



Behavioural change campaign: promoting improved cooking solutions in Kakuma refugee camp

Key research and implementation findings

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Abbreviations

BCC	Behavioural Change Communication
EnDev	Energising Development
MBEA	Market Based Energy Access
KCJ	Kenya Ceramic Jiko
KII	Key Informant Interviews
PA	Public Address
SNV	SNV Netherlands Development Organisation
TSOF	Three Stone Open Fire

1. Introduction

This report describes the design of a **Behavioural Change Communications (BCC) campaign** to promote improved cooking stoves in Kakuma town, Kakuma refugee camp and Kalobeyei Integrated Settlement, and the experiences and key learnings of the first six months of BCC campaign implementation (June to December 2021).

Kakuma town, Kakuma refugee camp and Kalobeyei Integrated Settlement¹ are home to over 280,000 people, including refugees and the host Turkana community, and located in arid, sparsely vegetated Turkana County, in north-western Kenya. The refugee community comprises people from South Sudan, Somalia, the Democratic Republic of Congo, Burundi, Ethiopia, Uganda, and Rwanda, among other countries. Similar to many low-income, off-grid contexts in Kenya, firewood and charcoal are the primary resources used for cooking by both the host and refugee communities in their households and small (food) businesses.

At the time of campaign design (end of 2020), UNHCR provided a basic allocation of firewood for free to refugees which was supplemented by the communities through purchasing firewood and/or charcoal in their local markets or gathering firewood in the nearby bushes. In 2021, the allocation was phased out and integrated into an existing cash-based support mechanism to refugees, which covers 11% of monthly fuel needs.

Cooking through inefficient practices such as open fires and basic firewood and charcoal stoves, leads to high fuel expenses, environmental degradation, and health issues. In addition, specific to the refugee context, the resource scarcity caused by firewood collection and charcoal production in the area leads to tensions between the local host community who run the firewood and charcoal markets, and the refugees who are formally not allowed to gather firewood but still do so at high risk, especially for women and girls.

SNV, under the [EnDev Market Based Energy Access \(MBEA\) project](#), has been working since 2017 on increasing the availability of improved stoves and solar products in the local markets. A local artisanal stove production unit was established and commercialised, producing affordable (low-tier) improved artisanal stoves². SNV also provides ongoing activity-based support to stove distributors to enter the market in Kakuma and develop distribution channels for (high-tier) industrially manufactured stoves, giving residents greater choice in options for stoves that meet their needs and purchasing power.

Even though various improved stove models were made available in the local markets through the provision of market-based support, uptake remained limited. Most people were used to cook on three stone open fires (TSOF) or basic metallic charcoal stoves and awareness of the improved stove options and their benefits was limited. This showed the need for **awareness creation on the benefits of improved stoves in a way that would change people's behaviour and trigger an intent to invest.**

To this end, behavioural change experts from consulting firm [17Triggers](#) supported SNV to develop an effective, culturally appropriate BCC campaign **for people in Kakuma to become aware of, purchase and consistently use improved stoves at the household and commercial level.**

¹ Referred to as 'Kakuma' in this report unless explicitly mentioned.

² The Stove Production Unit produces Kenyan Ceramic Jiko (KCJ) charcoal stoves in small, standard, medium and large size, and a multipurpose stove which can use both firewood and charcoal. KCJ type stoves are considered basic improved cookstoves (ESMAP, 2015).

This report presents the:

- approach to the initial formative research and campaign design,
- the formative research findings,
- how these findings were integrated into the BCC campaign design and implementation process,
- and finally, the key learnings from the first 6 months of implementing the BCC campaign and the outlook going forward.

2. Formative research and campaign design approach

The development of the BCC campaign was based on in-depth formative research, ideation, and testing using a human-centred design approach. This chapter presents the methodology developed by 17Triggers to design the BCC campaign.

Before starting with any design, the consultants needed to understand the context, motivations and barriers affecting the target groups. The initial target audiences for the campaign would be **refugee and host community households** and **food businesses**, also called “eateries” (who use their cookstoves for commercial purposes). These two groups became the central focus of the design approach aimed building understanding of the context and influences that affect these groups.

To understand the context, motivations and barriers, the research and design followed the process as depicted in **Figure 1** and further explained below.



Figure 1: BCC campaign design process

2.1 Situational analysis

The situational analysis mapped the landscape of cooking in Kakuma to understand overall demographics, communication channels, cooking practices and the contextual factors influencing households and eateries. The analysis was based on extensive literature review and Key Informant Interviews (KII) with SNV project staff, MBEA II partners and humanitarian agencies.

2.2 Formative research objectives and key questions

Once an understanding of the local landscape and context was achieved, the research team, led by 17Triggers remotely and conducted by SNV team members on the ground, aimed to build deeper understanding of the two target audiences.

The research aimed to:

- Understand the specific **personas as target audiences** for the campaign:
 - Households: With an estimated 55,000 households in Kakuma, from both the refugee as well as the host community, this target group formed the basis of the campaign’s focus
 - Eateries: As more heavy-duty users of cookstoves and cooking fuel, and with potential resources for purchasing improved stoves, this target group formed a subset of the campaign audience.
- Understand the impact of cultural food and cooking preferences on choices for cookstoves and fuel, focusing on the larger ethnic groups in Kakuma through the **Elephant-Rider-Path behavioural framework** (see below).

Starting with the development of **fictional target personas** which would become rough archetypes for the households and eateries, the research team conducted field research to

validate and update these personas, looking at the key drivers and effective communication channels.

Target personas

The following fictional personas were developed based on the situational analysis to become rough archetypes of the target audiences to guide the research. The personas were selected to represent the largest groups in the Kakuma area and were of higher-than-average income to imply ability to afford improved stoves. Starting with a basic set of assumptions at the start of the research, these personas were continually refined and shaped, based on validation from field activities. See a description of the target personas ‘Bendera’ and ‘Deng’ in Table 1 and Table 2.

Table 1: Description of household persona ‘Bendera’

Bendera, homemaker			
Bendera is the homemaker of a family who has been in Kakuma since 2012. She lives in a 2-bedroom house made from iron sheets with her husband and four children. Her current kitchen is indoors though she occasionally cooks outdoors. She would like to improve her kitchen eventually into a separate kitchen as currently, her children sleep by the kitchen.			<i>“My future plan is to run a shop business. I also plan to ensure my children get a good education.”</i>
Family	Married with 4 children		
Finance	Kes 6,000-8,000 per month (\$53-72)		
Home	2-room iron sheet house with solar system for lighting, radio and phone charging		
Occupation	Works with a community-based organisation		
Literacy	Semi-literate in English/literate in mother-tongue		
Stoves	Fuel expense	Social influencers	Media
Kenya Ceramic Jiko (KCJ), multipurpose stove, Three Stone Open Fires (TSOF) (sometimes)	Spends KES 200/week (\$1.80) on charcoal	Neighbours, Friends, community leaders, women’s group	Videos via WhatsApp, radio, posters, trucks with Public Address systems



Table 2: Description of eatery persona 'Deng'

Deng, hotel owner			
Deng is the owner of an eatery that has been in business since 2014. He operates with five staff and serves three cultural dishes. He's not happy with his current stoves but is waiting until he gets more customers to buy an improved stove.		"I want to be able to cook more dishes and get uniforms for my employees."	
Family	Married with 6 children		
Finance	KES 30,000 per month (USD \$270)		
Home	3-room iron sheet house, on the diesel grid for electricity, sometimes has extra money for DSTV		
Occupation	Runs an eatery serving 50 customers a day		
Literacy	Semi-literate in Swahili/Literate in mother-tongue		
Stoves	Fuel expense	Social influencers	Media
LPG, KCJs (several), Multipurpose	Spends KES 800/week (USD \$7.20) on charcoal	Family, friends, community leaders, customers	WhatsApp, radio



The Elephant Rider Path (ERP) behavioural framework

Triggers used the behavioural change framework 'Elephant-Rider-Path' to guide the research activities which informed the BCC campaign design. The framework, based on the work of social psychologist Jonathan Haidt, and refined by behavioural economics authors Chip and Dan Heath³, looks at different types and levels of motivation and barriers to actions, in this case to the adoption of improved cookstoves. The framework uses a simple analogy of an **Elephant** with a **Rider** on top, walking along a **Path**. This is used as a lens to analyse the target audience's context and mindset.

