



CATALYZING A RENEWABLE ENERGY TRANSFORMATION

A new initiative to protect forests and public health in Kenya's tea landscapes



Until recently, Purity W’Njema used firewood and charcoal to power her stove and heat her home in rural Muranga, Kenya. But those fuels emitted toxic fumes that put her and her family’s health in jeopardy. In fact, smoke from charcoal and firewood contributes to 16,600 deaths in Kenya each year, as well as to a range of illnesses that disproportionately affect women and children, who spend more time in the home.

Today, however, W’Njema and her family are no longer breathing in harmful smoke. She now cooks with smoke-free, carbonized briquettes made from waste materials like sawdust and corn husks. In addition to the clear health benefits, the biomass briquettes are much cheaper than firewood: Switching to briquettes, for example, cuts average household fuel costs by more than a third.

W’Njema’s household is just one of more than 5,000 that have benefitted from this far-reaching initiative to catalyze a renewable energy transition in Kenya’s tea landscapes.

The initiative, which leverages the Rainforest Alliance’s longstanding partnerships in Kenya’s tea sector, aims to improve incomes, reduce carbon emissions, and create healthier homes for 50,000 tea families by 2021.

To supply residents like W’Njema, seven Household Energy Centers (HECs) run by local entrepreneurs sell a range of clean-energy products, from smoke-free briquettes to clean cookstoves to solar lighting. Two of these HECs also produce the smoke-free briquettes, and two more briquette-producing HECs are in development. Because the landscape is so vast, about 50 local entrepreneurs have undertaken Rainforest Alliance training and are now selling these clean energy products in more remote areas. Our partner organizations, Living Earth and EnSo Impact, have been instrumental in implementing this important work, which is supported by the IKEA Foundation.

One of the briquette manufacturers, Mary Waiyego Kamau, had been collecting charcoal dust at the market to make briquettes



Purity W’Njema and her family are no longer breathing harmful smoke in their home.



Biomass briquettes are made from sawdust, corn husks and other waste materials.



Local entrepreneurs sell a range of clean-energy products, like these clean cookstoves and solar lighting.



“I help conserve the environment because I use waste material from my cattle and farm. I am not involved in deforestation.”

MARY WAIYEGO KAMAU
Renewable energy entrepreneur

by hand—a process that allowed her to produce only about 60 kg per month. Equipped with equipment and training, Waiyego produces that amount in an hour—and of course, her new briquettes are carbonized, smoke-free products. Waiyego, a widowed mother of three who once struggled to make ends meet, has become a local leader, selling to local households, as well as hotels and other customers. Her income has increased greatly, and she’s now one of the region’s most passionate advocates for renewable energy.

But households are only part of the fuel-use story in Kenya’s tea landscapes. A single tea factory burns the equivalent of 100–150 trees a day in order to dry and wither tea leaves, putting terrible pressure on Kenya’s forests, which in recent years have been depleted at the alarming rate of about 5,000 hectares a year. To address Kenya’s deforestation crisis at scale, the Rainforest Alliance is creating a Central Processing Facility (CPF) where industrial briquettes for tea factories will be produced. The timing

is fortuitous: last year, the Kenyan government announced a ban on logging, so now factories can only purchase firewood from private forests (not surprisingly, firewood prices have skyrocketed, putting increased stress on an industry with already-low profit margins). Between the CPF and the use of clean energy in households, the entire project is projected to save tens of thousands of trees from being chopped down for firewood.

For her part, Purity W’Njema is already sold on clean energy, which she says is a particular benefit to women, since “we are always the ones in the kitchen.” It’s not only better for her health and her pocketbook, she says, it also saves her time. “With firewood, you have to go find it and collect it,” and then you have to hover over the stove tending the fire, she says. “With briquettes, you just light the fire and put the food on and go do something else and find that the food is ready—I don’t have to stay there putting firewood in the stove.”



Photos: Urvi Kalra and RA staff