

Improving access to clean cooking fuel

A pilot study in Cambodia

BACKGROUND

Nearly 3 billion people cook and heat their homes daily with fuels such as coal, wood, and crop residue. Air pollution from burning these biomass fuels is a major source of small particulates that lead to serious illness when inhaled continually. According to the World Health Organization, there are an estimated 4.3 million deaths from household air pollution every year.¹ The impact on children is particularly alarming. Globally, respiratory infections such as pneumonia are the top killer of children under five years of age. The disease burden is particularly high in the densely populated countries of Southeast Asia, where biomass is the primary fuel source for more than 80 percent of the population.^{2,3}

Eliminating air pollution in homes is important for the prevention of childhood deaths from pneumonia. Modern fuels such as liquid-petroleum gas (LPG) produce virtually no emissions, so replacing biomass fuels with LPG will significantly reduce air pollution exposure. PATH and our partners are developing a strategy to make LPG available to low-income consumers by streamlining the supply chain, providing consumer financing, and using direct marketing.

PILOT STUDY

Although biomass is still the dominant fuel in countries such as Cambodia, LPG is widely used in urban areas and by higher-income consumers. However, our research in Cambodia revealed that an inefficient supply chain makes LPG more costly to low-income, non-urban consumers.

Clean fuel does not have to be out of reach for low-income families living outside urban areas. PATH and our local partner, Made For Life, are changing the status quo by streamlining the fuel supply chain and providing consumer financing to make clean fuels affordable and available to current biomass users. We are testing a business model that simplifies the LPG supply chain to selected peri-urban villages and provides access to credit for the purchase of safe and durable stoves.



PATH/Jessica Cole Kalb

A woman in her kitchen with her family's new double-burner stove and LPG fuel tank.

MILESTONES TO DATE

Under our current project we have:

- Conducted a landscape analysis of the LPG supply chain and gas-stove market in and around Phnom Penh, Cambodia.
- Conducted emissions testing and independently evaluated the durability and safety of six separate brands and models of LPG stoves. The results were used to select one single- and one double-burner LPG stove for the pilot study.
- Assessed consumer preferences for stoves and loan terms in the pilot study location (Kandal Province, Cambodia).
- Initiated a pilot study of a marketing/distribution/sales model for bundled fuel, canister, and LPG through Made For Life. The model includes a microloan, post-sales support, and free LPG delivery to customers.

OUR EXPERTISE

PATH's market development experience includes making domestic durable goods more available to and affordable for low-income households. Our commercialization and product development expertise strengthens supply chain capacity and supports market actors, including entrepreneurs, manufacturers, and microfinance institutions. We have already identified several key barriers to the adoption and use of LPG in Cambodia and are testing solutions to overcome these barriers. We aim to enable regional and global scale-up, and ultimately to significantly reduce needless deaths and illness from household air pollution.

FOR MORE INFORMATION

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PATH/Jessica Cole Kalb

A Made For Life clean cooking agent conducts a community meeting in Kandal Province.

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