

Partners



Practical ACTION



Mudara
Standing with communities



GREAT LAKES ENERGY



Solhyd



**Coordinated by
Technische Universität
Berlin**



SUNNY



Implement renewable energy technologies tailored to local needs, enhancing climate mitigation and adaptation

Contact us

contact@sunny-project.eu

More Information

[SUNNY Project](#)

[@SunnyProjectEU](#)



SUNNY



Sustainable energy systems for refugee and host communities in Africa

Horizon Europe - Research and Innovation action

sunny-project.eu

[SUNNY Project](#)
 [@SunnyProjectEU](#)

This project has received funding from the European Union's Horizon Europe Research and Innovation programme under Grant Agreement No. 101147546





RETs to match local needs

SUNNY develops renewable energy technologies tailored to local needs through stakeholder collaboration, considering technical, environmental, social, and economic impacts.

6 Technologies

★ Solar home systems

Solar-powered units providing electricity to off-grid households, offering clean, renewable, and affordable energy solutions

★ Hydrogen cooking solutions

Clean cookstoves powered by hydrogen, reducing CO2 emissions and health risks from traditional fuels

★ Biogas from waste

Converting organic waste into biogas for clean energy, supporting sustainable waste management and local energy production

★ Smart solar irrigation

Solar-powered irrigation with IoT integration, enhancing water management, crop yield, and energy efficiency for farmers

★ Refrigerated food storage

Solar-powered refrigeration systems ensuring reliable, energy-efficient food preservation in remote areas

★ Combined hydrogen and biogas cooking solutions

Dual-fuel cookstoves using both hydrogen and biogas for flexible, sustainable, and clean cooking solutions

EU-AU cooperation

The SUNNY project enhances EU-African collaboration to accelerate the green transition, focusing on renewable energy, food security, and rural development. It supports Africa's Paris Agreement goals by reducing emissions, promoting clean energy, and improving water management. SUNNY also strengthens cooperation on energy access in refugee contexts while boosting sustainable agriculture and ecosystem conservation.

Sustainability

☑ MULTI-ACTOR LEARNING LABS

Community mapping will form Multi-Actor Learning Labs (MALLs) to co-create solutions with diverse stakeholders, focusing on inclusive representation and improving policy and capacity building.

☑ WINDOWS OF THE ENERGY TRANSITION

Physical spaces fostering collaboration between citizens and stakeholders through workshops and demonstrations of renewable energy technologies

☑ COMMUNITY-BASED RECYCLING

This includes the installation of patios, walkways, retaining walls, and other structural elements to enhance the function and aesthetics of outdoor spaces.

☑ LOCAL MATERIAL SUPPLY CHAIN

This includes mowing, fertilizing, and aerating lawns to maintain their health and appearance.

2 demonstration sites

Taking account of refugee and local host populations

Mahama refugee camp

Rwanda

The Mahama Refugee Camp in Rwanda, home to over 58,000 displaced people, lacks national grid access and relies on firewood and diesel. Despite some renewable energy initiatives, challenges remain in achieving sustainable energy access and affordable cooking solutions.

Technologies demonstrated

- Solar home systems
- Hydrogen cooking solutions

Bidibidi refugee settlement

Uganda

The Bidibidi Refugee Settlement in Uganda houses 270,000 displaced persons with no access to the national power grid, relying on fuel-powered generators and limited solar capacity for basic services. This results in unreliable energy for health centers and schools, while local businesses face high fuel costs, contributing to overall energy insecurity for both refugees and the host community.

Technologies demonstrated

- Biogas production from waste
- Smart solar irrigation
- Refrigerated food storage
- Combined hydrogen and biogas cooking solution