

Need for Transboundary Accountability in India's Air Quality Management

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Context - The annual recurrence of 'severe' air quality levels in the Delhi-National Capital Region and surrounding areas during winter often leads to the misconception that air pollution is a seasonal issue primarily driven by farm residue burning. However, this perception falls short of the complex, year-round multi-source and multi-pollutant nature of the pollution.

As the nation grapples with the alarming levels of air pollution, a vital often overlooked aspect in this battle is the necessity for transboundary accountability in managing air quality. The pervasive nature of air pollution knows no boundaries, transcending state and national borders. Therefore, a collaborative and comprehensive approach is imperative to effectively combat this shared environmental crisis.

Contextualizing the Issue:

- Air pollution in India is a multifaceted problem, intricately woven with

industrial emissions, vehicular exhaust, agricultural practices, and urban development. However, the widespread impact of pollutants isn't confined by administrative demarcations; they traverse regions, impacting areas far beyond their sources.

- Understanding this transboundary movement of pollutants is crucial in devising comprehensive strategies for air quality management.

Transboundary Air Pollution

- **Understanding Dispersion:** Pollution emitted in one region can significantly impact air quality in another due to transboundary dispersion.
- **Inter-state Implications:** Weather, topography, and climatic conditions influence transboundary dispersion, creating challenges for downwind regions.
- **Limited Jurisdictional Power:** Downwind regions often lack the authority to regulate upwind pollution sources, rendering mitigation strategies ineffective.

Need for Airshed Air Pollution Management

- **Defining Airsheds:** An airshed is a geographic area governed by common meteorology, topography, and climate, impacting air mass dispersion.
- **Global Precedents:** Countries like the United States, China, and the European Union have implemented effective regional airshed-level frameworks.

Challenges and Complexities:

- The challenges of ensuring transboundary accountability in India's air quality management are multifaceted. Variability in contributing factors across regions, diverse sources of pollution, and differing regulatory frameworks pose considerable hurdles.
- The movement of pollutants across state and national borders complicates the formulation and execution of effective policies to control and mitigate

their impact.

Call for Comprehensive Policies:

- India needs a synchronized approach to manage air quality that transcends regional boundaries. Establishing uniform air quality monitoring systems, sharing data across states and countries, and standardizing emissions norms are vital steps.
- Harmonizing efforts to control vehicular emissions, promote cleaner fuels, and encourage sustainable agricultural practices is essential in curbing the transboundary spread of pollutants.

Importance of International Collaboration:

Given India's proximity to multiple countries, international cooperation becomes imperative. Diplomatic engagements and agreements focusing on shared environmental concerns must be fostered. Collaborative endeavors involving joint research, technology exchange, and policy initiatives could significantly aid in addressing transboundary air pollution.

Role of Legislation and Enforcement:

- A robust legislative framework that uniformly regulates emissions standards and their enforcement is vital. Coordinated efforts are required to ensure compliance and accountability across regions.
- Policymakers must facilitate the development and implementation of stringent regulations to combat air pollution collectively.
- Effective communication and public awareness campaigns play a crucial role in cultivating a sense of shared responsibility.
- Educating the public about the transboundary nature of air pollution and fostering environmentally conscious behavior is instrumental in encouraging collective action towards mitigating air pollution.

Way Forward:

Achieving transboundary accountability in air quality management demands a holistic and sustained effort. It necessitates a paradigm shift in approach, not merely in policies but also in the mindset of stakeholders and the general public. Collaborative frameworks, both within the country and internationally, are pivotal for a sustainable and effective response to the challenge of air pollution.

Conclusion:

The urgency for transboundary accountability in India's air quality management cannot be overstated. The complexity and cross-border nature of air pollution necessitate collective action, integrated policies, and concerted efforts at local, regional, and global levels. Only through a cohesive, unified approach can India effectively address the transboundary movement of pollutants and strive towards a cleaner, healthier environment for all.

SOURCE: [Down to Earth](#)

Practice question:

Q. Which of the following is not a component of AQI measurement

- a. Co₂***
- b. Co***
- c. NO_x***
- d. O₃***