leadership in global disaster response and cooperation.
- Guide participants in exploring trust-building and culturally sensitive communication.
- Suggest practical strategies for empowering local leaders and institutions.
- Ensure active participation through Q&A and reflective discussions.

Expected Outcome

By the end of the session, participants will understand why prepared communities are important in disasters and how different stakeholders should work together during emergencies. They will learn understand simple ways to build local capacities and role of NDRF in global disaster response.

7.5.4 Role of capabilities of NDRF

Duration: 75 min. (1.25 hours)

Objectives

- To familiarize participants with the origin, structure, and operational mandate of the NDRF.
- To demonstrate NDRF's field strategies, specialized capabilities, and role in community-based disaster preparedness.

Materials Needed

- Power Point presentation detailing NDRF structure and operations, Case study handouts, Visual aids on training frameworks and specialized equipment.

Methods Used

- Field Visit
- Detailed lecture
- Presentation of deployment case studies
- Live demonstration (if feasible)
- Q&A session

Technical Notes

The facilitator will lead a session introducing the NDRF, covering its origin, legal mandate, organizational structure, and evolution as India's specialized disaster response unit. Participants will explore the NDRF's real-world deployments, including major national and international missions, to understand operational challenges, adaptive strategies, and collaborative approaches. The session will highlight specialized capabilities such as CBRN handling, urban search and rescue, and water and rope-based rescue techniques. Additionally, facilitators will emphasize the NDRF's role in community-based preparedness through awareness campaigns, volunteer training, and grassroots capacity building. Visuals, case studies, and interactive discussions will engage participants, helping them appreciate both strategic and practical aspects of NDRF operations. *(Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*. The detailed list of suggestive places for field visits is at Annexure- IV.

Key approach elements for the facilitator

- Guide participants through the genesis, mandate, and organizational structure of NDRF.
- Highlight major national and international deployments to demonstrate operational lessons.
- Showcase specialized skills like CBRN response, USAR, and water/rope rescues using visuals or demonstrations.
- Emphasize NDRF's role in community outreach and grassroots disaster preparedness.
- Encourage interactive discussions and reflections on real-world challenges and solutions.

Expected Outcome

By the end of the session, participants will understand the NDRF's mandate, structure, and key capabilities. They will gain insights from major disaster deployments, appreciate the Force's specialized skills, and recognize the importance of community engagement in disaster preparedness. Participants will be able to relate these lessons to building resilient communities and effective disaster management strategies.

7.5.5 Demonstration on CBRN / Rope / Rescue / Response

Duration: 75 min. (1.25 hours)
Objectives • To provide hands-on experience of NDRF's rescue techniques and safety procedures. • To enable participants to observe decision-making and interact with NDRF professionals.
Materials Needed • CBRN protective gear and decontamination setups, rope rescue equipment (rappelling gear, pulleys, anchors), props for simulated building collapse and evacuation, communication devices for tactical coordination and incident scenarios
Method Used • Live field demonstrations at NDRF sites, or they can be organised in collaboration with NDRF in the host institute • Scenario-based rescue operations • Interactive participant engagement • Q&A session with NDRF personnel • Q&A session

Technical Notes

The learning will be imparted through hands-on demonstrations by the NDRF. The session will cover CBRN handling, high-rise rope rescues, and building collapse response, emphasizing the correct use of PPE, teamwork, and decision-making under pressure. Facilitators will highlight the importance of strict adherence to procedures, clear communication, and coordination in high-risk scenarios. They will encourage interaction with NDRF personnel, prompt discussions on operational challenges, and help participants reflect on both technical and psychological aspects of disaster response. Debriefing after each demonstration will reinforce learning and allow participants to connect observations with broader disaster management principles.

Key approach elements for the facilitator

- Ensure that participants should understand the importance of safety protocols and proper equipment use.
- Emphasize teamwork, coordination, and role clarity during operations.
- Highlight real-time decision-making and communication under pressure.

- Demonstrate how technical skills apply to specialized rescue and disaster scenarios.
- Encourage active engagement, questioning, and reflection after each demonstration.

Expected Outcome

Participants will learn importance of teamwork and understand the role of safety in operations. The session will demonstrate how quick decisions can save lives and teach practical skills for emergency planning and response. It will also help participants to understand the challenges faced by responders in real disaster situations.

7.5.6 Equipment display/visit of USAR Rubble Field and Museum Visit

Duration: 150 min. (2.5 hours)
Objectives • To provide participants practical knowledge of urban search and rescue, including equipment use and inter-agency coordination. • To honour the contributions of NDRF personnel through museum and memorial visits.
Materials Needed • Search and detection devices (life detectors, thermal imagers, snake cameras, etc.)
Method Used • Guided site visit • Equipment demonstrations • Interactive hands-on exercises • Museum and memorial tour

Technical Notes

The facilitator will guide participants through an immersive session at the USAR Rubble Field, providing hands-on exposure to urban search and rescue operations. The session will include demonstrations of search and detection devices, rescue tools, drone surveillance, and emergency medical setups. Participants will see how technology, teamwork, and safety protocols work together to save lives in disaster situations. The session will conclude with visits to the NDRF Museum and Shaheed Sthal, highlighting the NDRF's history, technologies, major operations, and the sacrifices of its personnel. Facilitators will encourage interaction, reflection,

and discussion to connect practical demonstrations with real-world disaster management principles. (*Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025).*

Key approach elements for the facilitator

- Demonstrate the use of search and rescue equipment and medical setups.
- Highlight the role of drones in hazard assessment and survivor detection.
- Emphasize teamwork, safety, and precision in high-risk operations.
- Show the importance of inter-agency coordination during disasters.
- Foster respect for the NDRF's history, achievements, and sacrifices.

Expected Outcome

Participants will gain practical knowledge of urban search and rescue operations and understand how technology and teamwork combine to save lives. They will learn how medical care, search, and rescue are integrated in real emergencies and recognize the importance of coordination between agencies. Visits to the museum and memorial will deepen their appreciation of the NDRF's commitment, inspiring respect for the personnel and the human spirit behind disaster response.

7.5.7 Fire Risk Management and demonstration

Duration: 150 min. (2.5 hours)
Objectives • To educate participants on urban fire hazards and prevention measures in India. • To provide hands-on experience with fire safety protocols, extinguisher use, and emergency rescue operations.
Materials Needed • PowerPoint presentation on fire hazards and prevention; fire extinguishers for demonstration; firefighting equipment, including water jets, breathing apparatus, and rescue ropes; and props for confined space and victim evacuation simulations.
Method Used • Expert presentation • Practical demonstration of fire safety techniques • Live firefighting and rescue drill • Interactive Q&A

Technical Notes

The facilitator should guide participants through an interactive session on urban fire risks, prevention, and response mechanisms in India. The session will cover common fire hazards such as kitchen gas leaks, electrical faults, flammable materials, and congested spaces. Participants will learn about fire safety tools like smoke detectors, alarms, and extinguishers and the importance of regular fire drills. Practical demonstrations will include the PASS technique for extinguisher use, firefighting simulations with water jets and breathing apparatus, and evacuation exercises. The facilitator will also discuss fire incident statistics, social vulnerabilities, and the importance of awareness campaigns. Throughout, emphasis will be placed on teamwork, coordination, and situational awareness to build effective urban fire preparedness. *(Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

Key approach elements for the facilitator

- Highlight common urban fire hazards and their causes.
- Stress the importance of preventive tools and fire drills.
- Demonstrate practical extinguisher use with the PASS technique.
- Show firefighting techniques and emergency evacuation procedures.
- Emphasize teamwork, coordination, and social awareness in fire response.

Expected Outcome

Participants will understand key urban fire risks and prevention measures. They will gain confidence in using fire safety equipment and conducting drills. The session will teach practical firefighting and rescue techniques, highlight social vulnerabilities, and reinforce the importance of teamwork and coordination. Participants will become better prepared to respond effectively to fire emergencies and contribute to safer communities.

7.5.8 Early Warning Systems: Field visit to India Meteorological Department(IMD) and National Centre for Seismology (NCS)

Duration: 300 min. (5 hours)

Objectives

- To explain IMD's role in weather forecasting, early warnings, and disaster risk reduction.
- To introduce India's earthquake monitoring, hazard assessment, and preparedness measures.

Materials Needed

- Pre-arrangements for the guided field visit jointly with IMD and NCS. Demonstration equipment and visual displays, IMD forecast bulletins and app guides, Handouts on multi-channel communication strategies, Seismic monitoring system visual aids, Microzonation maps, and data documentation, and BhooKamp app demonstration tools.

Method Used

- Guided facility tour
- Interactive presentations
- Live forecasting demonstrations
- Question and Answer session

Technical Notes

A one-day field visit at the IMD and NCS will provide an opportunity for comprehensive and hands-on knowledge to explore functioning of early warning systems /facilities. A detailed list of suggestive places for a field visit is at Annexure-IV.

Forenoon Session – IMD: Weather Forecasting and Early Warning Systems

In the forenoon session, the facilitator along with IMD representative will lead participants, showcasing early warning systems and weather forecasting systems of IMD. Participants will learn about the evolution from traditional weather prediction methods to advanced forecasting technologies, including demonstrations of cyclone, flood, heatwave, and other hazard predictions. The session will explain how district- and block-level alerts are generated and disseminated through platforms such as Mausam, Meghdoot, DAMINI, and CAP. IMD's role as a Regional Specialized Meteorological Centre will be highlighted, along with its advisories for

agriculture, health, and hydrology. Interactive discussions will focus on forecast uncertainties and effective dissemination to communities.

Afternoon Session – NCS: Earthquake Monitoring and Seismic Risk Management

The facilitator will guide participants through the NCS, highlighting India's expanding seismic monitoring network and real-time earthquake detection systems. Participants will explore hazard assessment protocols, microzonation studies in major cities, and digital apps such as the BhooKamp mobile app. Discussions will address the feasibility of earthquake early warning systems and the integration of seismic data into planning for resilient communities.

Key approach elements for the facilitator

- Highlight IMD's high-resolution forecasting.
- Explain multi-channel alert dissemination for timely public warnings.
- Show real-time monitoring and rapid data-driven advisories.
- Link forecasts to sectors like health care, agriculture, and urban planning.
- Emphasize IMD's role and its regional/international cooperation.
- Explain NCS's expanded seismic network and monitoring capabilities.
- Stress seismic hazard mapping and microzonation for resilient planning.
- Introduce public tools BhooKamp for earthquake awareness.
- Encourage engagement through field visits, demonstrations, and Q&A.

Expected Outcome

Participants will understand how India's meteorological and seismic networks function to provide accurate, localized early warnings. They will learn how technology, data analysis, and communication platforms work together to save lives and protect critical sectors. The session will enhance awareness of earthquake and weather risk mitigation strategies, promote the use of public preparedness tools, and encourage informed decision-making for disaster resilience at community and policy levels. *(Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

7.5.9 Basic First Aid and Evacuation Techniques

Duration: 150 min. (2.5 hours)

Objectives

- To equip participants with essential first aid skills, evacuation techniques, and knowledge of core protocols like DR ABC and mass casualty triage.
- To build confidence for effective first response and casualty management during disasters.

Materials Needed

- First aid kits, manikins for CPR practice (adult, infant, and child), visual aids illustrating DR ABC and TRIAGE protocols, and simulation props for fractures, burns, and poisoning.

Method Used

- Practical demonstrations
- Interactive training exercises
- Role-playing scenarios
- Question-and-answer session

Technical Notes

The facilitator will lead an interactive session focused on life-saving first aid and evacuation skills essential for disaster response. The session will introduce the "Golden Hour" concept and outline the objectives of first aid: preserve life, prevent harm, and support recovery. Participants will learn the DR ABC protocol, practice airway management, breathing, and circulation assessment, and understand scene safety. The session will cover mass casualty management using TRIAGE and the Alert, Verbal, Pain, Unresponsive (AVPU) scale, along with hands-on demonstrations of CPR, Compression-Only Life Support (COLS), and emergency care for injuries, burns, poisoning, and other common hazards. Safe casualty transport and evacuation techniques will also be practiced. Throughout, the facilitator will emphasize the importance of calmness, reassurance, and effective communication to enhance outcomes. Participants will gain both technical skills and emotional competence for confident and efficient first response.

Key approach elements for the facilitator

- Explain the "Golden Hour" and first aid objectives.
- Demonstrate the DR ABC protocol for life-saving intervention.
- Teach mass casualty TRIAGE and AVPU assessment.

- Provide hands-on practice in CPR, COLS, and emergency care for common injuries.
- Show safe casualty transport and evacuation methods.
- Emphasize calm, reassuring, and effective communication.
- Build both technical skills and emotional competence for responders.

Expected Outcome

Participants will gain practical first aid and evacuation skills, understand mass casualty management, and practice life-saving protocols confidently. They will be prepared to respond calmly and effectively in emergencies, providing immediate care and stabilization while ensuring victim safety. The session will enhance both technical ability and emotional readiness for real-life disaster response.

7.5.10 Incident Response System (IRS) and role of Emergency Support Functions (ESFs)

Duration: 75 min. (1.25 hours)
Objectives • To introduce participants to the IRS and its standardized emergency response protocols. • To highlight challenges in emergency management and promote IRS integration, coordination, and ongoing preparedness.
Materials Needed • PowerPoint presentation on IRS framework and practices, Sample Incident Action Plans (IAP), visual aids of Emergency Operation Centres (EOCs) and relief centre layouts
Method Used • Interactive lecture using a PowerPoint presentation • Discussion of IRS organizational structure • Case study analysis • Question-and-answer session

Technical Notes

The facilitator will conduct an interactive session on the IRS, explaining its structure, roles, and relevance as India's national emergency response framework. The session will cover the hierarchical design modelled on the Incident Response System (IRS), detailing the responsibilities of Incident commanders and section chiefs for smooth coordination from national to local levels. Participants will

explore common emergency challenges such as poor coordination, resource shortages, and communication gaps and learn practical solutions and strategic resource deployment. The session will also emphasize the integration of IRS into state disaster management frameworks, highlighting regular training, simulations, and readiness exercises. Case studies and real-life examples will demonstrate IRS in action, reinforcing the value of clarity, unified command, and efficient response.

