



TGUP Project Summary

Maasai Smoke-Free Stoves

Loibor-Siret, Tanzania

The Maasai Mara in western Tanzania (and southern Kenya) is one of the largest natural open game habitats in the world. It is home to the Maasai, a tribe which for millennia have been migrant herders, shepherding cows, goats, and sheep while moving in constant search of water and forage.

When the Maasai do settle, they build circular huts of mud, animal dung, sticks, and leaves. These “bomas” are inexpensive and easily assembled, yet durable. Inside the huts, the Maasai make small, open fires, for warmth and cooking. These open fires present serious hazards, both in the potential for burns (mainly afflicting small children), and the certainty of all inhabitants inhaling prodigious amounts of harmful smoke. 25 children per 1,000 die before the age of 5 from lung problems due to inhaling the smoke



TGUP’s partner in Tanzania, [Humanity for Children](#), has devised a smokeless stove for use in the bomas. The stoves are made of bricks which, themselves are hand-made by other Tanzanian workers, all part of a small-scale, local effort employing hundreds and delivering a proven, inexpensive solution to the problem of open fires and unregulated smoke.

The assembly and installation of the stoves is carried out by Maasai women who have received specific training on both the installation and use of the stoves. For most, this is the first and only paying job they will ever have. They are paid 40% above the average national wage.



The cost of a single stove installation is as follows:

Cost for Maasai stove installation

Manufacture and materials	\$80
Transportation to site	\$7
Labor per stove	<u>\$13</u>
Total cost per stove	\$100



The benefits of the smoke-free stoves inure to all members of the Maasai community, both installers and residents, especially children. They are direct, immediate, substantial, and enduring. They include, but are not limited to:

- 60% increase in fuel efficiency, reducing the hours spent gathering firewood from an average of 22 hours per week to less than 8 hours.
- A 90% reduction in ambient smoke, leading to many fewer lung problems.
- A 95% reduction in ambient carbon monoxide inside the bomas.
- Reduction in atmospheric CO2 of 3.5 tons per stove, per year.
- Highly remunerative employment for all members of the stove production and installation process.



In addition to these substantial material benefits, there is an unexpected side benefit to the ways that the stoves are installed. The Maasai are a highly patriarchal society. This project provides income, and, therefore, a measure of independence, to the female installers. It also frees time and improves the health of the women who spend time inside the huts preparing food for the entire family.

This project improves life outcomes for many of the three million Maasai who inhabit the Tanzanian side of the East African Maasai Mara. It does so in a way that engages the local people in the solution and is enduring for the life of the bomas. In these ways, it is an almost ideal development project. Thank you for considering this most worthy project.

