

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

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 cooperative in Kigali city to make briquettes and help reduce CO₂ emissions and deforestation. 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.

Project Objectives and Key Activities

The project goal was to promote 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 cooperative COOCEN (formerly ACEN) started the production of ecological briquettes and suitable cook stoves in Kigali city.

Training on briquette making was provided to cooperatives members. In addition, the women from the cooperative started awareness raising activities on environmental issues and waste management; the cooperative 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 very 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. 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 (2009, 2010) for 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. This situation has led the Kigali City Council and the Rwanda Utilities Regulation Agency 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 their self esteem and social status in the community, as 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 even shared on internet. This has made easier the replication by other cooperatives in Kigali.

A major result in terms of the replication and up scaling of the project is related to a project started in 2011 where the biggest garbage collector company in the city started to make briquettes with UNIDO support.

Lessons learned

The briquettes making project by COOCEN has shown the importance of empowering community based organizations as key actors in environmental protection. It also demonstrated that socio-economic benefits are key for project sustainability. The results achieved also show that the GEF SGP projects are really playing a catalytic role in ensuring environmental benefits and creating awareness on environmental issues.