



Supporting conservation through sustainable community development in the Maasai Mara.

P.O. Box 63794 Muthaiga 00619 Kenya

Sustainable Livelihoods for Maasai Women – Conservation Impact Report

Introduction

Maasai people are famous pastoralists, but as a result of the staggering local population growth rate (10.5%) and reducing land availability, pastoralism is increasingly constrained. These constraints increase tensions between pastoralism and conservation, which are only compatible when a balance is met.

Many families in the Maasai Mara face rural poverty, with the vast majority of households live without access to water, electricity or sustainable cooking fuels. Illiteracy and innumeracy among women in the areas is extremely high; 92% of women in our groups have not received any formal education (Courtney 2012). While men make an income from land lease payments from conservation, the sale of livestock and formal employment in tourism, women remain financially dependent on the men in the household. Without direct benefits from conservation, women feel marginalised and see no purpose in protecting the wildlife which they often come into conflict with while undertaking their daily chores such as collecting water and firewood. Children imitate attitudes of their mothers and consequently also develop negative attitudes towards wildlife and conservation.

Women need the means to become financially independent so that they are able to help bring their families out of poverty, ensure they are able to provide for basic needs and enable the girl child to access education so that they can actively participate in development of their communities. Income from conservation affiliated activities would also rectify the existing gender discrimination regarding conservation benefit distribution and resultantly improve attitudes to wildlife.

The Maa Trust is nurturing two social enterprises, Maa Beadwork and Maa Honey, to develop alternative environmentally sustainable livelihoods for Maasai women that will empower women and in turn reduce household's environmental impact and improve attitudes towards conservation.



Maa Honey and Maa Beadwork social enterprises under the umbrella of The Maa Trust.



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Now that the social enterprises have been established for over three years, we have repeated the baseline assessment that was first undertaken with 60 randomly selected Maa Beadwork members in 2015. This midline assessment with 50 Maa Beadwork members was conducted in December 2017. This sample of 50 ladies was selected proportionally between groups established for 2+ years, but ladies randomly selected within each group. Two additional surveys also inform this report; one is a baseline assessment of microfinance projects with Maasai women in the Mara in 2012. The second is the 2016 Maa Beadwork needs assessment survey which asked ladies to describe their home situation and self-identify their greatest problems which they would like to address through income earned.

The intention behind this analysis is to identify the extent to which Maa Beadwork is achieving its goals of improving the lives of Maasai families, reducing the environmental impact of households, and improving attitudes towards wildlife and conservation. It is hoped that areas still in need of improvement will also be identified, alongside recommendations for increasing the impact of the programme.

Impacts

The trust works closely with women engaged in Maa Beadwork to ensure that the money earned has the greatest possible impact upon their lives, the lives of their families, and the environment. Common practices such as tree-felling for firewood collection restrict the amount of time that women have to be economically productive as well as being very environmentally harmful. In 2016 we surveyed all project members who self-identified their expenditure priority for what will make the greatest impact on their lives. The results were:

- 21% gas cylinder for cooking
- 25% rainwater harvesting tank
- 16% Mkopa household solar power system
- 37% savings for school fees

The trust is partnering with companies to enable women to use their income to buy items that will address their self-identified priorities at cost price.

In 2012, 87% of households in the Maasai Mara used firewood that they collected themselves, 10.5% used charcoal that is made by felling trees on the border of conservation areas and 2.5% used a gas cylinder for cooking (Courtney, 2012). Similarly, in the 2015 Maa Beadwork baseline, only 2% of households used gas to cook on, and the rest relied on firewood or locally produced charcoal. In December 2017, the impact assessment survey for Maa Beadwork revealed that use of firewood has reduced to 70%, 18% are using charcoal, but the number using gas has increased significantly from 2.5% to 12%.

Collecting firewood in wildlife rich areas is a significant cause of human-wildlife conflicts for women, especially with elephants and buffalos, which frequently results in retaliatory killings (Thouless, 1994; Kurian, 2002). It is also a point of contention between women and conservancies as rangers fine women collecting firewood inside protected areas. Charcoal production is rife in the Maasai Mara, with a deforestation rate of 32% between 1973 and 2000 resulting in soil erosion, environmental degradation and net carbon release (Bailis, 2005; Mati et al., 2008). Deforestation for charcoal and firewood has reached a point that now threatens the Mara River which is the lifeblood of the ecosystem (Mati et al., 2008).

