Training Programme on

Integrated Strategies for Climate-resilient Mountain Ecosystem and Rural Landscapes

11-13 January 2027

Organized by:

Centre of Excellence on Sustainable Land Management
Indian Council of Forestry Research and Education
P.O. New Forest-248006, Dehradun, Uttarakhand

Sponsored by:

Ministry of Environment, Forest and Climate Change
Government of India



Background

Mountain ecosystems and rural landscapes in India are increasingly facing ecological degradation and heightened climate vulnerabilities. Issues such as biodiversity loss, land degradation, water scarcity, invasive species, and extreme weather events are exerting significant pressure on natural resources and livelihoods. These challenges are further compounded by fragmented sectoral approaches across departments, limiting the effectiveness of resilience-building efforts.
In this context, there is a critical need for integrated, ecosystem-based approaches that combine scientific knowledge, policy alignment, and community participation. Strengthening the capacities of government personnel across sectors is essential to enable convergence, informed decision-making, and implementation of climate-resilient strategies at the landscape level.

Present Scenario & Key Gaps

Mountain ecosystems and rural landscapes are experiencing accelerated degradation due to unsustainable land use, declining soil health, water stress, biodiversity loss, and increasing climate variability. While multiple government departments are engaged in addressing these challenges, interventions often remain sector-specific with limited convergence and coordination. There exists a gap in applying integrated, ecosystem-based approaches, supported by real-time data, modern tools such as remote sensing, and field-level diagnostics. Additionally, capacities in emerging areas like springshed management, climate-resilient farming systems, and nature-based solutions remain uneven across departments, constraining effective implementation and long-term impact.

Rationale

There is a pressing need to build cross-sectoral capacities and promote an integrated landscape approach to address climate and ecological challenges holistically. Strengthening technical knowledge, enhancing inter-departmental convergence, and aligning field interventions with policy frameworks are essential for improving resilience. The training aims to bridge these gaps by equipping personnel with practical tools, scientific understanding, and planning frameworks necessary to design and implement climate-resilient, ecosystem-based solutions. It also responds to the need for developing actionable, stakeholder-driven strategies that can be embedded within ongoing departmental programmes for sustainable and scalable impact.

Learning Objectives

- To enhance understanding of ecological degradation and climate vulnerabilities in mountain ecosystems
- To build capacities in soil health, water security, springshed rejuvenation, and nutrient management
- To promote landscape restoration through Assisted Natural Regeneration (ANR) and Afforestation, Reforestation and Restoration (ARR) approaches
- To strengthen knowledge of climate-resilient farming systems and nature-based solutions
- To improve understanding of environmental and climate policy frameworks in India
- To enable integration of ecosystem-based resilience into planning and programmes
- To facilitate development of practical, stakeholder-driven climate-resilient action plans

Target Participants

Mid- to senior-level personnel (Class A/I) from diverse government departments including:

- Agriculture, Horticulture, and Animal Husbandry departments
- Veterinary and Soil Conservation departments
- Rural Development and DRDA officials
- Tribal Affairs and Tourism departments
- Irrigation and Public Health departments
- Revenue and Police Administration (DSPs/SIs)
- Judicial Officers

Expected Outcomes

- Enhanced technical capacity and awareness to address climate risks and strengthen resilience across mountain ecosystems and rural landscapes.
- Ability to integrate climate-resilient practices and tools into departmental programmes by aligning them with ongoing schemes and field activities.
- Strengthened capacity to prepare and implement department-specific climate-resilient action plans using remote sensing data, policy frameworks and stakeholder inputs.

Course Director

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Programme Coordinators

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Boarding & Lodging

The CoE-SLM will provide all the necessary boarding and lodging facilities to the selected outstation participants during the training programme. Participants have to make their own travel arrangements for to and fro journey to the venue. However, train travel expenses (Up to AC III tier) will be reimbursed to the selected participants. The places which are not connected by the train, AC bus fare will be reimbursed to the selected participants. For train travel, bookings must be made through IRCTC and for buses online or offline tickets booked through the concerned state transport Corporation can be reimbursed. Request for the family accommodation will not be entertained.

