Piloting a Hill Approach for Resilient Agriculture in South Kivu

SEPTEMBER 2022

WHY A HILL APPROACH?

Smallholder farmers in South Kivu experience high levels of food insecurity and poverty, with low agricultural productivity and few off-farm income opportunities. Much of the farmland on the hills that are nestled between Lake Kivu and Kahuzi Biega National Park suffers from soil erosion and low soil fertility, resulting in low crop yields. Many of these hills are owned by absentee landlords who rent out plots to smallholder farmers. The lack of tenure security discourages farmers from investing in soil and water conservation measures that could reduce erosion and increase agricultural productivity. By working jointly with landowners, tenant farmers and local authorities, the USAID Bureau for Humanitarian Assistance (BHA)-funded, Mercy Corps-led Food Security Project (FSP) supported the rehabilitation and improvement of farmland on 18 hills on a pilot basis between 2017 and 2022.

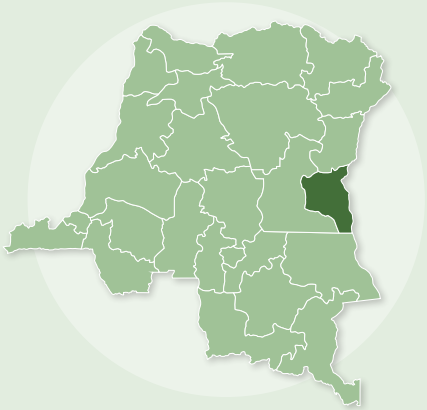
The Hill Approach has improved the livelihoods of tenure farmers on the hill:

Crop production and crop sales have increased. Farmers increased their crop yields by adopting improved agricultural practices, in particular the use of organic soil amendments and improved seed. They also increased their overall production by cultivating more land, which became available because of land reclamation. Some farmers were able to sell surplus production and thus increase their household income. The improved land quality also enabled farmers to diversify their crop production, where before only cassava could be grown.

Tenure security has improved. More than 2,500 farmers on the 18 pilot hills have obtained written tenure contracts that specify the location and size of the plot they are renting, the rent and its mode of payment, and any restrictions to usage (such as growing coffee or other perennial crops). In many cases, the contracts are for two or more years, giving farmers the assurance that they will benefit from any investments (soil conservation, fertilization) made to the plot.

Soil erosion has reduced significantly on the hills. The soil and water conservation measures introduced by FSP have had the desired effect to stabilize the hillsides and increase soil depth. As a result, there are now few, if any, crop losses due to soil erosion. Tenure farmers are now willing to invest in organic soil amendments, compost, manure and improved seed and planting material. The area of cultivation has increased by reclaiming degraded land. There is now more farmland on the hills for both existing or new tenants, in a context where the demand for farmland from local communities and internally displaced people is high.

ABOUT THE HILL APPROACH IN FSP



Goal: Proof of concept of an integrated "Hill Approach"

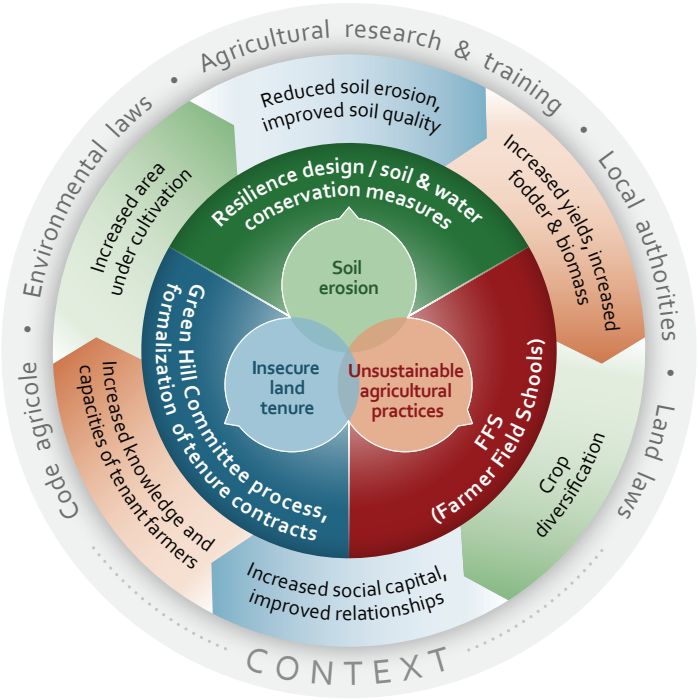
Objectives: Increased agricultural production, increased land quality, and increased duration of tenure contracts for smallholder farmers

