



# New WHO Global Air Quality Guidelines

## Why in News

Recently, the [World Health Organisation \(WHO\)](#) has released **new Global Air Quality Guidelines (AQGs)**. Under these guidelines, WHO has **further lowered the recommended levels of pollutants** that can be considered safe for human health.

- This is the **first-ever update of WHO since 2005**. The goal of the guideline is **for all countries to achieve recommended air quality levels**.

## Key Points

### ▪ New Guidelines:

- The guidelines recommend **new air quality levels** to protect the health of populations, by **reducing levels of key air pollutants**, some of which also **contribute to climate change**.
- By striving to achieve these guideline levels, **countries will be both protecting health as well as mitigating global climate change**.
- WHO move sets the stage for eventual shifts in policy in the government towards **evolving newer stricter standards**.
- WHO's new guidelines recommend air quality levels for **6 pollutants**, where evidence has advanced the most on health effects from exposure.
  - 6 classical pollutants include **particulate matter (PM 2.5 and 10), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>) sulfur dioxide (SO<sub>2</sub>) and carbon monoxide (CO)**.

### ▪ New WHO Global AQGs vs India's NAAQS:

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# REVISED AFTER 16 YEARS

WHO | Then & Now

| Pollutant*      | Average      | 2005* | 2021* |
|-----------------|--------------|-------|-------|
| PM2.5           | Annual mean  | 10    | 5     |
|                 | 24-hour mean | 25    | 15    |
| PM10            | Annual mean  | 20    | 15    |
|                 | 24-hour mean | 50    | 45    |
| O <sub>3</sub>  | Peak season  | NS**  | 60    |
|                 | 8-hour mean  | 100   | 100   |
| NO <sub>2</sub> | Annual mean  | 40    | 10    |
|                 | 24-hour mean | NS**  | 25    |
| SO <sub>2</sub> | 24-hour mean | 20    | 40    |
| CO              | 24-hour mean | NS**  | 4     |

India's National Ambient Air Quality Standards (NAAQS)

Average

- Annual mean
- 24-hour mean

PM2.5

40 | 60

PM10

60 | 100

NO<sub>2</sub>

40 | 80

SO<sub>2</sub>

50 | 80

Average

(8 hour mean)

O<sub>3</sub> | 100; CO | 2

CV  
Vision

\* micrograms per cubic meter (µg/m<sup>3</sup>); \*\*NS - Not Set; PM2.5 & PM10 - Particulate Matters; O<sub>3</sub> - Ozone; NO<sub>2</sub> - Nitrogen Dioxide; SO<sub>2</sub> - Sulfur Dioxide; CO - Carbon Monoxide

## ▪ Effect of Air Pollution on Human Health:

- According to WHO, [Air pollution](#) is one of the biggest environmental threats to human health, alongside [climate change](#).
- Every year, exposure to air pollution is estimated to cause **7 million premature deaths** and result in the **loss of millions more healthy years of life**.
- In **children**, this could include **reduced lung growth and function**, respiratory infections and aggravated asthma.
- In **adults**, **heart disease and stroke** are the most common causes of premature death attributable to outdoor air pollution, and evidence is also emerging of other effects such as **diabetes and neurodegenerative conditions**.
- This puts the burden of disease attributable to air pollution **on a par with other major global health risks such as unhealthy diet and tobacco smoking**.
- **Disparities in air pollution** exposure are increasing worldwide, particularly as low- and middle-income countries are experiencing growing levels of air pollution because of large-scale urbanization and economic development that has largely relied on the burning of fossil fuels.

## ▪ Status of Pollution in India:

- India continues to remain **one of the most polluted areas in the world**, with pollutant levels several times higher than recommended levels.
  - For example, a **Greenpeace study** found the average concentration of **PM2.5 in New Delhi in 2020 to be nearly 17 times higher than the recommended levels**.
  - In **Mumbai**, pollution levels were **eight times** higher; in Kolkata, over nine times higher; and in Chennai, over five times higher.

- According to experts of [Global Burden of Disease study](#), **over 95% of India's population already lived in areas where pollution levels were higher than WHO's 2005 norms.**
- India's own [national air quality standards](#) **are much more lenient**, even compared to WHO's 2005 norms.
  - For example, the recommended PM2.5 concentration over a 24-hour period is 60 micrograms per cubic metre, compared to 25 micrograms advised by WHO's 2005 guidelines.
  - But even these lower standards are hardly met.
- **Impact of New Guidelines on India:**
  - The new air quality guidelines mean that nearly **entire India would be considered a polluted zone for most of the year.**
    - However, by WHO's own admission, more than **90% of the world's population lived in areas** which did not meet its 2005 pollution standards.
  - The new WHO norms **should push India** to work harder to make its air cleaner and safer.
  - Further, the **feasibility of implementing the new guidelines is questionable**, especially in challenging geo-climatic zones like south Asia, including India.
    - Experts point out that this region has **challenging meteorological and climatic conditions**, with the added challenge of haze columns, heat island effects and very high base pollution.
  - However, as the WHO's guidelines are **not binding**, the move doesn't immediately impact India as the [National Ambient Air Quality Standards \(NAAQS\)](#) don't meet the WHO's existing standards.
    - The government has a dedicated [National Clean Air Programme](#) that aims for a 20% to 30% reduction in particulate matter concentrations by 2024 in 122 cities, keeping 2017 as the base year for the comparison of concentration.

## Way Forward

- Given the condition of the Air Pollution in India, there is a need to strengthen health data and **revise National ambient air quality standards** accordingly.
- Further, the hard lockdown phases during the pandemic have demonstrated the dramatic reduction that is possible when local pollution and regional influences can be minimised.

[Source: TH](#)

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