- **The Elephant represents Emotion** which is often unacknowledged and reactive, therefore the persona needs to be strongly motivated in order to drive to action. The research therefore aimed to understand: *what do households or eateries **feel** (good or bad) about improved stoves?*
- **The Rider represents Knowledge:** the persona needs to have a clear vision and direction for what action to take. The research therefore aimed to understand: *what do households or eateries **know** (good or bad) about improved stoves?*
- **The Path is the Environment in which the persona exists**, which can make it simple or difficult to perform the action. The research therefore aimed to understand: *what is the household or eatery's **access** to an improved stove?*

Using this lens to understand the target audience informs the nature of messaging required for a BCC campaign: whether to appeal to (which) emotion, or to strongly educate (on which point), or perhaps focus on processes to make it easy for the audience to buy the stoves.

³ Main works Chip and Dan Heath: 'Switch: How to Change Things When Change is Hard' (2010), 'Decisive: How to Make Better Choices in Life and Work' (2013); 'Made to Stick: Why Some Ideas Survive and Others Die' (2007).

Formative research - activities

To gain a deeper understanding of the key personas, answer the questions per Elephant, Rider, Path component, and identify relevant communication channels to inform BCC campaign design, 17Triggers developed various research tools and activities. These activities were carried out by the SNV team based in Kakuma. Research was highly iterative and adaptive, based on direct learnings and insights from the field. As the team learned more each day, new methods were designed to test perceptions, ideas, and ways to overcome assumed barriers. The following research activities were conducted:

Initial discovery:

- Contextual interviews with local stove vendors, households, and eateries from both the refugee and host communities, conducted at their place of work or residence. The research team was able to share photos of the cooking set-up, for the wider teams to appreciate.
- Photo challenges where the local teams found examples of topics of interest such as firewood and charcoal sales, community billboards, examples of cooking set-ups, to share with the remote team and build familiarity with local set-ups and environments.
- Quick 'person-on-the-street surveys' to build deeper understanding of specific facets of personas' lives. For example, 30 households shared their key expenses and plans for what purchases they would prioritize if they could reduce their spend on charcoal and firewood in the 'Budget Card Sort Game'. The teams used this method to test:
 - a. which of the current stoves people were aware of;
 - b. people's fuel use, cost of living, and aspirations.

As the teams' understanding grew of the local communities and their target personas of Bendera the homemaker, and Deng the eatery owner, the research became more targeted and iterative, with the objective of immediately testing assumptions through short experiments:

Co-creation:

- Ideation workshops were held within the research team, leveraging the deep local context of the SNV team on the ground, generating creative ideas for how to tackle specific challenges encountered throughout the research.

Trials:

- 'Try a cook stove' activities in which households and eateries were invited to test an improved cook stove for a week and provided regular feedback on their experiences and observations

Demo tests:

- Cookstove demonstration sessions in which community leaders were able to see and handle the array of stoves available in the market, see their performance, and provided feedback on how awareness should be raised among their specific communities
- Market demonstration sessions wherein the research team set up a table at a local market to showcase multiple types of stoves
- Raffle wherein winners (from a raffle held at the previous market) won the chance to use the cookstoves to cook a meal of their choice, to see how the experience could affect them and their invited guests

Message testing:

- Rapid message testing with households which helped validate early ideas for messages, characters and feelings that resonate across communities:
 - a. which messages resonated better?
 - b. which priorities or values did people associate with?

Conducting formative research during the COVID-19 pandemic

Due to the travel restrictions of the global COVID-19 pandemic, the research had to be carried out by the SNV team based in Kakuma with remote guidance and support from 17Triggers. The SNV team in Kakuma consisted of one project field manager and 6 local capacity builders from both the refugee and host community.

17Triggers designed field guides with clear step by step instructions. Considering the multicultural context of Kakuma, most of the tools were visual icons with minimal text, to allow for easier comprehension across the multiple ethnicities.

Before going to the field, the tools were explained by 17Triggers to the team in Kakuma through a joint video call. After the briefing call, the research teams went into the field and carried out the activities with the agreed number and types of participants. To reduce the need for data entry, the field guides were designed for easy data capture, with the team members simply uploading photos of their field notes to WhatsApp, alongside voice notes with a debrief in which they highlighted key learnings.

Relying on the SNV team in Kakuma for the research activities created ownership and deep understanding of the campaign messaging and activities by the local team, which led to effective implementation of the campaign from the beginning as hardly any additional training was necessary. Only when team members left and new team members joined, more detailed training was needed.

2.3 Ideation, testing and final campaign development

The key formative research findings were used to **ideate** several messages, activities and channels which were **tested** among the households and communities in Kakuma to inform **final BCC campaign messages, tools and channels**.

The ideation included a workshop with 17Triggers and SNV team in which through creative exercises messages were developed to communicate on the benefits of improved cookstoves. 17Trigger consequently prototyped a variety of key messages, tools and activities which were tested by the SNV team in Kakuma. The feedback from the audiences and team informed further iteration and evolution of prototypes of campaign materials including posters, flyers and taking scripts which were tested again to ensure a validated set of BCC campaign messages, tools and channels. Finally, 17Triggers presented a set of tools and activity descriptions with implementation guidelines for SNV.

3. Key formative research findings

This chapter presents the key findings of the situational analysis and formative research that informed the final BCC campaign design to promote improved cooking in Kakuma.

3.1 Situational analysis

This section presents the general demographics of Kakuma, cooking practices among refugees and host community, and factors influencing households and eateries' cooking practices. The analysis is based on extensive literature review and KII. The interviews were conducted both in person and virtually with 9 agencies operating in Kakuma, including World Food Programme, UNHCR, Kenya Red Cross, Norwegian Refugee Council, Jesuit Refugee Services, Danish Refugee Council, Film Aid, Lokado, Africa Action Help and Peace Winds Japan. These agencies had been selected as they had direct experience in providing services to the Kakuma communities, had previously run communication campaigns, and had insights on local perceptions and attitudes towards health, communication, culture and cooking practices.

Demographics

The refugee community of 222,390 people⁴ in Kakuma and Kalobeyei covers a wide diversity spanning 20 nationalities, ranging from long-term settled residents who have been in the camps since 1992 to recent and, often more vulnerable, arrivals in Kakuma Camp 4 and Kalobeyei. Households range in size and composition, and also include self-formed units where displaced individuals might band together to form their own households. See **Figure 2** for a map of the area and **Figure 3** for the demographic composition of refugees, asylum-seekers and Turkana residents in Kakuma and Kalobeyei.



Figure 2 Map of Kakuma town, Kakuma refugee camp and Kalobeyei Integrated Settlement

⁴ [Kakuma & Kalobeyei Population Statistics-As of 31th Oct 2021](#)

The Turkana host community of 60,000 people ranges from settled households with income generated from trade and services with the refugees, to recently nomadic people who have suffered losses to their crops and cattle and are themselves vulnerable.

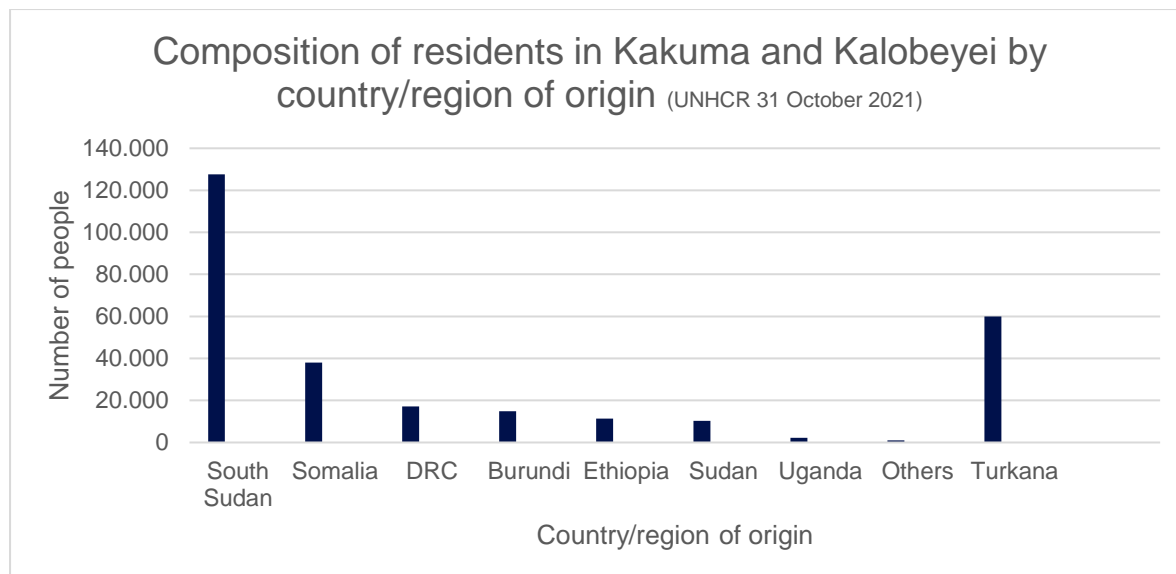


Figure 3: Composition of residents in Kakuma by country/region of origin

The most common languages spoken are Kiswahili and English. Other common languages are Dinka, Nuer, Somali, French, Arabic, Kirundi, Amharic, and Kinyarwanda.

