

REDUCING GLOBAL HEALTH RISKS

Through mitigation of short-lived climate pollutants

Scoping report for policymakers



**CLIMATE &
CLEAN AIR
COALITION**
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS



**World Health
Organization**

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Executive Summary

OVERARCHING MESSAGES

Reducing emissions of short-lived climate pollutants (SLCPs), which produce strong warming effects but persist in the atmosphere for periods ranging from days to decades (Figure 1), can provide health benefits in three key ways: directly from reduced air pollution and related ill-health; indirectly from reduced ozone and black carbon effects on extreme weather and agricultural production (affecting food security); and from other types of health benefits that are not associated with air pollution but may accrue as a result of certain SLCP mitigation actions, such as improved diets or increased physical activity.

- **Decreased emissions of black carbon and its co-pollutants, as well as emissions of ozone precursors, will reduce the substantial disease burden attributable to air pollution.** Exposure to ambient (outdoor) fine particulate matter ($PM_{2.5}$), of which black carbon is a substantial component, is estimated to cause some 3.7 million premature deaths annually (6).¹ 4.3 million deaths are attributable to exposure to $PM_{2.5}$ (which includes BC) from the household combustion of solid fuel (7). Diseases caused by $PM_{2.5}$ exposure include stroke, ischaemic heart disease, acute lower respiratory disease, chronic obstructive pulmonary disease, and lung cancer (see Figure 2). Exposure to ozone is responsible for roughly 150 000 deaths annually from respiratory conditions (8). A major study by the United Nations Environment Programme

What are Short-Lived Climate Pollutants?

The SLCPs of greatest health relevance include black carbon, a common component of fine particulate matter ($PM_{2.5}$), which is the air pollutant most associated with premature death and morbidity, as well as ozone, which has significant adverse impacts on respiratory health (1-5). Methane, another SLCP, contributes to ozone formation. Some strategies to reduce hydrofluorocarbons (HFCs) may also have health benefits.



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