Swachh Vayu Survekshan 2023 and NCAP

Source: PIB

Why in News?

Recently, the awards for **Swachh Vayu Survekshan** (Clean Air Survey) **2023** were announced. The survey was conducted by the **Central Pollution Control Board (CPCB)**.

Note:

- Every year, the **International Day of Clean Air for Blue Skies** is celebrated on **7 September** to raise awareness and facilitate actions to improve air quality.
    - It was **declared so by the United Nations General Assembly (UNGA)** in 2019.
- Theme for 4th International Day of Clean Air for Blue Skies (Swachh Vayu Diwas 2023) - **"Together for Clean Air."**

What are the Key Findings about the SVS 2023?

- **About:**
    - Swachh Vayu Survekshan (SVS) is a **new initiative by the Ministry of Environment, Forest and Climate Change** (MoEFCC) to rank cities on the basis of air quality and implementation of activities approved under the **city action plan (NCAP)** in 131 **non-attainment cities.**
        - Cities are declared non- attainment if **over a 5-year period they consistently do not meet the NAAQS** for PM10 or NO2.
    - The categorisation of cities has been based on the **2011 population census**.
- **Criteria:** The cities were assessed on eight major points:
    - Control of biomass
    - Municipal solid waste burning
    - Road dust
    - Dust from construction and demolition waste
    - Vehicular emissions
    - Industrial emissions
    - Public awareness
    - improvement in PM10 concentration

- **Performance:**
  - Top 3 cities under **1ˢᵗ category (million plus population):** Indore followed by Agra and Thane.
    - **Worst Performers:** Madurai (46), Howrah (45) and Jamshedpur (44)

    - **Bhopal ranked 5ᵗʰ and Delhi ranked 9ᵗʰ**
  - Top 3 cities under **2ⁿᵈ category (3-10 lakhs population):** Amravati followed by Moradabad and Guntur.
    - **Worst Performers:** Jammu (38), Guwahati (37) and Jalandhar (36)
  - Top 3 cities under **3ʳᵈ category (<3 lakhs population):** Parwanoo followed by Kala Amb and Angul.
    - **Worst Performer:** Kohima (39)
- **Comparison:**
  - In SVS 2022, the first three spots (million-plus category) were secured by cities in Uttar Pradesh — **Lucknow (1), Prayagraj (2) and Varanasi (3).**
    - All three cities have been ranked lower this year.

CITY LAGS IN AIR QUALITY

Category 1 Cities with population over 10 lakh

City	Rank
Indore	1
Agra	2
Thane	3
Srinagar	4
Bhopal	5
Trichy	6
Vadodara	7
Ahmedabad	8
Delhi	9
Mumbai	10

Swachh Vayu Survekshan is an initiative by MoEF&CC to rank cities on the basis of implementation of activities approved under city and air quality action plans in 131 NCAP cities

CRITERIA

Category 1
Population over 10 lakh
No. of cities
47

Category 2
Population 3-10 lakh
No. of cities
44

Category 3
Population under 3 lakh
No. of cities
40

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Note:

- In 2020, the Prime Minister of India announced the intent and plan to improve the air quality in more than 100 cities through a holistic approach.
  - In the context, the MoEFCC has been implementing a **National Clean Air Programme (NCAP)** as a national-level strategy outlining the actions for reducing the levels of air pollution at city and regional scales in India since 2019.

What is the NCAP?

- **About:** The National Clean Air Programme (NCAP) aims to systematically address air pollution by

engaging all stakeholders and ensuring necessary action.

- **131 cities have been identified** for the implementation of the city specific action plans under NCAP.
- **Target:** It is the **first-ever effort in the country** to frame a national framework for air quality management with a **time-bound reduction target.**
  - It seeks to cut the concentration of **coarse (PM10)** and **fine particles (PM2.5)** by at least **20% in the next five years** (base year for comparison - 2017).
- **Monitoring:** The **"PRANA" portal** has also been launched by MoEFCC for:
  - Monitoring implementation of NCAP.
  - Monitoring the action plans and implementation status of cities.
  - Sharing best practices adopted by cities for others to emulate.

Other Initiatives to Ensure Cleaner Air:

- Air (Prevention and Control of Pollution) Act, 1981
- Statutory Commission for Air Quality Management for Delhi-NCR
- Graded Response Action Plan (Delhi)
- Polluter Pay principle
- Smog Tower
- BS-VI vehicles
- Air Quality and Weather Forecasting and Research (SAFAR)
- Dashboard for Monitoring Air Quality

Air Pollutants

Sulphur Dioxide (SO_2)

It comes from the consumption of fossil fuels (oil, coal and natural gas). Reacts with water to form acid rain.

Impact: Causes respiratory problems.

Ozone (O_3)

Secondary pollutant formed from other pollutants (NOx and VOC) under the action of the sun.

Impact: Irritation of the eye and respiratory mucous membranes, asthma attacks.

Nitrogen Dioxide (NO_2)

Emissions from road transport, industry and energy production sectors. Contributes to Ozone and PM formation.
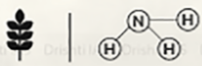
Impact: Chronic lung disease.

Carbon Monoxide (CO)

It is a product of the incomplete combustion of carbon-containing compounds.

Impact: Fatigue, confusion, and dizziness due to inadequate oxygen delivery to the brain.

Ammonia (NH_3)

Produced by the metabolism of amino acids and other compounds which contain nitrogen.

Impact: Immediate burning of the eyes, nose, throat and respiratory tract and can result in blindness, lung damage.

Lead (Pb)

Released as a waste product from extraction of metals such as silver, platinum, and iron from their respective ores.

Impact: Anemia, weakness, and kidney and brain damage.

Particulate Matter (PM)

PM10: Inhalable particles, with diameters that are generally 10 micrometers and smaller.

PM2.5: Fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

Source: Emitted from construction sites, unpaved roads, fields, fires.

Impact: Irregular heartbeat, aggravated asthma, decreased lung function.

Note: These major air pollutants are included in the Air quality index for which short-term National Ambient Air Quality Standards are prescribed.

UPSC Civil Services Examination, Previous Year Questions

Prelims:

Q. In the context of WHO Air Quality Guidelines, consider the following statements: (2020)

1. The 24-hour mean of PM2.5 should not exceed 15 μg/m³ and annual mean of PM2.5 should not exceed 5 μg/m³.
2. In a year, the highest levels of ozone pollution occur during the periods of inclement weather.
3. PM10 can penetrate the lung barrier and enter the bloodstream.
4. Excessive ozone in the air can trigger asthma.

Which of the statements given above are correct?

(a) 1, 3 and 4

(b) 1 and 4 only

(c) 2, 3 and 4

(d) 1 and 2 only

Ans: (b)

Q. Consider the following statements: (2017)

1. Climate and Clean Air Coalition (CCAC) to Reduce Short Lived Climate Pollutants is a unique initiative of G20 group of countries.
2. The CCAC focuses on methane, black carbon and hydrofluorocarbons.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Ans: (b)

Mains:

Q. Mumbai, Delhi and Kolkata are the three megacities of the country but the air pollution is a much more serious problem in Delhi as compared to the other two. Why is this so? **(2015)**

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