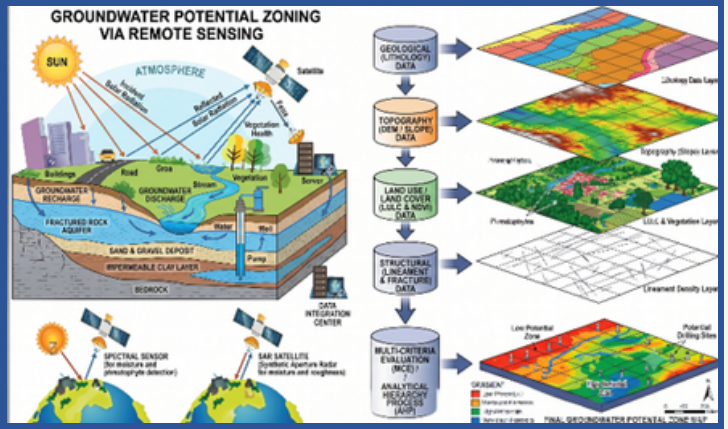
Online Training Course
on

GROUNDWATER POTENTIAL ZONING AND SITE IDENTIFICATION USING RS & GIS

(10 to 14 August 2026)



ORGANISED BY

NATIONAL INSTITUTE OF HYDROLOGY
NORTH WESTERN REGIONAL CENTRE, JODHPUR

IMPORTANT DATES

LAST DATE OF REGISTRATION: 7 AUGUST 2026

ABOUT THE TRAINING COURSE

Groundwater is a vital source of water for drinking, irrigation and industrial use, especially in arid and semi-arid regions. Increasing demand, erratic rainfall and over-exploitation have led to declining groundwater levels in many areas, making scientific planning essential for sustainable groundwater management.

This training programme focuses on the application of Remote Sensing and GIS techniques for groundwater potential zoning and identification of suitable sites for artificial recharge. Participants will learn how satellite data, DEM-based terrain analysis and thematic layers such as geology, geomorphology, lineaments, land use/land cover, soil, slope, rainfall and drainage density can be integrated in GIS using AHP-based weighted overlay analysis.

The programme will provide practical exposure to open-source tools, particularly QGIS, for preparing thematic maps, delineating groundwater potential zones and identifying suitable locations for recharge structures such as check dams, percolation tanks and recharge shafts. The training is designed to strengthen practical skills for scientific groundwater assessment and recharge planning at watershed and regional scales.

WHAT YOU WILL LEARN?

- Groundwater potential zoning and identification of suitable sites for artificial groundwater recharge using open-source RS and GIS tools, particularly QGIS.
- Basic hydrogeological concepts, terrain characteristics and groundwater-related factors influencing recharge potential.
- Use of open geospatial datasets, DEM processing, terrain analysis and watershed delineation.
- Preparation of thematic layers such as geology, geomorphology, lineament, land use/land cover, soil, slope, rainfall and drainage density.
- Application of AHP-based weighted overlay techniques for groundwater potential zone mapping.
- Validation of groundwater potential maps using available field and groundwater data.
- Site suitability assessment for recharge structures such as check dams, percolation tanks and recharge shafts.
- Hands-on practical sessions, tutorials and field-oriented exercises using real datasets.
- Interactive discussions on field-level problems, data limitations and practical groundwater management needs.

Who Can Participate?

The course is designed for officials from Central and State Government departments, professionals working in the fields of groundwater, irrigation, watershed development and water resources management, as well as faculty members, NGOs, research scholars, postgraduate students and Ph.D. students interested in the application of Remote Sensing and GIS techniques for groundwater assessment and artificial recharge planning.

HOW TO APPLY?

A **non-refundable registration fee of ₹1,500/-** is applicable for registration. However, nominated Central/State Government officials are exempted from the fee. The fee may be transferred to the account details given below.

SCAN & PAY

Name of Account: NIH Project
Account Number: 4044000100174852
Name of Bank: Punjab National Bank, IIT Roorkee
IFSC CODE: PUNB0404400

Participation will be confirmed upon receipt of the registration fee. Offline seats are limited and available to nominated government officials on a first-come, first-served basis; additional participants will join online. Registration, along with payment proof, must be completed by **7 August 2026**. Certificates will be provided upon successful completion of the training. Offline participants must arrange their own accommodation and DA/TA.

REGISTRATION LINK AND NOMINATION FORM

https://forms.gle/pnAQVbf7xgPB13XF9

NATIONAL INSTITUTE OF HYDROLOGY (NIH)

NIH is a premier Research and Development organization under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. It was established as an autonomous society in 1978 with its headquarters at Roorkee, Uttarakhand. The main objectives of the institute are to undertake, aid, promote, and coordinate systematic and scientific work in all aspects of hydrology and water resources management. The Institute was designated as a Science and Technology (S&T) organization in 1987.

The North Western Regional Centre (NWRC) is the 7th Regional Centre of NIH and was established in Jodhpur, Rajasthan. The area of jurisdiction of NWRC covers north-western states, i.e., Rajasthan, Gujarat, Haryana, and Punjab. The Centre focuses on conducting field-oriented hydrological investigations, hydro-climatic extremes, rejuvenation of ponds and rivers, and integrated water resources management through close interaction with various State and Central Government departments.

FOR MORE INFORMATION ABOUT NIH

CLICK HERE

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