Restoring Degraded Forest Landscapes: India's Approach to Sustainable Forest Management and Climate Resilience

Concept Note

Land: The problems, degradation, desertification

According to UNCCD (United Nations Convention to Combat Desertification) land degradation is the result of human-induced actions which exploit land, causing its utility, biodiversity, soil fertility, and overall health to decline. The impacts of land degradation will be felt by most of the world's population. Land degradation also changes and disrupts rainfall patterns, exacerbates extreme weather like droughts or floods, and drives further climate change.

The UNCCD's goal of Land Degradation Neutrality (LDN) can halt, and then reverse, this alarming picture of the future. The Bonn Challenge is a global goal to bring 150 million hectares of degraded and deforested landscapes into restoration by 2020 and 350 million hectares by 2030. In context of India, as per 2016 study of Space Applications Centre (SAC), an estimated area of 96.4 mha, i.e. 29.32% of India's total land area is undergoing the process of land degradation.

Restoration of Degraded Forest Lands in India

As per **Global Forest Resource Assessment** (GFRA, 2020) published by FAO, India is ranked amongst the top 10 countries of the world, in terms of forest area and holds 3rd position for highest annual net gain in forest cover between 2010-2020. Accordingly, India's forests act as a net sink of carbon. This shows India's commitment towards climate change mitigation and adaptation, highlighting that the country's development and conservation agenda at an equal footing.

Since 1987, India has been publishing its **India State of Forest Report (ISFR),** a biennial assessment, of forest and tree resources of India, based on interpretation of remote sensing satellite data and field based **National Forest Inventory (NFI)**. Besides providing vital transparent information for monitoring the country's forest and tree resources, the data given in the ISFR serves as a useful source of information for the policy makers, planners, State Forest Departments, research organisation, line agencies involved in various developmental works, academicians, civil society and others interested in natural resource conservation and management. This serves as an important tool in assessing not only the forest and tree cover but also several other characteristics vital to maintain forest health, flow of carbon in different pools, ecosystem services from forests, etc.

ISFR 2023, 18th report in the series, showcases, the total forest and tree cover of India at 82.73 million hectare (25.17% of geographical area). Out of which forest cover is 71.53 mha (21.76%) and tree cover is 11.20 mha (3.41%). Tree outside Forest (ToF) forms 9.33 % of geographical area (5.92 % in category of Forest cover and 3.41 % in category of tree cover). Growing stock in forests is 70% and in ToF is 30%. Green cover in recorded forest area as well as under ToF is increasing.

Regarding India's **NDC related to carbon sequestration**, the current assessment shows that India's carbon stock has reached 30.43 billion tonnes of CO2e; indicating that as compared to the baseline year of 2005, India has already reached 2.29 billion tonnes of additional carbon sink as against the target of 2.5 to 3.0 billion tonnes by 2030. Tree Outside Forest (ToF) has been playing an important role in achievement of this target.

Under the voluntary **Bonn Challenge**, India has pledged to restore 26 mha of degraded and deforested land by 2030. There has been progress towards this target as well, and the current area under restoration stands at 24.1 mha. India is actively progressing towards achieving this goal.

An initiative towards this is the **Aravalli Green Wall Project**, greening dryland forest in 5 km buffer area around the Aravalli Hill Range in four states of Haryana, Rajasthan, Gujarat and Delhi. This landscape spans over an area of 6 mha. The project aims to increase the green cover and biodiversity of the Aravalli through afforestation, reforestation, agroforestry, pasture development and restoration of water bodies, improve overall soil moisture regime, soil fertility, water availability, drought resilience and climate resilience of the region. Project banks on efforts and participation of all stakeholders, developing synergy between restoration, socio-economic factors and development activities to ensure that both conservation and development are achieved.

Programmes such as **Green India Mission (GIM)**, one of the eight missions under the **National Action Plan on Climate Change**. The target under the mission is 10 mha on forest and non-forest lands for increasing the forest/tree cover and to improve the quality of existing forests. It aims at protecting, restoring and enhancing the forest cover and responding to climate change by a combination of adaptation and mitigation measures. It envisages a holistic view of greening and focuses on multiple ecosystem services, biodiversity, water, biomass, preserving mangroves, wetlands, critical habitats etc. along with carbon sequestration as a co-benefit. This mission has adopted an integrated cross-sectoral approach and is implemented on both public and private lands with a key role of the local communities.

The tree plantation campaign **Ek Ped Maa Ke Naam / Plant4Mother** was launched on 5th June 2024 for restoring degraded forest land by fostering a community-driven approach to afforestation by encouraging individuals to plant trees in honor of their mothers and create an emotional bond that promotes long-term care and survival of saplings. Plantation of 1.17 billion saplings have been achieved under the campaign and a target of 1.40 billion is expected to be achieved by March 2025.

