SUSTAIN-RW – Sustainable Agriculture and Irrigation for Food Security in Rwanda

IMBARAGA Farmers Organization in Partnership with MLFM_ **Movimento per la Lotta contro la Fame nel Mondo**, are implementing the Sustainable Agriculture and Irrigation for Food Security in Rwanda (SUSTAIN-RW) project in Giti Sector, Gicumbi District, Northern Province, Rwanda. The project was developed in response to the challenges faced by local farming communities in an area particularly vulnerable to drought and soil erosion. It aims to improve agricultural productivity and food security by promoting sustainable, climate-resilient, and irrigated agriculture.

1. Project overview

SUSTAIN-RW is a development project funded by the Italian Agency for Development Cooperation (AICS) and developed by MLFM in collaboration with Gicumbi District. It aims to improve food security and strengthen the resilience of rural communities through sustainable agriculture, irrigation development, soil and water conservation, farmer training, and improved nutrition awareness.

The project builds on existing hydraulic infrastructure in Giti Sector, Gicumbi District. A currently unused dam and former hydroelectric

infrastructure will be rehabilitated and converted into a gravity-fed irrigation system. Irrigation will be complemented by hillside agricultural terracing and training to promote productive, sustainable and climate-resilient farming.

2. Location, partners and beneficiaries

The project is implemented in collaboration with Gicumbi District and in partnership with IMBARAGA, a Rwandan Farmers Organization active in the agricultural sector, the University of Bolzano, and two Italian private companies.

The project summary identifies 6,217 direct participants (1,243 households), including residents of Murehe and Gatobotobo Cells in Giti Sector and 112 technicians and other relevant personnel from Giti Sector and Gicumbi District. Activities include agricultural and water-harvesting training for the community; irrigation-system management training for 128 participants' households; capacity building for local technicians and rural facilitators; and nutrition-related training for health personnel and Community Health Workers.

3. Main activities

- **Rehabilitation and irrigation infrastructure.** Rehabilitate the existing dam and convert the former hydroelectric infrastructure into an irrigation reservoir of approximately 4,000 m³. The planned network includes four 100 m³ compensation tanks, 158 irrigation fountains and approximately 12,000 m of irrigation pipes. Water availability will be monitored, with

attention to minimum ecological flow requirements and equitable service to upstream and downstream plots. The irrigation system will cover an area of around 100 hectares.

- **Terracing and soil and water conservation.** Develop 100 hectares of agricultural terraces to reduce erosion and improve water-use efficiency, alongside surface-water collection, drainage stabilisation and soil-conservation practices.
- **Climate-informed and data-supported management.** Install a weather station and soil sensors to support analysis of reference evapotranspiration, crop water needs and soil-water balance. Pilot data-driven and AI-supported approaches to irrigation and soil management.
- **Training and community capacity building.** Support a participants-led structure for irrigation management and maintenance; train farmers, technicians and rural facilitators in sustainable agriculture, water harvesting, erosion control and improved farming methods, including through the Farmer Field and Life School (FFLS) approach. Improved seeds and organic and chemical fertilisers will be distributed to participating farmers.
- **Nutrition and awareness.** Train staff at Tanda Health Center and 76 Community Health Workers in the prevention and early identification of malnutrition and anaemia, and disseminate good agricultural and food practices through nine local radio campaigns.

4. Key expected results and indicators

- **100 hectares** of agricultural land terraced and targeted for productive and sustainable agriculture in Season C.
- **Irrigation infrastructure** established to serve farming plots through gravity-fed distribution.
- **1,243 farmers** from Murehe and Gatobotobo Cells participating in FFLS activities and receiving improved seeds and fertilisers.
- **Food insecurity** prevalence of moderate or severe food insecurity (calculate through FAO's FIES method) targeted to decrease.
- **Local capacity** strengthened through irrigation-management arrangements, agricultural and water-harvesting training, and nutrition training for health personnel and community health workers.