



Mozambique Carbon Initiatives, Lda

DISSEMINATION OF IMPROVED STOVES IN GAZA AND INHAMBANE PROVINCES (MOZAMBIQUE)

GS5562 VPA6: EFFICIENT AND CLEAN COOKING FOR MOZAMBICAN LOW-
INCOME HOUSEHOLDS

(NON-TECHNICAL SUMMARY)

1. ABOUT MOZAMBIQUE CARBON INITIATIVES LDA

Mozambique Carbon Initiatives LDA (MozCarbon) is a Mozambican company that develops its activities in environment and has as its ultimate purpose to identify, promote, and commercialize carbon credits in the market. It operates in several business areas that include the Reduction of Emissions from Deforestation and Forest Degradation (REDD) and in Energy Efficiency projects through the dissemination of improved cookstoves in Mozambique. This company has been in operation since 2011 and has worked for a long time with Eduardo Mondlane University through the University Foundation.

In the development of its activities, MozCarbon has partnerships of great relevance. From national and international NGOs, public and private institutions, including Small and Medium Enterprises, academic institutions, certification institutions, among others, which are a pillar of support and collaboration to make sure that implemented projects are based on scientific, transparent and honest criteria and processes, with the goal of benefiting Mozambican society, especially the most vulnerable families and people.

2. IMPROVED COOKSTOVE DISSEMINATION PROJECT

In Mozambique, like many developing countries, most people and families rely on biomass fuels (mainly firewood and charcoal) to cook, heat water, heat environments, prepare drinks and other cooking activities. Less than 5% of the population has access to clean cooking technologies and services such as electricity, LPG and others. This trend is expected to continue in the coming years. The use of these fuels (firewood and charcoal) emits toxic gases (mainly carbon dioxide) that cause various respiratory diseases, resulting in the death of many people, especially women and children. The use of woody fuels such as firewood

and charcoal is also responsible for the emission of greenhouse gases that cause climate change as well as forest degradation as a result of increased demand and production of these fuels. The use of traditional fuels in efficient stoves is responsible for other social, economic, and environmental problems.

Thus, as a way of contributing to changing this situation, in the context of its activities MozCarbon has identified the possibility of implementing and disseminating improved stoves in Mozambique with the aim of reducing greenhouse gas emissions, containing the constant pressure on biomass forest resources, biodiversity and the environment in general, including the possibility of creating socioeconomic benefits for the population and for the country in general through this activity.

MozCarbon is currently implementing a Programme of Activities (PoA) *Efficient and Clean Cooking for Mozambican Low-Income Households dissemination program*. In the context of this program, MozCarbon produces improved charcoal stoves locally and imports firewood clean stoves. So far, more than 130,000 improved wood and charcoal stoves were distributed in Mozambique urban, peri urban as well as rural areas. These projects aim to reduce emissions of carbon dioxide and other greenhouse gases, contribute to the reduction of deforestation and forest degradation as well as create socioeconomic benefits to communities.

As part of this project (VPA6) under the PoA *GS5562: Efficient And Clean Cooking For Mozambican Low-Income Households*, MozCarbon intends to continue and expand the distribution of improved stoves to Gaza and Inhambane provinces and uses the Gold Standard certification body to certify the impacts generated in terms of carbon dioxide emission reductions as well as other Sustainable Development Goals indicators such as improving health, access to energy, job creation, gender, poverty reduction and other relevant indicators.








3. TARGET GROUP AND TECHNOLOGY

For this specific Project MozCarbon will distribute about 22,000 firewood stoves to equal number of families who will then have access to clean and safe cooking energy, benefiting about 105,000 people in total. The target group is constituted by mostly low income and vulnerable families in rural and peri-urban areas of Gaza and Inhambane provinces in Mozambique who rely heavily on firewood for cooking. In this project the stove distributed is the Envirofit SmartSaver Wood as shown in the image below. Other stove models may be introduced in the project. The stove will be sold at discounted price of 600.00MT and can be paid in three installments. The stoves are sold in door-to-door model, sales points in neighborhoods, markets, community sales as well as online sales through direct orders from our sales platforms.



