

## General Studies-3; Topic: Conservation, environmental pollution and degradation, environmental impact assessment

### Forest Restoration

#### 1) Introduction

- India recently released its progress report on The Bonn Challenge, revealing that it has brought an area of 9.8 million hectares of deforested and degraded land under restoration since 2011.
- India's present forest and tree cover is 24.39 percent (802,088 sq.km) of the country's geographical area.
- However, the delicate balance within the ecosystem has been grossly disrupted due to anthropogenic activities such as urbanisation, expansion of agriculture, logging and hunting, which have severely damaged forest lands.

#### 2) India's National Greening Goals

- India has committed to restoring 21 million hectares of degraded land by 2030.
- India promised an additional carbon sink — a means to absorb carbon dioxide from the atmosphere — of 2.5 to 3 billion tonnes of carbon dioxide equivalent through additional forest and tree cover by the year 2030.
- India has a national target of bringing 33 percent of its geographical area under tree and forest cover while maintaining two-thirds of the area under green cover in mountainous and hilly regions.
- By 2030, there will be reductions in the emissions intensity of the GDP by about a third
- A total of 40% of the installed capacity for electricity will be from non-fossil fuel sources.

#### 3) Bonn Challenge

- India has now submitted its report titled, 'Bonn Challenge and India: Progress on Restoration Efforts Across States and Landscapes,' a first-ever publication from any country in the world, giving detailed progress on forest landscape restoration under the global treaty.
- The Bonn Challenge is a global effort under which countries have committed to bringing 150 million hectares of deforested and degraded land into restoration by 2020 and 350 million hectares by 2030.
- India had pledged to restore 13 million hectares of degraded land by 2020 and an additional 8 million hectares by 2030.
- It was launched in 2011 by the Government of Germany and the International Union for the Conservation of Nature (IUCN).
- Underlying the Bonn Challenge is the forest landscape restoration (FLR) approach, which aims to restore ecological integrity at the same time as improving human well-being.
- The Bonn Challenge progress report acknowledged that the government is the single largest stakeholder in forest restoration in India.
- Thus, it is critical that "the government continues to bear the responsibility of restoring large portions of degraded areas while reaching out to different agencies and impacted communities".

#### 4) Benefits

- According to a new study, locking up the carbon from the atmosphere in trees, ground vegetation and soils is one of the safest ways with which to remove carbon.
- Green cover will improve water quality, store water in wetlands, prevent soil erosion, protect biodiversity, and potentially provide new jobs.

- Allowing land to be converted into forests naturally will sequester 42 times the carbon compared to land converted to plantation.
- The restoration of 150 million hectares of degraded and deforested lands in biomes around the world will create approximately USD 84 billion per year in net benefits that could bring direct additional income opportunities for rural communities.
- Achieving the 350-million-hectare goal will generate about USD170 billion per year in net benefits from watershed protection, improved crop yields and forest products.
- Creation of livelihood opportunities in remote areas by linking villages to markets for sale of non-timber forest products

### 5) Government Initiatives

- To bring a minimum of one-third of the total land area of the country under forest and tree cover, an additional 27.8 million hectares of land area would need to be brought under green cover.
- To achieve this, the government of India has been running several programmes like the National Afforestation Programme (NAP), National Mission for a Green India (GIM), National Green Highways Mission, National Mission for Clean Ganga and National Agroforestry Policy.
- It is also facilitating funds to states for conservation, protection, improvement and expansion of forest and wildlife resources of the country under the Compensatory Afforestation Fund Act, 2016.

### 6) Way Forward

- While there is enormous potential in mitigating climate change through forest restoration, the amount of carbon stored depends on the type of forest restoration carried out.
- The most effective way is through natural forest regeneration with appropriate institutions to facilitate the process.
- A collaboration “between government agencies, local civil society organisations as well as the local communities on restoration initiatives.”
- Increase in carbon sink can be achieved by afforesting wastelands; agro-forestry; through green corridors, plantations along railways, canals, other roads, on railway sidings and rivers; and via urban green spaces.
- Trees selected for the plantations must not deplete the aquifers.
- India must ensure that deforestation is curtailed to the maximum extent.
- Restoration of impaired and open forests and wastelands should be focussed on natural forests and agroforestry.
- Involving local people and planting indigenous tree varieties.
- Growing food forests managed by local communities would have additional co-benefits.
- Protecting and nurturing public lands while preventing their private enclosure is paramount.
- Active forest management by local people has a long history in India and needs to expand to meet climate, environment and social justice goals.