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Air Pollution, Among Top Global Killers, Is Critical Climate Target

Combined Benefits for Health, Crops, and Climate Promote Sustainable Development

Washington, DC 8 March 2013 – Indoor air pollution is the fourth leading global risk factor for death according to the Global Burden of Disease study produced by 488 researchers from 50 countries. This puts air pollution behind poor diet and high blood pressure, and about the same as tobacco smoke as a preventable risk for early mortality, globally.

The study was published [online](#) this week by the Institute for Health Metrics and Evaluation at the University of Washington with interactive graphics that allow policymakers and public health officials to compare “modifiable” causes of death and disability among countries, and over time. The effort was funded by the Melinda & Bill Gates Foundation.

In South Asia, which includes India, indoor air pollution was the leading risk factor for burden of disease in 2010, while in Eastern, Central, and Western Sub-Saharan Africa it ranked second, and in South East Asia it ranked third. The study calculates that indoor and outdoor air pollution together are responsible for more than six million deaths annually, including 3.5 million deaths from household air pollution from solid fuel pollution, 3.1 million deaths from the ambient particulate matter pollution, and 0.2 million deaths from the ambient ozone pollution. In addition, the percentage of global disability-adjusted life years (DALY’s) attributed to air pollution is 4.5% from household air pollution from solid fuels, 3.1% from ambient particulate matter pollution, and 0.1% from ambient ozone pollution in 2010.

“Reducing air pollution, which includes black carbon soot pollution, can save millions of lives a year, reduce crop losses significantly, and cut the rate of global warming in half and the rate of warming in the Arctic by two-thirds over the next few decades,” said Durwood Zaelke, President of the Institute for Governance & Sustainable Development. “With this combination of benefits—healthier citizens, higher crop yields, and half the rate of climate change—reducing air pollutants should be a top priority for sustainable development.”

Black carbon soot, which is one of a group of four climate pollutants known collectively as short-lived climate pollutants (SLCPs), due to their relatively short atmospheric lifetimes, is the second leading cause of global warming behind CO₂. The other three SLCPs are methane, tropospheric ozone, and hydrofluorocarbons. Fast action to reduce SLCPs has the potential to cut the rate of climate change in half, slowing global temperature rise by up to ~0.6°C by 2050, while preventing 2.4 million air pollution-related deaths per year, and avoiding around 30 million tonnes of crop losses annually.

Due to the heightened effects of black carbon and tropospheric ozone near their emissions sources, these benefits, including much of the climate mitigation benefits, are enjoyed largely by the regions making the cuts. For example, eliminating emissions of black carbon from traditional solid biomass stoves with improved cook stoves would have a major impact in reducing black carbon direct climate effects over South Asia (by about 60%).

The Global Burden of Disease study published in *The Lancet* is [here](#).

The IGSD’s *Primer on Short-Lived Climate Pollutants* is [here](#).