

Market Assessment Context

This document summarizes the Ghanaian 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 Ghanaian Cookstove Market

Ghana, with a population of 24 millionⁱ, stands out in Africa as having political stability and a vibrant democracy and growing economy. Even still, 28.5%ⁱⁱ of the population remains below the national poverty line. The Ghanaian cookstove market is well developed with strong players across all sectors. However, large segments of the 80%ⁱⁱⁱ of households using biomass as their primary fuel, especially in the North, do not yet have access to clean fuels. Current market penetration for ICS remains low.

Although government interventions in improved cookstoves started in the 1980s, the sector really jumped in the 1990s with the Ministry of Energy's 'Ahibenso coalpot' program (production since stopped due to limited funding). It gathered further momentum when RI/EW launched a large ICS initiative in 2002, which still remains active today. This initiative birthed several spin-off companies that have since formed the foundation of the sector. Today, Ghana is home to many ICS producers that have each scaled to tens of thousands of cookstoves annually (and in one case to 100,000^{iv}), and there are regular instances of new entrants to the market, such as Envirofit and CookClean. The government is very supportive of ICS sector in terms of implementation of projects and key policies, e.g. Renewable Energy Act 2011, Bioenergy Policy (draft), although financial support is not always available.

Much of the knowledge and testing in the sector is executed in-house by manufacturers, leading to concerns over lack of impartiality and lack of consistent methodology or quality. Producers have chosen to focus on efficiency as opposed to emissions reduction, indicating that even and even popular stoves might not achieve the health benefits required to be called "clean cookstoves". Very high interest rates make access to finance a key issue for implementers and, although carbon financing is viewed as a key source of funding for ICS initiatives, Ghana will be dependent on voluntary carbon markets as of 2012.

Due to low affordability and accessibility to cleaner fuels, the traditional open fire, mud stove or coal pot cooking methods remain extremely popular within Ghana, especially in rural areas. Current costs and transport complications, despite the government's LPG subsidy, keep LPG out of reach of most households. As most ICS are small, portable, charcoal stoves (catering to the popular peri-urban/urban preferred fuel in the South), the 80.2%^v of the rural population using wood fuel have very limited ICS options.

The main conclusions of the Market Assessment are shown in the table below:

		Situation	Hypothesis
Fostering an enabling environment	<i>Regulations & Testing</i>	There is no independent testing facility or universal ICS standards. Regulations are imposed on government projects, but testing is contracted out. Efficiency testing is currently the focus, with minimal data around emission reductions. Health benefits are therefore hard to clarify.	Stove testing would result in increased transparency across the sector. Funds could be channeled more effectively and there will be incentives to invest in improvements to stove design, thus improving the products available in the market.
	<i>Awareness</i>	Despite general awareness of basic health complications linked to IAP, long term relationships are less clearly understood. The economic implications of IAP also remain uninvestigated, weakening the case for ICS.	Increased awareness across the board from consumers to government will result in increased consumer demand and prioritization within the government.
	<i>Support & Funding</i>	Although the government is supportive of ICS initiatives, funding is not readily available. Cost of capital is high, especially since ICS are viewed as high risk, and duties drive up unit price. Carbon financing is not yet available through PoAs.	Increased coordination in the ICS sector will boost the profile of IAP/ICS. Open Carbon PoAs reduce barriers to entry and provide a key source of finance. Lower duties aid ICS imports and increase access to clean fuels.
	<i>Knowledge Capital & Transfer</i>	Several large gaps exist within the current knowledge capital, with much duplication of effort between researchers. There is a lack of information sharing between implementers and a notable gap with regard to health and environmental impacts.	Increased information sharing and would substantially reduce duplication of effort, as well as provide additional information for key stakeholders. Closing knowledge gaps around key areas e.g. health will help increase support for the ICS sector.
Cookstoves Value Chain	<i>Design</i>	The market is dominated by improved charcoal stoves for the urban and peri-urban areas, neglecting rural households. Often, minimal research into local diet/customs is performed pre-deployment, impacting demand.	More detailed market research and thorough pilot studies for wood stoves, particularly involving women, will increase market data reliability and depth. This could stimulate demand, providing incentives for investment.
	<i>Materials / Fuel</i>	Since 1970, forest cover has reduced by 72%, with the national reliance on biomass as a household fuel being a contributing factor. The national LPG strategy, whilst offering considerable benefit, is not without issue.	Investing in biochar and improved charcoal as household fuels will reduce dependence on traditional biomass and reduce deforestation. LPG could be very beneficial, but more research is needed into the market implications of subsidies.
	<i>Production</i>	Limited access to capital and suitable training restrict companies from scaling up. Interest rates for loans from private banks and MFIs in Ghana are ~30%. ^{vi}	Training stove implementers will build awareness of other implementation models, hence creating more job opportunities within the sector and broadening the range of available stoves.
	<i>Sales & Distribution</i>	Most ICS producers produce improved charcoal stoves in the larger, urban, Southern regions of Ghana. Distribution to	Improved stove design for Northern regions could stimulate demand and hence incent manufacturers in the region

