

Market Assessment Context

This document summarizes the Colombia Cookstove and Fuels Market Assessment conducted by Accenture Development Partnerships (ADP) on behalf of the Global Alliance for Clean Cookstoves. Sixteen assessments were conducted across the world as part of a broader effort by the Alliance to enhance sector market intelligence and knowledge. They are intended to provide a high level snapshot of the sector (based on mid 2012). Further detail on these assessments can be found at the end of this document.

The Colombian Cookstove Market

Colombia is very urbanized with 75% of the 11.5 million households living in urban areasⁱ. Its economy is growing rapidly and it is now an upper middle-income country. However, the growth is not evenly divided, and over 45% of the population still lives under the national poverty lineⁱⁱ.

In the urban areas, not even the poor are in need of ICS. Since the gas “massification” program in the early 1990s, Colombia’s cities, peri-urban areas, and some rural areas are connected to subsidizedⁱⁱⁱ natural gas. However, most rural areas are not connected to natural gas, and expensive electricity is hardly used. LPG is the fuel of choice in unconnected areas to those whom it is available and affordable, but approximately half of the rural population still cooks on wood that they often gather themselves^{iv}.

There is very limited consumer and government awareness on of the health issues resulting from cooking with wood; only recently has the Ministry of Health started investigating indoor air pollution. However, the impact of wood cooking on the environment and deforestation did start to receive increased attention in the last decade, with reforestation components being baked into several ICS programs. These smaller-scale projects tend to provide fixed ICS to beneficiary households (almost) free of cost. The largest of these projects, the Huellas project led by the CORNARE corporation in Antioquia, is still ongoing and has disseminated approximately 17,000 fixed ICS in the last 5 years^v. Private companies have also recognized the opportunity and have initiated large scale programs (35-225k) to subsidize the adoption of natural gas and LPG in rural areas, thereby also increasing their customer base. Academic evaluations showed significant impact on health and environment in the target communities^{vi}.

Although there is a limited history of cookstove programs in rural Colombia, the topic is currently experiencing a surge in interest. The Ministry of Environment and Sustainable Development is in the midst of finalizing the design for a 20,000 fixed stove program (although implementation is still uncertain)^{vii}. Also, two large environmental/REDD programs funded by USAID are considering the inclusion of ICS in their programs aimed at reforestation and clean energy, respectively.

There is practically no market for biomass stoves to build on. Households either cook on stoves made from freely available materials, such as cement blocks/iron bars, or on a fixed stove that costs over \$400. As poor households are not used to paying for a stove and the fixed stove cost more than some of their houses, creating a self-sustaining market will require significant stimulation of the sector.

The main conclusions of the Market Assessment are illustrated in the table below.

		Situation	Hypothesis
Foster an enabling Environment	Regulation & Testing	There is a lack of clarity of Colombian-designed stove performance and quality differentiation, leading to the lack of a clear, strong case for ICS programs to help Colombia meet its emissions & MDG goals	Establishing a baseline and setting up a regular program for testing is key to measuring the impact of ICS programs, while national IAP and stove standards will provide a goal against which progress can be measured
	Support & Funding	Some regional departments and ministries have been more involved than others, and some sector stakeholders have been more interconnected than others. With multiple projects in beginning design phases, the time to leverage international organizations for best practice advice and drum up support among more regional and national government departments is now.	An international workshop gives an additional push of vitality, interconnectivity, and best practice to the clean cookstove actions being recently initiated. Seeking support from autonomous regional corporations and the Ministry of Health can have a large impact on awareness and action taken on the issue.
	Knowledge Capital & Transfer	Country-specific knowledge capital is currently insufficient to support decisions on the best path forward to foster adoption of clean cookstoves and fuels throughout all parts of rural Colombia	A detailed understanding of potential target segments, their energy needs and capabilities and the drivers of their behavior is necessary before a market for cookstoves can be developed.
Cookstoves Value Chain	Design	The market, especially lower income segments, could benefit from more targeted but cheaper ICS designs above and beyond the one expensive, full-kitchen design currently on the market. Current designs are produced small scale and by hand, with inconsistent quality as a result	Spurring design innovation, standardization, and mass production of cheaper stoves improves stove availability marketability. Standardizing and mass-producing efficient designs can reduce the price of components and make the efficiency and emissions of stoves more consistent.
	Sales & Distribution	Market mechanisms for financing and alternative pay-in-kind market models need to be explored to incubate the beginnings of a stove market in Colombia	The market for stoves cannot be started until the populations most in need not only see the stove as a product that they want, but it also becomes feasible to buy one
	Repair & Replacement	While developing a stove market, also creating a market for repair and replacement is essential to reap continued benefits	Innovative use of carbon financing could support continued maintenance and thereby increase the impact of subsidized stove programs

