



NEARLY

3 BILLION

people rely on open fires and simple stoves that burn solid fuels like wood, animal dung, and coal to cook their food.

4.3 MILLION

people die prematurely every year from illnesses attributable to household air pollution caused by cooking with solid fuels.

UP TO

25 PERCENT

of black carbon emissions come from burning solid fuels for household energy needs.

\$123 BILLION

in annual costs to health, environment, and economies in the developing world are due to the use of solid fuels for cooking.

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FROM OUR LEADERSHIP COUNCIL

Five years ago the global community came together with a common vision — to shine a light on and change the way millions of people in developing countries cook. While there have been efforts in the past to ensure the poorest among us no longer prepare their food as our ancestors did hundreds of years ago — over smoky, toxic fires — there was a growing consensus that in order to better address this silent killer, a fresh, comprehensive market-based approach was needed.

Based on this vision, the Global Alliance for Clean Cookstoves was created. With the goal of enabling the adoption of 100 million clean and efficient cookstoves and fuels by 2020, the Alliance uses a market-based approach to bring together a diverse group of actors across government, development, NGOs, academia, and the private sector to work toward a common goal.

Now, five years later, a movement is clearly building across the cookstoves and fuels sector. Just halfway through its 10-year plan, the Alliance has made tremendous strides, and we couldn't be more pleased with its progress. The issue of clean cooking is no longer on the sidelines of development, and the sector is well on its way to becoming a healthy market, thanks in large part to the Alliance's impressive roster of more than 1,300 partners.

Rarely does the global community have the opportunity to address a problem where the societal benefits from concerted action are so far-reaching — touching on health, environment, climate, women's empowerment, and livelihoods. The impact of the Alliance and its partners has the potential to be nothing short of transformative, and to achieve our vision, we must remain committed to working toward universal adoption of clean and efficient cookstoves and fuels over the next five years and many more to come.

HILLARY RODHAM CLINTON
ANTÓNIO GUTERRES
FRIEDRICH KITSCHELT
GINA MCCARTHY
MARY ROBINSON
ABUBAKAR BUKOLA SARAKI

GRANT SHAPPS
WANG SHI
HANNA S. TETTEH
R. VENKATARAMANAN
XIE ZHENHUA



FROM OUR CEO

The Global Alliance for Clean Cookstoves was founded on a simple belief: Cooking shouldn't kill. In 2010, our founding partners laid out a powerful vision to save and improve lives by creating a thriving, global market to enable 100 million households to adopt clean and efficient cookstoves and fuels by 2020.

The goal was — and remains — ambitious. Despite decades of hard-fought gains, 4.3 million people still die prematurely each year from illnesses attributable to smoke from cooking.

The goal also remains achievable. In just five years, working closely with more than 1,300 public, private, and non-profit partners, the Alliance has made strong progress in developing a sector that is poised for sustainable growth.

In fact, we are on target to exceed our mid-term goals.

Serving as a connector, catalyst, and facilitator, the Alliance has helped build a solid foundation for transformative change by working with our partners to spur innovation, develop standards, advocate for enabling policies, and expand the base of evidence of the benefits of clean cookstoves and fuels.

We've strengthened supply through increased funding to enterprises and entrepreneurs for development, training, and capacity building. This in turn has driven tens of millions of investment dollars directly to enterprises and businesses in the sector. We are also working to enhance demand by encouraging behavior change.

The Alliance has helped raise the issue of household air pollution and the benefits of clean and efficient technologies and fuels to the highest levels of international development. As a result, financiers and implementers are integrating clean cookstoves and fuels into their work. In addition, development organizations have begun looking to the Alliance's model as a basis for pushing their own initiatives forward. And donors, funders, and investors have expressed continued confidence in the sector and the Alliance's model, as we clearly saw through the commitments made at the 2014 Cookstoves Future Summit.

Progress doesn't come without bumps in the road. As in any successful enterprise, we continue to learn and adjust based on what is required to grow this dynamic ecosystem of actors into a cohesive, sustainable, healthy market that can meet the needs of households around the world.

The Alliance has helped raise the issue of household air pollution and the benefits of clean and efficient technologies and fuels to the highest levels of international development.

As we look to the future, the Alliance remains committed to: supporting the sector and our partners as they grow; ensuring efficiency in the sector, lowering transaction costs for donors and aligning efforts across our partner base; and lowering risk and easing entry into the sector for private investors, implementing organizations, and new actors who wish to join this effort.

