Mains Practice Question

Q. Analyze the effectiveness of the National Clean Air Programme (NCAP) in addressing urban air pollution in India. What additional measures can be implemented to improve air quality in major metropolitan areas? **(250 words)**

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Approach

- Introduce the answer by mentioning National Clean Air Programme
- Highlight the positive impacts of NCAP
- Delve into its challenges and limitations
- Give additional measures for improvement
- Conclude suitably.

Introduction

The **National Clean Air Programme (NCAP)**, launched in **2019** by the Ministry of Environment, Forest and Climate Change (MoEFCC), represents India's first national-level framework to improve air quality across **131 cities in 24 states/UTs.**

- With India ranking as the **third most polluted country globally** and **42 of the world's 50 most polluted cities** located within its borders (IQAir report 2023), the NCAP aims to address this critical environmental and public health issue.

Body

Effectiveness of NCAP:

Positive Impact:

- As of 2023, **90 out of 131 cities** have shown improvement in air quality in terms of annual PM10 concentrations compared to the 2017-18 baseline.
- Delhi, the capital, has seen a **17% reduction in annual PM2.5** concentration from 128 µg/m³ in 2018 to 106 µg/m³ in 2023, and a 22% reduction in PM10 levels.
- **Srinagar was declared the cleanest city** in terms of PM2.5 concentration (26.33 µg/m³) in 2022, while **Kohima** was the cleanest for **PM10 concentration** (26.77 µg/m³).
- Implementation of **BS-VI fuel standards nationwide** in 2020 to reduce vehicular emissions.
- Installation of **Vapour Recovery Systems (VRS)** at petrol stations.
- Development of Emergency Response Systems for air pollution emergencies.

Challenges and Limitations:

- **Uneven Progress:**
  - Only **8 out of 46 cities** have met the initial target of **20-30% reduction in PM levels.**
  - 22 cities have seen deterioration in PM10 levels over the past 5 years.

- **Underutilization of Funds:**
  - Only **60% of allocated funds have been utilized by cities.**
  - 27% of cities have spent less than 30% of their designated budgets, with **Visakhapatnam and Bengaluru** utilizing **less than 1%** of their NCAP funds.
- **Implementation Gaps:**
  - While most cities have submitted **Clean Air Action Plans (CAAPs)**, effective implementation remains a challenge.
  - Bureaucratic hurdles and red-tapism have hindered the efficient utilization of resources.

Additional Measures for Improvement:

- **Enhanced Monitoring and Enforcement:** Strengthen the air quality monitoring network to ensure comprehensive and reliable data collection.
  - Implement **stricter enforcement of existing regulations** on industrial emissions and vehicular pollution.
- **Sustainable Urban Planning:** Promote transit-oriented development and green infrastructure in metropolitan areas.
  - Increase green cover and create more urban forests to act as natural air purifiers.
- **Clean Energy Transition**: Accelerate the shift to renewable energy sources for power generation and industrial processes.
  - Expand the **electric vehicle ecosystem** in major cities through incentives and infrastructure development.
- **Waste Management:** Implement advanced waste management techniques to reduce open burning of garbage.
  - Promote **segregation and recycling** to minimize landfill emissions.
- **Public Awareness and Participation**: Launch extensive public awareness campaigns on the health impacts of air pollution.
  - Encourage citizen participation in local air quality improvement initiatives.

Conclusion

While the National Clean Air Programme has made some progress in addressing urban air pollution in India, significant challenges remain. To improve air quality in major metropolitan areas, a multi-pronged approach is necessary, involving enhanced monitoring, **clean energy transition (SDG 7), sustainable urban planning (SDG 11**), **and better waste management.** This aligns with India's goals for **public health (SDG 3)** and **climate action (SDG 13)** to ensure cleaner air and improved well-being.