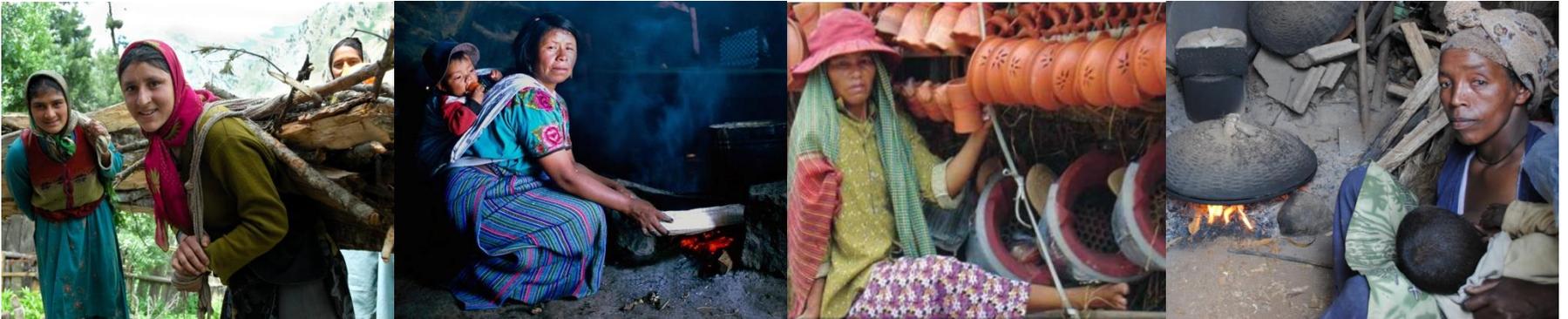




## Global Alliance in Ghana



# The Global Alliance for Clean Cookstoves working to facilitate a thriving market for clean cookstoves & fuels.

## PROBLEM

Every day,  
**3 BILLION PEOPLE**  
(500 million households)  
rely on solid fuels to power  
their rudimentary stoves



*which leads to...*

4,000,000 deaths annually  
Wasted productivity  
Environmental degradation  
Health & Economic burdens  
that disproportionately impact  
women and girls



## MISSION

- SAVE LIVES
- IMPROVE LIVELIHOODS
- EMPOWER WOMEN
- PRESERVE ENVIRONMENT

By creating a thriving  
Global Market for Clean and Efficient  
cookstoves and fuels



## GOAL



**100 MILLION**  
HOUSEHOLDS ADOPT  
CLEAN and EFFICIENT  
COOKSTOVES & FUELS  
by **2020**

# Old Issue, Renewed Momentum

## Why Now?



- Development of new stove technologies
- Private sector interest in Base of Pyramid
- Convergence of players and new approaches
- Availability of innovative carbon and micro financing
- Strong empirical evidence on health and environmental effects
- Ownership and excitement at national country level