Case Study: Flood Response Coordination in a District

During a severe flood event in a district of Assam, heavy rainfall caused river overflow and flooding in several villages. The DDMA activated the IRS and mobilized various departments under the ESFs framework. However, in the initial phase of response, several coordination gaps emerged. The Public Works Department deployed machinery for road clearance without coordinating with the Irrigation & Flood Control Department, which was simultaneously working on strengthening embankments in the same area. The Health Department set up a medical camp, but the location was not communicated to the local administration and community volunteers. ULBs were also unaware of the relief distribution schedule, leading to duplication in some areas and absence of relief in others. The situation improved when the incident commander (District Collector) established a centralized coordination mechanism through the Emergency Operations Centre (EOC). Daily coordination meetings were held with representatives from line departments, ULBs, police, and NGOs. Clear task allocation was made under ESFs such as search and rescue, medical response, transportation, and relief distribution. Communication channels were standardized through a shared reporting format and regular situation reports.

Table 9: Role clarity among SDMA, DDMA, line departments, ULBs and other stakeholders

Role	*Responsible Agencies*	*Description*
Overall Coordination	SDMA/ DDMA	SDMA will provide policy guidance, while DDMA will coordinate field-level response through the Incident Commander (IC). Line departments will work according to their respective ESF responsibilities.

Role	*Responsible Agencies*	*Description*
Activation of EOC and Coordination with response agencies	DDMA along with concerned ESFs	The district EOC will function as central hub at district level for information sharing, coordination, rescuer operations and decision-making among all responding agencies. State EOC can be activated if more than two districts are affected.
Regular Inter-Departmental Briefings	DDMA/IC	Daily coordination and review meetings helped prevent duplication of efforts and ensured timely deployment of resources across departments.
Relief distribution	IC with ESFs, ULBs and Volunteer organisations	ULBs and volunteer organisations – Civil defence, home guards, NYKS, Apda Mitras will support relief distribution, sanitation management, and communication with affected communities.
Standardized Reporting and Communica-tion	DDMA and SDMA	Situation reports and digital communication platforms enabled real-time information sharing and updates among all stakeholders.

Source: NDMA Guidelines on EOC & Communication Systems and Disaster Management Act, 2005 institutional framework

Key approach elements for the facilitator

- Explain IRS structure and roles for organized disaster response.
- Highlight common challenges in emergency management.
- Demonstrate practical solutions: IAPs, EOCs, and resource planning.
- Emphasize integration of IRS into state disaster frameworks.
- Stress the importance of training, simulations, and continuous preparedness.
- Use case studies to show IRS effectiveness in real emergencies.

Expected Outcome

Participants will understand the hierarchical and functional aspects of IRS and recognize common operational challenges. They will learn practical strategies to improve coordination and efficiency and appreciate the importance of embedding IRS within state frameworks. By the end of the session, participants will gain both theoretical knowledge and practical confidence in using IRS to ensure unified, accountable, and effective disaster response.

7.6 Suggested Handouts/Web-links

- *https://nidm.gov.in/PDF/pubs/NDRP.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/HADR_Guideline_Oct_2024.pdf*
- *https://nidm.gov.in/PDF/guidelines/sdmp.pdf*
- *https://nidm.gov.in/PDF/Modules/Handbook%20Labour_NIDM24.pdf*
- *https://nidm.gov.in/PDF/pubs/Handbook_NodalOfficer.pdf*
- *https://ndmindia.mha.gov.in/ndmi/images/pdf/SOP-NDM-2010.pdf*
- *https://nidm.gov.in/PDF/Modules/NIDM_CDM2021.pdf*
- *https://nidm.gov.in/PDF/Modules/NIDM_SBCC2021.pdf*
- *https://www.nrsc.gov.in/sites/default/files/pdf/RD_Activities/Applications/14.pdf*
- *https://www.nidm.gov.in/pdf/guidelines/new/ndmandmicsguidelines.pdf*
- *https://www.preventionweb.net/files/52828_apubliccommunication[1].pdf*
- *https://nidm.gov.in/PDF/pubs/MEQ_NIDM2022.pdf*
- *https://nidm.gov.in/PDF/pubs/SikkimEQ_ARoadmapforRecurection2011.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/Guidelines-on-Management-of-GLOFs.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/cyclones.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/NLRMS.pdf*
- *https://nidm.gov.in/PDF/pubs/FloodRM_NIDM2022.pdf*
- *https://nidm.gov.in/safety_earthquake.asp*
- *https://nidm.gov.in/PDF/pubs/Landslide_Preparedness_Guide_Hi.pdf*
- *https://www.ndrf.gov.in/en/study-material*
- *https://dea.gov.in/sites/default/files/Guidelines%20for%20National%20Disaster%20Response%20Fund%20%28NDRF%29.pdf*
- *https://ndrf.gov.in/sites/default/files/CAPACITY%20BUILD.pdf*
- *https://ndma.gov.in/Resources/awareness/fire-safety*
- *https://www.aerb.gov.in/images/PDF/fire.pdf*
- *https://bharatskills.gov.in/pdf/QP_Curriculum/CTSFireman_CTS_NSQF-3.pdf*
- *https://www.ntiprit.gov.in/pdf/infrastructuremanagement/Fire_safety.pdf*
- *https://mohua.gov.in/upload/uploadfiles/files/Chap-7.pdf*
- *https://mausam.imd.gov.in/*

- *https://seismo.gov.in/*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/incidentresponsesystemjuly.pdf*
- *https://nidm.gov.in/PDF/modules/irs-1.pdf*
- *https://nidm.gov.in/PDF/modules/irs-2.pdf*
- *https://nidm.gov.in/PDF/modules/irs-3.pdf*
- *https://nidm.gov.in/PDF/modules/irs-4.pdf*
- *https://nidm.gov.in/PDF/modules/irs-6.pdf*
- *https://nidm.gov.in/PDF/modules/irs-7.pdf*
- *https://nidm.gov.in/PDF/modules/irs-8.pdf*
- *https://nidm.gov.in/PDF/modules/irs-9.pdf*
- *https://nidm.gov.in/PDF/modules/irs-10.pdf*

Basic First Aid:

- *https://nidm.gov.in/pdf/trgReports/2025/July/Trg_21-01July2025ga.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/medical-preparedness.pdf*
- *https://www.indianredcross.org/fmr/Module2.pdf*
- *https://msdma.gov.in/publications/Basic_First_Aid_Manual_English.pdf*
- *https://nhm.assam.gov.in/sites/default/files/swf_utility_folder/departments/nhm_lipl_in_oid_6/menu/schemes/Facilitator%27s%20Guide%28140-246%29.pdf*
- *https://dgfscdhg.gov.in/mass-awareness-in-english*

Evacuation Techniques:

- *https://ndrf.gov.in/en/study-material*
- *https://nidm.gov.in/PDF/modules/village.pdf*
- *https://nidm.gov.in/PDF/Modules/TM_Cyclone_NIDM24.pdf*
- *https://nidm.gov.in/PDF/modules/irs-1.pdf*
- *https://www.sciencedirect.com/science/article/pii/S2666449624000628*

Chapter 8
Submodule 06- Disaster Recovery and Reconstruction

This chapter outlines the phase after a disaster has occurred, emphasizing the process of helping communities return to normalcy while building back stronger. This module introduces the concepts of recovery and reconstruction, explaining the difference between short-term relief and long-term rebuilding. It covers key principles, strategies, and planning approaches for effective recovery, including restoring infrastructure, livelihoods, and essential services. The chapter also highlights the role of government agencies, non-governmental organizations, and communities in coordinated reconstruction efforts. Participants will learn about best practices, challenges, and tools for resilient reconstruction practices.

8.1 Introduction

Disaster recovery and reconstruction is a key phase after a disaster that focus on helping communities to return to normal and rebuilding in a resilient manner. Recovery includes actions such as restoring water, electricity, roads, and other essential services, as well as supporting people to restart their work and daily life. Reconstruction involves rebuilding houses, schools, hospitals, and infrastructure with better designs and safety measures to reduce future risks, following the "BBB" principle. Effective recovery and reconstruction often need close coordination between government agencies, local communities, aid organizations, and the private sector, backed by proper planning and funding. Technology-driven tools such as maps, damage assessment tools, and digital monitoring systems help in

planning, tracking progress, and making better decisions. The ultimate aim is not only to repair what was lost but also to create resilient communities ready to face future disasters.

8.2 Learning Objectives

1. To develop an understanding of recovery and reconstruction processes, including the role of PDNA in planning.
2. To acquire basic skills in first aid and evacuation for immediate disaster response.
3. To comprehend the Incident Response System (IRS) and Emergency Support Functions (ESFs) for coordinated disaster management.

8.3 Session Outline under this Module

Technical Sessions: Sessions to be planned for delivering the Submodule are as follows:

1. Recovery & Reconstruction and Need of PDNA: Overview
2. Preparation of DM Plan- Identify urgent issues, needs and bottlenecks related to response & recovery
3. Recovery & Reconstruction: Build-Back-Better Approaches

8.4 Expected Outcome

Participants will learn to use PDNA in order to identify needs and prepare DMP with BBB principles. They will also gain basic knowledge on first aid and evacuation skills and coordinate response through IRS and ESFs to improve disaster preparedness and resilience.

8.5 Session-wise Facilitator's notes

The estimated time required for this session is 300 min. (5 hours). The technical session-wise facilitator's notes are as given below:

8.5.1 Recovery, Reconstruction, and Need of PDNA

The facilitator will lead a session on PDNA and its integration into national disaster recovery policies. Participants will learn how PDNA, adopted under NDMA and MHA guidelines, moves disaster management from ad-hoc responses to structured, evidence-based planning. The session will cover the funding framework, with 30% of NDRF and SDRF funds earmarked for PDNA-based recovery, and explain PDNA's objectives comprising of assessing damages, estimating losses, analysing socio-economic impacts, and identifying opportunities for Build Back Better. The

implementation process will be outlined, including multi-sectoral assessments by SDMAs, submission to MHA, NDMA review, and HLC approval. The case studies of recent disasters such as Waynad, Joshimath, and Dharali etc. will demonstrate decision-making, resource allocation, and accountability. The session will also highlight the need of monitoring, maintain transparency, and report to ensure funds reach beneficiaries. By the end, participants will understand PDNA as a governance tool promoting resilience, cooperation, and equitable, long-term disaster recovery.

Duration: 75 min. (1.25 hours)

Objectives

- To explain the importance of PDNA in planning, disaster recovery, and reconstruction.
- To familiarize participants with India's PDNA guidelines, funding mechanisms, and the implementation process through examples.

Materials Needed

- PowerPoint presentation on PDNA framework and guidelines, sample PDNA reports and recovery plans, handouts on funding allocation and monitoring protocols.

Methods Used

- Interactive lecture using a PowerPoint presentation
- Explanation of policy guidelines and processes
- Case study analysis
- Question & Answer Session

Key approach elements for the facilitator

- Explain the significance of PDNA in shifting from ad-hoc to structured, evidence-based recovery.
- Highlight India's adoption of PDNA under NDMA and MHA guidelines and associated funding mechanisms.
- Describe PDNA objectives: damage assessment, loss estimation, socio-economic impact analysis, and resilience-building.
- Outline the implementation process: SDMAs → MHA → NDMA review → HLC approval.
- Use the case studies to demonstrate real-world application and decision-making.

- Emphasize monitoring, transparency, and accountability in PDNA-based recovery.
- Reinforce PDNA as a governance tool that promotes resilience, cooperative federalism, and equitable recovery.

Expected Outcome

By the end of the session, participants will understand India's PDNA framework and how it fits into national disaster recovery policies. They will know its purpose, objectives, funding, and implementation process, and how it supports fair, transparent, and evidence-based recovery. Participants will also learn practical aspects of recovery and reconstruction, including monitoring, accountability, and Build Back Better, so they can apply these concepts in real disaster recovery planning.

8.5.2 Group Activity 4- Preparation of DM Plan- Identify urgent issues, needs, and bottlenecks related to response & recovery issues

The facilitator will guide participants through a hands-on group activity on disaster response and recovery planning. Small groups will work on real or hypothetical scenarios to identify urgent needs, anticipate challenges, and develop practical action plans using IRS and PDNA frameworks. The facilitator's role is to explain objectives, provide guidance, encourage collaboration, ensure focus on inclusiveness and local context, and reinforce critical thinking. The session will conclude with group presentations, discussions, and feedback to highlight key learning points and best practices

Duration: 75 min. (1.25 hours)

Objectives

- To enable participants to create a practical disaster response and recovery plan through a structured group exercise.
- To equip participants to identify critical issues, needs, and bottlenecks during disaster response and recovery phases.
- To foster collaborative problem-solving and the application of strategic frameworks in real-life scenarios.

Materials Needed

- Flipcharts and markers
- Handouts on Incident Response System (IRS) and PDNA
- Templates for Response and Recovery Planning
- Reference materials or case studies of past disasters

Methods Used

- Interactive Group Work
- Facilitated Discussion and Brainstorming
- Presentation and Peer Review

Key approach elements for the facilitator

- Highlight innovative approaches proposed by each group.
- Encourage groups to discuss coordination challenges and possible solutions.
- Emphasize learning from each other by showing different strategies that work in various settings.

Expected Outcome

By the end of the activity, participants will be able to create practical, evidence-based disaster response and recovery plans, identify critical needs and gaps, coordinate across agencies, and apply IRS and PDNA principles to strengthen preparedness, response, and long-term community resilience.

