

Course Fee & Accomodation

The course is offered free of cost to selected participants. We will arrange boarding and lodging facilities (sharing basis) at the venue. Travel expenses (to and fro) have to be borne by the participants/sponsoring organizations.

Venue

KSCSTE-Centre for Water Resources Development and Management, Kozhikode, Kerala

About CWRDM

CWRDM is a premier R & D institution in the water sector established by the Government of Kerala under its Science and Technology Policy in February 1978. Later, the Centre was amalgamated with the Kerala State Council for Science, Technology and Environment (KSCSTE) in its Silver Jubilee Year-2003. CWRDM has substantially contributed to the scientific hydro-logic studies and water management in the region. Starting with the establishment of data management system for the region, CWRDM has tackled different problems pertaining to watershed development, wetland management, water management for agriculture, forest and urban hydrology, estuarine management, groundwater development, water quality management, irrigation and drainage issues.



Training of Trainers (TOT) Training programme on Hydro-Climatic Extremes and Impact in Water Resource Management

23.02.2026 to 07.03.2026



Funded by
Ministry of Jal Shakti, Govt. of India

Organized by
KSCSTE - Centre for Water Resources Development and Management (CWRDM)
Kozhikode-673 571, Kerala

Background

Hydro-climatic extremes severely disrupt societies, causing significant human, material, and environmental losses, and are expected to increase with climate change. Despite rising disaster frequency and costs, attention to risk reduction often fades once events pass. Disaster risk reduction focuses on minimizing immediate losses and enabling long-term prevention. This training includes both theory and hands-on-sessions aims to build the capacity of water managers to develop effective strategies for managing hydro-climatic disasters such as floods, droughts, and landslides within a water resources management framework.

Course Content

- 1. Introduction to Hydro-Climate Extremes:** Climate change impacts on water resources planning and management, Hydrological database creation and watershed delineation, Rainfall-runoff modelling using hydrological models, Future climate projections and bias correction, Future streamflow prediction using hydrological models, Time series analysis of hydrologic parameter and water resource mapping using GEE
- 2. Impacts of Hydrological Extremes: Flood:** Flood inundation mapping using HEC-RAS, Flood mapping using SAR, Flood and coastal erosion modelling using DELFT-3D F. **Drought:** Drought vulnerability analysis using statistical tools, Agriculture drought analysis. **Landslides, Soil erosion & Earthquake:** Landslide susceptibility mapping using Geospatial techniques, Landslide vulnerability assessment using machine learning approach, Soil erosion modelling using Geospatial techniques, Landslide Early Warning System and Earthquake Analysis for Seismic Hazard and Risk Assessment.
- 3. Management strategies for Disaster Mitigation:** Flood risk zonation and river basin management (case study), Soil and water conservation practices for soil erosion control, Nature-based solutions for disaster-prone areas, Drought monitoring and management, Disaster preparedness, emergency response, and evacuation planning.



Who can apply

Extension specialists, Trainers, Researchers, State and Central Government officers and others imparting training on water resources and related subjects, Officers from Civil Society Organisations (CSOs) and NGOs.

How to Apply?

<https://forms.gle/tUoY2iaV1oaEvPzY8> or scan QR code

The number of participants is limited to 25 and will be filled on a first come first serve basis, so register early to secure a seat.

Important Dates:

Last date for registration: 15 February 2026

Confirmation mail to participants: 16 February 2026

Training dates: 23/02/2026 to 07/03/2026



Patron and Training Coordinators

Chief Patron

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