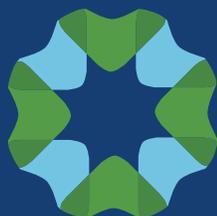




2018 ANNUAL REPORT

Investment. Innovation. Impact.



CLEAN
COOKING
ALLIANCE

STORIES FROM THE SECTOR: AN ENTREPRENEUR'S PERSPECTIVE

The 2018 Alliance Woman Entrepreneur of the Year, Chebet Lesan, is the founder and CEO of BrightGreen Renewable Energy, an alternative energy company in Kenya that creates, produces, and distributes charcoal briquettes made from recycled organic waste.

Alliance: What excites you about being an entrepreneur in the clean cooking sector?

Lesan: The opportunity to shed light on a challenge faced mostly by women has been an honorable experience for me and an impactful one for my community. We are solving a challenge and we are doing it by empowering our local communities. For example, 80 percent of our raw materials are supplied by local women. I am deeply proud of this.

Alliance: What do you hear from customers about why they value clean cooking products?

Lesan: Customers are happy to learn that the product costs less than charcoal and also burns more cleanly.

Alliance: How has clean cooking impacted your life?

Lesan: I am head of product design at BrightGreen. We co-create our products with local communities and work hard to ensure we are addressing challenges and adding value for our customers. We're learning and improving every day.

Cover photos: BURN Manufacturing; Envirofit; PayGo Energy; KOKO Networks

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FROM THE CEO

My first year with the Alliance has been truly inspiring. Working with our partners around the world, we hosted the first-ever Clean Cooking Investment Forum in Rwanda; gave the Alliance a new name, look, and feel; and developed insightful investment and business trends for the inaugural Clean Cooking Industry Snapshot.

Since joining, I've also been able to meet with individuals from across the clean cooking sector, from entrepreneurs and investors to consumers, donors, and champions. There is real excitement around the innovations emerging in the clean cooking sector, and I'm proud of the work the Alliance and its partners are doing to build an inclusive industry that makes clean cooking accessible to the three billion people who live each day without it.

There's no single stove, fuel, or business model capable of solving this complex issue. Businesses and entrepreneurs must have the right tools, resources, and policies in place to produce high-quality products, reduce costs, and improve margins. As we know, this will require a significant scale-up in investment, which, in turn, depends on greater engagement and support for making clean cooking a global priority. Following nearly a decade of successes, challenges, and lessons learned, we must now look to the future and what is needed over the next 10 years to drive our industry forward and move us toward the goal of universal access to clean cooking.



Sincerely,

Dymphna van der Lans,
CEO, Clean Cooking Alliance

CLEAN COOKING INDUSTRY SNAPSHOT: EMERGING TRENDS

Developed throughout 2018, the inaugural Clean Cooking Industry Snapshot (“Snapshot”) is a first-of-its-kind publication that highlights investment and business model innovation in the clean cooking sector. The Snapshot, launched in April 2019, gauges progress toward a sustainable and inclusive clean cooking industry, based on investment, operational, and financial performance data provided by more than 40 companies.

The Snapshot identifies a number of emerging trends that illuminate progress toward a private sector-led industry that delivers affordable, appropriate, high-quality clean cooking products, including:

Sector investment is growing but is still insignificant due to relatively unproven business models.

In 2017, total investment in clean cooking businesses was greater than in any of the previous five years. However, this is still insignificant compared to the USD 4 billion required annually for universal access by 2030. Once models are more definitively proven and demonstrated to be financially viable and scalable, the Alliance anticipates much greater investment flows into market expansion and replication by existing companies and emerging competitors.

In recent years, East Africa has consistently attracted a significant share of total investment flows.

In 2017, 12 companies headquartered in East Africa attracted USD 22 million in grant and investment capital, representing more than 50% of the total tracked investment. The relative success of companies in the region can be attributed to a combination of enabling policies by East African governments, a well-established charcoal market, and product category

awareness and demand for clean cooking solutions resulting from past development programs.

Business models that integrate fuel sales are gaining increased private sector attention.

