

International Training on Agroecological/Landscape Based Natural Resource Management in Nigeria



Organized by
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
under the aegis of
CGIAR CapSha Accelerator and Multi-Functional Landscape (MFL) Science Program

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Nigeria

About the course:

Land degradation is one of the most significant environmental and development challenges facing Nigeria and many countries across Sub-Saharan Africa. It adversely affects agricultural productivity, food security, water resources, biodiversity, and rural livelihoods. Rapid population growth, deforestation, overgrazing, bush burning, unsustainable farming practices, mining, urban expansion, and climate variability have accelerated the degradation of natural resources and reduced the capacity of landscapes to provide essential ecosystem services.

Over the past decades, extensive areas of forests, savannahs, wetlands, and natural ecosystems have been converted into agricultural land and settlements to meet increasing demands for food and economic development. Although this expansion has supported agricultural production, it has also resulted in severe soil erosion, declining soil fertility, desertification, gully erosion, biodiversity loss, reduced groundwater recharge, declining water quality, and increased vulnerability to droughts and floods. These challenges are particularly severe in Nigeria's rainfed farming systems across the northern savannahs, Middle Belt, and humid forest zones, where millions of smallholder farmers depend directly on natural resources for their livelihoods.

Degraded landscapes undermine agricultural productivity and contribute to poverty, food insecurity, malnutrition, unemployment, and climate

vulnerability. Limited access to productive land and reliable water resources often forces rural households to diversify livelihoods through migration or off-farm employment, creating additional socio-economic pressures. Climate change further intensifies these challenges through rising temperatures, erratic rainfall, prolonged droughts in northern Nigeria, and frequent flooding across major river basins.

Agroecological and Landscape-Based Natural Resource Management (NRM) offers an integrated and sustainable approach to restoring degraded landscapes while improving agricultural productivity and ecosystem resilience. By combining soil and water conservation, watershed management, agroforestry, regenerative agriculture, biodiversity conservation, and climate-smart farming practices, degraded lands can be transformed into productive and resilient ecosystems. Scaling these approaches will strengthen food systems, improve rural incomes, enhance climate resilience, support Nigeria's commitments to the **Great Green Wall Initiative**, **Land Degradation Neutrality (LDN) targets under the United Nations Convention to Combat Desertification (UNCCD)**, the **National Agricultural Technology and Innovation Policy (NATIP 2022–2027)**, the **National Climate Change Policy**, and contribute to sustainable agricultural development and the achievement of the Sustainable Development Goals.

Who should attend?

The program is designed for researchers, extension professionals, government officials, project managers, policy makers, NGO practitioners, development partners, university faculty, watershed and natural resource management specialists, and private-sector representatives involved in agroecology and nature-based solutions, landscape restoration, climate resilience, and sustainable rural development.

Objectives of the course:

- Understand landscape restoration principles
- Diagnose landscape degradation
- Design integrated restoration interventions
- Use geospatial tools
- Integrate climate information into planning
- Evaluate ecosystem services
- Develop restoration investment plans
- Monitor restoration outcomes
- Develop bankable restoration projects
- Support policy implementation

Approach and methodology of training:

The training program will combine expert-led lectures, interactive discussions, hands-on exercises, and case studies. Participants will examine practical solutions for addressing land degradation, water scarcity, climate risks, and low agricultural productivity through integrated land-water-crop-tree-livestock management approaches. The program will promote knowledge exchange and peer learning by encouraging participants to share best practices. Special emphasis will be placed on translating scientific evidence into policy and practice, enabling participants to use research findings effectively for planning, decision-making, and scaling sustainable landscape management interventions.

Application:

Prospective applicants from Nigeria only are eligible to apply for the course on the website of using the link below:
<https://forms.gle/Wj5SXDb6GnhYkT4z8>

Outlines of the course: (Themes covered during the course)

- Introduction to land degradation and landscape approaches in Nigeria: agroecological zones, farming systems, drivers of degradation, food security implications, and landscape-based NRM concepts.
- Agroecology and nature-based solutions
- Landscape characterization, planning and designing of interventions
- Soil Health and Land Resource Assessment
- Watershed management and landscape restoration: watershed diagnosis, gully erosion control, slope stabilization, community-based watershed governance, and restoration of degraded farmlands, rangelands, forests, and wetlands.
- Agroecology, regenerative agriculture, and sustainable intensification: soil health, integrated soil fertility management, crop diversification, rotations, intercropping, and climate-smart practices.
- Agroforestry, biodiversity, and ecosystem services: farmer-managed natural regeneration, shelterbelts, windbreaks, parkland systems, tree-based farming systems, and ecosystem service valuation.
- Climate risk management and resilience planning: drought, flood, heat, and erosion risk management; seasonal climate information; climate advisories; and integration of climate services into extension and local planning.
- Monitoring, Evaluation and Impact Assessment
- Community Institutions and Scaling Approaches

Coordinators

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