

Welcome to the ECOCA



PESITHO

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THE ECOCA

The ECOCA is solar powered electric cooking stove consisting of an electric base with a built in battery pack and sperate household solar panel. The ECOCA was designed with a user-centric approach to ensure its ease of use and maximum energy efficiency.

FEATURES:

- Runs **100% on solar**
- Produces **enough energy for 3 meals** per day for a family of 5- 7
- **Cooks local dishes** effectively e.g beans and grains.
- Makes cooking easy with **3 cooking options** dependent on food type. This energy optimizing system ensures that **no energy is wasted**
- **Round pots** designed especially for stirring traditional dishes like posho/ugali (maize)
- Keeps food warm with **insulated pots** and **double lids**.
- Can be used to generate an **income from using the USB ports** to charge mobile phones for a small cost.
- Provides **light in the home**.
- Completely **replaces the need for firewood**.



THE ECOCA

WHAT IS INCLUDED ?



1 Solar Panel (275W)



2 Pots (5.8 L) specifically designed to fit onto control base.



1 Control base (614 W) with 3 automatic cooking options



1 LED Torch (5V) for direct light source



1 LED Lamp (5V) for indoor lighting

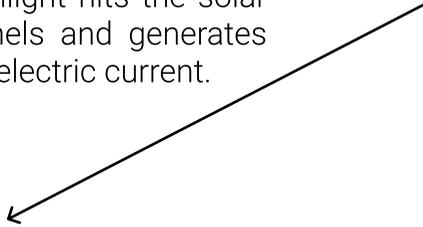
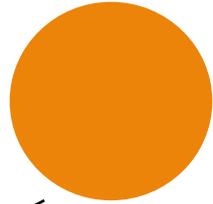


THE ECOCA

HOW DOES IT WORK ?

SOLAR ENERGY

Sunlight hits the solar panels and generates an electric current.



CLEAN ENERGY

The electricity flows into the base of the stove, converting energy for usage of the ECOCA appliances. Unused energy is stored in the battery meaning the ECOCA can function for cooking and energy access even when there is no sunlight.



THE ECOCA

There is enough energy to cook 3 meals per day. Energy can also be used for charging items through the USB ports, like ECOCA lamps and mobile phones.

THE ECOCA

WHAT ARE THE BENEFITS ?

5t CO2 reduced

Each ECOCA reduces an average of 5 tonnes of CO2 each year due to replacing firewood and charcoal for cooking, **reducing air pollution**. In Europe, the carbon footprint of a single person is 6.7 tonnes of CO2 per year (source:EU2019).

1025kg wood saved

Replacing firewood and charcoal with the ECOCA for cooking, reduces the rate of deforestation, allowing trees and fauna time to regrow.

Local Production

All ECOCA stoves are **locally assembled, sold, monitored and maintained** at the local Ecoca Cooperative in Uganda. Members of host and refugee community are trained and employed, reinvesting in, and supporting the local economy.

Access to Education

Increased time in schools (especially girls) since they are no longer collecting firewood. The ECOCA lamps provide a **light source for reading** and homework at night.

Income Generation

The USB ports can be used for **charging mobile devices** creating income generation opportunity. Replacing biomass such firewood and charcoal, with solar is more affordable, allowing for monetary saving. Reduced time spent on firewood collection allows for extra time for income generation.

Improved Health

Replacing firewood for cooking means less exposure to air pollution and respiratory related illnesses. **Reduction in time spent on firewood collection** means less risk of assault (especially for women), sunburns, and headaches and improved mental well-being

INSTALLATION AND TRAINING

Every new household receives **individual technical training** on their new ECOCA stove after purchase. The technical training is conducted by a member of the Ecoca East Africa Team, ensuring the stove is **used correctly and efficiently** adopting the 3 cooking options for energy optimization.

Training **creates knowledge and develops expertise** in the use(s) and benefits of the ECOCA, **increasing user's confidence** and ability to use the system in other areas outside of household cooking, like **income generation**. Increased knowledge and confidence relate directly to the probability of sustained adoption, which is a key component on the ECOCA.

Every household will also receive a **follow up visit** from a member of the Ecoca East Africa monitoring team, who will follow up on how the family are using their stove, if they have any issues or challenges. This allows for a **refresher training** or further suggestions on using the stove.