Companies that sell stoves and associated fuels (through “tool and fuel” business models) have attracted increased visibility and investment in the past several years. These models address historical problems associated with unused stoves, since they rely on convincing a consumer to purchase a stove and, more importantly, to use it on an ongoing basis. They also respond to affordability gaps (by allowing companies to decrease upfront costs for customers) and businesses’ financial viability gaps (through long-term recurring revenue streams).

Among more traditional producers of stoves, fuels, and biogas systems, select players are showing signs of growth.

Companies that design and manufacture cleaner and more efficient, industrially-produced wood and charcoal stoves were the major recipients of donor and investment capital in 2015, capturing more than 90% of the tracked capital flows. Although the overall share of capital flows to stove manufacturers has

declined, it remains significant in the case of several companies, particularly those that have diversified to offer additional stove types or entirely new product lines.

Additionally, the industrial-level production of prefabricated biogas systems has reduced costs and improved product quality, performance, and consistency. Companies that couple consumer finance with these solutions have also experienced robust growth not seen in past years.

Select companies have begun to secure commercial capital.

There is growing interest in certain clean cooking models from commercially-oriented investors, including banks, family offices, and venture funds. An estimated USD 21 million in commercial capital was invested in 2017, representing more than 50% of the total.

At the same time, multilaterals, bilaterals, development finance institutions, foundations, and other concessional capital providers continue to play a key role in de-risking business models and technologies. In 2017, they contributed USD 16 million, roughly 40% of total funding.

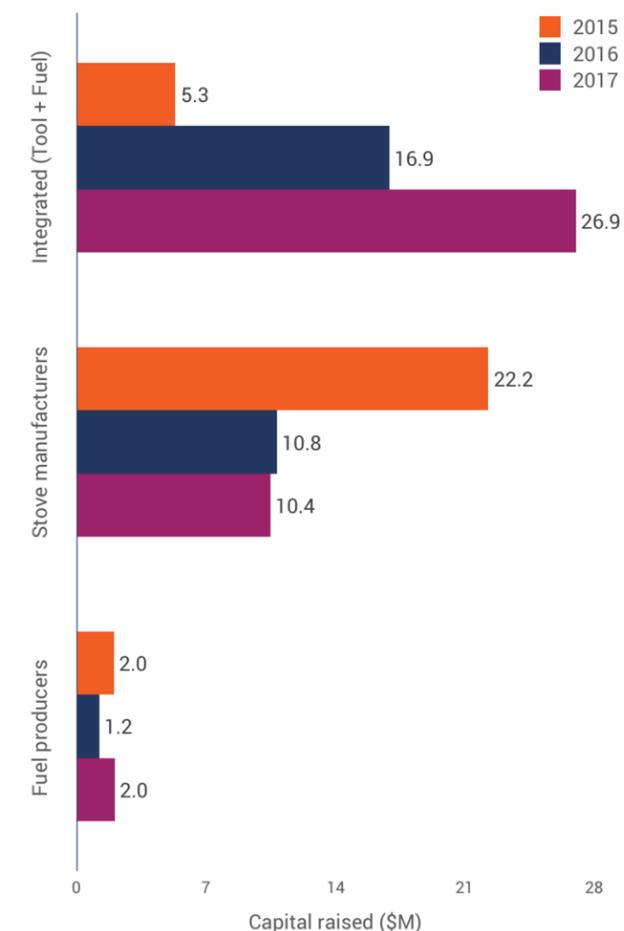
Fuel-based models promise higher growth than biomass stoves, but remain nascent.

Ten sector-leading biomass cookstove manufacturers generated average revenue growth of 6–8% per annum in 2016 and 2017. Such modest levels of growth are likely linked to relatively stagnant investment levels. Conclusions cannot yet be drawn about the six companies developing “tool and fuel” models across sub-Saharan Africa, Asia, and Central America, which are still early-stage. Four prefabricated biogas companies with operations in more than 15 countries in Latin America, Africa, and Asia saw healthy growth of 154% and 37% in 2016 and 2017, respectively.

Microfinance institutions and off-grid solar companies are emerging as important distribution channels for clean cooking solutions.

Companies with existing routes to market and consumer finance products, including off-grid solar companies and microfinance institutions, are increasingly serving as commercial distributors of efficient biomass cookstoves and other clean cooking solutions. Among 10 manufacturers in 40 countries, commercial distributors account for 67% of their reported sales volumes.

