

## ProSilience: Enhancing soils and agroecology for resilient agri-food systems in Sub-Saharan Africa



*Research - farmer exchange in Western Kenya, © GIZ / Faith Innocent*

### **Objectives of the project:**

The specific objective (outcome) of ProSilience is to enhance the agroecological transition towards sustainable agri-food systems in selected partner countries. The overall objective (impact) of ProSilience is to contribute to a climate-relevant, productive and sustainable transformation of agriculture and food systems in low and middle-income countries (corresponding with the overall objective of DeSIRA).

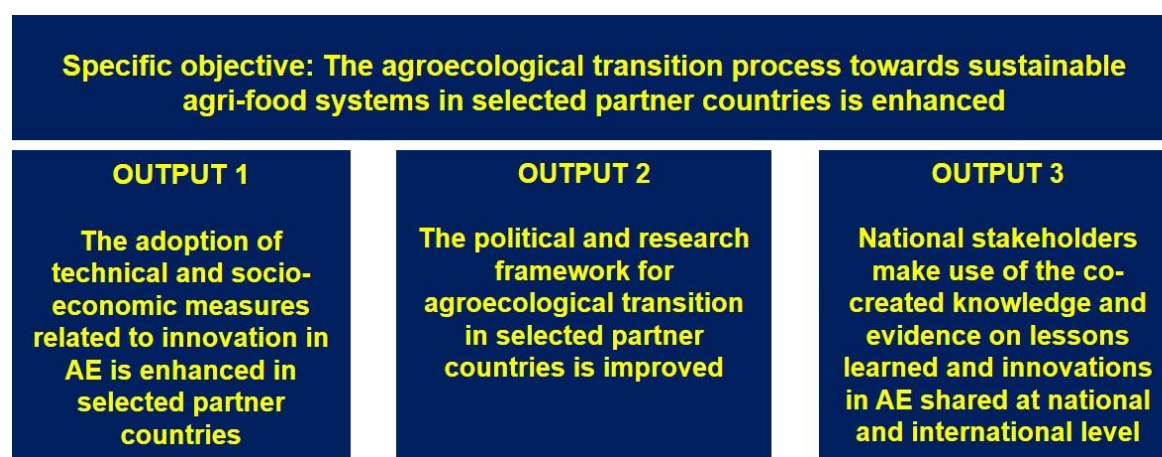
### **Background:**

Agriculture is the backbone of many African economies, providing the basis for growth in other sectors such as manufacturing and services. With a significant share of the population living in rural areas and practising farming, ensuring and raising agriculture incomes is considered critical for reducing poverty, boosting prosperity and creating jobs, especially for women and youth. However, the current agriculture and food systems are largely unsustainable and face several challenges due to climate change and non-climatic stresses on the system. These stresses induce the loss of healthy ecosystems and ecosystem services such as water availability and soil fertility and increase social inequalities, while at the same time a growing population worldwide results in an additional demand for food supply. Agroecology (AE), particularly, is considered to support both sustainability and productivity of industrial and subsistence farming systems, while also looking at protecting human, animal and environmental health. Furthermore, AE thereby offers various solutions for adaptation to and mitigation of climate change.

The pathways for future agriculture and food systems in Benin, Ethiopia, Kenya and Madagascar, as in many other African countries, can still be modelled to a certain extent. Amongst the many proposals, efforts need to sustain ecological landscapes while carefully enhancing agricultural productivity, such as agroecological approaches including soil conservation and rehabilitation,

climate-resilient and low carbon agriculture, agroforestry, permaculture, and ecological intensification. In this context, agricultural research should consider farming systems in a socio-ecological context and contribute to innovations back-to-back with the farmers in a co-creative manner to boost the transformative changes. Measurable good practices, policy orientations, and mechanisms to foster broad-scale implementation on the ground are still insufficient. Further investigation is needed on the contextualisation of agroecological practices, their cost-benefit and impact on rural livelihoods, economy and ecology, including their respective adaptation and mitigation benefits.