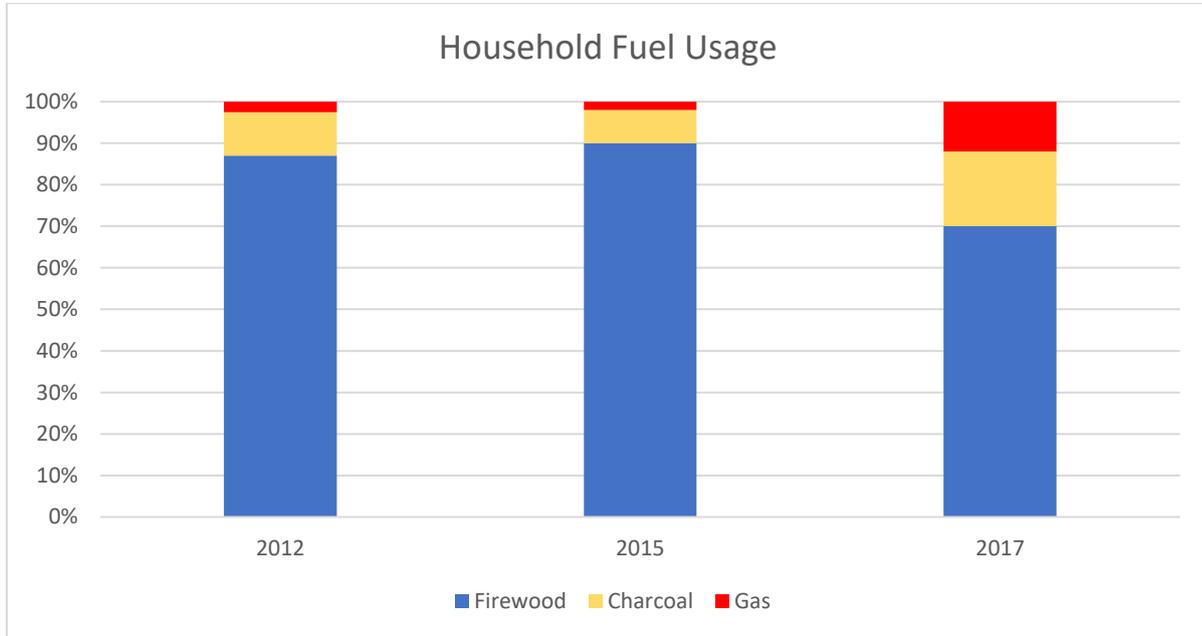
Through a partnership with kenol-kobil, The Maa Trust is bringing refillable gas canisters for sale to the women in these livelihood schemes and through our satellite networks, assisting in the refilling of these cylinders. Through this initiative, they become an affordable alternative that has positive environmental implications as



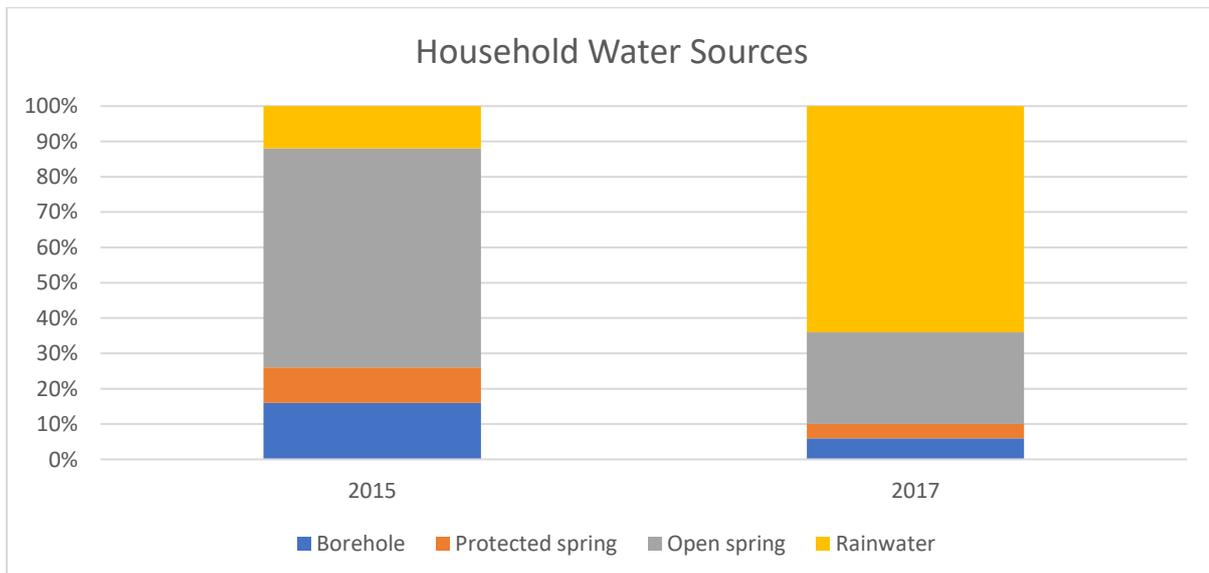
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well as freeing up time for the ladies to be economically productive and bringing health benefits through reduced smoke inhalation in homes.