Summary of Intervention Options

The significant health impact of IAP in 1.6 million^{viii} rural households gives considerable cause for cookstove interventions in Colombia. Now is a key moment to act, as the government and various NGOs and private companies are starting up projects that could greatly benefit from international expertise and best practice. The Alliance can primarily contribute by fostering an enabling environment in

Colombia, and could also nurture the practically nonexistent cookstove market by kick-starting the enhancement of demand and strengthening of supply.

- Organize international best practice workshop, inviting international experts, to stimulate and support the various projects that are currently starting up.
- Set up a national testing center in one of the experienced universities and create standards for biomass stoves to provide a further framework for the sector.
- More deeply involve the Ministry of Health and the autonomous regional authorities, to respectively increase the attention to IAP and to spur and replicate successful regional action
- Gather knowledge on energy needs, usage trends, and segmentation of possible target communities in order to gain the essential better picture of the cookstove consumers.
- Conduct pilots to get a deep understanding of consumer behavior, preferences, and needs.

As there is practically no market for biomass stoves in Colombia, there are many gaps in the value chain; six interventions are identified that suit this early incubation phase of the sector.

- Design a greater variety of stoves for the rural market beyond the expensive fixed stove currently available, segmented according to consumer needs, preferences, and affordability.
- Standardize and mass produce components of such designs in order to reduce cost and ensure consistent quality.
- Expand a microfinance program for electricity customers similar to that, which proved successful with natural gas customers in order to improve affordability of stoves.
- Explore pay-in-kind market models, such as one implemented by GIZ in Peru, in order to reach segments that do not have abundant cash currency for stove purchases
- For specific segments, continue support of reforestation/ stove combination programs as necessary.
- Use carbon financing innovatively to help create a market for repair and replacement.

Market Assessment Approach

- This is one of sixteen such assessments completed by the Alliance to:
 - Enhance sector market intelligence and knowledge; and
 - Contribute to a process leading to the Alliance deciding which regions/countries it will prioritize.
- Full slate of market assessments include studies in: Bangladesh, Brazil, Colombia, East Timor, Ethiopia, Ghana, Indonesia, Kenya, Mexico, Nigeria, Peru, Rwanda, South Africa, Tanzania, Uganda and Vietnam.
- Each assessment has two parts:
 - Sector Mapping – an objective mapping of the sector; and
 - Intervention Options – suggestions for removing the many barriers that currently prevent the creation of a thriving market for clean cooking solutions.
- In each Alliance study a combination of ADP and local consultants spent 4-6 weeks in country conducting a combination of primary (in-depth interviews) and secondary research. They used

the same Market Assessment ‘Toolkit’ for each country so that comparisons can be made. The Toolkit is available free of charge to all organizations wishing to use it in other countries.

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References

ⁱ World Bank, 2010

ⁱⁱ Government statistics agency DANE, 2009

ⁱⁱⁱ Gas subsidized for the lower income strata – bottom two strata

^{iv} Demographic health survey 2010

^v Interview during site visit, May 2012

^{vi} Universidad de Cartagena, 2009 and Universidad del Norte, 2008

^{vii} Initiative presented to the Global Alliance for Clean Cookstoves, May 2012

^{viii} Sector Mapping Calculation, derived from UPME and DHS 2010 figures