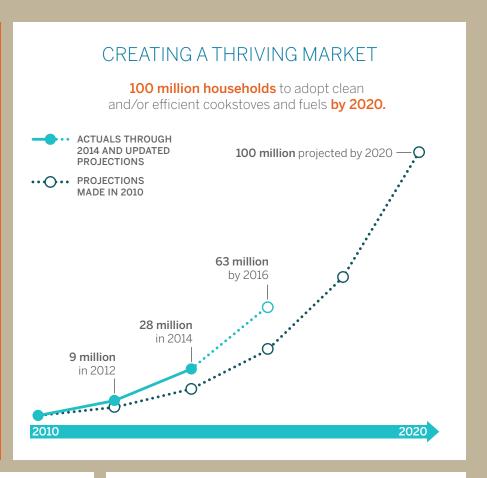
Above all, the Alliance remains committed to our market-based philosophy, to our 100 million by 2020 goal, and ultimately to the universal adoption of clean cookstoves and fuels.

We have made progress and celebrated success in the sector. But we can't stop until we reach a world where cooking doesn't kill. The opportunity is real, and the time is now. Our journey continues.



Radha Muthiah
Chief Executive Officer

In just five years, the Alliance and its partners have made significant strides toward developing a clean cookstoves and fuels sector that is poised to scale and built for sustainable growth.

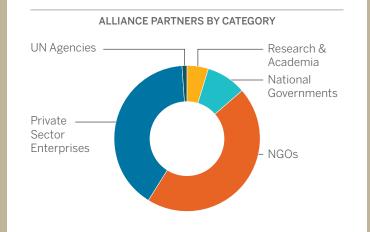


CREATING A MORE COHESIVE SECTOR

Since 2010, the Alliance partner base has grown from

19 to 1,300

The Alliance works with a diverse group of partners seeking to transform the way the developing world cooks:



STANDARDIZING PRODUCT EVALUATION AND PERFORMANCE

28

countries actively engaged in the development of International Organization for Standardization-approved standards

16

Alliance-supported cookstove and fuel testing centers in 14 countries around the world

With nearly

300 stoves

featured, the Alliance's Clean Cooking Catalog has become the largest single source of information on product and performance data for the cookstoves sector.

STRENGTHENING SUPPLY



The Alliance has strengthened close to **200 enterprises** across the sector



28 of those enterprises have collectively increased cookstove production by more than 300% and have doubled their fuel production.



19 new investors have already deployed more than **\$60 million** into the sector.

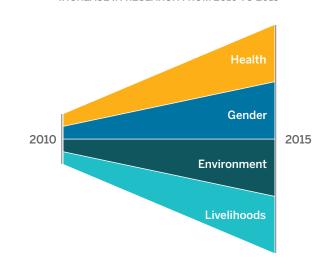


The Alliance has helped attract **\$265 million** in carbon finance for the sector.

BUILDING THE EVIDENCE BASE

The Alliance has directed and overseen 40+ research studies and invested more than \$5 million to enable investigators to produce the critical research necessary to build a case for global action on clean cooking.





EMPOWERING WOMEN

300

women entrepreneurs have received training and support through the Alliance's Women's Empowerment Fund

BOOSTING HUMANITARIAN FFFORTS

The Alliance has trained more than

175

humanitarian aid workers from 27 countries and 82 organizations to provide improved cooking and fuel technologies for crisis-affected populations.

The Alliance's Humanitarian Program is on track to ensure

1 million households

in humanitarian settings gain access to clean and efficient cookstoves and fuels by 2018.

MOBILIZING SUPPORT AND INVESTMENT FOR THE SECTOR

The Alliance has helped mobilize global investment in the clean cooking sector, stimulating more than \$400 million in pledges to advance the widespread adoption of clean and efficient cookstoves and fuels.

\$286 million in grants + \$127 million in investment

\$413 million to fuel growth in the sector

Further commitments from donors, implementing countries, non-governmental organizations, and the private sector are expected over the next five years in support of a thriving market for clean cookstoves and fuels.

GREENWAY APPLIANCES

NEHA JUNEJA, CEO: "We were awarded a Spark grant from the Alliance during a critical time in our company's development. As a result, Greenway was able to launch programs that greatly improved consumer demand and allowed us to better scale our manufacturing facilities. Since receiving Alliance funding, we've gone from serving consumers in one region of India to becoming the country's largest cookstove producer. We've also been able to leverage the Alliance's support to attract additional funding. As a result, we now export our stoves to Mexico, and this year, we reached 1 million cookstove users worldwide."

