

ADAPTATION FUND

**Climate
Innovation
Accelerator**

SMALL GRANTS. BIG IMPACT.



Solution Summary

Location:

Dundgobi & Uvurkhangai, **Mongolia**

Solution type:

Agriculture and food security

Innovation stage:

Transition to scale

Project proponent:

Ministry of Environment & Climate Change

Implementing entity:

UN CTCN

Technical assistance provider:

OIKO LOGICA S.L.

Funding received:

USD 197,440 (Adaptation Fund)

SOLUTION FACTSHEET

Combining Ecosystem-based Adaptation and Digital Crop Insurance for Smallholder Farmers

2026-2027



ADAPTATION FUND

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

- Mongolia is helping smallholder vegetable farmers adopt water-efficient technologies and digital crop insurance to protect harvests, incomes and food security from climate shocks.

Adaptation Innovation

- The project combines solar-powered irrigation, climate-resilient greenhouses and agroforestry to help farmers produce more food with limited water and withstand extreme weather.
- The greenhouse generates most of the additional farm income, while efficient irrigation, trees and insurance protect production against water scarcity, wind and other climate risks.
- It will also explore the design of a digital crop insurance tool—combining satellite data, AI and farmers' photographs—to improve risk assessment and claims processing.

Climate Impacts

The project is helping Mongolia adapt to:



Drought and water security



High temperatures and heatwaves



Extreme cold

Key Achievements

By completion, the project could **benefit 150,000 smallholder farmers** by aiming to:

- Develop a *digital insurance product* that allows farmers to submit photos via mobile phones, significantly speeding up claims assessment and payouts.
- Assess the *best solar-irrigation, greenhouse and agroforestry options* for Dundgobi and Uvurkhangai provinces.
- Develop *national guidelines* and quality standards so farmers can access safe, reliable technologies suited to Mongolia's climate.
- Design a *blended-finance facility* and prepare two projects for larger-scale investment.
- Establish *training hubs* in both provinces with demonstration plots and train-the-trainer programmes.

Replication and Scaling Potential

- A national roadmap and two investment-ready concept notes will set out how the technologies, finance and insurance model can expand to other provinces.
- Training hubs, practical guidance and national standards will help farmers, extension services, banks and insurers continue the work after the project ends.



To learn more, visit [CTCN-AFCIA here](#)

Investment Potential

- **Business model:** A blended-finance facility would combine grants, affordable loans, guarantees and commercial capital so farmers can invest in irrigation, greenhouses and agroforestry. Digital insurance would reduce risk for farmers and lenders.
- **Revenue per year:** A representative 300 m² greenhouse could generate around *USD 6,700/year* in gross revenue in Uvurkhangai and *USD 5,500/year* in Dundgovi, with estimated annual net margins of *USD 3,400* and *USD 2,200* respectively.
- **Sustaining criteria:** Reliable water supplies, affordable finance, strong farmer groups, good greenhouse management, market access and safeguards against groundwater overuse.
- **Expected return:** The full package has an estimated 43% IRR and 3-year payback in Uvurkhangai, and 18% IRR and 5-year payback in Dundgovi using the recommended low-cost greenhouse design.

Project Location



Project activities are taking place in two provinces: Dundgobi (yellow) & Uvurkhangai (blue).

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