Compensatory Afforestation in India

Mains: *GS III – Environment*

Why in News?

Recently, the National Compensatory Afforestation Fund Management and Planning Authority (CAMPA) approved several wildlife conservation initiatives.

What is Compensatory Afforestation?

- **Compensatory afforestation** – It refers to the process of creating or regenerating forests to compensate for the diversion of forest land for non-forest purposes.
- **Objective** – To offset the ecological loss caused by developmental projects by ensuring that equivalent or larger areas are brought under forest cover.
- **Statutory mandate** – Under the Forest (Conservation) Act, 1980, any proposal seeking prior approval from the Union Government for the diversion of forest land must include a comprehensive compensatory afforestation plan approved by the concerned State or Union Territory administration.
- **Underlying principle** – The principle underlying compensatory afforestation is often described as **"land for land" and "trees for trees."**
- It seeks to maintain the country's forest cover while facilitating essential infrastructure and economic development.
- However, compensatory afforestation is intended as a mitigation measure rather than a justification for indiscriminate diversion of forests.
- **Legal and Institutional Framework –** The legal framework governing compensatory afforestation has evolved over the years.
    - **Forest (Conservation) Act, 1980 –** Regulates the diversion of forest land for non-forest purposes and mandates prior approval of the Central Government.
    - **Compensatory Afforestation Fund (CAF) Act, 2016 –** Provides the legal framework for collecting, managing, and utilising funds received as compensation for forest diversion.
    - **CAMPA (Compensatory Afforestation Fund Management and Planning Authority) –** Functions as the institutional mechanism for managing and monitoring compensatory afforestation funds.

What is Compensatory Afforestation Fund Management and Planning Authority?

- **Function** – Every State and Union Territory has its own CAMPA authority responsible for implementing afforestation and conservation projects, while the National CAMPA provides policy guidance, technical oversight, and monitoring.

- **Sources of CAMPA Funds –** The primary source of CAMPA funds is the compensatory charges levied on individuals, organisations, public sector undertakings, and government departments that divert forest land for developmental activities.
- These charges include:
    - Cost of compensatory afforestation.
    - Net Present Value (NPV) of forest land.
    - Charges for regeneration and ecological restoration.
    - Other statutory levies prescribed under environmental laws.
- An important feature of CAMPA funds is that they are **non-lapsable**, meaning they do not expire at the end of a financial year and continue to accumulate.
- They are also interest-bearing.
- **Distribution of funds** – The funds are distributed between the National and State CAMPA authorities in the ratio of **10:90**.
- **Maintenance of accounts** – The National CAMPA fund maintained in the Public Account of India and State CAMPA funds maintained in the Public Accounts of the respective States and Union Territories.
- **Utilisation of CAMPA Funds –** CAMPA funds are utilised for a wide range of ecological restoration and conservation activities aimed at improving forest health and biodiversity.
- Major areas of utilisation include:
    - Compensatory afforestation and reforestation.
    - Assisted natural regeneration of degraded forests.
    - Forest protection and fire prevention.
    - Wildlife habitat improvement.
    - Soil and moisture conservation.
    - Catchment area treatment.
    - Development of wildlife-related infrastructure.
    - Biodiversity conservation programmes.
    - Restoration of mangroves and wetlands.
    - Capacity building, monitoring, and research.
- The overarching objective is the sustainable enhancement of ecosystems while ensuring long-term ecological security.
- **Recent Initiatives Approved by National CAMPA**
    - Preparation of a Conservation and Recovery Action Plan for River Dolphins.
    - Project Snow Leopard Phase-II, including the second cycle of snow leopard population estimation.
    - Conservation Action Plan for the Indian Rhinoceros.
    - A Pan-India Conservation Strategy for the Wild Water Buffalo.
    - Continued support for the conservation of Manipur's Brow-antlered Deer (Sangai).
    - Extension of the Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI) for another three years with a revised allocation of ₹600 crore.
    - These initiatives demonstrate that CAMPA has evolved beyond plantation activities and now contributes significantly to wildlife conservation, habitat restoration, and ecosystem resilience.

