Two weeks Special Short Course on *Geospatial Applications in Water Resources Management - with focus on "More Crop per Drop"*

March 09 – 20, 2026

Indian Institute of Remote Sensing (IIRS)
Indian Space Research Organisation (ISRO)
Department of Space, Government of India
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About IIRS

The Indian Institute of Remote Sensing (IIRS) - is a constituent unit of Indian Space Research Organisation (ISRO), Department of Space, Govt. of India. Since its establishment in 1966, IIRS is a key player for training and capacity building in geospatial technology and its applications through training, education and research in Southeast Asia. The training, education and capacity building programmes of the Institute are designed to meet the requirements of Professionals at working levels, fresh graduates, researchers, academia, and decision makers. IIRS is also one of the most sought after Institute for conducting specially designed courses for the officers from Central and State Government Ministries and stakeholder departments for the effective utilization of Earth Observation (EO) data.

The Institute has a strong, multi-disciplinary and solution-oriented research agenda that focuses on developing improved methods/ techniques for processing, visualization and dissemination of EO data & Geo-information for various societal applications and better understanding of Earth's system processes. State-of-the-art laboratory and field-based instrumentation and observatories network help meeting the research goals and objectives.

About the Course

India faces growing challenges in managing its limited water resources, especially in the agriculture sector, which consumes nearly 80% of the country's freshwater. Despite high usage, water productivity remains low, and inefficient irrigation practices continue to strain resources. Climate variability, declining groundwater levels, and poor data-driven decision-making further aggravate the situation. In this context, geospatial technologies like remote sensing & GIS have emerged as powerful tools to monitor, manage, and optimize water use in real time. There is an urgent need for trained professionals who can leverage these tools to promote sustainable and efficient water management practices. This course on Geospatial Applications in Water Resources Management aims to bridge that gap. With a strong focus on the principle of "More Crop per Drop", "Atal Bhujal Yojana", "Jal Jeevan Mission" and "Pradhan Mantri Krishi Sinchayee Yojana", etc., it equips participants with practical skills to analyse spatial data to assess water availability and demand, to monitor crop health & evapotranspiration using satellite imagery, to support efficient irrigation planning & water budgeting and to develop site-specific solutions for improved water productivity.

Objective

The overall objective of this two weeks short course is to make the awareness among users/researchers/professionals/decision-makers/ academicians about the recent advances and innovations in Remote Sensing and GIS applications in Water Resources Management with focus on "More Crop Per Drop".

Course Outline

The course broadly will cover following topics:

- Basics of Evapotranspiration estimation using Remote Sensing and GIS
- Irrigation command area development, mapping and evaluation using RS & GIS
- Concepts of Water Accounting, Crop Water Requirement Estimation and irrigation scheduling
- Geospatial data utilisation for watershed conservation and integrated watershed management in context of anthropogenic change.

Eligibility

Participants should possess a B.E./B.Tech. in Civil Engg./ Agri. Engg./ Water Resources/ Env. Sci./ Hydro-informatics or equivalent with experience in Water Resources sector or Diploma in Engineering with at least three years working experience in related areas. The candidate should have basic knowledge of Remote Sensing & GIS Techniques.

Course Fee and How to Apply

Course Fee: Rs. 12,000/- (Rs. 4,000: Tuition Fee + Rs. 8,000: Registration & Other Charges). Boarding & lodging charges in IIRS Hostel are extra. Applicants are requested to apply through the link: https://admissions.iirs.gov.in.

Contact Details

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Last date for application: January 15, 2026

Number of Seats: 20 (all seats for Indian nationals only)