



**GROUNDWATER QUALITY MONITORING  
AND ASSESSMENT**  
(A CSIR - Integrated Skill Initiative)

February 03-13, 2025



**CSIR- NATIONAL GEOPHYSICAL RESEARCH INSTITUTE**  
Uppal Road, Hyderabad - 500007

सीएसआईआर  
CSIR  
भारत का नवाचार इंजन  
The Innovation Engine of India



CSIR Integrated Skill Initiative

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## **ABOUT THE INSTITUTE**

Established in the year 1961, the CSIR-National Geophysical Research Institute (CSIR-NGRI) is primarily dedicated to R&D activities encompassing geodynamics, earthquake hazard assessment, and exploration of natural resources. Water being an essential life-sustaining resource to living beings, its exploration, management, and quality assessment studies form an important area of research at the institute. Hydrogeochemistry Activity @ CSIR-NGRI deals with the quality assessment of water and soil including hydrogeological, hydrochemical, and isotopic studies. Being a national institute, CSIR-NGRI has been imparting training to postgraduate students, research scholars, and professionals on the assessment of groundwater quality and its isotopic characterization to enhance their skills in their respective fields of work.

## **GROUNDWATER QUALITY MONITORING AND ASSESSMENT (GWQMA)**

Groundwater is an extensive, concealed, and inaccessible resource, and its quality changes often very slowly within the subsurface aquifers. These changes warrant for extensive monitoring networks, data generation, processing, and interpretation. Therefore, these observed groundwater quality trends provide key inputs for its management.

The focus of the ensuing training course would be to understand the concepts of monitoring and assessment of groundwater beginning from appropriate site selection and field sampling, sample preparation, and analysis in the laboratory. There will be lectures on theoretical aspects as well as a demonstration of the state-of-art analytical instrumentation that will provide key skills and the latest knowledge on the above subject to the participants.

## **NEED FOR TRAINING/RE-SKILLING**

Due to the interaction of water with chemical, biochemical, and geological materials (rocks, soils, and sediments), groundwater contains a wide variety of dissolved inorganic chemical constituents in various concentrations. In addition, anthropogenic factors

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(industrial effluents, agrochemicals, municipal solid waste, etc.) also affect the quality of groundwater. Inorganic contaminants like salinity, chloride, fluoride, nitrate, iron, and heavy/toxic metals are important to determine the suitability of groundwater for drinking/irrigation purposes. Therefore, monitoring and assessment of groundwater quality is essential to know the quality threats and their mitigation through proper management of this valuable natural resource.

## **TRAINING FOR WHOM**

The postgraduate students, research scholars, NGOs, and professionals working in the (field of geo-environmental study/research hydrologists/hydrogeologists/environmentalists) interested to update/enhance their skills about the recent advances in this field, are the main target audience of this 10 days residential training program.

## **COURSE STRUCTURE**

The training course includes major themes like concepts of monitoring and assessment; groundwater monitoring; water quality variables; monitoring frequencies and optimization; field and laboratory work; and how to report the water quality assessment.

## **METHODS OF INSTRUCTION**

Instruction methods involve lectures on theoretical aspects, demonstration of instruments, and hands-on training/practice. The medium of instruction will be English only.

## **MANAGEMENT AND FACULTY**

The training will be imparted mainly by Scientists/Experts of CSIR-NGRI.

## SELECTION PROCEDURE

Depending upon the number of applicants, the selection cut-off will be decided by the Skills Development Section. However, preference will be given to the candidates with a minimum 60% or equivalent in their qualifying exam.

## CERTIFICATION

A certificate will be issued to the participants who successfully complete the course.

<b>Education Qualification</b>	A Master Degree in Applied Geochemistry/Analytical Chemistry/Environmental Sciences/Geology/Hydrology and any equivalent/allied field.
<b>Nationality</b>	Indian Nationals
<b>Duration</b>	February 03-13, 2025
<b>Venue</b>	CSIR- National Geophysical Research Institute, Uppal Road, Hyderabad - 500007
<b>Last Date for Applying</b>	January 03, 2025
<b>Number of Seats</b>	30
<b>Course Fee*</b>	Rs. 2,500/- + 18% GST = 2950/- (for Master, Diploma/Degree students) Rs. 5,000/- + 18% GST = 5900/- (for Ph.D. Students) Rs. 10,000/- + 18% GST = 11800/- (for Faculty and Industry sponsored)
<b>Food</b>	Breakfast and Dinner will be available at nominal rates in the CSIR-NGRI Campus payable by the participants.
<b>Accommodation Charges</b>	CSIR-NGRI guest house on twin sharing basis at the rate of Rs. 300/- per head per day for the first 6 days and 7 <sup>th</sup> day onward Rs. 600/- per day per head. Skills Development quarters (Rs. 100/- per head per day) and staff quarters/research scholars' hostel (Rs. 50/- per head per day) on twin sharing basis
<b>Course Coordinators</b>	<b>Dr. Devender Kumar</b> (e-mail: devender@ngri.res.in) <b>Dr. K. Rama Mohan</b> (e-mail: krenviron@ngri.res.in)

\* Course fee includes training fee, course material, working Lunch, Tea, and Snacks. It should be paid online by the shortlisted participants.