What is the significance of compensatory afforestation?

- **Maintaining Forest Cover –** It helps compensate for the loss of forests resulting from developmental activities and contributes to maintaining overall forest cover.
- **Supporting Sustainable Development –** The mechanism enables the country to pursue infrastructure development while integrating environmental safeguards, thereby promoting sustainable development.
- **Biodiversity Conservation –** CAMPA funds support habitat restoration, wildlife protection, and conservation programmes for endangered species, thereby strengthening biodiversity conservation efforts.
- **Climate Change Mitigation –** Afforestation enhances carbon sequestration, contributing to India's commitments under the Paris Agreement and its goal of achieving net-zero emissions by 2070.
- **Improving Ecosystem Services –** Healthy forests regulate water cycles, conserve soil, improve groundwater recharge, prevent erosion, and provide livelihoods to forest-dependent communities.

What are the concerns and criticisms?

- **Plantations Cannot Replace Natural Forests –** The most significant concern is that artificial plantations are fundamentally different from natural forests.
- While plantations may increase tree cover, they often fail to replicate the complex ecological interactions, biodiversity, and ecosystem services provided by mature natural forests.
- **Loss of Biodiversity –** Natural forests contain diverse plant and animal species that have evolved over centuries.
- Monoculture plantations created under compensatory afforestation cannot restore this biodiversity.
- **Ecological Imbalance –** Development projects may permanently alter hydrology, wildlife corridors, soil quality, and microclimatic conditions.
- Simple tree plantation cannot compensate for these irreversible ecological changes.
- **Diversion of Forest Land for Plantations –** Environmental groups have raised concerns that compensatory plantations are sometimes undertaken on existing forest land rather than on non-forest land, contrary to the objectives of the CAF Act.
- Such practices defeat the very purpose of ecological compensation.
- **Delays in Fund Utilisation –** In several States, substantial CAMPA funds remain unutilised due to administrative bottlenecks, inadequate planning, procedural delays, and limited implementation capacity.
- **Social Concerns –** Afforestation projects occasionally affect the customary rights and livelihoods of forest-dwelling communities.
- Inadequate consultation with local communities can result in conflicts and reduce the long-term success of restoration efforts.

What measures could be taken?

- To improve the effectiveness of compensatory afforestation, several measures are necessary.
- Prioritise the protection of existing natural forests, as conservation is more effective

than restoration.
- Ensure that compensatory afforestation is undertaken on appropriate non-forest land as envisaged under the law.
- Promote restoration of native forests instead of monoculture plantations by using indigenous species suited to local ecological conditions.
- Strengthen scientific monitoring through satellite imagery, GIS, remote sensing, and periodic ecological assessments.
- Increase transparency and accountability in the utilisation of CAMPA funds through regular audits and public disclosure.
- Encourage active participation of Gram Sabhas, local communities, and forest-dependent populations in planning and implementation.
- Integrate afforestation with landscape-level conservation, wildlife corridor protection, and climate adaptation strategies.
- Improve coordination between forest departments, research institutions, and conservation organisations to ensure evidence-based ecological restoration.

What lies ahead?

- Compensatory afforestation represents an important policy instrument for balancing developmental aspirations with environmental conservation in India.
- Through the CAMPA framework, substantial financial resources are mobilised for afforestation, biodiversity conservation, and ecosystem restoration.
- However, compensatory plantations cannot fully replace the ecological complexity, biodiversity, and ecosystem services of natural forests.
- Therefore, the primary emphasis should remain on avoiding unnecessary diversion of forests and protecting existing ecosystems.
- Scientific afforestation, transparent utilisation of CAMPA funds, community participation, and ecosystem-based restoration approaches will be essential for ensuring that compensatory afforestation contributes meaningfully to sustainable development and ecological resilience.

Reference

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