

# Sustainable Energy for Smallholder Farmers (SEFFA) Innovation Fund

## Note on the Thematic Focus

The Sustainable Energy for Smallholder Farmers in Ethiopia, Kenya and Uganda (SEFFA) project aims at supporting scalable, innovative business cases using renewable energy services and technologies to improve production and livelihoods of smallholder farmers in the dairy and horticultural value chains in the three implementation countries. GIZ, SNV and RVO are collaborating in this project to improve the agricultural productivity for smallholder farmers by facilitating increased market-based access to renewable energy sources with a special focus on women and youth in rural areas.

The SEFFA project is implemented in all three countries jointly by GIZ and SNV, where each implementer is responsible for piloting different PUE business cases. This note on the thematic focus gives an overview which implementer is piloting which PUE technology and for which value chain.

## 1. Uganda

In Uganda, the SEFFA project has a range of intervention areas including results-based financing, piloting of innovative business cases, capacity building and awareness raising, as well as the SEFFA innovation fund.

In Uganda, **GIZ** is focusing on renewable energy for the horticultural value chain specifically fruits and vegetables in East and Central Uganda. The target technologies under this value chain include solar powered irrigation, solar drying, and solar cooling.

Under results-based financing, GIZ will select distributors of quality solar water pumps (SWP) companies and provide them financial incentives for every eligible SWP sold and verified. Demonstration pilots for solar irrigation, solar drying and solar cooling will be set up by GIZ for business trainings and hands on technical training for farmers. Capacity building will be offered for smallholder farmers and PUE suppliers, while awareness raising is targeted to smallholder farmers.

**SNV** is promoting solar cooling for milk and its products (yoghurt, ghee, butter, cheese etc.) in the Southwestern region of Uganda. SNV is piloting solar technology by switching from the existing power source to solar power and promoting access to solar refrigerators for the milk processing groups for women and youths in off-grid areas.

The innovation fund has been set up to support organisations with innovative and scalable business cases in renewable energy for dairy & horticulture. The target technologies include solar powered irrigation, solar drying, and solar cooling, for horticultural and dairy value chains.

Through promoting the productive use of energy in the horticulture and dairy value chains, the smallholder farmers will have increased access to the solar irrigation, drying and cooling solutions, resulting in increased production and productivity, reduced operation and maintenance costs hence improved household incomes and livelihoods for smallholder farmers.

**Business cases/ideas we would like to see:**

The SEFFA Innovation Fund aims to accelerate PUE business cases that are at a concept stage. The fund will provide small grants on a competitive basis to support local, innovative PUE business models which have the potential to be scaled and are related to the following PUE technologies: solar irrigation for horticulture, solar drying for horticulture, solar cooling for horticulture and dairy. The innovations may be technology related (e.g., solar based irrigation, cooling, drying, preservation, and other innovations that are sustainable, accessible, effective, efficient and affordable) but may also be related to processes such as business models, new forms of cooperation, innovative financing.

**Excluded concepts:**

For all technologies, submissions must be innovative, meaning different from business as usual and additional to existing markets, products, and services.

## 2. Kenya

In Kenya, **GIZ** aims to work with Financial Intermediaries to unlock access to Consumer Finance for acquisition of productive use of energy (PUE) technologies by identification and scaling up of innovative and market-based business cases that enhance the affordability of these technologies by smallholder farmers and small and micro enterprises in dairy and horticultural value chains. Custom made support packages will be designed to facilitate promotion and uptake of consumer finance such as awareness creation and capacity building of FIs interested in developing and upscaling innovative commercial/market-based consumer financing for Solar PU technologies. Support packages also include enabling B2B (business to business) linkages with technology suppliers, provision of result-based-incentives and Technical Assistance (TA).

**SNV** will provide a set of facilities to accelerate access to affordable and sustainable energy services using renewable energy for irrigation in horticulture and water for animals or fodder production in the dairy value chain. The facilities will support market development for the solar-powered water pump (SWP) distributors to upscale the last-mile distribution and uptake of solar-powered water pumping. Through a business case approach, support will involve project interventions to address market development barriers on both the demand and supply sides.

The SWP component will include the following set of finance mechanisms: (1) post-sales unit incentives in the form of Results-Based Financing (RBF), (2) Pre-sales market establishment/development actions in the form of Capacity Building Grants (CBG), (3) Awareness Creation support availed by the project for the benefit of the companies and smallholder farmers, and, (4) Technical Assistance support availed on a need basis and in the form of advisory services provided by the project. The project is implemented in 6 counties in Kenya which include: Kirinyaga, Muranga, Meru, Makueni, Machakos and Kajiado.

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- Technology related (e.g. solar based irrigation, cooling, drying, preservation) or any other energy innovation that is sustainable, accessible, effective, efficient and affordable.
- Processes such as business models, new forms of cooperation, innovative financing etc.

**Excluded concepts:**

For all technologies, submission have to be innovative, meaning different from business as usual and brings additionality to existing markets, products and services.

### 3. Ethiopia

The SEFFA project in Ethiopia has range of intervention areas including demonstration of innovative business cases, capacity building & awareness raising, and innovation funding. The innovation fund has been set up to support organisations with innovative and scalable business cases in renewable energy and horticulture & dairy nexus. The target technologies include solar powered irrigation, solar drying, and solar cooling, for the horticultural & dairy value chains.

In Ethiopia, **GIZ** is focusing on promotion of renewable energy technologies for the dairy and horticultural value chain specifically milk, fruits and vegetables in the project intervention regions Amhara, Oromia, SNNPR and Sidama. The target technologies under these value chains and regions include renewable energy-based cooling for dairy as well as the piloting of a renewable energy community hub, i.e. a walk in cold storage where smallholder farmers can cool their produce (fruits and veggies), which parallelly provides other renewable energy services to the community.

**SNV** will setup demonstration pilots for solar irrigation and solar drying, that fits to smallholder farmers, in selected project intervention woredas of the regions covered by the baseline study and market assessment for awareness/ demand creation & capacity building (business trainings and hands on technical training) of farmers, PUE suppliers and agri-business providers. Moreover, with the aim of promoting SWP through sustainable business cases, SNV will closely work with selected distributors of quality solar water pumps (SWP) companies, agri-business providers, financial institutions and other potential partners.

Through promoting the productive use of energy in the horticulture and dairy value chains, the smallholder farmers will have increased access to the solar irrigation, drying and cooling solutions. This will result into increased production and productivity, reduced operation and maintenance costs hence improved household incomes and livelihoods of the smallholder farmers.

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