Cooking in Kakuma

Cooking practices

The most common cooking practices are three stone open fires (TSOF) - using firewood -, Kenya Ceramic Jiko “KCJ” (charcoal), all-metal stoves (charcoal) or the UNHCR provided multipurpose⁵ Maendeleo stove. Firewood and charcoal are the main sources of fuel for cooking. LPG is limitedly available in Kakuma town with only minor uptake due to the high price. See **Table 3** for an overview of the different cooking methods and findings on the advantages and disadvantages that came out of the research.

⁵ Multipurpose meaning that the stove can cook using either firewood or charcoal





Cooking technology	3-stone open fire (TSOF)	Kenyan Ceramic Jiko (KCJ)	All metal stove	Maendeleo
Visualization				
Advantages	Good for big pots, large surface areas	Good for fast cooking, ceramic liner retains heat better	Good for fast cooking, very durable, no need for frequent replacing	For cooking with any fuel they have
Disadvantages	Can't use if raining, stove repositioned when muddy	Ceramic liner made of clay can break	All-metal body loses heat	Ceramic liner made of clay can break
In - or outdoor use	Outdoors	Portable: Indoors and outdoors	Portable: indoors and outdoors	If portable, indoors and outdoors If fixed in mould, indoors

Table 3: Overview of most common cooking methods

Stove availability

The available stoves in the market include artisanal KCJ stoves, both locally produced by the MBEA II supported suppliers or purchased from Nairobi and Kisumu, with price ranging from 350–800 KES (€2.75–€6.30⁶), to various industrially manufactured stoves that cost between 3000 KES (\$23,60) to 5000 KES (€39,40). The stoves are available through different suppliers, of which most are supported through the EnDev MBEA project. The suppliers sell their products through local vendors on both cash and instalment basis. At the time of the formative research, it was expected that more suppliers would enter the market and current suppliers would expand their stove products offering.

Fuel availability

Charcoal and firewood are the predominant fuels used for cooking. The fuels can be purchased in the market (often supplied by women from the Turkana host community) or (illegally) collected from the nearby bush. Firewood and charcoal prices fluctuate and vary per area and season (i.e. dry or rainy season). At the time of the research (January 2021) the cost of firewood per 'bicycle bundle'⁷ (40KG) was 200-650 KES (€1,50–€5,10) and per charcoal sack (42KG) 500-800 KES (€3,95–€ 6,30) depending on quality, availability and

⁶ Exchange rate of 1 EUR = 127 KES applied

⁷ Firewood is being sold by the amount that fits on a bicycle (used for distribution to end-users) which is on average 40KG.

weather conditions (see **Figure 4** and **Figure 5**). A family of 5 was found to spend 230 KES (€1,80) per week on cooking fuel on average.



Figure 4 Firewood bicycle bundles sales in Kakuma



Figure 5 Charcoal bicycle bundle sales in Kakuma

Factors influencing cooking practices

The following factors were identified which affect the household or eatery's cooking practices in Kakuma:

Cooking inside or outside:

- **Kitchen set-ups:** Most permanent shelters are designed with semi-attached outdoor kitchens; however, some households choose to convert these into rooms, and therefore cooking is either done inside where there is decreased ventilation or outside where it is subject to weather and wind conditions. Temporary shelters, such as in parts of Kalobeyei, have tarpaulin tents which do not allow for ventilation or safe indoor cooking.
- **Climate and weather:** The area is arid and dusty. Wind can affect outdoor cooking by losing heat and increasing fuel consumption, while rainy seasons force households to rely on indoor cooking and charcoal due to wet firewood.
- **Health:** Smoke and indoor air pollution from biomass stoves cause respiratory issues. This affects not only the cook, but often children or other family members that are nearby the stove. People doing the cooking often 'label' the issues as irritations that arise from doing various chores and are not fully conscious of the further serious implications.

Interviews with local health institutions reported that respiratory illnesses are the highest incidences that residents present at local health clinics and considered a key health issue, and while refugees can access free medical services, the local Turkana cannot, impacting their quality of life in terms of health and finance.

Experience in market interventions as well as lessons from other BCC efforts⁸ repeatedly show that while good health is appreciated as a benefit of using improved cooking approaches, it is too long-term and intangible to act as the main driver.

Choice of cooking fuels:

A firewood-fuelled stove is part of refugees' initial set-up: UNHCR issues a locally produced multipurpose Maendeleo stove to refugees upon arrival, which can set the expectation to continue using firewood despite low rations/cash-based support and restrictions in their ability to collect.

- **Firewood is free for the host community:** The Turkana community, as opposed to the refugee community, has free access to firewood that they can collect at any time, so they do not have immediate need to upgrade to a cleaner form of fuel, since it would be more expensive. The refugee community is not allowed to collect firewood for security reasons as per UNHCR regulations given the risks for women and girls.
- **Social-cultural background:** Cooking is ingrained in one's roots, allowing refugees to recall home. Some may continue practices, such as gathering firewood, despite restrictions because of their former habits. Strong attachments to cooking approaches can also result in resistance toward changing stove or fuel type.

⁸ Stockholm Environment Institute (2016). What's Health Got To Do With It? Testing Marketing Messages For Clean Cookstoves In Cambodia And Kenya. *Stockholm Environment Institute Working Paper No. 2016-04*. [Online](#).

- **Safety:** Collecting firewood becomes a safety risk. The initial bimonthly fuel handouts and now cash transfers for cooking fuel are very limited⁹. Refugees are not allowed to collect their own firewood as per UNHCR guidelines for safety reasons, so they have to find ways to acquire more firewood or move to charcoal stoves. The refugees who can't afford to purchase fuel in the market continue to collect firewood in the bush at high risk, with violent conflicts and sexual assault reported, which also lead to further tensions between the host and refugee communities.

Other factors influencing cooking practices and preferences:

- **Ability to pay:** Income levels vary greatly among the communities, ranging from established households who have been there since the camp formed, thriving businesses in entrepreneurial-minded communities, and households who regularly receive remittances from family abroad, to the other end of the spectrum with highly vulnerable no-income households which depend completely on cash/voucher support. Despite this range of income levels, a 2020 study by Refugee Studies Centre found that in Kalobeyei 89% of refugee households are indebted towards retailers¹⁰.
- **Upgrade does not mean replacement.** Higher tier models of cleaner stoves can be up to ten times more expensive than the artisanal stoves. As households and eateries use multiple stoves at a time, a newly added cleaner stove may not completely replace the older stoves or TSOF, but at least it can reduce overall fuel consumption where cooking needs expand.
- **Small vs. large pots and cultural meal preferences:** The size of the family impacts the type of stove that is more convenient as well as the preferred meal type. Cooking for large groups requires larger, heavier pots, which need to balance well on top of a stoves. Households opt for all-metal stoves for reasons of durability and stability, despite not being heat-efficient, or TSOF as it caters for large pots as opposed to small KCJs. Similarly, different cultures have specific traditional food that they prefer, such as injera for Ethiopians, or spaghetti for Somalis. Specific dishes have different energy requirements, and certain dishes like 'injeras' (flatbread and Ethiopian staple food) need a wide surface to cook on, so the TSOF becomes the most practical for cooking.

General observations influencing the BCC campaign design:

- **Beneficiary mindset:** The restrictions on movement and formal employment, lack of resources and agency, the hidden trauma of their circumstances, and the high visibility of humanitarian agencies on the ground can lead to a "beneficiary mindset" amongst refugees, with expectations of handouts and support. This exacerbates resentments from the host community who are not eligible to receive the same benefits although they may be in similar economic straits. It is important to note that this cannot be generalised, as there are always communities and individuals able to rise above their circumstances and create opportunities to improve their quality of life.

⁹ Firewood handouts covered approximately 20% of fuel needs, current cash transfer amounts to KES 42 per person per month which covers approximately 11% of fuel costs.

