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EASTERN AFRICA: 15,000 HOUSEHOLD BIOGAS CLEAN COOKING SOLUTIONS

CASE STUDY/INSIGHT

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Around 1 billion people in Africa still use traditional cooking practices – such as open three-stone stoves and improved cookstoves. Traditional cooking requires fuelwood or charcoal as the cooking fuel. These fuelwood are mainly sourced from adjusting forest regions leading to continuous deforestation. Traditional cooking also leads to increased indoor air pollution (IAP). IAP has been recorded as a key cause for respiratory and health issues in women and children.

Several initiatives supported by different NGOs and international funding agencies are on-going in various countries of the African continent. As an alternative to the traditional cooking system, improved cooking solutions such as gasifier stoves, ethanol stoves, kerosene stoves and LPG stoves are being promoted. Yet, these stoves depend on biomass or fossil fuel. Though these stoves contribute to increased fuel efficiency and reduced IAP, they continue to emit CO2 during their operation.

To address these concerns, the project promoted biogas digester based clean cooking systems in the East African countries namely – Tanzania, Kenya, Uganda, Ethiopia, Rwanda and Burkina Faso. The project was implemented by an international cooperation organization from The Netherlands. Biogas digesters of different models (fixed drum, floating drum, balloon type, pre-fabricated, etc.) and various sizes were promoted under the project. The households in rural regions with cattle farming were targeted by the project. Cattle farming (such as cows, goats, poultry, swine, etc.) generated cattle wastes which are used as the raw material for the biogas generation.

The project used an innovative business model linking the local micro-finance institutions, rural co-operatives, skilled masons, biogas digester companies, farmers, service technicians, etc., to create a sustainable market for the biogas. In partnership with the national government, a project steering committee including members from ministries, academia and the private sector was formed to guide the project implementation from time to time.

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The project also brought in international development funds from different organizations such as the SNV, the World Bank, etc., to manage the expenses of training the masons and end-users. The project also offered incentives to the masons/digester companies to ensure digester quality and subsidy to households to install biogas cooking systems. A call centre was step up to track the performance of digesters, collect complaints from households and resolve issues from time to time.

This is a climate change project designed to reduce the global carbon footprint. The biogas cooking systems installed under the project reduced a significant amount of carbon emissions every year, improved the health of women and children and contributed to the achievement of SDG targets of respective East African countries.