

Session description

Session- 1A

Theme: Biodiversity/nature conservation integration in FLR

Effective conservation of forest biodiversity and effective forest restoration are two of the biggest challenges being faced globally. Even though biodiversity conservation has been an important global agenda for at least three decades, forest biodiversity continues to be lost at an alarming rate. Deforestation is the single most important driver of forest biodiversity loss, affecting the ecological functioning and stability of forests, therefore undermining the provision of ecosystem services to humanity. There is a need to describe how conservation and restoration principles can be used to guide specific conservation and restoration strategies and on-the-ground practices to address underlying ecological problems. There is a need to deliberate on key challenges on forest landscape restoration and management and its integration with nature conservation.

This session brings a perspective of practitioner, researcher, and government policy maker to discuss the basic principles and strategies for Forest Landscape Restoration (FLR). The session aims to explore ways and means to enhance interdisciplinary and cross-sectoral approaches to guide both the conservation of existing forest biodiversity and forest ecosystems and restore biodiversity that has declined and ecosystems that have been depleted or degraded. How these conservation and restoration principles are implemented on the ground, which will invariably be ecosystem specific and will vary between different forest ecosystems.

There will be three lead speakers address to set the stage for the session discussing approaches to integrated/cross sectoral education on landscape restoration. Each of the three speaker represents as practitioner, researcher, and the government. This will be followed by a panel discussion to deliberate on some challenges and general conservation and restoration principles to address underlying ecological problems.

Session- 1B

Intersectoral Coordination in Policy and Planning for FLR

Forest Landscape Restoration (FLR) approach has been proposed as one of the solutions to address degraded lands. However, the land use competition has been quite high and intensive, particularly between sectors. This situation has provided serious challenges for the implementation of FLR on the ground. To ensure its effectiveness, an integrated FLR approach should be implemented as part of the overall landscape-based regional development at all administrative levels. The approach needs to be mainstreamed into regional development planning at all levels (national to village). The FLR approach should also complement the various programmes set by different government agencies.

Forest landscape restoration (FLR) initiatives necessitate the engagement of multiple and diverse stakeholder groups and sectors – such as government agencies at all levels, agriculture and forestry companies, research institutions, NGOs, traditional communities and landowners – with diverse and often conflicting interests and priorities. For FLR to be sustainable and responsive to multiple developmental and environmental needs, it is necessary to maintain and cultivate dialogue and coordination among this network of sectors and groups. Intersectoral coordination helps to forge shared visions and improve the way stakeholders, institutions and sectors interact

with each other to negotiate and address potential conflicts and synergies involved in the process of restoring landscapes and sustainably managing natural resources. It also increases gender equity and reinforcing the participation of native people and communities. All of this positively impacts the implementation of FLR initiatives, improving their outcomes on the ground. Intersectoral and Institutional coordination for FLR is also critical for achieving desired outcomes at the country level, It ensures that the range of competing interests, from the Government to the community level, are given due consideration, as well as to identify the best roadmaps and plans for the design and implementation of cross -sectoral, inclusive and effective policies, strategies and measures.

There will be one keynote address to set the tone for the session deliberating on the issues of Intersectoral Coordination in Policy and Planning for FLR. The three lead Speakers are from different backgrounds. Dr. Madhu Verma is an Economist and Mr.B.K.Singh and Mr.Franklin are from the Forest Service managing the Forestry and Agricultural Sector of the country The experts will be sharing their opinion and views about the Intersectoral linkages and coordination for policy and planning for FLR.