¹⁰ Refugee Studies Centre (2020). Cash Transfer Models and Debt in the Kalobeyei Settlement. [Online.](#)

3.3 Communication channels

The following effective communication channels were identified in the situational analysis, based on what other agencies used in the area, and their reported success with each:

What has worked for other agencies	Unsure
<ul style="list-style-type: none"> ● Media: <ul style="list-style-type: none"> ○ Radio ○ Posters ● Digital: <ul style="list-style-type: none"> ○ WhatsApp ○ Relay app (bulk SMS system) ● Public events: <ul style="list-style-type: none"> ○ Demonstrations ○ Drama groups ○ Trucks with Public Address (PA) systems and mobilizers ● Influencers: <ul style="list-style-type: none"> ○ Community leaders ○ Religious gatherings ● Public spaces: <ul style="list-style-type: none"> ○ Markets ○ Food distribution points ○ Field post centres ○ UNV centres in Kalobeyei 	<ul style="list-style-type: none"> ● Television: unknown level of access ● Facebook: users are younger, literate in English and Swahili; may not connect to target audience (stove users) ● School children: not reliable in passing messages on to their households ● Billboards: unsure about use in Kakuma

Table 4: Communication channels

3.4 Key findings based on the Elephant-Rider-Path framework

The following key findings per Elephant-Rider-Path component (Rider for knowledge, Elephant for emotion, Path for environment) on why households and eateries would consider upgrading to improved stoves were found which formed the basis for the BCC campaign design. This information was gathered through the various activities as explained in chapter 2. Formative research and campaign design approach.

Rider – Knowledge: what do people know (good or bad) about improved stoves?

- **Bendera and Deng DO know improved stoves are out there, but they don't know the names or the difference between the stoves and estimate the prices are lower.** People have heard of improved stoves “that use less fuel” but have not seen them in the markets. When asked to estimate the prices, they would undervalue them by almost half the actual stove prices. Of the ones people have seen, they don't know what they're called or the difference in efficiencies between models. They do know to ask about fuel type and consumption, durability, and whether the holes let too much heat escape.

- **Conceptually, Bendera and Deng do NOT realise improved stoves lead to cost savings.** Fuel is seen as a fixed cost and unlocking fuel budgets is not obvious. Charcoal was a constant top expense in budgets; they know they spend a lot but don't actively look for how to reduce it. The budget card sorting activity revealed to households that fuel budgets could be reallocated to other activities. This made people realise that there is a direct connection between purchasing an improved stove and reducing fuel cost.
- **Until he tries it, Deng does NOT realise improved stoves lead to more business.** Overall eateries are waiting for increased business demand before upgrading to an improved stove. In addition, eateries say 'no' to improved stoves because of a lack of experience using them. In the "Try a Stove" activities, eateries made a connection between an improved stove and increased business, as its use enabled them to increase their output and their speed, which generated more income. Moreover, it led to the realisation that they can use the same charcoal amount to make more dishes.
- **Bendera and Deng DO know smoke is bad for health.** Households and eateries know that the current smoky stove is bad for one's health: it causes hurting eyes and coughing, but the consequences are too far in the future to inspire action. Kenya Red Cross confirmed that respiratory tract infections and eye conditions are the main health complaints in Kakuma, caused by stove smoke and the dusty environment.

Community leaders are strongly aware of the causes of the health issues as they have been exposed to health messaging but don't actively advise the households in their communities. Apart from sore eyes and coughing, people don't like to smell like smoke and the smoke and soot make the saucepans and the kitchen walls dirty. Households know when their stoves are poor-quality by how much smoke and soot it generates but accept it as an inconvenience rather than an actionable thing to change.

Elephant – Emotion: what do households or eateries **feel** (good or bad) about improved stoves?

- **Bendera and Deng DO want to reduce cooking time.** The 2 eateries and 5 out of the 6 households participating in the "Try a stove" activity reported that the improved stove cooked faster and freed up time, which made them realise that they could spend more time with their family and on the business.
- **Bendera and Deng DO want to buy the stove after using and/or seeing it, preferably in instalments.** Already after only day 1 of the "Try a Stove" trial, all participants wanted to keep using the improved stoves and the majority put in orders, while others started negotiating with the budget controllers at home.

All participants wanted to pay in instalments. Moreover, the participants experimented both cooking indoors and outdoors, whereby their neighbours were able to see the stoves and expressed demand. Eateries had known about the improved stove but had not even considered it as they could not justify the expense.

- **Bendera and Deng DO want to improve the kitchen. An improved stove can become a catalyst for other improvements.** Depending on the set-up of having indoor or outdoor cooking areas, households and eateries have plans for how to improve their current kitchens. Having a space to cook indoors is aspirational, as it allows cooking in any weather condition. If their stove no longer produced so much smoke or soot, participants looked forward to the prospect of improving the convenience and cooking

space by finally cleaning soot-stained walls and improving the atmosphere, putting up shelves and tables in indoor kitchens so that stoves can be off the floor.

- **Bendera and Deng do NOT think about the next stove until the current one breaks.** Refugees are given a stove, and host community households have free firewood, so there is no urgent need for a new stove until the current one breaks. If they do not see better options, they will replace their current stove with the same type, bypassing the higher tier improved stoves as something for “higher class” people.

Path – Environment: what is the household or eatery’s access to an improved stove?

- **Price is the largest barrier for NOT purchasing an improved stove.** Considering the limited resources available to refugees and to the host community, it was no surprise that all of the “Try a Stove” participants would only consider instalment plans. In addition, the budget controller needs to be convinced. At the household level, the woman primarily decides on the stove to buy, and will have to convince the main cost winner. While she may like specific features like cleanliness and comfort, she will promote the durability and cost savings aspects. For eateries, the business owner decides.
- **Once Bendera was shown HOW to use the stove, she realised she, too, could own and use one.** It can be intimidating to think of using stoves different to what they currently have. Unless invited to try, people can convince themselves that these are for “high class” households only. The research team took the time to show the “Try a Stove” participants how to use the new stoves, which gave them confidence and pride when they could later show their neighbours. Community leaders also cited how they had learned how to use bioethanol and LPG stoves through demonstrations, which made them feel confident to show others.
- **Even if they want it, it is NOT (yet) easy for Bendera or Deng to find and purchase an improved stove.** Interview respondents across households, eateries and community leaders were surprised to see the improved charcoal and firewood stoves as they did not realise these are available in Kakuma. There is strong interest, so the key is to make the residents easily find the stoves in their local markets.

3.5 Overall key findings & summary

These findings led to three key insights which formed the basis of the BCC campaign design:

- **Seeing the difference made a difference.** After a week of the “Try a Stove”, activity, participants could tangibly see how much less fuel the improved stoves used. Understanding and visualising fuel savings is key. Households need to see, whether it is to actively use an improved stove, or at least seeing how it works, to comprehend how much less it consumes. It also helps to visualise where savings can be channelled to, and therefore stop complaining passively and start visualising the opportunities.
- **Improved stoves are giving back lost time.** Stoves are a steppingstone to other activities: the households reported that cooking and cleaning is faster and easier, keeping pans clean, reducing soot that accumulates on the walls and in general reducing the amount of smoke created, and by consequence stop having itchy eyes or a cough. The stove’s efficiency results in extra available time.

- Levelling up in life.** Most people thought improved stoves were high-end, and therefore not a possibility for them, especially if they perceived their homes were in not good conditions. However, by the end of the “Try a Stove” activities, all households and eateries ranked their improved stove as 5 out of 5, had told their neighbours about them, and reported pride in feeling admired and respected by their neighbours and customers. Stove sellers indicated that while many did not buy the improved stoves because the price was intimidating and they did not know how to use them, those who did purchase a new stove were proud of their choice.

The assumption going into the research was that drivers for behavioural change would be diverse across households and eateries. However, despite eateries being commercially oriented with higher income and operational costs, it was found that eateries’ needs, and motivations align with households that cook for large numbers – which can also be attributed to the fact the research focused on target audience with an above average income. The one distinguishing driver from the research is that cooking is a source of income for eateries, therefore, an improved stove can be seen as a business investment. See a summary of the key findings in **Table 5**.

Table 5 Summary of key motivators and barriers

	Rider	Elephant	Path
Motivators <i>What makes people want an improved stove?</i>	Knowledge: Knows which stoves are improved stoves Savings: Uses less fuel = cost savings Investment*: Improved stove can lead to more business <i>*Specific to eateries</i>	Convenience: Produces less smoke: I don’t smell, better for health, less smoke = less soot = easier to clean Save time: Want to spend more time with family and friends Aspiration: Want to improve their kitchen	Recommended by trusted party: Seeing a friend/neighbour have one Confidence: Learned how to use it, had been afraid of it before Affordability: Can pay in instalments
Barriers <i>What makes people not want a cleaner stove?</i>	Cost: Stove is too expensive	No perceived need: Current stove is not broken (no need to replace) or other more pressing priorities	Difficult to access: Don’t see improved stove anywhere

4. Campaign design, implementation and observations

This chapter presents the structure of the overall campaign as informed by the formative research findings, the specific campaign activities and how each was implemented, any adjustments and preliminary results.

4.1 BCC campaign design

The key findings and strategic recommendations were translated into several messages, activities and channels. These were tested among the households and communities to determine the final BCC campaign content.