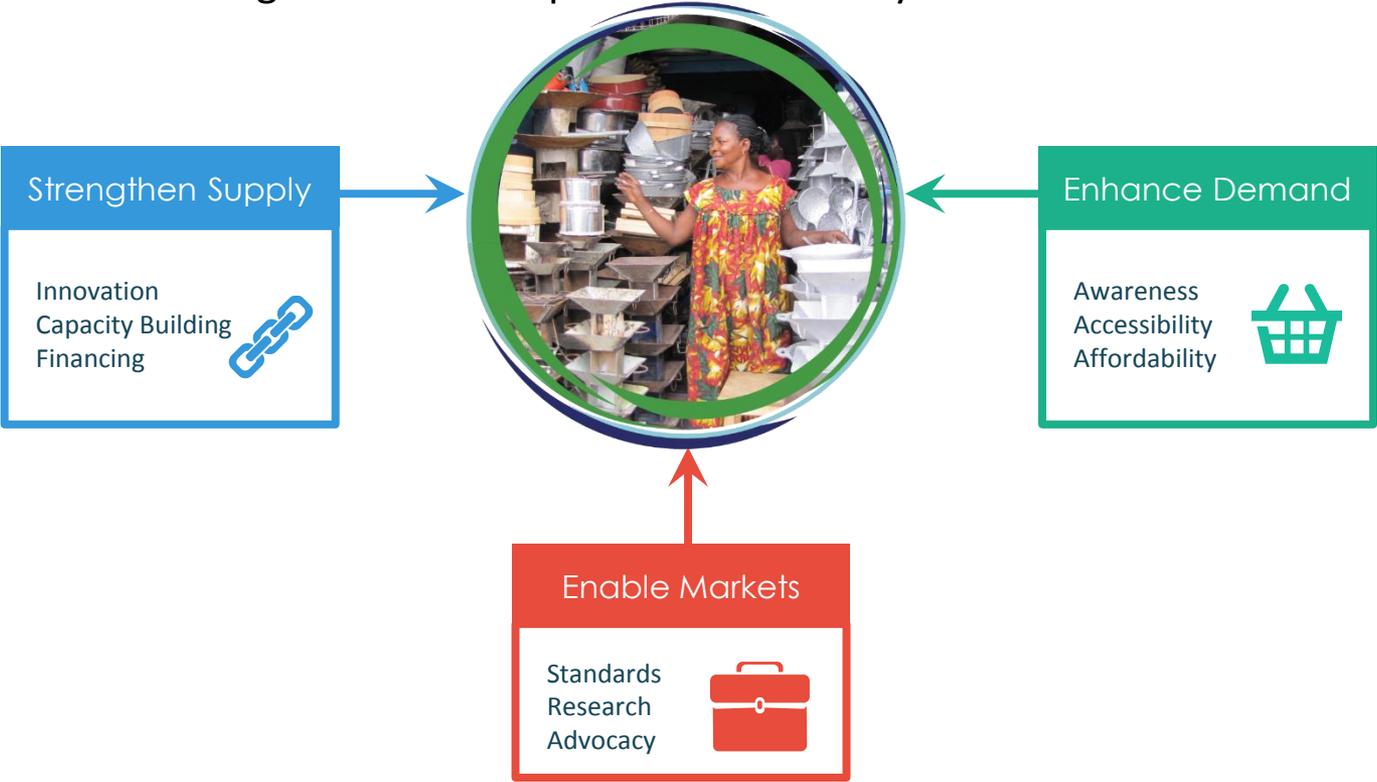
# Why the CAP ?

- 84% of households rely on solid fuels such as wood and charcoal for cooking.
- Over 13,400 deaths each year are caused by household air pollution, with more than 21 million people impacted by exposure to household air pollution each year.
- 70% reduction in forest cover over the last forty years, partially caused by cooking fuel harvesting.

# GHANA CAP

- The Global Alliance, in close collaboration with the Ghanaian Alliance for Clean Cookstoves, worked with in-country stakeholders, Govt representatives, and international organizations to develop a strategic action plan for catalyzing the improved cookstoves and fuels markets
- **Highlights of the plan, include**
  - The impacts of traditional cookstove use
  - The current state of the improved cookstoves and fuels sector
  - Interventions to help overcome the barriers to widespread adoption of clean cooking solutions
  - Phase 1 Completion

Our market based approach is built on three core strategies driven through CAP's developed with in-country stakeholders



... and is being pursued in three phases.



# State of the Ghanaian Clean Cooking Sector:

- Active in-country cookstove market with multiple consumer segments.
- Entrepreneurial local cookstove production base with one predominant cooking technology.
- Government interest in reducing dependency on solid fuels with a goal of transitioning at least 50% of the population to liquid petroleum gas (LPG) by 2020.
- Low awareness and understanding of the health, economic, gender, and environmental impacts by consumers and policymakers
- Reach into 4 million households to adopt clean cooking technologies by 2020

# National Strategic Path forward

- Prioritized national strategy focused on providing 50% of the country with a sustainable supply of affordable and accessible cleaner cooking fuel alternatives like LPG
- The other 50% will be encouraged through health advocacy to produce and consume charcoal in an efficient and sustainable manner through improved clean cook stoves.