The Alliance provides early seed funding so companies like Greenway can successfully scale operations, helping build a wider marketplace and facilitating broader adoption of clean cookstoves and fuels. Over the past five years, the Alliance has provided millions of dollars in funding to expand the sector.



LANZHOU HUANENG ECO ENERGY

LI QIANG, CEO: "The Alliance's partnership with the Chinese government has had a significant impact on stimulating the sector and expanding the market for clean cookstoves and fuels. People across the country are becoming more aware of the need to change the way they cook. Our solar stoves are helping meet the growing demand for cooking solutions that save customers money and can also benefit human health and the environment."

Government support is a critical step in facilitating broader adoption of clean cookstoves and fuels. The Alliance works with leaders around the globe to promote policies and programs that boost the production and adoption of clean cooking solutions, educate people about the negative health and environmental impacts of traditional cooking, and change harmful behaviors.





GEORGE WASHINGTON UNIVERSITY

JIM TIELSCH, PHD, CHAIR OF THE DEPARTMENT OF **GLOBAL HEALTH:** "From a research perspective, the Alliance has served as an important enabler and convener. Its leadership has motivated top scientists in a variety of fields to come together to assess the state of the art, identify key unaddressed research questions, and to set a research agenda that is moving the field forward. Through their investments in research, the Alliance is a key player in building a foundation of evidence on the impact of truly clean cooking on people's health."

The Alliance has directed millions in research grants to the sector and supported more than 40 studies across 23 countries. Funding researchers like Dr. Tielsch builds an evidence base to demonstrate that the adoption of clean cooking technologies will significantly improve public health.



CENTRE FOR RESEARCH IN ENERGY AND ENERGY CONSERVATION

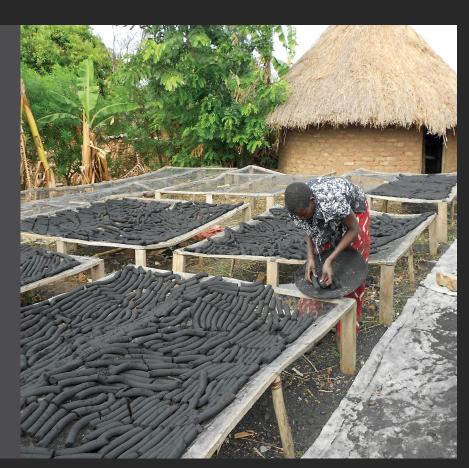
MARY SUZAN ABBO, MANAGING DIRECTOR: "Our goal is to become a one-stop shop for cookstove and fuel testing, as well as technology innovation. In 2012 and 2015 we were awarded capacity building grants from the Alliance, which is helping to put CREEC on a path to providing state-of-the-art testing services and to being a reliable resource for East Africa's maturing cookstoves market."

Regional Testing and Knowledge Centers (RTKC) like CREEC provide quality assurances and product performance information for customers, governments, and stakeholders. RTKCs also enable local manufacturers to improve technologies and communicate benefits to customers. The Alliance has provided RTKC's with training and grants to strengthen performance and deliver high-quality, timely services.

APPROPRIATE ENERGY SAVING TECHNOLOGIES

BETTY IKALANY, CEO: "By better engaging women in an improved production process, we are now distributing our briquettes to many more households, both in urban and peri-urban areas in Uganda. We're also able to reach additional institutions that we weren't before, including schools, orphanages, and hotels, and we're proud to be a partner of the Alliance. We have also recruited women to sell our products on commission, and our target is to get 200 additional retail outlets in as a result of our increased production."

The Alliance is increasing women's economic empowerment by supporting businesses such as AEST that will engage both men and women in promoting women's participation in different stages of the fuel value chain. As a result, women are taking on broader roles in the production, distribution, marketing and provision of after sale services for fuel enterprises, which is strengthening women-led businesses and creating livelihood opportunities for those working in the cookstoves and fuel sector.



MERCY CORPS

DAVID NICHOLSON, DIRECTOR, ENVIRONMENT, ENERGY AND CLIMATE CHANGE TECHNICAL SUPPORT UNIT:

"With a Women's Empowerment Fund grant from the Alliance, we were able to conduct a research study to illuminate the gender drivers of demand for improved cookstoves in East Acholi, Uganda. As a result, a larger market share of women purchased improved cookstoves, which saved them time and money, improved their wellbeing, and even opened up new opportunities for employment as clean cookstoves sales agents. Mercy Corps plans to apply this research methodology and lessons learned to scale the sector in other countries, including Myanmar."

