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Global warming rate could be halved by controlling 2 pollutants, U.N. study says

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The projected rise in global temperatures could be cut in half in coming years if world governments focused on reducing emissions of two harmful pollutants - black carbon and ground-level ozone, including methane - rather than carbon dioxide alone, according to a U.N. study released Wednesday.

The study, ["Integrated Assessment of Black Carbon and Tropospheric Ozone,"](#) by the U.N. Environment Programme, shows the impact that the two short-lived pollutants have on the environment, compared with carbon dioxide, which can stay in the atmosphere for decades.

"I think what this study does that hasn't been done in the past is look at the contributions to global warming by gases with short lifetimes," said Steve Seidel, vice president of policy analysis for the [Pew Center on Global Climate Change](#).

Black carbon, a component of soot, is a threat to human health and is known to hasten the melting of snow. Ground-level ozone kills farm crops and also adversely affects health. Reducing the two, the study said, would improve health outcomes in the regions where they are implemented and "slow the rate of climate change within the first half of this century."

The impact from reducing short-lived pollutants such as black carbon and ground-level ozone such as methane is more immediately felt. Carbon dioxide remains in the atmosphere for years, so the effects of reducing the emissions take longer to register.

To reduce black carbon emissions, the study recommends placing a ban on open-field burning of agricultural waste, replacing industrial coke ovens with modern recovery ovens, introducing clean-burning biomass cook stoves for cooking and heating in developing countries and eliminating high-emitting vehicles.

To reduce ground-level ozone, including methane, the study recommends upgrading wastewater treatment, controlling methane emissions from livestock and reducing gas emissions from long-distance pipelines.

A fairly aggressive strategy to reduce carbon dioxide emissions under current reduction scenarios "does little to mitigate warming over the next 20 to 30 years," the study said. With carbon dioxide reductions alone, global temperatures are still projected to rise by more than 2 degrees Celsius by 2050 over pre-industrial levels.

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But reducing black carbon and ground-level ozone reductions would delay the warming for another 20 years, until 2070, according to the study.

"You get to keep below these critical temperatures," said Durwood Zaelke, president and founder of the [Institute for Governance & Sustainable Development](#).

The study is aimed at local pollution control officials in municipalities worldwide, particularly in developing nations such as China, India, Brazil and South Africa. Scientists and activists have started to focus on reducing short-lived greenhouse gases in these areas in part because leaders have failed to reach a broader agreement to curb carbon dioxide, global warming's biggest contributor.

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