



Enabling Maasai women to access improved cook stoves in Mbirikani Group Ranch, Kenya

Technical facilitation by Maasai Stoves and Solar Project

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Submitted By

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Project Summary

In FY13, both African Wildlife Foundation (AWF) and the Jane Goodall Institute (JGI) facilitated detailed field assessments to better understand the energy options and extent of adoption of fuel efficient technologies which we see as critical to REDD+ programs that ABCG members African Wildlife Foundation (AWF) and the Jane Goodall Institute (JGI) are piloting. Products from FY13 work include a reference assessment report and a step-by-step field tool kit for reference by extension staff when promoting the use of clean cookstoves and solar lighting technologies. In FY14, AWF implemented a Masai Stoves Project (MSP) in Mbirikani Group Ranch in the three villages adjacent to Chyulu Hills in Kilimanjaro Landscape (KL). The aim of the project was to raise awareness among local community on the multiple benefits of using improved cook stoves and solar lighting technology as well as build their capacity in fabrication and installation of improved cookstoves. Finally, it also aimed at creating partnerships among organizations and institutions that work on energy technologies in this area to strengthen capacity for scaling up and finally, to reach out to the National Environmental Management Authority (NEMA) and Climate Change desk in Kenya to sensitize policy on clean energy. The trainings of fabricators and Masai women were undertaken and the cookstoves installed except the solar lighting which was not funded. This report describes the status of the project implementation after the end of the project cycle in September 2014 with clear recommendations.

Glossary of Terms

AWF	African Wildlife Foundation
CBO	Community Based Organization
GVEP	Global Village Energy Partnership
ICSEE	International Collaborative for Science, Education and the Environment
JGI	Jane Goodall Institute
KL	Kilimanjaro Landscape
KWS	Kenya Wildlife Service
MOU	Memorandum of Understanding
MSP	Maasai Stoves Project
NGO	Non-Governmental Organization
RNE	Royal Netherlands Embassy
USAID	United States Agency for International Development

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A. Background

Mbirikani Group Ranch is approximately 1,300 km² (320,000 acres), bordered on the eastern edge by the Chyulu Hills National Park (Figure 1). Mbirikani is owned and run communally by about 4,500 members of Ilkisongo Maasai. There are just over 10,000 people living on the group ranch, along with some 60,000 - 90,000 livestock, these numbers are before 2009 drought. The vegetation on the ranch ranges from upland grasslands to flat savannah grasslands to dense bush. Permanent water is scarce and restricted to a few swamps, the Kikarangot River along the southern boundary of the ranch and a water pipeline running south to north in the western quarter of the ranch. Rainfall is erratic and averages between 350 and 500mm per year along an east-west gradient. During the rainy season, wildlife congregate in this area.

