

Cow Dung Fuel Initiative, Masai Mara, Kenya

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Need for initiative: There is much damage being caused to local forests and trees in the Masai Mara as a result of the daily collection of firewood for fuel by the local Maasai women. Additionally, the Maasai women responsible for firewood collection are increasingly coming into direct contact, and conflict with, wildlife (particularly elephants) on their daily firewood forays. The women report



that they also have to travel much greater distances to collect firewood (because of the deforestation caused by their activities), which is taking them away from their other duties in the village. With up to 800 cattle living in each of the 5 Maasai cultural manyattas in the Mara Triangle, there is no shortage of cow dung! The Maasai

women asked TVC to assist them in acquiring the 'know how' and equipment to manufacture fuel briquettes from cow dung in their villages, as an alternative fuel source for their daily cooking needs. Additionally, they requested support in establishing a briquette-making business whereby they could sell any 'surplus' briquettes to tourism businesses in the area as a new livelihood strategy linked to tourism. Many of the lodges currently use briquettes for heating water to supply clients' rooms and also in their staff accommodation, but currently these are purchased in Nairobi and transported into the Mara on their regular resupply runs.

This initiative was a natural fit with the Travel Foundation's objectives of supporting sustainable alternative community livelihood strategies linked to tourism and in their carbon reduction goals.

Seed funding was hence supplied to TVC to set up briquette-making facilities in the 5 villages that were part of the Travel Foundation-funded Maasai Villages Kenya Initiative pilot project.

Overall purpose of project:

- To develop cow dung briquettes as an alternative cooking/heating fuel source to firewood in the 5 Maasai villages that are engaged in tourism in the Mara Triangle.
- To sell ‘surplus’ briquettes to tourism businesses in the area, thereby generating an alternative income generating enterprise for the local Maasai women.

Outputs and activities achieved:

1. The technical know-how on how to make fuel briquettes was secured by partnering with the Millennium Fuel Project in Nairobi. This project was set up by Dr Chris Wood (co-founder of the Flying Doctors service in East Africa) and is run as a ‘not for profit’ community development project. Dr Wood and his local team have successfully transferred briquette-making knowledge widely to rural communities in East Africa – not before using cow dung, however.

2. 5 briquette making presses and all the necessary accessories (pistons, mortars and pestles etc.) were manufactured by hand for the Maasai villages by the Millennium Fuel Project team over a 3 month period and these were transported one at a time to the Mara Triangle during visits to the area by Dr Mvula on Maasai Village Tourism project business. Safari and lodge operator



&Beyond (formerly CC Africa) also supported the initiative by taking in some of the presses on their resupply runs to their lodges in the Masai Mara free of charge.

3. Dr Mvula commissioned the services of a local trainer from the Millennium Fuel Project (Francis) to accompany her to the Mara Triangle during March 2009 to conduct training workshops in briquette making in the 5 villages. 3 workshops were held over 3 days in (a) Enkereri village (b) Hardrock village (c) Enkutoto/Ilkinye/Olonana villages combined. The training workshops went exceedingly well and each was well attended. In total circa. 200 women were trained over the 3-day period. In addition each village nominated a lady who was given extra tuition so she could train others in the village at a later date. Briquettes were successfully made by the women at the workshops out of a mixture of:

- Waste paper, dried leaves and water
- Waste paper, dried cow dung and water

The briquettes were left to dry in the sun for 4 days and when the women burnt them on their fires for cooking purposes they did not smoke and much to the women's delight the cow dung briquettes had no bad odour (they thought they would have). Subsequent to the workshops the women in Enkereri village have successfully made briquettes out of dried elephant dung and paper! This could have high appeal for usage in the tourist lodges and is very unique.





4. Dr Mvula instructed the women in each village on record keeping for their briquette making enterprises and a system is now in place whereby each village is keeping detailed daily records on the production and sales of briquettes. In this way, data is being collected on the scale of production of briquettes in each village, the number of firewood collection runs (and quantity of firewood) that have been replaced by briquette making (hence carbon reduction calculations can be made over time) and the sale of excess briquettes to tourist lodges and others. This system will continue into the future so that the villages can monitor their enterprises effectively and figures can be extrapolated for the reduction in firewood collection and hence carbon reduction achieved.
5. Dr Mvula facilitated dialogue between the women and the tourist lodges in the area re the sale of excess briquettes and the supply of waste paper from the lodges to the villages, which is essential for briquette production, as is water. To date the Mara Conservancy (the conservation management organisation running the protected area) have committed to purchasing surplus briquettes for use by their staff for cooking and heating water, as have &Beyond's (formerly CC Africa) Kichwa Tembo Tented Camp and Bateleurs Camp, A&K's

Olonana Camp and Mara West Camp. Additionally Kenya Wildlife Service has made two trips to the villages to see the briquette-making project and have subsequently agreed to purchase briquettes.

Future potential of initiative:

- Over time the aim of each village's briquette-making enterprise is to build production capacity to 400 briquettes in one morning (4 hour period) – as is being achieved on other Millennium Fuel Project trained villages. This will involve a team of 6 women working on the press each day. This time period is less than the time currently spent by the women in collecting firewood so will free up time enabling them to carry out other duties in the village including the production of more beadwork curios for sale to tourists that visit the villages. The women are taking it in turns working the presses each day.
- Once the women in the villages have built up their experience working the presses and have reached target production they estimate that they will have surplus production in excess of their own needs. These briquettes will be sold to external users (tourism businesses, local organisations and other Maasai villages) at 10KS per briquette (800KS per 50kg sack – 80 briquettes) i.e. £7 a sack. At full capacity 5 sacks can be produced in one morning by 6 women generating a potential income of £35.
- Dr Mvula will continue to monitor the success of this initiative and report on production, sales and firewood savings over time on future project visits to the area for the Maasai Villages initiative.
- This initiative offers excellent value for money and it is hoped that it can be replicated in other villages in the Masai Mara and elsewhere.

For further information on this initiative contact Dr Cheryl Mvula at cdmvula@aol.com