8.5.3 Recovery & Reconstruction- Build-Back-Better Approaches

The facilitator should guide participants through the concept of BBB, emphasizing recovery beyond reconstruction toward resilience and inclusivity. The session will cover sector-specific approaches, including social (owner-driven housing), productive (livelihoods in agriculture and tourism), and infrastructure (resilient WASH, transport, and hazard mitigation systems). Cross-cutting themes such as gender mainstreaming, social inclusion, and Disaster Risk Reduction (DRR) will be highlighted. Facilitators will introduce sectoral templates, demonstrate structured recovery planning, discuss financial allocations for BBB, and stress capacity-building measures, including institutional strengthening, training, data management, and inter-departmental coordination. Participants will engage in discussions and practical exercises to understand actionable, resilient recovery planning.

Key approach elements for the facilitator

- Present BBB as a forward-looking approach for resilient recovery.
- Demonstrate use of sectoral templates for structured planning.
- Explain financial provisions for supporting BBB initiatives.
- Highlight the importance of capacity building and institutional readiness.
- Encourage participant engagement through discussions and practical exercises.

Expected Outcome

By the end of the session, participants will understand how to apply the BBB approach in disaster recovery. They will be able to plan and implement recovery strategies that are evidence-based, financially supported, and institutionally feasible, while strengthening community resilience and sustainability for the long term.

8.5.4 Post Disaster Needs Assessment (PDNA)

The facilitator should guide participants the role of disaster recovery with BBB approach within the PDNA framework, showing that recovery is more than rebuilding (Table 10). The session will cover how to assess sector-wise damage and losses and non-sectoral losses. Participants will learn from global examples such as the Kobe earthquake, Indonesian tsunami, and Nepal earthquake, as well as Indian flooding experiences such as the Bihar, Uttarakhand, and Kerala floods. The facilitator will also explain how recovery can be aligned with the SDGs. Discussions and exercises will help participants see how to apply BBB principles in real situations.

Table 10: Linkage between PDNA Findings, Policy Decisions and Financing Mechanisms

Component	*Key Elements*	*Role in Disaster Recovery*	*Policy Linkage*
Damage and Loss Assessment (PDNA)	Sector-wise assessment of damages and losses in housing, infrastructure, agriculture, health, education, livelihoods, and environment.	Establishes the evidence base for recovery and reconstruction planning.	Provides quantified estimates used to determine funding requirements from SDRF, NDRF, and other recovery funds.
Impact Analysis	Evaluation of socio-economic impacts, displacement, livelihood disruption, environmental damage, and vulnerability of affected populations.	Helps identify priority sectors and vulnerable groups requiring targeted recovery interventions.	Guides policy decisions on allocation of recovery budgets and prioritization of investments.

Component	*Key Elements*	*Role in Disaster Recovery*	*Policy Linkage*
Recovery Planning	Preparation of short-, medium-, and long-term recovery strategies based on PDNA results.	Translates damage data into a structured Recovery and Reconstruction (R&R) plan with timelines and institutional responsibilities.	Enables preparation of Detailed Project Reports (DPRs) for funding approval and budget allocation.
Build Back Better (BBB) Principles	Reconstruction of infrastructure and services to higher resilience standards, integrating climate resilience, safety codes, and sustainability.	Ensures reconstruction reduces future disaster risk rather than restoring pre-disaster vulnerabilities.	Influences policy decisions on resilient infrastructure funding, building codes, and risk-reduction investments.
Sector-Specific Recovery Projects	Conversion of PDNA findings into structured projects (e.g., resilient housing, road restoration, water supply rehabilitation).	Operationalizes recovery strategies through project-based implementation.	Projects are financed through central/state disaster funds, development schemes, multilateral support, or special recovery packages.
Institutional Decision Making	Review by State Governments, NDMA, and the Ministry of Home Affairs based on PDNA findings.	Determines the scope of recovery programmes and approval of financial assistance.	Enables allocation through SDRF/ NDRF mechanisms and other national recovery financing windows.

Component	Key Elements	Role in Disaster Recovery	Policy Linkage
Monitoring and Implementation	Tracking progress through reporting, audits, and evaluation mechanisms.	Ensures transparency, accountability, and effectiveness of recovery interventions.	Linked to release of subsequent funding tranches and compliance requirements.

Source: PDNA Report, NDMA (https://ncrmp.gov.in/pdna-report/)

Key features

Duration: 75 min. (1.25 hours)

Objectives

- To enhance understanding of BBB in PDNA using global and Indian experiences.
- To promote inclusive, risk-informed recovery that builds resilience in alignment with global goals.

Materials Needed

- PowerPoint presentation on BBB principles and sectoral templates, handouts detailing Indian PDNA initiatives and implementation strategies, and data sheets linking BBB with Sustainable Development Goals (SDGs)

Methods Used

- Sectoral case study discussions
- Group exercises on recovery planning
- Presentation and Q&A session

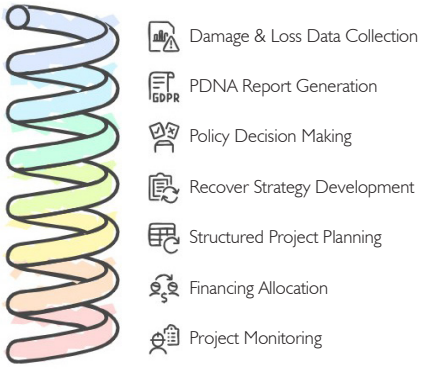

Figure 5: Key Conceptual Flow (PDNA to Financing)

Source: Authors interpretation

Key approach elements for the facilitator

- Explain BBB as recovery that goes beyond rebuilding to restore lives and livelihoods.
- Emphasize including resilience, sustainability, social equity, and inclusiveness in planning.
- Use global and Indian examples to show practical application.
- Show how recovery can support SDGs and long-term development.
- Highlight the need for collaboration between different stakeholders.
- Stress institutional strengthening and DRR integration for effective recovery.

Expected Outcome

By the end of the session, participants will understand how to apply Build Back Better (BBB) in disaster recovery using PDNA. They will know how to plan recovery that is inclusive, resilient, and sustainable, take lessons from global and Indian experiences, work with multiple stakeholders, and strengthen institutions. Participants will be able to make recovery efforts that not only rebuild what was lost but also make communities safer and stronger for the future.

8.6 Suggested Handouts/Web-links

- *https://www.un.org/en/ecosoc/meetings/2005/docs/RECOVERY%20guidlines.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Reports/Recovery-and-Reconstruction-Guidelines-NDMA.pdf*
- *https://nidm.gov.in/PDF/Modules/NIDMCPDRR_22.pdf*
- *https://nidm.gov.in/pdf/pubs/DRR-LTR.pdf*
- *https://www.mha.gov.in/sites/default/files/2024-08/DMGuideline_20082024.pdf*
- *https://www.adb.org/sites/default/files/publication/885861/disaster-recovery-planning-explanatory-note-case-study.pdf*
- *https://www.unisdr.org/files/53213_bbb.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf (Chapter 9)*
- *https://ndmindia.mha.gov.in/ndmi/viewUploadedDocument?uid=NEW2164*
- *https://nidm.gov.in/pdf/pubs/DRR-LTR.pdf*
- *https://nidm.gov.in/PDF/pubs/sop_pdna.pdf*
- *https://ssdma.nic.in/uploads/pdffiles/guidelines_recovery_reconstruction-india_draft_dloomba.pdf*
- *https://nidm.gov.in/PDF/pubs/pdna_manual_vol1.pdf*
- *https://nidm.gov.in/PDF/pubs/pdna_manual_vol2.pdf*
- *https://nidm.gov.in/PDF/pubs/handbook_pdna.pdf*
- *https://nidm.gov.in/PDF/pubs/sop_pdna.pdf*

- *https://www.gfdrr.org/sites/default/files/2017-09/PDNA-Volume-A.pdf*
- *https://www.worldbank.org/content/dam/Worldbank/document/SAR/nepal/PDNA%20Volume%20A%20Final.pdf*
- *https://www.undp.org/publications/post-disaster-needs-assessment-kerala*

Chapter 9
Submodule 07- Risk Financing and Insurance

This chapter explains how financial tools such as insurance, risk transfer, and disaster funds support effective disaster management. It highlights why risk financing is essential for reducing economic losses and helping vulnerable sectors recover quickly. The chapter covers key concepts, types of insurance, government schemes, and the role of public-private partnerships. It also discusses challenges in increasing insurance coverage and presents practical strategies to strengthen financial resilience at community, sectoral, and national levels.

9.1 Introduction

Risk financing and insurance are key tools in disaster management, ensuring that funds are available to respond to and recover from disasters without disrupting long-term development. Risk financing includes strategies such as contingency funds, reserve funds, disaster bonds, risk pools, CAT (catastrophe) Bonds, and other risk transfer mechanisms that help manage the economic impact of disasters. Insurance allows individuals, businesses, and governments to share financial risks with insurers, reducing the burden of losses and enabling faster recovery. It also encourages investment in risk reduction measures. Together, risk financing and insurance build financial resilience by spreading risk across different stakeholders and over time. Governments are increasingly incorporating these tools into national disaster risk reduction plans, linking them with fiscal planning and sustainable development. Innovations like parametric insurance, micro-insurance, and catastrophe-linked securities are expanding coverage, particularly for vulnerable communities. A well-planned risk financing and insurance system acts as a safety net, supporting recovery, maintaining economic stability, and promoting proactive

disaster risk management. *(Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

9.2 Learning Objectives

- To familiarize participants with India's disaster risk financing and insurance mechanisms.
- To enable participants to apply financial strategies in disaster response and recovery planning.

9.3 Session Outline under this submodule

Technical Sessions: Three sessions should be planned for delivering the submodule. The estimated time required for this session is 240 min. (4 hours). The details are as given below:

1. Financial and Strategic Framework for Disaster Risk Management in India
2. Panel Discussion 2- Risk Financing and Insurance
3. Group Activity 5- Disaster Management Planning: Preparing an Action Plan for Response & Recovery Planning

9.4 Expected Outcome

Participants will learn to use risk financing, insurance, and planning tools. They will apply these tools to create disaster response and recovery plans that build resilience and support sustainable management in India.

9.5 Session-wise Facilitator's notes

The technical session-wise facilitator's notes are as given below:

9.5.1 Financial and Strategic Framework for Disaster Risk Management in India

Duration: 75 min. (1.25 hours)

Objectives

- To help participants understand the evolution and current structure of disaster management financing in India.
- To explain strategic fund allocation, integration with risk reduction, and links to climate adaptation and resilience goals.

Materials Needed

- PowerPoint presentation on detailing fund structures and allocations, Charts illustrating budget breakdowns and cost-sharing models, Case study documents on disaster fund utilization

Methods Used

- Lecture presentation
- Financial data analysis
- Case study analysis
- Question & Answer Session

Technical Notes

The facilitator should provide an overview of financial framework of disaster management. Participants will learn about the structure and allocation of funding under NDRMF for the 2021–2026 period, including the National Disaster Response Fund (NDRF) and National Disaster Mitigation Fund (NDMF). The session will cover proactive financing approaches, such as earmarked allocations, cost-sharing models, predetermined disaster budgets, and sector-specific investments in fire services, urban flood mitigation, and Himalayan hazard preparedness through various case studies. The facilitator will also highlight the integration of disaster financing with climate adaptation and resilience goals, demonstrating how strategic financial planning supports long-term disaster preparedness. The session will further introduce financial risk management tools, including risk pools, catastrophe (CAT) bonds, risk transfer, and risk-sharing instruments, for managing large-scale disaster risks. Participants will also learn about the linkages between the State Disaster Response Fund (SDRF) and the National Disaster Response Fund (NDRF), as well as available disaster mitigation funding windows. Finally, the discussion will touch upon external assistance mechanisms and broader risk financing frameworks, highlighting how international support and innovative financing instruments can complement domestic disaster financing systems.

Key approach elements for the facilitator

- Explain the evolution of disaster financing in India.
- Present NDRMF structure and allocation, including NDRF and NDMF.
- Highlight proactive financing approaches: earmarked funds, cost-sharing, and pre-disaster budgets.
- SDRF/NDRF linkages and disaster mitigation funding windows.

- Showcase sectoral investments: fire services, urban flood mitigation, Himalayan preparedness.
- Use of case studies to demonstrate fiscal flexibility and adaptive funding.
- Emphasize the link between disaster finance and climate adaptation and resilience.
- Encourage participant engagement with real-world examples and discussions on strategic fund use.

Expected Outcome

By the end of the session, participants will understand the structure, evolution, and strategic significance of India's disaster management financing framework. They will be able to explain fund allocations, proactive financing approaches, and sectoral investments and appreciate the importance of fiscal flexibility in emergencies. Participants will also recognize how integrating disaster financing with climate adaptation and disaster resilience goals. Ultimately, it will enhance long-term preparedness and effective response capabilities.

9.5.2 Panel Discussion 2- Risk Financing and Insurance

Duration: 90 min. (1.5 hours)
Objectives • To explain the role of risk financing and insurance in DRR and resilience building. • To explore ways to increase insurance coverage in vulnerable sectors. • To explore the role of public-private partnerships in supporting recovery.
Materials Needed • Handouts, flipcharts, markers
Methods Used • Interactive panel discussion • Case study analysis of international and domestic insurance models • Open Q&A and audience engagement

Technical Notes

The facilitator should moderate a panel discussion on disaster risk financing and insurance, focusing on strategies to enhance financial resilience and reduce post-disaster fiscal burdens. The session will explore ways to increase insurance coverage in vulnerable sectors such as agriculture, MSMEs, and urban housing, identify barriers like affordability and low awareness, and discuss solutions to

make risk financing inclusive and accessible. The discussion will highlight public-private partnerships, global best practices, including parametric insurance models, and the importance of financial literacy and community awareness. Participants will examine how timely insurance pay-outs can accelerate recovery, reduce government fiscal pressure, and strengthen overall disaster preparedness.