**The theory of change to achieve the objectives:**



*Figure 1 Objectives and Outputs of ProSilience*

Referring to the sustainable food system framework developed by the High Level Panel of Experts (HLPE), the project focuses on its following components: food production support systems (mainly ecosystems, human and economic systems) and food supply chains (focus on production systems in the production-to-distribution continuum).

ProSilience is fully embedded in the Global Programme Soil Protection and Rehabilitation for Food Security (ProSoil) which is commissioned and funded by Germany's Federal Ministry for Economic Cooperation and Development (BMZ). ProSilience's specific objective and outputs are thus aligned to ProSoil and it builds on already implemented activities and achieved results. ProSilience aims to achieve the most inclusive impact possible by adopting proven and upgraded strategies for soil protection and the rehabilitation of degraded soil at farm system and agroecosystem level based on agroecological principles (output 1). At the same time the regulatory and socio-economic framework is improved (output 2) and partners are supported to leverage lessons learned, co-evaluate them in terms of policy and loop them into their national and international dialogue (output 3). The research findings under output 2 will feed into roll-out and scaling under output 1. Co-created research findings will be transferred to local, regional and national political decision makers. The focus of output 3 is on knowledge management and exchange of lessons learned, experiences and innovations on AE by national stakeholders at various levels.

The Action will achieve the objectives and outputs through the following impact pathways: closing research gaps, test and adoption of innovation, capacity development (CD), enabling environment, multi-level approach, knowledge management and South-South cooperation.

## Strategy development with a multilevel approach

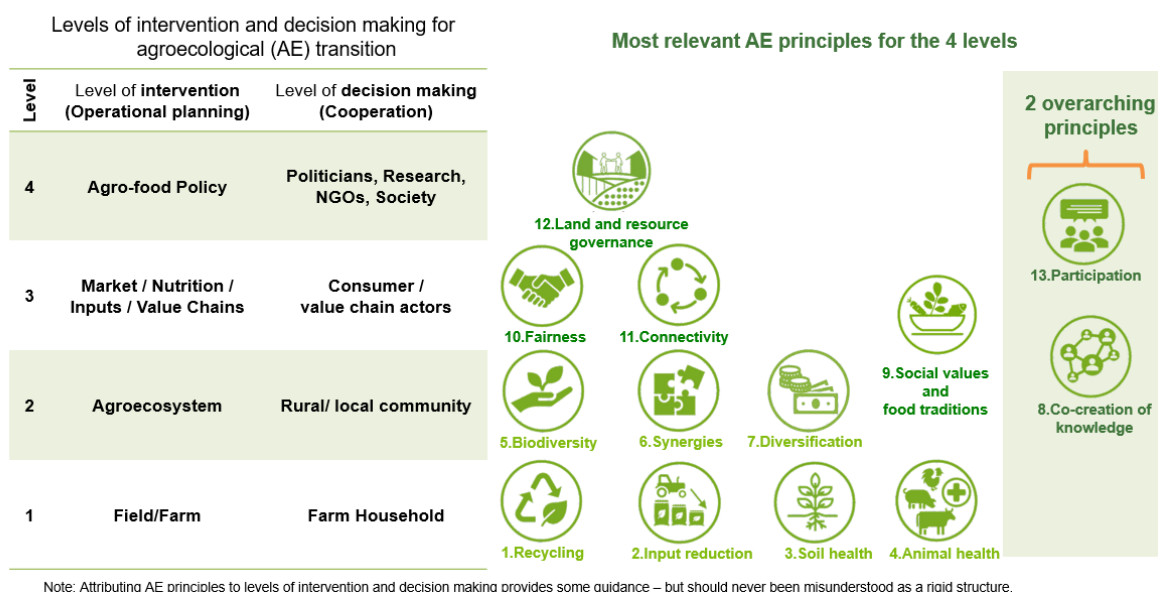


Figure 2: Multilevel approach to enhance agroecological transition through ProSilience activities

Figure 2 provides an overview of the intervention and decision-making levels that are addressed through ProSilience activities. The direct target group of the activities are smallholder farmers in the intervention areas of Benin, Ethiopia, Kenya and Madagascar with a particular focus on women and young farmers (level 1 in Figure 2). At the organisational level, researchers working on agriculture and food systems will be better linked to the target groups and the extension services. Thus, new mechanisms and procedures for interaction between research and fieldwork will strengthen the transfer of AE innovation into practice. Main partners of the Action are decision-makers and staff from public institutions at national, regional and local levels, civil society, including representatives of community groups, associations and the private sector (referring to levels 2, 3 and 4 in Figure 2).

