Arafa Kalfani

Solar Mama of Tanzania
Trained in India 2012

barefoot college
INTERNATIONAL

UN WOMEN

SOLAR MAMA AND FUTURE BEEKEEPER

Arafa Kalfanı is a 50 year-old woman from Southern Tanzania. She is a mother of four, wife, farmer and solar engineer. Nicknamed a “Solar Mama’, Arafa can assemble, install and maintain Solar Home Lighting systems for the households in her community. In 2013 when equipment arrived to her village, Arafa and one other Solar Mama from the community installed 100 solar panels atop the roofs on the villager’s homes. This many panels benefitted over 500 villagers, who then had access to clean, reliable and affordable solar-powered lights.

On the island of Zanzibar at Barefoot College Zanzibar’s training centre, Arafa received beekeeping training. She learned how to manage hives, maintain their health and operate honey harvesting. If she likes, her next steps would be to gain remote support from Barefoot’s team and begin to harvest and sell the natural, local honey she produces.

Although Arafa’s formal education ended early in her life, this second chance at learning a lucrative skill has given her life new meaning. Her youngest daughter is now in school, and Arafa intends to keep her in school for longer than she was herself. This will give her more opportunity to thrive as a young adult. Village life is often demanding on young women, where many become wives and mothers at a young age, causing their studies to end abruptly. Breaking this cycle will help Arafat’s daughter to gain autonomy in adulthood.

LIGHTING UP A REMOTE VILLAGE

In the remote depths of Southern Tanzania is the small village of Chekereni, Mtwara. Down a bumpy dirt road that is hours from the nearest town, the village is too far from any source of grid electricity to receive power. It is here that Arafa and one other woman lives. Nearly a decade ago, they trained to become solar engineers.

These “Solar Mamas”, trained by Barefoot College International in 2012, took a journey to Rajasthan, India to learn these life-changing skills. Illiterate and semi-illiterate, these Tanzanian women left their villages and families behind for 6 months with the promise of returning with new resources for their community. The selection process involves the entire community, who suggest and take votes on which women are the best candidates to train.

For the first time, they flew by plane to an entirely different country to pursue an opportunity given to them beyond their wildest dreams. They lived within a semi-arid village with different languages, foods, customs and other women from countries around the world. Arafat’s training was immersive and diverse, spanning beyond solar to teach her about financial inclusion, digital literacy, women’s rights, self-advocacy, health and sustainable living.

Combined, these new skills ensured that trainees would feel prepared, informed and confident in their ability to become leaders in their communities. Arafa knew that once she had completed her training, she would return home where, eventually, a shipment of equipment would arrive.

The equipment- Solar Home Lighting Systems and all of the required tools- would be their next objective. These women, now Solar Engineers, would assemble, install and maintain solar panels and lights for their neighbours.

“The women of my village now have their voices heard. We run a solar committee and advocate for the benefits of solar energy. Women congregate to share knowledge and collectively engage with one another on important topics. Even the men come to us in the hopes of gaining useful knowledge”

This clean, renewable affordable source of light has transformed the lives of many villagers, who reduce their risk of lung infection from black smoke and can see late into the evening for a higher quality of life. Local forests, often cut down to use for burning as a source of light, become a less desirable fuel source.

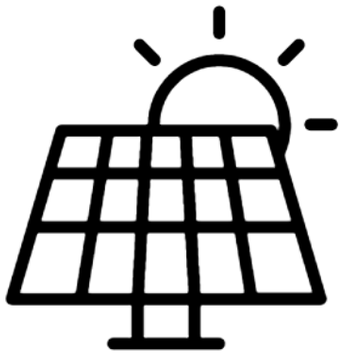
"The solar program made me want to keep learning and doing. Now I've learned beekeeping and I want to produce and sell honey too!."

The sun shines brilliantly on many days in Southern Tanzania, making it an excellent place for solar-charged systems. With an average of over 300 hours of sunlight per month, Solar Home Lighting Systems are a constant source of power.

Compared to grid electricity that is available in less remote villages in the region, where power outages commonly last for over a month, solar energy's consistency is superior.

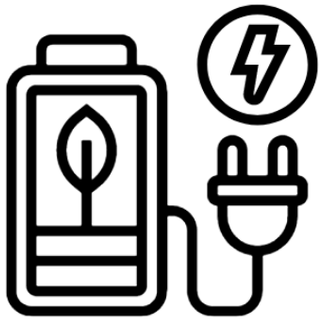
Children, who often rely on kerosene or candles to study during the dark evenings, often complain that such light sources are inadequate for reading. The solar lights, on the other hand, are so bright that every child has praised them.

Children study on average 4 hours more per week when Solar Home Lighting Systems are used. Adults are able to focus on additional livelihoods during the night as well, such as sewing and building. One villager, a young widow, attested that preparing food at night to sell the next day has enabled her to support her young child.



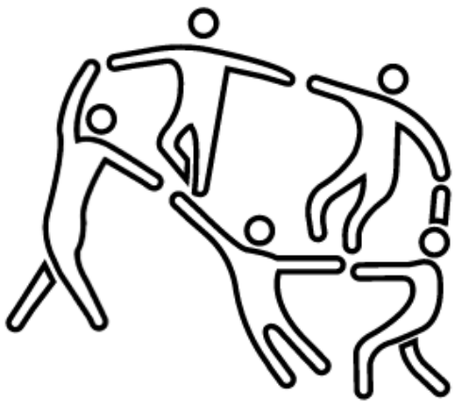
100

Houses electrified



Up to 8

Years total battery life



500+

Direct Beneficiaries

A BRIGHT SOLUTION THAT LASTS

When BCI visited Chekereni village in 2020, they were thrilled to discover that several of the Solar Home Lighting Systems were still functioning. The batteries, at least 8 years old at that time, continued to hold a charge and shine strong. It is a testament to the quality of the systems, of how well they were installed and also the willingness of villagers to take good care of the systems. With new initiatives on the horizon, villagers may soon have solar lanterns and torches available to them as well.

Arafa, like many Tanzanian women, married young and began having children. With most domestic duties and unpaid labour falling to women, Arafa was forced to stop her studies and cook, clean, collect wood and raise her family. Arafa also has farming duties, where her family grows corn and cashew nuts to collect a modest income.

When Arafa was approached by Barefoot College International and offered a chance to study again, it was quickly accepted by her. In a country where rural women are rarely selected for independent livelihood opportunities, the Barefoot model aims to realign women to roles of leadership and paid labour. In doing so, entire communities are uplifted into equity, prosperity and resilience.

Barefoot College International demystifies and decentralizes technology, putting new tools in the hands of under-utilised rural communities, fostering resiliency and sustainability. With a geographic focus on the Least Developed Countries, we train women worldwide as solar engineers, entrepreneurs and educators. We have helped develop over 3200 women from 93 countries, solar electrifying over 125,000 households worldwide. These women, our "Solar Mamas", return to their villages to bring light and scalable, regionally-specific livelihood opportunities to their community.

Our programmes naturally address 14 out of 17 of the Sustainable Development Goals.

Corporate Offices in India | Switzerland | United Kingdom | United States of America

Training Centres in India | Guatemala | Tanzania | Sierra Leone | Madagascar | Senegal | Burkina Faso | Liberia | Fiji

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