

ADAPTATION FUND
Climate Innovation Accelerator
SMALL GRANTS. BIG IMPACT.

SOLUTION FACTSHEET

NoorNation: Solar-driven irrigation

2025–2027

UN WFP World Food Programme | INNOVATION ACCELERATOR

Solution Summary

Location:
Egypt

Solution type:
Smart irrigation

Innovation stage:
Transition to Scale

Grantee:
The NoorNation for Renewable Energy

Implementing entity:
World Food Programme

Funding received:
USD 228,000 (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

- NoorNation introduced its Solar Irrigation as a Service (SIaaS) innovative model to replace traditional flood irrigation with modern, smart irrigation systems.
- SIaaS is powered by a solar-driven unit called LifeBox. This solution enables farmers to pay per use for the time of water pumped during the entire cultivation calendar.
- By eliminating the need for large upfront investments, SIaaS offers a financially accessible and sustainable irrigation solution tailored to smallholder farmers' usage patterns.

Climate Impacts

The solution is helping Egypt adapt to:

Drought and water security

High temperatures and heatwaves

Key Achievements

- SIaaS replaces inefficient flood irrigation in Egypt by smart irrigation that is driven by its LifeBox, where farmers can pay per use, bringing energy costs down by 90 percent, increasing produce by 33 percent and farmers' income by 25 percent.
- Through its targeted pilot programmes, SIaaS by NoorNation validated the effectiveness and practicality of SIaaS systems. As the pilot is still ongoing, the team projects it will contribute to a 90 percent reduction in diesel pump usage, resulting in a minimum 25 percent boost in agricultural productivity and a corresponding 10 percent increase in farmer profitability.

Replication and Scaling Potential

- Once successful at a centre of an Upper Egypt Governorate, the company plans to replicate its model all over Upper Egypt, Delta region, the Eastern, Western Deserts and sub-Saharan Africa.

To learn more, visit [WFP-AFCIA NoorNation]

Investment Potential

- **Business model:** SIaaS operates on a subscription model, where users are charged based on the volume of water and energy used.
- **Revenue per year:** USD 100,000
- **Sustainable approach:** The company's business model attracts a broad customer base which will sustain the service in the short and long term.

Project Location



Last updated: 30/10/2026