The Compensatory Afforestation Fund Act through the **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** promotes afforestation and regeneration activities as a way of compensating for forest land diverted to non-forest uses. Funds are used for plantations, activities relating to conservation and management of forests and wildlife, accelerate preservation of natural forests, restoration of degraded forests, enrichment of biodiversity, capacity building, research and development, infrastructure development in the sector and other allied works.

Mangrove forests have four times more capacity to store carbon than any terrestrial ecosystem, provide breeding grounds for marine biodiversity, work as a bio shield and support global fish populations. The Government has taken several steps to protect and enhance mangrove forests in the country through promotional and regulatory measures. **Conservation and Management of Mangroves and Coral Reefs**, **Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)** are the two main initiatives.

Recently, the Ministry has launched the **Green Credit Program under the Green Credit Rules, 2023**, which encourages Public Sector Undertakings to undertake eco-restoration and tree plantation activities in degraded forest lands.

There are several other schemes, programmes and missions through which the country in working towards restoration of forest lands, enhancing forest and tree cover and even going beyond forest lands. These are not restricted or limited to only the Ministry of Environment Forest and Climate Change but go beyond to other line ministries, National Bamboo Mission, Rashtriya Krishi Vikas Yojana (RKVY), Sub-Mission of Agroforestry (SMAF), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Matri Krishi Sinchai Yojana – Watershed (PMKSY), Nagar Van Yojana (City Forest Scheme) at national level. State level polices on forestry, agriculture, watershed, springshed, and other frameworks, future vision documents, such as Delhi Urban Forest Vision 2050, Gujarat@2047, Uttarakhand Vision 2030, Vision 2030 Maharashtra, etc

India's forests support the local communities and forest dependent communities through food, fodder, shelter, livelihoods. But also, participation through resource, habitat, individual and usufruct rights. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act and Panchayat (Extension to Scheduled Areas) Act (PESA), empower the Gram Sabha for the same. The community participation is in various forms including Joint Forest Management Committees (JFMCs), Eco-Development Committees (EDCs), Biodiversity Management Committees (BMCs), Community Conserved Areas (CCAs), Watershed Committees and Van Panchayats. These community institutions participate in protection and management of forest resource, in and around the protected areas, conserve biodiversity, eco-development activities in the villages, water resources and infrastructure management and participating in management, livelihood generation and conservation of other common pool resources.

India's updated **National Biodiversity Strategy and Action Plan (NBSAP)** aligns with the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**, setting 23 national biodiversity targets through an extensive consultative process involving diverse stakeholders. It acknowledges environmental challenges and outlines strategies to address them through ecosystem restoration, species recovery programmes, community-driven conservation efforts focusing on restoration of degraded ecosystems, protection of wetlands, and sustainable management of marine and coastal areas.

To implement these activities, missions, projects, there are multisectoral financing options ranging from public, private, innovative sources for piloting and upscaling with direct benefits accruing to various stakeholders.

The strong framework and implementation of country's policy and regulatory framework is responsible for India fulfilling its local, national and international commitments at UNCCD, UNCBD, UNFCCC and SDGs.

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Draft Agenda: 06 May 2025, Tuesday

Time (GMT – 4 hrs)	Subject	Speaker
13:15–13:20	Introduction to the Theme of Program	**Dr. JV Sharma** Senior Director, Land Resources Division, The Energy and Resources Institute (TERI), New Delhi, India
13:20–13:30	An overview of Sustainable Development of Forests in India	**Shri Sushil Kumar Awasthi** Director General of Forests and Special Secretary Ministry of Environment, Forest and Climate Change, Government of India
13:30–13:37	Policy and Regulatory Framework to Combat Forest Degradation in India	**Shri Ramesh Kumar Pandey** Inspector General of Forests Ministry of Environment, Forest and Climate Change, Government of India
13:37-13:44	Forest Resource assessment; Indian State of Forest Report, 2023	**Shri Anoop Singh** Director General, Forest Survey of India Ministry of Environment, Forest and Climate Change, Government of India
13:44-13:51	India's Approach on Restoring Degraded Forest lands	**Shri R Raghu Prasad** Inspector General of Forests Ministry of Environment, Forest and Climate Change, Government of India
13:51–13:58	Pathway to achieving India's NDC Commitment of 2.5 to 3.0 billion tonnes by 2030	**Shri Varun Grover** Associate Fellow, The Energy and Resources Institute, (TERI), New Delhi, India
13:58–14:02	Contribution of India's forestry towards sustainable livelihoods of forest dependent communities	**Shri Aniruddh Soni** Fellow, Land Resources Division, TERI, India and **Dr. Dipankar Saharia** Senior Director, Social Transformation and Strategic Alliances, TERI, India
14:02–14:25	Discussion *Moderated by Dr. Dipankar Saharia,* *Senior Director, Social Transformation and Strategic Alliances, TERI, India*	
14:25–14:30	Summary and Vote of Thanks	**Shri Amit Anand** Deputy Inspector General of Forests, Ministry of Environment, Forest and Climate Change, Government of India