

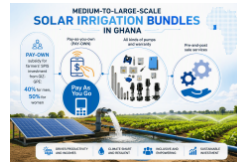
# Solar-Based Irrigation Bundle (SBIB): Solar Irrigation Solution with Flexible Payment and Services

Affordable Solar Irrigation for Year-Round Farming!

The Solar Irrigation Solution with Flexible Payment and Services provides an integrated approach to expanding smallholder farmers' access to solar-powered irrigation.

Flexible payment arrangements reduce the need for a large upfront investment, while sales and after-sales services help address technical and maintenance barriers.

By combining equipment, financing, and support services, the solution can facilitate wider adoption of solar irrigation and support year-round agricultural production.



**IWMI**  
International Water  
Management Institute

International Water  
Management Institute  
Dr. Thai Thi Minh

## Commodities

Livestock, Pepper, Tomato,  
Horticultural crops

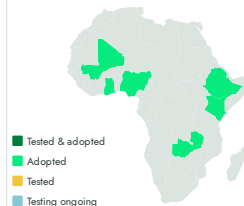
## Sustainable Development Goals



## Categories

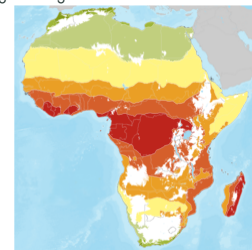
Production, Equipment

## Tested/adopted in



## Where it can be used

This technology can be used in the colored agro-ecological zones.



## Target groups

Development institutions, Farmers,  
Governments, Researcher center,  
Advisory and Extension Services,  
Cooperatives and Agribusinesses

This technology is **pre-validated**.

Scaling readiness: idea maturity 9/9; level of use 8/9

Inclusion assessment

12

12

STOP 12

Climate impact

6

## Problem

- High upfront costs limit smallholder farmers' access to solar irrigation.
- Limited financing options create barriers to wider technology adoption.
- Inadequate support services restrict access to technical assistance and maintenance.
- Limited market availability slows wider access to solar-powered irrigation.
- Limited adoption constrains year-round agricultural production.

## Solution

- Flexible payment options improve smallholder farmers' access to solar irrigation.
- Tailored financing helps reduce the upfront investment barrier.
- Sales and after-sales services strengthen access to technical support and maintenance.
- Sales and service networks support wider access to solar irrigation equipment.
- Solar-powered irrigation supports wider adoption and year-round agricultural production.

## Key points to design your project

The Solar Irrigation Solution with Flexible Payment and Services can support government programs aimed at expanding access to solar-powered irrigation, strengthening year-round agricultural production, and promoting clean energy use. Its adoption contributes to **SDG 1 (No Poverty)**, **SDG 2 (Zero Hunger)**, **SDG 6 (Clean Water and Sanitation)**, and **SDG 7 (Affordable and Clean Energy)**. Successful implementation should:

- Target smallholder farmers and areas with limited access to solar irrigation.
- Facilitate access to solar pumps and flexible financing options.
- Strengthen installation, maintenance, and after-sales services.
- Build partnerships with private-sector suppliers, irrigation companies, farmer organizations, and service providers.
- Monitor adoption, irrigation access, production, and sustainable water use to support scaling.

1426 USD

2225 USD

799 USD

56 %

| Cost Per season per<br>hectare                                                                                                                | Revenue Per season per<br>hectare | Net income Per season<br>per hectare | ROI Per season |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------|----------------|
| <div>  <b>IP</b> </div> <div>Open source / open access</div> |                                   |                                      |                |



Solar-Based Irrigation Bundle (SBIB)

<https://taat.africa/eor>

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