Risks that can impede to achieve the intended outcomes are external factors such as extreme weather events or pest infestation, crises and violent conflicts, the COVID-19 pandemic as well as changes in political situation and reassessment of strategic significance of soil protection and rehabilitation.

### Main activities:

Each ProSilience intervention at country level follows a slightly different strategy for the integration of agroecological principles into their ongoing activities within the overarching ProSoil framework. A common ground is, that all four countries apply agroecological principles in a more holistic way at farm, agroecosystem, market and agro-food policy level, whereas ProSilience at global level organises cross-cutting and country-spanning measures as well as knowledge management, networking and dissemination of aggregated results to international audiences. Joint activities include for example methodological guidance on how to economically assess the ecological and socio-economic impacts of agroecological practices. With this guidance at hand, all measures are assessed on country levels. Another joint activity is a leadership programme with strong peer-to-peer elements, through which decision-makers from policy, research and civil-society are provided with the necessary knowledge and capacity to foster agroecological transition in their countries.

An overview of the activities for the respective Outputs can be seen in Figure 3:





Figure 3: Overview on main activities of ProSilience

The following spotlights from Benin, Ethiopia, Kenya and Madagascar demonstrate how the agroecological transition towards sustainable agri-food systems will be enhanced.

In **Benin**, ProSilience is scaling-up agroecological innovations in further 80 villages in ProSoil's existing intervention zones. This involves intensifying the agro-silvo-pastoral approach and the focus

on cotton and market gardening crops, that have received little attention from ProSoil so far. Furthermore, the project supports the national Ministry of Agriculture to take account of agroecological principles (e.g. through incentives for agroecological intensification by smallholder farmers) and the action research approach with national research institutions, advisors and farmers.

In **Ethiopia**, ProSilience establishes 30 demonstration farms in existing and new intervention areas, in which the holistic approach of agroecological measures is implemented on the whole farm. Activities there are considered key for upscaling and mainstreaming of agroecology at practical, research and political levels. In addition to the already adapted methods of Integrated Soil Fertility Management other practices will be enhanced, e.g. biogas from human and animal waste, conservation agriculture with green manure, mulching and direct seeding, agroforestry, fodder production or zero free grazing. The following figure illustrates the agroecological transition pathway for ProSilience in Ethiopia.

### Connection between soil protection and agroecology at the example of Integrated Soil Fertility Management (ISFM+ in Ethiopia/Highlands)

