

Clean Cookstoves Improve Community Health While Improving Environmental Conditions

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EcoLogic Development Fund, a US-based NGO, has been providing rural and indigenous communities in Central America with clean-burning, fuel-efficient cookstoves since 2002. After 15 years of monitoring and evaluation, accumulated program data indicates a high statistical correlation between stove access and two desirable development trends: (1) lower rates of health problems linked to household air pollution, and (2) decreased local deforestation due to lower household demand for wood fuel. The World Health Organization identifies household air pollution produced by traditional cookstoves as a major cause of illness and premature death globally, with approximately 4.3 million people a year dying as an indirect result of unsafe fuel combustion. Despite demonstrated health hazards, about 3 billion people worldwide continue to rely on open-pit stoves or other traditional cooking methods. Primary obstacles that have prevented the wide-scale adoption of safer, fuel-efficient stove technologies in Central America and elsewhere include the relatively high cost of new stoves, reluctance to abandon traditional cooking methods, and a lack of awareness or sense of urgency with respect to traditional stoves' negative health effects. EcoLogic Development Fund's experience with clean-burning cookstoves in Central America has yielded empirical evidence that confirms the long-term viability of community-level programs that use safe, fuel-efficient stoves as a means to sustainably improve public health while reducing the environmental costs of food preparation. This evidence suggests that the provision of new stoves tends to result in measurably improved household health and sanitation, and that this effect is enhanced when stove installation is complimented by instruction in proper stove use and maintenance. Furthermore, EcoLogic's work has demonstrated that a household using a fuel-efficient stove can be expected to consume 70% less fuel wood, on average, compared to a home that uses open-pit stoves or other traditional cooking methods. Communities in which new, efficient stoves have resulted in decreased dependence on fuel wood harvested from nearby forests report lower levels of deforestation and accelerated rates of flora regrowth. For rural communities, improved proximate forest health results in a number of indirect health benefits, including: (1) improved water quality and decreased terrestrial pollution due to increased watershed health, (2) improved nutrition and food availability due to lower rates of soil erosion, and (3) reduction of incidence of vector-borne diseases caused by mosquito populations that benefit from deforestation. In 2017, EcoLogic will install 450 new fuel-efficient cookstoves in Guatemala, Honduras, and Mexico. This presentation will outline progress made to-date with respect to the stoves' community health and environmental impacts, as well as describe how data gathered during the first 15 years of EcoLogic's stoves program is now being used to inform the organization's newest strategies with respect to stove distribution.