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Covid-19 Lockdown & Improved Air Quality

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Why in News

The nationwide **lockdown**, to prevent **COVID-19**, has led to minimal air pollution in over 90 cities including Delhi.

Environmentalists have welcomed the reduction in pollution and have urged the government to treat it as a wake-up call and stop the development at the cost of the environment.







Key Points

- During the lockdown, the government has asked the people to **avoid unnecessary travel** which has **significantly reduced the traffic** movement.
- Other factors which have contributed to the improved air quality are **shutting down of industries and construction sites and rains**.
- According to the **centre-run System of Air Quality and Weather Forecasting and Research (SAFAR)**, the measures against COVID-19 have led to a drop in:
 - **PM2.5**
 - It is an atmospheric **Particulate Matter** of **diameter of less than 2.5 micrometres**, which is around 3% of the diameter of a human hair.
 - It causes respiratory problems and also reduces visibility. It is an endocrine disruptor that can affect insulin secretion and insulin sensitivity thus contributing to diabetes.
 - **Nitrogen Oxide (NOx)**

NOx pollution is mainly caused due to a high motor vehicle traffic and can increase the risk of respiratory conditions.
- Generally in March, pollution is in the moderate category in the Air Quality Index while currently, it is in the satisfactory or good category.

Under the **good category, pollution** is considered to be at the **lowest** and the **air** is believed to be the **healthiest to breathe**.

- According to the **Central Pollution Control Board (CPCB)** data:
 - Air quality in the National Capital Territory of **Delhi** is presently in the **good** category.
 - **Kanpur**, which has high pollution levels normally, is in the **satisfactory** category.
 - 92 other cities with CPCB monitoring centres have recorded minimal air pollution, with the air quality ranging between good and satisfactory.

AQI	Remark	Color Code	Possible Health Impacts
0-50	Good		Minimal impact
51-100	Satisfactory		Minor breathing discomfort to sensitive people
101-200	Moderate		Breathing discomfort to the people with lungs, asthma and heart diseases
201-300	Poor		Breathing discomfort to most people on prolonged exposure
301-400	Very Poor		Respiratory illness on prolonged exposure
401-500	Severe		Affects healthy people and seriously impacts those with existing diseases

Observations and Suggestions:

- The low AQI and the blue skies prove that **air pollution was mostly anthropomorphic** (man-made), which **can be reduced** by conscious efforts.
- Reducing air pollution by rapidly slowing down the economy is not an ideal way so **mindful use of technologies** and **low-emission alternatives** can be opted to minimise the pollution.
- It was also emphasised that air pollution weakens the lungs so **countries like India with higher pollution and lower nutrition levels** will be **more affected by COVID-19** leading to higher morbidity and deaths.

Air Quality Index

- The AQI is an index for reporting **daily air quality**.
- It focuses on health effects one might experience within a few hours or days after breathing polluted air.

- AQI is **calculated for eight major air pollutants**:
 - **Ground-level ozone**
 - It is also found in the **stratosphere** and **protects from ultraviolet (UV) rays**, while in the **troposphere (ground level)** it acts as a **pollutant**.
 - It is not a primary pollutant but a secondary one.
 - Ground-level ozone is not emitted directly into the air but is **created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight**.
 - PM10
 - PM2.5
 - Carbon monoxide
 - **Sulfur dioxide**
 - Nitrogen dioxide
 - Ammonia
 - Lead
- **Ground-level ozone and airborne particles** are the two pollutants that pose the **greatest threat to human health** in India.

Source: TH