INTRODUCTION

Negative environmental impacts associated with aquaculture are of increasing concern due to the rapid growth and often unregulated of the aquaculture industry. Aquaculture has been associated with a range of issues including habitat degradation, contaminated water systems, increases in the spread of fish diseases, and the introduction of alien species. Mitigation of these adverse effects is key to developing sustainable, end-user level aquaculture systems.

The Aquaculture & Fisheries Collaborative Research Support Program (AquaFish CRSP) strives to enrich livelihoods and promote health through international multidisciplinary partnerships. Headquartered at Oregon State University, AquaFish CRSP funded 43 core research investigations from 2007-2009 to increase the efficiency of aquaculture and improve fisheries management in three global regions: Latin America, Africa, and Asia. Of these investigations, seven focused on sustainable solutions for mitigating or eliminating environmental impacts caused by aquaculture. These investigations were conducted in Mexico, Cambodia, China, Indonesia, The Philippines, and Vietnam. Each investigation assessed a variety of ecological effects relating to waste management, associated with a range of issues including habitat degradation, contaminated water systems, increases in the spread of fish diseases, and the introduction of alien species. Mitigation of these adverse effects is key to developing sustainable, end-user level aquaculture systems.

VIETNAM & CAMBODIA
ASSessment of Diversity and BiEcological characteristics of low vaLue/trash fish spEcies

Collaborating Institutions
- University of Connecticut-Avery Point (USA)
- Inland Fisheries Research & Development Institute (Cambodia)
- Can Tho University (Vietnam)

Research and Outreach:
- Investigated the environmental impacts of aquaculture in the lower Mekong Basin.
- Involved local fisheries stakeholders in understanding the status of low value fish stocks and the importance of sustainable management.

INDONESIA & THE PHILIPPINES
Training in Sustainable Coastal Aquaculture Technologies in Indonesia and the Philippines

Collaborating Institutions
- North Carolina State University (USA)
- University of Arizona (USA)
- Unjung Batee Aquaculture Center (Indonesia)
- Southeast Fisheries Development Center Aquaculture Department (SEAFDEC AQD) (The Philippines)
- Department of Agriculture (The Philippines)

Research and Outreach:
- Provided training and short courses on alternatives to shrimp monoculture: 1) incorporating seaweed in tilapia-shrimp polyculture and 2) soft shell crab farming.
- Determined if new techniques were adopted and if crop diversification and farming sustainability have improved.

CHINA
Assessing Effectiveness of Current Waste Management Practices for Intensive Freshwater and Marine Pond Aquaculture in China

Collaborating Institutions
- University of Michigan (USA)
- Shanghai Ocean University (China)
- Huazhong Agricultural University (China)
- Hainan University (China)

Research and Outreach:
- Investigated the environmental impacts of aquaculture in the lower Mekong Basin.
- Involved local fisheries stakeholders in understanding the status of low value fish stocks and the importance of sustainable management.

CHINA & VIETNAM
IMPact of introduction of alien species on the Fisheries and BiDiversity of Indigenous species in the Zhanhe Reservoir of CHina and Tri An Reservoir of Vietnam

Collaborating Institutions
- University of Michigan (USA)
- Huazhong Agricultural University (China)
- Shanghai Ocean University (China)
- Nong Lam University (Vietnam)

Research and Outreach:
- Investigated the impacts of alien species in reservoirs, involving farmers, reservoir management, and government officials in understanding the implications for the development of appropriate management strategies.
- Developed recommendations to eliminate further stocking of the alien species.

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