The formative research found that the campaign had to address a number of key challenges and barriers to the uptake of improved stoves and therefore the final BCC campaign design aimed to ensure that the target audiences:

- **Know availability and affordability:** Know that improved stoves are now available in the markets, and how much they actually cost and ways to pay for them (including instalments)
- **Know benefits:** Know the features and benefits so they know what to ask for when purchasing their next stove
- **See savings:** Through trials or demonstrations, show the savings that can be made from changing to an improved stove
- **Experience and decide:** See and experience the improved stoves.

Campaign messaging

These barriers informed the final messaging of the campaign which included 3 key benefits, each related to a different type of “saving”, that can be done thanks to an improved stove, linking to an immediate effect:

- Less smoke, more health
- Less fuel, more savings
- Less cooking time, more family time

The simplicity of the messaging also made it easier to convey the messages in a visual way (through photos) that can cater to the multi linguistic audiences with various literacy levels in Kakuma. In terms of language, it was decided to initially start with having all tools in both English and Kiswahili as this catered to the majority of the communities. The project team was also encouraged to translate the tools if necessary to their respective communities when carrying out the activities and using the tools.

Campaign tools and activities design

The final campaign design was developed in a way to make people go through a ‘customer journey’ (the steps people take to purchase a good or service) as depicted in **Figure 7** (activities and tools in the boxes). In the awareness phase people learn about which stoves are available through reading information on **posters**, hearing about it on the **radio**, seeing the stoves in the market at the **vendors**, receiving a **flyer** with information and listening to the

messages through the **public service announcement (PSA)** activities. In the consideration phase people are triggered to apply the gained knowledge to themselves: what benefits could an improved stove bring to me, and could I afford this? Through seeing the stoves being used in **market demonstrations** and reaching out to a **chatbot** to receive more information. Through participating in **the market demonstrations**, trying a stove for their business through the **cookstove library** and understanding the different payment options per stoves in the **stove catalogues** at the vendors, people can further engage with the stoves and ultimately enable people to express their interest in an improved stove to an actual purchase. All printed materials included the 'improved stove logo' with the benefits cited (see **Figure 6**), to ensure recognition of the materials as being part of the same campaign. The different tools and activities will be further explained in section 4.2.

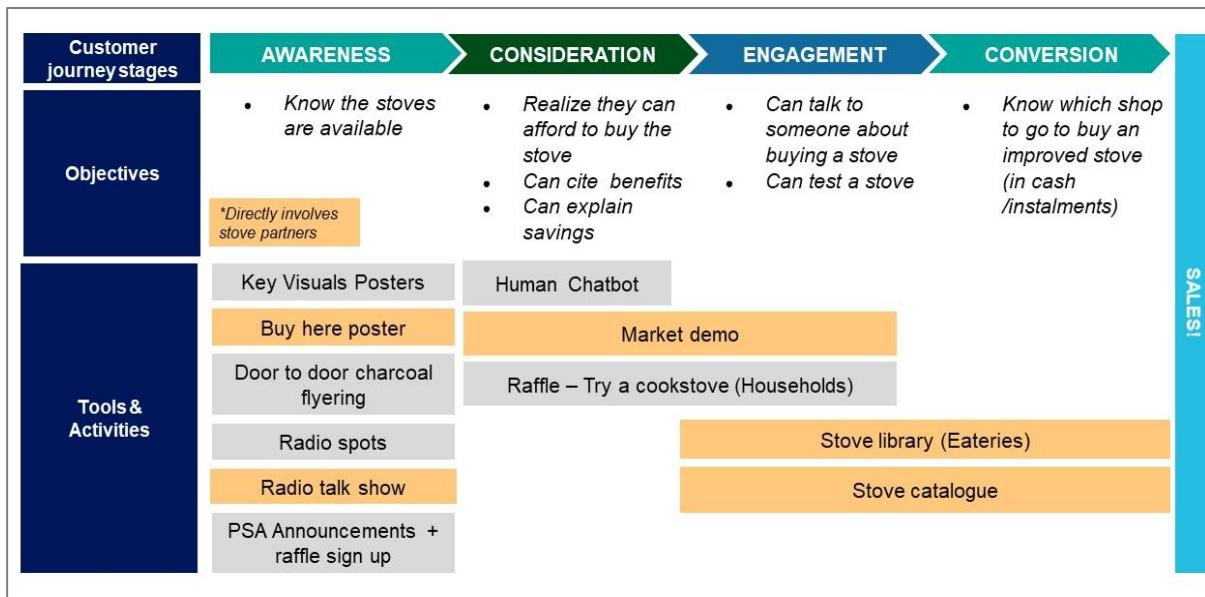


Figure 7 BCC campaign design



Figure 6 Reoccurring BCC campaign logo in Kiswahili and English

Campaign channels

The activities and tools leverage on different communication channels specific to the area to ensure a wide audience is reached as people are exposed to different channels. The posters and vendor kits will be used in **public spaces** including markets, water points, and food distribution events. Then people using **media** will be reached through radio and WhatsApp. Other activities are aimed at **mobilising the community** through market demonstrations, PSA events and door to door flyering. See **Figure 8** for an overview of channels deployed per tool and activity.

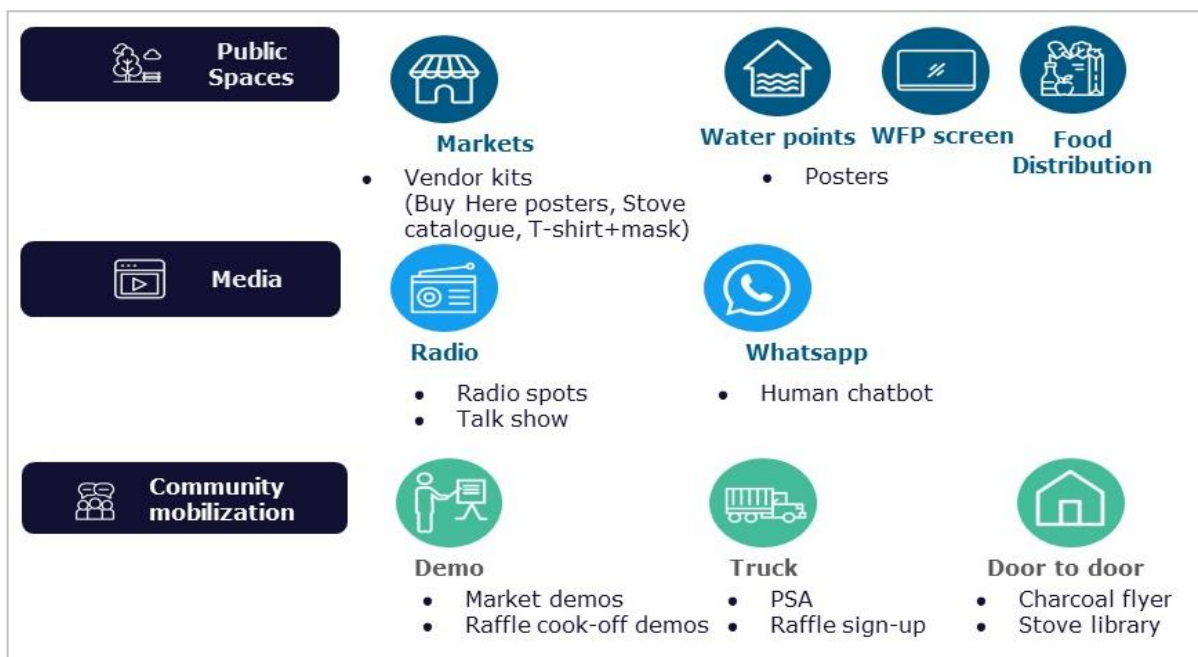


Figure 8 BCC campaign channels

BCC campaign set up

The BCC campaign was kicked-off in June 2021 in Kakuma and was initially planned to continue for at least six months. Preparation for the kick-off included printing of the posters and flyers, development of the radio spots, vendor kit materials, procurement of several stoves for cooking demonstrations, and planning for the implementation of BCC activities. Moreover, the campaign and plans were discussed with the stove distributors supported through MBEA II to get their feedback and engagement in campaign implementation. The activities were run by a team of 6-8 people, led by SNV's field manager. Throughout the implementation the activities and tools were frequently monitored, regular feedback rounds were held with the team in Kakuma and the stove distributors, and activities were adjusted based on the feedback and observations from the local team.

4.2 Campaign tools, activities, and their implementation

This section describes the BCC campaign tools/activities in terms of objectives, implementation, and main observations.

