

## BASIC CASE INFO

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**Inspiring Initiative:** Domestic Biogas Production in Mauritania / **Land:** Mauritania

**Land degradation:** Vegetation degradation by overgrazing and deforestation; Climate deterioration

**Initiative by:** Development), OESS (Organisation for the Enhancement of the Senegal Stream)

**Initiative supported by:** Tenmiya



# Cooking Up Fuel Solutions



CREDITS: ONEVILLAGE INITIATIVE

## MAKING THE BEST OF LOCAL RESOURCES

The compact biogas units are constructed in people's back yards and it is relatively easy to learn how to put them together. An air tight reservoir is filled with a mixture of cow dung and water and is left to ferment, with the gas being piped into canisters where it is stored. The materials needed for each unit cost around \$250. To ensure a steady supply of gas the owners need to add 2-3 kg of cow dung from the cattle that they keep in their compounds overnight.

### SETTING THE INITIATIVE

The valley of the Senegal Stream in southern Mauritania is a fragile and over-exploited environment. A narrow strip of land, less than 20km long, it is the country's main agricultural area and is also the most densely populated. Wood is the most commonly used fuel and 80% of the wood cut is used for cooking. Alternatives are either unavailable or are too expensive. Over-harvesting of wood, combined with recent droughts and overgrazing are leading to deforestation. As a result women have to travel increasing distances (an average of 10km per day) to collect wood for cooking. Women also suffer poor health as a result of cooking with wood or charcoal. Respiratory diseases are one of the major causes of mortality in the Sahel and sub-Saharan Africa.

In response to these problems, the Mauritanian Association for Autonomous Development has set up a pilot domestic biogas project. The project, sponsored by UNDP, is located in a village inhabited by pastoralists and aims to convert the plentiful supplies of animal manure into cooking gas. In doing so the project creates economic, environmental and health benefits. In economic terms, it reduces the workload of women in collecting firewood and provides a high-quality compost which can be used on their kitchen gardens or sold. In environmental terms, it reduces pressure on the remaining woodlands, allowing them to regenerate. It also improves environmental quality and hygiene by reducing the amount of animal waste in the village. And, finally, in health terms, it reduces exposure to fumes from burning solid fuel in unventilated spaces.

### MAKING THE DIFFERENCE

This project was initiated in partnership with a women's co-operative with more than 500 members, with units initially being installed in some 50 households in one village (Ari Haara). The women there have been trained in assembling and maintaining the kits. The women of Ari Haara conducted a communication campaign in neighbouring villages, telling them about the new technology and inviting women's organisations to come to visit them to see the units in practice. The village now acts as a demonstration site where women from other villages can come and witness the improvements to village life. The women from Ari Haara are now involved in training women in other villages in how to set up their own systems. One group in another village, Djoudé Djeri, received support from the Organisation for the Enhancement of the Senegal Stream to install thirty units in their village. Since this time women in this village have built another twenty units, which they have financed themselves.

Grassroots support and women's commitment to the idea is essential in maintaining a momentum which extends beyond the lifespan of the initial project. The women who have adopted the technology are delighted with the outcomes and their new role as ambassadors for the technology. Future challenges include setting up functioning village level micro-credit systems so more households can avail themselves of this technology without being dependent upon external funding.