Key approach elements for the facilitator

- Highlight sector-specific insurance needs for agriculture, MSMEs, and housing.
- Emphasize the role of public-private partnerships in designing effective insurance programs.
- Showcase lessons from global parametric insurance models for faster pay-outs and innovative approaches.
- Stress the importance of financial literacy and community awareness for widespread adoption.
- Explain how risk financing reduces government fiscal burdens and supports faster recovery.

Expected Outcome

By the end of the session, participants will understand the role of risk financing and insurance in disaster management. They will be able to identify sector-specific insurance needs, appreciate the value of collaborative models and global best practices, and recognize the importance of community awareness and financial literacy. Participants will gain insights on how these mechanisms can strengthen resilience, accelerate recovery, and ease government fiscal pressures during disasters.

9.5.3 Group Activity 5- Disaster Management Planning: Preparing an Action Plan for Response & Recovery Planning

Duration: 75 min. (1.25 hours)

Objectives

- To enable participants to prepare action plans that include quick assessment, clear communication, and proper coordination.
- To help them plan resource use and resilient recovery strategies for effective disaster management.

Materials Needed

- Disaster response and recovery plan templates, scenario briefs on customized disaster situations, flip charts, markers, and sticky notes for mapping, government and NDMA/SDMA guidelines documents, geospatial maps or digital planning tools, and handouts on early warning systems and evacuation procedures.

Methods Used

- Lecture by subject experts introducing key response and recovery planning concepts
- Use of case studies from recent floods and cyclones
- Guided group discussion to identify roles and priorities
- Templates and stepwise guides for developing action plans
- Interactive exercises for mapping resources and tasks
- Presentations and collective feedback sessions

Technical Notes

The facilitator should guide participants through a structured and interactive disaster planning exercise. They should begin by explaining the disaster context and outlining the session's goals, ensuring participants understand the importance of quick assessment, resource mapping, coordination, and recovery planning. During group work, the facilitator should support teams as they identify risks, map critical resources, draft rapid response actions, and design recovery strategies. They should provide timely guidance using NDMA and Build Back Better principles, encourage inclusive and gender-sensitive planning, and prompt participants to think critically about their decisions. Throughout the session, the facilitator should encourage active participation, ensure good quality teamwork, and connect group outputs with real-world disaster management practices.

Key approach elements for the facilitator

- Emphasize clear understanding of disaster context and session goals.
- Guide teams in risk assessment, resource mapping, and coordinated planning.
- Ensure plans align with NDMA guidelines and Build Back Better principles.
- Promote inclusiveness, gender sensitivity, and attention to vulnerable groups.
- Encourage critical thinking, teamwork, and practical decision-making.
- Provide constructive feedback using real-world examples and case insights.

Expected Outcome

By the end of the session, participants will be able to prepare practical disaster response and recovery plans that include quick assessment, resource identification, and coordinated actions. They will demonstrate stronger teamwork, problem-solving, and planning skills while applying national guidelines and resilience principles. Participants will also understand how to make their plans inclusive, sustainable, and adaptable to real disaster situations.

9.6 Suggested Handouts/Web-links

- *https://nidm.gov.in/PDF/pubs/WGR_NIDMandIII_2021.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/ndmp-2019.pdf*
- *https://cdri.world/upload/biennial/CH4.7-MI.pdf*
- *https://tnsdma.tn.gov.in/app/webroot/img/document/library/05-Disaster-Risk-Management-&-The-Role.pdf*
- *https://egyankosh.ac.in/bitstream/123456789/112456/1/Unit-8.pdf*
- *https://www.undrr.org/gar/gar2025*
- *https://www.adb.org/sites/default/files/publication/646156/adbi-pb2020-5.pdf*
- *https://nidm.gov.in/PDF/pubs/WGR_NIDMandIII_2021.pdf*
- *https://cdri.world/upload/biennial/CH4.7-MI.pdf*
- *https://sdgfinance.undp.org/sites/default/files/2025-01/Inclusive%20insurance%20and%20risk%20financing%20in%20India%20-%20Snapshot%20and%20way%20forward%202024.pdf*
- *https://nidm.gov.in/pdf/trgReports/2025/July/Trg_21-01July2025ga.pdf*

Chapter 10
Submodule 08-
Cross-Cutting Issues

This chapter covers key cross-cutting issues in disaster management, including role of leadership, the role of media, gender, youth engagement, public health, psycho-social aspects, environment, and climate change. It highlights the need to integrate these aspects into all phases of disaster management to promote equity, protect vulnerable groups, and strengthen community resilience. The chapter also refers to global frameworks such as the SFDRR 2015–2030 and the SDGs. It further highlights the contribution of various national and international organizations, such as the United Nations Development Programme to promoting women as equal partners in disaster risk management.

10.1 Introduction

Cross-cutting issues in disaster management represent key themes that influence all phases of disaster management. These aspects include the mainstreaming cross cutting issues such as gender, volunteers, differently abled, age, public health, psycho-social aspects, communication, environment, and climate change. Their integration with DM planning ensures a comprehensive and inclusive approach to disaster management. Incorporating these elements promotes social equity, strengthens resilience, and ensures that vulnerable groups are considered in planning and decision-making.

The integration of gender perspectives often helps to identify different impacts and needs during disasters. The aspects like environmental and climate considerations, support sustainable mitigation and adaptation measures. International frameworks such as the Sendai Framework for DRR, SDGs, and global climate agreements

underscore the importance of addressing cross-cutting issues across all components of disaster management. This approach contributes to more effective, equitable, and sustainable outcomes and enhances the resilience of communities to a wide range of hazards.

10.2 Learning Objectives

- To understand the role of leadership, media, and inclusive approaches in disaster management for better coordination, participation, and effective response.
- To recognize the importance of public health resilience, psychosocial support, and essential coping skills in disaster risk reduction.
- To learn gender-sensitive and community-focused strategies that ensure inclusion, improve communication, and strengthen resilience in disaster situations.

10.3 Session Outline under this submodule

Technical Sessions: Five sessions are planned for delivering the submodule. The estimated time required for this session is 375 min. (6 hours and 15 min.). The details are as given below:

1. Leadership Role in Disaster Management
2. Gender and Inclusive Aspects related to Disaster Management
3. Role of Media in Disaster Management
4. Public Health Resilience and DRR
5. Group Activity 6 - Psycho - Social aspect of Disaster Management and Essential skills

10.4 Expected Outcome

Participants will be able to integrate leadership principles, gender-responsive and inclusive approaches, media engagement strategies, public health resilience measures, and psycho-social support skills to design and implement holistic disaster risk reduction and management interventions that enhance community resilience, ensure equitable outcomes, and strengthen coordinated response and recovery systems in India.

10.5 Session-wise Facilitator's notes

The technical session-wise facilitator's notes are as given below:

10.5.1 Leadership Role in Disaster Management

Duration: 75 min. (1.25 hours)
Objectives • To help participants understand key leadership roles, responsibilities, and skills needed for effective disaster management. • To strengthen their ability in strategic planning, coordination, and decision-making during disasters.
Materials Needed • PowerPoint presentation, Case study handouts featuring national and state-level leadership examples, Role-play scenario scripts and guidance notes, audio-visual aids such as videos of disaster response leadership in action, flip charts, markers, and writing materials for group activities.
Methods Used • Interactive lecture on leadership frameworks and structures. • Case studies on effective disaster leadership in India. • Group discussions and role-play on decision-making in a crisis situation. • Scenario-based simulations focused on the application of leadership skills across disaster management phases.

Technical Notes

The session will explain the importance of leadership in disaster management and show how strong leadership becomes most crucial during emergencies. Using simple stories, examples from nature, and real events, the session will highlight key leadership qualities such as awareness, empathy, teamwork, and quick decision-making. Participants will take part in discussions, case studies, and coordination activities to learn how leadership affects every stage of disaster management from preparedness to response and recovery. The facilitator should also emphasize the need for inclusive leadership, cooperation between agencies, clear communication, and active participation of women and communities to build stronger resilience.

Key approach elements for the facilitator

- Leadership is crucial across all phases of disaster management.
- Effective leaders translate policies into action and ensure coordination.
- Empathy, awareness, teamwork, and clear communication strengthen leadership.
- Inclusive leadership involving women and communities enhances resilience.

- Real-life examples and case studies help in understanding practical challenges.
- Strong leadership improves decision-making, resource management, and public trust.

Expected Outcome

Participants will gain a clear understanding of essential leadership qualities and their application in disaster situations. They will be better equipped to make informed decisions, coordinate effectively with multiple stakeholders, and communicate responsibly during crises. The session is expected to build confidence, improve crisis leadership skills, and promote an inclusive and proactive approach to strengthening disaster resilience at all levels. *(Source: Training Report on 1st Comprehensive Course on Disaster Risk Management, NIDM, 2025)*

10.5.2 Gender and Inclusive Aspects related to Disaster Management

Duration: 75 min. (1.25 hours)

Objectives

- To help learners understand gender-sensitive and inclusive approaches in disaster management.
- To enable learners to apply these approaches for equitable participation, protection of vulnerable groups, and community resilience.

Materials Needed

- PowerPoint presentations covering gender and inclusion frameworks, policies, and examples, case study handouts or digital documents illustrating gender-sensitive disaster response, videos or recorded testimonies from disaster-affected individuals focusing on inclusion issues.

Methods Used

- Interactive lecture
- Case studies
- Group Discussions

Technical Notes

The facilitator will guide participants on understanding the disproportionate impacts of disasters on vulnerable groups, including women, children, the elderly, and persons with disabilities. The facilitator will explain specific risks faced by each group and highlight the importance of inclusive pre-disaster planning that integrates their unique needs across all disaster management phases. Using the case study of Bhopal Gas Tragedy and short films, the facilitator will illustrate gender-specific

consequences of disasters. The session may include the UNDP's publication, "Women as Equal Partners: Gender Dimensions of UNDP-DRM Programme," which highlights good practices, lessons learned, and recommendations for strengthening women's participation in disaster risk management. Participants will be encouraged to discuss practical measures for empowerment, participation, and protection of marginalized populations, ensuring disaster management actions are inclusive and resilience-focused.

Key approach elements for the facilitator

- Vulnerable groups often face specific and heightened risks during disasters.
- Inclusive pre-disaster planning ensures that the needs of all stakeholders are considered.
- Empowerment and participation of marginalized populations strengthen resilience.
- Case studies and real-life examples enhance understanding of social and gender aspects.
- Disaster management plans should address accessibility, protection, and inclusion of all community members.

Expected Outcome

By the end of the session, participants will understand the unique vulnerabilities of women, children, the elderly, and persons with disabilities in disaster contexts. They will be able to design and apply inclusive disaster management strategies that protect marginalized groups, ensure equitable participation, and promote long-term resilience for the entire community.

10.5.3 Role of Media in Disaster Management

Duration: 75 min. (1.25 hours)

Objectives

- To help participants to understand the role of media across all phases of disaster management and the importance of accurate & responsible reporting.
- To introduce disaster journalism training and self-learning opportunities available through NIDM's iGOT platform.

Materials Needed

- PowerPoint presentation, access to iGOT (Karmayogi) portal, handouts with sample news coverage and enrollment instructions.

Methods Used

- Interactive presentation
- Case study analyses
- Demonstration of online learning portal
- Question-and-answer session

Technical Notes

The facilitator should lead a session on the role of media in all stages of disaster management before, during, and after disasters. Using real examples like cyclone Amphan, the Uttarakhand glacier burst, and Kerala floods, participants will learn how media raises public awareness, shares timely information, and supports accountability in recovery. The session will stress the need for accurate and fact-checked reporting to prevent misinformation and ensure effective disaster response. Participants will also be shown NIDM's iGOT Karmayogi online courses and guided on how to enroll for continuous learning in disaster journalism. Discussions, visuals, and practical demonstrations will help participants understand ethical reporting, media's role in reducing risks, and its impact on building community resilience.

Key approach elements for the facilitator

- Enabling participants to appreciate media's role in all disaster phases.
- Guide on accurate, ethical reporting to prevent misinformation.
- Use case studies to show media's impact on public behaviour and policy.
- Develop an understanding of preventive reporting for long-term preparedness.
- Promote learning through NIDM's iGOT courses.
- Facilitate discussions on practical challenges and communication strategies.

Expected Outcome

By the end of the session, participants will understand the multifaceted role of media in disaster management and its influence on public behaviour, resource mobilization, and policy decisions. They will recognize the importance of accurate, ethical reporting to prevent misinformation and learn practical ways to integrate media strategies into disaster preparedness, response, and recovery. Participants

will also be familiarized with the online disaster journalism courses for continuous professional development, enhancing their ability to support resilient and informed communities.

10.5.4 Public Health Resilience and DRR

Duration: 75 min. (1.25 hours)
Objectives
• To explain the role of resilient health systems in disaster risk reduction. • To introduce Health EDRM frameworks and link global hazard impacts to sustainable development.
Materials Needed
• PowerPoint presentation, handouts outlining the PHEDM framework and health infrastructure protocols, and infographics on SDGs and public health risk scenarios.
Methods Used
• Interactive presentation • Case study analyses • Demonstration of online learning portal • Question-and-answer session

Technical Notes

The facilitator will lead a session on the role of strong health systems in reducing disaster risks and keeping communities healthy. Participants will learn about the Health Emergency and Disaster Risk Management (Health EDRM) framework, which includes preparedness, mitigation, response, recovery, and rehabilitation. The session will cover key areas like disease monitoring, continuous medical care, protecting health facilities, and planning for climate impacts. Facilitators will also discuss different hazards, such as natural disasters, pandemics, and industrial accidents, and how they affect public health, linking these to Sustainable Development Goal 3 (SDG-3). The session will explain the essentials for hospital readiness, community involvement, policies, funding, and information systems. Participants will be guided to use proactive, risk-based, and inclusive approaches to make health systems more resilient.

Key approach elements for the facilitator

- Emphasize the importance of resilient health systems in disaster risk reduction.

