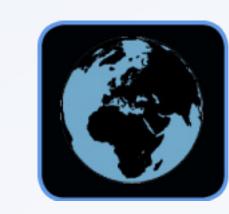
EVALUATING VALUE CHAINS AND CONSUMER PREFERENCES IN ASIAN AND AFRICAN AQUACULTURE TO HELP OVERCOME UNDEREMPLOYMENT AND POVERTY

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Sustainable Aquaculture and Fisheries for a Secure Future

Introduction

In aquaculture and fisheries, the value chain consists of the many processes and activities involved in bringing fish, shellfish, and aquatic plants to market. In some regions it can be an indicator of the economic welfare of poor communities involved in small-scale operations. In order to maximize smallholder participation and benefit in developing countries, it is critical to understand the complexities and intricate linkages of markets and value chains. This understanding provides the foundation for proper value chain management and is a way to increase productivity by improving efficiency, opening access to new markets and value-added products, and tracking consumer preferences. Researchers in the Aquaculture & Fisheries Collaborative Research Support Program (AquaFish CRSP) in Africa and Asia have been analyzing value chains, helping to provide market access to small-scale fish producers, improve local economies, and create more opportunities for women.

The AquaFish CRSP, headquartered at Oregon State University, brings together resources from US and Host Country institutions to promote sustainable solutions in aquaculture and fisheries. This effort is accomplished through integrated, multidisciplinary partnerships, focusing on poverty alleviation in target countries through the improvement of local and sustainable fish production. Within a large research portfolio, the work on value chains reported here represents a key component of the AquaFish CRSP mission.



Tilapia on display and ready to grill at a restaurant in Kisumu, Kenya. (Jeff Hino)



A street vendor selling processed fish on the outskirts of Lake Victoria in Kenya. (Jeff Hino)

Snakeheard Value Chain in Cambodia and Vietnam

University of Connecticut (US Lead), Inland Fisheries Research & Development Institute (Cambodia), and Cantho University (Vietnam)