Nomination Form

Interested participants may submit the duly forwarded nomination form to:
Email: coe_slm@icfre.gov.in
CC: drhrajmandi@gmail.com
Latest by: 15 December 2026
Incomplete forms will not be accepted.
Confirmation of selected participants will be communicated via email after scrutiny.

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

The Centre of Excellence on Sustainable Land Management (CoE-SLM), established at ICFRE following the Hon'ble Prime Minister's COP 14 UNCCD announcement and inaugurated on 20 May 2023, supports India and UNCCD member countries in achieving Land Degradation Neutrality. It promotes sustainable land management, builds capacity through ICFRE's research network, and serves as a hub for ecosystem restoration in Dehradun's Doon Valley. January in Dehradun is generally cool, with average daytime temperatures of around 19-20°C and nighttime temperatures of 4-6°C. Participants are advised to carry warm clothing and jackets.

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COURSE OUTLINE

Module I: Environmental degradation & Landscape Vulnerabilities/Understanding the Changing Ecological Context

- Trends in Biodiversity Loss, Ecosystem Collapse & Pressure on Land
- Emerging Threats: Invasive Species, Microplastics and Anthropogenic Pressure
- Mountain Ecosystem Vulnerability and Natural Resource Management
- Climate-linked Extreme weather events & Ecosystem Thresholds

Module II: Soil, Water & Ecosystem Productivity

- Healthy Soils for Healthy Landscapes: Indicators, Diagnostics & Management
- New-Age Soil Enhancers for Improved Fertility and Resilience
- Water Security Through Springshed Rejuvenation and Eco-hydrological Approaches
- Assisted Natural Regeneration, ARR and Landscape Restoration Interventions

Module III: Sustainable Agriculture and Climate-Resilient Farming in India

- Climate-resilient farming strategies for Indian agroclimatic zones
- Integrated Farming Systems for diversified and sustainable livelihoods
- Green agriculture approaches to maintain soil health
- Horticulture and farm diversification for enhanced income and resilience
- Nature-based Solutions and Ecosystem-based Adaptation in agricultural landscapes

Module IV: Community Centred Climate Solutions and Modern Techniques

- Community driven strategies and solutions for climate crisis
- Climate-resilient livelihoods through NTFPs, ecotourism and green enterprises
- Community-led fire management and prevention systems
- Remote sensing, modern Techniques and real-time environmental monitoring tools
- Circular rural economy approaches and nature-based infrastructure
- Decision-support tools and group discussion
- Key policies guiding India's environmental and climate agenda

Centre of Excellence on Sustainable Land Management

Indian Council of Forestry Research and Education

(An Autonomous Body of Ministry of Environment, Forest & Climate Change, Govt. of India)

Nomination Form

Name of the Programme: Training Programme on "Integrated Strategies for Climate-resilient Mountain Ecosystem and Rural Landscapes"

Duration: 11-13 January, 2027

Venue: Centre of Excellence on Sustainable Land Management, ICFRE, P.O. New Forest-248006, Dehradun, Uttarakhand

Name of the Participant: .....

Designation: .....Pay Level: ..... Group: .....

Date of Birth/Age: ..... Gender: ..... Category (SC/ST/OBC/EWS/UR): .....

Name and Address of the Organization: .....
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Telephone: ..... STD Code: ..... Office: .....Residence: .....

Mobile: ..... Email: .....

Blood Group: ..... Alternative Number: ..... Any kind of Allergies: .....

Accommodation requirement during the training (only for outstation participants): .....
(Required/not required)?

Date: ..... Signature of the Participant/Candidate

RECOMMENDATION BY THE CONTROLLING/NOMINATING AUTHORITY

Date: Name, Designation and Signature of the Controlling/Nominating Authority (with stamp)

Note: Please don't proceed to join the Training Programme without prior confirmation e-mail

Contact Information: + 91 7005846355; E-mail: coe_slm@icfre.gov.in, drhrajmandi@gmail.com