

**UPSC Syllabus Topic : GS Paper 3 Environment – Conservation.**

**Challenges to India's Climate Goals**

**Introduction**

The 2023 UN Climate Change Conference (COP28) concluded with a resounding call for the global phase-out of fossil fuels, emphasizing the urgency of collective action to combat climate change.

While this directive holds promise for a greener future, the onus is particularly significant on India, the world's third-largest greenhouse-gas emitter. With India contributing 7.6% of global greenhouse gas (GHG) emissions in 2022, immediate and decisive action becomes paramount for a successful transition to non-fossil energy.

**Challenges in Transitioning to Non-Fossil Energy**

**1. Taxation Policy on Petroleum Products**

India's countercyclical taxation policy on petroleum products poses a substantial challenge. When global prices surge, India reduces taxes, making fossil fuels more attractive due to lower costs. Conversely, when prices drop, taxes increase, hindering the shift to renewable sources that may appear costlier in comparison.

**2. Electricity Pricing and Subsidies**

Electricity, constituting 34% of India's emissions, faces a hurdle in the form of heavy subsidies. The artificial lowering of electricity prices through subsidies makes fossil energy seem more affordable than its actual cost, impeding the transition to cleaner alternatives.

**3. Difficulties in Reforming Electricity Pricing**

Reforming electricity pricing encounters complexities as it is not centralized; instead, states and Union Territories (UTs) set their own prices. The political expectation of subsidized power adds another layer of challenge, intertwining energy policies with the dynamics of Indian politics.

**4. Lack of Clean-Energy Investments**

The heavy subsidization of electricity strains state governments' finances, creating a financial bottleneck that impedes investments in clean energy. Without significant investments, transitioning to renewable sources becomes a distant goal.

**Negative Outcomes of India's Electricity Policies**

**1. Depletion of Water Resources**

India's reliance on fossil fuels for power generation, especially in agricultural regions, contributes to the rapid degradation and depletion of water resources. The environmental impact extends beyond emissions, affecting the sustainability of crucial water supplies.

**2. Health Issues due to Emissions**

The dependence on fossils, notably coal, for power generation has severe consequences on public health. Pollution-related health problems, ranging from respiratory issues to broader environmental health concerns, become prevalent in regions with high fossil fuel usage.

**3. Populism Leading to More Subsidies**

Electricity subsidies, popularized as a tool for winning elections, may result in competitive populism among state governments. This can lead to a cycle of increasing subsidies, further straining the economic viability of the energy sector.

**Recommendations for a Sustainable Transition**

**1. Economically Feasible Renewable Energy**

To make the transition economically feasible, renewable energy and storage must be made more affordable. Investment in research, development, and innovation is crucial to drive down the costs of renewable technologies, making them competitive with traditional sources.

**2. International Financial Support**

Given the financial strain on state governments, international financial support becomes imperative for renewable energy and storage projects in developing countries. Collaborative efforts and funding from global entities can accelerate the adoption of sustainable energy solutions.

### Conclusion

India stands at a crucial juncture in its journey towards a sustainable and non-fossil energy future. Overcoming challenges in taxation policies, electricity pricing, and subsidies requires a multi-faceted approach that involves both domestic and international cooperation. By addressing these challenges head-on and implementing strategic solutions, India can not only meet its climate targets but also emerge as a global leader in sustainable energy practices.

### UPSC Syllabus Topic : GS paper 3- environment – conservation and GS paper 2- polity- devolution of powers and finances up to local levels.

#### Finance Commission support forest conservation in India

The Finance Commission (FC) plays a pivotal role in supporting forest conservation efforts in India, contributing significantly to the nation's climate change mitigation strategies.

#### Here's how the FC aids states in improving and maintaining their forests:

##### 1. Progressive Increase in Financial Allocations:

- The Finance Commission has consistently raised funding for forest conservation. The allocation has seen a notable increase from Rs 1,000 crore in the 12th FC to Rs 5,000 crore in the 13th FC.
- The 14th FC dedicated 7.5% of the central tax pool to forests and ecology, demonstrating a growing financial commitment. This share was further increased to 10% by the 15th FC.

##### 2. Largest Payment for Ecosystem Services (PES) System:

- The funds mobilized and distributed by the 15th FC for forest conservation exceeded Rs 4.5 lakh crore, making it the world's largest Payment for Ecosystem Services system.

##### 3. Alignment with National Climate Goals:

- The increasing financial allocations by the Finance Commission support India's commitments under the Paris Agreement. This funding incentivizes states to enhance and sustain their forest cover, contributing to the national goal of reducing greenhouse gas emissions.

#### Despite these contributions, there are challenges in forest conservation:

##### 1. High Opportunity Costs:

- Forest conservation often involves substantial opportunity costs, impacting the revenue and expenditure of states.

##### 2. Balancing Economic and Environmental Needs:

- Striking a balance between economic growth and environmental conservation remains a challenge.

##### 3. Dealing with Specific Environmental Issues:

- Addressing issues like crop burning and forest fires, exacerbated by climate change, requires dedicated funds and innovative solutions.

##### 4. Variability in Climate Vulnerability:

- Different regions face varying levels of climate vulnerability, demanding tailored approaches to forest conservation.

#### Opportunities for the 16th Finance Commission:

##### 1. Incorporating Climate Parameters in Tax Distribution:

- The 16th Finance Commission can include climate vulnerability and emission intensity in the tax devolution formula, encouraging states to align with India's National Determined Contributions (NDCs) under the Paris Agreement.

##### 2. Performance-Based Grants for Specific Sectors:

- Providing performance-based grants for crucial sectors like clean energy and sustainable land and forest management, in line with India's NDCs and Sustainable

Development Goals (SDGs).

**3. Innovations for Environmental Challenges:**

- Funding innovations to address specific challenges such as crop burning and mangrove restoration, responding to increasing forest fires and weather-induced floods.

**4. Scientific Data-Driven Fund Allocation:**

- Utilizing remote sensing data and pollution inventories to assess ecosystem degradation, designing a performance-based system for efficient and targeted fund allocation.

By exploring these opportunities, the 16th Finance Commission can enhance its support for forest conservation and strengthen India's climate change resilience.

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