ISSUES

The agriculture sector in Georgia is highly vulnerable to climate change and climate variability, leading to serious problems such as production loss and threats to food security under a business as usual scenario. Recent extreme weather events - floods, windstorms, and drought - evidenced a marked land degradation trend throughout the country and a shifting aridification trend that is poised to heavily affect the already semiarid eastern portions of Georgia by the end of the century. Smallholder farmers in the country are highly sensitive to climate change due to their heavy reliance on subsistence agriculture. The limited access to financial resources, technologies, and adaptation knowledge entail low adaptive capacity and higher vulnerability to extreme weather, unpredictable climate variations, and environmental degradation.

ACTIONS

The project aims to demonstrate the adaptation potential of climate-resilient crop production systems and technologies – especially efficient irrigation technologies and conservation agriculture – combined with the rehabilitation and climate-proofing of irrigation schemes and value chain infrastructures (e.g. improved storage and processing facilities, and greenhouses) in ten selected crop value chains. The implementation of landscape restoration measures will mitigate the impact of climate-related phenomena, such as soil erosion, siltation and floods, which damage both farmland and infrastructure. The project will support multi-stakeholder processes involving all value chain actors, knowledge generation and pro-poor farmers’ investments leading to a more resilient agriculture production. The project will also support the Ministry of Agriculture to mainstream climate change adaptation into agriculture policies and regulations, favouring the sustainability and upscaling of interventions supported by the project.

PROJECT SUMMARY

Total cost: US$32.8 m
Special Climate Change Fund US$5.3 m
Approved IFAD loan: US$26.8 m
IFAD grant: US$700,000
Project period: 4 years (2015-2019)
Executing agency: Ministry of Agriculture through the Agriculture Development Fund (RADF)
Beneficiaries: 10,000 households
Project objective: Improve water availability, farmland productivity and smallholders’ income through investments in climate resilient farming systems and value chain technologies.
The specific project objective is to improve water availability, farmland productivity and smallholders’ income through investments in climate-resilient farming systems and value chain technologies. The intervention is built around the following components: i) On-farm efficient irrigation and soil and water conservation for sustainable agriculture production; ii) Landscape restoration to prevent climate-related risks; iii) Enabling environment for climate-risk reduction in agriculture.

On-farm efficient irrigation, and soil and water conservation for climate-resilient agriculture production. ERASIG will identify, demonstrate, validate and disseminate options for efficient pressurised irrigation technologies and conservation agriculture management systems and technologies, focusing on fruit trees, berries, vegetables, potatoes, honey, herbs, beans & pulses, nuts and pastures. This is expected to lead to significant water savings owing to the reduction of water loss and water needs, while allowing farmers to obtain higher and more stable annual yields, cultivate higher-value crops, and improve production and market opportunities.

Landscape restoration to prevent climate-related risks. Three types of adaptation technologies for soil erosion prevention are prioritized by ERASIG, which correspond to the government’s policies: i) the adoption of conservation agriculture system in crop farming; ii) the restoration of natural vegetation at the landscape level to prevent soil erosion upstream and downstream agriculture land, as well as avoid siltation in irrigation canals; iii) the modernization of irrigation infrastructure incorporating climate-proof engineering and bio-engineering interventions in a number of soil erosion hotspots affecting the targeted irrigation schemes. While conservation agriculture is being addressed in the first project component, natural vegetation restoration – both vegetation shelterbelts and pastures – and the rehabilitation of climate-proof modern irrigation infrastructures will be the objective of the second component.

Enabling environment for climate-risk reduction in agriculture. The project will provide training to increase the capacity of public and private extension agents to transfer advice to subsistence, semi-commercial and commercial farmers on key technical, postharvest and market issues. Researchers and higher education teachers, and agro-environmental NGO staff will also be invited to participate in the training programme. The participants will be empowered to effectively guide farmers in the process of shifting from conventional agriculture to efficient irrigation and conservation agriculture systems that integrate organic agriculture principles.

EXPECTED IMPACTS

On-farm efficient irrigation, and soil and water conservation for climate-resilient agriculture production.

- At least 4,750 hectares in the project areas managed using efficient irrigation technologies and/or conservation agriculture systems that enhance yield and water use efficiency for selected crop value chains.
- At least 3,000 farmers report diversification of farming systems with higher economic and environmental benefits from the deployment of efficient irrigation technologies and/or conservation agriculture (disaggregated by gender).
- Up to 1,000 small grants made to farmers and at least 30 grants made to agribusinesses and processors in target value chains.

Landscape restoration to prevent climate-related risks.

- At least 4,750 hectares receiving reliable irrigation water supply from climate-proof rehabilitated and properly maintained irrigation schemes.
- Up to 150 landscape restoration plans implemented.

Enabling environment for climate-risk reduction in agriculture.

- At least 3,000 smallholder farmers trained in climate-resilient farming systems and technologies.
- 30 demonstration plots on efficient irrigation and conservation agriculture technologies provide successful results in soil and water improvements and higher yields from selected value chain crops.