# LPG - Going from 18% to 50%

- **Advocacy:** LPG advocacy support through safety awareness plus health and environmental merits of LPG
- **Market Studies:** find out which infrastructure location, and distribution models should have the greatest impact on demand given the current supply infrastructure in place.
- **Infrastructure and scale-up funding:**
  - provide some public and private sector support to suppliers that can sustainably scale up supply, distribution, & storage infrastructure
  - Scale up support for LPG cook stove suppliers



# Clean cookstoves are a tangible solution.

Going from open fires or traditional cookstoves to cleaner cookstoves and fuels will lead to:



Less exposure to toxic smoke

Fewer burns and other injuries

Less income spent on and time needed to collect fuel

More time for education and income-generating activities

Reduced fuel use, greenhouse gas emissions and deforestation



saving lives, improving livelihoods, empowering women, and preserving the environment.

# Innovation and technology have provided the sector with a variety of stove solutions.

## Traditional Stoves



## Improved Stoves and Fuels



## Advanced Super Clean Stoves and Fuels



More options and technologies in development

# Ghana CAP Joint Priority Interventions:

- **Transitioning to Cleaner Fuels:** Urban and peri-urban cookstove users who currently pay for fuel such as charcoal often have access to LPG, pointing to an opportunity for these families to move completely to LPG. A first step to addressing this would be a technical study examining the challenges to LPG affordability and reliability of supply, and providing clear policy guidance to the government.
- **Improving Local Technologies:** Improving the locally produced Gyapa-style cookstove through a variety of innovations to further increase efficiency and reduce emissions in order to decrease exposure to household air pollution and potentially have an impact on the health of users.
- **Increasing Access to Finance:** High interest rates on loans have prevented cookstove manufacturers from expanding their businesses and reaching greater production numbers. To increase investment, it is necessary to develop more investment ready entrepreneurs and support them through capacity building.
- **Improving the Regulatory Environment:** Several government policies and goals provide a supportive policy framework for advancing clean cookstoves and fuels, however, a more open regulatory framework would diversify and strengthen the market.

# Highlights of the Objectives in Ghana (Phase 1):

- Enhance regional testing and knowledge center to act as a regional hub, provide critical testing services, and respond to the technical needs of Ghanaian organizations.
- Collaborate with the Government of Ghana to support their current LPG pilot project which seeks to improve rural access to LPG
- Fund a child survival research study to build the evidence base for health interventions in Ghana.
- Establish financial instruments to improve access to capital (for example, a working capital fund or loan guarantee program) to help cookstove manufacturers access capital in order to produce at greater scale and lower cost, innovate around quality improvements, and reach greater segments of the population.
- Commission cookstove technology experts to partner with Ghanaian cookstove manufacturers to improve the quality of their products through existing technology retrofits

# Phase 1 Joint Accomplishments in Ghana

- <900k stoves improved and clean cookstoves distributed
- Prioritization of clean cooking across government ministries and agencies
- 50% by 2020 LPG policy in place by Government
- Enhancement of testing center at CSIR
- Country specific child survival health research in Kintampo
- Ghana standard process initiated for clean cooking & aligned with global ISO 285
- Identification and capacity building of promising local enterprises
- Building awareness of investors in potential of clean cooking sector
- Development of GHACCO as local Alliance
- Two strong celebrity Ambassadors and highly influential Minister on Alliance Leadership Council