INSTALLATION AND TRAINING

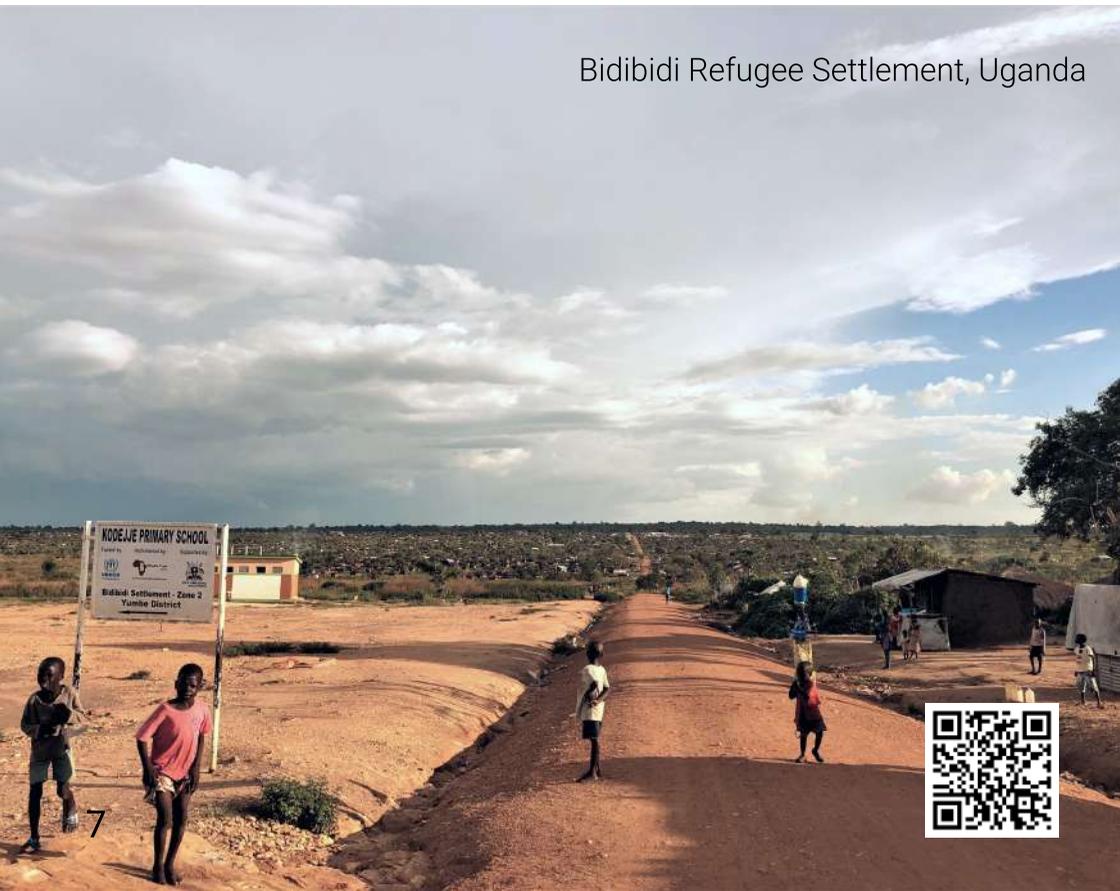


“Training also gives us a chance to raise awareness on the wider impacts of cooking with solar energy, like deforestation and health. We work in this way to bring about a lasting transformation that is generated over time and sustained from within, changing mindsets and attitudes when it comes to clean cooking, creating healthier lives”
– Simon Buss La Cour, CEO of Pesitho.

OUR WORK

The ECOCA has been designed to be **affordable in price**, making it possible for NGOs, government organisations, relief agencies, village communities or even private citizens to invest in the unit. **Designed with simplicity and ease of use in mind**, the ECOCA solar cooker is a simple, environmentally sound and pragmatic solution to several of the problems faced by the rural populations. The ECOCA is equipped with 2 USB ports which allow for **income generating activities** based on electricity, such as mobile charging or hairdressing. Additionally, using the **ECOCA reduces exposure to harmful pollutants** caused from smoke while cooking with solid biomass. Time spent **collecting firewood is lessened**, along with **exposure to the risks of violence and assault** associated with fuel collection.

Bidibidi Refugee Settlement, Uganda



OUR WORK



OUR WORK

BIDIBIDI REFUGEE SETTLEMENT, UGANDA

The Bidibidi Refugee Settlement in the Yumbe district of Northern Uganda, located close to the border of South Sudan, is our main area of work. Both residents (those living at Bidibidi) and host community (people in the surrounding areas) depend on firewood or charcoal to cook food. A study by FAO and UNHCR from 2017 estimated that the total population of Bidibidi uses around 952 tons of firewood per day, amounting to approximately 347,480 tons per year. Many refugees resort to selling or exchanging their food rations for firewood or charcoal in order to cook for their families.



OUR WORK

BIDIBIDI REFUGEE SETTLEMENT, UGANDA



Most families who purchase the ECOCA, completely replace firewood and charcoal with the solar powered cooking solution. Refugee families using the stove everyday have commented on sleeping better, coughing less, saving money feeling safer from not having to venture outside of the settlement for firewood collection and overall, an improvement in mental wellbeing. Further, the benefit of having a light source in their home has improved their mood and feeling of safety. The money saved which that would be spent on wood fuel or phone charging, is used on purchasing other food items, home necessities or sending children to school.

