Airbel Impact Lab
Research & Innovation at the IRC

CASE STUDY

IRC + AquaPoro Ventures: Addressing Water Scarcity and Stimulating Investment

THE CHALLENGE

According to UNICEF, "Jordan is the second most water-scarce country in the world. [Its] annual renewable water resources are less than 100 cubic meters per person, significantly below the threshold of 500 cubic meters per person that defines severe water scarcity."[1] This problem has the potential to disrupt IRC operations in the region, and imperils health, sustainability and economic viability for Jordanians and the region's large population of displaced people.

Water scarcity challenges both funding and innovation, given the dire need for investment in – and procurement of – cheaper, more sustainable solutions. Solutions are being developed by ClimateTech companies, but this technology takes time to manufacture and scale. [2]

As consumers of resources in fragile settings, humanitarians have a role to play by revisiting how their procurement dollars can function as 'investment' in private sector companies offering lower cost, more sustainable technology to enable better service delivery to people affected by conflict and crisis.

INNOVATIVE FINANCE AS A CATALYST

Founded in 2021, the role of Innovative Finance at International Rescue Committee (IRC) has been to create the conditions needed for country program teams to build new ways of working with the development and private sectors. This usually manifests in the form of investor-humanitarian partnerships, which are sourced by IRC Innovative Finance to address needs identified by the country program. IRC Innovative Finance started working with the Jordan Country Program in 2021 on the West Irbid wastewater infrastructure project financed by EBRD. It was determined through in-country workshops on this project as well as consultations with the Country Program's leadership that sourcing further water investments was critical to addressing water scarcity concerns of the vulnerable populations IRC serves all over the country.

A 'PROCUREMENT AS INVESTMENT' PILOT

AquaPoro is a Jordanian ClimateTech startup using integrated materials-based devices and systems to catalyze atmospheric water harvesting, creating drinking-quality water from air vapor even in dry, desert climates. IRC is a humanitarian NGO operating in 40 countries around the world delivering aid and assistance to the world's most vulnerable populations. Together, AquaPoro and IRC are piloting a new way of working between the humanitarian and private sectors, with IRC Jordan procuring AquaPoro's cutting-edge climate tech to deliver services more sustainably to its clients.

IRC Jordan has procured the first order of AquaPoro's first commercial offering, Droplet, which is being installed in the fall of 2024 in IRC's health clinic at Zaatari camp. The joint goal for this pilot partnership is to enable AquaPoro to scale its manufacturing of Droplet to be procured all around the world, allowing the company to provide lower cost, sustainable drinking water solutions to communities in need at scale.

1 https://www.unicef.org/jordan/water-sanitation-and-hygiene

2 https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/a-different-high-growth-story-the-unique-challenges-of-climate-tech

Procurement funding for the Jordan Country Program by Airbel's Innovation Fund

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The procurement funds were awarded to the Jordan Country Program through Airbel Impact Lab's Innovation Fund, enabling the Country Program to pilot this innovative procurement while maintaining its budget allocation to drinking water and to allow time for the development of the technology to be delivered in a safe and controlled manner, given it will be installed in the health clinic. This collaboration will enable IRC Jordan to provide a sustainable drinking water supply at a cheaper cost than its current drinking water procurement and – because the machines can be powered by solar – drinking water will eventually be available to the clinic at no cost. The partnership demonstrates an innovative approach to procurement: by using its grant funding allocation to innovation to procure advanced technology, IRC has demonstrated how humanitarians can 'invest' in ClimateTech startups.

LESSONS LEARNED

- Solutions have to be led by humanitarian teams on the ground. After initial Jordan Country Program consultations to identify the needs that humanitarians were unable to address, IRC Innovative Finance identified a variety of private sector companies addressing the issue of water scarcity that were initially sourced by private sector investor partners. The decision to switch drinking water procurement to AquaPoro, however, came from the Jordan Country Program's health clinic leadership and operations management.

- Sustainable switches have to be cost effective. The IRC Jordan Country Program would not have decided to procure AquaPoro technology without a cost analysis demonstrating that the drinking water costs would not only be cheaper, but less resource intensive (GHG emissions) than its current drinking water procurement.

- It is well documented that ClimateTech startups can have a longer time to operationalization and manufacturing at scale, therefore delays in delivery are expected. In the IRC Jordan case, the procurement was finalized in October 2023, but the machines were not delivered until October 2024. Because it is a new technology, the machines will not be the sole source of drinking water in the clinic, due to new regulations and mandatory water safety testing, for at least six months.

- Grant-funded procurement budgets can be both innovative and more sustainable if used to procure cheaper and lower emissions technology solutions. Because this funding is not coming from the health clinic's drinking water budget line, but a separate grant award, it can match the longer timeline needed by advanced technology companies to allow for expected delays. In the investment world this is called 'patient capital' or 'non-dilutive investment capital.'[3] Through its 'patient' procurement of AquaPoro, IRC Jordan has helped the company to be able to develop its technology on the necessary timeline, while also providing an incentive for the company to work as safely and as quickly as possible, since IRC Jordan is a customer that needs fulfilment of a safe and sustainable machine for its health clinic staff and patients.

Learn more here about the Advisory Model for Investor + Humanitarian Partnerships.

3 https://trellis.net/article/we-need-more-patient-capital-behind-early-stage-climate-tech/