

ADAPTATION FUND
Climate Innovation Accelerator
SMALL GRANTS. BIG IMPACT.

SOLUTION FACTSHEET

Visual Artificial Intelligence Solutions: Empowering smallholder farmers with climate-smart solutions

2025–2026

UN WFP World Food Programme | INNOVATION ACCELERATOR

Solution Summary

Location:
Egypt

Solution type:
Smart irrigation

Innovation stage:
Proof of Concept

Grantee:
Visual Artificial Intelligence Solutions (VAIS)

Implementing entity:
World Food Programme

Funding received:
USD 150,000 (Adaptation Fund)

ADAPTATION FUND

The Adaptation Fund Climate Innovation Accelerator provides grants and technical assistance to innovative solutions for adapting to climate change.

Adaptation Innovation

- **VAIS's FarmGuru for Smallholders** is a sensor-free, AI-powered digital extension platform. It turns satellite, weather, climate, soil and crop-model data into plot-level advice on irrigation, adverse weather, climate risks, disease and fieldwork. The advice reaches farmers by voice, SMS, WhatsApp and an offline-first app in local languages, giving them a 24/7 digital agronomist with no hardware to buy.
- **VAIS's proprietary "virtual field probing"** applies machine learning to multi-modal satellite imagery, weather simulations and soil and crop models. It gives sensor-level, plot-level insight with zero equipment in the field.
- **A generative AI companion** automatically monitors every plot and sends early warnings of heatwaves, wilting and disease risk. Each warning comes with recommendations delivered as audio, text and visuals.

Climate Impacts

The solution is helping Egypt and Africa adapt to:



Drought and water security



High temperatures and heatwaves



Erratic rainfall

Key Achievements

- In the WFP sprint in Luxor, FarmGuru directly reached 206 smallholders, twice the target of 100, and an estimated 1,030 end users. Weather- and disease-related crop losses fell from 20 percent to 13 percent, a 35 percent reduction. Awareness of climate-smart practices rose from 17 percent to 97 percent.
- Fifty-eight percent of farmers acted on weather alerts, 61 percent adopted sustainable practices and 80 percent increased their use of adaptation measures. Yields on targeted crops rose by 368 kg, field-scouting time fell by 33 percent and four jobs were created.
- Farmers stayed: 87 percent retention, 99 percent monthly active use, 97 percent intend to renew, with 99 percent platform uptime.

Replication and Scaling Potential

- Fast adaptation to new regions, crops and languages. FarmGuru is a geography-agnostic SaaS solution that is inherently accessible and scalable internationally. Its self-learning AI models adapt to new languages, crops, regions and climates with little or no recalibration. Farmers need only a mobile device and basic internet access to benefit.
- AI-first economic advantage. FarmGuru needs no sensors, drones or field equipment, giving it low CAPEX and near-zero COGS. Running costs (cloud hosting, satellite and weather data) barely rise as users grow, so each additional farm costs almost nothing to serve. Rollout time in a new area is insignificant.



To learn more, visit WFP-AFCIA VAIS

Investment Potential

- **Business model:** Tiered SaaS subscription per hectare or per user (USD 2–5 per hectare per season). It is sold to farmers directly and through cooperatives, agribusinesses, insurers, governments and development programmes.
- **Revenue per year:** Currently, the company reports revenue of USD 200,000.
- **Sustainable approach:** Egyptian operations are sustained by subscription revenue and grant funding, supported by a low-cost, hardware-free model. VAIS plans to raise a USD 2 million funding round in Q2 2027 to expand FarmGuru into MENA and sub-Saharan Africa.

Project Location



Last updated: 30/10/2026