INTRODUCTION

Improving aquaculture productivity and expanding market access for rural fish farmers can greatly increase income generation and food security in developing nations.

For small-scale aquaculture in Africa, many of the challenges to growth of the sector result from inadequacies in the flow of information along the fish value chain. Technology can spur collaboration by connecting players in the value chain where a lack of timely communication and knowledge transfer may be inhibiting growth and opportunity for product movement. The AquaFish Innovation Lab has partnered with researchers in Kenya, Ghana and Uganda to develop and implement technologies that provide text-based market data and information via cell phones.

This method of linking fish farmers and fishers with markets will be particularly effective in Ghana, as mobile phone technology is available to 94% of the population.

AquaFish researchers initiated a pilot study in Uganda to evaluate the feasibility of establishing a mobile phone network for delivering fish market data. Researchers held focus-group interviews with fish farmers in five separate regions of the country to assess the current uses of mobile phones for information transfer along the value chain.

Results of the study indicate that many fish farmers currently use their mobile phones to acquire technical guidance on aquaculture and to communicate with traders and other farmers who provide information on agricultural inputs and market data. However, more support is needed to better disseminate information on prevailing market prices of cultured fish in various markets, providing them with leverage to improve their bargaining position and sell fish at higher prices.

AquaFish researchers conducted a pilot study and a workshop to train fish farmers on EFMIS functionality, and determined that creating a dedicated system for synthesizing daily market information on farmed fish to end-users would bolster the aquaculture sector in Kenya.

Initiated in 2009, and continuing to this day, the EFMIS is a joint effort between the Kenya Marine and Fisheries Research Institute and the International Labour Organization. EFMIS has made significant progress in expanding the flow of information along the fisheries value chain in Kenya, including establishing a market data and information collection service, creating a system that provides up-to-date market information for more than 150 landing sites on Lake Victoria via mobile technologies and creating and maintaining a repository of critical fisheries market data (Ahiakha et al. 2013).

In Kenya, AquaFish researchers evaluated the feasibility of building a farmed fish marketing database into an existing network, called the Enhanced Fish Marketing Information System (EFMIS), which provides market information to the capture fisheries sector.

Fish farmers and traders alike are benefiting from the services provided by this SMIS, which likely will result in increases in fish quality and yield, reductions in post-harvest losses, and improved incomes across the board. Additionally, the system improves efficiencies throughout the value chain for tilapia, connecting fish farmers to buyers in the market and providing current market prices, which allow farmers to receive higher prices for their product.

Future plans for SMIS in Ghana include expanding its functionality applicability to the marine artisanal fisheries subsector, providing buyer/seller matching services, and providing potential group marketing services for smallholder fish farmers and fishers.