Capital raised by business model

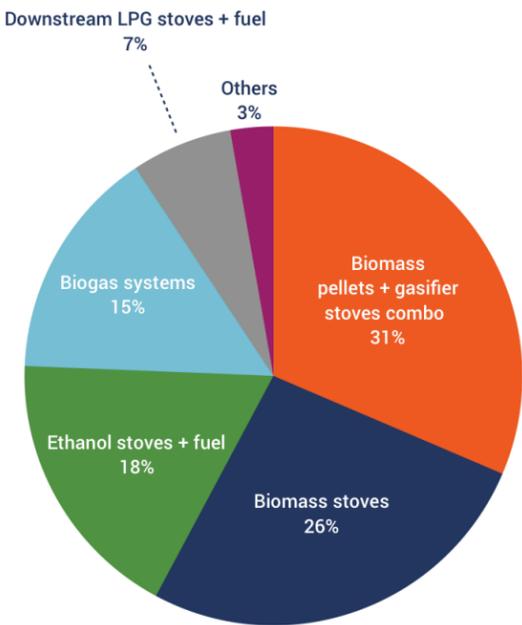


Source: Clean Cooking Alliance based on self-reported data by companies (2015–17).

Fuel type may impact cookstove margins, but does not necessarily imply viability.

Manufacturer margins on cookstoves, based on reporting for over 25 product models, show that forced-draft gasifier stoves and wood stoves earn margins around 35–37%, versus 25–30% for charcoal stoves. Added to the fact that no clear market for fuelwood exists, one factor likely at play is higher competition among charcoal stoves.

Capital raised by technology/fuel type in 2017



Source: Clean Cooking Alliance based on self-reported data by companies (2015–17).

It is still early, but there are reasons to be optimistic. The market seems to be evolving toward scalable and financially-viable solutions with higher degrees of social and environmental impact.

Technological and business model innovation is increasingly benefiting from more strategic public sector engagement, which aims to accelerate commercial approaches with investment potential. The industry is moving toward sustainability, scale,

and the delivery of solutions that are both affordable for consumers and beneficial from social and environmental perspectives.

While still in its infancy, private sector investment in clean cooking solutions for lower-income consumers is beginning to stimulate important innovation. Leveraging the foundation laid over the past 10 years, including standards and testing protocols, behavior change and awareness campaigns, and public advocacy, the sector has both come a long way and also faces a long road ahead. Combined with urbanization, poverty reduction, and financial inclusion, the clean cooking sector is poised to continue transitioning from a long-standing development challenge into a robust, commercial market opportunity in the years to come.



STORIES FROM THE SECTOR: A MANUFACTURER'S PERSPECTIVE

Faith Wanjiku is the customer care manager for Kenya at Envirofit, a social enterprise with a global product line of smart clean cooking technologies.



Alliance: What excites you about working at a company that manufactures clean cooking solutions?

Wanjiku: I have worked in logistics for over 10 years, but I didn't always have a role where I felt I was making a difference. Now, when I come to work every morning, I am excited to have an impact on improving the environment for everyone while also advancing my career.

Alliance: What do you hear from customers about why they value clean cooking products?

Wanjiku: I first learned about Envirofit from a salesperson who was also a customer. She told me about her child who has asthma and how the Envirofit Jiko is a lifesaver because it doesn't cause her child to sneeze and cough all the time.

CLEAN COOKING INVESTMENT FORUM: KIGALI, RWANDA | NOV. 5-6, 2018



The inaugural CCIF was opened by Ambassador Claver Gatete, Minister of Infrastructure in Rwanda, who reiterated his government's support for clean cooking.

The Clean Cooking Investment Forum (CCIF) 2018 was an inaugural private sector-oriented conference convening business leaders, investors, donors, and government representatives to collaborate on developing a clean cooking industry at scale. Under the theme of "Accelerating Investment in the Clean Cooking Sector," this two-day event brought together more than 250 people to amplify efforts to identify, support, and finance businesses with the potential to massively expand the clean cooking sector. Co-organized by the Alliance and Energy Private Developers Rwanda, CCIF was made possible thanks to the support of partners and donors, including Get.Invest (formerly the Africa-EU Renewable Energy Cooperation Programme), Energising Development (EnDev), SNV, the Government of The Netherlands, the European Union, BFZ, the Rwanda Development Board, and the Government of Rwanda.

