15th ANNUAL HEINZ AWARDS

RECIPIENT BACKGROUNDER

Kirk R. Smith, Ph.D., 62, Berkeley, California

Kirk Smith is honored with a Heinz Award for his research on an environmental health problem of global significance – the dangers of indoor fuel use to human health. Dr. Smith was the first to recognize and quantify the magnitude of the pollution exposure to the poorest persons in developing countries as a result of cooking indoors with solid fuels such as wood, coal and cow dung. With estimates that one half of the world's population uses such fuels, the health impacts of this exposure are believed to be larger than any other environmental risk with the exception of contaminated water supplies. He was also the first to point out the important global climate implications of cookstove emissions.

According to the World Health Organization, toxic emissions from cooking stoves are responsible for causing 1.6 million premature deaths a year. The age-old practice of cooking on an open fire releases hazardous amounts of respirable particles and such toxins as carbon monoxide and formaldehyde and disproportionately affect women and young children.

To provide the highest quality of medical evidence on these effects, Dr. Smith, a professor of Global Environmental Health at the University of California, Berkeley, School of Public Health, and his colleagues and students conducted the first randomized trial of air pollution in history in Guatemala to demonstrate how improved stoves can reduce child pneumonia, the chief cause of death among children worldwide. He has developed small, rugged monitors based on microchip technology for use in remote settings to measure daily exposures. He discovered that women using solid fuels indoors were consistently exposed to pollution in concentrations 50 times greater than would be permitted in the United States. Other studies conducted under his guidance have found adverse effects on birthweight, tuberculosis, cataracts, chronic lung disease and blood pressure associated with this practice.

In the early 1990s, he also conducted the first measurements of the global warming impacts of stoves with colleagues in India and China. These measurements are still relied upon by international organizations and climate scientists for their climate models. As a result of his research, Dr. Smith has recommended both long-term and short-term approaches to governments of developing countries as well as to leaders of industrialized nations and international agencies. Through NGOs spun off from his research group, he also pursues the dissemination of improved stoves throughout the world supported by the global carbon market to achieve "co-benefits" in health and climate protection.

Said Teresa Heinz, chairman of the Heinz Family Foundation:

"Dr. Smith's work shows us that indoor air pollution for the poor can be just as harmful as the soot and chemicals from the factory down the street. Dr. Smith studied women who spend hours cooking with coal, wood, and other biofuels, often with their children cradled in their arms. They all got sick. Because of his efforts, simple changes like monitoring how long women inhale the smoke and providing cleaner burning stoves will help improve the health of millions of women and children around the world. We are so grateful to present him with a Heinz Award."

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