

सफी एहसन रिज़वी, भा. पु. से.  
कार्यकारी निदेशक

Safi Ahsan Rizvi, IPS  
Executive Director



सत्यमेव जयते



राष्ट्रीय आपदा प्रबंधन संस्थान  
National Institute of Disaster Management

(गृह मंत्रालय, भारत सरकार)

Ministry of Home Affairs, Govt. of India

प्लॉट नं. 15, ब्लॉक बी, पॉकेट 3,  
सेक्टर 29, रोहिणी, दिल्ली - 110042Plot No. 15, Block B, Pocket 3,  
Sector 29, Rohini, Delhi-110042

NIDM/EDRM/Flashfloods/GS/2025-26

September 8, 2025

*Dear Piyush,*

The National Institute of Disaster Management (NIDM) is organizing a three-day national training programme titled **"Flash Floods and GLOF Risk Reduction at Vulnerable Locations along Mountain River Basins"** from **October 29 - 31, 2025** at **NIDM, Delhi**. The programme will convene key line departments and response agencies from Himalayan States/UTs to strengthen institutional capacity for managing Glacial Lake Outburst Floods (GLOFs) and flash floods.

2. The course is aligned with **NDMA's Guidelines on Management of GLOFs (2020)** and Govt. of India's **National GLOF Risk Mitigation Programme (NGRMP)**. It covers hazard and risk assessment, monitoring and early warning, structural and non-structural mitigation, community preparedness, and coordinated response. Given the mountainous terrain and glacial lake systems in Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh, this training is particularly pertinent.

3. In this regard, it is requested to facilitate nominations of **two mid-career officials from the NDRF 2<sup>nd</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> Battalions** placed in the states and UT namely, **J&K, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh, along with a reserve candidate.**

4. NIDM will host all participants on campus and provide necessary boarding and lodging facilities. However, travel arrangements and expenses shall be borne by the respective State/UT. The **concept note along with schedule and other registration details** can be accessed by scanning the below given **QR Code**.

5. I look forward to your cooperation in sharing the confirmation of the nominations preferably by **October 10, 2025**. For any assistance/enquiry, the nominated participant/concerned organization may be advised to write an email to Dr. Gagandeep Singh, Assistant Professor at [gagandeep.nidm@nic.in](mailto:gagandeep.nidm@nic.in) and contact at +91-9760798654.

*With regards,*

(Safi Ahsan Rizvi)

Shri Piyush Anand, IPS  
Directorate General, NDRF  
6th Floor, NDCC-II Building  
Jai Singh Road, New Delhi - 110001



आपदा प्रबंधन महाविचार: पूरा भारत भागीदार

## SCHEDULE

**29/10/2025 (Wednesday)**

Time	Session Topics	Resource Person
1000- 1100	Welcome and about the Programme  Address  Address  Keynote Address  Inaugural Address	Dr. Gagandeep Singh, Assistant. Prof., NIDM Col. Manoram Yadav, Joint Director, NIDM Shri Randeep Rana, Senior Advisor, NIDM TBD Shri Safi Ahsan Rizvi, IPS, Executive Director, NIDM
1100 - 1115	<b>Tea Break</b>	
<b>Learning Unit 1</b>	<b>Understanding GLOF &amp; Flash Flood Hazards</b>	
1115 -1300	<b>Overview of Flash Floods and GLOF Hazards</b> <b>Objectives:</b> participants will be able to <ul style="list-style-type: none"> <li>• Understand and describe flash floods and GLOFs</li> <li>• Explain key drivers and recent case histories (Kedarnath 2013, Chamoli 2021, Sikkim 2023).</li> <li>• Relate these hazards to climate change impacts in the Himalayas.</li> </ul>	Dr. Gagandeep Singh, Asstt. Prof. NIDM
1300 - 1400	<b>Lunch</b>	
1400 - 1515	<b>Glacial Lake Dynamics &amp; GLOF Triggers</b> <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>• Differentiate types of glacial lakes and their hazard potential.</li> <li>• Identify common triggers of GLOFs (avalanches, landslides, heavy rain).</li> <li>• Explain why moraine dams are inherently weak.</li> </ul>	NIH/ GSI/ WIHG (TBD)
1515– 1530	<b>Tea Break</b>	

1530-1700	<b>Hazard Mapping &amp; Vulnerability Assessment</b>  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>• Interpret hazard/risk maps of high-risk lakes.</li> <li>• Identify vulnerable downstream communities and infrastructure.</li> <li>• Explain how inventories and risk ranking support mitigation planning.</li> </ul>	NIH/ GSI/ WIHG (TBD)
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**30/10/2025 (Thursday)**

