

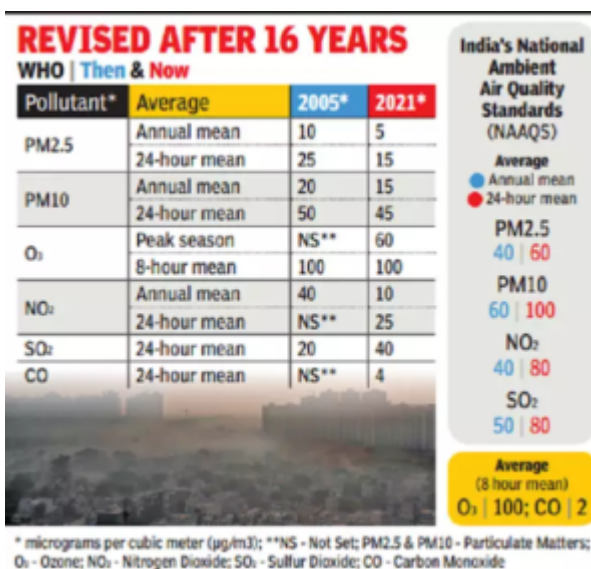
New Global Air Quality Guidelines by WHO

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In news– The World Health Organization has released a revised Global Air Quality Guidelines recently.

The new Global Air Quality Guidelines

- These Guidelines **provide clear evidence of the damage air pollution inflicts on human health**, at even lower concentrations than previously understood.
 - 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.
 - The guidelines **make more stringent limits for six pollutant categories** –particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂) sulfur dioxide (SO₂) and carbon monoxide (CO).
- **It is WHO's first-ever update since 2005.**



- The upper limit of annual PM_{2.5} as per the 2005

standards, which is what countries now follow, is 10 microgram per cubic metre. That has now been revised to five microgram per cubic metre.

- The 24-hour ceiling used to be 25 microgram but has now dropped to 15.
- The PM10, or particulate matter of size exceeding 10 microgram, upper limit is 20 microgram and has now been revised to 15 whereas the 24-hour value has been revised from 50 to 45 microgram.
- The guidelines also highlight good practices for the management of certain types of particulate matter (for example, black carbon/elemental carbon, ultrafine particles, particles originating from sand and dust storms) for which there is currently insufficient quantitative evidence to set air quality guideline levels.
- **Whilst not legally-binding, like all WHO guidelines, AQGs are an evidence-informed tool for policy-makers** to guide legislation and policies, in order to reduce levels of air pollutants and decrease the burden of disease that results from exposure to air pollution worldwide.
- **The development of these global AQGs was overseen by a steering group led by the WHO European Centre for Environment and Health.**

Why emphasis on containing Air pollution?

- WHO says that 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, ischaemic 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.
- Both PM_{2.5} and PM₁₀ are capable of penetrating deep into the lungs but PM_{2.5} can even enter the bloodstream, primarily resulting in cardiovascular and respiratory impacts, and also affecting other organs.
- PM is primarily generated by fuel combustion in different sectors including transport, energy, households, industry and from agriculture.
- In 2013, outdoor air pollution and particulate matter were classified as carcinogenic by WHO's International Agency for Research on Cancer (IARC).
- In 2019, more than 90% of the global population lived in areas where concentrations exceeded the 2005 WHO air quality guideline for long term exposure to PM_{2.5}.

Pollution in Indian cities

Delhi's annual PM_{2.5} trends in 2020 was 16.8 times more than WHO's revised air quality guidelines, while Mumbai's exceeded 8-fold, Kolkata 9.4, Chennai 5.4, Hyderabad 7 and Ahmedabad exceeded 9.8 fold.

National Ambient Air Quality Standards (NAAQS)

- India's NAAQs – last revised in 2009 – specify an annual limit of 60 microgram per cubic metre for PM₁₀ and 100 for a 24-hour period.
- Similarly it's 40 for PM_{2.5} annually and 60 on a 24-hour period.
- There are also standards for a host of chemical pollutants including sulphur dioxide, lead and nitrogen dioxide.

National Clean Air Programme (NCAP)

- The Central Government launched the (NCAP as a long-

term, time-bound, national level strategy to tackle the air pollution problem across the country in a comprehensive manner.

- It aims to achieve a 20% to 30% reduction in Particulate Matter concentrations by 2024 keeping 2017 as the base year for the comparison of concentration.
- Under NCAP, 122 non-attainment cities have been identified across the country based on the Air Quality data from 2014-2018.