

# How Women Benefit from Sustainable Technologies for Water, Sanitation and Energy in rural households of Kyankwanzi district, Central Uganda.

Implementing Organisation: ARUWE and WECF

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**Action for Rural Womens' Empowerment (ARUWE)** is a Ugandan indigenous organization that was transformed from a community based organisation founded in 2000 to an NGO in 2008. ARUWE's mission is to support and advocate for the needs and rights of marginalized rural poor women to enable them initiate and manage their own social-economic and development process

**Women in Europe for a Common Future (WECF)** is an international network of over 150 women's and civil society organisations implementing projects in 50 countries and advocating globally to shape a just and sustainable world; our Common Future.

## Problem Statement

In Uganda, the energy exploitation pattern is such that biomass accounts for 92% of the total energy consumed. Most of the biomass energy is from wood, which is consumed in the form of charcoal and fire wood. This exploitation pattern is not sustainable because it heavily relies on non-renewable energy that is both costly, untimely, limited and has serious environmental effects.

In Mulagi Sub County, 100% of households rely on wood as a source of energy for cooking meals.

The supply of fire wood is insufficient; **families spend a lot of time walking long distances looking for wood**, children lose school time which affects their performance while elderly grandmothers find it difficult to look for fire wood due to their diminishing energy. The current practice of using firewood which is the main source of energy gives off a lot of smoke which is a **health hazard to women and their children**. The rate of depleting forest cover for fuel is also alarming, which requires urgent intervention of all stakeholders to save the environment for the current and future generation. There is increasing community conflicts arising from families encroaching on other people's land in search for fire wood.

In addition to the above, currently in Kyankwanzi women and children walk long distances in search of water for house hold use, which in some cases may not be clean or safe water for consumption. Families are faced with a high risk of being affected by the many water and sanitation related illnesses including diarrhoea, and the dangers associated with walking long distances in search of water including sexual violence with regard to women and girls.



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## Introducing the Sustainable Technologies – Rainwater Harvesting and Biogas Digester constructed with Bamboo

The technologies are not new ones but the construction is innovative, the tanks and digester are constructed with a bamboo basket that is plastered with water tight cement. The construction is very robust and long lasting. The innovative construction has been imported from India within a **South-South-Know how-Transfer**.

The advantage of this construction is that it uses **renewable material, bamboo**, and that women are involved in the construction, even they earn money through the bamboo preparation and weaving the baskets.

The **rainwater harvesting tanks** are constructed in a volume of 6000 liters which makes sure in the region that the water volume last during the dry season to provide safe water for drinking, food and hygiene for an average family.

*I now spend now only a few minutes to cook tea and food. I have more time to market my produce, to be in my shop and for sowing.*



The **biogas digesters** are constructed with a digester volume of 3000 liters and use the dung of at 2-3 cows. The generated biogas can then be used for cooking with a clean stove and for lighting. With one biogas plant of this size and 2-3 cows, enough gas is produced to cover the cooking demand for one average famil

We provided the households with the possibility to **connect a pour flush toilet** to it. Thus it provides sustainable sanitation and the human excreta add to the generated biogas volume. The effluent of the digester is reduced in pathogens and contains organic matter as well as all the nutrients as they are not degraded in anaerobic digestion.

The effluent can be used as fertiliser in the garden or field but some safety measures have to be taken, e.g. like not applying to food crops which are eaten raw.

These technologies have been introduced to the communities in a participatory way, where **the women's groups and community leaders were the main players** and participated in the sensitization and training sessions to understand the benefits of these technologies. Women groups together with the community leaders selected identify potential households who were willing and ready to participate in adopting some of the green technologies especially setting up bio gas plants and rain water harvesting bamboo tanks. Women groups further identified local masons who were trained in the construction and maintenance of the different green technologies. These groups further supported selected households in raising local contribution/materials, including accommodating and feeding the technical trainers.

### First Results meeting the SDGs

The results which we see in the local communities show that this holistic approach reaches a number of SDGs, which are interlinked on local level:



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