With a targeted focus on increasing investment for clean cooking solutions, CCIF facilitated rich

discussions that highlighted a number of key trends in the sector. One major takeaway is that companies are increasingly deploying high-impact products and services through high-growth, scalable, and investable business models. However, further scaling up of these models depends on transparent and long-term policy frameworks, as well as a range of investments, including patient public and private commercial and concessional capital, technical assistance, and grants. At the same time, it is critical that companies scale at the right time and seek the right type of capital.



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Top: Company representatives, investors, donors, and others met in one-on-one networking meetings during a dedicated B2B matchmaking session.

Middle: CCIF featured sessions dedicated to policy, business, investment, market development, and innovative financing.

Bottom: A range of technologies and approaches were featured as part of the fuel and stove exhibition.

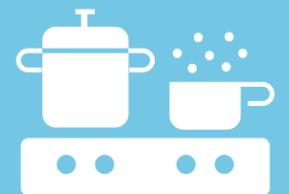
BY THE NUMBERS

250+ participants from **40+** countries



200+ one-on-one meetings between companies, investors, donors, consultants, and other participants

20 companies and other sector organizations demonstrated their products as part of a fuel and stove exhibition



50,000+ people reached via print, broadcast, and social media

99% of participants who evaluated the event indicated they would consider joining a similar forum in the future

2018 HIGHLIGHTS

Since its launch in 2010, the Alliance has worked to make clean cooking accessible to the billions who live each day without it. While much work remains to achieve our shared goals, the Alliance and partners have made noteworthy progress over the past year.



SUPPORTING COMPANIES TO BECOME INVESTMENT-READY THROUGH SPARK+

The Alliance delivered support to four companies in East Africa and Southeast Asia through its SPARK+ Technical Assistance Facility in March. With support from Shell, Osprey Foundation, Bank of America, and most recently the African Development Bank, SPARK+ provides operational, financial, strategic, and investment advisory support, as well as small amounts of grant funding, where appropriate, to companies with significant commercial and impact potential.



IMPROVING STOVE PERFORMANCE AND INNOVATION THROUGH STANDARDS

In June, the International Organization for Standardization, with support from the Alliance, published the first international standard for laboratory testing of cookstoves. Developed and approved by international experts from 45 countries, the new standard is expected to serve as the basis for national policies and programs on clean cooking, while also incentivizing manufacturers and developers to improve stove quality and performance.



SUPPORTING WOMEN ENERGY ENTREPRENEURS

For the fourth year in a row, the Alliance's Women's Empowerment Fund provided grants to women energy entrepreneurs working to increase access to clean cooking. The Alliance selected energy company CEO Chebet Lesan as its second Woman Entrepreneur of the Year Award recipient, which recognizes female leaders who are advancing clean cooking solutions in emerging markets.



MOBILIZING PRIVATE SECTOR INVESTMENT FOR CLEAN COOKING

The Alliance and Accenture produced a report on the financing, mechanisms, business models, and technology innovations required to scale up investment. The Alliance also developed a *Handbook for Cooking Fuel Enterprises* and contributed to third-party publications such as *SEforAll's 2018 Energizing Finance* report and *IEA's World Energy Outlook*.



SUPPORTING KNOWLEDGE SHARING ON CLEAN COOKING

In Ghana in May, the Alliance helped host a delegation of technical experts from across the Indian LPG value chain. The delegation visited Ghana's existing LPG operations, discussed plans for Ghana's new LPG recirculation model, and identified opportunities to learn from India's national cooking gas program, which has connected more than 50 million people to LPG since 2016. In July in Kenya, the Alliance hosted the latest in a series of South-South Cooperation Workshops, this time bringing together 30 participants from eight countries in Africa and Asia.



INSPIRING FAMILIES TO ADOPT CLEAN COOKING

The Alliance continued to support demand-enhancing and behavior change interventions across its focus countries, reaching 40 million people to date. A multi-year, external evaluation of four of the interventions revealed that there was evidence of effectiveness in achieving intended outcomes across all the interventions: the campaigns boosted awareness of clean cooking solutions by up to 25 times and in some cases doubled intention to purchase, with likely impacts on purchase and increased use of promoted stoves and fuels.