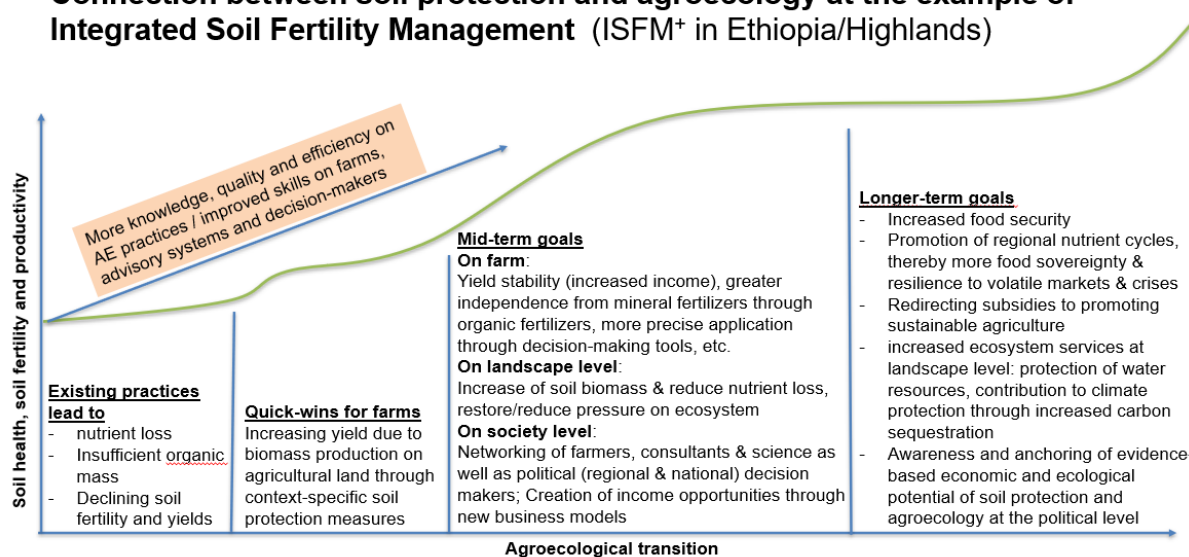


Figure 4: Connection between soil protection and agroecology - transition pathway for ISFM+ in Ethiopia/Highlands

In **Kenya**, ProSilience focuses on the agroecological intensification of the agricultural production system of 3,000 smallholder farms in ProSoil's existing intervention areas. The activities aim at increasing the area under sustainable soil management on those farms that have already made experiences with agroecological practices on smaller portions of their land. This is going to result in an additional 1,500 ha of land (1,000 ha cropland and 500 ha grazing land, woodlots, riverbanks, etc.) managed according to agroecological principles.

In **Madagascar**, ProSilience values agroecological principles by scaling-up best practices of farming systems and agroecosystems already successfully tested in the ProSoil intervention region of Boeny to a new geographical and climatic intervention area, the Androy region in the south. The agroecological plots will be used as demonstration fields for farmer groups. In order to benefit from synergy effects in the targeted peanut value chain, ProSilience closely cooperates with the German bilateral project *Adaptation of agricultural value chains to climate change*, which is commissioned by the BMZ and co-funded by the European Union.

#### Organization:

The project is embedded in the Global Programme Soil Protection and Rehabilitation for Food Security (ProSoil) commissioned by BMZ and implemented by *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) GmbH. While ProSoil is active in seven partner countries, ProSilience focuses on the four sub-Saharan countries Benin, Kenya, Madagascar and Ethiopia where a context-specific implementation of the aforementioned activities is taking place.

The steering structure consists of a project steering committee at global level (EU INTPA, BMZ, GIZ) and strategic steering (or coordination) committees at country level, which are already in place in the context of ProSoil.

The project itself is fully integrated into existing GIZ structures, including administrative, financial and operational aspects. It is implemented by a GIZ steering unit in Bonn and by GIZ project offices at country level.

**Implementing organizations:**

*Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*

**Partners of the project:**

The political/institutional partners are the respective ministries of agriculture in the four countries: Benin: *Ministère de l'Agriculture, de l'Élevage et de la Pêche* (MAEP), Ethiopia: *Ministry of Agriculture* (MoA), Kenya: Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MOALFC), Madagascar: *Ministère de l'Agriculture, de l'Élevage et de la Pêche* (MAEP).

**Other main stakeholders:**

Main partners of the project will be decision-makers and personnel from public institutions at national, regional and local level, civil society, including representatives of community groups, associations and the private sector. Research institutions will be associated at international and national and regional level.

Synergies and cooperation with other ongoing development projects or research and innovation projects (especially EU DeSIRA projects), initiatives and movements at international and national level will be built. To foster knowledge exchange on international level ProSilience will interact with existing knowledge networks such as Regional Knowledge Centres on Organic Agriculture (KCOA), or the Transformative Partnership Platform (TPP) – including the alignment with other existing initiatives and entities such as the EOA-I of the AU, the FAO Scaling Up Agroecology Initiative, the Economic Community of West African States (ECOWAS) with its Agroecological Transition Support Project in West Africa (AETSP) or the Alliance for Agroecology in West Africa (3AO).

**Localisation:** Benin, Ethiopia, Kenya and Madagascar

**Funding and co-funding:** 12,000,000 EUR (8,000,000 EUR EU; 4,000,000 EUR BMZ)

**Duration:** 43 months (06/2021-12/2024 an inception phase of 6 months (06/2021 – 11/2021).

