

WOMEN IN UGANDA AQUACULTURE: NUTRITION, TRAINING, AND ADVANCEMENT

AFRICA PROJECT: KENYA & UGANDA

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Human Nutrition and Human Health Impacts of Aquaculture/Activity/16HHI04AU

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Objectives

1. Train women participating in the value chains of new and established culture species on marketing and nutrition, promoting the understanding of fish as a dietary asset for women and children.
2. Support events among the target populations of fish farmers focusing on women.
3. Develop capacity to access fish production, nutrition, and market information through a series of conferences, workshops, and a national symposium.

Significance

This activity outlines a capstone series of events that will engage Uganda AquaFish with institutional partners and the industry to propagate understanding of the nutritional value of a new species and enhance the status and role of women in aquaculture. It builds on the previous project by connecting the project of fish farmer cooperatives across the country, women's groups working in aquaculture, and to Nutrition Innovation Lab researchers in Uganda working on nutrition issues who can amplify and refract the scientific information about fish culture produced by the project.

Lungfish is an indigenous species in that has reproduced in activity under the aegis of previous AquaFish work led by John Walakira. The work described here endeavors to advance the role of lungfish and other fish species as food items in Ugandan diets. We seek to expand the participation of women in production, market development, and use of lungfish and other fish species through training, demonstration, and dialogue among stakeholders. New understandings about how to reproduce and grow this fish will advance farm income and household nutrition.

Poor families in developing countries typically spend between 50 to 70 percent of their income on food (IFPRI, 2015). When meat, fish, eggs, fruit, and vegetables become too expensive, families often turn to cheaper cereals and grains, which offer fewer nutrients. Widely available, affordable, and wholesome fish can have profound impacts on human development, particularly in the critical first 1000 days of life (Save the Children, 2012). Women tend to cut their food consumption first, and as a crisis deepens, other adults and eventually children cut back. Lungfish are a plentiful source of iron, a critical dietary requirement for children and potentially countering anemia, a significant problem for women.

Lentisco and Lee (2014) identified three main ways in which women access fish as a food item. First is primary access through fishing and financing/owning fishing operations; second is through close personal relationships including family; and third is through the normal purchases in local markets. Fish farming

presents a fourth path for women's access to fish. Women producing fish from ponds in Uganda are members of the segment involved in fish-harvesting as primary users; secondary users are those that access fish through kinship or other relationships; and women who buy fish directly from fishers or traders are tertiary users (Lentisco and Lee, 2014).

Communication is a fundamental aspect of value chain development and mobile phones have become a central means for advancing these processes. Yet women face continuing barriers to participation. While mobile phone penetration is very high in Africa at almost 80 percent, women in sub-Saharan Africa are on average 23 percent less likely to own a mobile phone (GSMA, 2014). One critical obstacle to women's access to mobile phones is affordability: Expensive mobiles are reserved for use by men, and women tend to get second-hand phones. Technology often is viewed as a tool for men, so it seems that culture and attitudes toward ownership of productive assets can still be impediments to women's access to technology (GSMA, 2014). Trainings and conferences must address the role of cell phones in women's empowerment.

As aquaculture is often an activity that can be done close to the household, increasing the participation of women can be a strategy for empowerment, but it must be accompanied by secure rights to the resources such as farm space (Lentisco and Lee, 2015). For example, lungfish (*Protopterus aethiopicus*) is an emerging culture species in Uganda and there may be opportunities for women to participate in the development of this value chain in a fundamental way (Walakira et al., 2012).

Some of the gains of empowerment include: women's own income; membership in decision-making bodies; exercise of influence in their communities for aspects that are important for them, such as education for their children and dealing with alcoholism. Lentisco and Lee (2015:21) also cite gains in self-esteem and bargaining power within their households.

Some women-operated kiosks feature lungfish products (Walakira et al., 2012). In Kampala suburbs and some rural centers, women own the majority of these kiosks, selling fried lungfish chunks and boiled lungfish soup during the evening. Walakira et al., (2012) reported that a small number of restaurants have lungfish on their menu, preparing fresh, smoked and fried fish meals. Some restaurants in Kabusu and Owino centers (Kampala district) specialize in selling fried lungfish pieces.

