The Feed the Future Innovation Lab for Collaborative Research on Aquaculture & Fisheries

AquaFish Innovation Lab

HUMAN & INSTITUTIONAL CAPACITY DEVELOPMENT IN AQUACULTURE AT CENTERS FOR HIGHER EDUCATION

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Introduction

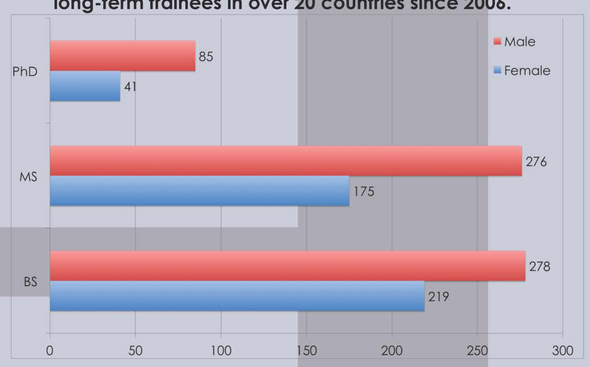
Human and institutional capacity development (HICD) in partner countries is a hallmark of the AquaFish Innovation Lab. By involving partnering host country institutions, AquaFish provides financial support, research mentoring, and academic guidance for students in undergraduate and graduate programs in aquaculture, fisheries, aquatic ecology, economics, and many other degree programs. Degree-seeking trainees often move on to careers in government, academia, and private enterprise upon graduation, building human capacity for aquaculture research and development. Beyond the individual level, this process of change and development also occurs at the institutional level to improve the functions, policies, and processes that support the advancement and the management of research.

Training the Next Generation

Often it has been said that the most important resource in any field is the human resource. And in aquaculture research and development, this maxim certainly holds true. AquaFish has made human capacity building in the fields of fisheries and aquaculture science a centerpiece of its development portfolio.

AquaFish supports students in long-term trainings, and provides opportunities for young scientists and farmers to make connections and strengthen networks.

AquaFish has supported the education of over 440 long-term trainees in over 20 countries since 2006.



Participants gather around workshop leader, Dr. Charles Ngugi, during an aquaculture pond construction workshop in Mali. Photo by Jim Bowman.

AquaFish understands that women's participation is essential to successful development of the aquaculture and fisheries sectors. To ensure that women are included in the development agenda in meaningful and equitable ways, AquaFish has set benchmarks to track these metrics.

Some key capacity building strategies include:

- collecting and analyzing disaggregated gender data
- tailoring specific extension and technical services to women
- engaging extension specialists who are sensitive to diversity issues
- setting a 50% benchmark for women in trainings

Strengthening Institutions

A benefit of implementing HICD in host countries is the improvement of institutional processes that could limit development goals.

AquaFish Innovation Lab is able to help Host Country partner institutions strengthen and develop institutional capacity by promoting highly competent local research and administrative capability – networked globally – using Host Country nationals to design and implement effective research and outreach programs.

Women examine water samples under a microscope at Sokoine University of Agriculture during a workshop in Morogoro, Tanzania. Photo by Caleb Price.

Wilfrido Contreras Sanchez scoops young tilapias where they're fed methyltestosterone (MT) to turn them into males. This study tested the ability of bacteria to remove the MT steroid from the water. Photo by Tiffany Woods.

At the Universidad Juárez Autónoma de Tabasco (UJAT) in Mexico, AquaFish has supported 8 key faculty members and over 30 students (graduate and undergraduate).

Additionally, AquaFish helped strengthen the infrastructure of the Tropical Aquaculture Laboratory at the Biological Sciences Division, the Aquaculture Laboratory of the Agricultural Sciences Division, and the Marine Aquaculture Station, all of which are part of UJAT.

Curriculum Development

AquaFish has worked to develop aquaculture, fisheries and related curriculum at many universities and centers for higher education in countries across the globe. In Nepal, a partnership between the Agriculture and Forestry University (AFU) in Chitwan, AquaFish, and government agencies has helped create the very first Bachelor of Science in Fisheries program in the country, which began in 2014.

Graduate students at the Agriculture and Forestry University (AFU) in Chitwan Nepal. Photo by Stephanie Ichien

Ethel Tettey, Masters student, attends to her thesis experiment studying the dietary protein requirements of Claroteid catfish (*Chrysichthys nigrodigitatus*) at the KNUST aquaculture lab. Photo courtesy of Emmanuel Frimpong.

At the Kwame Nkrumah University of Science and Technology in Kumasi, Ghana, AquaFish supported the development of 8 aquaculture courses by 4 faculty in the College of Agriculture and Natural Resources from 2007-2014.

Two new degree programs resulted from this support: a Bachelors in Aquaculture and Water Resources Management, and an Masters degree in Aquaculture Business Management.

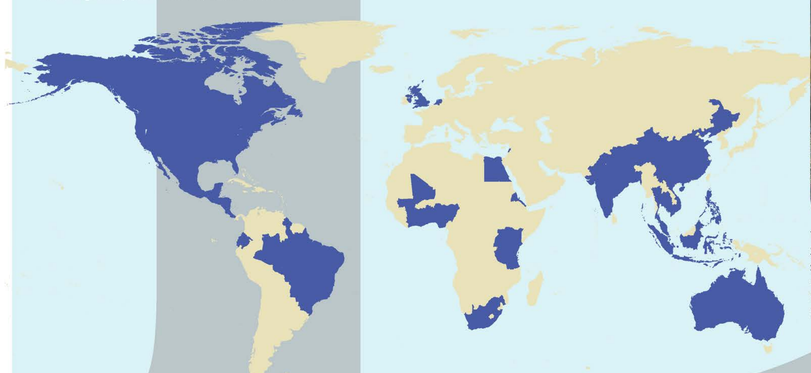
Knowledge Transfer

One program that was successful in promoting human capacity development was the Host-Country Principal Investigator (HCPI) Exchange Project.

Researchers from AquaFish partner countries visited program partners in a different region to experience first hand the aquaculture research projects and facilities in-country.

This unique opportunity facilitated the exchange of knowledge and ideas between personnel that helped strengthen research and outreach efforts, establishing networks between aquaculture professionals across the globe.

AquaFish HCPIs from around the world gather in Kenya in an exchange of ideas, techniques, and information through the HCPI Exchange Project. Photo by Jim Bowman.



With connections in 40 countries (in blue) around the world, the AquaFish network expands to over 300 professionals, linking participants to a large global community. This synergistic participation benefits by building additional expert capacity throughout the AquaFish network, consisting of world-class scientists, technical specialists, research administrators, government personnel, and graduate and undergraduate students.

Two Malian fish farmers were trained in rice-fish culture techniques at Shanghai Ocean University, China, in 2008 and returned to Mali to share what they had learned. They were directly involved in setting up the four rice-fish demonstration sites in 2009 and generated so much interest that at least 21 new farmers adapted their fields for fish production in the following year. Photo by Jim Bowman.

USAID FROM THE AMERICAN PEOPLE

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