- Guide participants through the health EDRM framework and its five pillars.
- Highlight critical hospital infrastructure and operational readiness for emergencies.
- Explain proactive, community-driven, and inclusive approaches for health emergency planning.
- Develop an understanding of integration of policy, financing, and information systems for effective health disaster management.

Expected Outcome

By the end of the session, participants will understand the role of resilient health systems in reducing disaster risks. They will be able to apply the Health EDRM framework, address critical infrastructure and operational needs, and use community-based approaches to strengthen preparedness, response, and recovery, while linking health resilience to sustainable development goals.

10.5.5 Group Activity 6- Psycho - Social Aspects of Disaster Management and Essential Skills

Duration: 75 min. (1.25 hours)

Objectives

- To help participants understand psychosocial needs during disasters.
- To build skills in empathetic communication and trauma-sensitive support.
- To integrate mental health and psychosocial care into disaster management.

Materials Needed

- Printed handouts on therapeutic communication (e.g., SOLER model)
- Scenario cards for role play
- Flipcharts and markers
- Reference materials on gender and emotional dynamics in disasters

Methods Used

- Role-playing exercises and simulation
- Group discussions and reflections
- Collaborative practice of communication techniques

Technical Notes

The facilitator will lead an interactive session on psychosocial aspects of disaster management, guiding participants through practical techniques such as active listening and emotional support using the SOLER model. Through role-playing and discussions, participants will learn to respond empathetically to survivors,

understand trauma communication, and consider gender-sensitive approaches. The facilitator will ensure a safe and respectful environment, emphasizing the integration of mental health and psychosocial support into disaster management and recovery planning.

Key approach elements for the facilitator

- Encourage participants to practice empathetic communication and active listening.
- Guide understanding of trauma-informed responses and survivor engagement.
- Highlight gender-sensitive approaches to psychosocial care.
- Ensure a safe, respectful, and supportive learning environment.
- Reinforce the integration of mental health and psychosocial support in disaster planning.

Expected Outcome

By the end of the session, participants will understand psychosocial needs during disasters and be able to apply empathetic, trauma-sensitive communication techniques. They will also recognize the importance of integrating mental health support into disaster management and recovery efforts. The detailed Suggestive Group Activities for sessions at Annexure-V.

Table 11: Suggested Group Activity

Activity	*Description*	*Guidance for Delivery*
Role-Play: Empathetic Communication	• Practice empathetic engagement using the SOLER model with disaster survivor scenarios. • Participants alternate roles as responder and survivor.	Encourage experiential learning, provide feedback, and guide trauma-sensitive communication.
Group Discussion: Gender & Emotion Mapping	• Map emotional strengths, vulnerabilities, and support across genders; identify cultural norms and inclusive strategies.	Highlight gender and cultural sensitivities, and facilitate interactive discussion.

Activity	*Description*	*Guidance for Delivery*
Case Reflection: Mental Health in Disaster Planning	• Analyse real or hypothetical cases for integration of psychosocial support; identify gaps and propose actions.	Reinforce mental health integration and encourage collaborative reflection.
General Guidance	• Outline objectives, outcomes, and roles clearly. • Promote a safe, respectful, and inclusive environment. • Encourage participation, reflection, and sharing. • Adapt activities to group needs and dynamics. • Integrate psychosocial, gender, and communication aspects.	Adapt content to participants, use visuals/handouts, and manage emotional intensity with breaks and self-care reminders.

Source: Adapted from NIDM (Ministry of Home Affairs) Training Module on Psychosocial Care in Disaster Management, NDMA–NIMHANS Psychosocial First Aid Module and NDMA Guidelines on Mental Health and Psychosocial Support Services in Disasters

10.6 Suggested Handouts/Web-links

- *https://ndma.gov.in/sites/default/files/PDF/Technical%20Documents/HDM_Advanced.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/CBDRR_Guidelines_Oct_2024.pdf*
- *https://ndma.gov.in/sites/default/files/PDF/NDMA%20DDMP%20Explanatory%20Notes.pdf*
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- *https://ndma.gov.in/sites/default/files/PDF/Guidelines/DIDRR.pdf*
- *https://www.gfdrr.org/sites/default/files/publication/gender-equality-disaster-recovery.PDF*
- *https://wrd.unwomen.org/sites/default/files/2021-11/546_genderdisastersourcebook_0.pdf*
- *https://www.unisdr.org/files/547_gendergoodpractices.pdf*
- *https://www.undrr.org/media/89321/download?startDownload=20250604*
- *https://nidm.gov.in/pdf/ncrmp/Deliverable%2014-2.pdf*
- *https://www.adpc.net/igo/category/ID1021/doc/2016-pt37Na-ADPC-Information_Kit_for_Media_Lao_PDR.pdf*
- *https://www.unesco.org/en/articles/media-face-disasters*
- *https://www.unisdr.org/files/20108_mediabook.pdf*

- *https://indiajapanlab.org/wpIJ/wp-content/uploads/2024/01/15.-Role-of-Media-in-Disaster-Risk-Reduction-C.pdf*
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- *https://nidm.gov.in/PDF/pubs/NDMA/18.pdf*
- *https://mohfw.gov.in/sites/default/files/Framework%20for%20Establishing%20and%20Operationalizing%20State%20level%20Health%20Emergency%20Operations%20Centres%20%28HEOC%29%20-%20A%20Guidance%20Document_0.pdf*
- *https://ncdc.mohfw.gov.in/wp-content/uploads/2024/08/PUBLIC-HEALTH-GUIDELINES-FOR-FLOOD-EVENT.pdf*
- *https://stacks.cdc.gov/view/cdc/12007*
- *https://www.undp.org/india/publications/women-equal-partners-gender-dimensions-disaster-risk-management-programme*
- *https://nidm.gov.in/pdf/trgReports/2025/July/Trg_21-01July2025ga.pdf*

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9. Disaster Risk Financing, Insurance, and Risk Transfer – NIDM (2021)
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29. National Guidelines on Community-Based Disaster Risk Reduction (NDMA, Oct 2024)
30. Simplified Guideline for Earthquake Safety of Buildings (NDMA, May 2021)
31. Cool Roof: House Owners' Guide (NDMA, May 2021)
32. Guidelines on Mental Health and Psychosocial Support Services in Disasters (NDMA, Dec 2023)
33. National Policy on Disaster Management (NPDM, 2009)
34. Guidelines on Temporary Shelters for Disaster-Affected Families (NDMA, 2019)
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36. National Disaster Management Plan (NDMP) (NDMA 2016)
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Annexure-I

Glossary

Termi-nologies	*Definitions*
Affected people	People who are affected, either directly or indirectly, by a hazardous event. Directly affected are those who have suffered injury, illness or other health effects; who were evacuated, displaced, relocated or have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets. Indirectly affected are people who have suffered consequences, other than or in addition to direct effects, over time, due to disruption or changes in economy, critical infrastructure, basic services, commerce or work, or social, health and psychological consequences.
Build back better	The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment.
Building code	A set of ordinances or regulations and associated standards intended to regulate aspects of the design, construction, materials, alteration and occupancy of structures, which are necessary to ensure human safety and welfare, including resistance to collapse and damage.
Capacity	The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

Terminologies	*Definitions*
Coping capacity	It is the ability of people, organizations and systems, using available skills and resources, to manage adverse conditions, risk or disasters. The capacity to cope requires continuing awareness, resources and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks.
Capacity assessment	It is the process by which the capacity of a group, organization or society is reviewed against desired goals, where existing capacities are identified for maintenance or strengthening and capacity gaps are identified for further action.
Capacity development	It is the process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals. It is a concept that extends the term of capacity-building to encompass all aspects of creating and sustaining capacity growth over time. It involves learning and various types of training, but also continuous efforts to develop institutions, political awareness, financial resources, technology systems and the wider enabling environment.
Contingency planning	A management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses.
Critical infrastructure	The physical structures, facilities, networks and other assets which provide services that are essential to the social and economic functioning of a community or society.
Disaster	A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Termi-nologies	*Definitions*
Disaster damage	It occurs during and immediately after the disaster. This is usually measured in physical units (e.g., square meters of housing, kilometres of roads, etc.), and describes the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area.
Disaster impact	It is the total effect, including negative effects (e.g., economic losses) and positive effects (e.g., economic gains), of a hazardous event or a disaster. The term includes economic, human and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being.
Disaster loss database	A set of systematically collected records about disaster occurrence, damages, losses and impacts, compliant with the Sendai Framework for Disaster Risk Reduction 2015-2030 monitoring minimum requirements.
Disaster manage-ment	The organization, planning and application of measures preparing for, responding to and recovering from disasters.
Disaster risk	The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.
Acceptable risk or toler-able risk	It is therefore an important sub-term; the extent to which a disaster risk is deemed acceptable or tolerable depends on existing social, economic, political, cultural, technical and environmental conditions. In engineering terms, acceptable risk is also used to assess and define the structural and non-structural measures that are needed in order to reduce possible harm to people, property, services and systems to a chosen tolerated level, according to codes or "accepted practice" which are based on known probabilities of hazards and other factors.

Termi-nologies	*Definitions*
Residual risk	The disaster risk that remains even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained. The presence of residual risk implies a continuing need to develop and support effective capacities for emergency services, preparedness, response and recovery, together with socioeconomic policies such as safety nets and risk transfer mechanisms, as part of a holistic approach.
Disaster risk assessment	A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.
Disaster risk governance	The system of institutions, mechanisms, policy and legal frameworks and other arrangements to guide, coordinate and oversee disaster risk reduction and related areas of policy.
Disaster risk information	Comprehensive information on all dimensions of disaster risk, including hazards, exposure, vulnerability and capacity, related to persons, communities, organizations and countries and their assets.
Disaster risk manage-ment	It is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.
Disaster risk reduction	It is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

Terminologies	*Definitions*
Early warning system	An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.
Emergency	It is sometimes used interchangeably with the term disaster, as, for example, in the context of biological and technological hazards or health emergencies, which, however, can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.
Emergency management	It is also used, sometimes interchangeably, with the term disaster management, particularly in the context of biological and technological hazards and for health emergencies. While there is a large degree of overlap, an emergency can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.
Evacuation	Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them.
Exposure	The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.
Extensive disaster risk	The risk of low-severity, high-frequency hazardous events and disasters, mainly but not exclusively associated with highly localized hazards.
Hazard	A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.
Mitigation	The lessening or minimizing of the adverse impacts of a hazardous event.

Terminologies	*Definitions*
National Platform for Disaster Risk Reduction	A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multisectoral and interdisciplinary in nature, with public, private and civil society participation involving all concerned entities within a country.
Preparedness	The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.
Prevention	Activities and measures to avoid existing and new disaster risks.
Reconstruction	The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.
Recovery	The restoring or improving of 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.
Response	Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

Terminologies	*Definitions*
Retrofitting	Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.
Structural and non-structural measures	Structural measures are any physical construction to reduce or avoid possible impacts of hazards, or the application of engineering techniques or technology to achieve hazard resistance and resilience in structures or systems. Non-structural measures are measures not involving physical construction, which use knowledge, practice or agreement to reduce disaster risks and impacts, in particular through policies and laws, public awareness raising, training and education.
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

Source: UNDRR- Disaster Risk Reduction Terminology (https://www.undrr.org/drr-glossary/terminology)

Abbreviations and Acronyms

ATI	Administrative Training Institute
BBB	Build Back Better
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CAP	Common Alerting Protocol
CBRN	Chemical, Biological, Radiological, and Nuclear
CDRI	Coalition for Disaster Resilient Infrastructure
COLS	Compression-Only Life Support
CPR	Cardiopulmonary Resuscitation
CRT	Crisis Response Teams
CWC	Central Water Commission
DAE	Department of Atomic Energy
DDMA	District Disaster Management Authority
DM	Disaster Management
DMP	Disaster Management Plan
DPR	Detailed Project Reports
DMS	Disaster Management Support
DR ABC	Danger, Response, Airway, Breathing, Circulation
DRDO	Defence Research and Development Organisation
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EDRM	Emergency and Disaster Risk Management
EOC	Emergency Operation Centres
ESF	Emergency Support Functions
GIRI	Global Infrastructure Risk Model and Resilience Index

GIS	Geographic Information System
GLOF	Glacial Lake Outburst Floods
HFS	High-Resolution Forecasting System
HLC	High-Level Committee
HRVA	Hazard, Risk, Vulnerability Assessment
HVCRA	Hazard, Vulnerability, and Capacity Risk Assessment
IAP	Incident Action Plans
ICR-ER	Integrated Control Room for Emergency Response
ICS	Incident Command System
ICT	Information and Communications Technology
IDRN	India Disaster Resource Network
iGOT	Integrated Government Online Training
IIT	Indian Institute of Technology
IMD	India Meteorological Department
INCOIS	Indian National Centre for Ocean Information Services
INSA	Indian National Science Academy
IORA	Indian Ocean Rim Association
IPCC	Intergovernmental Panel on Climate Change
IRS	Incident Response System
IT	Information Technology
IUINDRR	Inter-University Institutional Network for Disaster Risk Reduction
LED	Light-Emitting Diode
MCQ	Multiple Choice Questions
MHA	Ministry of Home Affairs
MoEFCC	Ministry of Environment, Forest and Climate Change
MSME	Micro, Small, and Medium Enterprises
NCS	National Centre for Seismology
NCT	National Capital Territory (of Delhi)

NDEM	National Disaster Emergency Management
NDMA	National Disaster Management Authority
NDMIS	National Disaster Management Information System
NDMP	National Disaster Management Plan
NDRF	National Disaster Response Force
NDRMF	National Disaster Risk Management Fund
NPDM	National Policy on Disaster Management
NRSC	National Remote Sensing Centre
PASS	Pull, Aim, Squeeze, and Sweep
PDNA	Post-Disaster Needs Assessment
PHEDM	Public Health Emergency and Disaster Management
PPE	Personal Protective Equipment
PPT	Power Point Presentation
RSMC	Regional Specialized Meteorological Centre
SAR	Synthetic Aperture Radar
SDGs	Sustainable Development Goals
SDMA	State Disaster Management Authority
SFDRR	Sendai Framework for Disaster Risk Reduction
SDRF	State Disaster Response Force
SOLER	Squarely face, Open posture, Lean in, Eye contact, Relaxed demeanor
SOP	Standard Operating Procedure
TNA	Training Needs Assessment
TERI	The Energy and Resources Institute
UAV	Unmanned Aerial Vehicle
UN	United Nations
UNDP	United Nations Development Programme
USAR	Urban Search and Rescue

List of Recreational Activities

The recreational activities are designed to enhance participants' physical and mental well-being, alleviate stress, and support holistic learning throughout the training programme. They foster camaraderie, promote informal networking, and strengthen interpersonal connections among participants from diverse professional backgrounds. Additionally, these activities provide cultural exposure, offer meaningful relaxation after intensive academic sessions, and contribute to stronger group cohesion, creating a positive, engaging, and collaborative learning environment. Suggested list of recreational activities is as follows:

S. No.	Recreational Activity	Description
1	Morning Yoga Sessions	Guided outdoor yoga for physical and mental rejuvenation.
2	Outdoor Sports Activities	Light sports to promote fitness, energy, and group bonding.
3	Evening Local Visits	Planned outings for cultural exposure and relaxation.
4	Visit to ISKCON Temple, Rohini	Spiritual and cultural experience in a serene environment.
5	Visit to Unity One Mall	Leisure visit for shopping, food, and informal interaction.
6	Visit to Delhi Haat	Exposure to crafts, culture, cuisine, and cultural performances.
7	Movie / Documentary Night	Screening of short films and awareness documentaries.
8	Cultural Evening	Participant-led performances: singing, dancing, poetry, and other creative acts.

