AquaMnara: Building resilience for aquaculture farmers

The aquaculture sector in Africa is growing at an average of 11 percent with some regions registering up to 23 percent annual growth, according to World Fish Centre. This growth is led by increased demand for fish and a reduction of capture fish in water bodies due to overfishing and climate change.

Despite the growth and demand, experts have noted the existing financing gaps in the sector of up to an annual shortfall of $12 billion in necessary investments.

In Kenya, fishing is dominated by men, who have to spend hours inside major lakes like Lake Victoria and when they dock, women who are mainly the fish sellers have to compete to access dwindling catches including sexual offers.

Triggering Exponential Climate Action (TECA) project

FSD Africa in partnership with BFA Global, are working to support startups who are building climate resilience for communities in Africa through the 'Catalysing Climate Resilience' programme. As part of this programme, 'Triggering Exponential Climate Action' (TECA) was established as a venture launcher to seed and incubate bold new climate resilience solutions, developing ideas into viable businesses.

Through this programme seventeen startups have been awarded $27,500 in seed capital and $27,500 in hands-on venture-building support to progress financial and tech-enabled solutions that bolster the climate resilience of communities and ecosystems in and around the oceans, lakes, and rivers across the Eastern region of Africa.

Addressing aquaculture challenges in Kenya – Elizabeth Okullow's story

On the shores of Lake Victoria, in Kisumu town, the challenges faced by women fish sellers were a great motivation for Elizabeth Okullow to develop AquaMnara, one of the start-ups supported through TECA.

Ms Okullow, saddened by the plight of her grandmother who was a fish monger, often returning home without fish, thought she could address the fishing value chain by introducing several interventions to ensure a thriving business environment. *AquaMnara*; an aquaculture lighthouse in Swahili, aptly describes her desire to provide guidance to the sector.

AquaMnara is working within the aquaculture sector in Kisumu by providing linkages to value chain inputs and service providers like certified fingerling suppliers, feed suppliers, access to reliable markets for their fish, and technologies like water quality and temperature regulators for both fish cages and fish ponds.

She is also working to solve financial linkages faced by farmers, "Aquaculture is considered a high-risk sector and our fish farmers lack access to finance. So we want to be the link between the financial institutions and the fish farmers so that we help them get the necessary finance."

The financing facilitation that AquaMnara plans on rolling out include e-voucher system that will allow fish farmers affiliated with the project pick feeds, nets and other accessories from a list of service providers already enrolled by the organization.

Samwel Nyabinda is one of the beneficiaries of *AquaMnara* in Nyakach area of Kisumu. He takes pride in the role his wife Sharon Awuor played in introducing him to aquaculture farming when he used to be a *boda boda* (motorbike taxi) rider. It was through Sharon that Nyabinda learnt the best way to practice

farming which eventually made him leave the motorbike business that was not giving him enough income and start Sam's Fish Farm.

With AquaMnara's support, the couple dug a pond and stocked fingerlings and over the last one and half years, they have been able to increase the number of ponds to three with each earning him over 150,000 shillings (1,100 USD). With this, they have installed a solar pump to provide him with more water for the pond, a healthy stock due to technical support and water quality tests and now prides themselves with a brand-new motorbike to transport their produce.

"Before we met AquaMnara, we used to practice our aquaculture farming without any plans. When we met them, they informed us that the water in the pond had high PH and gave us instructions to reduce this. I ignored them initially, but when I noticed my fish dying, I quickly followed their recommendations," he observes.

Nyabida and Sharon are now ready to make his farm a demo farm with him pulling fellow youth in the area.

"Were it not for the mindset change through AquaMnara, I would still be a *boda boda* rider. I want fellow young people to use my farm to learn how they can make profitable ventures through aquaculture.

AquaMnara's TECA Journey

Ms Okullow was a TECA fellow in 2022 where they were taken through the process of building solutions in the blue economy through entrepreneurship. Coming from a community of fishermen, she knew the ins and the outs of the sector and she developed systems to support aquaculture farmers in the region.

"I was inspired to start up a AquaMnara so that I can become a solution for my community and sustain our culture. Also, while ensuring that I'm taking part in protecting Lake Victoria by promoting sustainable aquaculture practices," she adds.

Ms Okullow acknowledges there are significant benefits already being realized in her community from her interventions. As an example, she notes that while working with women fish traders, they can also own their own cages and have solutions along the fish production chain. These solutions include provision of healthy fish raring environment, good fingerlings stocks, ideal feeds and value addition knowledge.

AquaMnara intends to set up its own cold rooms for fish preservation, as well as fingerlings production units and a fish feed processing factory to ensure that the fish farmers they work with have adequate solutions to their farming needs.

Through the initial collaboration with TECA, AquaMnara has begun attracting key players in the aquaculture industry including Pepsico Foundation, IREX and the US Embassy in Kenya through the Mandela Washington fellowship which has given AquaMnara a grant to continue developing aquaculture interventions for fish farmers in Kenya.

AquaMnara is also getting an extra 10,000USD from TECA to finance the piloting of the women in aquaculture programme which aims to project the work done by women in the sector and facilitate interventions addressing the issues that women in aquaculture face.

“We are launching a ‘women in aquaculture’ programme specifically targeting women fish farmers so that we are able to provide them with resources from inputs to finance. Already, we have taken up a group of 20 women and have two cages,” she says. Traditionally, she says women in the fish industry around Lake Victoria have faced cultural restrictions and AquaMnara want to ensure the community have a buy-in to help boost women in aquaculture.

AquaMnara feels that it is sitting at a strategic spot to bring considerable impact to aquaculture in Kisumu and Kenya as a whole. There are an estimated 43,494 aquaculture farmers in Kenya with a total of 66,337 ponds, with almost half of such ponds being active. The ministry in charge of fisheries estimated that new 3,501 ponds with an estimated area of 1,961,798 M2 were excavated during the year 2021.

AquaMnara Impact

- Working with a cohort of 20 women fish farmers
- Setting up 2 cages for women fish farmers
- Trained 160 fish farmers on sustainable aquaculture practices
- The support has seen fish farmers increase production by 30 percent and reduce losses
- Created 15 jobs opportunities
- Supplied inputs to 40 fish farmers within Kisumu County
- Tested the water quality of many fish ponds and cages
- Created linkages between the fish farmers and fish feed manufacturers, water quality kits supplier, fish market within Kisumu area, and certified fingerlings suppliers
- Onboarded five partners
- Through various intervention been able to reach over 800 individuals working in the fish business

Looking ahead over the next three years, AquaMnara’s impact will be even more profound. They aim to increase their reach to 2,000 fish farmers helping them increase their income by 40%, creating 1,200 jobs and directly improving the livelihoods of 12,000 individuals.