



### 3-Weeks National Training Program

## HYDRO-METEOROLOGICAL AND EXTREME EVENTS DISASTER RISK MANAGEMENT

June 01-21, 2020



Organized by

### National Institute of Disaster Management (NIDM)

Ministry of Home Affairs,  
4th Floor, 'A' Wing, NDCC Building,  
Jai Sing Road, New Delhi - 110001  
[www.nidm.gov.in](http://www.nidm.gov.in)

Jointly With

### Indian Institute of Technology Indore

Khandwa Rd, Simrol,  
Madhya Pradesh 453552  
[www.iiti.ac.in](http://www.iiti.ac.in)

## BACKGROUND

Extreme events such as droughts, heatwaves, heavy rain, and violent storms are now part of our daily news. Risk-aware development towards the United Nations 17 Sustainable Development Goals can significantly reduce societal risks associated with climate extremes. Disaster due to extreme climatic events have been reported across the globe causing huge loss of property and lives. It is expected that these losses and casualties may multiply in future.

Climate change is one of the biggest environmental threats faced by the world which can potentially impact food production and security, sustained water supply, biodiversity of forests and other natural ecosystems, human health and settlements. Climate variability and change could result in increased number of extreme events which can cause profound damage to the human well-being. India, with more than 1.2 billion population, has been devastatingly affected by extreme climatic events in the past. For example, a drought event in 2016 affected 330 million people, accounting an economic loss of \$100 billion (ASSOCHAM Report 2016) in India. Similarly, 268 flood events have been reported during 1950-2015 affecting 825 million people and it is recorded a threefold rise in the extreme precipitation events during the same period over the central part of India. Recently, India has witnessed a rise in simultaneous occurrence of different extreme events. For instance, 18 out of 38 districts in one of the poorest states of India-Bihar was hit by severe droughts in the first six months of 2019. Currently, despite being rain-deficient by 20% till September 19<sup>th</sup> 2019, the state government reported that the total number of people affected by flooding in from July-October 2019 is over 1.7 million. Such simultaneous occurrence of extreme events not only multiplies the risk but also complicates the process of disaster risk mitigation and management. Traditional approaches of studying extreme climatic events mostly involve the univariate statistical and probabilistic analysis. However, climate processes are intricate and influenced by many interconnections, therefore, the role of different climate drivers in developing an extreme event must be analyzed. It is crucial that we understand the occurrence, distribution and

mechanism of extreme events and their role in augmenting disaster risk should be understood.

Indian Institute of Technology Indore and National Institute of Disaster Management are jointly organizing the training programme on "**Hydro-meteorological and Extreme Events Disaster Risk Management**" from 01-19 June, 2020 in Online mode at Indian Institute of Technology Indore, Madhya Pradesh.

## AIM

Aim of the training programme is to update the knowledge on risks due to extreme climatic events and facilitate the way forward towards better plans and strategies for disaster risk management, adaptation and mitigation.

## OBJECTIVES

Key objectives of the training program are

- Understand and discuss the possible impacts of extreme climatic events in context of sustainable development.
- Analyze what has been and can be done to minimize the impacts of extreme climatic events: adaptation and mitigation.
- Comprehend recent research findings on extreme events such as droughts, floods, etc.
- Understand the global risks and challenges due to climate change induced disasters.
- Interpret the current modeling practices and recent advancements in understanding extreme climatic events.
- Outline the potential strategies and actions that can mitigate the adverse impacts of extreme weather events or climate-related disasters

## METHODOLOGY

Lectures, Power Point Presentations, Video films, discussions, and guided group exercises.

## TARGET GROUP

The main target group for this program are:

- Professionals/officials from government departments, training institutes of environment, forests, water, PWD, police, health, power, irrigation, rural, agriculture, climate etc, faculty members/research scholars/scientists from Universities/colleges, etc and representatives from NGOs also.
- National, state and local level disaster management professional including private sector and NGOs.

## ABOUT IIT INDORE

Indian Institute of Technology Indore located in Madhya Pradesh, known as IIT Indore or IITI, is a institute of national importance established by the Government of India in 2009. It is one of the eight new IITs, started by the Ministry of Human Resource Development (India), Government of India. The institution started functioning from 2009-10 in a temporary campus at Institute of Engineering and Technology of Devi Ahilyabai University under mentorship of IIT Bombay. Shri Arjun Singh, the Union HRD minister, laid the foundation of the permanent campus, spread over an area of around 501.42-acre (2.1 km<sup>2</sup>), on 17th February 2009 at Simrol, a location on Khandwa Road about 25 km from the city of Indore.

## ABOUT NIDM

National Institute of Disaster Management (NIDM), Ministry of Home Affairs, and Government of India is a premier institute and a Statutory Body (under Disaster Management Act 2005) for training, research, documentation, awareness and human resources and capacity development in the field of disaster mitigation and management in India and in the region.

The institute lays emphasis on multi-stakeholder interdisciplinary cross-sectoral approach for an effective and efficient proactive continuum disaster risk management based on participatory integrated multi-hazard-risk management concept.

## DATE

The programme will be organized online from 01-19 June 2020.

## REGISTRATION

- There is no registration fee for the participants.
- Attendance is compulsory in at least in 90% days/sessions.
- Submission of abstract is not compulsory to attend the programme.
- Participants who are interested to present their work during the programme may submit an abstract. After review, selected abstracts will be asked to submit full papers and will be published. The abstract should be related to the training programme's area of focus.
- Registration deadline is May 25, 2020.
- For course registration/abstract submission, please click the following link-



[Registration form link](#)

## CERTIFICATE

A Certificate will be awarded to each participant jointly by IITI and NIDM on the successful completion of the training programme only after attending the full course. Participants who present their work will be awarded with additional certificate.

## AREA OF FOCUS

- Extreme events
- Climate change and water resources
- Agricultural and ecosystem resilience
- Disaster risk and management
- Sustainable policy making on disaster management
- Disaster risks reduction and role of community building
- Term project and Group exercise

## COURSE PATRONS:

**Major Gen. Manoj Kumar Bindal**  
Executive Director, NIDM

**Prof. Neelesh Kumar Jain**  
Director (Officiating)  
Indian Institute of Technology Indore

## COURSE CHAIRS

**Dr. Manish Kumar Goyal**  
Associate Professor  
Discipline of Civil Engineering  
Indian Institute of Technology Indore  
Contact: +91 7324 - 306697  
email: [iitinidm@gmail.com](mailto:iitinidm@gmail.com)

**Dr. Anil K Gupta**  
Professor,  
National Institute of Disaster Management  
(Ministry of Home Affairs, Govt. of India)  
email: [anil.gov.in@gmail.com](mailto:anil.gov.in@gmail.com)