OUR WORK



ECOCA COOPERATIVE, UGANDA



The EcoCa Cooperative (ECOOP) based at the Lokopio Hills Technical Institute, outside of the Bidibidi Refugee Settlement provides a local base for the assembly of our ECOCA stoves to be distributed within the Northern regions of Uganda. The ECOOP employs women and men from both the Bidibidi Settlement and host community, in roles such as sales, assembly, monitoring, management and technical. Each employee is also a member of the Cooperative, meaning they have a say in how the business is run, also representing the voices of their community. All employees receive thorough training before commencing their roles, with refresher courses frequently held. Having a locally run business in Uganda means Pesitho can reinvest in the local economy and communities.



OUR WORK

ECOCA COOPERATIVE, UGANDA



OUR WORK



CAMP +, UGANDA

We have joined the Camp+ project, a program to establish the first fully sustainable refugee camp world-wide with Care Denmark and Norway as project owners and initiators. Together with a number of different organizations and NGO's we contribute to these efforts by providing ECOCA cooking units for community kitchens in the settlements.



OUR WORK

CAMP +, UGANDA



OUR WORK



JOURNEY TO SCALE , UGANDA

In November 2020 we were awarded the “Journey to Scale” Grant, a financial support offered by the Humanitarian Innovation Fund and Elrha. Throughout the course of the program, we receive guidance and education as well as financial support in order to be able to assemble and install 200 ECOCA cookstoves at our local production facility in BidiBidi Refugee Settlement Uganda.

The aim of this collaboration is to conclude the project period with the development of a sustainable business model, including the establishment of a carbon credit scheme and a user-friendly “Pay-as-you-cook” payment scheme.

Built on the local Ecoca Cooperative project resulting local assembly, business model, payment scheme and retailer network can then further serve as a role model and blueprint for other locations.



OUR WORK

JOURNEY TO SCALE, UGANDA



OUR WORK



WILLINGNESS TO PAY, BURUNDI

Through the Innovation Accelerator Programme awarded by WFP, Pesitho developed a pilot project to promote the ECOCA to urban end-users. The primary identified market segment for this project were WFP Burundi staff in the three main cities (Bujumbura, Ngozi and Gitega).

Starting in 2019 the premise was to ascertain urban end-users' willingness to pay, based on the assumption that economic gain in the medium to long term and health benefits would be an attractive value proposition for them.

The upfront capital investment to obtain the ECOCA might be much higher than the cost of buying a traditional stove, however, when analyzing cooking expenditure over several years and factoring in the monthly amount spent on charcoal for cooking, the ECOCA becomes more affordable.

To make the ECOCA affordable for households with low monthly spending capacity, a pay-as-you-go model will be developed, which will allow end-users to pay for the unit in instalments.

So far, the outcomes of the project have been promising with many households showing interest in buying the ECOCA.

OUR WORK

WILLINGNESS TO PAY, BURUNDI



OUR IMPACT

About 3 billion people globally depend on wood as their main energy source for cooking. In areas hosting displaced populations, dependence on firewood is even more significant, being the main driver of deforestation and forest degradation regionally. This creates not only environmental problems, but wood fuel burning also creates significant local health problems due to indoor air pollution. The fast-growing number of premature deaths due to respiratory ailments is estimated to be higher than the death toll from malaria and HIV combined (African Development Bank, 2016).



OUR IMPACT



By giving people access to clean energy and therefore more sustainable cooking methods through switching from using wood fuel to using our ECOCA solar home-units, many of these problems can be solved.

We are in constant exchange with partners, staff and beneficiaries to hear about their experiences with the ECOCA and how it has helped them to improve problems with time-management, health, well-being and income.

Through interviews and reports by beneficiaries we are able to capture and communicate these experiences as what we call "Impact stories".

IMPACT STORY

Mariam Kinde, resident at the Bidibidi Refugee Settlement in Uganda

1. Saving money

Significant amounts of money are saved each week from switching to the ECOCA with an estimated costs of \$3-4 for firewood and charcoal are reduced to \$1.4 for a single fire pit in the center of the property.

Further **expenses for charging phones are eliminated** as the ECOCA comes with USB outlets that can charge all the family's electronic devices. The total amount saved rounds up to \$8.5 which can be used to cover her children's school fees in the future.

2. Saving time

Mariam used to spend several hours a day fetching firewood. As the area around the property is very scarce of trees due to the high population, walks took up to 3 hours daily.