In the past five years, the Alliance's strong support of gender-informed solutions has expanded the market for clean cookstoves and fuels. By forging partnerships with organizations like Mercy Corps, the Alliance has helped change the gender landscape around clean cooking, impoving women's health, and livelihoods.





RED TSIRI

CARMEN PATRICIO, GROUP LEADER: "The Alliance's partner GIRA provides our organization with cleaner, more efficient cookstoves, which has enabled the women we work with to cook more efficiently and sell their locally-created food products to thousands of urban consumers across Mexico. Having access to these clean cookstoves has changed the way we cook, improved our livelihoods, helped us conserve local forests and native maize, and promote traditional gastronomy in a sustainable manner."

The Alliance provides funding to partners like Grupo Interdisciplinario de Tecnología Rural Apropiada (GIRA) around the globe. These organizations facilitate development of programs such as Red Tsiri that empower women and improve livelihoods at the local level by providing them with the training and resources they need to help improve cooking methods and spread adoption of clean cookstoves and fuels.



CLEAN COOKSTOVES ASSOCIATION OF KENYA

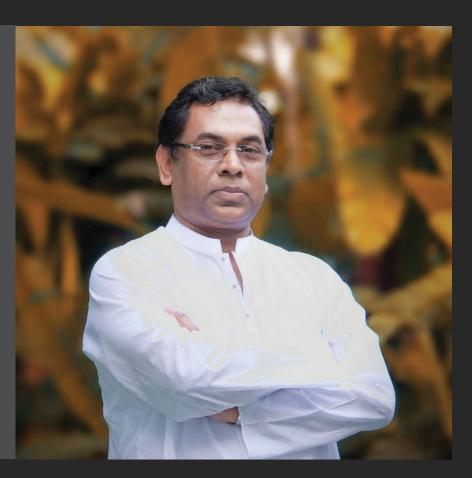
JECHONIAH KITALA, CHAIRMAN: "The Clean Cookstoves Association of Kenya (CCAK) has benefitted from its close collaboration with the Alliance over the past three years. Their significant strategic support has helped CCAK launch its important work to foster the development of a thriving market for clean cookstoves and fuels in Kenya, and we are well-positioned to carry on this work with our partners throughout the country."

The Alliance works with regional- and nationallevel alliances around the globe. Providing start-up support to organizations like CCAK helps to establish the necessary market infrastructure and builds a strong foundation for long-term sustainability of the clean cookstoves and fuels sector.

PEOPLE'S REPUBLIC OF BANGLADESH

NASRUL HAMID, STATE MINISTER OF POWER, ENERGY, & MINERAL RESOURCES: "The Government of Bangladesh acknowledges the work done by the Alliance in bringing the private and public sector together and working in harmony for the overall growth of the cookstoves sector. We also appreciate the effort for development of the Country Action Plan and institutionalization of the Household Energy Platform in Bangladesh. I recognize the importance of clean cookstoves to mitigate the health risks and efficient use of fuel, and we look forward to working with the Alliance in the coming years to make all kitchens smoke free in Bangladesh."

Working closely with governments and policymakers, the Alliance is helping to create enabling environments where policies and programs are established that boost private sector growth and better support cookstoves interventions.



GHANA CYLINDER

ELIZABETH YAWA MORNY, CEO: "The Alliance's Catalytic Small Grant program enabled Ghana Cylinder to come back from the brink, much stronger and more profitable. We were able to purchase new machinery, streamline operations, and increase production capacity. The Alliance helped catalyze our growth and develop a comprehensive distribution expansion strategy, and become a regional leader in quality and service."

Small- and medium-sized enterprises need reliable funding sources and capacity building in order to scale and meet growing consumer demand. The Alliance's Catalytic Small Grant Program meets the need for country-specific mechanisms that fund capacity building and growth of start-up and venture stage companies, particularly those that are locally-owned and operated. The Alliance's early support can also help connect businesses with investors and attract additional funding.