Fermented fish of various kinds provide a value added

Women at a fish buying station in the Tri An Reservoir in

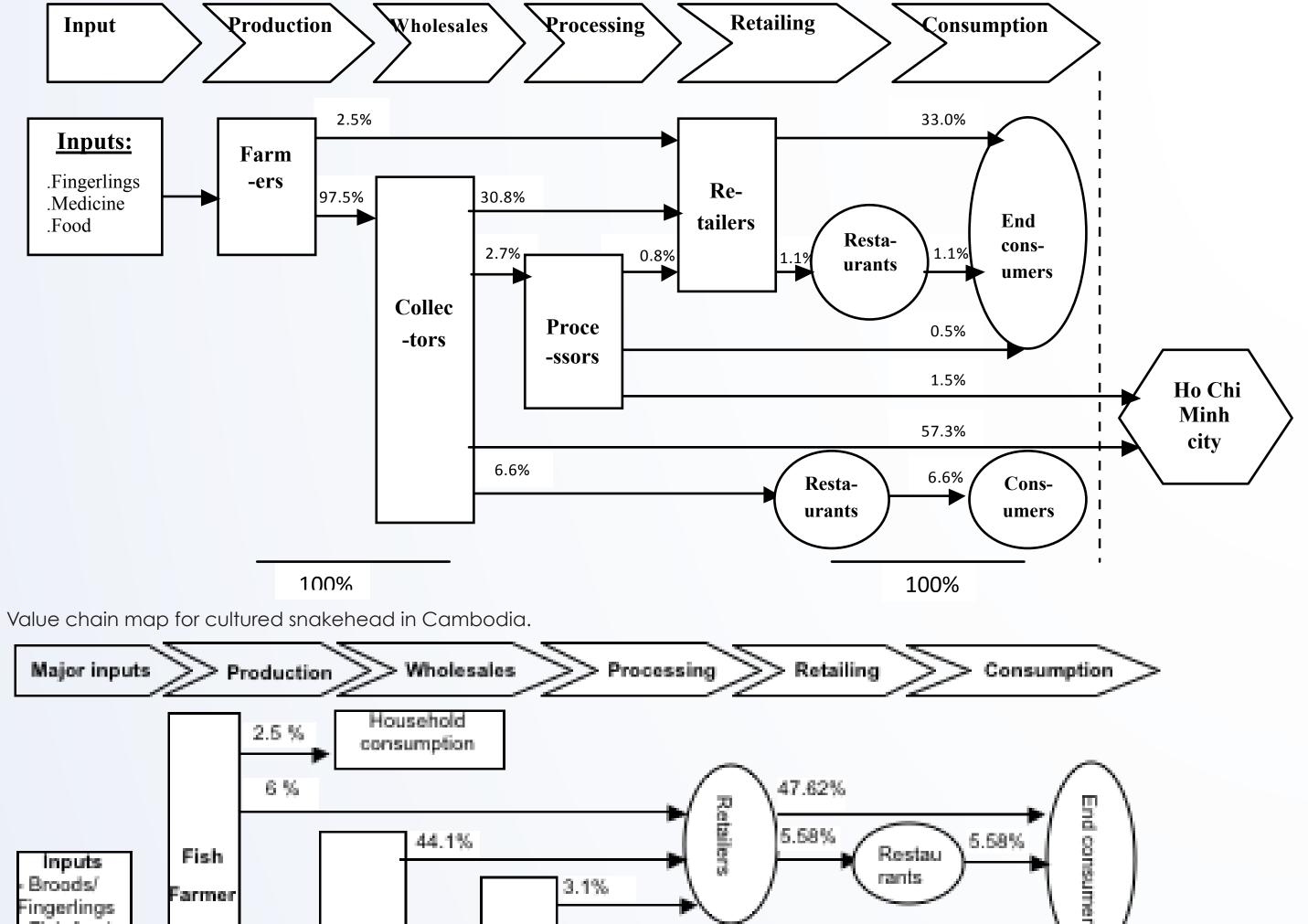
product in Cambodia. (Peg Herring)

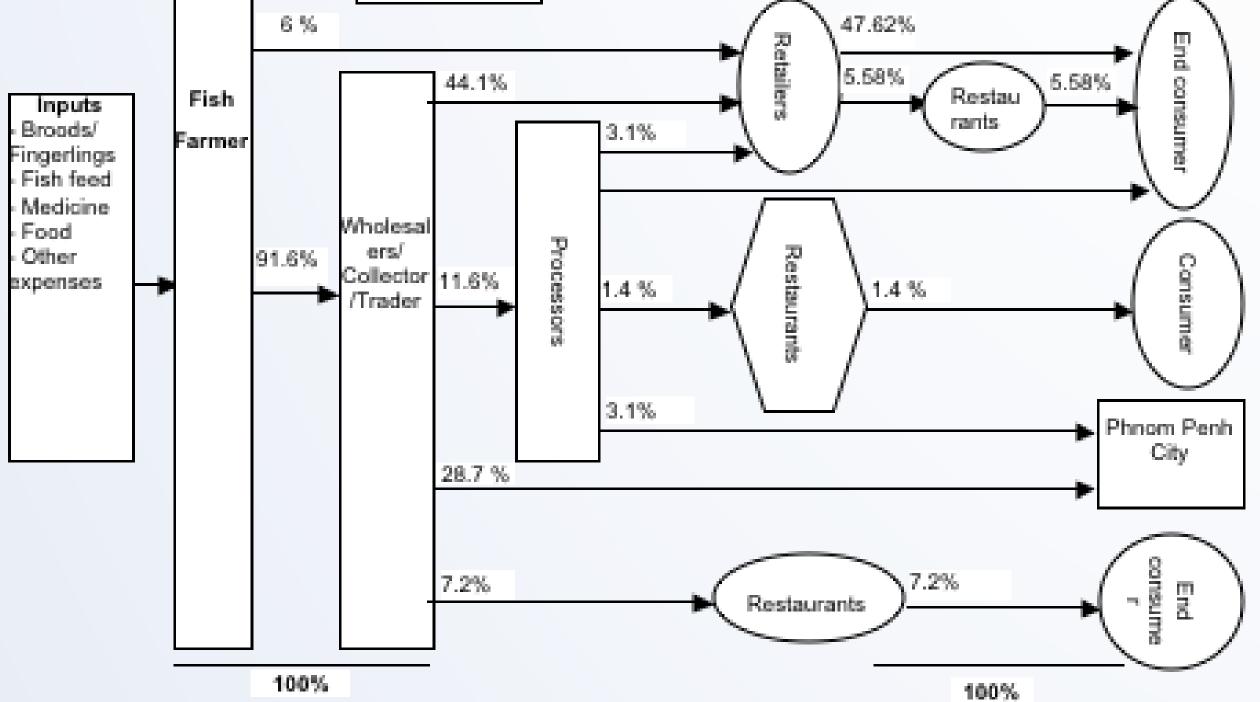
Vietnam. (Peg Herring)

