

# SUSTAINABLE LAND MANAGEMENT AND ENVIRONMENTAL REHABILITATION FOR POVERTY REDUCTION



Implementing Agency:  
Send-a-Cow Rwanda

Project Start:  
09/12/13

Project Duration:  
36 months

## What does the project do?

The project aims to improve the livelihoods of 600 vulnerable households (around 3000 people) by:

1. Improving the quantity and diversity of food production through environmentally sustainable agriculture;
2. Addressing soil erosion, vital nutrient depletion and unsustainable agricultural practices;
3. Encouraging the use of renewable energy devices, including fuel efficient stoves, biogas and solar lanterns.



## Why is the project needed?

The agricultural sector accounts for 34% of Rwanda's GDP, and offers tremendous potential for lifting people out of poverty. Yet the sector faces over-exploitation with severe soil erosion leading to poor crop productivity. Poor agricultural practices and insecure land tenure trap smallholders in poverty, whilst also exacerbating a decline in opportunities presented by the natural environment, for example, by further degrading soil quality. Particular problems are presented by extended dry periods and extreme heavy rainfall events, both of which can wipe out agricultural production for a smallholder farmer. In SACR project consultations, many farmers perceived these weather events to have gotten more extreme in the past decade, and feared that agricultural problems would escalate.

One of the most significant causes of poor agricultural productivity relates to Rwanda's natural topography - the 'thousand hills' present a challenge for farmer cultivation. Heavy rainfall events can easily wash away nutrient rich topsoil and flood agricultural land in the basins below.

The social cost of poor agricultural production is severe. Without sufficient quality or quantity of production, farmers struggle to produce sufficient food to bring to market or even to feed their families. This has knock-on effects, as

household income is diverted to buying food, away from health insurance or children's educational needs. There is little opportunity to generate savings for longer-term investments to diversify and improve their potential for generating income.



## Providing sustainable community benefits

The project covers four districts, selected both on need and existing SACR presence - Rulindo District in Northern Province, and Bugesera, Rwamagana and Kayonza in Eastern province. These districts are characterized by high levels of poverty, the use of poor agricultural practices, and low protection against soil erosion. Since its inception in January 2014, the project has constructed over 50Ha of progressive terraces, utilizing local labour to facilitate skills transfer and income generation in the local communities. The project has established 8 tree nurseries and constructed 150 heap composts (above).

In the early engagement communities, there have been substantial achievements in the promotion of sustainable environmental management, and in the adoption of renewable technologies. Communities have benefitted from training that has enabled them to develop terraced agriculture, with irrigation practices that enable them to harvest crops throughout the year. This has had substantial impacts on beneficiaries' food security and income generation, through which new livelihood opportunities have been developed. Project training has helped farmers to utilize their household land more effectively by developing kitchen gardens, harvesting rainwater, and controlling erosion.

Beneficiaries were selected through consultation with local leaders, with highly vulnerable people prioritized to receive project support. The project utilizes a "peer farmer" system, where training participants who demonstrate high levels of engagement are supported to become model farmers. These individuals are encouraged to mentor other farmers, both within and beyond the initial beneficiary group, again ensuring that the project outcomes are spread as widely as possible.

The project provides a revolving credit facility; whereby a small loan is provided

to a group member, which accrues to a new member upon repayment of the initial loan. Loans were used for solar powered lamps, so that beneficiaries no longer need to use paraffin candles - which have negative health impacts - to light their homes in the evening. These solar powered lamps also provide a useful source of electricity, allowing beneficiaries to charge mobile phones. A smaller number of beneficiaries also received biogas digesters, which utilize human and animal waste to produce fuel for cooking, reducing the need of trees for firewood. These biogas digesters utilize the manure produced by project cows producing an organic fertilizer, reducing the need for farmers to use chemical alternatives.

As a result of the income generation supported by the project, beneficiaries have been able to meet development aspirations for accessing electricity and engaging in activities which require greater energy and fuel inputs. However, the project has ensured that such development aspirations are consistent with environmental sustainability and climate resilience, helping to steer beneficiaries towards the adoption of energy-efficient devices and renewable fuel sources.