In 2015, 16% beadwork members collected water from a borehole, 12% used rainwater, 10% collected water from a protected spring and 62% collected water from an open water source which is shared with livestock and wildlife. When we repeated the survey in 2017, we found that: 6% collect water from a borehole, 4% are using a protected spring, now only 26% collect water from an open water source shared with livestock and wildlife and 64% are using rainwater. This use of rainwater in 2017 is divided into 42% collect water from a Maa Trust community rainwater harvesting system and 22% collect rainwater off their own roof. Simultaneously, 34% of Maa Beadwork members have changed their roofs from mud and dung to iron sheeting over the last two years which as well as preventing leaks enables rainwater harvesting.





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The Maa Trust enables women who identified collecting water as their greatest problem to install rainwater harvesting tanks on their homes. This frees up their time to be more economically productive, by preventing the need to walk many kilometres every day to collect dirty water, and reduced human-wildlife conflicts, including crocodiles (Ross, 1998) and elephants (Kuriyan, 2002). Water sources that are shared with wildlife and livestock are also key contamination points for spreading diseases between species such as Rift Valley fever (Nguku et al, 2010) and brucellosis (Muma et al., 2007). The large increase in rainwater harvesting has the additional benefit over other safe water sources such as boreholes or shallow wells of not draining ground water supplies essential for ecosystem sustainability.

Through The Maa Trust's sustainable spending programme, members of Maa Beadwork and Maa Honey can invest some of their income in a water tank. Buying a water tank locally in the Maasai Mara is very expensive because of transport costs. We have a partnership with a tank manufacturer, Roto Tanks, who transport tanks to the Mara for free. This means that the ladies can buy tanks at Nairobi prices and in addition, our water and sanitation partner, Dig Deep UK will subsidise 50% of the installation costs in terms of gutters, pipe, tank base, taps and labour. The households are then taught how to safely treat the water using chlorine. In the last six months, 36 water tanks have been installed onto houses.



Rose Sairowua with the tank, guttering and other installation materials that she has purchased through her income from Maa Beadwork.

As well as the source of water used in homesteads, sanitation has also improved over the last two years, with the percentage of homesteads with toilets increasing from 17% to 33%. Reducing open defecation also reduces disease transmission as well as the risk of human-wildlife conflict.



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In the 2016 needs assessment survey, solar power systems were a priority for 16% of households as homes are currently lit either by kerosene lamps, solar torches or just by light emitted from the central firewood fire and phones are charged in trading centres from diesel or petrol generators. All of these energy sources have negative environmental and climate impacts. The National Institute of Environmental Health Sciences, USA, has shown that replacing kerosene lamps alone would have a major impact in slowing the earth's warming trend (Stummpf, 2013). Having safe, reliable light in the household means that children can do homework at night time, women have more hours in the day to be economically productive and research has also shown that electrifying households reduces domestic violence (Sievert, 2015) and birth rates in rural households (Peters, 2011).