		<p>the poorer regions in the North is complex and costly. Previous producers in the North have ceased production, deterring current implementers. This reduces access for some of the most vulnerable households.</p>	<p>– improving accessibility and lowering cost. Leveraging local communities and networks (especially gender networks), will also improve access for rural communities.</p>
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Summary of Illustrative Priority Intervention Options

Although the market contains numerous strong players and general government support, there are key issues which would benefit the sector if addressed with the support of the Alliance. The recommended intervention options can be summarized as:

- Build impartial stove testing capacity. Until this is established, testing may need to be executed outside Ghana. Efficiency testing is a quick win, although emissions testing is a critical gap.
- Introduce stove standards to ensure that projects are providing the expected benefits. Make results accessible to stakeholders and donors to allow optimum funding allocation.
- Establish awareness campaigns highlighting the health benefits and economic advantages of ICS using both radio and TV. Work with local institutions (e.g. churches, schools) to increase community buy-in, and potentially educate families through the school feeding program.
- Create a stove representative body that will raise the profile of ICS as well as provide bargaining power for the industry with regard to government policy and access to capital.
- Create a national or regional “plug-and-play” PoA that will enable easier access to carbon finance for ICS implementers through reduced cost and administrative support.
- Improve access to capital through government matching schemes, such as the Social Investment Fund and a loan guarantee program similar to the UNEP AREED program.
- Work with the government to reduce duties on clean cookstoves, clean fuels, and stove parts as well as creating a new classification number and an associated tariff for clean cookstoves.
- Close key research gaps, such as health implications of IAP and create an easy to access portal to share project status and best practice. Focus on key areas for improved wood burning stoves and items key to carbon financing e.g. a step-by-step guide and toolkits.
- Fund pilot studies to understand and address the issues with previous improved wood stoves in the Northern region. Work closely with women in the community, as the Ministry of Energy highlighted the need to take local customs/preferences into account.
- Work with academic institutions e.g. KNUST to understand the opportunities for clean fuel, in particular improved charcoaling techniques, biochar and LPG distribution and ensure best practice is readily available to implementers. Work with the Ministry of Energy to include these programs as part of the Renewable Energy Plan.
- To improve last mile distribution, coordinate the local NGO and gender networks to distribute within rural communities, as well as sharing lessons learned from similar last mile distribution schemes in country e.g. Freedom from Hunger Ghana, Impact Energy.
- In the Northern region, kick-start business by providing the key resources required to scale production (i.e. kiln, machinery) as well increase demand through innovative purchasing options e.g. distributing carbon finance revenues and subsidizing the stoves.

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](#)

ⁱⁱ [World Bank](#)

ⁱⁱⁱ WHO Global Health Observatory Data Repository, data from 2004; Ghana Statistical Service (2008)

^{iv} [Relief International](#)

^v Ghana Living Standards Survey 5

^{vi} ‘High Interest Rate Private Business’ Predicament’ - <http://mimicromwell.blogspot.com/2010/04/high-interest-rate-private-business.html>