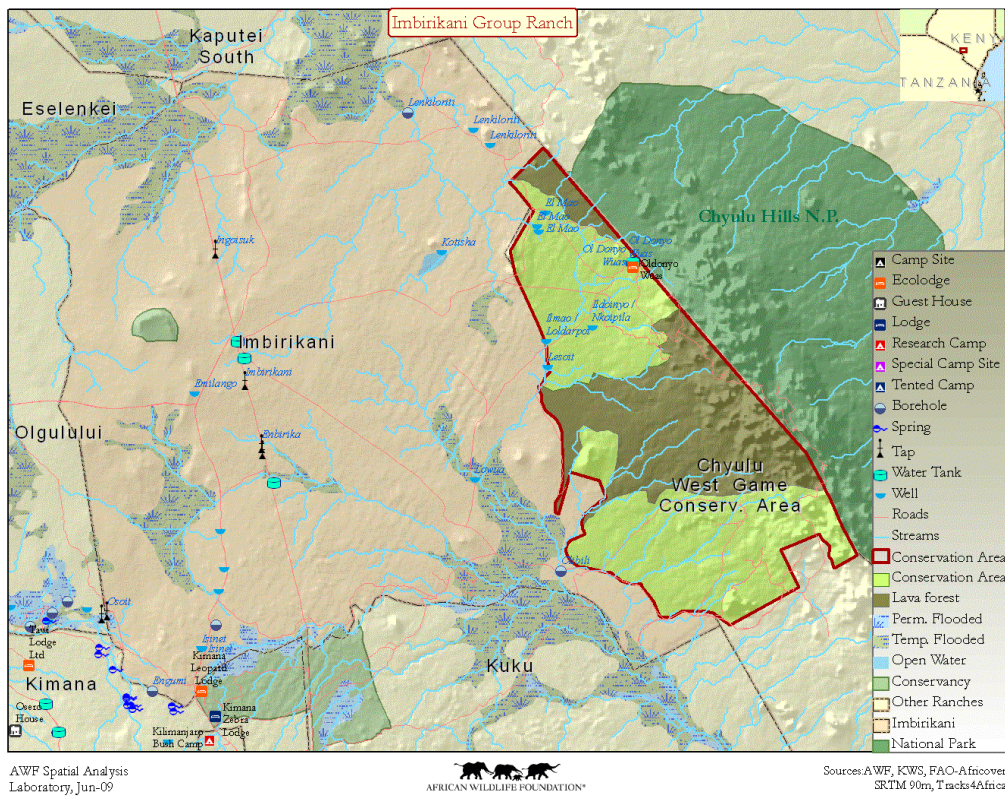


Figure 1: Map showing the location of Mbirikani Group Ranch and Chulu Hills Conservation Area

B. Project Inception and Development

In June 2012, the Global Village Energy Partnership (GVEP) International was contracted by AWF and Jane

Goodall Institute (JGI) to produce an in-depth review and documentation of clean energy technologies used by households in the conservation landscapes of Kenya and Tanzania. The review identified the preferences, challenges and scope for scaling up the use and adoption of clean energy technologies in the wider East African region, with a focus in Mbirikani Group Ranch in Kenya, as an AWF site. The review also provided a basis to inform on-going conservation efforts by enhancing intake of clean energy technologies at meaningful scale. A feedback workshop was undertaken, from the Clean Energy Review conducted by GVEP International in June/ July 2012 which involved field assessments at the Mbirikani Group Ranch. The main findings from the review were discussed along with opportunities and recommendations for increasing the uptake of clean energy products in the ranch. The workshop also detailed the next steps by AWF to help promote the use of clean energy technologies and provide an opportunity for local energy business to show case their products to the community. Among other recommendations was AWF to take the project beneficiaries to Maasai Stove Project (MSP) in Monduli, Tanzania, to see a similar project. The Monduli project is undertaken by International Collaborative for Science, Education and the Environment (ICSEE). Hence, women from Olbili, Oltiasika and Lemasusu visited Maasai Stove Project and thereafter a reconnaissance visit was undertaken by the MSP staff to establish the possibility and the cost of starting a similar project.

On August 12th 2014 African Wildlife Foundation commissioned the ICSEE and Maasai Stove and Solar project in Monduli to undertake an assignment of bringing the Project to Kenya at Mbirikani Group Ranch targeting the three villages of Olbili, Lemasusu and Oltiasika.

C. Scope of the Project Assignment

The assignment was expected to train fabricators and Masai women and install the cookstoves in three villages namely Olbili, Oltiasika and Lemasusu in Mbirikani Group Ranch. It was also expected to undertake consultations with some of the community members, local leaders and partners in Mbirikani Group Ranch about the project for buy in and ownership and to provide the way forward. Finally, the project was to undertake the monitoring of the performance of the project jointly with co-funding from the Royal Netherlands Embassy (RNE).