Time	Session Topics	Resource Person
1000-1015	Recap	Participants
<b>Learning Unit 2</b>	<b>Risk Mitigation &amp; Policy Frameworks</b>	
1015-1130	<b>NDMA Guidelines on Management of GLOFs (2020)</b>  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>• Summarize key provisions of the 2020 NDMA GLOF Guidelines.</li> <li>• Identify roles of central, state, and local agencies.</li> <li>• Relate guidelines to their departmental responsibilities.</li> </ul>	Dr. Gagandeep Singh, Asstt. Prof. NIDM
1130-1145	<b>Tea Break</b>	
1145-1300	National GLOF Risk Mitigation Programme (NGRMP)  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>• Describe NGRMP components (risk assessment, EWS, mitigation, capacity).</li> <li>• Recognize funding and implementation mechanisms.</li> <li>• Align state-level strategies with the NGRMP framework.</li> </ul>	Dr. Sweta and Shri Ashok Kumar, NDMA
1300-1400	<b>Lunch</b>	
1400-1515	<b>Early Warning &amp; Monitoring Systems</b>	Shri Sandeep Tambe, IFS, Sikkim (TBC)

	<b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>● Explain how GLOF monitoring and EWS function.</li> <li>● Evaluate strengths/limitations of remote sensing &amp; ground sensors.</li> <li>● Propose community-based warning dissemination measures.</li> </ul>	
1515-1530	<b>Tea Break</b>	
1530-1700	<b>Structural &amp; Non-Structural Mitigation Measures (Sikkim)</b>  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>● Differentiate between structural and non-structural measures.</li> <li>● Provide examples of mitigation measures for risky lakes.</li> <li>● Recommend feasible interventions for local contexts.</li> </ul>	Shri Sandeep Tambe, IFS, Sikkim (TBC)

**31/10/2025 (Friday)**

Time	Session Topics	Resource Person
1000-1015	Recap	Participants
<b>Learning Unit 3</b>	<b>Preparedness, Response &amp; Strategy Development</b>	
1015- 1130	<b>Community Preparedness &amp; Capacity Building</b>  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>● Identify approaches for community awareness and drills.</li> <li>● Integrate indigenous knowledge into preparedness planning.</li> <li>● Propose 2–3 actionable awareness initiatives for their state.</li> </ul>	Dr. Sushma Guleria, Asstt Prof. NIDM
1130-1145	<b>Tea Break</b>	
1145-1215	<b>Emergency Response &amp; Incident Management</b>  <b>Objectives:</b> Participants will be able to: <ul style="list-style-type: none"> <li>● Outline SOPs for GLOF/flash</li> </ul>	Shri Shekher Chaturvedi, Asstt. Prof., NIDM

	flood response under ICS. <ul style="list-style-type: none"> <li>● Recognize agency roles (DM, SDRF, NDRF, BRO).</li> <li>● Sequence actions from warning to rescue/relief effectively.</li> </ul>	
1215-1315	<b>Lunch</b>	
1315-1515.	<b>Simulation Exercise- Mitigation and Coordinated response to an Imminent GLOF</b>  Objectives: Participants will be able to: <ul style="list-style-type: none"> <li>● Formulate state-level GLOF risk mitigation strategies</li> <li>● Develop a quick action response plan.</li> </ul>	NIDM Team
1515-1700	Summing up Address  Address  Address  Valedictory Address  Vote of Thanks	Dr. Gagandeep Singh, Asstt. Prof. NIDM Col. Manoram Yadav, Joint Director, NIDM Shri Randeep Rana, Senior Advisor, NIDM Shri Safi Ahsan Rizvi, IPS, ED NIDM YP, NIDM

**NATIONAL INSTITUTE OF DISASTER MANAGEMENT (NIDM)**  
**Ministry of Home Affairs, Govt. of India, New Delhi**

**Nomination Form**

**Name of the Programme:** 3 days Training programme on Flash Floods and GLOFs Risk Reduction at Vulnerable Locations along Mountain River Basins” from 29-31 October 2025.

**Venue:** NIDM, Rohini Campus, Delhi.

**Name of the Participant:**\_\_\_\_\_

**Designation:**\_\_\_\_\_ **Level:**\_\_\_ **Group:**\_\_\_\_\_ **Date of Birth/Age:**\_\_\_\_\_

**Name and Address of the Organization:**\_\_\_\_\_

**Residential Address:**\_\_\_\_\_

**Telephone: STD Code:**\_\_\_\_\_ **Office:**\_\_\_\_\_ **Residence:**\_\_\_\_\_

**Mobile:**\_\_\_\_\_ **Email:**\_\_\_\_\_

**Blood Group:** \_\_ **Alternative Number:** \_\_\_\_\_ **Any kind of Allergies:** \_\_\_\_\_

**Expectations from the programme:**\_\_\_\_\_

**In what way do you think that this training programme will be useful?**

**Accommodation requirement only for outstation participants during the Training Programme (Required / not required) ?**

**Date:**\_\_\_\_\_

**Name, Designation and  
Signature of the Nominating  
Authority**

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**Venue Address:**

National Institute of Disaster Management, Ministry of Home, Affairs, Govt. of India, Plot No. 15, Block-B,  
Pocket-3, Sector-29 Rohini Delhi-110042,  
Dr. Gagandeep Singh, Assistant Professor, NIDM (gagandeep.nidm@nic.in)

## **Training Programme on Flash Floods and GLOFs Risk Reduction at Vulnerable Locations along Mountain River Basins**

**29-31 October 2025 | NIDM Rohini Campus, Delhi**

### **Background**

The Indian Himalayan Region (IHR), often referred to as the “Third Pole,” is highly vulnerable to Glacial Lake Outburst Floods (GLOFs) and flash floods. Climate change driven glacial retreat has led to the rapid formation and expansion of glacial lakes in states like Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh. These lakes, dammed by weak moraines, are prone to sudden breaches triggered by avalanches, cloudbursts, earthquakes, or heavy rainfall, causing catastrophic downstream flooding.

