



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 (O₃), nitrogen dioxide (NO₂) sulfur dioxide (SO₂) 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 ₃	Peak season	NS**	60
	8-hour mean	100	100
NO ₂	Annual mean	40	10
	24-hour mean	NS**	25
SO ₂	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

NO₂

40 | 80

SO₂

50 | 80

Average

(8 hour mean)

O₃ | 100; CO | 2

* micrograms per cubic meter (µg/m³); **NS - Not Set; PM2.5 & PM10 - Particulate Matters; O₃ - Ozone; NO₂ - Nitrogen Dioxide; SO₂ - 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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