D. Specific Tasks of the Project

AWF awarded a sub grant to the Masai Stoves Project to implement the project. The specific activities that

were carried out are as described in detail in the table below:

	Specific Activities
	5 people from Mbirikani travel to Monduli for a 14 days comprehensive training in technical design, manufacturing process, stove construction, use and maintenance and village organizing.
	15 people from Monduli to travel to Mbirikani to attend village meetings, train women and assist in installation of 60 stoves. The Monduli team to deliver fire boxes and chimney extensions for the 60 stoves while cement, lime, sand and tools to be purchased locally.
	5 trained fabricators from Mbirikani to visit all homes with stoves, communicate all issues, complaints, positive feedback to AWF, leaders in Mbirikani and to the Monduli Stove Project
	2 Monduli leaders to travel to Mbirikani for 3-village meeting for feedback on stoves, and for planning the continuation of the project with AWF team, Mbirikani leaders and Mbirikani villagers
	Maasai Stove and Solar project to prepare a report and distribute to all stakeholders

In July 2014, an assessment and selection of potential fabricators to be trained in Monduli by ICSEE from Kimana town was undertaken. The criteria of selecting the fabricators included; the ownership of a fabrication workshop, level of equipment with necessary tools, interest in being trained to make the Cookstoves and finally interest in starting a business in cookstoves. As a result, five (5) fabricators, who are experts in metal workshops were identified and only three (3) were ready to go to Monduli for the 14 days training (*see photo below*).



Fabricators being trained on how to make the cookstoves in Monduli

On August 3rd 2014, AWF facilitated the selected fabricators to travel to Monduli for a two weeks comprehensive training in technical design, manufacturing process, stove construction, use and maintenance and village organizing but only turned up for the training. The trainees mastered the work very quickly during the training were also exposed to some villages installed with cookstoves to practically learn how stoves are installed and repaired by the Maasai women. The fabricators mastered the engineering principals about how to manufacture these ICSEE stove parts and how to build a complete stove.

At the end of the training, the fabricators were able to make and install cookstoves on their own and a certificate of recognition as the Maasai stoves and solar project experts in Kenya was awarded by ICSEE (*see photo below*). Sixty (60) stove parts materials as well as RanchBricks and metal parts were delivered to Olbili, Lemasusu and Oltiasika villages by ICSEE from Tanzania.



Fabricators metal work and a copy of the certificate awarded

E. Meeting with Mbirikani leadership

On August 28th 2014, the ICSEE Project Manager and three men from Monduli and AWF staff, and attended a leaders meeting in Mbirikani Group ranch (*see photo below*). The aim of the meeting was to introduce the project to the community leadership among them the Group Ranch officials, chiefs and Opinion leaders. The meeting was held at Mbirikani Hospital Hall attended by over 42 (all men comprising 35 group ranch leaders, 3 chiefs, 4 men from Tanzania). The men were targeted because culturally, it is the Masai men who are supposed to buy the stoves for their women and hence they needed to understand and buy the concept. AWF and ICSEE made power point presentations about the background of the project and the Maasai stoves and Solar Project in general.

The project message was delivered in the *mau* (local language) on the role of men in the project especially on the purchase of the stoves for women. The project was well received by the leaders and majority of the leaders committed to support the project by purchasing the stoves.



Group ranch leaders and local chiefs in a meeting in Mbirikani on Maasai Stoves Project

F. Training and Installation of stoves in Mbirikani by the Monduli women experts

On the 3rd of September, 2014, two men and six Maasai women from Monduli who are experts on Maasai stoves sales, installation and maintenance traveled to Mbirikani Group Ranch to start the training and installation of stoves (*see photo below*). The trainers stayed for 16 days where 20 people (18 women and 2 men) from Olbili, Lemasusu, Oltiasika villages and Siana Women Group were trained at Oltiasika African Church of Kenya (ACK) Church Centre.



Maasai women and men from Monduli, Tanzania pose for a photo in Mbirikani

The training started by a presentation by AWF on the background of the project, a clean energy assessment that was done in Mbirikani in July 2012 and describing how AWF was introduced to the ICSEE by the consultant who did the assessment. Then ICSEE made a presentation on how the Maasai Stoves and Solar Project started in Tanzania, how it operates and the benefits of the project in terms of environmental conservation, women's saving time and exposure to dangerous wild animals, women's empowerment and improved health condition of the houses. This was then followed by open discussions where the group sought clarity. Thereafter, the group was taken through a practical training session. The Monduli women first build a demonstration stove to get a rough idea about how the construction of the Maasai stove.

