

INTRODUCTION

The Aquaculture & Fisheries Collaborative Research Support Program (AquaFish CRSP), headquartered at Oregon State University, brings together resources from US and Host Country institutions to promote sustainable solutions in aquaculture and fisheries. Through integrated, multidisciplinary partnerships, the program aims to increase aquaculture productivity, enhance environmental stewardship, address gender integration, and increase domestic and export market opportunities in participating Host Countries.

AquaFish CRSP currently manages eight field research projects in 16 countries in Africa, Asia, and Latin America. Each project focuses on poverty alleviation in targeted countries through the improvement of local and sustainable fish production across four programmatic themes:

- Improved Health and Nutrition, Food Quality, and Food Safety
- Income Generation for Small-Scale Fish Farmers and Fishers
- Environmental Management for Sustainable Aquatic Resources Use
- Enhanced Trade Opportunities for Global Fishery Markets

Recognizing the growing global market demand for fish protein, each of the AquaFish CRSP projects is investigating ways to responsibly meet increasing needs for both human consumption and for aquaculture feeds, particularly in developing countries. Research is conducted on a variety of scales in the aquaculture and fishing sectors ranging from proper pond construction techniques and alternative feed strategies to market assessments and value chain development. AquaFish CRSP is guided by the overall goal to improve the lives and income-generating abilities of small-scale farmers and fishers in target countries.



MARKETING, ECONOMIC RISK ASSESSMENT, AND TRADE

Aquaculture is a rapidly growing industry with varying impacts on the livelihoods of individuals and communities worldwide. Understanding the constraints across value chains in local, regional, and international markets is of particular interest, especially as constraints affect competitiveness, market demand, and the availability of resources. Research into the aquaculture-fisheries nexus is also an increasingly vital component in order to avoid excessive stress on wild fish stocks and fishing communities. The following AquaFish CRSP investigations explore these aspects of the industry revealing critical trends and providing solutions within the realm of marketing, economic risks, and trade.



COMPETITION AND IMPACTS BETWEEN USES OF LOW VALUE FISH FOR AQUACULTURE FEED VERSUS USES FOR HUMAN FOOD IN THE LOWER MEKONG BASIN OF CAMBODIA AND VIETNAM

COLLABORATORS: UNIVERSITY OF CONNECTICUT- AVERY POINT (USA), CANTHO UNIVERSITY (VIETNAM), INLAND FISHERIES RESEARCH AND DEVELOPMENT INSTITUTE (CAMBODIA), AND OREGON STATE UNIVERSITY (USA)

The issues related to the use of low value/trash fish are underpinned by the rapid development of the aquaculture industry, the increasing demand for fish by consumers, and the resulting competition between the two uses. Given the strong interdependency between capture fisheries for low value/trash fish and aquaculture, research on these two sub-sectors cannot be carried out in isolation of each other to get a comprehensive understanding of the potential impacts on local livelihoods and market trends.

Research accomplishments:

- Analyzed the status of low value/trash fish in Mekong Delta region through interviews, group discussions and secondary data collection. The supply of low value/trash fish has dropped and price has increased due to the decrease in fish populations from increasing demands and overfishing.
- Assessed the impacts of low value/trash fish utilization in aquaculture on food security and livelihoods through interviews and focus groups. The snakehead culture industry creates a greater demand for low value/trash fish and directly competes with the demand for human food.
- Developed a list of recommendations to better manage aquatic resources and improve capacity for fish production and marketing including increasing the capacity to culture highly productive fish species other than snakehead and develop alternative feeds to lessen the demand for low value/trash fish.

DEVELOPING SUPPLY CHAIN AND GROUP MARKETING SYSTEMS FOR FISH FARMERS IN GHANA AND KENYA

COLLABORATORS: PURDUE UNIVERSITY (USA), MOI UNIVERSITY (KENYA), KWAME NKRUMAH UNIVERSITY (GHANA), AND OREGON STATE UNIVERSITY (USA).

Developed a supply chain framework for small-scale and medium-scale commercial fish farmers in Ghana and Kenya to enhance their access to and integration into urban fish markets for better returns. By improving on the current cluster farming system in Kenya and fish farming associations in Ghana, fish farmers can utilize their collective organizational structure to develop strategic assembly location points for group sales, and also minimize their marketing risks by benefiting from government programs and engaging in contracting with both input suppliers and fish buyers.

Research Accomplishments:

- Fish farmers traditionally operated independently, and were taught and trained to engage in collective efforts to plan production, and manage supply and sales. Fish clusters formed in Kenya and fish farming associations in Ghana, now utilize their collective organizational structure for strategic marketing.
- Trainings— using an aquaculture supply management framework— enabled rural fish farmers to access urban markets and helped to place fish vendors and farmers in a better position to collectively engage in more direct trade partnerships.
- In Kenya, the spin off effect was the government inclusion of Kshs 1.1 Billion (about US\$15million) as an Aquaculture Stimulus Package in the 2009/2010 budget.



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