

Briquettes as an alternative to fuel wood and to prevent deforestation, Kigali, Rwanda

Project No: RWA /OP3/2/06/15

Grantee: Coopérative pour la conservation de l'environnement (COOCEN)

Location: Nyakabanda in Nyarugenge District, Kigali City

SGP Contribution: 49,542 USD

Cash Co-Financing: 34,000 USD

In-Kind Co-Financing: US\$ 11,000

Project Duration: July 2007 – Oct 2008

Number of people served: 4,000 households??

Focal area: Climate Change

Background

As in most developing countries, Rwanda relies on fuel wood for heating and cooking. Fuel wood in Rwanda accounts for at least 80.4 per cent of energy consumption and as a result, there is massive deforestation across the country. Furthermore, population growth is intensifying deforestation and causing more environmental degradation. For this reason, in 2007 the GEF Small Grants Programme supported a project implemented by a women's cooperative in Kigali city to make briquettes, as an alternative to fuel wood. These briquettes are made from organic components of the garbage collected from households which is dried, ground and compacted. They are used for heating and cooking. The project has helped reduce CO2 emissions and deforestation.

Project Objectives and Key Activities

The project goal was to introduce alternative energy sources to the use of fuel wood and to demonstrate this technology as a potential solution to address climate change and deforestation while improving the livelihoods of the community.

With the support of the Global Environmental Facility's Small Grants Programme (GEF SGP), implemented by the United Nations Development programme (UNDP), the women's cooperative COOCEN (formerly ACEN) started the production of ecological briquettes and suitable cook stoves in Kigali city.

As part of the project, the women from the cooperative started awareness raising activities on environmental issues and waste management and provided training on briquette making to the members of the cooperative. The cooperative also designed cooking stoves which are suitable to use with the briquettes at household level.



Environmental Impact

Today, around 1,500 tonnes of briquettes are made per year and sold to prisons, schools, tea factories and brick factories as alternative to firewood. So far the use of briquettes at household level is still limited.

Through the introduction of these ecological briquettes the project helps to avoid the burning of 1,200 tonnes of firewood per year or the cutting of at least 9,000 trees per year, which represents around 9ha of forest plantation. Thus, the project has helped avoid 297 tonnes of CO2 emissions per year.



Socio-Economic Impact

The cooperative employs 110 persons, mostly women, who earn at least 50 USD per month. With this amount, they can pay for food, school fees for their children, and medical insurance. This income has improved their quality of life and capacity to provide for their families. The employees have been equipped with gloves, protective masks and boots to protect them from injuries and respiratory diseases while manipulating garbage.



In addition, the 4,000 households where garbage is collected, benefit from improved health and sanitary conditions. In Kigali, garbage collection is indeed mainly done by cooperatives as there is no public institution for that. COOCEN has been awarded by the City Council in 2008 and twice by the Ministry of Labour in 2009 and 2010 for its efforts towards jobs creation and innovation.

Policy Impact

The number of waste recycling initiatives is increasing in Rwanda. The GEF SGP Rwanda has played a big role in this through the support to briquettes making, plastic recycling, and composting projects. The results demonstrated by these projects lead the Kigali City Council and the Rwanda Utilities Regulation Agency to sensitize the city residents to sort garbage at source and facilitate waste recycling initiatives.

Gender Mainstreaming

Ninety percent of the cooperative employees are women and most of them are widows and former sex workers. Working for the cooperative allows them to be independent, have a source of reliable income, improved self esteem and social status in the community, and has also helped them to prevent abuse from their husbands.

Replication and up scaling

As a result of the project, COOCEN has become a demonstration site that is visited by hundreds of people every year from abroad and around the country, including governmental officials and university students. Several articles were written about the project and shared on internet. This has facilitated the replication of the projects results by other cooperatives in Kigali.



A major result in terms of the replication and up scaling of the project approach was the start in 2011 of a larger-scale project supported by UNIDO, where the biggest garbage collection company in Kigali started to make and promote use of briquettes.

Lessons learned

The briquette making project by COOCEN has shown the importance of empowering community based organizations as key actors in environmental protection. It has also demonstrated that socio-economic benefits are a key for project sustainability. The results achieved indicate that the GEF SGP projects are successful in playing a catalytic role in ensuring wider environmental benefits and awareness on environmental issues through policy change, replication and upscaling.