Events such as the Kedarnath tragedy (2013), Chamoli disaster (2021), and the South Lhonak GLOF in Sikkim (2023) have highlighted the devastating impacts on lives, livelihoods, infrastructure, and fragile mountain ecosystems. The risks are further compounded by flash floods from intense cloudbursts, making it imperative to strengthen preparedness and resilience in Himalayan states.

### **Why Flash Flood & GLOF Risk Reduction?**

- GLOFs and flash floods pose severe risks to mountain communities, hydropower projects, roads, bridges, and ecosystems.
- Effective management requires risk assessment, early warning systems, structural and non-structural mitigation, community preparedness, and inter-agency coordination.
- This training aims to sensitize and equip stakeholders with the knowledge, skills, and strategies needed to address these unique high-altitude hazards.

### **About NIDM**

The **National Institute of Disaster Management (NIDM)** was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its redesignation as the National Institute of Disaster Management (NIDM) for training and capacity development. Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

### **Target Group**

This programme is designed for officials and professionals involved in disaster management in the Himalayan states/UTs:

- State/UT Disaster Management Authorities (SDMAs/DDMAs)

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- Irrigation & Flood Control Departments
- Municipal Corporations & Urban Local Bodies (ULBs)
- Public Works Department (PWD) & BRO
- Urban Planning Departments
- SDRF & NDRF officials
- Research and technical institutions working on GLOFs/flash floods

## Course Objectives

- To provide a comprehensive understanding of GLOF and flash flood dynamics in the IHR.
- To familiarize participants with NDMA Guidelines on GLOFs (2020) and the NGRMP framework.
- To enhance knowledge of hazard mapping, monitoring, and early warning systems.
- To discuss structural and non-structural mitigation strategies for high-risk glacial lakes and valleys.
- To strengthen community preparedness and inter-agency coordination.

## Course Schedule

### Day 1: Understanding GLOF & Flash Flood Hazards

- Overview of Flash Floods and GLOF Hazards (case studies: Kedarnath 2013, Chamoli 2021, Sikkim 2023)
- Glacial Lake Dynamics & Triggers of GLOFs
- Hazard Mapping & Vulnerability Assessment

### Day 2: Risk Mitigation & Policy Frameworks

- NDMA Guidelines on Management of GLOFs (2020)
- National GLOF Risk Mitigation Programme (NGRMP)
- Early Warning & Monitoring Systems
- Structural & Non-Structural Mitigation Measures (case experiences from Sikkim)

### Day 3: Preparedness, Response & Strategy Development

- Community Preparedness & Capacity Building
- Emergency Response & Incident Management
- Simulation Exercise
- Valedictory Session

## Mode of Instruction

The primary language of instruction will be **English**. However, resource persons may use Hindi or local languages based on participants' needs.



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## Registration Details

- **Online nomination:** The participants may fill up the Google Form via this weblink: <https://forms.gle/QuRTHgk3Nx5KcHCS7> or scan **QR code** for sharing their nominations.
- **Confirmation:** The confirmation to attend the programme will be shared via email. Only confirmed participants will be permitted to attend the course.
- **Offline Registration:** For confirmed participants, in-person registration will take place on Day 1, Monday 29 October, 2025, from 9:00 AM at the venue.



## Transport, Accommodation, and Food

- **No Course Fee:** The training programme is fully sponsored by NIDM.
- **Boarding & Lodging:** Free accommodation and meals will be provided at NIDM during the course.
- **Travel Costs:** Participants/sponsoring organizations must bear to & fro travel expenses, including local transport.
- **Meals:** Tea and working lunch will be provided during the training.

## Evaluation

A dedicated session for **feedback and valediction** will be conducted. Participants will fill out an **evaluation form** to assess the effectiveness of the training.

## Attendance & Certification

- Attendance **before and after lunch** is mandatory for certification.
- Participants who complete the programme successfully will receive an official **Certificate of Participation** from NIDM.

## Training Methods

The training will include a mix of:

- ✓ **Classroom Lectures**
- ✓ **Case Study Discussions**
- ✓ **Group Exercises**
- ✓ **Video Demonstrations**

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## **Organizing Team**

### **Patron**

**Shri Safi Ahsan Rizvi, IPS**  
**Executive Director, NIDM**  
ed.nidm@nic.in

### **Programme Coordinator**

**Dr. Gagandeep Singh**  
**Assistant Professor, NIDM**  
gagandeep.nidm@nic.in