TRANSFORMING CLIMATE PLANS INTO ACTION

For the first time, the Intergovernmental Panel on Climate Change acknowledged that we will not be able to limit global warming to 1.5° degrees without reducing short-lived climate pollutants like black carbon alongside deep-cuts in CO2 emissions, including by deploying clean cooking solutions.



FOCUSING GLOBAL MEDIA ATTENTION ON CLEAN COOKING

With support from partners and champions such as actor Julia Roberts and Chef José Andrés, the Alliance continued to drive global support for clean cooking. Media outlets including the *Economist*, *BBC News*, *Reuters*, and the *Times of India* showcased the issue. The Alliance also launched its new name and brand, while ensuring clean cooking was prioritized at high-level forums, including the WHO Global Conference on Air Pollution and Health and the Global Climate Action Summit.



IMPROVING MATERNAL AND INFANT HEALTH THROUGH CLEAN COOKING

Alliance-supported research found that replacing inefficient wood and kerosene stoves with clean-burning ethanol stoves can have a positive impact on birth outcomes with babies born later and heavier.



IMPROVING ENERGY ACCESS IN HUMANITARIAN SETTINGS

The Alliance and partners launched the first-ever global, multistakeholder plan to ensure that crisis-affected people gain access to affordable, reliable, sustainable, and modern energy services by 2030. The Alliance's Humanitarian Clean Cooking Fund provided grants to two projects that will collectively have the potential to impact over 30,000 people in refugee camps in Ethiopia and Rwanda.



PRIORITIZING CLEAN COOKING IN NEPAL

Together with the Government of Nepal, the Norwegian Ministry of Foreign Affairs, and other partners, the Alliance launched the Modern Cookstoves behavior change campaign to promote smoke-free kitchens. The program included community events with celebrities, social media messages, catchy radio jingles, kitchen demonstrations, text messages, brochures, and stories in local newspapers. Of the closely targeted households, nearly 50% have purchased a clean stove.



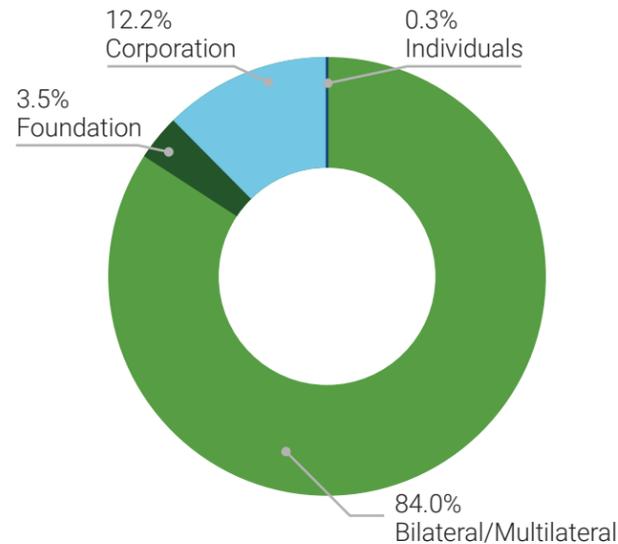
BUILDING DEMAND FOR CLEAN COOKING IN CHINA

The Alliance partnered with China's Ministry of Agriculture, Shell, local governments, and SSM (Shengzhou Stove Manufacturer) to launch a new clean cooking project in Zhejiang province. The project aims to encourage commercial enterprises to switch from wood and coal to biomass pellets.

FINANCIALS & DONORS

The Clean Cooking Alliance is grateful for the generous financial and in-kind support of its donors in 2018*:

