WHO global air quality guidelines

Particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide

The global burden of disease associated with air pollution exposure exacts a massive toll on human health worldwide: exposure to air pollution is estimated to cause millions of deaths and lost years of healthy life annually.

Acknowledging that 4.3 million deaths occur each year from exposure to household (indoor) air pollution and that 3.7 million deaths each year are attributable to ambient (outdoor) air pollution, at a high cost to societies. (Health and the environment: addressing the health impact of air pollution, 2015)

Air pollution increases morbidity and mortality from cardiovascular and respiratory disease and from lung cancer, with increasing evidence of effects on other organ systems.

Since 1987, WHO has periodically issued health-based air quality guidelines to assist governments and civil society to reduce human exposure to air pollution and its adverse effects. The WHO air quality guidelines were last published in 2005 (Air quality guidelines – global update 2005. Particulate matter, ozone, nitrogen dioxide and sulfur dioxide) and this update had a significant impact on pollution abatement policies all over the world and led to the first universal frame of reference.

More than 15 years have passed since the publication of Global update 2005. In that time there has been a marked increase in evidence on the adverse health effects of air pollution, and new epidemiological studies have documented the adverse health effects of exposure to high levels of air pollution in low- and middle-income countries, and studies in high-income countries with relatively clean air have reported adverse effects at much lower levels than had previously been studied.

Immagine che contiene tavolo

Descrizione generata automaticamenteFor these reason WHO revised the guidelines in 2021. The overall objective of the updated global guidelines is to offer quantitative health-based recommendations for air quality management, expressed as long or short-term concentrations for a number of key air pollutants.