10 THINGS WE KNOW NOW THAT WE DIDN'T KNOW THEN

1.	Household air pollution causes 4.3 million deaths a year, up from the 1.9 million premature deaths the World Health Organization had previously estimated. This higher figure is due to the 2012 inclusion of cardiovascular disease from smoke inhalation in the mortality figures from the use of traditional stoves and open fires.	6.	Women are willing to give up their traditional stoves and adopt clean cookstoves and fuels exclusively, as demonstrated in child survival studies; 80% of women in a study underway in Nigeria gave away their kerosene stoves after they switched to cleaner-burning ethanol stoves.
2.	Household air pollution is the #1 environmental risk factor for the burden of disease in developing countries, responsible for a higher burden than unclean drinking water and poor sanitation.	7.	Women entrepreneurs are more successful at selling cookstoves and maintaining customers — women in Kenya who received training outsold their male counterparts 3 to 1.
3.	Household air pollution is responsible for up to 25% of black carbon emissions globally, with especially high percentages in Asia and Africa.	8.	New biomass stoves are approaching the efficiency and emissions levels of stoves using cleaner burning fuels. Research and development have significantly improved the performance of biomass stoves, increasing the usability and affordability of using solid fuels, based on test results of 19 new stove prototypes.
4.	Household air pollution is the leading cause of non-communicable diseases among women in developing countries.	9.	People do not need to move up the energy ladder rung by rung — millions of people are leapfrogging from basic solid-fuel stoves to induction stoves, solar cookers, and those that use cleaner burning fuels such as ethanol, LPG, and biogas.
5.	\$4.7 billion is needed globally to ensure universal access to clean cooking energy through 2030, according to a 2015 report by the World Bank.	10.	Increasing numbers of humanitarian agencies recognize access to energy as having a direct impact on the health, safety, and livelihoods of crisis-affected people. As a result, leading humanitarian responders are now including energy products as part of their emergency distributions, alongside food and shelter.

The Alliance leverages a market-based approach to build a more cohesive sector, strengthening existing actors and attracting new ones to eliminate fragmentation and establish a sustainable, healthy market capable of enabling 100 million households to adopt clean and efficient cookstoves and fuels by 2020.

MARKET-BASED APPROACH



ENABLE MARKETS

Standards & Testing Research Advocacy & Policy



STRENGTHEN SUPPLY

Innovation
Capacity Building
Financing
Inclusive Value
Chain



ENHANCE DEMAND

Awareness
Accessibility
Affordability
Behavior Change

VALUE PROPOSITION



OPERATING PRINCIPLES

Focus on high quality, scalable approaches

Be **technology and fuel neutral**, while emphasizing "clean"

Build on lessons from the past without reinventing the wheel

Put consumers and users first

Attract new partners and strengthen existing ones

Utilize a **market-based approach**, while aiding vulnerable populations

RESOURCE MOBILIZATION

The Alliance attracts investment at multiple levels, leveraging its own resources to drive hundreds of millions of dollars directly into the sector.

- Alliance-mobilized resources to support Alliance Secretariat and partner priorities
- Alliance-brokered resources and partnerships for Alliance partners to execute against
- Alliance champions and advocates for resources for the sector at-large

2

3

Over the next five years, the Alliance will build on previous successes while working toward our ambitious goals.

We are continually learning and adjusting based on what is required to grow our dynamic ecosystem of partners into a cohesive, sustainable, healthy market that can meet the needs of households around the world. Some of those key attributes that will allow us to sustain our impact include:

GOING GLOBAL AND LOCAL: Continue championing the issue at the global level while building local capacity to ensure long-term sustainability.

KEEPING OUR FINANCING FLEXIBLE AND ACCESSIBLE:

Have multi-year, flexible financing with results-based, long-term resources.

ENGAGING EARLY AND OFTEN WITH STAKEHOLDERS:

This is where knowing your customer is critical and different from traditional aid.

DEFINING PRIORITIES. CREATING METRICS. MEASURING EFFECTIVENESS: Stay accountable with clear, regularly-measured metrics.

As we have seen over the past five years, success will not be easy. But it is achievable and will require added attention and a sustained focus on some specific areas:

Place an added focus on fostering adoption of clean cookstoves and fuels that will achieve the health benefits we know are possible;

Help extend clean fuel supply chains so more people have energy access;

Provide additional support around measuring and evaluating the benefits of clean cooking interventions;

Increase consumer demand to transition cookstoves from a push to a pull product;

Bolster the impact and sustainability of local alliances and product testing centers; and

Ensure clean cooking is included in a wide variety of solutions to implement the next global development agenda.

While there is much to be done to reach our goals, the impact of the Alliance and its partners has the potential to be transformative. We must remain committed to working toward universal adoption of clean and efficient cookstoves and fuels over the next five years and many more to come.

