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Women Empowered Through Biomass Energy Production

In 2004, the women of the SAM Muhima community-based organization received a grant of \$73,500 from USAID through Associates in Rural Development Inc. (ARD).

The women started collecting garbage from 5,245 households, sorting and processing the waste into high quality biomass fuel briquettes for household and industrial use, and organic compost fertilizer for agricultural production.

The biomass fuel briquette production is achieved using a locally-made torrefaction-briquetting technology, the first in Africa. Both the biomass fuel briquettes and organic compost fertilizer are in high demand.

Since the project became operational, it has garnered attention at the highest level (the President's office contributed a vehicle) and achieved social, economic, and environmental impacts.

It has contributed to the reduction in deforestation and reduced depletion of soil nutrients by providing an alternative source of cooking fuel in the form of fuel biomass briquettes. Since 98% of the Rwandan population uses charcoal and/or wood fuel for cooking, pressure on natural resources is great, and much of the country's tree cover has been eliminated.

This project currently employs 117 regular workers and an additional 10 to 25 part time workers. Nearly 90% of these workers are women, with little or no formal education. Many had been forced into

prostitution after the Rwandan genocide, while the male employees were formerly homeless street boys. The employees now participate more fully in society and also enjoy priority access to the briquettes, which are significantly cheaper than charcoal.

The enterprise has three steady sources of income: (1) monthly service delivery fees from the 5,245 households where garbage is collected daily, (2) selling of biomass fuel briquettes, and (3) selling of organic compost fertilizer.

Within a period of less than three months, revenue from this project brought the organization's bank account skyrocketing from zero to Frw 5,157,500 (approximately \$9,350 USD), and every worker has opened his or her own bank account, where his or her salaries are deposited. The project also significantly reduced the money spent by local authorities on solid waste management.

Due to a one-time small grant given by USAID to a group of enterprising Rwandan women, the people participating in this project – both workers and consumers – enjoy myriad benefits such as employment opportunities, increased income, and better health. The local government has since copied this model and set up an additional 7 trash collecting cooperatives around Kigali.



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