# Phase 2 Alliance Interventions I

- **International Standards and Testing Protocols:** The Alliance will work with all partner countries to implement guidelines and standards that will enable policymakers, donors, investors, manufacturers, distributors, retailers and consumers to better understand the impact, quality and efficiency of cookstoves.
- **Develop and Enhance Testing Centers:** The Alliance will support the development and enhancement of cookstove and fuel regional testing and knowledge centers that can evaluate performance and compliance with standards, as well as work with cookstove manufacturers to test and modify designs that deliver on quality and performance.
- **Knowledge Hub:** The Alliance will work with partners to make important information and knowledge on improved cooking solutions and critical topic areas available to stakeholders in the sector, as well as regional knowledge that could be useful for informing national actors and market activities.
- **Access to Grant and Investment Facilities:** Members of the Alliance and country partners will have access to the Alliance's grant and investment facilities. The Alliance's annual SPARK Fund that will support key innovations, scalable solutions and capacity building in the sector, along with a guarantee facility to support investment in the sector.

# Phase 2 Alliance Global Interventions II

- **Monitoring and Evaluation Tools and Resources:** The Alliance is developing a framework and toolkit in order to provide a credible and pragmatic framework to measure the outputs, intermediate outcomes, and long-term impacts that result from the sector's activities.
- **Advocacy and Awareness Raising:** In order to continue raising awareness of this important issue at the country level, the Alliance will work with all of its partner countries and its international partners to raise awareness of the health, environmental, empowerment, and economic impacts.
- **Brokering Partnerships and Leveraging Indirect Funding:** The Alliance will leverage its international platform network to broker partnerships and mobilize resources by creating, facilitating, and coordinating these partnerships to significantly enhance the resources necessary to finance the global cookstove sector.

# Ghana: Priorities for Phase 2



## Enhancing Demand

- Targeted awareness raising campaigns in at least five regions – focused efforts at district level
- Preferential interest rates for consumer loans with one major bank, 2 large scale MFIs and savings groups
- At least 3 strong distribution models capitalized and in place to expand the product access & after sales service



## Strengthening Supply

- 4 local enterprises and 2 importers ready
- Business capacity building for a dozen
- Technology improvement support for locally produced charcoal and firewood stoves;
- Support to scale 3 clean fuel enterprises
- Customer research to support growth of home based institutional stoves market
- Complete LPG Investment study and support brokering of partnerships for execution



## Fostering and Enabling Environment

- Develop a national database for all cooking technologies and fuels and practitioners in the country
- GSA adaptation of global standards and strong certification process in place
- Strong partnership with SEF4ALL, GEF, W-Bank, etc. initiatives in place to reinforce clean cooking
- LPG and Biofuels policy in place – derive policy brief to ensure the clean household energy for cooking is prioritized in the policy
- Engage government to relax duties on large quantities of sourced materials

# Ghana: Narrative



Enhancing  
Demand



- Targeted awareness raising campaigns in 5 regions - focused efforts at district level
- Catalytic Grants to 6 companies with 4 of them ready to boost local inventories
- Preferential interest rates for consumer finance with MFIs( GHAMFIN) and Savings & loans.
- At least 3 strong distribution models ( Toyola, Cookclean, Ghana Cylinder) strengthened
- Enhance after sales service, particularly on related to adoption of LPG ( IC's have it)

# Phase 2 Gaps in Ghana

- Adoption for additional 2.4 M improved and clean cookstoves in circulation by 2017
- Prioritization of clean cooking across at the regional and district level agencies
- LPG LI's and legislature, infrastructure and investment should be in place for clean cooking
- Build Capacity for Standards, labeling, and Innovation of all testing centers
- Health interventions at the national, regional and district levels from clinical data
- Ghana finalizes, and implements progressive standards, and testing that supports innovation within local production/distribution
- Identification and capacity building of more promising local enterprises
- More working capital and investment must be channeled into the sector
- Building awareness of investors in potential of clean cooking sector
- GHACCO emerges as leading national trade organization advocating for the industry
- Presence of Clean cooking interventions within professional groups, faith based groups, women groups at the district level
- More strong local Ambassadors and more locally generated funds

