



WorldFish
C E N T E R

PROJECT FLYER | 2011-59

Aquatic Agricultural Systems

KEY FACTS

CGIAR Research Program on Aquatic Agricultural Systems

Donor
CGIAR

Lead Center
The WorldFish Center

Partners
Biodiversity International, International Water Management Institute (IWMI), CARE (USA), Catholic Relief Services, Land O'Lakes International Development, Concern (Zambia) and many more

Program Leader
Patrick Dugan,
The WorldFish Center

Locations
Zambia, Bangladesh, Cambodia, Philippines and Solomon Islands

Start – 2011

End – 2017



More than 700 million people depend on aquatic agricultural systems for their livelihoods. These are diverse farming systems that include a mix of cultivation, livestock, aquaculture, fishing, and gathering natural resources such as fruits, seeds, timber and wildlife. However, there are many constraints that prevent low income smallholders from fully benefitting from these naturally productive systems. The CGIAR Research Program on Aquatic Agricultural Systems starts from the premise that poverty is rarely caused solely by inadequate income or assets. Other reasons can include marginalization, when a group of people is disadvantaged or excluded due to their ethnicity, race, religion, caste, gender, age, HIV status or other attribute. Often this group is also more vulnerable to economic shocks, environmental changes, and natural disasters.

The Program, led by the WorldFish Center, recognizes the multiple dimensions of poverty, and the diversified livelihood strategies used by farming families. Research is embedded within communities using a farmer-participatory approach, with both beneficiary households and development partners working hand-in-hand.

Our research agenda

Geography very often determines the livelihood opportunities and the role of fisheries and aquaculture within aquatic agricultural systems. For aquatic agricultural systems located close to urban centers or transport corridors, these opportunities are increasingly market-oriented. For those aquatic agricultural systems located in remote and inaccessible rural areas however, market opportunities are severely constrained. Meeting the livelihood and food security needs of these remote rural populations requires multi-pronged approaches with changes to technologies, markets and social institutions.

Recognizing the complexity of these livelihoods, WorldFish will work with CGIAR centers and other partners to pursue an integrated program of research that focuses on six broad themes:

- i. Sustainable increases in system productivity. We will focus on increasing productivity by using better inputs and through the adoption of new production and post-harvesting technologies. For example in Uganda improved strains of fish will be developed and disseminated for use in pond aquaculture, while in Bangladesh integrated systems of prawn-shrimp-fish-rice cultivation will be refined and their use extended. Gender mainstreaming will focus on reducing the productivity gap between men and women by engaging both groups in priority setting, research, field trials, dissemination and monitoring.
- ii. Equitable access to markets. We will work to improve markets and services for poor and vulnerable households that produce, process and trade in aquatic products. Using Participatory Market Chain Analysis researchers and market chain actors will work together to identify at which steps along the chain greater efficiencies can be realized through interventions, including the development and uptake of more productive technologies, market innovations, policies and institutional changes. In doing so we will identify gender disparities along the value chains and promote interventions that result in empowerment and a more equitable share of benefits.
- iii. Social-ecological resilience and adaptive capacity. We will work to strengthen resilience and adaptive capacity in poor, vulnerable and marginalized groups. We will do so by working with partners to strengthen the rights, assets, capability and learning of these groups. We will focus on addressing gendered differences in vulnerability and risk in the face of seasonal and lifecycle events, natural hazards and climate change. Emphasis will be placed on food security, nutrition, health and survival disparities.

- iv. Gender equity. We will work to fundamentally reduce gender disparities in access to and control of resources and decision-making. We will do this by focusing on changing the norms, attitudes, beliefs and practices relating to gender roles, by strengthening the role of women in decision-making, and by emphasizing increasing access, ownership and control over productive resources for women.
- v. Policies and institutions to empower aquatic agricultural systems users. We will work to improve policies and institutional structures in order to support pro-poor, gender equitable and sustainable development. To do so we will work with government and civil society organizations to articulate and address citizen's concerns about policies and institutions that are identified as critically blocking the emergence of resilient, pro-poor fisheries and aquaculture.
- vi. Knowledge sharing, learning and innovation. We will work to establish productive relationships, partnerships and networks capable of achieving research and development outcomes sustained through effective knowledge sharing and learning. WorldFish is committed to learning by doing and demonstrating how our activities will contribute to significant and lasting changes in the well-being of beneficiaries.

Where we will work

We will focus our future investments initially in Zambia, Bangladesh, Cambodia, Philippines and Solomon Islands and will seek to expand our work to Uganda and Mali as soon as opportunities permit, and progressively through partnerships to other countries in Asia (Indonesia, Vietnam and India). The CGIAR Research Program hubs, located in each country, represent a spectrum of fisheries and aquaculture development constraints, and addressing them in each location will generate tools and approaches that can be scaled out regionally.

How we will achieve impact and do so at scale

The CGIAR Research Program on Aquatic Agricultural Systems will achieve impact at multiple scales. It will do so through three related pathways that reflect distinct strategies of partnership and knowledge sharing and learning. The first pathway will be the significant but localized benefits achieved through our direct engagement with partners in specific research sites in selected program hubs. The second is the more extensive achievement of benefits through the learning alliances and impact networks that the program will develop in these hubs. We will link closely with partners working in these hubs with the express intention of expanding the program's learning and impact through their own projects and networks. The third pathway is the more widespread and larger reduction in poverty that can be achieved by expanding the program networks nationally, regionally and globally, as well as by working through these networks to foster the dissemination and wider adoption of the learning, methods and technologies harnessed through the Program. To achieve this, we will foster the development of national learning alliances for aquatic agricultural systems in focal countries, and work with partners internationally to build a global coalition for knowledge sharing and learning in aquatic agricultural systems. Achieving impact at scale along these three pathways will require careful investment in a range of research, partnerships, and knowledge-sharing and learning activities designed to facilitate the processes required to translate outputs into outcomes and outcomes into impacts.

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