Timeframe: October 2018 – September 2023

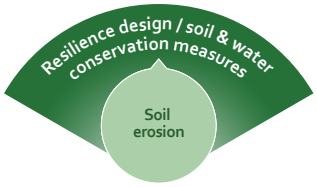
Donor: USAID

Location: 18 hills in the Health Zones of Miti Murhesa and Katana (Kabare territory) and Kalehe (Kalehe territory) of South Kivu, DRC

Partners:
- Mercy Corps (lead)
- World Vision
- Harvest Plus
- Université Evangélique de l'Afrique (UEA)
- Action pour la Paix et la Concorde (APC)
- Réseau Inter-Organisationnel (RIO)

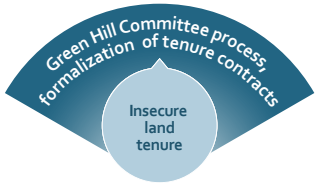


The Hill Approach tackled the three inter-related challenges of soil erosion, unsustainable agricultural practices, and insecure land tenure in an integrated manner, through mutually reenforcing interventions:



Resilience Design (RD) aims to strengthen the resilience of smallholder farmers and their farming systems to environmental and economic shocks and stresses through improved farm design. It focuses on improving soil health and water management, using an integrated design process that is site- and context-specific. It seeks regenerative ways to invest in farming, relying largely on local resources. The Hill Approach used RD elements and principles such as starting at the top of the hills to reforest degraded hilltops; adding large-scale and small-scale water harvesting structures (such as check dams, berms, and infiltration pits) to slow, spread and sink water into the soil; planting multi-purpose trees; and improving soil quality through mulching and using local amendments such as manure and natural fertilizers. The implementation of some of these measures required collective action by farmers on each hillside.

Farmer Field Schools (FFS) originated in Southeast Asia as a participatory agricultural extension approach that emphasized farmer-led experimentation. The initial focus was on Integrated Pest Management (IPM), soon widening out to include soil and water conservation and other agronomic practices. The approach weaves together elements of adult education, agroecology and local organizational development. The Hill Approach used elements of FFS to implement a comprehensive training program for farmers on soil and water conservation, use of improved crop varieties, agronomic practices, pest and disease control, post-harvest handling and marketing. A cascade training approach was used, with Green Hill Committee members receiving training and then in turn training other farmers.



In South Kivu, the predominantly unequal power balance between landowners and tenants has resulted in a situation whereby tenants typically have no formal rights to the land they cultivate and can be evicted at any time. While actual eviction has been rare, the FSP team was aware that the lack of tenure security had historically discouraged farmers from making the investments needed to protect plots from soil erosion and from using organic soil amendments that would improve soil quality and productivity over time. Social mobilization and organization of tenant farmers is therefore a key element of the Hill Approach. Following an initial scoping, FSP identified hills suitable for rehabilitation and engaged with the landowner to convince him (all landowners were men) to collaborate with the project. The project then established Green Hill Committees as a governance, advocacy and management mechanism for activities on the hill.

The roles of Green Hill Committees

The COCOVE (Comités de Colline Verte or Green Hill Committees) are an essential part of the Hill Approach. Most of the members of the committee are elected from amongst the tenant farmers on the hill. In addition, the committee includes the landowner (or land manager) of the hill, as well as the local village chief. The role of the COCOVE is to:

- Provide a link between the landowners, the tenant farmers, and all other stakeholders
- Prevent and resolve conflicts on the hill
- Negotiate and promote long-term, sustainable, win-win contracts, and advocate with the landowners and other partners for tenant farmers' rights
- Organize regular stakeholder meetings and ensure that the rights and duties of all stakeholders are respected
- Plan and supervise the soil and water conservation work on the hill and coordinate their maintenance

KEY STAGES OF THE HILL APPROACH

PREPARATION

- Meeting between FSP, the chiefdom, group leaders and village chiefs
- Mapping and pre-identification of hills by health zone
- Feasibility study and final identification of hill

