

# **The impact of efficient firewood stove usage on firewood consumption and respiratory related illnesses: The case of Chalaco District in the Northern Peruvian Andes**

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## **Abstract**

The distribution of firewood efficient (“improved”) stoves has been one of the most worldwide diffused strategies to alleviate the level of degradation of forest resources in rural areas of developing countries and also to reduce the levels of indoor air pollution. Using first hand data, collected during the summer of 2008, this study explores how improved stove usage by rural households in the Chalaco District, in the Peruvian Northern Andes, influences rural household’s firewood consumption during the winter (rainy) season, as well as the incidence of respiratory related illnesses among household members. This research exploits random *ex-ante* non observable differences in improved stoves’ materials quality to identify the causal effect of improved stove usage. The results indicate that improved stove usage significantly decreases monthly firewood consumption during winter months in the area (January to May). The impact of improved stove usage on the incidence of respiratory illnesses among household members appears to be statistically significant only among adult women, who are the ones in charge of food preparation.

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