It has been proven through field research that families using the improved wood stove save at least 68% of firewood when compared to families using the traditional wood stove.

Advantages of the project stove

 <p>Atractive Design The stove is modern and is appealing to the eye. The stove is also made for maximum efficiency.</p>	 <p>Secure and stable stove The stove has a wide base that prevents accidents such as tipping with hot food.</p>
 <p>Time Savings The stove reduces the by 50% the time necessary to cook food when compared to traditional charcoal stoves</p>	 <p>The stove is portable It is designed to be moved around the house or other locations when necessary</p>
 <p>Financial Savings The stove saves at least 68% charcoal when compared to traditional charcoal stoves. This translates to monetary savings from cooking energy purchase.</p>	 <p>High Lifespan The stove is designed with strong components to last at minimum 3 years. The stove comes with 1 year warranty</p>
 <p>Indoor air pollution reduction The stove reduces emit 68% less smoke when compared to traditional charcoal stoves</p>	

4. CARBON CREDITS

The stoves distributed, by reducing the emission of greenhouse gases will result in something called carbon credits that can be sold on the international market. A

carbon credit represents the non-emission or sequestration of a ton of carbon into the atmosphere. To measure how many carbon credits will be generated, the scenarios before and after the implementation of an activity (in this case cookstoves) that aims to reduce emissions or sequester carbon are compared. These credits are issued by various certification institutions such as Gold Standard, VERRA, CDM and others after a very rigorous audit. MozCarbon will certify project impacts and carbon credits through the Gold Standard institution using the Gold Standard for Global Goals (GS4GG). In short, carbon credits are used:

- To make stoves more accessible and affordable to the people who need them most. In this case, during the sales process, for households to benefit from a discounted price, they will share their data and transfer the carbon benefits or rights to MozCarbon. This is because the stove is sold at a subsidized price by carbon credits. Families buy the stove at 600.00 meticais, although its market value is too much high.
- To support other activities that contribute to sustainable development. Carbon credits will allow more stoves to be produced in the factory and more families to be reached by the project or program. They will help improve Research and Development activities for the creation of better, more efficient, and affordable stoves and other energy products for most of the population. Carbon credits revenues will also support marketing activities as well as awareness on climate change and Sustainable Development.
- To help pay for costs related to project management, salaries for employees and service providers, audit fees, certification fees, logistics and other processes involved.

5. PROJECT CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

The expected benefits from the dissemination of improved stoves under this project are aligned with the main criteria of Sustainable Development, i.e., the creation of environmental, social, and economic benefits as well as a broad participation of those affected and interested in the project. Thus, the implementation of this project is important as it will help to achieve the following Sustainable Development Objectives (SDGs):

- **SDG 1- Poverty Reduction**, because efficient stoves will allow people to use less firewood when compared to traditional wood stoves currently used in Gaza and Inhambane. Field studies confirm that the improved stoves that will be used in the project save at least 68% of charcoal when compared to traditional stoves that have already been used by families in rural and peri-urban areas in Mozambique. So, people will save money and invest in other family needs such as transportation, school supplies for their children, uniforms, diversified food for the family among others. It will also be

reduced the time required to cook food or other similar activities. It is expected that the project will also generate employment for young people, especially for women, in the areas of stove production as well as in distribution and marketing activities, management, and create opportunities for the emergence of small entrepreneurs in cooking energy among other benefits.

