Environment & Ecology · GS - III

Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve these revised standards?

EXAM YEAR	PAPER	SUBJECT
2021	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

WHO Global Air Quality Guidelines 2021, PM2.5, PM10, nitrogen dioxide, sulphur dioxide, ozone, carbon monoxide, stricter exposure limits, National Clean Air Programme, emission reduction, air-quality monitoring, public health

Model Answer

Introduction

In September 2021, the World Health Organization revised its Global Air Quality Guidelines to reflect stronger evidence linking air pollution with cardiovascular disease, respiratory illness and premature mortality.

Key Changes in the 2021 Guidelines

The WHO recommended stricter guideline levels for major pollutants, including:

- **PM2.5:** Annual mean reduced from 10 to 5 µg/m³.
- **PM10:** Annual mean reduced from 20 to 15 µg/m³.
- **Nitrogen dioxide:** Annual mean reduced from 40 to 10 µg/m³.

- **Sulphur dioxide:** The 24-hour guideline was reduced from 20 to 40? No—the 2021 guideline is **40 µg/m³**, compared with 20 µg/m³ in 2005; the averaging periods differ, so the figures are not directly comparable.
- **Ozone and carbon monoxide:** Updated guideline levels and averaging periods reflect revised evidence and health-risk assessments.

The central change was a more health-protective approach, particularly for fine particulate matter.

Implications for India's NCAP

India's National Clean Air Programme should be strengthened through:

- Tighter, sector-specific emission controls for industries, transport, power plants and construction.
- Expansion of continuous monitoring and reliable city-level emissions inventories.
- Stronger enforcement of dust control, waste-burning restrictions and cleaner fuels.
- Regional airshed planning, recognising that pollution crosses municipal boundaries.
- Greater public transport, electric mobility and clean household energy.
- Transparent performance targets and health-based monitoring.

Conclusion

The WHO guidelines are recommendations rather than legally binding limits. India should progressively align its air-quality strategy with health evidence while strengthening implementation, monitoring and public accountability.