Project achievements have been



appreciated by district authorities. The project has worked closely to align with District Development Plans. In recognition of this, the SACR project received a certificate of contribution to Rwamagana district's performance contract. Compared against the 30 other districts in Rwanda, Rwamagana District has progressed from 29th to 10th in terms of achievement of

their performance contract during the project period. One of the key strengths of the project so far has been the value of working closely with District and Sector leadership. This partnership has enabled closer alignment between project and district plans, and created an element of government ownership of the project.



#### Farmers from Rwamagana District tend to their seed nursery

The group contains 145 beneficiaries, who have been supported for 1 year to establish seed nurseries for food and for fodder trees. The trees help to improve slope stability and act as a "nitrogen fixer", helping to improve soil fertility. Before the project, there was a very serious problem of deforestation in the local area. Local people relied upon the trees for firewood, but population growth had increased the pressures on this already dwindling resource. The seedlings from the nursery will contribute 1,800 trees, helping to restore the local ecosystem whilst also providing a range of benefits to the farmers, who have been trained in how to manage the trees sustainably. The project has also taught them how to construct energy saving stoves which require less wood and, together, these actions will help restore the trees in the local area.

# Case Study: Basile Bastilde, Gatari Village, Bugesera District

Basile and his family were among the first beneficiaries to be involved in the SACR project. The cell in which he lives was targeted due to high levels of malnutrition, affecting 30% of children locally. At that time Basile struggled to grow food in his compound and frequently found the soil washed away by heavy rains, causing problems to him as well as his neighbours downhill. Initially supported by SACR to join a cooperative, his group worked together to cultivate seeds that could later be utilized at the household level. Basile and other members of the cooperative received training in soil control techniques, helping them to cultivate seedlings on a communal lot and to establish resilient kitchen gardens within their households. Basile also benefitted from training to build an improved cook stove and, as a beneficiary with a compound able to accommodate it, was given a cow.

The project further supported Basile to purchase a solar lantern and a biogas digester, using income generated from the project and a loan facility, respectively. Today, every inch of his compound has been utilized to provide some benefit to his family, the environment or the local community. The income generated from initial project activities, as well a better understanding of natural resource management, has enabled Basile to continue to develop his compound beyond the scope of the project. He has now built a rainwater harvesting system, invested in a solar

generator for his house, and built a shower. Basile has become a "peer farmer" through the project, and plays an important role in training others in the immediate community and beyond. Although not everyone has been able to achieve as much as Basile, his story is an important example of what can be achieved through the project and provides a role model for the community. His community is now looking to accelerate tree planting in the local area, and hopes to see dramatic changes within 5 years. Basile's story shows how effective skills and knowledge transfer, with a limited amount of asset transfer, can create cascading benefits which extend beyond the project's initial scope and target beneficiaries.



**“Their lives are changing,**  
when I visit the community, I can see people coming together, sharing knowledge, making changes together. At the start of the project, some of the beneficiaries had an inferiority complex, making interaction impossible. By supporting them to work together in small groups, their confidence has been built substantially.” - Mrs Muhorakeye Angelique, Project Manager

### How does the project promote green growth?

The Send a Cow project integrates a number of important elements of climate compatible development. Most significantly, its approach helps to conserve and encourage more sustainable management of the natural environment, whilst utilizing renewable energy sources and innovative green technologies. However, the project also makes a significant contribution to the social and economic development of the provinces in which it operates, not only reducing poverty in the short-term, but equipping people with the knowledge, skills and attitudes to adopt more resilient, sustainable livelihood practices that can



adapt to future changes in the climate. By changing behaviours which negatively impact the environment into behaviours that positively impact the environment, the project provides a win-win scenario for people and the environment.



Send a Cow (SAC) is a UK-based development organisation, established by a group of Christian dairy farmers over 25 years ago, to

support Uganda's emergence from civil war. The charity now works to bring the benefits of smallholder dairy farming to 6 countries in East Africa, including Ethiopia, Kenya, Uganda, Burundi, Zambia and Rwanda.