Assessing Tree based programmes

What is the issue?

- In 2015, India made a Bonn Challenge commitment to:

    i. restore 13 million hectares (Mha) of degraded land by 2020.
    ii. bring an additional 8 Mha by 2030.

- India's NDCs have also pledged to sequester 2.5 to 3 billion tonnes of CO2 equivalent additionally by 2030.
- India needs to assess and design its tree-based environmental programmes to meet its climate goals.

What is the shortfall?

- Recently, Madhya Pradesh planted 66 million trees in 12 hours to enter the record books, overtaking earlier record of Uttar Pradesh.
- As different States work to achieve the above commitments, it appears that there is an **over-reliance on plantations**.
- Resultantly, large-scale plantation drives do not really achieve the goals

because they **lack focus on**:

i. species selection.
ii. quality of planting materials.
iii. survival rates of planting materials.
iv. tenure and resource rights to ensure that the benefit flows to communities.

What should the approach be?

- Plantations are but one among a larger group of interventions.
- Notably, neither the Bonn Challenge nor the NDCs are about large-scale plantations alone.
- More emphasis is essential on **landscape approaches**, a model aimed at improving the ecology of a landscape as a whole.
- Only this can contribute to the larger goal of climate change adaptation by **benefitting the local communities** dependent on forests and agriculture.
- And ensure a **flow of multiple ecosystem services** such as food security, biodiversity conservation and water supplies.
- Besides, **protecting the existing healthy forest** areas from deforestation, degradation and fragmentation is crucial.

What are the options?

- India has numerous models that are suited for different regions and farm household sizes whereby trees can creatively be integrated into different

land uses.
\n
- **Agroforestry** - At least 35 types of agroforestry models are practised in India.
  \n
- It involves planting different trees that provide timber, fruits, fodder, fuel and fertilizers along with food crops.
  \n
- This diversifies income from farming as well as improves land productivity.
  \n
- **Natural regeneration** - The Farmer-managed natural regeneration (FMNR) systems deliver a combined economic and ecosystem benefit.
  \n
- Under this, <u>farmers protect and manage the growth of trees and shrubs that regenerate naturally</u> in their fields.
  \n
- The regeneration could be from root stock or from seeds dispersed through animal manure.
  \n
- The FMNR system can contribute to increased carbon sequestration as well as to annual agricultural production.
  \n
- **Besides**, NABARD's 'Wadi' model and the Foundation for Ecological Security's re-greening of village commons project are good examples of tree-based interventions.
  \n
- These are proving to be of great value in terms of cost-effectiveness as well as the range of benefits they deliver to communities.
  \n

\n\n

What are the preconditions?

\n\n

  \n
- **Land rights** - An important success factor in large-scale tree-based programmes is <u>security of tenure and land rights</u>.
  \n
- In several parts of the world, securing tenure over forests has been established as a cost-effective way of achieving climate sequestration.
  \n
- It is also critical to ensure that owners have the right to manage and use these trees.
  \n

- **Monitoring system** - A performance monitoring system is essential to quantify tree survival rates and analyse the benefits to communities.
- Remote sensing, crowd sourced, ground-level monitoring, etc are the technological means to monitor.
- These can better be combined with support from communities and civil society organisations to have a qualitative assessment of the programmes.
- **Methods** - It is critical to <u>determine the right type of tree-based interventions</u> most suitable to a certain land use.
- This is achieved by using scientific evidence-based methodology with a participatory approach.
- A tool called the ROAM (Restoration Opportunities Assessment Methodology) is being used in 40 countries for this purpose.
- The ROAM includes analysis of spatial, legal and socio-economic data and draws on consultations with key stakeholders to determine the right type of interventions.
- In India, this tool is being piloted in Uttarakhand and Madhya Pradesh.

Quick Fact

'Wadi' model

- This is a tribal development programme launched by the National Bank for Agriculture & Rural Development (Nabard)
- It is a holistic model for tribal development aiming at economic uplift through sustainable agriculture, social empowerment and improvement in quality of life.
- The financial assistance under Wadi is provided from Tribal Development Fund set up by Nabard out of its profit.

\n\n

\n\n

Source: The Hindu

\n