The Mbirikini women were split into eight (8) groups with each group having one expert person from Monduli to guide them on the engineering principles of installing the Maasai stove (*see photo below*).



Maasai women from Oltiasika village going through the practical session of constructing the Maasai stove

The trainees commented the training. ***”It was very good. When I was looking the photos of the stoves from the Presentation, i thought to build that stove won’t be easy. But yesterday I did not believe myself that it was that easy. I can even build it by myself today without the expert leading me.”*** ***Said Jenifa Simon.*** The women were then advised to look for potential customers who are ready to buy the stoves in order to start the installation. For proper leadership of the project, the women elected their officials (chair Lady, Secretary and Treasurer) and formed an organization called Oltiasika Maasai Stoves Women Organisation. This is a government and bank requirements for formal recognition as a CBO and open a bank account and start banking funds collected from customers. The CBO was registered formally by the government and a bank account opened with Equity Bank, Kimana branch. The money collected will be used to purchase more materials so that the project can continue as part of their business.

During the training the project was visited by AWF Director- Kenya Country office and the Kilimanjaro Landscape Projects Manager to assess its implementation and generally the women looked very impressed and enthusiastic with the training.. The area Member of Parliament also visited the project.



A cookstove installed in a house

The first Monduli team returned back and another team of trainers were brought in September 16th, 2014 comprising six women and three men in order to continue training women on installation of the stoves. However, during this time, two stoves had been installed in Olbili and Lemasusu villages without experts from Monduli to their satisfaction.



Maasai women on top for the roof installing the chimney

In order to show case the work of women, a filming crew was hired by AWF to document the women

training and that was the activity of the day.



A filming crew documenting the process of constructing the cookstoves

Because the high demand of the stoves by other villages, a few stoves were install to scale up the project to Kimana town, Siana women and in Olorika in Kuku Group Ranch. This was necessary as it will increase the market and hence demand by other villages.



Maasai women from Monduli demonstrate how to build the cookstove to Mbirikani women

G. Project Evaluation and Recommendations

At the end of training, 32 stoves had been installed and by September, 30th 2014 a total of 36 stoves had been installed. This was great success because more than a half of the 60 pilot stoves had been sold and installed. The remaining stoves will be installed by the trained women and monitoring of the progress will be done by the Masai Stoves Project. Secondly, the money raised by women from purchase of stoves will be used by the women's organization to purchase more materials and to scale up the project. This initiative is necessary to turn the project into a business for sustainability but it will require financial support in the initial stage and further guidance for it to operate as a viable business.

The advantage with the Mbirikani women is that they are already more organized under a Christian umbrella and have strong leadership and are excellent in advertising their work. Hence, this makes it easy to promote their business. However, the challenge is the far location of the villages from each other. Transport will be required to visit all the villages to organize the work. Also there is need for a fulltime person on the ground to provide support to the women. Secondly, the Mbirikani women just like the ICSEE Project in Monduli need to install solar for lighting at a subsidized price for those who have installed the cookstoves. This will increase the earnings for women; however, more capital will be required to support the business.

The logistics of transporting materials to the villages is quite a challenge since the bomas are far from each other. The women's organization will need to purchase a Toyo truck (motor bike with a small trailer) to be hired at a reasonable price to transport materials.

The financial analysis needs to be done to determine the most suitable prices for the sustainability of the project. In order to keep costs down, one strategy is for ICSEE (I) to establish a firebox production unit or factory in Mbirikani. However, the factory will need to be well linked with the Monduli operations in order to maintain high quality products and to be sure that periodic improvements in firebox design and manufacturing methods can be shared.

Finally, a proper monitoring and evaluation tool needs to be put in place with clear baselines in order to determine the impact of the project on the environment and the households at large.



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