The Maa Trust partners with Mkopa which is a rent-to-buy household solar system which has lights, phone charging, a radio and a torch. The daily cost is US\$0.5 for one year, at the end of which the household owns the system on the home and can then choose to upgrade to a system with a tv or fridge. In the Maasai Mara, between our baseline and midline research in 2015 and 2017, homesteads using solar power systems increased dramatically from 13% to 34%.

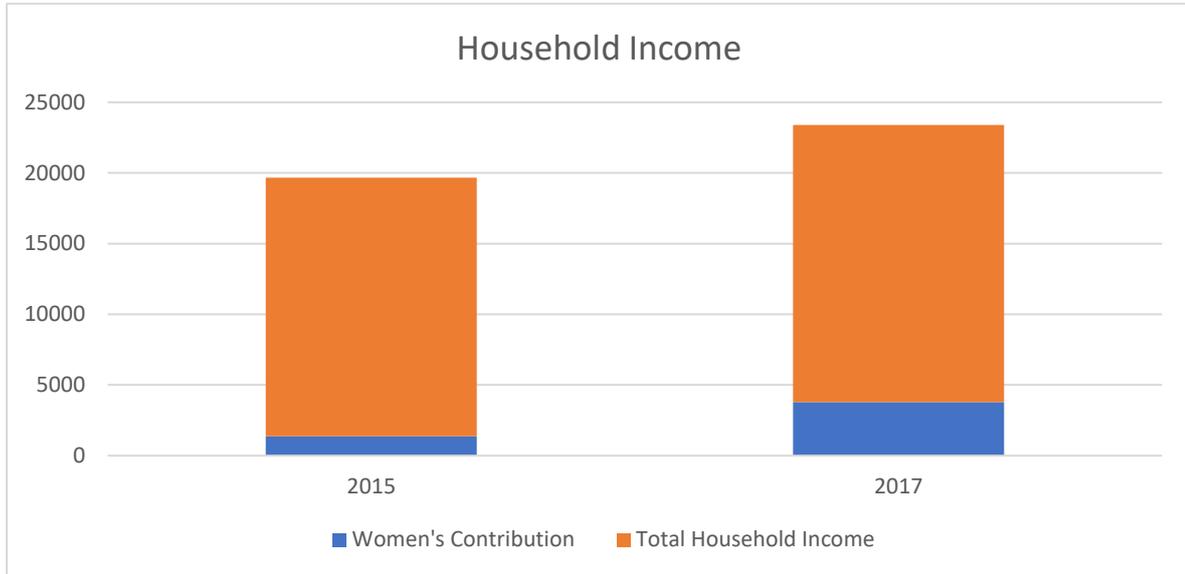


The Maa Trust's sustainable spending team, Marias Ripau and Kelvin Nabaala installing Mkopa solar systems.

While easing the chores that burden Maasai women and reducing their environmental impact in terms of cooking fuel, water collection and electrification has been immense, these are not the only positive impacts emanating from The Maa Trust's social enterprises. The greatest improvement that members have identified in their lives over the last two years as a direct result of the income from Maa Beadwork are:

- Improved life at home from rainwater harvesting, electricity or gas (18%)
- Developed businesses or investments (18%)
- Improved livestock (2%)
- Life has now become easier (14%)
- More children in school (48%)

Between 2015 and 2017, the average contribution of women to household income has more than doubled, from KES 1367 per month (7% of average household income of KES 19,667 in 2015) to KES 3783 per month, 16% of average household income (KES 23,398).



Almost half, 42%, of women surveyed identified beadwork as one of the two greatest income generating revenues for the household. As a result of this economic empowerment, 100% of women now believe that they have a greater, and more equal, role in their family and community. As an example of this, 86% ladies now attend and fully participate in community meetings.



Women Outnumbering Men at the Kipolto Spring Water Project Community Meeting



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With regard to educating their children, 90% of women surveyed say that since becoming a member of Maa Beadwork, they now contributing towards school fees, especially for their daughters. As a direct result of this, 94% now have a higher proportion of children in primary school than in 2015 and 74% now have a higher proportion of children in secondary school. There is still a way to go, however, until all school age children of beadwork members are in school. Of the 50 ladies interviewed in 2017, there are still 44 daughters and 38 sons of school age not in school. This is an average of 1.6 children per woman still not attending school.