PLANNING AND DESIGN

- Mapping and pre-identification of hills by health zone Hill design for each of the selected hills
- Meeting between FSP and the landowners of the selected hills to present the approach
- Presentation to the tenant farmers on each of the hills

SOCIAL MOBILIZATION

- Establishment of Farmer Field Schools (FFS)
- Establishment of the Green Hill Committees (COCOVE) by election from FFS members

IMPLEMENTATION

- Distribution of seeds, tools, and seedlings
- Launch of the SWC work on the hill with voluntary labor from all tenants

CAPACITY DEVELOPMENT

- On-the-job training throughout the agricultural season in the FFS
- Awareness raising and mediation activities on land conflicts
- Coaching and follow-up of activities

CHANGES OBSERVED ON THE PILOT HILLS INCLUDE:

Environmental changes

- Reduced soil erosion and increased soil quality on the hill due to the adoption of soil and water conservation measures and an increase in use of organic matter
- Increased vegetation cover and biodiversity on the hill through the planting of trees, hedges, and grasses and natural revegetation
- Reduced number of bush fires though awareness raising via Farmer Field Schools and sanctions from the Green Hill Committees and local authorities

Economic changes

- Increased yields due to improved farming practices, including use of organic manures
- Increased incomes from crop sales for tenants due to increased production and training on post-harvest handling and marketing
- Access to emergency cash from a social cash fund made up of tenant farmers' contributions and managed by the Green Hill Committees
- Increased demand for land on the FSP hills, contributing to increased area under crop cultivation
- Increased number of tenants due to increase quality and availability of farmland on the hill, resulting in increased income from tenure fees for the landowner and increased availability of tenant labor
- Increased value of land on the hill and increased availability of timber and fodder on the hill, resulting in an increased income to the landowner
- Changes in tenure fees for plots (both increases and decreases, benefiting either the landowner or the tenants).
- Reduced crop theft and reduced livestock damage due to increased social mobilization and collective action
- Crop diversification, contributing to improved diets of tenants and their families and increased quantity and range of produce available in local market

Human, social and institutional changes

- Increased knowledge and understanding by tenant farmers of soil and water practices, the establishment and use of agroforestry trees and fodder grasses, good farming practices, farming as a business, and crop processing and marketing.
- Increased ability to negotiate, mediate and address conflicts between Green Hill Committee members
- Increased awareness of the role of women in agriculture and women leadership among Green Hill Committee members
- Increased social capital between farmers, and between farmers and landowners, and changes in attitudes, confidence, and other intangible attributes as a result of the FFS process
- Increased tenure security due to written tenure contracts

LESSONS FROM THE PILOT ON HOW TO FURTHER IMPROVE THE HILL APPROACH

- A more **systematic tracking of key outcome parameters** could demonstrate impact and convince stakeholders to invest in the approach.
- The Farmer Field School could focus more on **farmer-led experimentation and adaptation** to support farmers' innovations.
- Landowners should make a larger contribution to the costs of the Hill Approach to achieve a **fairer distribution of benefits and costs / investments between landowners and tenant farmers.**
- **Linking tenure farmers on the hills to markets** for surplus produce could further increase their revenue and thus enhance their motivation to maintain the soil and water conservation measures on the hill.
- The approach could first be **replicated on areas adjacent to the original pilot hills** with tenant farmers and COCOVE members from the pilot hills serving as trainers / facilitators.
- An **exit strategy** for community-based organizations (FFS, COCOVE) is required to ensure sustainability of the approach.

FSP has demonstrated that the Hill Approach is a viable strategy to tackle the interrelated challenges of soil erosion, low productivity, and insecure tenure for smallholder farmers in South Kivu. There is scope for scaling out this approach by working closely with local authorities, landowners and some of the farmers already trained during the pilot. This would contribute to strengthening the capacities and self-reliance of local communities and take a step toward diminishing their dependency on humanitarian aid. However, it will require political will to incentivize absentee landowners, as well as investments in materials (tools, seed) and additional capacity strengthening support for tenure farmers and their organizations. Initial discussions with provincial and local government representatives in June 2022 indicate there is interest in promoting the wider adoption of the Hill Approach.

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