Posters with key messages

Objective: Posters with key messages were designed to be hung at public display places and communicate the benefits of cooking with improved stoves in a visual way. Testing showed that there is a strong interest in family, and the visuals therefore feature local residents, to make the posters and messaging more relatable. The posters, shown in **Figure 9**, were translated into English and Kiswahili. Photography that directly compares a traditional stove with an improved cookstove had the aim to ensure that the messaging would come across despite the several languages spoken in Kakuma.



Figure 9 BCC poster campaign

Implementation: The posters were hung up at the beginning of the BCC campaign in various public areas. New display places were added throughout the campaign period, and posters were replaced when they were torn down.

In general, people respond well to the posters, the messaging is understood, and it leads to active inquiries on stoves (observed during the poster hanging activities). The key visuals were also displayed at food distribution points which take place once per month at various central camp locations. A need for more translations was noted as not all communities are literate in English or Kiswahili. Therefore, going forward the posters will be printed in more languages.

The people featured on the posters are from the local communities and gave informed written consent for the usage of the photos and were provided an incentive. However, complaints came in from family members once the posters were up in public areas who deemed it inappropriate their relative was on the poster (especially the photo of the Turkana woman).

Hence wider family consent may be required when using community members for visual BCC tools.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Posters with key messages	YES	YES	YES	NO

Door-to-door charcoal flyers

Objective: To be delivered door-to-door. The attached charcoal piece is aimed at creating curiosity and ensure memorability (Figure 10). The folder invites to reach out to the WhatsApp number, where a “human chatbot” will provide information about the stoves.

Implementation: The charcoal flyers were handed out to people during the market demonstrations, Public Service Announcement (PSA) events and at individual flying moments.

In general, the activity was considered impactful in terms of drawing attention to events such as the market demonstrations, however the response rate to the call to action to reach out to the WhatsApp number was low as further explained in the Chatbot tool section. Similar to the posters, there is a need to have the flyers in more languages



Figure 10 Charcoal flyers

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Door-to-door charcoal flyers	YES	YES	MEDIUM	NO

Radio spots and talk show

Objective: The *radio spots* are designed to communicate the benefits of improved cooking in a fun and provocative way. Each spot, just as the posters, focuses on a key feature which is revealed through a casual and fun conversation between two friends: one is struggling with her current way of cooking, while the other knows how to fix it, namely with an improved stove. The benefits of improved stoves are just ‘unbelievable’. Therefore, the tone is humoristic, exaggerated, and enthusiastic. Find the radio spots in English and Kiswahili [here](#).

The **radio talk shows** are designed to have community influencers and other guests join a radio talk show in which the conversation revolves around cooking, associated challenges and linkages to family and community. The talk shows were unscripted but talking points were prepared to guide the conversations.

Implementation: The radio spots and radio talk shows were aired by two radio stations: Radio Ref FM and Radio Ata Nayece. Ref FM is a refugee-run radio station based in Kalobeyei (featured in **Figure 11**), its reach encompassing the Kakuma sub-camps and Kalobeyei villages and covering a variety of languages depending on the hosts. Radio Ata Nayece is based in Kakuma town and the most popular radio station for people from the host community with Kiswahili as primary language.

The radio spots ran intensively the first month of the BCC campaign. After this initial period, it ran at both stations for a week prior to the talk show which happened twice at both stations.

The talk shows included SNV Kakuma staff from both the refugee and host community, stove suppliers and vendors. While talking points were prepared, the shows mostly turned out to be very interactive with listeners actively calling in to ask questions on the type of stoves, prices and where they can be bought. One of the stove companies reported that several people came to their shop after announcing their location on the show.

Both the radio spots and talk shows turned out to be very effective: the radio stations reported that they received inquiries from people hearing the ads, and both talk shows went long overtime due to the number of listeners calling in with questions. A need for longer talk shows was expressed by the participants, in addition to including local community leaders and more vendors in the shows.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Radio spots and talk show	YES	NO	YES	MEDIUM



Figure 11 Radio talk show at Radio Ref FM

Public Service Announcements (PSA) + raffle

Objective: The PSA activities were aimed to promote upcoming market demonstrations in the area using SNV's public address system and recruit community volunteers willing to cook in the upcoming market demonstration through a raffle sign-up.

Implementation: Two days prior to the weekly market demonstrations, the team went around with a vehicle branded with BCC campaign posters and spoke to the people using a public address system (see Figure 12). This being a very common activity among the various agencies in Kakuma, the activity was well received and often led to direct inquiries about the type of stoves available, where to find them and even direct purchases.

Besides raising awareness on the upcoming event, people were asked to sign up for a raffle. The raffle winners were provided with ingredients and were supported to cook a meal for their family and neighbours at the market demonstration two days later in the same area. This way people could see the cooking in action in real life and relate to the people cooking with it. Initially people were willing to sign up and participate in the activity. However, after a few times the number of applications reduced, and winners would not always show up due to various reasons. The raffle was therefore cancelled halfway through the campaign and instead the team identified a volunteer themselves. This allowed for more focus on raising awareness on upcoming market demos and the BCC messaging rather than convincing people to sign up for the raffle.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Public Service Announcements (PSA) + raffle	NO	YES	YES	MEDIUM



Figure 12 Public Service Announcement activity

Vendor kit

Objective: The vendor kit was designed for vendors to be sensitised on the BCC campaign messages, enable them to explain benefits of the various stoves and to be visible in the market.

The stove vendor kit consisted of a stove catalogue (**Figure 13**), a 'Buy Here' poster, T-shirt, and mask (**Figure 14**). The 'Buy Here' poster was placed at the stove vendor shops so that people could identify where they can buy improved stoves. The T-shirt and masks were for stove vendors to wear so they are easily linked to the campaign. The stove catalogue was designed to provide vendors key information regarding the differences between stove models and facilitate the conversation to guide the customer in selecting a suitable stove.






MODEL					
LESS FUEL	Charcoal 71%	Firewood 67%	Charcoal 71%	Charcoal 54%	Charcoal 45%
LESS TIME COOKING	70%	70%	70%	67%	56%
TIME TO BOIL 1LT OF WATER	7min	12min	7min	6min	6min
WARRANTY	1 year	2 years	2 years	2 years	1 year
LIFESPAN <small>(based on proper usage and maintenance)</small>	5 years	5 years	5 years	5 years	5 years
USE	Household	Household	Commercial/Household	Household	Household
POT DIAMETER	30	29	32	28	26
CAPACITY # of people	12	12	15	15	15
COST					
FULL PRICE (KSH)	4,000	4,500	3,500	6,700	4,500
INSTALLMENTS	YES	YES	YES	YES	YES

Figure 13 Stove catalogue example

Implementation: The materials were handed out during tailored training sessions for stove vendors selected by the MBEA II stove company partners (for which they do the local distribution). In the training all vendors were sensitised on the contents of the campaign. Representatives from the stove companies were also present at the training sessions and were provided with the opportunity to display their stoves, leading to additional stove purchases from the vendors. Besides the training, the team went around to check if the "Buy Here" posters were up, and if not, supported the vendors in hanging the posters.

The vendors are a crucial part of the campaign. The training fostered trust among the vendors in the stove companies and their products, further reinforced by them being backed by SNV/EnDev. This led to a high increase in stove orders from current vendors and recruitment of new vendors as reported by the stove companies. In addition, it provided a platform for the

vendors and companies to discuss challenges and new ideas. The 'Buy Here' posters worked well in terms of drawing attention to the shops and connecting the different campaign activities as the improved stove logo recurred in the various tools and activities.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Vendor kit	NO	NO	YES	YES

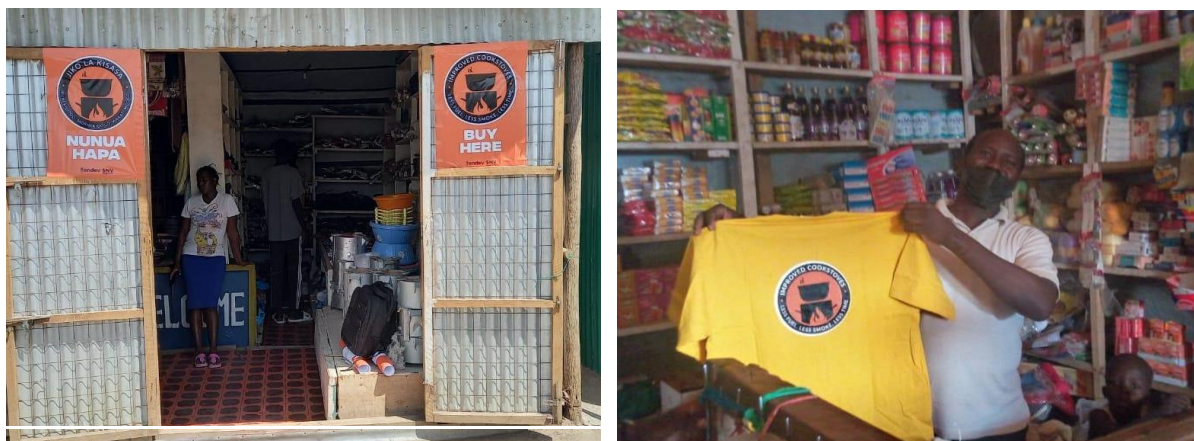


Figure 14 Vendor kit materials (Buy Here poster and T-shirt)

Human chatbot

Objective: The 'Human chatbot' was developed to deliver information related to stoves, such as benefits and where to buy in a customised language to people through WhatsApp chat.

