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NEW ANALYSIS IN GHANA

Household air pollution contributes to nearly 10,000 deaths in Ghana; also a major contributor to the high levels of outdoor air pollution

(May 30, 2019) A new report released today by the Health Effects Institute[1] synthesizing nine research and policy studies conducted in Ghana finds that household air pollution is a significant contributor to fine particle outdoor air pollution in Ghana. The analysis, *HEI Communication 19, Contribution of Household Air Pollution to Ambient Air Pollution in Ghana,* goes on to note that the average level of fine particle pollution ($PM_{2.5}$) in Ghana (35 µg/m^3) is more than three-fold higher than the World Health Organization (WHO) outdoor Air Quality Guideline (10 µg/m^3) for healthy air.

The analysis, conducted by the HEI Ghana Working Group (made up of scientists from Ghana, Canada, India, the United Kingdom, and the United States), reported that household air pollution from the burning of solid fuels (i.e., wood, coal, charcoal, and other biomass) for cooking contributes to nearly 10,000 deaths each year in Ghana. It is the 7th leading risk factor for premature mortality in Ghana where approximately 73% of the population relies on solid fuels for cooking. Household solid fuel use (including cooking, lighting, and heating) is a major contributor to the levels of outdoor fine particulate matter ($PM_{2.5}$) that

[1] The Health Effects Institute is an independent, nonprofit research institute funded jointly by the U.S. Environmental Protection Agency, industry, foundations, and development banks to provide credible, high-quality science on air pollution and health for air quality decisions. Support for this study was provided by Bloomberg Philanthropies.

Ghanaians breathe; one study suggests it contributed nearly 65% of the primary $PM_{2.5}$ emissions in the country in 2010. The authors noted that these findings are also likely to apply more broadly to household air pollution throughout sub-Saharan Africa where 80% of the population relies on solid fuels for cooking.

At the same time, the Working Group identified several practical opportunities to better document and address this problem, including expansion of the air quality monitoring program and better data collection practices for major sources of air pollution, as well as enhanced coordination among the several analysis efforts underway in Ghana. These steps in turn could inform stronger policy-relevant science guidance for action by local and national leaders. For African countries, the Working Group also noted the importance of regional actions to address the management of air pollution and its sources, including promotion of cleaner fuels for household energy use.

Dr. Allison Hughes, Professor at the University of Ghana Legon and a member of the Ghana Working Group, commented, "This detailed report on household air pollution contribution to ambient air pollution will inform policy- and decision-makers in Ghana and other developing countries in sub-Saharan Africa on the relevance of systematic monitoring and modeling of $PM_{2.5}$ and help them understand its impact on human health and the environment in the wake of rapid growth in urban population, industrialization, and rising demands for energy and motorized vehicles."

The work of the Ghana Working Group was supported by Bloomberg Philanthropies (*www.bloomberg.org*).

Copies of a Summary for Policy Makers, and the full *HEI Communication 19,* can be downloaded for free on the HEI website, *www.healtheffects.org*.