

BUILDING HUMAN AND INSTITUTIONAL CAPACITY IN DEVELOPING COUNTRIES TO ENHANCE SUSTAINABLE AQUACULTURE

JENNA BORBERG*, STEPHANIE ICHTEN, AND HILLARY EGNA

INTRODUCTION

Building aquaculture capacity for individuals, communities, and institutions in developing countries is core to the overall mission of the AquaFish Innovation Lab to enrich livelihoods and promote health. Aquaculture is important for overcoming poverty and hunger, and its success relies on the transfer of reliable and high quality information. AquaFish's significant and still growing international network of trained aquaculture researchers and professionals is able to train and empower the next generation of aquaculturists through a continuous pipeline. Gender equity is an integral theme of the AquaFish capacity building effort, aiming to help communities take ownership of aquaculture research and outreach priorities and helping countries shape their aquaculture sector.

AquaFish builds capacity and ensures long-term program impacts through:

- 1) **Building linkages** between US and Host Country researchers and institutions,
- 2) Supporting **long-term training** of students and researchers,
- 3) Providing **short-term training** opportunities such as workshops and courses, and
- 4) Focusing on **gender integration** in aquaculture & fisheries.

Capacity building benchmarks and milestones, through a rigorous Monitoring and Evaluation strategy, have been set in order to track program progress and outcomes, and manage for continuing successes.



AquaFish-sponsored graduate students from Nepal gather for a photo at their university in Chitwan. Photo by Stephanie Ichien.



Gladys Kuria, an MS student in Kenya, sets up her experiment at the Mwea Aquafish Farm. Photo courtesy of Kwamena Quagrainie.



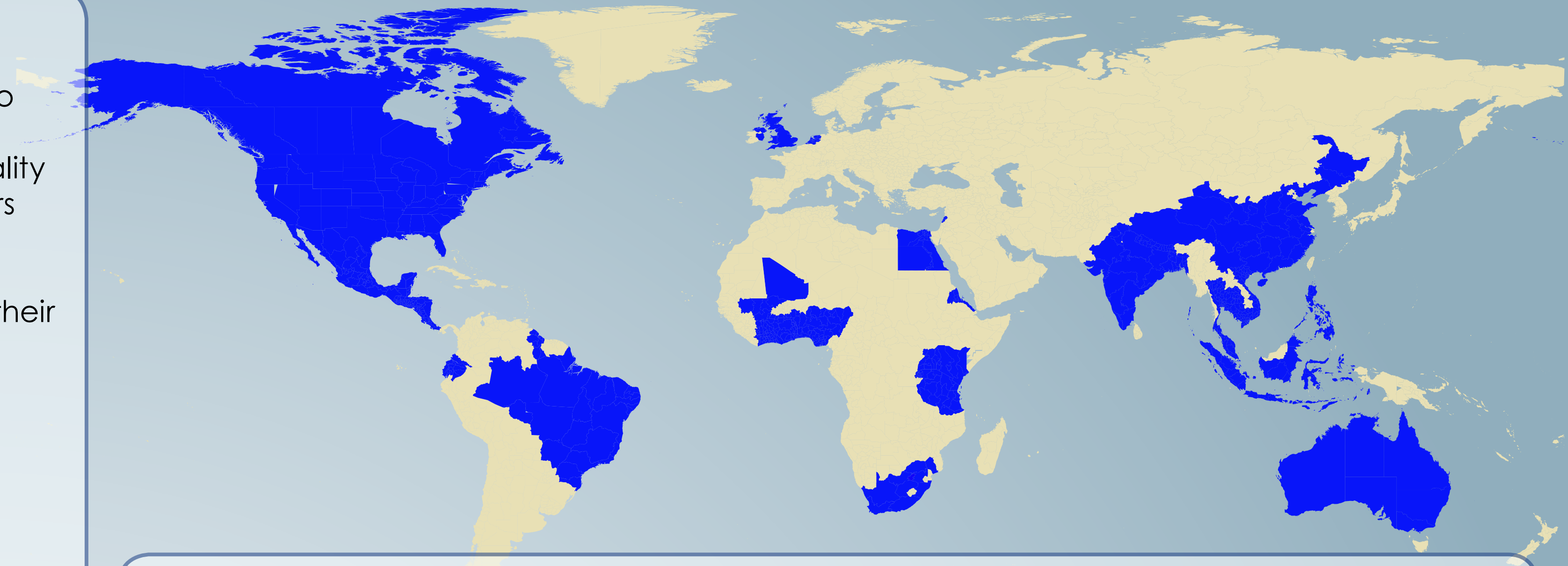
Charles Ngugi (center) leads a workshop on pond construction in Mali. Photo by Jim Bowman.



