



TRAINING PROGRAMME

on

Application of Geospatial Tools, Models, and AI/ML Techniques in Agricultural Water Management

14–19 September 2026



Remote Sensing

Water Management

AI/ML Technologies

**ICAR-Indian Institute of Water Management
Bhubaneswar 751023, Odisha**

About the Training

Efficient agricultural water management is becoming increasingly important under water scarcity, climate variability, and rising demand for food production. Recent advances in Remote Sensing, GIS, hydrological modelling, Google Earth Engine, drone technology, and AI/ML-based decision tools offer strong potential for monitoring, analyzing, and managing agricultural water resources more effectively.

Recognizing this need, ICAR-Indian Institute of Water Management, Bhubaneswar, Odisha, is organizing a six-day training programme on “Application of Geospatial Tools, Models and AI/ML Techniques in Agricultural Water Management” from 14–19 September, 2026. The programme is designed to provide participants with practical exposure to geospatial tools, hydrological and crop-water simulation models, spatial decision-support systems, and AI/ML applications for smart and climate-resilient agricultural water management.

The training will include expert lectures, hands-on practical sessions, demonstrations, case studies, field visits and interactive discussions on emerging technologies and their applications in agricultural water management.

Training Highlights

- Expert lectures by ICAR-IIWM scientists and invited resource persons
- Hands-on sessions on RS, GIS, GEE and AI/ML tools
- Practical exposure to the operation of hydrological and crop-water models
- Demonstrations and case studies on smart, climate-resilient agricultural water management

Course Contents

- Fundamentals of Geospatial Technologies, model and AI
- Principles and Applications of Remote Sensing and GIS
- Spatial Data Acquisition, Processing, and Visualization
- Satellite-based Monitoring of Water Resources
- Detection of WHSs using model fusion techniques and GEE
- Crop Water Requirement and Evapotranspiration estimation
- Water footprint of different crops at regional scales
- AI and Machine Learning Concepts and Algorithms for AWM
- Groundwater Mapping and Water Productivity Analysis
- Carbon credits and Ecosystem services in AWM
- Hands-on practical Sessions using Geospatial and AI/ML Tools
- Case Studies of Smart Agriculture Water Management

Target Participants

This advanced training is specifically designed for professionals, students, and researchers from Government departments, Universities, ICAR Institutes, private organizations, and NGOs working in agricultural water management and planning. Participants are expected to bring their own laptops.

Course Fee

Registration Fee: Rs. 4000/-

Payment mode: Online bank transfer

Account Name:

ICAR-Indian Institute of Water Management

Account No: 2977002100000985

Bank Name: Punjab National Bank (IFSC-PUNB0297700)



How to Apply

Interested candidates may apply through the Google Form link: <https://shorturl.at/WDo6o>. Selected candidates, limited to maximum 25 participants, will be informed by email. For queries, please contact the Course Director/Coordinators via email.

Travel and Accommodation

TA/DA, boarding and lodging may be borne by the sponsoring Institute. Training materials and refreshments will be provided by the host institute. Accommodation for participants may be arranged on a payment basis, subject to availability.

Important Dates

Last date for receipt of application: 14th August 2026

Confirmation of participation: 20th August 2026

Address for Correspondence

Course Director

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