# Lesson's Learned

- Market-based local alliance built to raise it's own funds, be project focused and self-sustain like an energy trade organization
- Need for practical country-specific action plan developed by local stakeholders & built on the support of enabling Ministries
  - Need country specific market-based studies
- Need for Robust standards and M&E framework
- Need to support local producers/distributors, and accommodate regional importers
- Need for the formation of a national clean cookstoves & fuels stakeholders steering group
  - To keep everyone informed, and support the work of in-country implementers

# Conclusion

- Cooking shouldn't kill
- Cooking is essential; it should not be lethal
- The time is right, and the time is now, for a market for clean, safe, efficient and affordable cooking solutions
- This is a global problem from local activity that deserves a global response fed by local expertise. The Global Alliance for Clean Cookstoves is that global response; but sustainable success will be up to local expertise.

# KHONA

- <https://www.youtube.com/watch?v=yhk52GlkhVA>

Back Up Slides

# Why Ghana is a bit ahead

## *Policies related to Improved Cookstoves*

- **Energy Sector Strategy & Development Plan, 2010**
  - Promotion of production & use of improved & more efficient woodfuel utilization technologies e.g. improved cookstoves)
- **National Woodfuel Policy (draft)**
  - Collaborate with National Board for Small Scale Industries to train artisans in the manufacture of improved stoves
- **Renewable Energy Act, 2011 (Act 832)**
  - legal framework for development & use of more efficient biomass production & utilisation technologies

# Initiatives on Improved Cookstoves

- ***Improved Charcoal Stove Initiative - Ministry of Energy***
- ***1990s, Ahibenso stoves***
- 12,000 stoves pre-financed by Ministry of Energy and disseminated through comprehensive promotion on radio and television
- ***funded by the World Bank and the government.***
- ***Enterprise Works Ghana Initiative***
- ***Since 2002, has sold over 480,000 Gyapa stoves***
- has mentored manufacturers, distributor and retailers
- ***key sponsors -USAID, Shell Foundation and the Environmental Protection Agency of the USA.***

# Initiatives on Improved Cookstoves

- ***Climate Care Initiative***
- promoted the *Gyapa* stove
- Carbon finance allows the stoves to be marketed at an affordable price
- As at 2009, the project had distributed over 110,000 stoves.
- ***Toyola Stoves Initiative***
- started up in 2006 with a loan from the Africa Rural Energy Enterprise Development (AREED) programme for pre-financing materials and for vehicles
- loan has been repaid and new loans have been obtained
- 30,000 stoves were manufactured and sold in 2008
- expected that sales would reach 50,000 stoves in 2011 with carbon financing.

# Initiatives on Improved Firewood Stoves

- Institute of Industrial Research (CSIR) developed & deployed improved firewood stoves, 2008
  - to 1000 households in the Tumu District, Upper-East Region
  - Collaboration with Plan Ghana (NGO)
- Ministry of Energy /UNDP Household Energy, 2006
  - improved wood burning stoves deployed in 22 schools in the Northern and Upper-East regions