Implementation: The chatbot was managed through WhatsApp. The number was communicated through the charcoal flyers, posters, radio spots and on the banners used at the market demonstrations with a call for people to 'Text for more information'. Incoming messages were handled by the project staff. The staff was provided and trained on using a standard script to obtain information on the fuel preference, household/business size, pricing and location which was used to advise the inquiring party on suitable stoves and where these could be bought.

While flyering was done frequently, the number of direct inquiries to the WhatsApp number was low with 2-4 inquiries per month. This can be attributed to the fact that people are not yet used to this type of communication, the action is not explained clearly, or potential customers simply do not always have access to WhatsApp or prefer other channels such as Facebook.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Human chatbot	NO	NO	NO	NO

Market demonstrations

Objective: The market demonstrations were developed to demonstrate the stoves in action through having the raffle winners cook a meal for their family and neighbours and have representatives from stove companies explain the features and where to buy the stoves.

Implementation: The market demonstrations were implemented on a weekly basis, each week in a different location to ensure all market areas were covered. After the raffle winner (and later a volunteer) was identified, the ingredients for the meal of their choosing were purchased and the companies and local stove vendors were informed on the time and place of the event. At the event itself, the raffle winner/volunteer cooked using several of the improved stoves. The SNV team supports the cooking and shares the messages of the campaign with the public address system. Meanwhile, the company sales representatives actively interact with interested crowds, providing information on the various stoves and making direct sales (as shown in **Figure 15**).



Figure 15 Market demonstration activity

The market demonstration overall showed to be an effective activity with several direct stove purchases made and new stove vendors recruited. However, the effectiveness varied a lot per area: the demos in busy markets such as in Kakuma 1 and 3 attracted much attention, while demos in quieter, spread out areas such as Kalobeyei drew less crowds. A recurring issue was the set-up of the activity as the climate is often very hot and windy. The activity needed a sheltered place, but this affected the visibility of the activity. In addition, the active participation of SNV staff in terms of supporting cooking and talking to potential customers could give the false impression that SNV is selling the stoves rather than the companies. Hence a good balance needs to be found between supporting the activity and ensuring the companies are in the lead.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Market demonstrations	NO	YES	YES	YES

Stove library

Objective: The stove library was designed to enable eateries to try a stove for a week to experience cooking with an improved stove and understand the difference an improved stove can make as compared to their current practices in terms of fuel, cooking time, smoke emissions and soot.

Implementation: The SNV team selected five stove types suitable for cooking in eateries. These included the industrially manufactured stoves from Burn, Envirofit and Biolite, and the large artisanal stoves that can hold large pots. On a weekly basis, five eatery owners were approached and asked whether they would be interested in trying out one of the stoves for a week at no cost. Following the trial week, their feedback was obtained and, if interested in buying, referred to the stove company.

After several months most eateries had been covered, hence the number of eateries to target was reduced from five to three. In addition, a few months into the activity, the (more expensive) industrially manufactured stoves were not bought anymore. This was attributed to the fact that these usually are too small to hold the large pots used by the eateries and the more well-off eateries had already purchased one while the remaining eateries did not have the funds to purchase the higher tier stoves. Hence, halfway through the activity period, only the more affordable large artisanal stoves were offered to the eateries. While the activity was effective in convincing eateries to purchase and use the offered stoves – the activity as organised fostered the perception of SNV offering the stoves and managing the sales process. Therefore, going forward the activity will be more company-led rather than SNV-led.

	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Stove library	NO	NO	YES	YES

Summary & key takeaways

Activity/Tool	Easy to implement?	Low implementation costs?	Positive feedback?	Direct sales conversion?
Posters	YES	YES	YES	NO
Door-to-door charcoal flyers	YES	YES	NO	NO
Radio spots and talk show	YES	NO	YES	MEDIUM
Public Service Announcements (PSA) + raffle	NO	YES	YES	MEDIUM
Vendor kit	NO	NO	YES	YES
Human chatbot	NO	YES	NO	NO
Market demonstrations	NO	YES	YES	YES
Stove library	NO	YES	YES	YES

Key takeaways implementation experience:

- The activities with direct product engagement such as market demonstrations and the stove library are staff time intensive but effective in terms of supporting companies to their sell stoves
- In terms of general awareness raising, the radio show was highly effective in reaching a large audience
- The chatbot and flyering were shown to be less-effective tools in terms of both awareness raising and sales conversion
- The vendor kit is costly; however, the training did very much contribute to the expansion of the vendor network of the stove companies and visibility of stove sales points in the different markets
- Ultimately the implementation experience proves the importance to have a mix of tools and activities focused on targeting people at their different levels of awareness on the benefits of the stoves, how they can use them and where they can buy them, in addition to having a flexible approach to implementation as further elaborated on in the next chapter.

5. Initial impact, key learnings, and BCC campaign outlook

This chapter presents the initial impact, key learnings and outlook of the campaign.

5.1 Stove sales performance

The BCC campaign was highly effective in increasing improved stove sales (see **Figure 16** and **Figure 17**). The MBEA partner companies reported **5194 stove sales to households** since the beginning of the campaign in June 2021 to December 2021 (average of 685 stoves a month), showing a significant increase compared to the **1341 stoves** sold by MBEA partners during the first 5 months of the year (average of 268 stoves a month). Similarly, **280 stoves** were sold to eateries (40 a month on average) as compared to **117 stoves** in the 5 months prior to the campaign (23 a month on average).

Sales to households and eateries followed a similar curve with only eatery sales immediately increasing due to stove library which sold on average to 16 eateries a month. Overall, the sales trends indicate a 3-month scale up from June on, with in September a peak in sales reported: this can be explained by one of the companies ramping up local stove production in that time, supported by the expanded vendor network as facilitated by the campaign. The production and sales stalled again in December (which is usual during Christmas times in Kenya). The company focused early 2022 on optimising the production unit and digitalising its business processes and only resumed production in March, expecting to increase overall sales. Sales to eateries also lowered after the peak in September, this can be attributed to the fact that the stove library had targeted most eateries in the area.

Besides the spike in sales, it is important to note that the sales included predominantly locally made artisanal low-tier stoves (**6700** units in total in 2021 to both households and eateries) which are significantly cheaper (300-800 KES and 2500 KES for large KCJs) as compared to industrially manufactured high tier stoves (3000-5000 KES) of which only **238** units were sold in total in 2021 to both households and eateries. The industrially manufactured high-tier stoves still see low uptake due to the high price, except with eateries due to their higher ability to pay

Sustained use

The purchase of an improved stove does not necessarily lead to sustained use. Therefore, an after sales survey among a sample of recent customers (21 SMEs and 47 households) that have purchased a stove after start of the campaign was conducted. The survey inquired about their motivation to buy the stove, frequency of use, fuel costs and overall stove satisfaction.

The survey found that most respondents (94%) cook everyday with the stove, primarily inside (85%). 66% of respondents also deploy other methods for cooking such as basic charcoal and/or wood stoves, KCJs as well as LPG or open fires. In general, most respondents spend about 50-100KES per day on fuel.

All respondents indicate their new stove uses less fuel, they take less time to cook and reported reduced symptoms such as itchy eyes and/or coughing due to smoke. These benefits were also the reasons mentioned on why they are satisfied with their stoves. 61% would be interested in a new/additional stove, the majority expressing interest in an Envirofit, KCJ or Jiko Koa stove.

and seeing industrially manufactured stoves as an investment directly translating into substantial fuel savings.

Availability is a key aspect: the increase of sales also goes hand in hand with increase of production of artisanal stoves by two of the partner companies that have set up Stove Production Units in the area¹¹. Meanwhile, only 2 companies provide 5 different types of industrially manufactured stoves.