Participants in an AquaFish best management practices (BMP) workshop in Ghana. Photo by Hillary Egna.

BUILDING LINKAGES

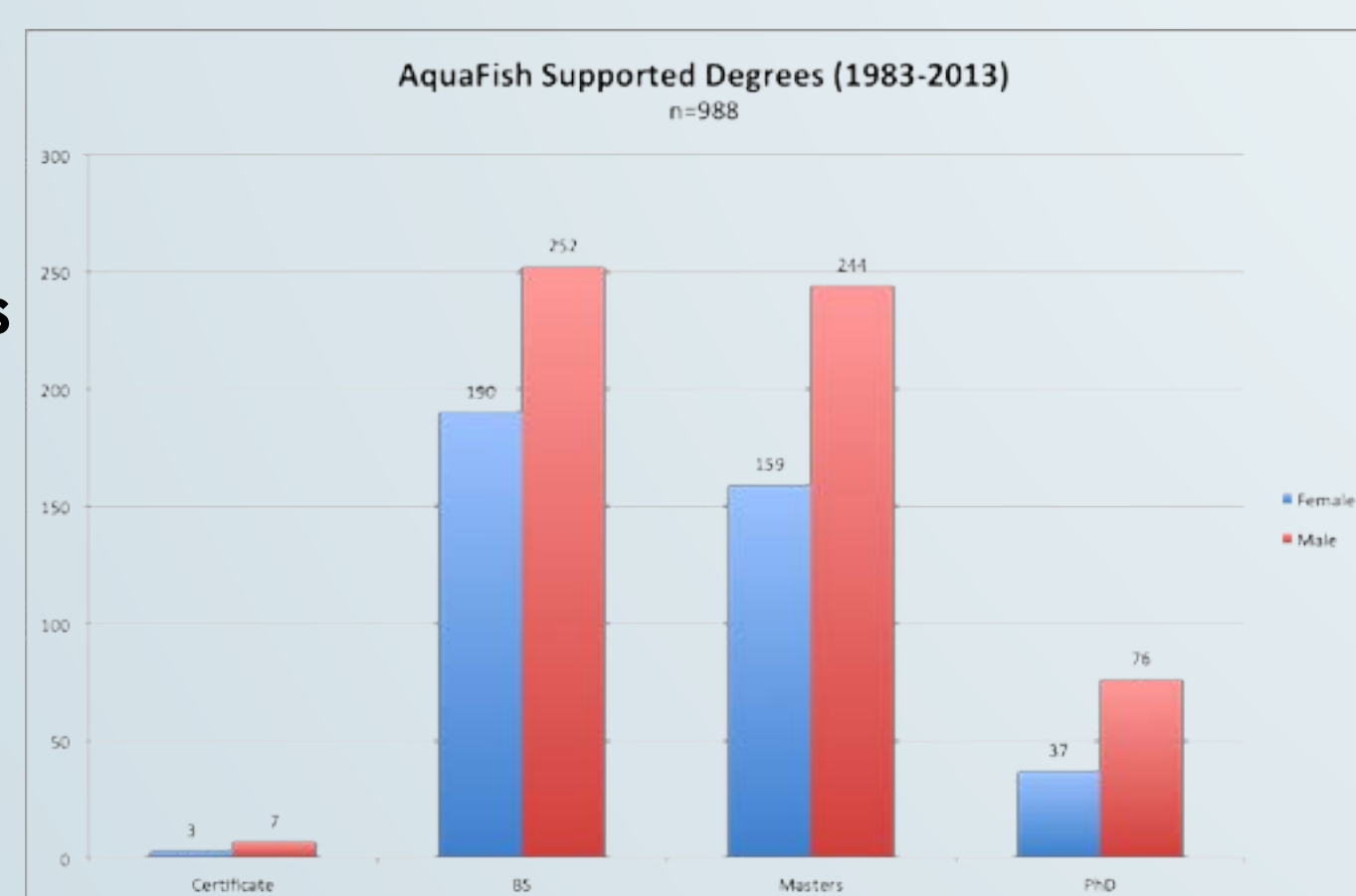
With **connections in 40 countries** (in blue) around the world since 1983, the AquaFish network expands to over 300 people, linking participants to a large global community. AquaFish accomplishes this by engaging many students, professionals, and institutions. This synergistic participation benefits from building additional expert capacity throughout the AquaFish network, consisting of world-class scientists, technical specialists, research administrators, government personnel, and graduate and undergraduate students.