Session -2A

Theme: Agriculture, Agroforestry and Food security

There are challenges in the Indian agriculture, agroforestry and food security. The Agri. Share in Indian Economy has been declining progressively not because of less support and attention but due to the high growth rates of the industrial and services sectors. However, the importance of agriculture in Indian social fabric goes beyond this indicator and sector is still supporting more than 60% of the population in terms of employment and food security. Government of India is stressing hard on doubling farmers' income through various progressive measure i.e., increasing productivity, reducing input cost, diversification in crop rotations, reducing harvesting and post harvesting losses, etc. But the pace of development seems little slow and the youth is becoming disinterested in agriculture. We understand that our market is extensive and we are moving with same scale and at present country is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes), as well as the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. The country has some 195 m ha under cultivation of which some 63 percent are rainfed (roughly 125m ha) while 37 percent are irrigated (70m ha). In addition, forests cover is around 70m ha and majority of demands for domestic and industrial timber are met outside forests. Productivity itself is around 25 times higher under agroforestry interventions and present policies are also supporting the adoption of trees on agricultural land. This intervention is becoming popular and presently around 90 per cent of the timber requirement in the country is met outside forests, which is supporting the conservation of natural resources including traditional forests from exploitation. This session will emphasize on increasing the agricultural productivity including timber productivity to reduce rural poverty, enhance employment and Food security.

Session- 2B

Theme: Governance issue and stakeholder engagement in FLR

Governance is an integral aspect of Sustainable Forest Management (SFM) and in promoting multiple stakeholder dialogue at different tiers from local communities to international policies. Forest Landscape Restoration (FLR) in recent years have received increasing attention. Forest

landscape restoration faces several governance challenges such as who is included or excluded, who makes the decision, and importantly decision impacts where to restore and how? In brief, governance by whom and how are all stakeholders engaged?

This session brings a perspective of practitioner, researcher, and government policy maker to question and explore solution for governance in FLR implementation. The session aims to explore ways and means to enhance interdisciplinary and cross-sectoral approaches to governance from micro to macro level and what hinders contributing to building resilient landscapes. The governance can be both solution and hindrance because it is based on whether there are rules on the use of the forests and land rights, clarity on what to restore and how the benefit-sharing will be inclusive of diverse stakeholders. Given that landscapes as understood in FLR might not be the administrative units of the state, so then how formal and informal institutional arrangement can co-shape in recognizing these dynamics in creating an effective governance framework.

There will be three lead speakers address to set the stage for the session discussing approaches to integrated/cross sectoral education on landscape restoration. Each of the three speaker represents as practitioner, researcher, and the government. The panel will then share experiences with concrete examples and explore options for enhancement and mainstreaming of 'good' governance practices in FLR.

Session- 4A

Theme: Water resources, soil conservation and mined land restoration

The UN Decade on Ecosystem Restoration aims to prevent, halt and reverse the degradation of diverse ecosystems. This can help to combat climate change, prevent a mass extinction of species and reduce poverty. In this endeavour various sectors have a significant role for collective actions on restoring and regenerating ecosystems as a core part of resilient landscapes, for the sake of future generations and biodiversity. The water cycle plays a crucial role for resilient, productive landscapes that provide clean water, energy, and food. Landscapes with a functioning hydrology sustain biodiversity and contribute to climate change mitigation and adaptation. Also the degradation of natural areas due to mining activities has led to acceleration of erosion of biological diversity and creation of several other problems of livelihood insecurity and global climate change. Direct disturbances occur relatively quickly; however, the zone of influence outside the direct mining area is also considerable. After years of increasingly unsustainable land use that has disrupted the hydrological cycle, there is need to explore new ways to protect and restore landscapes and their ecological and hydrological functions. A new, systemic and inclusive narrative needs to be developed that can connect the foresters, farmers, agriculture, horticulture, mining, water resources sectors, conservationists, communities, etc. for building resilient landscapes.

The session on Water resources, soils conservation and restoration of mined out areas aims to deliberate on the issue with the objective of discussing ways and means and scientific interventions for conserving our water resources, maintaining the hydrological balance in the ecosystem, soil conservation for retaining the productivity of forest landscapes and restoring the mined out sites for building resilient landscapes, with close intersectoral coordination and cooperation. There will be three lead talks in the session, focusing on various aspects of the session theme. Each of the speaker represents government, practitioner and the researcher. Presentations will be followed by a panel discussion to deliberate on challenges and innovative approaches to address active soil erosion, water conservation and mitigation measures for landscape restoration.

