



Forest Ecosystem and Green GDP

Why in News?

Recently, **Chhattisgarh** became the **first state in India to link its forest ecosystem to the [Green Gross Domestic Product \(Green GDP\)](#)**.

- This approach highlights the **economic and environmental value of forests**, focusing biodiversity conservation and climate change mitigation.

Key Points

- **Goals and Design of the Action Plan:**
 - The plan **ensures economic progress while preserving the environment** for future generations.
 - Key benefits like **climate regulation, soil enrichment, water purification, and carbon absorption** will now be integrated into the state's economic planning.
- **Importance of Forest Resources in Chhattisgarh:**
 - With **44% of its land covered by forests**, Chhattisgarh's natural resources are vital to millions.
 - Forest products such as **tendu leaves, lac, honey, and medicinal plants** significantly boost the rural economy.
 - Forests absorb **carbon dioxide**, playing a crucial role in combating **climate change**.
- **Alignment with National Vision:**
 - The initiative aligns with the Prime Minister's vision of a **"[Developed India 2047](#)."**
 - The plan emphasizes both the **economic and environmental benefits of forests** in **budget planning** and policy-making.
- **Findings from ISFR Report:**
 - **[The India State of Forest Report \(ISFR\)](#)** highlights a significant rise in forest and tree cover in Chhattisgarh, attributed to **[biodiversity protection and conservation efforts](#)**.
- **Cultural and Employment Significance:**
 - Forests in Chhattisgarh hold **religious and cultural significance**, deeply tied to tribal traditions and spiritual solace for local communities.
 - Forests contribute to employment through **eco-tourism** activities such as jungle safaris and camping in **[national parks](#)**.
- **Ecosystem Services Valuation:**
 - To quantify the **economic value of forests**, scientists will assess their ecosystem services, including:
 - **Clean Air:**
 - **Quantifying CO2 absorption by trees** and its conversion into oxygen.
 - Adding its **market value to Green GDP**.
 - **Water Conservation:**
 - Measuring the **economic impact of water provided by forests** through rivers and springs.
 - **Biodiversity:**
 - Valuing the role of forest fauna in maintaining ecological balance and aiding agriculture.

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Green Gross Domestic Product (Green GDP)

- **Traditional GDP:** A measure of the **annual value of goods and services** produced within a country, **GDP** has been the global standard since 1944.
 - **Simon Kuznets**, the economist who created **GDP**, stated that **GDP doesn't reflect a nation's true welfare**, as it ignores factors like environmental health and social well-being.
- **Green GDP:** It is a **modified version of traditional GDP** that accounts for the **environmental costs of economic activities**.
 - It incorporates factors such as **natural resource depletion, environmental degradation, and pollution into the economic output**, offering a more comprehensive picture of a nation's true wealth.
- **Need for Green GDP:** Traditional GDP overlooks **sustainability, environmental degradation, and social welfare**. It focuses solely on **economic output** without considering the long-term consequences on the environment.
 - Green GDP, on the other hand, ensures that **economic growth aligns with sustainable practices**, reflecting the true cost of environmental damage and the depletion of natural resources.
- **Formula:**
 - According to the **World Bank**, **Green GDP = NDP (Net Domestic Product) – (Cost of Natural Resource Depletion + Cost of Ecosystem Degradation)**.
 - Where $NDP = GDP - \text{Depreciation of Produced Assets}$.
 - **Cost of Natural Resource Depletion** refers to the value lost due to overuse of natural resources.
 - **Cost of Ecosystem Degradation** refers to the value lost from environmental damage such as pollution and deforestation.