Suggestive List of Places for Field Visit in Delhi-NCR

Since the training course is designed for the Delhi NCR region, a suggestive list of potential sites for field visits within Delhi NCR is provided. The Course Coordinator may finalize and customize the field visit locations based on logistical feasibility, training objectives, and participant requirements.

For visits to specialized institutions such as the National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), and other disaster risk reduction (DRR) facilities, the Course Coordinator is advised to coordinate directly with the respective local authorities to facilitate access and necessary arrangements. The places for the field visit are as follows:

- National Disaster Response Force (NDRF)
- National Disaster Management Authority (NDMA)
- India Meteorological Department (IMD)
- National Centre for Seismology (NCS)
- Integrated Command and Control Centres (ICCCs), MHA
- Yamuna Biodiversity Park, New Delhi
- Indian National Science Academy (INSA)
- Coalition for Disaster Resilient Infrastructure (CDRI)
- The Energy and Resources Institute (TERI) Headquarters
- National Museum of Natural History
- Delhi Disaster Management Authority, Government of NCT of Delhi
- Conservation Education Centre, Delhi
- Delhi Earth Station-ISRO
- Centre for Atmospheric Sciences, IIT Delhi
- Centre for Urban Ecology and Sustainability
- National Science Centre
- National Museum, New Delhi
- Prime Minister's Museum & Library (Teen Murti Bhavan)
- Indian National Science Academy (INSA), Bahadur Shah Zafar Marg
- ICAR-National Institute for Plant Biotechnology, Pusa
- Asola Bhatti Wildlife Sanctuary and Conservation Education Centre

- Aravalli Biodiversity Park, Vasant Vihar
- Kamla Nehru Ridge
- Delhi Ridge and Sanjay Van
- Wetlands and Water Bodies (Bhalswa Lake, Najafgarh Jheel)
- Chhawla Dada Dev Mandir Eco Park

Suggestive Group Activities for session

Activity	*Objective*	*Groups & Roles*	*Key Steps*	*Learning Outcome*
Tabletop Simulation	Practice emergency decision-making	6 groups of 8–10; stakeholders (govt, responders, volunteers, schools)	Present disaster scenario; plan response, resources, communication;	Understand coordination, adaptability, and decision-making under pressure
Hazard Mapping	Identify local hazards and risks	10 groups of 6	Map hazards, vulnerable populations, and infrastructure; prioritize risks; propose mitigation	Learn participatory risk assessment and community resilience planning
Resource Management Game	Manage limited resources in disaster	10–12 groups of 5–6	Allocate cards (food, water, medicine) under simulated scenarios; negotiate and justify decisions	Build awareness of survival priorities, ethics, and practical resource planning
Stakeholder Debate	Understand roles & accountability	Teams representing govt, NGO, media, residents, scientists	Debate responsibilities in disaster scenario; defend or critique roles	Learn about leadership, collaboration, and response gaps

Activity	*Objective*	*Groups & Roles*	*Key Steps*	*Learning Outcome*
Evacuation Mapping	Plan safe evacuations	8–10 groups of 6; assigned community roles	Map evacuation routes and shelters under hazards; present plans	Develop practical planning skills and collaborative problem-solving
Book Review / Interactive Exercises	Build awareness and preparedness	Groups up to 60	Role-play responders, officials, volunteers; design disaster response plans	Enhance teamwork, communication, critical thinking, and hands-on learning

Source: Compiled by Authors

Suggestive Sports, Fitness, and Recreational Activities for the Evening

The sports evening activities are designed to promote physical fitness, mental relaxation, and overall well-being among participants after intensive training sessions. These activities foster teamwork, strengthen interpersonal relationships, and encourage informal networking in an outdoor and energizing environment. By offering both competitive and non-competitive options, the program ensures inclusivity and accommodates diverse fitness levels. Additionally, the Sports Evening supports stress reduction, enhances motivation, and contributes to building a cohesive and resilient participant group. The list of activities is as follows:

Sl. No.	*Activity*	*Type*	*Description*
1.	Cricket	Team Sport	Encourages teamwork, coordination, and healthy competition among participants.
2.	Volleyball	Team Sport	Enhances collaboration, communication, and physical fitness in a group setting.
3.	Football	Team Sport	Promotes agility, endurance, and team bonding through fast-paced play.
4.	Relay Races	Team Sport	Builds teamwork, speed, and cooperative participation across mixed groups.
5.	Light Jogging	Non-Competitive	Supports cardiovascular health and provides a refreshing wind-down activity.
6.	Yoga Stretches	Non-Competitive	Enhances flexibility, mindfulness, and stress relief after intense training sessions.

Sl. No.	*Activity*	*Type*	*Description*
7.	Group Walks	Non-Competitive	Creates an easy, inclusive activity encouraging conversation and relaxation.
8.	Guided Warm-Up Session	Fitness	Led by a trainer to prepare participants physically and prevent injuries.
9.	Music & Informal Socializing	Recreation	Adds a light, enjoyable atmosphere to promote bonding and relaxation.
10.	Prize Distribution	Engagement Activity	Recognizes participation, boosts morale, and encourages active involvement.

Other Suggestive Topics

Based on the specific requirements and needs of the course, the facilitator or course coordinator may choose to include additional topics. These topics can be selected to address emerging issues, local contexts, or specialized areas relevant to the participants. This flexibility ensures the course remains adaptable, comprehensive, and responsive to the evolving landscape of disaster management and learner needs. These topics may include:

1. Understanding Floods: Fundamentals, Impacts, and Responses with a Focus on Bihar Floods 2025

Duration: 75 min. (1.25 hours)
Objective • To introduce participants to fundamental knowledge about floods, including causes, types, impacts, and essential disaster management strategies for effective flood prevention, preparedness, response, and recovery.
Method • Interactive lecture using a PowerPoint presentation • Group discussion • Question-and-answer session
Materials Needed • Handouts, flipcharts, markers, case studies

Handouts/Web Links:

- *https://ndrf.gov.in/en/operations/response-ndrf-during-bihar-floods*
- *https://ndma.gov.in/Natural-Hazards/Floods*
- *https://ndma.gov.in/Reference_Material/NDMAGuidelines*
- *https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1779789*
- *https://indiawris.gov.in/wiki/doku.php?id=flood_management*

Technical Session Plan with Facilitator's Notes

The facilitator should start the session by discussing the key concepts pertaining to flood types, its primary causes, and drainage aspects. It also includes the discussions related to their impacts on life, property, varied sectors' specific infrastructures,

and public health through case studies of flood-prone regions of India and across the globe.

Key approach elements for the facilitator

- Explain flood types, causes, and contributing factors.
- Highlight the impacts on communities, infrastructure, and health.
- Describe the role of data-driven decision-making and GIS tools.
- Highlight the importance of community engagement, multi-agency coordination, and climate-adaptive solutions.
- Showcase holistic, long-term planning aligned with disaster risk reduction frameworks.

Expected Outcome

Participants will understand flood dynamics, risks, and management strategies. They will also gain practical knowledge to implement DM phases effectively.

2. Understanding CBRN Disaster Management: Strategies and Best Practices

Duration: 75 min. (1.25 hours)

Objectives

- To build understanding of the specialized nature of CBRN disasters and India's evolving CBRN preparedness framework, including stakeholder roles and responsibilities.
- To develop practical skills for effective CBRN prevention, response, and recovery.

Method

- Interactive lecture using a PowerPoint presentation
- Case study discussions
- Question-and-answer session

Materials Needed

Hand-outs, flipcharts, markers, relevant CBRN simulation videos or images, case studies

Hand-outs/Web links

- *https://www.pib.gov.in/PressReleasePage.aspx?PRID=2147187*
- *https://nidm.gov.in/pdf/guidelines/new/managementofnuclearradiologicalemergencies.pdf*

- *http://gsdma.org/uploads/Assets/other/n06072017050617460.pdf*
- *https://www.drdo.gov.in/drdo/cbrn-defence*
- *https://www.who.int/southeastasia/outbreaks-and-emergencies/emergency-operations/cbrn*
- *https://nct-cbnw.com/india-reforming-cbrn-disaster-management-preparedness/*

Technical Session Plan with Facilitator's Notes

The facilitator should initiate or start the session by introducing CBRN hazards and basic explanations on the key concepts depicting how they differ from conventional disasters. The strong emphasis is on their invisible nature and long-term impacts on the society. The facilitator should briefly outline India's CBRN preparedness framework, highlighting the leadership role of NDMA and the supporting functions of DRDO, DAE, NDRF, and health agencies. It incorporates the deliberations through case studies, simulations, and mock exercises. The intent is to demonstrate early warning systems, inter-agency coordination, evacuation planning, and decontamination procedures. Discussions should be facilitated in order to identify operational gaps and learnings from global best practices.

Key approach elements for the facilitator

- Highlight the importance of CBRN disasters compared to conventional emergencies.
- Showcase effective management of early detection, trained responders, protective equipment, and coordinated medical care.
- Highlight India's CBRN framework is led by NDMA and other agencies' role.
- Emphasizes on simulation-based training and mock exercises.
- Showcase wide varied global best practices, essential to managing CBRN risks.

Expected Outcome

Participants will have a clear understanding of the CBRN preparedness framework and the challenges posed by such hazards. Also, help to support early detection, coordinated response, and informed decision-making, contributing to stronger institutional readiness and resilience.

3. Hands-on Demonstration: Data to Action Matrix

Duration: 75 min. (1.25 hours)
Objectives • To demonstrate how flood data and GIS outputs can be translated into an actionable planning framework for disaster management plans. • To enable participants to convert data from events such as the 2025 Bihar floods into structured DDMP/SDMP planning components.
Materials Needed • PowerPoint presentation on the Data to Action Matrix • Sample flood datasets (GIS, demographic, infrastructure) • Action Matrix template for DDMP/SDMP • Visual aids of flood inundation and critical infrastructure
Method Used • Data synthesis demonstration • Hands-on action matrix exercise • Group discussion on planning integration • Gap analysis and Q&A session
Facilitator's Tip • Use real disaster data • Emphasize the Action Matrix • Encourage gap analysis

Technical Notes

i) Data Synthesis (The Input Phase)

Before writing the plan, the facilitator should demonstrate how to categorize data from the 2025 Bihar floods or similar events:

- **Spatial Data**: GIS maps showing inundation depth, breach points in embankments (e.g., Kosi or Gandak rivers), and blocked drainage arteries.
- **Demographic Data**: Population density in "Red Zones," number of vulnerable groups (elderly, children), and livestock counts.
- **Infrastructure Data**: Locations of schools (potential relief camps), health centers, and lifeline roads.

ii) Drafting the Action Matrix (The Core Task)

The "Action Matrix" is the heart of a DM Plan. It assigns accountability. Participants should practice filling a table based on the Bihar 2025 context:

Phase	*Key Action Item*	*Primary Agency*	*Support Agency*	*Time-line*
Pre-flood	Desilting of major drainage channels	Water Resources Department	MNREGA/Local Bodies	Jan – May
Warning	Last-mile connectivity (SMS/Sirens)	SEOC/District Admin	Telecom Providers	Real-time
Response	Deployment of SDRF/NDRF to hotspots	District Magistrate	NDRF/SDRF/ Police	Within 2 hours
Recovery	Damage assessment for crop compensation	Agriculture Department	Revenue Department	Post-recession

iii) Converting Data into a Planning Chapter

A DDMP chapter isn't just a list of facts; it must be prescriptive. Guide participants to use the following structure:

a. Hazard Profile

- Use historical data to define "Return Periods" (e.g., "The 2025 flood exceeded the 25-year return level").
- Identify specific breach-prone sections of embankments using GIS coordinates.

b. Vulnerability Analysis

- Quantify the risk: "Based on 2025 data, 15 blocks in District X are at high risk of isolation for >72 hours."

c. Resource Mapping (SOPs)

- Boats & Equipment: Map the nearest NDRF base or private boat owners' contact list.
- Health: Stockpiling of anti-venom and halogen tablets based on past health data.

d) Guided Exercise: The "Gap Analysis"

Ask participants to look at the 2025 Bihar flood data and answer the following:

- Where did the communication break down? (e.g., "Warning reached the Block but not the Ward.")
- Strategy: Add a "Communication Bridge" line item to the SDMP matrix.
- Climate Adaptation: How do we adjust the "High Water Mark" in our engineering codes based on 2025 levels?