Also, **preparing food using the ECOCA is much faster** than cooking over an open fire. A whole pot of beans takes no more than 2 hours to be fully cooked which is very fast in her opinion.

The **time saved** during the day allows Mariam to attend community meetings with women from the area. They exchange experiences and discuss matters and concerns. Furthermore, she now has more time to spend with her children and friends.

3. Improved health

A pressing issue when cooking with charcoal or firewood is poisonous smoke that is released. It can cause lung cancer and other respiratory illnesses if a person is exposed to the pollutants for an extended period of time. Mariam notices **improved health since switching to the ECOCA** because her eyes do not hurt anymore. She suffers from allergies and previously her eyes used to water and hurt when cooking food for her family.

Apart from that, the entire **family notices improved quality and taste of food since using the ECOCA**. Her children do not complain about the smoky taste of their morning tea or meals anymore.



IMPACT STORY

Rose, mother of two, lives on a small coffee plant in Rakai, Uganda.

Rose, a mother of two, lives on a small coffee plant in Rakai, Uganda.

Aside from her main income through growing coffee and selling it through a local coffee cooperative, she now uses her free time to produce hand-woven mats from rattan, which she sells at a local market to earn money on the side, thanks to the ECOCA

Since receiving the ECOCA she has used it every day and her life has changed to the positive in several ways.

1. She does not have to spend any money or time on getting fuel to make a fire every day, as the solar-powered cookstove produces all the energy needed to cook for her family.
2. Less worry for her children's safety due reduced exposure around open fire or dangerous petrol lamps around, as the ECOCA comes with two lamps, providing a safer solution for small children.
3. The meals cooked using the ECOCA taste much better, no longer tasting of smoke, which she also interprets to be way healthier.
4. The time saved from not having to fetch firewood and keeping an eye on the open fire at all times, enables her to use her free time to make handwoven mats, which she sells on the local markets. Apart from being a creative task she enjoys, this also has developed into a business opportunity and a source of additional income for the family, enabling Rose to cover costs like school fees for her children in the future.



Rose, holding the mats she has recently made and ready to sell.

PARTNERS



Caritas Denmark has been a partner since 2018 including close collaboration with Caritas Uganda and Caritas Myanmar (KMSS)



Mercy Corps has been a partner since 2019 working on the Journey to scale and other projects in Uganda



Elrha is partner and funding body for the Journey to Scale project with Mercy Corps

PARTNERS



Care Denmark has been a partner since 2019 working on Camp + in Uganda



World Food Programme partnership began in 2019 on the Innovation Accelerator Programme and Willingness to pay in Burundi . We also work with WFP in Malawi



Cidi has been an partner since 2019 working to establish the Ecoca Cooperative in Uganda

ABOUT US

Pesitho is a Danish start-up with a mission to provide clean and affordable energy for cooking with our ECOCA stove, to conflict affected, vulnerable and marginalized communities.

The ECOCA was developed by our co-founders, Marco with a background in the private sector and Simon who was working in the sustainary energy sector, left their careers after learning about the dangers refugees face from cooking each day with firewood

Today, we are a small team based in Herning, Denmark, made up of engineers, anthropologists, and human rights workers.



ABOUT US

Would you like more information? Please contact us:

General information and pricing:

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Media:

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For more information you can check our website:

<https://pesitho.com/>

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OUR IMPACT



SUSTAINABLE
DEVELOPMENT
GOALS



The ECOCA provides an affordable option for everyday cooking. The built-in USB ports can be used for income opportunities e.g., hairdressing + phone charging stations.



Replacing the need for firewood means families no longer need to sell or trade their food rations for it.



Reducing exposure to air pollution and risk of burns from cooking with firewood. ECOCA thoroughly cooks foods including hard foods like beans and grains.



Children, especially girls, can attend school instead of collecting firewood. The ECOCA lamps can be used for homework at night.



Reducing the risks women face and time spent on firewood collection. Women can instead spend time on other activities like income generation or leisure.



Addressing energy poverty, the ECOCA solar-powered stove provides clean and sustainable energy to cook 3 meals per day, light the home and charge electric items.



Members of the host and refugee community are employed at the ECOCA cooperative in Uganda, assembling, selling, and maintaining and monitoring stoves.



The ECOCA is designed to provide clean and affordable energy for cooking, addressing the needs of vulnerable and marginalized groups.



Reducing household air pollution and climate impact with our ECOCA stove and local Cooperative.



Relacing firewood and charcoal for cooking with the ECOCA reduces black carbon emissions and household air pollution.



Deforestation and forest degradation is lessened significantly without large populations heavily relying on wood fuel.



Pressure between Local and host communities over scarce resources is significantly reduced. Instead, the two communities work together at the Ecoca cooperative.



We partner with local and international NGO's, local communities, and governments in all our projects.