Adaptation Story

Egypt

PROJECT DETAILS AF Funding Amount: US \$10 million over two projects

OBJECTIVES

- · Increase food security and productivity of staple crops such as wheat and maize
- Diversify production through intercropping, animal and fish production and agro-processing
- Increase production through protected agriculture measures
- Support management of water resources through low-cost water saving techniques
- Reduce loss in extreme weather events through early warning systems.

Egypt is highly vulnerable to climate change impacts such as water scarcity, drought, and rising sea levels. Southern Egypt, a region that is already economically stressed and whose food supplies are under constant threat of disruption, faces extreme climate shocks with reduced crop and livestock productivity caused by temperature rise and higher level of drought as well as reduced water resources. The World Food Programme (WFP) estimates that this region could lose a minimum of 30 percent of its food production by 2050.

The agricultural sector is one of the most important sectors to the country's economy providing livelihoods for over half the labor force, and is among the most climate-vulnerable.

Abdelglel, a smallholder farmer, decided to participate in community actions to seek ways to secure food after years of struggle with dramatic reduction in his wheat production.

As a first step, he and his neighboring farmers worked together to consolidate their small, fragmented land plots to reduce loss and inefficient use of land. After conducting soil analysis of productivity of each plot, the farmers collaborated as one farm to cultivate the same crops using climate-smart methods such as intercropping,



Luxor

Aswan •

Abdelglel, smallholder farmer who joined hands with his neighbours to consolidate their small, fragmented land plots so that they can pool their resources to cultivate the same crops. His wife, Amani Musbah received in-kind loans to bring additional income for the household. (WFP photo)

heat-tolerant varieties, and more ideal sowing dates to reduce climate-induced productivity losses, fertilizer and water usage. With additional land being cultivated and economies of scale achieved, the farmers were able to increase productivity by 50 percent and income by 45 percent.

These measures are part of a 'Building Resilient Food Security Systems to Benefit the Southern Egypt Region' project that the Ministry of Agriculture and Land Reclamation started in 2013 as a response to climate impacts on agriculture and livelihoods.

Funded by the Adaptation Fund, this project was implemented by the World Food Programme and showed great success in improving food security, resilience and adaptive capacity of the Southern zone across five governorates.

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It exceeded project objectives in increasing resiliency at the community level to climate change and variability by reaching 145,960 direct beneficiaries, 25 percent of who were women. The project contributed significantly towards enhanced and sustainable management of land and water resources, with a 20-25 percent increase in land available for cultivation and a 25-30 percent reduction in fertilizer and water usage.

Land consolidation was one of the pillars contributing to the success of the project. It is especially useful for smallholder farmers as they may not always be able to afford buying machinery and applying new and improved methods of agriculture. After they united to consolidate their lands together, divided by markers, they pooled their resources and could afford to apply such practices. "We started to use enhanced corn seeds that are stronger and survive the rough seasons. Thanks to the increase of productivity, I gained more income that I can spend on my children and family and was able to enroll the kids in schools to continue their education. I feed them properly compared to before. I manage to provide extra luxuries when needed," said Nobby Saad Ibrahim, a third-generation farmer from Al-Baghdadi village.

"Our neighbors are asking to join forces to consolidate lands and use new improved seeds to have better results. Now, we have more than 120 acres of consolidated land owners who use the new methods", he added.

The project also had positive effects on women empowerment by offering loans for women that create new occupations by setting up small to medium size enterprises, animal-keeping projects and trading clothes and handicrafts – in the process creating a micro economy in the project areas driven by women.

The first (US \$6.9 million) phase of the project was completed in 2020 and proved to be a highly successful model for the support of vulnerable villages in Assuit, Sohag, Qena, Luxor and Aswan. Building on its successes, a second (US \$3 million) project funded by AF and carried out by WFP



Abdelrhman Saad & his father with their wheat harvest in Aswan. (WFP photo)

was launched in 2021 to extend climate resilience among additional vulnerable smallholders' communities in 15 new villages such as Dabeya and Rayayna villages in Southern Egypt. While the Phase 2 project will replicate successful interventions of the Phase 1 project such as climate-resilient farming methods and seeds, it will also introduce new interventions such as intensifying and diversifying production through protected agriculture and introduction of small-scale fish farming to empower communities to better face anticipated reductions in production due to climate change.

Small-scale plastic-covered tunnels will be introduced to grow additional crops and support farmers increase their production and revenue from agriculture through cultivation of non-traditional cash crops that they normally do not grow, while production will be diversified to include fish through aquaculture that is much less sensitive to water scarcity and flow fluctuations than water-intensive activities such as crop production.

The project will also leverage the trust and capacities that phase one has managed to strengthen through the introduction of new adaptation interventions that have widened the scope of resilience and contributed to building adaptive capacity. Farmers will continue intercropping

with fast-growing crops like tomatoes, cucumbers, eggplants and beans between the lines of main crops that include wheat, maize, rice and sugarcane. This improves soil, protects the main crops from temperature changes, and generates added income.

Other key activities of the second project include establishing Climate Information Centers, Early Warning Systems, water saving techniques, water users associations, low-cost irrigation improvement techniques, adaptation in cultivation, further crop diversification, and enhancing incomes from non-staple crops.

Like the first project, the second project is planned to generate knowledge, new lessons learned and best practices in resiliencebuilding and enhancing food security of vulnerable communities in the face of climate threats that will help sustain project replication in the region, sharing of new tools and best practices among farmers, and ensure sustainability of the interventions in the long run.



Nobby Saad Ibrahim, a 54-year old farmer from Al-Baghdadi village and a direct beneficiary of the project. (WFP photo)

EGYPT PROJECTS BY THE NUMBERS

