

PARTNERS



The balanced participation of EU and AU private, public and civil society organisations in the consortium will ensure the knowledge transfer North-South and South-South, and the sustainability of value chains based on local value creation and entrepreneurship.

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Empowering Communities,
Energizing Futures

**LEAVE NO ONE BEHIND:
BOTTOM-UP ENERGY
TRANSFORMATION OF
LASTMILE COMMUNITIES**



Co-funded by
the European Union

Co-funded by the European Union, project number 101146291. Views and opinions expressed within the current document are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor CINEA can be held responsible for them.

CONTEXT

Sub-Saharan Africa (SSA) accounts for **85% of the population living in energy poverty** without access to electricity.

This lack of access to electricity creates **instability in the food supply chain** and makes it difficult to access clean drinking water.

More than 1.8 billion people **lack access to clean cooking** technologies and fuels.

Finally, women and young girls spend about **40B hours per year transporting water**, a figure which corresponds to a full year of labour at the EU labour market.

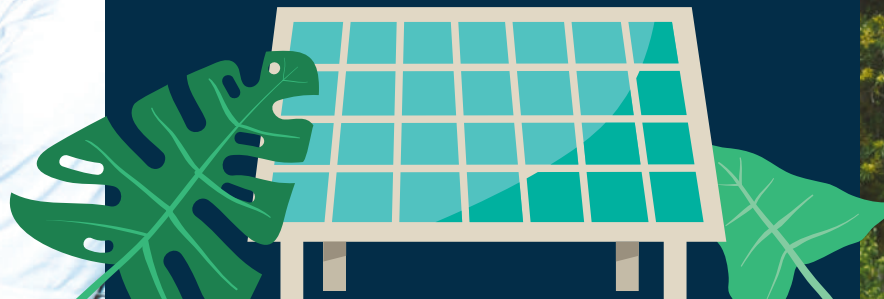


CONCEPT

United by the common goal to find a solution for access to clean energy, European and African research institutions and private sector have joined forces in this project to pilot SWARM-E - a circular and bottom-up renewable energy infrastructure that links SWARM grids with other renewable energy generation and storage assets (solar mini-grids, solar containers, water purification).

The inter-disciplinary collaborative project proposes a solution for affordable, reliable, modern and sustainable access to clean energy that LEAVES NO ONE BEHIND and meets the energy and water and food productivity needs of all users in communities in the SSA.

The solution is a bottom-up modular and dynamic infrastructure called SWARM electrification (SWARM-E) that deploys a circular renewable energy system called a SWARM grid in which households and businesses with solar home systems are interconnected with those without via a low-voltage distribution grid.



EXPECTED IMPACT

SWARM-E will operate and replicate

- 5 pilots in Rwanda and Tanzania, under which 5 SWARM grids are installed,
- delivering 6.9 GWh of renewable electricity while generating income through the trading of electricity and avoiding the discard of 3,200 batteries;
- 5 water purification applications delivering 101.M L of clean water;
- 15 light electric vehicles delivering farmers' produce, power mobile productive uses and cold storage, increasing the yields of 1,000 farmers and reducing the food losses of more than 5,000;
- 700 kg of H2 are blended with LPG for cleaner cooking,
- and more than 500 jobs for women and youth are created.