LONG-TERM TRAINING

Long-term training is defined as academic training lasting six months or more, including but not limited to degree programs. Long-term training typically culminates in a BS, MS, or PhD degree (or equivalent), but can also lead to a high-school diploma, a technical certificate or Associates Degree or post-doctoral studies. Direct involvement in AquaFish research projects provides Host Country and US students with opportunities for training and experience, ensuring lasting impacts towards community development.

Since 1983, AquaFish has supported **approximately 1,000 post-secondary degrees** in a variety of disciplines at universities around the world. The figure at the right represents these degrees disaggregated by gender.



GENDER INTEGRATION

Gender equality and female empowerment are core development objectives in the AquaFish portfolio, and are fundamental to accomplishing effective and sustainable development outcomes, improving family nutrition, and ensuring the most basic human rights. The degree of hunger within a society is in large part associated with the status of women—the family nutritional gatekeepers. In the past decade, efforts to overcome these inequalities have narrowed many of the gender gaps, but equality issues remain, particularly in low-income and conflict-affected countries.

Gender integration is implicit and interwoven throughout the program, with the intention of **creating equal opportunities** for participation in the program's research, training, educational, and other activities.

- Between 2006-2011, **women's participation in AquaFish short-term trainings increased from 32% at the start to 39%.**
- In the same time period, **women have represented 48% of the AquaFish long-term training program.**