Value chain analysis of snakehead fish in the Lower Mekong Basin of Cambodia and Vietnam

The AquaFish CRSP team in Cambodia and Vietnam conducted a value chain analysis of snakehead production and marketing in the Lower Mekong Basin of Cambodia and Vietnam in order to propose solutions for further development of the snakehead industry. The study was conducted between September 2009 and September 2011 using both primary and secondary data resulting in the value chains illustrated below. In both countries, the analysis revealed an unequal distribution of benefit along the value chain with the highest profits going to the collectors/wholesalers for both wild and cultured snakehead.

Researchers offered several suggestions, including better management of wild snakehead stocks along with increased monitoring of illegal fishing, developing a breeding program for snakehead to improve snakehead aquaculture, use of pelleted feeds, better access to market information including price settings, and increased opportunities for domestic and export markets.





Value chain map for cultured snakehead in Vietnam.



Women fish processors preparing fish for the smoker in Cambodia. (Peg Herring)



A woman fish processor cleaning fish in Vietnam. (Peg Herring)



An assortment of processed fish for sale in Vietnam. (Peg Herring)

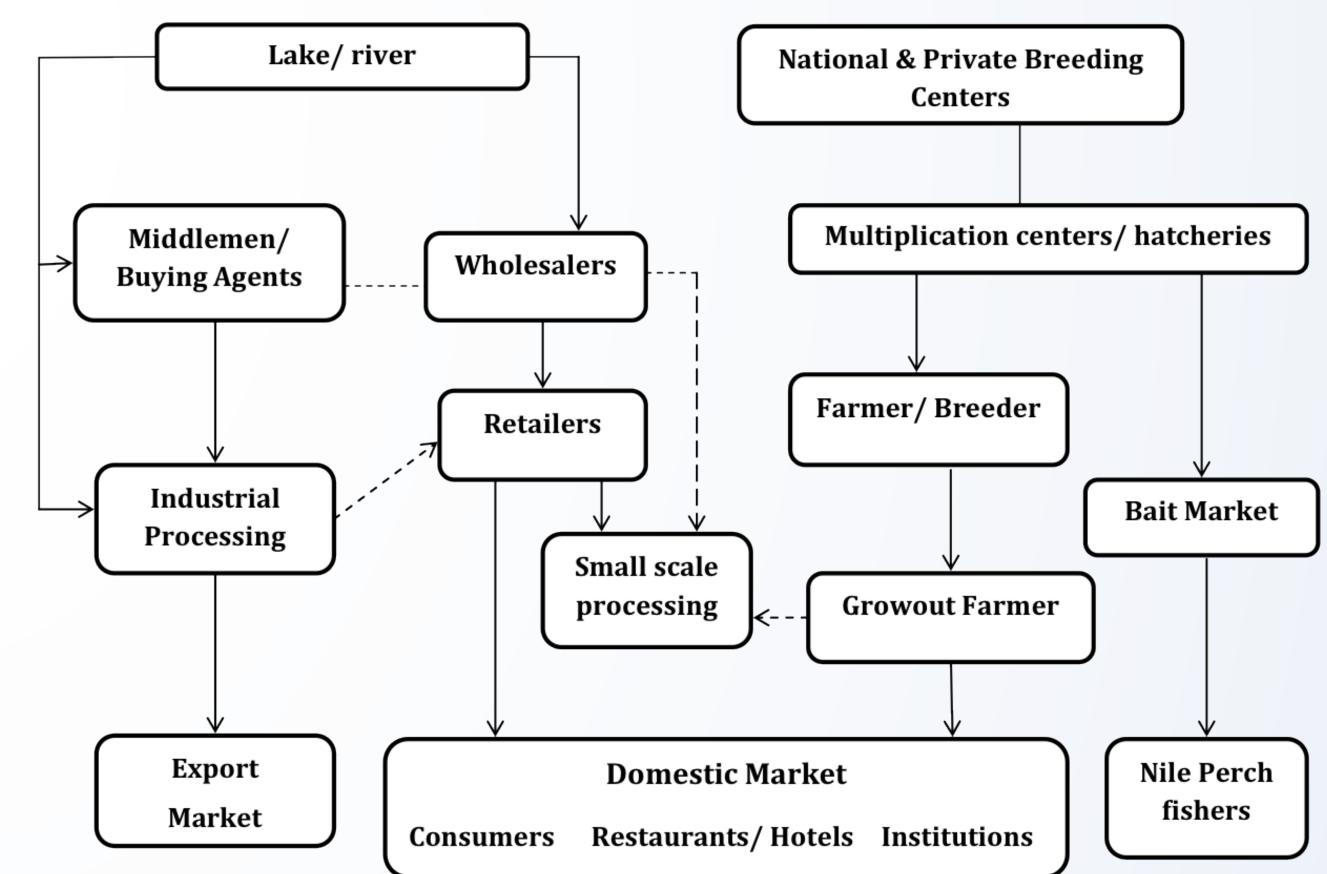
Tilapia and Catfish Value Chains in Kenya

Purdue University (US Lead), Moi University (Kenya), and Ministry of Fisheries Development (Kenya)

Value Chain Development for Tilapia and Catfish Products: Opportunities for Female Participation in Kenya

The purpose of this study was to understand consumer preferences and trends in the demand for tilapia (Oreochromis niloticus) and African catfish (Clarias gariepinus) products in Kenya and to analyze value chains involving women. The results of the study can provide opportunities for economic growth and overcoming underemployment and poverty among women. The linkages between chain actors and the fish value chain structure in Kenya were determined through questionnaires and surveys and are displayed below.

The findings suggest that high initial costs of fish farming, including land, training, and construction, are among the major constraints to increased female participation in fish production. A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis indicated the need for more information sharing, highlighting the benefits of being close to urban markets.



Flow chart for cultured tilapia and African catfish products in Kenya.







Value-added tilapia for sale in a Kenyan open-air restaurant. (Jeff Hino)

Other AquaFish CRSP Work on Value Chains

North Carolina State University (Us Lead) and Central Luzon State University (Philippines) Implications of export market opportunities for tilapia farming practices in the Philippines (2007-2009)

Purdue University (US Lead), Kwame Nkrumah University of Science & Technology (Ghana), and Moi University (Kenya) Developing supply chain and group marketing systems for fish farmers in Ghana and Kenya (2007-2009)

University of Connecticut (US Lead), Cantho University (Vietnam), and Inland Fisheries Research & Development Institute (Cambodia)

Competition and impacts between use of low value/trash fish for aquaculture feed versus use for human food (Vietnam and Cambodia 2007-2009)

Auburn University (US Lead), National Fisheries Resources Research Institute (Uganda), Makerere University (Uganda), Gulu University (Uganda)

Market assessment and profitability analysis of aquaculture enterprises in Uganda (2009-2011)

North Carolina State University (US Lead) and Central Luzon State University (Philippines) Improving supply chain opportunities for tilapia in the Philippines. (2009-2011)





