

Addressing Air Pollution and Climate Crisis



Interlinkages Between Air Pollution and Climate Change

Air pollution and climate change are two of the biggest environmental health risks globally. Unites Nations Environment Program (UNEP) calls air pollution and climate change “two sides of the same coin” and by reducing air pollution we can also protect the climate.¹ Air pollutants, such as black carbon, sulphur dioxide (SO₂) and tropospheric ozone also act as green-house gases contributing to climate change whereas changes in climate and atmospheric conditions impact air quality. Thus, air pollution is both a cause and an effect of the global climate crisis as they both feed on each other. Furthermore, tackling air pollution is the key to addressing climate change.

“The climate crisis is a health crisis. The same unsustainable choices that are killing our planet are killing people too... Air pollution is the new tobacco, as the simple act of breathing is killing 7 million people a year and harming billions more, but a smog of complacency pervades the planet.”

- Dr Tedros Adhanom Ghebreyesus, WHO Director-General





Short Lived Climate Pollutants

Short Lived Climate Pollutants (SLCP) are pollutants that remain in the atmosphere for much shorter period than carbon dioxide but have global warming potentials up to 1,500 times higher than that of carbon dioxide (CO₂) and contribute to 45 percent of current global warming. SLCPs include black carbon, methane, tropospheric ozone and hydrofluorocarbons which are also major air pollutants.

Reduction in SLCPs can result in both improved public health and planetary health. Climate and Clean Air Coalition (CCAC) estimates that black carbon emissions can be reduced by 70 percent globally by 2030, methane emissions can be reduced by 40 percent globally by 2030, and Hydrofluorocarbons (HFCs) can be reduced by 99.5 percent by 2050. It also states that, “these measures can cut the amount of warming that would occur over the next few decades by as much as 0.6°C, while avoiding 2.4 million premature deaths from outdoor air pollution annually by 2030 and preventing 52 million tons of crop losses per year.”² The relatively short atmospheric lifetime of SLCPs also means that the climate benefits of reducing SLCPs can be achieved quicker.

Common Sources, Common Solutions

Policies, programs and interventions aimed at reducing air pollution provide a “win-win” solution for both health and climate. Reducing air pollution will reduce emissions of carbon dioxide (CO₂) and SLCPs that contribute to climate change, while improving health, such as cardiovascular and respiratory of health populations in both the long- and short-term, particularly among the poor, marginalized and vulnerable people and communities.

Common sources of air and climate pollutants	Common solutions
 Vehicular Emissions: Use of fossil fuel in vehicles releases CO ₂ , Carbon monoxide (CO), Oxides of Nitrogen (NO _x), SO ₂ , benzene, particulate matter (PM), black carbon, Volatile organic compounds (VOC)	<ul style="list-style-type: none"> Replace fossil fuel vehicles, particularly diesel buses, with electric vehicles. Promote non-motorized transport such as walking and cycling. Adopt Euro VI emission standards for vehicles
 Waste and agricultural residue burning: Burning of waste releases CO ₂ , NO _x , SO ₂ , black carbon, organic carbon	<ul style="list-style-type: none"> Stop open burning of waste and agricultural residue. Segregate biodegradable waste and recycle it to produce biogas or compost. Effectively manage wastewater and fecal sludge
 Household energy: Burning of biomass for household use releases CO, CO ₂ , methane, VOC, black carbon, PM, Polycyclic Aromatic Hydrocarbons (PAH)	<ul style="list-style-type: none"> Promote clean cooking practices, particularly electric stoves. Promote energy-efficient buildings.
 Industrial emissions: industries, particularly those that burn fossil fuels emit CO ₂ , methane, black carbon, SO ₂ , NO _x	<ul style="list-style-type: none"> Improve energy efficiency in industries, through energy audits and investment in energy-efficient systems. Promote the use of renewable energy, such as electricity and bio-pellets, in industries. Reduce coal consumption in the brick industry through improved kilns and the adoption of practices such as internal fuel and hollow bricks. Promote green products such as non-burnt bricks.

¹ [Air pollution and climate change: two sides of the same coin \(unep.org\)](https://www.unep.org/air-pollution-and-climate-change-two-sides-of-the-same-coin)

² [Short-lived climate pollutant solutions | Climate & Clean Air Coalition \(ccacoalition.org\)](https://www.ccacoalition.org/short-lived-climate-pollutant-solutions)

Community Action for Change

If air pollution and climate change are two sides of the same coin, USAID Clean Air, a five-year initiative led by FHI 360, bridges them through government policies and community action. Applying a human-centric design-driven Implementation Science approach, the initiative aims for locally driven, sustainable solutions, reducing air pollution and contributing to climate change mitigation. Engaging government, municipalities, civil society, and the private sector enhances capacity for evidence-based action in achieving clean air and climate goals.



Empowering youth for climate action: USAID Clean Air is working with Nepalese Youth for Climate Action (NYCA) to engage youth in climate action and clean air.



Promoting electric public transport: Palmo Bulon has been trained to drive Safa Tempo, a public electric three-wheeler. USAID Clean Air is working with Safa Tempo entrepreneurs to create green jobs and improve access to financing.



On October 31, 2023, Kathmandu Valley Mayors' Forum, a platform for Mayors and Deputy Mayors of 18 municipalities of Kathmandu Valley, unanimously adopted a 10-point commitment and a 6-point action plan to take immediate action to address air pollution and climate change.

"Climate change and air quality cannot be treated separately. They go hand-in-hand and must be tackled together to break this vicious cycle,"
– Petteri Taalas, Secretary-General, World Meteorological Organization (WMO)

Scan QR code to find out more about USAID Clean Air!



PROJECT BRIEF

USAID Clean Air is a five-year initiative that is assisting the Government of Nepal to implement the Kathmandu Valley Air Quality Management Plan. It aims to improve air quality in the Kathmandu Valley to approach national ambient air quality standards leading to improved health and educational outcomes. This initiative is led by FHI 360 with four consortium partners - Asian Institute of Technology, Environment and Public Health Organization, Energy Policy Institute of University of Chicago and One to Watch.

FOR MORE INFORMATION

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