

Reduced Consumption of Firewood and Charcoal through Efficient Cook Stoves in Malawi



For Rachel, 57 years old, Lilongwe, the main advantages of the cook stove are cost savings and its ability to retain heat for a long period. Photo: UpEnergy

These climate protection project helps to reduce carbon emissions and deforestation by introducing efficient cook stoves throughout Malawi. In addition, women and girls have to collect less firewood and can use the time gained for productive activities.

In Malawi, forest cover has been greatly reduced due to charcoal production and consumption. It is estimated that the country's forest cover has declined from about 40 percent in the 1970s to about 32 percent in 2020. According to recent estimates, about 90 per cent of Malawi's population still relies on biomass fuels for cooking.

One of the main drivers of deforestation in Malawi is the use of traditional cook stoves that require large amounts of charcoal. These cook stoves are inefficient, poorly made and can emit significant amounts of smoke. The World Health Organization (WHO) estimates that traditional cooking methods using solid fuels such as wood and charcoal contribute to about three per cent of global carbon dioxide emissions.

Up to 45 per cent savings

To address this problem, there is a growing need for improved cook stoves in Malawi. The project's cook stoves are designed to be more fuel-efficient, reducing the amount of biomass fuel such as firewood and charcoal required for cooking by up to 45 per cent. One stove is suitable for a household of five to seven people. By adopting improved cook stoves, every household can contribute to reduce deforestation by using less charcoal and minimizing the demand for unsustainable forest harvesting.

Project type:

Efficient cook stoves

Project location:

Malawi

Project status:

In operation, credits available

Annual CO₂ reduction:

500,000 t CO₂e

Situation without project

Higher carbon emissions by using inefficient stoves

Project standard

Gold Standard[®]

VER

Impressions



Construction of the liner of the stove by Esnat, Lilongwe. Photo: UpEnergy



Stoves get distributed in Lilongwe by Matthews (Agent), Ernest (Rep), Chikondi (Rep), Judith (Agent). Photo: UpEnergy

It is very easy to use the stove. I like its ease of use because it catches fire quickly. The stove produces less smoke than the wood fire I used to use.

Rachel, 57, prepares meals for her family of seven to ten people, ranging from a seven month old to a 57 years old.

Additional benefits

Improved biomass cook stoves provide several additional benefits beyond combating deforestation and reducing carbon emissions. By reducing the amount of fuel needed for cooking, households directly reduce their fuel costs, which improves their financial resilience, and families can use their savings for other essential needs, such as education, healthcare or nutrition. In addition, the production and distribution of clean cook stoves creates both direct and indirect employment opportunities, fostering economic growth in local communities. Traditional cooking methods can be time-consuming, especially for women and children who spend an average of 2.7 hours a day cooking. Improved cook stoves shorten cooking time and reduce trips to get cooking fuel. The time saved can be used for productive activities, such as education and income generation.

I have convinced 15 of my friends to buy the stove because I knew it would save them money.

Edina, 36 years old, widowed mother of three daughters

Project implementation and verification

The myclimate project partner UpEnergy works with local manufacturers and operates an extensive distribution network to produce and distribute its products, creating local jobs and strengthening the local ecosystem. With staff on the ground across the country, it is possible to distribute affordable, durable and thermally efficient cook stoves to urban and rural communities – those most affected by climate change. The project is registered with the Gold Standard and is regularly audited by an independent third party. For more information, see "Documents".

This project contributes to 8 SDGs (as of end 2022):

Find out how myclimate reports these SDGs in our FAQ.



"Before buying the stove I used double the amount of money that I am using now." Edina, 36 years old, Lilongwe. Photo: UpEnergy



The stoves get burned in such an oven. Photo: UpEnergy

The following SDGs are verified by the Gold Standard:



Yearly savings of about USD 100-200 in charcoal expenditure.



The efficient stoves are safer, cleaner, more durable and easier to use.



Especially women gain back time, money and health.



The distributed cook stoves will impact the lives of thousands of people.



The team in Malawi currently has 21 full time employees, 38 per cent of which are women.



The stoves are being locally manufactured using local materials and labour.



Estimated annual average emission reduction 500,000 tCO₂(eq)



Reduced fuel needs by 45 per cent.