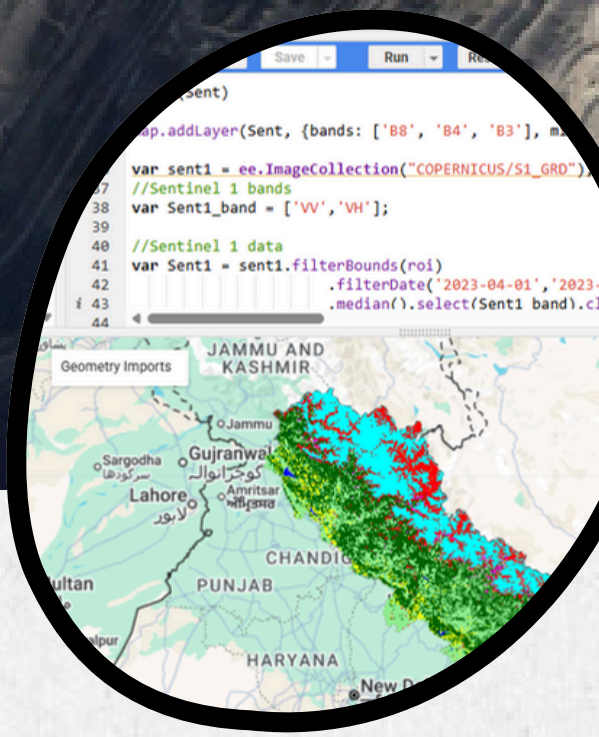
Centre of Excellence on Sustainable Land Management
Indian Council of Forestry Research and Education, Dehradun, India



International Training on

Remote Sensing for Forest Degradation Monitoring and Sustainability

8-12 December, 2025

Last day to apply : 25 October, 2025

To apply:
https://forms.gle/yrkAh5H9ScsVq3X16
or
Scan the QR and apply

Note : The training will be sponsored by CoE-SLM and Travel & Accomodation will be available to participants on need basis.

Background

Forest degradation poses a critical threat to biodiversity, water resources, and human well being, creating an urgent need for effective monitoring and restoration strategies. Remote Sensing (RS) and Geographic Information Systems (GIS) offers powerful solutions to identify degradation hotspots, assess ecosystem dynamics, and support evidence-based restoration planning.

The International Training on "Remote Sensing for Forest Degradation Monitoring and Sustainability", to be organized by the Centre of Excellence on Sustainable Land Management (CoE-SLM), Indian Council of Forestry Research and Education (ICFRE), Dehradun, Uttarakhand, will equip participants with state-of-the-art geospatial tools and methodologies. The training is designed to build practical expertise in application of RS and GIS approaches in forest management and sustainability.

Learning Objectives

- Application of remote sensing and GIS for forest monitoring
- Understanding forest degradation and it's monitoring using Earth observation data
- Cloud-based geo-spatial modelling for understanding forest dynamics
- Spatial modelling of forest for climate change adaptation
- Hands on exercise, experience sharing and case studies

Target Audience

- Senior Executives/Professionals from Government Agencies/Boards, Public sector undertakings working in field of forestry
- Members/Representatives of Non-Governmental and Community organizations engaged in assessments, planning, implementation, and or monitoring of any aspects related to forest and climate change
- Faculty Members/Professionals from training, education, and research institutes

Chief Patron

- Dr. Rajesh Sharma, Sci-G & Director, CoE-SLM

Patron

- Sh. Sanjeev Kumar, Sci-F & Head, CoE-SLM

Training Coordinator

- Dr. Hans Raj, Scientist-E, CoE-SLM

Course Coordinator

- Dr. Manoj Kumar, Scientist-D, CoE-SLM

Course Co-Coordinators

- Dr. Sanjay Singh, Scientist-E, CoE-SLM
- Dr. M K Singh, Scientist-E, CoE-SLM
- Dr. Krishna Giri, Scientist-E, CoE-SLM
- Dr. Gaurav Mishra, Scientist-E, CoE-SLM

Organizing Committee

- Dr. Divesh Pangtey, Research Associate
- Dr. Tanay Barman, Research Associate
- Dr. Arpit Huria, Research Associate
- Sh. Ajay Chauhan, Research Associate
- Dr. Ashish K Yadav, Research Associate
- Sh. Vinod Kumar, Senior Techician

About the Venue: CoE-SLM, ICFRE, Dehradun, Uttarakhand, India

The Centre of Excellence on Sustainable Land Management (CoE-SLM), established at ICFRE after the Hon'ble Prime Minister's COP 14 UNCCD announcement and inaugurated on 20 May 2023, supports India and other UNCCD member countries in achieving Land Degradation Neutrality. It promotes sustainable land practices, fosters South–South cooperation, and leverages ICFRE's research network for capacity building and upscaling best practices. As a hub for land rehabilitation and ecosystem restoration, CoE-SLM conducts trainings in Dehradun's scenic Doon Valley. In December, the weather is cold (10°C–24°C by day, 5°C–8°C at night); participants should bring warm clothing and jackets.

For more information, contact:

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International Training on Remote Sensing for Forest Degradation Monitoring and Sustainability

Course Outline

Module 1 Fundamentals of RS-GIS and Forest Degradation Concepts

Session 1: Monitoring forest and its degradation

Session 2: Fundamentals of remote sensing & GIS

Session 3: Introduction to open-source GIS tools and data portals

Module 2 Satellite Data Acquisition and Spectral Analysis for Forest Monitoring

Session 1: Vegetation monitoring using spectral indices

Session 2: Multi-sensor approaches (Optical, Radar, LiDAR, Hyperspectral)

Session 3: Satellite data preprocessing and calculation of indices

Module 3 Cloud-based Geospatial Analysis for Tracking Forest Degradation

Session 1: Introduction to cloud-based platform: Google Earth Engine (GEE)

Session 2: Time-series analysis for forest degradation monitoring

Session 3: Hands-on exercise for mapping forest degradation hotspots using GEE

Module 4 Spatial Modelling of Forest for Climate Change Adaptation

Session 1: Climate change adaptation methods, models, and challenges

Session 2: Machine learning approaches for spatially explicit species distribution modelling

Session 3: Developing models to identify climate adapted species and provenances

Module 5 Synthesis and Application

Session 1: Designing geospatial workflows for Sustainable Forest Management

Session 2: Group exercise – case studies

Session 3: Presentation of group work and feedback

REGISTER TODAY ▶

Application Deadline: October 25, 2025

For more information, contact:
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