PROJECTED IMPACTS OF THE ALLIANCE'S WORK BY 2020:



640,000 lives saved, including **170,000** children



2.1 million sector jobs



1.9 billion trees saved



1.6 billion metric tons

of CO2e saved (equivalent to that of 340 million passenger vehicles)



61% reduction

in spending on fuel per household



6.2% of household income saved



102 hours saved

annually per household collecting firewood

^{*} In the first printing of the Five Year Report, this figure only included impacts for Phase 3 (2018 – 2020) of the Alliance. This figure has been corrected in the online and subsequent printed versions.

ADVISORY COUNCIL



Kris M. **Balderston** Senior Vice President, Senior Partner and General Manager, Fleishman-Hillard



Kathy Calvin President & CEO, **United Nations** Foundation



Jay Ireland President and CEO, GE Africa



David Martin General Manager Production, Nigeria, Shell Petroleum Development Company of Nigeria



Wanjira Mathai Director, **Partnerships** for Women's Entrepreneurship in Renewables, Wangari Maathai Institute



Radha Muthiah CEO, Global Alliance for Clean Cookstoves

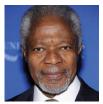


Juan Carlos Paiz Co-Founder and President, Pani-Fresh

CHAMPIONS



José Andrés Alliance Global Ambassador, founder of World Central Kitchen, and owner and partner of ThinkFoodGroup



Kofi Annan Former Secretary General of UN and Chairman of Kofi Annan Foundation



Stephen Appiah Former professional soccer player and Head of Stephen Appiah Foundation



Rocky Dawuni International musician and humanitarian advocate



Pati Jinich Alliance Chef Corps Member (U.S.), Chef of the Mexican Cultural Institute, author, and cooking teacher



Susan Kamau Alliance Chef Corps Member (Kenya), Chef at Kenyan Kitchen



Sanjeev Kapoor Alliance Chef Corps Member (India), Chef at Khana Khazana India Pvt. Ltd.



Luu Meng Alliance Chef Corps Member (Cambodia), Chef at Cambodia Hotel Association



Julia Roberts Alliance Global Ambassador, Actor



Zhao Wei Actor and director

The Global Alliance for Clean Cookstoves is grateful for the generous financial and in-kind support of our donors

BILATERAL AND MULTILATERAL DONORS

Agencia Española de Cooperación Internacional para el Desarrollo

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ)

Climate and Clean Air Coalition

Department for International Development (DFID), United Kingdom of Great Britain and Northern Ireland

> Deutsche Gesellschaft fur Technische Zusamarket managerenarbeit (GIZ)

> > **Environment Canada**

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Ministry for Foreign Affairs, Sweden

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Shell Foundation

SNV Netherlands Development Organization

The David and Lucile Packard Foundation

The Energy and Resources Institute

The Iorio Family

The Nathan and Gretchen Day Fund of The Dallas Foundation

United Nations Foundation

World Lung Foundation

IN-KIND SUPPORT

Baker & McKenzie LLP

Delher

Deutsche Bank

Fondation Maison des Sciences de l'Homme

Infosys







"The Alliance has demonstrated strong ambition and made remarkable progress in the first five years since its establishment. I commend the leadership the Alliance has provided to galvanizing international efforts to develop market-based solutions to improving access to clean cooking solutions. We are pleased to be able to work with the Alliance to play our part in creating a healthier and more prosperous future for the girls and women on whom the burden so often falls hardest."

RT HON. GRANT SHAPPS

UK MINISTER OF STATE FOR INTERNATIONAL DEVELOPMENT AND MINISTER OF STATE FOR FOREIGN AND COMMONWEALTH AFFAIRS

"Advancing clean cookstove technology protects the environment through reducing carbon emissions and spurs economic growth. We are excited to partner with the Global Alliance for Clean Cookstoves in its efforts to raise \$100 million in investment funding to provide clean cooking solutions to millions of households in the developing world."

PURNA SAGGURTI

CHAIRMAN OF GLOBAL CORPORATE AND INVESTMENT BANKING,
BANK OF AMERICA MERRILL LYNCH

"For too long, cooking has been a silent killer in developing countries around the world. Finally, we are seeing a growing momentum around this issue. Thanks to the Alliance and its many partners, millions more people are now using clean and efficient cookstoves and fuels. We must continue to build on this new momentum and ensure solving this global problem remains a global priority."

KOFI ANNAN

FORMER SECRETARY GENERAL OF THE UN AND CHAIRMAN OF KOFI ANNAN FOUNDATION



WWW.CLEANCOOKSTOVES.ORG