



जल शक्ति मंत्रालय
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION



National Water Mission-Sponsored 3rd

National 'Training of Trainers (TOT)' programme on

Glaciers and Glacial lakes observations for Sustainable Water Resource Management

(Field Glaciology Training)

28th Sep – 11th Oct, 2026

**Organised by
Centre for Cryosphere and Climate
Change Studies (C4S)
National Institute of Hydrology,
Roorkee, Uttarakhand
INDIA**

ABOUT THE PROGRAMME

The advanced training program on Glaciers and Glacial Lakes Observations for Sustainable Water Resource Management marks the third consecutive year of its successful organization by the Centre for Cryosphere and Climate Change Studies (C4S), National Institute of Hydrology (NIH), Roorkee. It aims to equip participants with specialized knowledge and technical skills in glaciology. This intensive, physically-conducted program focuses on the application of state-of-the-art techniques in remote sensing, geospatial analysis, and field-based data acquisition to monitor glacier dynamics and assess glacial lake outburst flood (GLOF) risks. **A key highlight of the programme is a 7-day glacier field visit, during which participants will engage in hands-on training in glacier mass balance measurements, glacial lake surveys, debris and snow cover assessments, and the installation of hydro-meteorological instruments.** Through a combination of expert-led lectures, interactive technical sessions, and this immersive field experience, participants will gain proficiency in analysing the impacts of climate change on cryosphere systems, and developing strategies for sustainable water resource management and disaster risk mitigation.

PATRON

Dr. Y. R. S. Rao
Director
National Institute of Hydrology
Roorkee, Uttarakhand; INDIA

CONVENOR

Dr. Surjeet Singh
Scientist 'G' & Head
Centre for Cryosphere and Climate Change
Studies (C4S),
National Institute of Hydrology
Roorkee, Uttarakhand; INDIA

COORDINATOR

Dr. Lavkush Patel
Scientist 'D', Centre for Cryosphere and
Climate Change Studies (C4S), NIH
P: +911332 249343;
M: +917769873182
E: lavkush.nihr@gov.in

CO-COORDINATOR

Dr. Kapil Kesarwani
Scientist 'D', Centre for Cryosphere and Climate
Change Studies (C4S), NIH
P: +911332 249209;
M: +918881377714
E: kapil.nihr@gov.in

ABOUT THE INSTITUTE



The National Institute of Hydrology (NIH) is a premier R&D organization under the Department of Water Resources, River Development & Ganga Rejuvenation of the Ministry of Jal Shakti, Government of India, established in 1978, with its headquarters at Roorkee. The main objectives of NIH are to undertake, aid, promote and coordinate systematic and scientific work in all aspects of hydrology. The Institute was declared a S&T organization in 1987. NIH is an ISO 9001:2008 Certified organization. It is a Center of Excellence for pursuing research activities in hydrology and water resources, emphasising technology transfer and demand-driven, user-defined, strategic research. The NIH has headquarter at Roorkee and seven Regional Centres located at Bhopal, Belagavi, Guwahati, Jammu, Jodhpur, Kakinada, and Patna.

COURSE CONTENT

- Glaciology & Water Resource management.
- Remote Sensing and Cryosphere (Optical & SAR Polarimetry)
- Glacier dynamics & modelling: Mass Balance, volume and evolution
- Glacial Observations using Python
- Glacial Hydrological Modelling, practical's with field visit
- GLOF modelling and Assessment (Hands-on)
- Glacial Observations through Google earth engine, AI and Machine Learning
- Seven-Days Glacier Field Expedition: Hands-on training on glacio-hydro-Meteorological Observations.

WHO CAN PARTICIPATE

Early-career scientists, university and government faculty members, M.Sc./Ph.D. students, researchers, and field engineers from Central and State Government organizations working in the areas of glaciology, hydrology, climate change, remote sensing, and water resources.

REGISTRATION

<https://forms.gle/5jQj3v4qriZZmTEK6>

Admissions are open to a maximum of 30 participants
Training fee: free of cost (Except Travelling Allowances)

Contact persons:

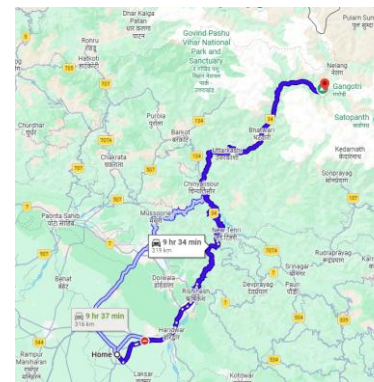
Dr. Lavkush Patel: lavkush.nihr@gov.in; M: +91 7769873182

Dr. Kapil Kesarwani: kapil.nihr@gov.in; M: +91 8881377714

PROPOSED TIMELINE

- **Announcement : 15th July, 2026**
- **Application Start Date: 15th July, 2026**
- **Last date of Application: 15th August, 2026**
- **Decision on selected Candidates: 31st August, 2026**
- **Training Start: 28th September 2026**

VENUE



Jal Vigyan Bhawan, NIH Roorkee and NIH Observatory, Bhojwasa, Gangotri Glacier



HOW TO REACH NIH, ROORKEE

By Train

Roorkee is well connected to Delhi by rail and lies on the Delhi–Dehradun route.

By Road

Distance from Delhi: ~180 km.

Route:

Delhi → Ghaziabad → Meerut → Muzaffarnagar → Roorkee → NIH

By Air

Indira Gandhi International Airport
Delhi: ~180 km.

Jolly Grant Airport, Dehradun: ~ 75 km.



Registration form

<https://forms.gle/5jQj3v4qriZZmTEK6>

GLIMPS OF THE 1st and 2nd TRAININGS