Expected Outcome

Participants will be able to interpret raw flood data (GIS, demographic, and infrastructure information) and systematically convert it into an actionable planning framework for District or State Disaster Management Plans (DDMP/SDMP).

4. AI, Dashboards, and Decision Support Systems in DM

Duration: 60 min. (1 hour)

Objectives

- To understand how AI/ML enhances the speed and accuracy of disaster alerts and resource allocation.
- To demonstrate the role of visual dashboards in interpreting complex early warning data.
- To explore the modernization of traditional tools like HAM Radio through digital signal processing.

Materials Needed

- Live internet access for NDEM/SACHET portals,
- HAM Radio digital interface (SDR) demo,
- AI-simulation case studies.

Method Used

- Live Demo: Trigger a mock "Cell Broadcast" alert and show the dashboard response.
- Interactive Session: "Simulate a Flood"—Ask participants to use a dashboard to allocate 5 NDRF teams based on a predictive flood map.
- Q&A: Address the "Black Box" concern (trusting AI vs. human judgment).

Facilitator's Tip

- Use real disaster data
- Emphasize the action matrix
- Encourage gap analysis

i) Cell Broadcast & AI-Driven Alerting

Cell Broadcast (CB) is the next-generation evolution of India's SACHET/CAP system. Unlike SMS, which can fail during network congestion, CB sends a high-priority "broadcast" to all handsets in a geofenced area.

- **AI Integration**: AI models are now used for subscriber prediction. By analyzing real-time telecom data, the system predicts the number of people in a "high-risk" polygon, allowing authorities to estimate evacuation needs before the alert is even sent.
- **Content Optimization**: AI-based Natural Language Processing (NLP) tools analyze alert messages for clarity and automatically translate them into vernacular languages, ensuring that the urgency is communicated effectively across diverse populations.
- **The "One Click" Dissemination**: AI helps in selecting the most effective dissemination channels (TV, radio, mobile, and coastal sirens) based on the current reach and time of day.

ii) Decision-Support Dashboards & Early Warning

Dashboards act as the "brain" of the Emergency Operations Centre (EOC). They aggregate data from the NDMIS Portal, satellite feeds (ISRO/NRSC), and ground sensors.

Feature	*Role of AI/ML*	*Impact on Planning*
Predictive Analytics	Analyzes historical weather patterns and current sensor data to forecast flood levels or cyclone paths.	Shifts from reactive response to Pre-emptive Evacuation.
Vulnerability Mapping	Overlays hazard zones with socio-economic data (population density, hospital locations).	Prioritizes resources for high-risk/low-capacity areas.
Scenario Simulation	Runs "What-If" scenarios (e.g., "If this dam fails, which 50 villages will be flooded?").	Enables precise Disaster Management Planning (DMP).

Facilitator Note: During the demo, show how the NDEM 4.0 (National Database of Emergency Management) dashboard allows users to perform "Proximity Analysis" to find the nearest relief shelters and the safest routes to reach them.

iii) Modernized HAM Radio (Digital Integration)

HAM Radio (Amateur Radio) remains the "last mile" fail-safe communication. While traditionally analog, it is being revolutionized by AI and digital tools to overcome its historical limitations.

- **AI Noise Reduction**: Deep Learning algorithms are now used to filter out atmospheric static and interference, allowing clear voice communication even in the worst weather conditions.
- **Digital Amateur Radio (BMERS)**: Systems like the Bethesda Emergency Radio System combine Wi-Fi with HAM Radio to send emails over radio waves. This allows medical reports and resource lists (from the IDRN database) to be transmitted when the internet is completely down.
- **Signal Classification**: Machine Learning helps operators automatically identify signal types and modulation, ensuring that emergency distress frequencies are monitored with 100% accuracy without human fatigue.

Expected Outcome

Participants will understand the practical role of Artificial Intelligence (AI), data dashboards, and modern communication technologies in strengthening disaster preparedness, early warning, and response systems.

5. Data Governance in Disaster Management

Duration: 60 min. (1 hour)

Objectives

- To standardize the collection, sharing, and storage of disaster-related data across agencies.
- To establish clear protocols for data accuracy, validation, and regular updates.

Materials Needed

- PowerPoint presentation on data governance frameworks and standards
- Examples of disaster datasets (IMD, CWC, IDRN, Census, and satellite data)
- Demonstration of interoperable data formats (CAP alerts, GIS layers)
- Visual aids explaining data integration and dashboards

Method Used

- Interactive lecture using a PowerPoint presentation on data standards and governance principles
- Demonstration of data integration across multiple sources
- Discussion on interoperability, validation, and data-sharing protocols
- Question and answer session

Facilitator's Tip

- Emphasize data standardization and interoperability
- Highlight the need for regular data updating and validation
- Promote integrated data use for decision-making

Technical Notes

i) Data Standards and Formats

For digital tools like SACHET or IDRN to work, data must follow a universal language. Without standards, a "flood level" reported by one agency might not be readable by another's mapping software.

- **Geospatial Standards**: Adherence to OGC (Open Geospatial Consortium) standards (like WMS/WFS) ensures maps from ISRO can overlay perfectly with district-level boundary maps.
- **Alerting Standards**: Use of the Common Alerting Protocol (CAP). This is a digital "envelope" that allows a single emergency message to be broadcast simultaneously via SMS, TV, radio, and social media.
- **Data Formats**: Moving away from static PDFs to machine-readable formats like JSON, XML, and CSV. This allows AI/ML models to "scrape" and analyze data instantly.

ii) Updating Cycles and Validation

Data is perishable. A list of oxygen cylinders in the IDRN (India Disaster Resource Network) is useless if it was last updated three years ago.

- **Dynamic vs. Static Data:**
  a. **Static:** Census data, administrative boundaries (updated every 5–10 years).
  b. **Dynamic:** Weather (IMD), water levels (CWC), and resource availability (Updated hourly/daily).

- **The "Golden Record" Principle:** Designating a single source of truth (e.g., only the CWC is the authoritative source for river gauge data) to prevent conflicting information during a crisis.
- **Validation Loops:** Automated "pings" or mandatory monthly digital sign-offs by District Magistrates (DMs) to ensure resource inventories are current.

iii) Integration of Multiple Datasets (The Data "Silo" Problem)

Disaster management is inherently multidisciplinary. Effective governance breaks down "silos" between departments to create a Common Operational Picture (COP).

Source Agency	*Data Provided*	*Use in DM Planning*
IMD	Rainfall/Cyclone tracks	Triggering the Early Warning System.
CWC	River discharge/dam levels	Predicting inundation zones (Flood mapping).
Census/SECC	Population density	Calculating the number of people to evacuate.
Line Departments	Roads, power grids, hospitals	Planning logistics and medical response.
NRSC (ISRO)	Satellite imagery	Post-disaster damage assessment (PDNA).

Key approach elements for the facilitator

- **Interoperability is Key**: Explain that "integration" doesn't mean moving all data to one server but, but making sure different servers can exchange data (APIs).
- **Quality over Quantity**: Emphasize that "Bad Data" leads to "Bad Decisions." A dashboard is only as good as the validation protocol behind it.
- **Policy Support**: Mention the National Data Sharing and Accessibility Policy (NDSAP) as the legal backbone for this inter-agency sharing.

Expected Outcome

Participants will understand the importance of a structured data governance framework in ensuring that disaster-related information is accurate, standardized, and accessible across multiple agencies involved in disaster management.

6. Building Institutional Capacity beyond Training – Systems, SOPs, Continuity, and Institutional Memory

Duration: 60 min. (1 hour)

Objectives

- To highlight that capacity building in disaster management requires strong institutional systems beyond individual training.
- To emphasize the importance of SOPs, institutional memory, and continuity mechanisms for effective disaster response.

Materials Needed

- PowerPoint presentation on institutional capacity building and SOP frameworks
- Case examples of institutional continuity and knowledge management
- Sample SOP templates and documentation formats
- Visual aids on institutional structures (SDMA/DDMA)

Method Used

- Interactive lecture using a PowerPoint presentation on institutional systems and capacity building
- Discussion on challenges such as staff turnover and knowledge loss
- Case examples on institutional memory and master trainer systems
- Question and answer session

Facilitator's Tip

- Highlight system-based capacity building
- Promote internal learning mechanisms
- Discuss institutional documentation, knowledge repositories, and structured handover processes.

Technical Notes

The facilitator should highlight that capacity building in disaster management goes beyond individual training and requires strong institutional systems. The session should discuss challenges such as frequent staff turnover in SDMAs, DDMAs, and line departments, which can lead to loss of knowledge and experience.

Participants should understand the importance of institutional memory mechanisms, including proper documentation, knowledge repositories, and structured handover processes. The role of trained officers as in-house master trainers should also be emphasized to ensure continuous learning within institutions. Additionally,

the session should stress the need for Standard Operating Procedures (SOPs) to strengthen institutional processes and ensure consistent disaster response.

Key Features

- Impact of staff turnover in disaster management institutions.
- Importance of institutional memory and knowledge retention.
- Role of trained officers as in-house master trainers.
- Need for SOP-based systems for consistent operations.
- Strengthening institutional capacity through structured processes and continuity mechanisms.

Key approach elements for the facilitator

- Capacity building should focus on systems and institutional continuity, not only training.
- Institutional memory mechanisms help retain knowledge despite staff changes.
- Master trainers within institutions can sustain learning and capacity.
- SOPs and structured systems improve coordination and response efficiency.

Expected Outcome

Participants will understand how systems, SOPs, and institutional memory strengthen disaster management institutions and help maintain continuity despite staff turnover.

7. Interpreting Risk Assessment Outputs and translating them into Planning Decisions

Duration: 75 min. (1.25 hour)

Objectives

- To help participants understand how to interpret key risk assessment outputs.
- To demonstrate how risk information can support risk-informed planning and decision-making.

Materials Needed

- Projector and presentation slides
- Sample hazard or risk maps
- Flip chart / Whiteboard and markers

Method Used

- PowerPoint Presentation
- Case examples and map-based discussions
- Group discussion/exercise linking risk assessment outputs with SDMP/ DDMP and development planning.

Facilitator's Tip

- Use practical examples from district or city risk assessments.
- Encourage participants to discuss how risk findings can influence planning decisions.
- Highlight the importance of using risk data for prioritizing mitigation and preparedness measures.

Technical Notes

This session explains how risk assessment outputs such as hazard maps, exposure data, and vulnerability information can be interpreted and applied in planning processes. It highlights how risk findings can guide authorities in identifying priority areas, allocating resources, and integrating disaster risk considerations into development and disaster management plans.

Key Features

- Interpreting hazard maps and risk profiles.
- Identifying priority risk areas for action.
- Linking risk information with development and disaster management planning.
- Promoting evidence-based decision-making.

Expected Outcome

By the end of the session, participants will be able to interpret risk assessment outputs and use them to support risk-informed planning and disaster management decisions.

Other suggestive topics are:

- Landslides & DRR – Wayanad Case Study
- Tsunami Risk Reduction
- Disaster Health Care
- Nature-Based Solutions for Risk Mitigation

- Climate Resilience and Sustainable Development Action
- Cultural Heritage and DRR
- Heatwave Preparedness & Public Health Impacts
- Forest Fire Risk Reduction Strategies
- Cyclone Risk Reduction Approaches
- Glacial Lake Outburst Floods (GLOF): Risk and Impact
- Integrated Control Room for Emergency Response (ICR-ER)

Proposed Model Programme Schedule

0915- 0945	**Registration**	To be managed by organizing team
Inauguration		
0945- 1000	Welcome Address	
1000-1015	Special Address	
1015-1030	Inaugural Address	
1030-1032	Vote of Thanks	
1032- 1100	Group Photo and Tea Break	

Time	*Sessions*	*Methods used*
Day 1		
Submodule 01: Basics of Disaster Management and Climate Change		
1100- 1145 (45 min.)	Session 1: Leadership Role in Disaster Management	PPT and Discussion
1145- 1230 (45 min.)	Ice-Breaking Exercise	Pre-training assessment and Group activity
1230- 1315 (45 min.)	Session 2: Overview of Prevailing Disasters, Extreme Events, and Climate Change Events in India	PPT & Group Discussion
1315- 14015	Lunch Break	
1415- 1515 (60 min.)	Session 3: Understanding of Disaster Management and its Cycle	PPT & Group Discussion
1515- 1530	Tea Break	

Time	*Sessions*	*Methods used*
1530- 1645 (75 min.)	Session 4: Group Activity 1– Role Play Activity based on Do's and Don'ts of various disasters	Role Play/ Group Activity
1645- 1700 (15 min.)	Summing- up	Discussions
1830 Onwards	Film Fiesta	Audio-Visual
Day 2		
Submodule 02: Global Policies and Institutional Framework		
0930- 1000 (30 min.)	Recapitulation by the assigned group	PPT & Group Discussion
1000- 1115 (75 min.)	Session 5: Global and National Disaster Risk Reduction Frameworks	PPT & Group Discussion
1115- 1130	Tea Break	
1130- 1245 (75 min.)	Session 6: Legal and Institutional Frameworks of Disaster Management in India	PPT & Group Discussion
1245- 1300 (15 min.)	Awareness Activity 1- Film showcasing DM in India (NPDRR video or any other latest) Short Films: After Shock by SRM university, Andhra Pradesh; Stay back by Mizoram University and The Blacksmith's Boon by CD staff college and Spinifex Grass: The Silent Protector of Our Coasts by The Naked eye)	Audio- Visual
1300- 1400	Lunch Break	
Submodule 03: Risk Assessment and Role of Technology		
1400- 1515 (75 min.)	Session 7: Introduction to Risk Assessment	PPT & Group Discussion
1515- 1530	Tea Break	
1530- 1645 (75 min.)	Session 8: Tools and Technologies for Risk Assessment in India (GIS, RS, and UAV)	PPT/ Live Demonstration