## ECOWAS/UEMOA Regional Policy Targets, 2005

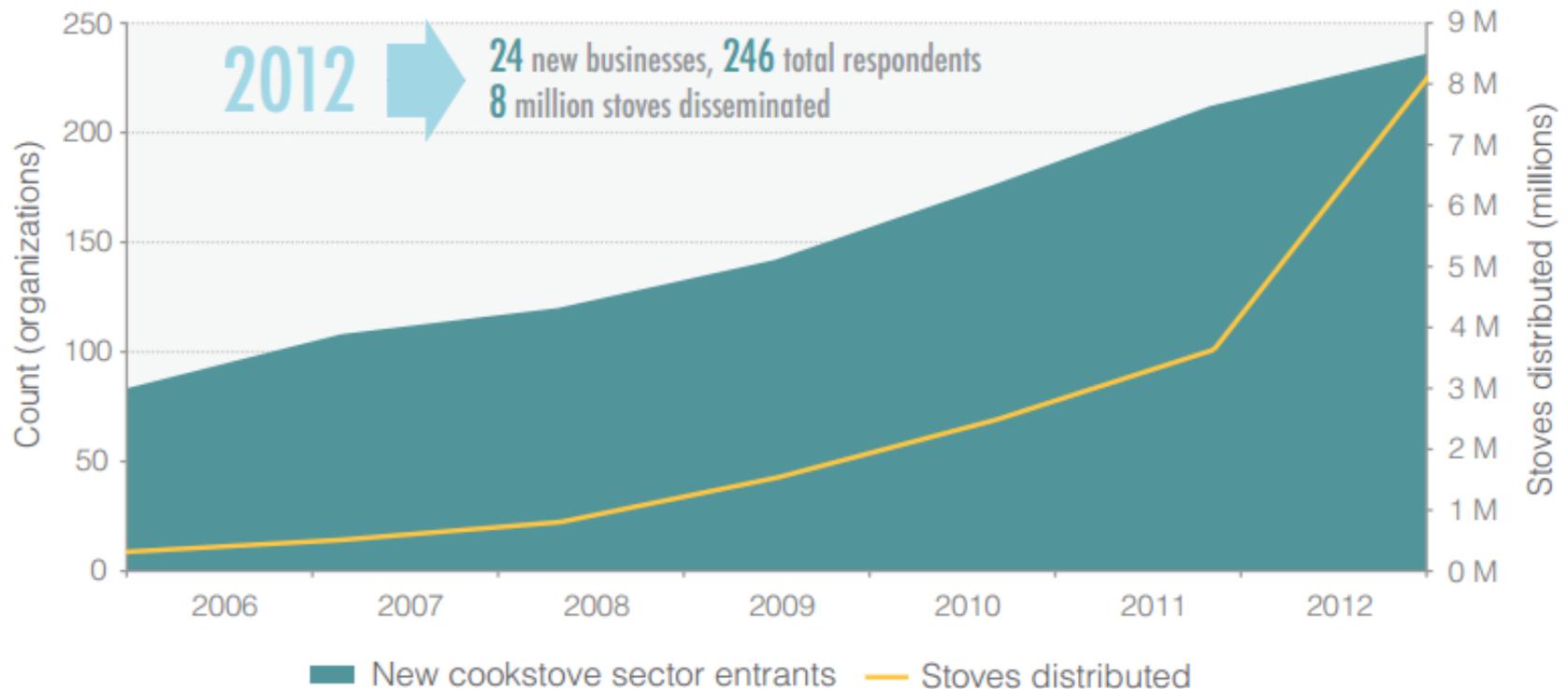
- **Increase access to energy services for rural, urban and peri-urban populations by 2015 in order to achieve the MDGs**
- 100% of total populations have access to modern cooking fuel and devices
- **At least 60% of people in rural areas have access to productive energy services**
  - mechanical power to boost productivity of economic activities
- **66% of population have access to individual electricity supply**
  - 100% of urban and peri-urban areas
  - 36% of rural populations

# Sustainable Energy for All (SE4ALL)

## **Achieve sustainable energy for all by 2030 through**

- Ensuring universal access to modern energy services
  - Modern Energy for Cooking
    - LPG Promotion Strategy
    - Improved Cook Stoves
  - Electricity to Communities and Households
  - Productive Uses of Energy
- Doubling rate of improvements in energy efficiency
- Doubling share of renewable energy in global energy mix
- Ghana has developed a Country Action Plan focusing on:
  - Improved cookstoves
  - Promotion of LPG use
  - Promotion of productive uses of energy

Figure 5: Cumulative Survey Respondents Active in Cookstove Market and Stove Distribution to Date, by Year of Business Start

