Varied Progress in Clean Air Target

For Prelims: Varied Progress in Clean Air Target, **National Clean Air Programme (NCAP)**, **Indo-Gangetic Plain (IGP),** Meteorology, **Central Pollution Control Board (CPCB).**

For Mains: Varied Progress in Clean Air Target, Environmental pollution and degradation.

Source: TH

Why in News?

Recently, the **Climate Trends and Respirer Living Sciences** have conducted a study, revealing that the majority of cities are far from the clean air targets of the India's **National Clean Air Programme (NCAP)**.

Note

Climate Trends and Respirer Living Sciences are both involved in the NCAP Tracker, an online hub for updates on India's clean air policy.

- Climate Trends is a **research-based consulting and capacity building initiative** that focuses on environment, climate change, and sustainable development.
- Respirer Living Sciences is a climate-tech startup partner to the Government of India. It **supported the Centre of Excellence ATMAN on Clean Air Technologies which was** established at IIT Kanpur.

What are the Key Highlights of the Study?

- **PM2.5 Reduction Disparities:**
  - Among 49 cities with consistent PM2.5 data over five years, only 27 cities **showed a decline in PM2.5 levels,** while merely four cities met or surpassed the targeted decline as per **National Clean Air Campaign (NCAP)** Goals.
    - The NCAP's goal is to reduce **average particulate matter (PM) concentrations by 40% by 2026** in 131 cities.
    - Initially aimed for a 20-40% reduction by 2024, the target was later **extended to 2026.**
- **Mixed Progress Across Cities:**
  - While some cities like Varanasi, Agra, and Jodhpur exhibited significant reductions in PM2.5 levels, others, including **Delhi, reported marginal declines (only 5.9%) or even increased pollution loads.**
    - Varanasi showed the **most substantial reduction with a 72%** average decrease in PM2.5 levels and a 69% reduction in PM10 levels from 2019 to 2023.

- **Regional Vulnerabilities:**
  - The **Indo-Gangetic Plain (IGP)** remains highly vulnerable to elevated particulate matter concentrations, hosting around 18 of the top 20 most polluted cities for PM2.5.
    - Only **Guwahati and Rourkela,** outside the IGP, were **among the 20 most polluted cities for PM 2.5.**
- **Monitoring Challenges:**
  - The availability and distribution of continuous ambient air quality monitors significantly **influence annual pollutant concentrations.**
  - However, many Indian cities **lack an adequate number of such monitoring stations.**
  - While cities such as Mumbai and Delhi have several such stations, most **Indian cities have only a handful.**
    - Only four of the 92 cities have more than 10 such stations.
- **Factors Impacting Pollution:**
  - Variations in pollution levels can be **attributed to geographical locations,** diverse emission sources, meteorological influences, and the interplay between emissions and **Meteorology**, requiring further investigation.

What is the National Clean Air Programme?

- It was launched by the **Ministry of Environment, Forests and Climate Change (MoEFCC)** in January 2019.
- It is the first-ever effort in the country to frame a **national framework for air quality management** with a time-bound reduction target.
- The NCAP's goal is to reduce **average particulate matter (PM)** concentrations by 40% by 2026 in **131 cities**. Initially aimed for a 20-40% reduction by 2024, the target was later extended to 2026
- It covers 131 non-attainment cities which were identified by the **Central Pollution Control Board (CPCB).**
  - Non-attainment cities are those that have fallen short of the National Ambient Air Quality Standards (NAAQS) for over five years.
    - NAAQs are the standards for ambient air quality with reference to various identified pollutant notified by the CPCB under the Air (Prevention and Control of Pollution) Act, 1981.
    - List of pollutants under NAAQS: PM10, PM2.5, SO2, NO2, CO, NH3, Ozone, Lead, Benzene, Benzo-Pyrene, Arsenic and Nickel.
- **PRANA (Portal for Regulation of Air-pollution in Non-Attainment cities)**, is a portal for monitoring of implementation of NCAP.

What are the Initiatives Taken for Controlling Air Pollution?

- **System of Air Quality and Weather Forecasting and Research (SAFAR) Portal.**
- **Air Quality Index:** AQI has been developed for eight pollutants viz. PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulphur dioxide, ozone, and carbon monoxide.
- **Graded Response Action Plan** (for Delhi).
- **For Reducing Vehicular Pollution:**
  - **BS-VI Vehicles,**
  - **Push for Electric Vehicles (EVs),**
  - Odd-Even Policy **as an emergency measure (for Delhi).**
- **New Commission for Air Quality Management**
- Subsidy to farmers for buying Turbo Happy Seeder (THS) Machine **for reducing stubble burning.**
- **National Air Quality Monitoring Programme (NAMP):** Under NAMP, four air pollutants viz. SO2, NO2, PM10, and PM2.5 have been identified for regular monitoring at all locations.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. In the cities of our country, which among the following atmospheric gases are normally considered in calculating the value of Air Quality Index? (2016)

1. Carbon dioxide
2. Carbon monoxide
3. Nitrogen dioxide
4. Sulfur dioxide
5. Methane

Select the correct answer using the code given below:

(a) 1, 2 and 3 only
(b) 2, 3 and 4 only
(c) 1, 4 and 5 only
(d) 1, 2, 3, 4 and 5

Ans: (b)

Mains

Q. Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve revised standards? **(2021)**