Time	*Sessions*	*Methods used*
1645- 1700 (15 min.)	Summing-up	Discussions
1830 Onwards	Film Fiesta	Audio-Visual
	Day 3	
0930- 1000 (30 min.)	Recapitulation by the assigned group	PPT & Group Discussion
1000- 1115 (75 min.)	Session 9: Flood Risk Assessment and Step-by-Step process and overview of Disaster Management Support (DMS) Programme	PPT & Group Discussion
1115- 1130	Tea Break	
1130- 1300 (90 min.)	Session 10: Gender and Inclusive Aspects related to Disaster Management	PPT & Group Discussion/ Activity
1300- 1400	Lunch Break	
1400-1515 (75 min.)	Session 11: Preparation of Disaster Management Plan	PPT & Group Work
1515- 1530	Tea Break	
1530- 1645 (75 min.)	Session 12: Group Activity 2– Identify different sets of indicators for multi-hazard risk assessment in a community/ school/ hospital/ institution	Group Activity/ Interactive Session
1645- 1700 (15 min.)	Summing- up	-
1830 Onwards	Film Fiesta	Audio-Visual

Time	*Sessions*	*Methods used*
	Day 4	
	Submodule 04: Understanding Disaster Mitigation	
0930- 1000 (30 min.)	Recapitulation by the assigned group and introduction to the submodule	Group Discussion
1000- 1100 (60 min.)	Session 13: Mitigation and Resilient Infrastructure	PPT & Case Study
1100- 1115	Tea Break	
1115- 1230 (75 min.)	Session 14: Earthquake Risk Mitigation	PPT & Group Discussion
1230- 1300 (30 min.)	Awareness Activity 2: Quiz on Disaster Management	Interactive Session
1300- 1400	Lunch Break	
1400- 1515 (75 min.)	Session 15: Floods and Cyclone Risk Mitigation	PPT & Case Study
1515- 1530	Tea Break	
1530-1645 (75 min.)	Session 16: Urban Flood Causes and Mitigation	PPT, Case Study & Group Discussion
1645- 1700 (15 min.)	Summing Up	Discussions
1830 Onwards	Film Fiesta	Audio-Visual
	Day 5	
0930- 1000 (30 min.)	Recapitulation by the assigned group	PPT & Group Discussion
1000- 1115 (75 min.)	Session 17: Public Health Resilience and DRR	PPT & Group Discussion
1115- 1130	Tea Break	

Time	*Sessions*	*Methods used*
1130- 1230 (60 min.)	Session 18: Group Activity 3- Mainstreaming DRR in ditfferent Sectors (The groups will be requested to choose one sector and single/ multiple hazards to develop a sectoral action plan for mainstreaming DRR)	Group Activity/ Interactive Session
Submodule 05: Understanding Disaster Preparedness and Response		
1230- 1315 (45 min.)	Session 19: Practical Aspects to Enhance Preparedness & Response during Disasters	PPT & Group Discussion
1315- 1400	Lunch Break	
1400- 1515 (75 min.)	Session 20: Panel Discussion 1- Community Preparedness for Response - Experiences of Management of Floods, Cyclones, Landslides and Earthquakes	Panel Discussion & Group Discussion
1515- 1530	Tea Break	
1530- 1645 (75 min.)	Session 21: Group Activity 4- Psycho - Social aspect of Disaster Management and Essential skills	Group Activity & Role Play
1645-1700 (15 min.)	Briefing for the field visit and Summing-up	
1830 Onwards	Film Fiesta	Audio-Visual
Day 6		
Exposure Visit to NDRF/Any other Organization		
0730- 0800 (30 min.)	Assembly at NIDM	Field visit
0800- 0930 (90 min.)	Transit to NDRF Battalion, Ghaziabad	
0930- 1300 (210 min.)	Session 22: Role of NDRF in Disaster Response	
1300- 1400	Lunch Break	

Time	*Sessions*	*Methods used*
1400- 1500 (60 min.)	Session 23: Visit to various facilities and demonstration at site (to be continued)	Field visit
1500- 1515	Tea Break	
1515- 1700 (105 min.)	Session 24: Visit to various facilities and demonstration at the site	Field visit
1700- 1900	Return to the campus	
Day 7		
Sightseeing in Delhi		
Day 8		
0930- 1000 (30 min.)	Debriefing Session	PPT & Group Discussion
1000- 1115 (75 min.)	Session 25: Communication in Emergency Situations	
1115- 1130	Tea Break	
1130- 1245 (75 min.)	Session 26: Role of Media in Disaster Management	PPT & Group Discussion
1245-1300	Open Discussion	-
1300- 1400	Lunch Break	
1400- 1515 (75 min.)	Session 27: ***Demo 1-*** *Use of Sachet App and Common Alerting Protocol (CAP)* ***Demo 2-*** *NDMIS and IDRN online platforms and other portals managed by NIDM*	PPT & Group Discussion
1515- 1530	Tea Break	

Time	*Sessions*	*Methods used*
1530- 1645 (75 min.)	Session 28: Fire Risk Management & demonstration ***Demo 3-*** *Basics of Fire Safety and demonstration on Fire-fighting techniques*	PPT/ Live Demonstration/ Interaction
1645-1700 (15 min.)	Briefing for the field visit and Summing-up	Discussion
1830 Onwards	Film Fiesta	Audio-Visual
Day 9		
Field Visit- Session on EWS- IMD/Any other Organization		
0745- 0800 (30 min.)	Assembly at NIDM	Field visit
0800- 0930 (90 min.)	Transit to IMD and NCS	Field visit
0930- 1900 (570 min.)	Exposure visits to IMD and NCS Purpose: to witness multi-hazard early warning systems (Workshop Mode)	Field visit
Day 10		
Submodule 06: Disaster Recovery and Reconstruction		
0930- 1000 (30 min.)	Debriefing Session	Discussion
1000- 1115 (75 min.)	Session 29: Principles of Disaster Recovery and Reconstruction	PPT & Group Discussion
1115 -1130	Tea Break	
1130- 1215 (45 min.)	Progress Review of Assignment	Group Work
1215- 1330 (75 min.)	Session 30: Recovery & Reconstruction- Build-Back-Better Approaches	PPT & Case Study
1330- 1415	Lunch Break	

Time	*Sessions*	*Methods used*
1415-1530 (75 min.)	Session 31: Post Disaster Needs Assessment (PDNA)	PPT, Case Study & Group Discussion
1530 -1545	Tea Break	
1545- 1700 (75 min.)	Session 32: Basic First Aid and Evacuation techniques	Interactive Session
1700- 1715 (15 min.)	Summing- up	
1830 Onwards	Film Fiesta	Audio-Visual
	Day 11	
0930- 1000 (30 min.)	Recapitulation by the assigned group	PPT & Discussion
1000- 1115 (75 min.)	Session 33: Incident Response System (IRS) and role of Emergency Support Functions (ESFs)	PPT/ Interaction Session & Group Discussion
1115- 1130	Tea Break	
	Submodule 07: Risk Financing and Insurance	
1130- 1300 (90 min.)	Session 34: Financial and Strategic Framework for Disaster Risk Management in India	PPT & Group Discussion
1300- 1400	Lunch Break	
1400- 1530 (90 min.)	Session 35: Panel Discussion 2: Risk Financing and Insurance	Panel Discussion & Group Discussion
1530- 1545	Tea Break	
1545- 1645 (60 min.)	Open Discussion	

Time	*Sessions*	*Methods used*
1645- 1700 (15 min.)	Summing-up	Discussion
1830 Onwards	Cultural Evening	Audio-Visual
Day 12		
Assessment and Conclusion		
0930- 1000 (30 min.)	Recapitulation by the assigned group	PPT & Discussion
1000- 1115 (75 min.)	Session 36: Group Presentations by the participants	Group Work
1115- 1130	Tea Break	
1130- 1200 (30 min.)	Session 37: Group Presentations by the participants	Group Work
1200- 1300 (60 min.)	Post Training Assessment	MCQs test
1300- 1400	Lunch	
1400- 1500 (60 min.)	Feedback and Review	Interactive session

Course Evaluation / Feedback Form

Comprehensive Course on Disaster Risk Management

Session Feedback Form

Date:

Venue:

Basic Information

Email: _____

Select your Name:

Select Name of the Session:
(Drop down menu to choose the session from 1 to 35)

TRAINER: RATING SCALE

Using the rating scale below, rate the item as per your belief and mark the appropriate option.

1: Poor | 2: Average | 3: Good | 4: Very Good | 5: Excellent

Criteria	*1*	*2*	*3*	*4*	*5*
Delivery Mechanism	☐	☐	☐	☐	☐
Eye Contact	☐	☐	☐	☐	☐
Query Satisfaction	☐	☐	☐	☐	☐
Engagement of Participants	☐	☐	☐	☐	☐

TRAINING MATERIAL: RATING SCALE

Using the rating scale below, rate the item as per your belief.

1: Poor | 2: Average | 3: Good | 4: Very Good | 5: Excellent

Criteria	*1*	*2*	*3*	*4*	*5*
Clarity of Presentation	☐	☐	☐	☐	☐
Clarity of Topic	☐	☐	☐	☐	☐
Coverage of Topic	☐	☐	☐	☐	☐
Examples	☐	☐	☐	☐	☐

PROGRAMME FEEDBACK

Relevance to Topic

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Programme would be useful to me immediately in my job

☐ Yes ☐ No ☐ Can't say

Programme will help me in my future job related to Disaster Management

☐ Yes ☐ No ☐ Can't say

Additional Feedback

Any other comments/observations related to the academic part of the training programme:

_____

_____

Feedback Summary of the Training Programme	
Programme Title	
Date	
Venue	
Course Coordinator(s)	

No. of Participants	
Avg. no. of feedback per session	
No. of Sessions	
No. of Feedback Responses	

Name of the Session and Resource Person	*Session Rating out of 5*	*No. of Feedbacks received*
Session 1: Leadership Role in Disaster Management		
Session 2: Introduction of the course and Ice-Breaking Exercise		
Session 3a: Overview of Prevailing Disasters, Extreme Events, and Climate Change Events in India		
Session 3b: Understanding of Disaster Management and its Cycle		
Session 4: Group Activity 1- Role Play Activity based on Dos and Don'ts of various disasters		
Session 5: Global and National Disaster Risk Reduction Frameworks		
Session 6: Legal and Institutional Frameworks of Disaster Management in India		
Session 7: Preparation of Disaster Management Plan		
Session 8: Tools and Technologies for Risk Assessment in India		
Session 9: Flood Risk Assessment and Step-by-Step process and overview of Disaster Management Support (DMS) Programme		

Name of the Session and Resource Person	*Session Rating out of 5*	*No. of Feedbacks received*
Session 10: Gender and Inclusive Aspects related to Disaster Management		
Session 11: HRVA Framework		
Session 12: Group Activity 2- Identify different sets of indicators for multi-hazard risk assessment in a community/ school/ hospital/ institution		
Session 13: Mitigation and Resilient Infrastructure		
Session 14: Role of Media in Disaster Management		
Session 15: Earthquake Risk Mitigation		
Session 16: Communication in Emergency Situations		
Session 17: Public Health Resilience and DRR		
Session 18: Group Activity 3- DM Planning- Identification of different issues and mitigation solutions		
Session 19: Practical Aspects to Enhance Preparedness & Response during Disasters		
Session 20: Panel Discussion 1- Community Preparedness for Response		
Session 21: Group Activity 4		
Session 22: Role of capabilities of NDRF		
Session 23: Demonstration on CBRN / Rope / Rescue / Response		
Session 24: Equipment display / visit of USAR Rubble Filed		
Session 25: Urban Flooding- Causes and Mitigation Strategies		
Session 26: Cyclone Risk Mitigation- Case Studies		
Session 27: Sachet App and Common Alert Protocol, NDMIS, IDRN		
Session 28: Fire Risk Mitigation		
Session 29: Recovery & Reconstruction and Need of PDNA		

Name of the Session and Resource Person	*Session Rating out of 5*	*No. of Feedbacks received*
Session 30: Recovery & Reconstruction- Build Back-Better Approaches		
Session 31: Post Disaster Needs Assessment (PDNA)		
Session 32: Basic First Aid and Evacuation techniques		
Session 33: Incident Response System (IRS) and role of Emergency Support Functions (ESFs)		
Session 34: Financial and Strategic Framework for Disaster Risk Management in India		
Session 35: Panel Discussion 2- Risk Financing and Insurance		

Overall Programme Rating	
Overall Hostel Rating	

Hostel Feedback

Comprehensive Course on Disaster Risk Management [Feedback Form]

Date: Venue:

Select your Name

Choose

PARTICULARS

Using the rating scale below, rate the item as per your belief and put the number in relevant box.

1: Poor 2: Average 3: Good 4: Very Good 5: Excellent

***Reception and Registration** **

1	*2*	*3*	*4*	*5*
◯	◯	◯	◯	◯

Tea, Breakfast, Lunch and Dinner *

1	2	3	4	5
◯	◯	◯	◯	◯

Drinking Water *

1	2	3	4	5
◯	◯	◯	◯	◯

Lodging *

1	2	3	4	5
◯	◯	◯	◯	◯

Housekeeping / Cleanliness *

1	2	3	4	5
◯	◯	◯	◯	◯

IT Support *

1	2	3	4	5
◯	◯	◯	◯	◯

Security *

1	2	3	4	5
◯	◯	◯	◯	◯

Overall Experience in hostel *

1	2	3	4	5
◯	◯	◯	◯	◯

Name of any individual who provided excellent services during the Training Programme

Your answer

Any other Suggestion / Comments

Your answer

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Resilient India - Disaster free India

NATIONAL INSTITUTE OF DISASTER MANAGEMENT

(Ministry of Home Affairs, Govt. of India)

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