Children at Mbitin Primary School. Mbitin is one of the 15 communities that are part of Maa Beadwork.

Across the world, research has found that education levels positively correlate with conservation actions and attitudes (Tenge et al., 2004; Vodouhe et al., 2010). Therefore, the dramatic increase in children attending school due to income earned from The Maa Trust's social enterprises has significant environmental and conservation benefits for the future.

At The Maa Trust, we work hard to stress the link between the organisation and conservancies and wider conservation goals, as well as for individual programmes. For our social enterprises, the motto is **Esiaai tenkaraki Ing'uesi** which translates as **work because of the wildlife**. Through prayers, songs, talks, images and practical experiences such as game drives, the link between the opportunities that ladies are receiving and wildlife is stressed. This message is being understood.

When asked in December 2017 if there is a link between Maa Beadwork and wildlife/conservation, 96% of respondents believed strongly that being part of the programme has positively influenced their attitude towards conservation because the link is very clear. One lady said the programme had made her more positive but she wasn't sure why, and one other thought that the programme may have influenced her opinion to a small extent. We then asked the survey participants why this was. 10% believed there is a link between Maa



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Beadwork and conservation because they are making beadwork to tourists who come to see wildlife. 90% believe there is a link because beadwork is sold to tourists on safari and the project is run by a conservancy organisation which would not be here without conservancies.

This positive attitude towards wildlife and conservation was also reflected in participants' responses to further questions. When asked about predators attacking livestock, 98% members noted that their homestead did not retaliate the last time it was attacked and 100% of members want conservancy leases to be renewed so that the programme will continue. Respondents acknowledged that some species of wildlife are more troublesome than others, but because of the benefits that they are now receiving and relating to wildlife, 94% of members stated that they like all wildlife, even those that cause trouble. This topic is currently being investigated in more detail by Danish Masters researcher Line Bang who has been in the Mara September – December 2017 interviewing women across the Mara regarding their attitudes towards wildlife. Informally, she has expressed that members of Maa Beadwork were the most positive that she interviewed and they all clearly understood the link between the income generation and conservation. She is now writing up her research which will be available to the public in the coming months.

Conclusion

In conclusion, although Maa Beadwork and Maa Honey may initially appear to be social enterprises focused on uplifting and empowering Maasai women and their families through income generation, this analysis has found that its impact delves much deeper, especially in the conservation realm. There are three main ways in which The Maa Trust's alternative livelihoods for women are having a positive impact on the environment.

Firstly, The Maa Trust utilises social enterprises to enable women to afford, and facilitates, environmentally sustainable alternatives to harmful practices such as firewood collection, burning kerosene and reducing the potential for human-wildlife conflicts while collecting wood or water.

Secondly, the social enterprises are significantly increasing the number of members' children attending school, which will in turn increase the conservation attitude of the children in years to come.

Finally, by developing a close relationship with the women, and ensuring that they are able to receive a share of direct benefits resulting from wildlife, women and their families are becoming more positive about living with wildlife, and conservation more generally. This research has shown that the hard work in ensuring that the women understand, and appreciate, this link between wildlife and social enterprises is working and the message is filtering through.

There is still work to do, however. This research has found that while improvement have been made in all areas, there are still:

- 70% of women collecting firewood, and 18% using local charcoal
- 26% homesteads collecting water at an open water source shared with livestock and wildlife
- 66% without a solar power system on their home
- 1.6 children per women who should be in school, and are not
- 14% women not fully participating in community meetings
- 4% of members who do not believe strongly that being part of the programme has positively influenced their attitude towards conservation because the link is very clear



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The more that The Maa Trust is able to engage with the 569 families (494 on Maa Beadwork and 75 and Maa Honey) that are already beneficiaries of the two social enterprises, the greater the depth of the impact will be with these families. Likewise, the more families that The Maa Trust is able to bring into its programmes, the greater the breadth of the impact. With the support and guidance of IBM and Conservation Capital, the social enterprises are on a pathway to independence and self-sustainability, but during this time of development, nurturing and growth, it is the invaluable support of Tusk Trust, Asilia Giving and Escape Foundation that is making all of the positive impacts highlighted in this analysis and report possible.

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