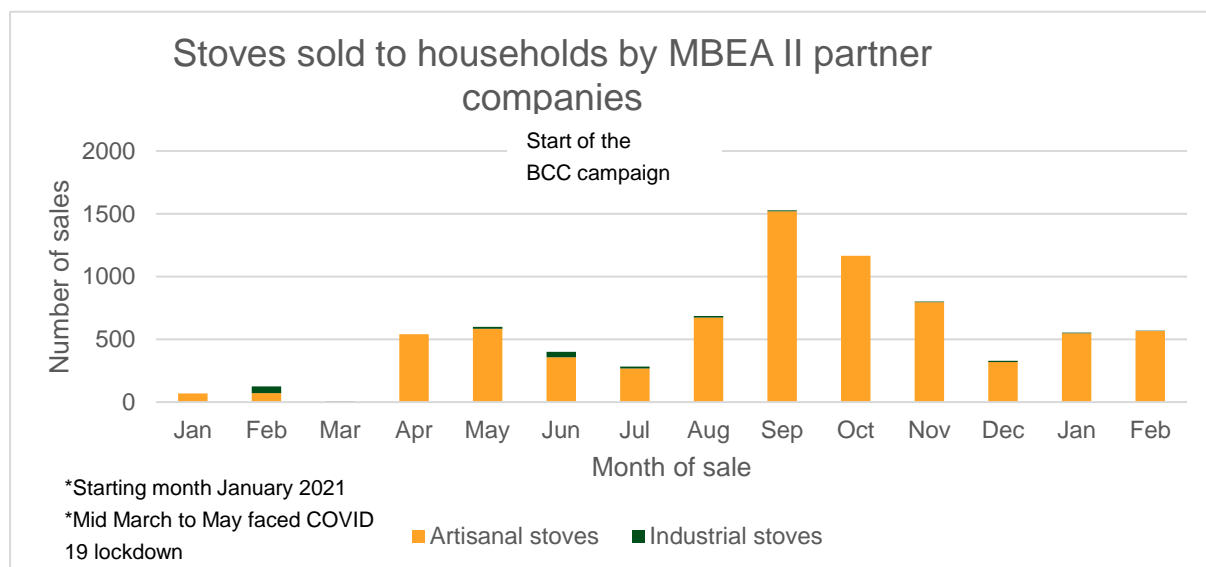


Figure 16 Stoves sold to households by MBEA partner companies Jan 2021-Feb 2022

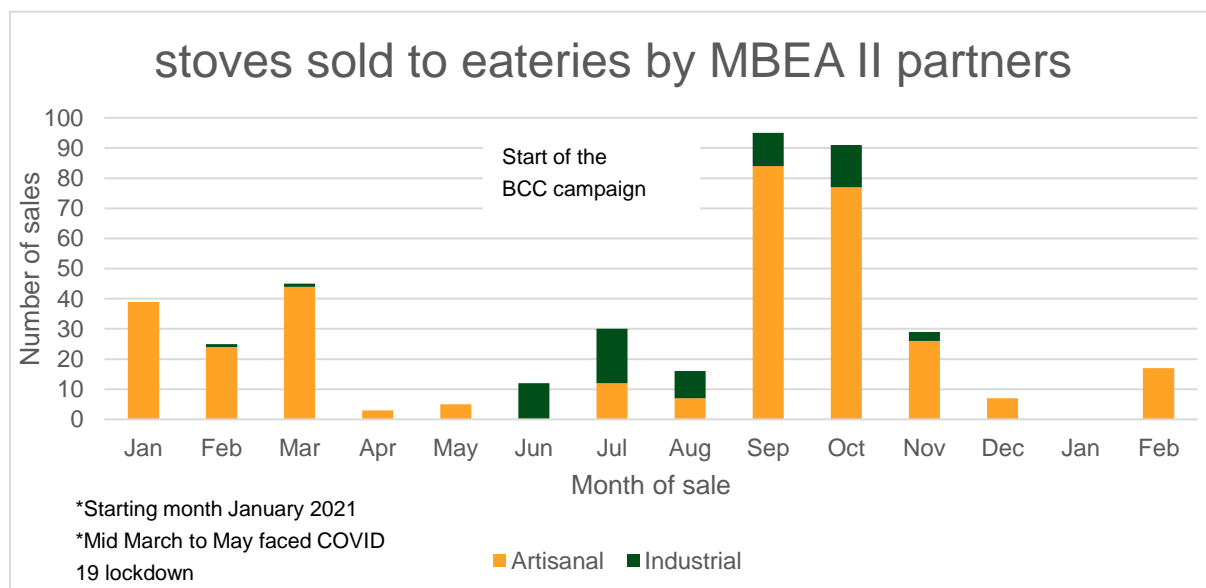


Figure 17 Stoves sold to eateries by MBEA partner companies in Jan 2021-Feb 2022

5.2 Learnings so far

Considering the high sales numbers, the overall BCC campaign can be considered effective in terms of supporting suppliers to sell stoves and drive overall uptake. Several observations

¹¹ One SPU was set up under the pilot phase of MBEA and was later transferred to project beneficiary Sunken Ltd, another project beneficiary called Usafi Green Energy [established a local production unit](#) on their own initiative to lower transport costs and reach more customers.

can be made with regards to what works, what does not work, and what can be explored in the campaign going forward:

Deploy an iterative approach to designing and implementing a BCC campaign:

Just like the research, activities were adjusted throughout implementation based on feedback from the local team and community response. The realities on the ground continuously change, on the consumer side due to the transient nature of the camp and settlement, but also on the supply side with regards to available stoves and suppliers. New companies and products enter the market while others leave due to a variety of circumstances.

The local implementing team plays a key role as the voice on the ground: There is a need to continuously focus on tapping into every team member's strength or have them train each other on participating in the different activities and using the various tools available. Therefore, it is of key importance to have regular feedback rounds on what is working and what is not, what other activities can be tapped into, and which tools might not be worth investing resources on.

Show, don't just tell: Activities focused on demonstration and product engagement which showcase the functional benefits for each respective target audience are key to draw in the audience. These activities are, while costly and time intensive, most impactful. The effectiveness of the market demonstration and stove library showed the importance of having people experience the benefits through engaging with the product directly.

Private sector involvement is key: Involvement of private sector companies is of key importance to move from awareness to direct sales. The companies were actively involved in planning and implementation from the vendor trainings to the market demonstrations.

It is important to reinforce the perception that it is indeed the private companies selling the products and not the donor or development agency. When asked if they would consider running the activities by themselves, the product distributors preferred to maintain the backing of SNV to foster credibility and trust. At the same time, it is important to not create the perception that SNV is selling the products and to ensure a sustainable self-sustaining market is developed, and therefore limit engagement to due diligence that ensures companies conduct business responsibly and that after sales commitments are delivered on.

There is no one-size-fits-all approach for reaching all communities: In implementing the various campaign activities there is need for an even more localised approach targeting the various communities and areas, to ensure people are being reached with the appropriate products. This can be done through translating the printed materials into additional languages and closer engagement of local leaders. Leveraging other channels and activities can also be explored where possible, for example food distribution, health checks and other events where all communities are engaged. Moreover, there is need to be more selective on the type of stoves that should be promoted in different areas based on income levels and cultural preferences.

Continued need for flexible payment options for higher tier stoves: Uptake of higher tier stoves remains low (as opposed to artisanal stoves) due to the cost involved. Instalments as a payment option is a clear way to address the cost barrier. Some of the companies do have credit options but this is not always structurally communicated and often applied only on a case-by-case basis. In addition to properly articulating the benefits of higher tier stoves, more focus needs to be placed on communicating how to access these products through flexible payment plans in the campaign and by the suppliers themselves.

5.3 Outlook

Going forward, most activities will continue to be implemented as part of the campaign in 2022, however, a more localised approach will be taken to reach the people that are not commonly in the market areas and have therefore been less exposed to the campaign messages. For example, the wide geographic spread and lower population density of Kalobeyei means that market areas are less developed, with fewer crowds. The market demonstrations in Kalobeyei villages will therefore be changed into smaller local stove demonstrations targeting the residential areas. In addition, for all demonstrations, community leaders will be more explicitly engaged to mobilise their respective communities and foster trust in the messages of the campaign. Furthermore, a more strategic approach will be taken in terms of selecting which stoves to promote in which area considering fuel use and pricing. Lastly, the campaign posters and flyers will be translated into additional languages. Due to the low responsiveness of the WhatsApp chatbot, a Facebook page will be created as an additional channel to share messages and for people to reach out to.

The broader EnDev MBEA project will continue to work on bringing further cooking solutions with higher levels of efficiency, alternative fuels (electricity, pellets, briquettes) and with appropriate payment models to the market serving different customer segments to increase product choice and drive people to higher levels of access to cleaner cooking solutions. This includes the introduction of electric pressure cookers through a market-based approach to mini-grid users in Kalobeyei mini-grid through the [Piloting EPCs in Kalobeyei Project](#) and supporting solar companies to integrate stoves in their product offering and PAYGO systems.

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