

RESEARCH AND DEVELOPMENT FUND PROJECT SPOTLIGHT

ADILI SOLAR HUBS

SOLAR POWERED ICE FLAKE MACHINE

This project will develop an integrated system comprising a solar-powered ice machine with a water purification unit.

In fishing communities across Kenya, men are mainly responsible for fishing, whereas women typically undertake post-harvest processing of the fish. This involves drying, smoking or deep-frying the fish. In doing so, the market value of fish decreases and this renders the fish unexportable to overseas markets. Furthermore, large industries based in urban centres manage the cold chain away from the fishing communities.

By producing ice with clean water at the shore, Adili Solar Hubs aims to bring cold chain management services to local areas, so that those fishing can do so for an extended time. This will keep the harvested fish fresh for longer, increasing the economic value of the fish.

The project will achieve this by developing an integrated system. This will include a water purification unit, an ice flake machine, an off-grid PV system and a smart controller. The smart controller will enable the machine to be mostly powered by direct solar energy, thereby reducing the need for large energy storage. The excess solar energy will power the purification process of the remaining water in the tank. An online remote monitoring feature will also alert the user and identify any issues.

The project will benefit fishing communities in Kenya by reducing post-harvest fish loss. It will also help to grow the fish market and give women and youth involved in the fish trade around Lake Turkana employment opportunities. A further benefit is that it will help increase food security.



AT A GLANCE

R&D Awardee
Adili Solar Hubs

**Efficiency for Access
Funding**
£53,323

**R&D Funding Unlocked
from Adili Solar Hubs
Limited**
£44,628

Project Location
Kenya