- **SDG 3 – Good Health and Well-being:** The project contributes to reducing the incidence of respiratory diseases associated with indoor air pollution because the project stoves emit 68% less smoke when compared to traditional stoves. These benefits are much more important for women and children who are most affected by pollution of the kitchen environment. As an example, data from the World Health Organization (WHO) show that around 3.2 million people die worldwide each year due to indoor air pollution in homes and kitchens. In ¹Mozambique, about 11.6% of all deaths are due to diseases related to air pollution at home and in the kitchen.
- **SDG 7 - Access to Affordable and Clean Energy:** the project will contribute to allow at least 22.000 families have access to improved stoves at subsidized price, benefiting in total 105 thousand people. The cost of the stove will be reduced, thus increasing affordability and the stoves are clean and safe to use.
- **SDG 8 - Decent Work and Economic Growth:** the project will promote job opportunities in various areas including stove production, logistics, industrial maintenance, sales and marketing, monitoring, administration, and other areas. MozCarbon has already created job opportunities for more than 300 people in the various areas mentioned. MozCARBON prioritizes the creation of job opportunities for women. For example, the majority (more than 60%) of the employees in other MozCarbon projects are women, thus promoting gender equality (SDG 5). On gender issues, improved stoves are very important because they mainly benefit the health of women and children who are the people most exposed to the dangers of pollution, accidents and other kitchen and cooking hazards.
- **SDG 13- Reduction of Greenhouse Gases Emissions** and deforestation and forest degradation: the project reduces the emission of carbon dioxide responsible for global and consequently Climate Change. The use of more efficient stoves than traditional stoves result in a lower biomass consumption and consequently reduced greenhouse gases emissions from the combustion of biomass (wood). The project contributes to the reduction of forest degradation, which is caused by the procurement of wood and charcoal production.

¹ [Household air pollution \(who.int\)](https://www.who.int)

6. PROJECT SAFEGUARDING PRINCIPLES ASSESSMENT

Safeguarding Principles	Analysis of Safeguarding Principles
(1) Human rights	The project respects universal Human Rights and its implementation will be based on them. The project will not discriminate and disallow participation based on race, gender, ethnicity, or other elements of differentiation. The project will not support and will not be complicit in any form of violence or abuse as defined in the Universal Declaration of Human Rights.
(2) Gender Equality and Women's Rights	The project will not use any form of discrimination based on gender. The project will ensure that men and women participate in it considering their skills and abilities. The project will not support or be complicit in any form of violence against women including sexual harassment or any form of restriction of women to have access to the natural and economic resources associated with the project.
(3) Community Health, Safety and Working Conditions	The project will not expose the community and people involved in its activities, such as workers to health and safety risks. To this end, the company will use national and international standards to ensure the health and safety of those involved and affected by the project is considered and is not affected. The project will provide a safe and healthy working environment, providing conditions to prevent accidents, injuries and diseases.
(4) Cultural Heritage, Indigenous People, Displacement and Resettlement of Persons	The project will have no impact on Cultural Heritage, Indigenous People nor does it involve displacement and resettlement of people in the area of implementation. The project does not affect the rights that people have over the land and natural resources.
(5) Corruption	The project does not involve any kind of corruption, will not be a complicity of corruption and will not implement the actions that reinforce corrupt practices. The project will be guided by the highest standards of ethics in all its activities.
(6) Economic Impact	The project is expected to contribute economically to by benefiting families and other actors involved. Labor rights and fair payment will be observed. Negative economic impacts are not expected with the implementation of the project. The project is expected to contribute economically by creating jobs and reducing the cost of purchasing fuel for cooking, thereby helping to reduce poverty. Regarding jobs, the project will follow the ILO guidelines and national

	legislation on working hours, fair pay, child labor, social security, etc.
(7) Climate and Energy	The project promotes climate and energy by ensuring access to clean cooking energy technologies for households while reducing greenhouse gas emissions. No negative impacts are expected in this area.
(8) Water	The project will not affect water flow patterns or create some instability in water systems and bodies. The project does not have a direct linkage with water resources usage.
(9) Environment, Ecology and Land Use	The project will have no negative impact on the environment, ecology, and land use. The project does not involve any type of crop production or land use or modification. The project does not work with genetic resources such as Genetically Modified Organisms with the potential to cause ecological disturbances. Positive impacts are expected in this area, mainly the reduction of greenhouse gas emissions, the reduction of harmful pollutants during cooking, the reduction of forest degradation and other positive ecological and environmental impacts.