Quantified Anticipated Benefits

- A Conference on Advancing Nutrition and the Status of Women through Uganda Aquaculture will involve at least 30 participants from women's farming groups, cooperatives, women-led fish-related business, and others in the value chains of tilapia, lungfish, and clarius.
- A training on women's organizations in development will target the leadership of cooperatives and women's organizations.
- Training on value chains, mobile applications, and marketing in aquaculture, although addressed to a broader audience, this training will feature women's involvement in the value chain and women as primary providers of child nutrition in Uganda.
- The Annual Fish Farming Conference and Trade Show is an annual activity that this project will reinforce and infuse with gender-related activities to engage all participants in the ways that women can advance aquaculture in Uganda.
- Three presentations to fish farmer cooperatives will address technical needs and issues, as well as specific gender-related concerns in the operation of farmer associations.

Research Design and Activity Plan

Activity 1: Organize and conduct a conference on Advancing Nutrition and the Status of Women through Uganda Aquaculture

We will work with Makerere University colleagues affiliated with the Nutrition Innovation Lab to plan and program this conference -- Professor Bernard Bashaasha (Nutrition Lab project PI), Dr. Turyashemererwa (Project Coordinator), and others from the Nutrition Lab. In particular, we will address the potential benefits of broader availability of lungfish as a food item in Uganda. The meeting will involve at least 30 participants from women's farming groups, cooperatives, women-led fish-related business, fisheries students, and others in the value chains for tilapia, clarius, and lungfish. Gertrude Abalo, the Principal of the Fisheries Training Institute (FTI)³ in Entebbe, Uganda will be enlisted to guide and host this conference. As an institution focused on aquaculture and fisheries with a high proportion of women in the student body, this school will benefit from leading the conference and liaising with AquaFish institutions.

The event will target the leadership of cooperatives and women's organizations. We also foresee an anticipatory session or a pre-meeting event to the Annual Fish Farmer Symposium and Trade Show in February 2017. Presentations will provide an overview and perspective on gender issues in aquaculture and institutional participation that advance women and address gender equity in value chain engagement. We envision one focus on the development of the value chain of emerging species such as the lungfish. Training on value chains and marketing in aquaculture, although addressed to a broader audience, this training will feature women's involvement in the value chain and women as primary producers of fish in Uganda. We envision this a cross-cutting activity on the project as marketing studies, consumer preference, cell-phone applications, and the results of new species development all bear on the topic. We envision a meeting that outlines the way forward in industry development and market expansion for Uganda fish farmers. One study summarizing women's involvement in value chains reported that successful women entrepreneurs felt additional skills were still needed to build their competency, especially more integrated business, and leadership skills.

Activity 2: Conduct an edition of the Annual Fish Farming Conference and Trade Show with a focus on women in aquaculture

The Annual Fish Farming Conference and Trade Show is an activity that this project will reinforce and infuse with gender-related activities to engage all participants in the ways that women can advance aquaculture in Uganda. Women's individual agency is crucial for development as it enhances one's capacity to navigate the psychological, socio-cultural and structural challenges that are faced on a daily basis. It is important that efforts move beyond technical training, although that remains a fundamental, continuing unmet need, to a broader vision of fish farming as a source of nutritional security and income for Uganda families. Women's empowerment is a potential by-product of improved access to inputs and markets, but there is also a need to move to amplify women's roles, agency and voice in this sector. Without direct and active involvement of women the industry will not progress.

³ Fisheries Training Institute (FTI) provides comprehensive instruction to increase fish production and improve utilization of fish and fish products. It is a Regional Institute, one of few such Institutions in Africa. The Institute sits on 9.3 hectares of land on Bugonga point, near the Entebbe airport about 2½km from the main road at Lake Victoria Hotel.

Research Project Investigations: Human Nutrition and Human Health Impacts of Aquaculture

Three presentations to fish farmer cooperatives will address technical needs and issues, as well as specific gender-related concerns in the operation of farmer associations. The fish farmers outside Kampala are often overlooked by project activities.

Trainings and Deliverables

Item	Mechanism (e.g. podcast, reports, factsheets).
Conference on Women in Uganda Aquaculture	Fact sheet on women's roles in Uganda aquaculture
One training on women's organizations in development for women farmers and service providers	Leaflet providing practical guidance to women's groups
One training on value chains and marketing in aquaculture for farmers	Leaflet providing practical guidance to women's groups with focus on nutritional value of lungfish
Presentations to fish farmer cooperative members and leaders	Fact sheet for leaders and participants in cooperatives with emphasis on lungfish as a new market item

Schedule

Activity	2016		2017			
	3 rd	4 th	1 st	2 nd	3 rd	4 th
Conference on Women in Uganda Aquaculture		x	x			
Training on value chains and marketing in aquaculture		x				
Fish farming conference and trade show			x			
Presentations to fish farmer cooperatives			x	x	x	
Report writing, workshops, journal article		x	x	x	x	x