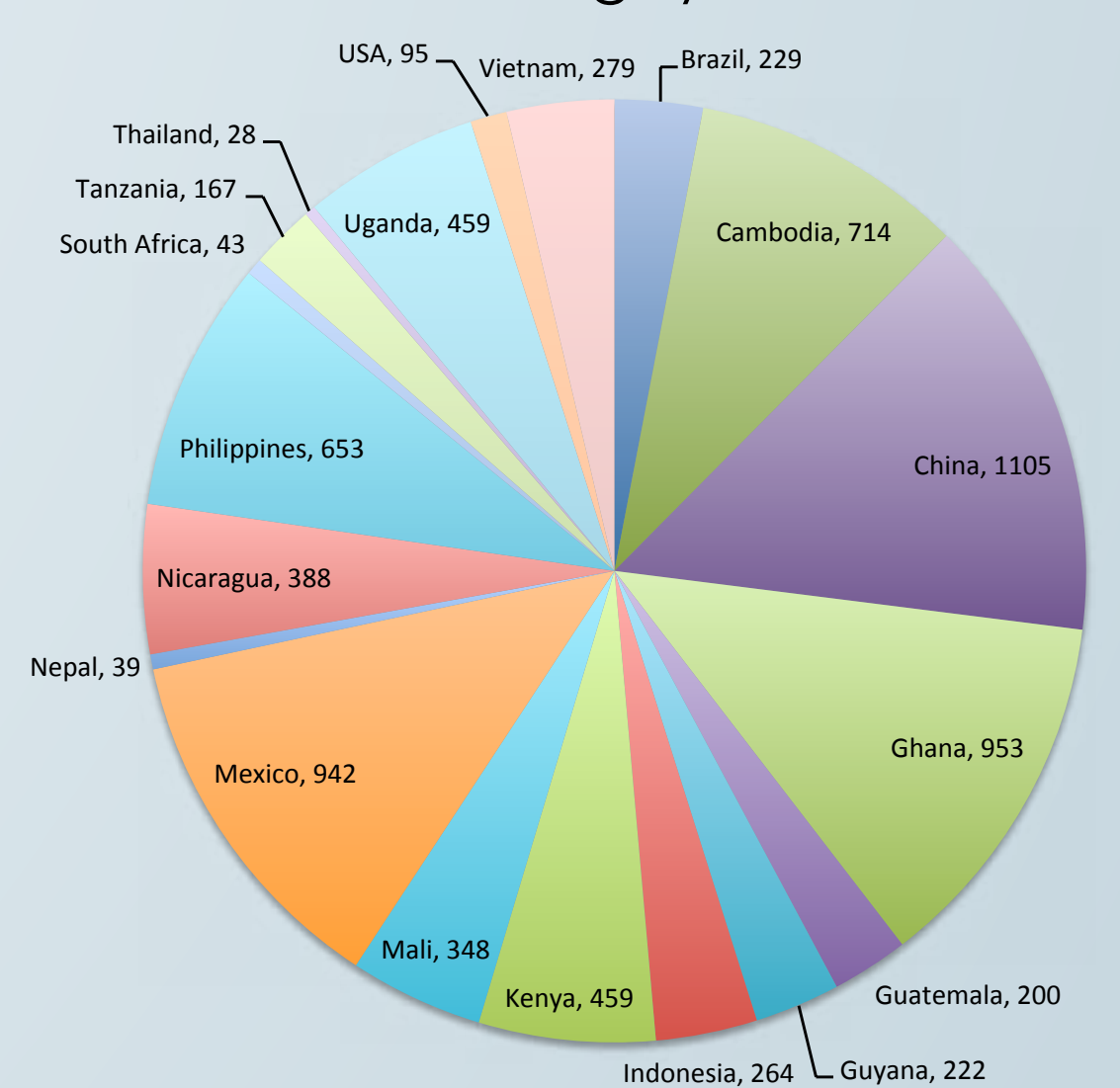
SHORT-TERM TRAINING

Short-term training is defined as non-academic training that lasts less than six months and does not lead to a degree or technical certificate. Short-term training typically includes training provided through short-courses, seminars, workshops, internships, and observational study tours, which typically focus on training Host Country extension specialists, local farmers and fishers, producers, fisheries officers, policy makers, and NGOs.

Since 2006, AquaFish sponsored projects have **trained over 7,600 people in 245 events held in 20 countries** around the world. Some of the topics addressed in AquaFish workshops include:

- Record keeping
- Fish farm business management
- Fish harvesting, processing, and value added techniques
- Local feed substitutes
- Market access and product development
- Best management practices
- Value chain analysis
- Rice-fish culture
- Business skills management
- Recirculating systems

The figure at the right represents the number of individuals trained in each country by AquaFish efforts between 2006 and 2013.



AquaFish graduate students gather for a photo in Ghana with Director, Hillary Egna. Photo courtesy of Hillary Egna.



Former AquaFish student Sunila Rai from Nepal with her advisor Yang Yi. Photo courtesy of Sunila Rai.



Two of the members of the Women in Aquaculture Cooperative involved with AquaFish work in Nepal. Photo by Stephanie Ichien.



A woman fish vendor in Mali. Photo by Jim Bowman.



AquaFish participant, Nelvia Alfonso, in Nicaragua. Photo courtesy of Maria Haws.



Liu Liping speaks with a Malian fish farmer about rice-fish culture in China. Photo by Yuan Derun.

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