

# RESEARCH AND DEVELOPMENT FUND PROJECT SPOTLIGHT

## Rural Aquaculture Development (RAD)

RADiCool - Low-cost mobile refrigerated transportation for perishable goods in Africa

### Project Summary

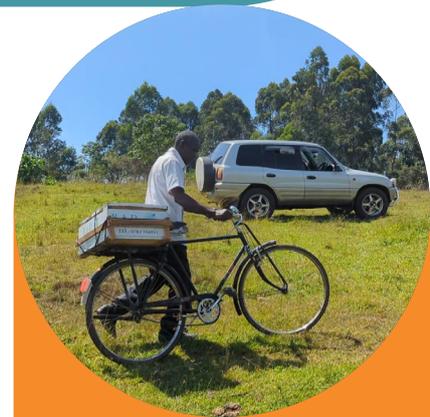
This project will develop a low-cost refrigerated system, the RADiCool box, to transport and store fish in Uganda.

### Project Description

RADiCool is a low-cost refrigerated system for Uganda's fish industry. The system uses optimised Internet of Things (IoT)-cold boxes with phase change materials instead of onboard refrigerators and PV-driven freezer hubs. These materials can be refrozen in urban centres and then loaded into the RADiCool boxes for fish transport.

Fish is a vital food source for over 10.2 million Ugandans, primarily supplied by small-scale fisheries. Despite the industry's growth in Uganda, fish loss remains high at 20-40% due to insufficient cold chain logistics. Efficient 'first' and 'last mile' transport is essential to extend fish shelf life, reduce food waste, ensure sustainable food transport, and improve livelihoods. This also creates economic opportunities in off-grid and weak-grid areas.

Over 12 months, the project will model, build, test, and refine three prototype fish transport appliances. RAD, an SME aquaculture farm in Western Uganda, will test these prototypes to support local smallholder farmers. Working with partners, the project will design, model and manufacture the solution and ultimately aim to scale and bring it to market. This affordable solution, ideal for motorbike transport in Africa, has significant potential for transporting perishable goods to off-grid areas across the continent.



### R&D Partner

Rural Aquaculture  
Development (RAD)  
Rukungiri

### Organisation Founded

June 2023

### Technology

Mobile cooling

### Project Location

Uganda