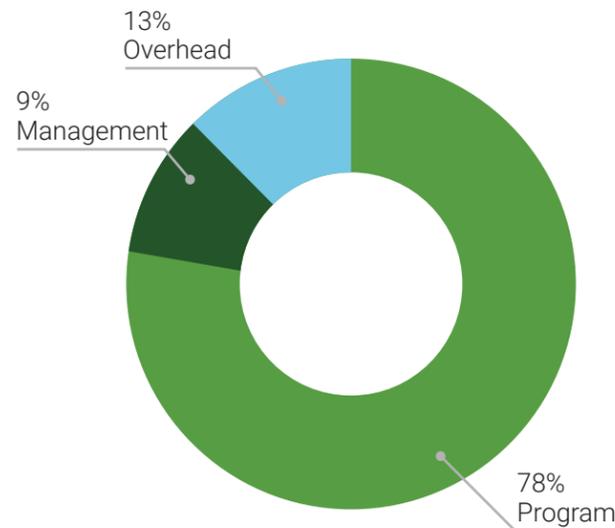
How Our Work is Funded



List of Major Donors

- » Climate and Clean Air Coalition
- » Global Affairs Canada
- » Finland Ministry of Foreign Affairs
- » Johnson & Johnson
- » Netherlands Enterprise Agency
- » Norwegian Agency for Development Cooperation
- » OPEC Fund for International Development
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Where Your Support Goes



Where Your Support Helps

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- » Cambodia
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- » Ethiopia
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- » Guatemala
- » Haiti
- » India
- » Kenya
- » Nepal
- » Nigeria
- » Rwanda
- » Uganda

*As an initiative hosted by the United Nations Foundation (UNF), the Clean Cooking Alliance is officially governed by the UNF's Board of Directors and its financials are included under UNF's U.S. Internal Revenue Service's Form 990. The United Nations Board of Directors maintains fiduciary responsibilities for the Alliance, and the UN Foundation also provides the Alliance with operational support and maintains a seat on the Alliance's Leadership Council.

STORIES FROM THE SECTOR: CONSUMER PERSPECTIVES

Shu Xinhua and Yang Dondi are mothers, grandmothers, and home cooks from Shou Rong village in Zhejiang province, China.



Alliance: What excites you the most about using clean cooking technologies?

Shu: This new stove doesn't have any smoke, not at all! My old stove often produced piles of ash, and there was smoke everywhere. The new stove is so clean now, and there's even no ash on the floor – I love it! I've used this stove over a month now and it's faster and uses less wood. I can cook a meal in a snap after returning home from hard farming work.

Alliance: What excites you the most about using clean cooking technologies?

Yang: I feel very good about the new stove. It uses half the amount of wood for cooking. It used to take one hour to cook a meal, but now it only takes half an hour so it's saving me time. Also, there's no smoke!

