Lockdowns & Reduced Air Pollution

Why in news?

Lockdowns around the world, enforced to slow down the spread of Covid-19, have also visibly reduced air pollution.

How was the result of reduced pollution quantified?

- **Quantification** - A new study in 'Lancet Planetary Health' has quantified the number of lives saved in China due to reduced pollution.
- It has estimated that 12,125 deaths were prevented during China's ban on traffic mobility between February 10 and March 14, 2020.
- This is higher than the lives lost to the pandemic - 4,633 as of May 4.
- **Applicability** - These findings cannot be directly applied to other countries due to the differences in severity of and responses to COVID-19, air pollution levels and population characteristics.
- But the reduction of air pollution levels have been detected in other countries such as South Korea, India, Italy, Germany, Spain, and the US after their own lockdowns.
- This could have likely brought health benefits in those countries, too.
- However, this way of having clean air through massive quarantine and travel restrictions is not sustainable and likely to be only temporary.

What are the calculations?

- The study was conducted in 367 Chinese cities from January 1, 2016 to March 14, 2020.
- The estimates are based on changes in daily concentrations of two air pollutants (nitrogen dioxide and PM2.5).
- The changes in air quality in 2020 (during quarantine versus before quarantine) were calculated.
- These changes were compared these findings with corresponding changes in the same periods (lunar calendar) for 2016 to 2019.
- Accounting for these earlier years helped factor in the already declining pollution levels in China on account of the country's clean air policy.
- The study calculated the deaths prevented due to reduced levels of these two pollutants.

What are the findings?

- Due to quarantine, nitrogen dioxide dropped by 22.8 micrograms/cubic metre (Wuhan) and 12.9 micrograms/cubic metre (China).
- PM2.5 dropped by 1.4 micrograms/cubic metre (Wuhan) and 18.9 micrograms /cubic metre (China).
- The improved air quality during the quarantine period **prevented**,
    a. 8,911 nitrogen dioxide-related deaths (65% from cardiovascular diseases and COPD) and
    b. 3,214 PM2.5-related deaths (73% from cardiovascular diseases and COPD).

What is the takeaway?

- As aggressively as we are fighting Covid19, we must reduce air pollution and address climate change.
- However, this should be done in a more sustainable and healthier way.
- This can prevent the health burdens of air pollution and climate change without having the devastating consequences of a pandemic.
- We need to build a more sustainable and climate-friendly society.
- This will require strong political will, enhanced international cooperation, and unprecedented societal mobilization.

Source: The Indian Express

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