TRAINING COURSE
on
Isotopic and Geochemical Techniques for River Basin Management

(October 13-17, 2025)

Organizer

National Institute of Hydrology (NIH)
Roorkee, Uttarakhand 247667
India

Introduction

River has a major role in the Earth surface evolution, human civilization, and global economy due to its freshwater distribution capability. An imbalance in the hydrological cycle mainly induced by the climate change effect has led to extreme events like flood, drought, species migration, and extinction within river basins. This demands regular monitoring of various components of hydrological cycle as well as fingerprint the association of climate with hydrological and hydrogeological processes at spatial and temporal scales for integrated river basin management. With the rise in anthropogenic impacts on environmental resources as well as technological advancement, there has been an increase in the utility of field and laboratory generated data for river basin management at global to local scales. Consequently, the application of geochemical and isotopic abundance of elements have proved to be the useful technique in tracing distinct water link across the Earth's critical zone. Thus, the geochemical and isotopic tracers support decision making and policy development in water and climate sectors promoting integrated river basin management.

About the training course

During the five-day training course, the participants will be introduced to key hydrological, hydrogeological and hydroclimatic processes that define and shape the critical zone of the Earth as well as to understand their link with isotopic and geochemical tracers. The course provides an opportunity to explore various case studies on how the implementation of distinct techniques of isotope hydrology, environmental geochemistry and modelling promotes integrated river basin management. The training focuses on analytical techniques dealing with principles of chromatography, spectroscopy and mass spectrometry, and their applications in river basin management. The training engages participants in group project activities on integrated river basin management techniques which include field work, laboratory investigation, data analysis, data interpretation, technical report preparation, and presentation of visible output. This training provides a platform to understand and prioritise various safety and sustainable practices during field, laboratory and resource utilization for river basin investigation.

About NIH

National Institute of Hydrology (NIH) is an ISO: 9001:2015 certified premier research and development organization under the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation, Government of India. It was established as an autonomous society in 1978 with its headquarters at Roorkee and was declared as a scientific and technical organization in 1987. NIH has seven regional centers located at Belgaum, Bhopal, Guwahati, Jammu, Jodhpur, Kakinada and Patna. The aim and mission of NIH are to provide leadership in hydrology research through effective scientific solutions for achieving sustainable development and self-reliance of the water sector in India.

For further details, kindly visit: https://www.nihroorkee.gov.in

Who can participate

- Master's students and Research scholars.
- Interested working professionals from government and private sectors.

Registration

Course has a limited number of seats (20). Candidates must register through the below Google link and complete payment by September 26, 2025. Candidates must be nominated by the Head of Department/ Organization (enclosed format to be uploaded). Participants have to arrange all expenses from their parent organization. NIH Guest House facility may be availed on payment basis. Participants may carry laptops for group projects.

Registration link:
https://forms.gle/JuBYgvDeQW7PRzdK6

Registration fee: Rs. 8,500 for students
Rs. 12,000 for others

Fee Payment details:
Account Name: NIH Project
Account No.: 4044 0001 0017 4852
Bank: Punjab National Bank (PNB)
Branch: IIT Roorkee
IFSC code: PUNB0404400
MICR code: 247024103

Patron: Dr. YRS Rao, Director, NIH

Convenor

Dr. Suhas D. Khobragade
Scientist 'G' & Head
Hydrological Investigations Division (HID)
NIH, Roorkee
Telephone: 01332 249308

Course Coordinator

Dr. Tripti Muguli
Scientist 'D', HID, NIH
Email: tripti.nihr@gov.in
Telephone: 01332 249273

Course Co-Coordinator

Dr. Santosh M Pingale
Scientist 'D', HID, NIH
Email: pingalesm.nihr@gov.in
Telephone: 01332 249388

Course venue: NIH, Roorkee, India

All correspondence regarding training course will be via the Course Coordinators.

Nomination Form

for

Training Course on

Isotopic and geochemical techniques for river basin management

(October 13-17, 2025)

Name & Designation: ……………………………………………………………..……..…………

Name of Department/Organization: ………………………………………...…..………

Address: ……………………………………………………………..………..…..…..……

Contact No.: …………………………………………………………………….…..…..……….

Email: ………………………………………………………….....………..…..…..……

Qualification: …………………………………………………………..………..…..…..……

Field of Specialization: ………………………………………………..………..…..…..……

Accommodation Required: Yes …..…………… /No….……………. (Tick mark applicable)

(Signature of Candidate)

Date: ………………………….

Sponsorship Certificate

Certified that **Ms./Mr./Dr.** ……………………………………………………..……………
has been officially deputed for the above training course to be conducted by National Institute of Hydrology, Roorkee and agree to complete the payment process, if selected.

(Name & Signature of sponsoring authority with seal)

Date: …..………………………………………………………