



Title: “Greening the Future: Sustainable Solutions for Environmental Restoration”

Date: 5th March 2025

Time: 9.30 am – 11.00 am Thematic Track (Group A)

Venue: Juniper Hall (India Habitat Centre)

Problem statement and state of play

Global population is projected to increase approximately 8.5 billion by 2030 and reach 9.7 billion by 2050, with a peak of around 10.4 billion in the 2080s. This population increase has raised global concerns about sustainability, safety and quality of environment and concern on climate change, biodiversity loss, water, soil, and air pollution, as well as pressures on food and energy resources.

As nation proceeded with fast industrialization and urbanization with financial progression, fuelling the contamination from different sources is one of the major issues. The release of various inorganic and organic chemicals from various industries such as petrochemicals, agro-based industries, textiles, pharmaceuticals and tanneries is highly toxic to the environment and human health. Dumping of industrial wastes and spillage of hazardous wastes or chemicals during different activities would adversely impact affect the surrounding environment, particularly soil, surface water and groundwater.

Environmental remediation is the process of removing or neutralizing pollutants like petroleum products, heavy metals, pesticides from a contaminated site. The different chemical, physical and biological method is employed to remediate the water, soil and air environment. These remediation methods are employed to restore the environment to a healthier state by removing harmful substances like heavy metals, pesticides, or petroleum products from soil, water, or air. The lead national programmes like Swachh Bharat Abhiyan and Namani Ganga drive showed promising progress in restoration of contaminated sites.

Among various remediation methods, bio-based based methods offer a promising approach to addressing the challenges. It utilizes microorganisms, plants, or fungi to break down the different contaminants into

harmless compounds. "Bioremediation is an eco-friendly, cost-effective, and versatile method that helps to restore large contaminated sites."

In-order to manage the polluted hotspots, there are several successful remediation stories in India and abroad with adaptation of best available restoration methods and practices. The present thematic track titled "Greening the Future: Sustainable Solutions for Environmental Restoration" focuses on the different innovations, collaboration, adaptation in the field of remediation of various pollutants from different ecosystem like soil, water and air.

Objectives of the thematic track

1. The main objective of this thematic track is to understand the current process, issues and policies in the adaptation of various remediation methods to manage the environmental pollutants.
2. Identify the potential scope for the innovation, improvement, adaptation and collaboration among national and international partners.

Questions

- How can remediation technologies address the issues of management of different pollutants from various sources
- In what ways can participation of multi-level governance be strengthened to overcome challenges in management and restoration of polluted sites
- What role do collaboration and partnerships among various stakeholders, including local governments, communities, businesses, and non-profit organizations, play in achieving sustainable and clean environment
- How eco-based and sustainable bioprocess systems, aligns with several of the Sustainable Development Goals and offers innovative technical and business solutions.

About the World Sustainable Development Summit (WSDS)

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. The 24th edition of the annual flagship event of The Energy and Resources Institute (TERI)—the World Sustainable Development Summit (WSDS)—will be held from 5-7 March 2025 in New Delhi. The Summit deliberations will focus on the umbrella theme: Partnerships for Accelerating Sustainable Development and Climate Solutions.