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CHAMPIONS



José Andrés
Founder of World Central
Kitchen and chef/owner
of ThinkFoodGroup



H.E. Samira Bawumia
Second Lady of Ghana



Rocky Dawuni
International musician &
humanitarian advocate



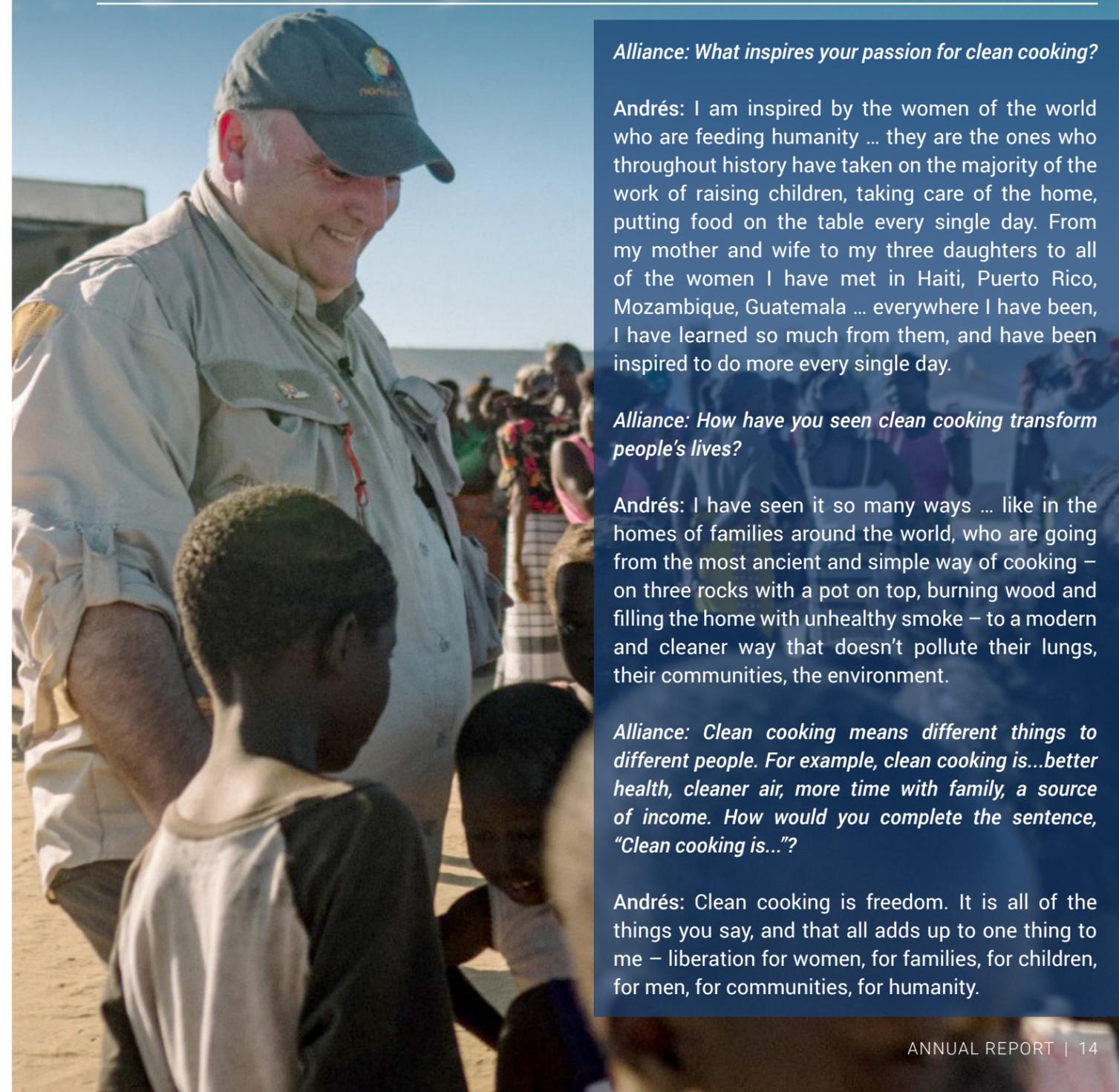
Julia Roberts
Actor



Zhao Wei
Actor and director

STORIES FROM THE SECTOR: A CHAMPION'S PERSPECTIVE

José Andrés is an Alliance Global Ambassador, Head of the Alliance Chef Corps, and founder of World Central Kitchen. He is also the chef/owner of ThinkFoodGroup.



Alliance: What inspires your passion for clean cooking?

Andrés: I am inspired by the women of the world who are feeding humanity ... they are the ones who throughout history have taken on the majority of the work of raising children, taking care of the home, putting food on the table every single day. From my mother and wife to my three daughters to all of the women I have met in Haiti, Puerto Rico, Mozambique, Guatemala ... everywhere I have been, I have learned so much from them, and have been inspired to do more every single day.

Alliance: How have you seen clean cooking transform people's lives?

Andrés: I have seen it so many ways ... like in the homes of families around the world, who are going from the most ancient and simple way of cooking – on three rocks with a pot on top, burning wood and filling the home with unhealthy smoke – to a modern and cleaner way that doesn't pollute their lungs, their communities, the environment.

Alliance: Clean cooking means different things to different people. For example, clean cooking is...better health, cleaner air, more time with family, a source of income. How would you complete the sentence, "Clean cooking is...?"

Andrés: Clean cooking is freedom. It is all of the things you say, and that all adds up to one thing to me – liberation for women, for families, for children, for men, for communities, for humanity.

STORIES FROM THE SECTOR: A HEALTH WORKER'S PERSPECTIVE

Bhetwal Saraswoti is a Female Community Health Volunteer in Kafledi Village in Kavre district, Nepal.

Alliance: What do you hear from people about why they value clean cooking?

Saraswoti: People tell me their new induction stoves are fast, clean, and cheap. Dozens of families have purchased new stoves after speaking with me. Others are gradually making up their minds about buying clean cooking options as they learn more about the benefits of clean cooking.

Alliance: What excites you the most about progress in clean cooking?

Saraswoti: I feel honored when people come to consult me about their health and I feel proud that I am able to help the community through clean cooking.



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cleancookingalliance.org