Session- 4B

Theme: Enhancing livelihoods, equality, and human well-being in FLR

Forests are under degradation due to enormous anthropogenic pressure such as agricultural expansion, over exploitation of natural resources and climate change. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services report on “Land Degradation and Restoration” shows that well-being of at least 3.2 billion people is impacted negatively by land degradation, and it is the driver for biodiversity loss and responsible for intensifying climate change and its impacts, contributing to mass human migration and increased conflict (IPBES, 2018). Restoration of degraded forest landscapes is essential to ensure the continued flow of ecosystem services, including carbon sequestration, biodiversity conservation, and livelihood contributions as well as climate change adaptation and mitigation. FLR activities aim to restore functioning of forest ecosystem and contribute to the livelihoods of the communities, human well-being, and climate change adaptation and mitigation. Effective FLR practices should focus on strengthening the resilience of landscapes and create future options to enhance and further optimise ecosystem goods and services. Restoration takes place through an active process that allows the integration of various sectors, plans, and programmes, bringing local communities and other stakeholders together to identify and implement appropriate restoration activities.

FLR can reduce poverty and improve the livelihoods of the communities through increasing provisional ecosystem services, increase soil fertility and crop yield. Restored forest landscapes can support increase food production and water security, sequester carbon, enhance adaptability and resilience to climate change, and minimise the risks associated with conflicts over natural resources and large-scale migration. FLR can safeguard the livelihoods and strengthen economic well-being. The social returns of taking action on restoration at a global level are estimated at US\$ 5 for every \$ 1 invested in restoring degraded land. These facts represent both an excellent investment opportunity for both developed and developing countries. FLR provides a clear pathway to achieve land degradation neutrality (SDG 15), while providing opportunities to support achievement of the other SDGs. A focus on sustainable management and restoration of the land base is the central tenet of a better and sustainable future, where poverty is reduced, food and water are secured, biodiversity is safeguarded, and sustainable livelihoods are promoted.

This session will bring a perspective of policy makers, practitioners, researchers and other stakeholders to question and explore solution for enhancing livelihoods, equality, and human well-being in FLR implementation. The session aims to explore ways and means for enhancing livelihood opportunities, equality, and human well-being through restoration of degraded forest lands.

There will be three addresses by the lead speakers to set the stage for framing feasible approaches for enhancing livelihoods, equality, and human well-being in FLR. Each of the three speaker represents as practitioner and researchers, and deliver the presentations on Forest landscape restoration and human wellbeing; what works (or not) for livelihoods and equity in India's FLR. This session will share experiences and explore suitable strategies for enhancement of livelihoods, equality, and human well-being in FLR.

Session- 5A

Theme: Building resilience to climate change and its impacts in FLR

IPCC estimates that limiting warming to 1.5°C implies reaching net zero CO₂ emissions globally around 2050. With the continuing increase in use of fossil fuels globally the net zero CO₂ emission status would be achievable only by massively expanding the land area under forests and trees.

Forest Landscape Restoration is, therefore, an extraordinarily important part of global efforts to mitigate climate change. And its importance is even greater because restoration, and creation of new forestry assets through this process, will also serve to moderate the vulnerability of ecosystems, and of people dependent on these ecosystems, to the changing climate.

This session seeks to explore the role FLR can play in reducing ecosystem vulnerabilities caused by climate change and reflected in adverse effects on forest regeneration and growth, increased incidences of forest fires, insect attacks and diseases of epidemic proportions, and damages to forest ecosystems by storms, floods and droughts. These vulnerabilities vary in scale and intensity across geographies and the communities living there respond to these vulnerabilities differently in accordance with their skills and capacities, and economic status. Within the communities also these vulnerabilities often have a noticeably different effect across gender and economic strata. There is a need to build capacities and act in a complementary fashion across agriculture, animal husbandry, power generation, water resources, tourism and other sectors in order to speed up adaptation to, and enhance mitigation of, climate change.