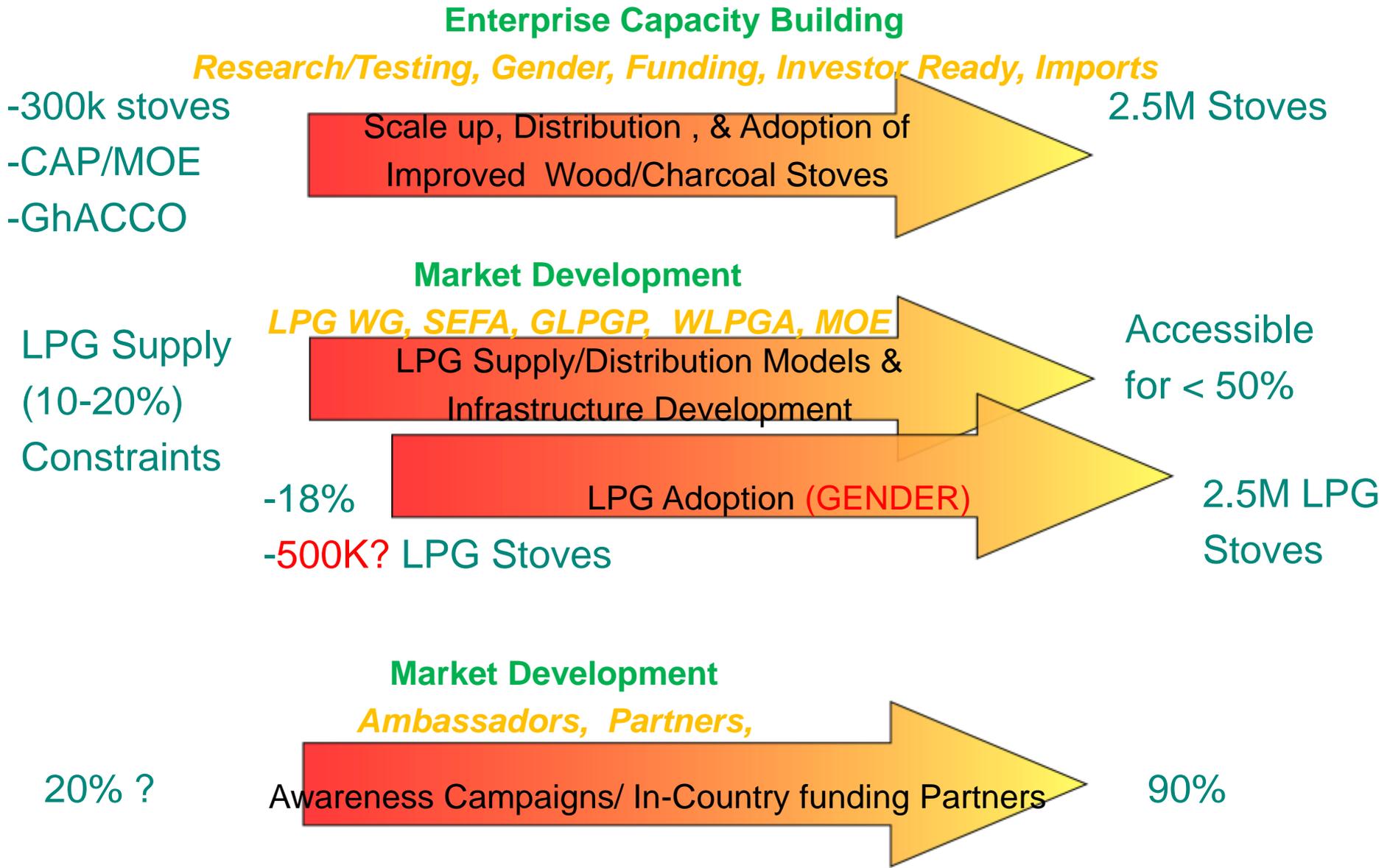


Source: 2012 Results Report. Global Alliance for Clean Cookstoves.

Notes: Based on 238 organizations reporting year of business start, of a total response rate of 246 organizations.

- Alliance partners distributed approximately 8.2 million stoves in 2012,
  - > twice the number reported in 2011 (3.6 million)
  - almost half of all stoves distributed (17.5 million) since PCIA started tracking progress in 2006.

# 2013 Catalyzing the Market & Brokering Partnerships 2020



# Directional Stove Growth