There will be three lead speakers who will explore these concerns in their native geographies and beyond and set the stage for discussion in which members of the audience will be invited to contribute.

Session- 5B

Theme : Integrated/cross-sectoral education and training

With the start of the UN Decade on Ecosystem Restoration in 2021, as well as many ongoing national and international land restoration-related support and funding mechanisms, it is expected that investments into restoration programmes and projects on the ground will significantly increase. To this end, natural resources managers of all sectors will be challenged to live up to the expectations and lead in the transition towards resilient and sustainable landscapes. This is to be achieved through restoration of degraded ecosystems and the establishment of non-degrading land use practices at scale providing added value to both human wellbeing and ecosystem health and vitality.

In an educational context, the expansion of restoration efforts around the world means that an increasing number of young and mid-career professionals trained as forester, natural resources manager, agricultural specialist, ecologist, spatial planner, coastal zone manager, or other related domains will find their way to a job that is directly or indirectly related to restoration. It is expected that the higher demand for restoration expertise and associated trained professionals will need to be met through adequate vocational, tertiary, and continuing education programmes. This session therefore seeks to highlight ongoing efforts to mainstream landscape restoration in current education systems in South Asia and explore ways and means to enhance interdisciplinary and cross-sectoral natural resources education to meet the demand for trained professionals capable of effectively contributing to building resilient landscapes.

There will be one keynote address to set the stage for the session discussing approaches to integrated/cross sectoral education on landscape restoration. Before a panel of experts takes the floor, an information paper on “experiences with restoration education development in Africa” will be presented. The panel will then share experiences with developing cross-sectoral restoration educational programmes and explore options for their enhancement and mainstreaming.

Session-6

Theme: Experiences/case studies of sectoral integration for building resilient Landscapes

Climate change impacts and anthropogenic disturbances such as deforestation are vital drivers of forest degradation. Furthermore, the vulnerability of forests to disturbances such as drought, flooding, landslide, heatwave, storm, and forest fires will increase as the climate continues to warm and sea-level rises. Therefore, the future forests being restored today should be social-ecologically resilient to withstand and recover from climate change-induced disturbances. The success of forest landscape restoration (FLR) depends on the involvement of all stakeholders across multiple sectors to co-design and co-execute the FLR activities. Furthermore, a multi-sectoral approach to FLR would increase societal acceptance because it can lead to a win-win situation for increasing ecological resilience while bringing social and economic prosperity through sustainable forestry. In this session, we will have case study examples involving multiple government and non-governmental sectors, corporate sectors, civil society organizations, and citizens in successful FLR planning and implementation. The session will consist of four presentations followed by short panel discussions. First, Dr. Shalini Dhyani from the CSIR-NEERI (Council of Scientific and Industrial Research – National Environmental Engineering Research Institute) will start the session and provide examples of successful forest restorations across India by focusing on adequately formulating policies incentivizing restoration, involving citizens, and acknowledging uncertainties of climate change impacts to help develop a synergy between different government departments. Then, Mr. Lokesh Jayasawal, the Principal Chief Conservator of Forests, Telangana Forest Department (Indian Forest Service), will provide implementation examples of FLR in Telangana. After that presentation, Mr. Shyam Mallick, Deputy Project Director, Odisha Forestry Sector Development (Indian Forest Service, IFS), will give an example of how poverty reduction and livelihood promotion can be achieved by FLR through the convergence of different sectors. Finally, Dr. Isuru Alawatte from the Sri Lankan Forest Department will give an example of how a low-cost and nature-friendly approach, such as the natural regeneration of local species, can be successfully used for restoring different types of degraded forest ecosystems in Sri Lanka. Furthermore, Dr. Alawatte will highlight the need for synergies between government agencies and private sectors and patronizing support of international organizations such as the IUFRO and IUCN.