

## EVALUATION BRIEF

# CGIAR Research Program on Aquatic Agricultural Systems February 2016



Independent  
Evaluation  
Arrangement

## Background and Context

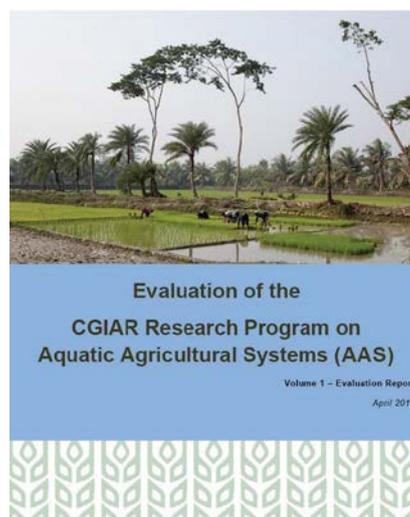
The CGIAR research program (CRP) on Aquatic Agricultural Systems (AAS) was designed to improve the well-being of the people who depend on aquatic agricultural systems, defined as “agricultural systems in which the annual production dynamics of freshwater and/or saline or brackish coastal systems contribute significantly to total household income.” CRP AAS is led by the WorldFish Center. Two other CGIAR centers – Bioversity International and the International Water Management Institute (IWMI)—participate in it, accounting for about 4% of the funding. CRP AAS began operations in June 2011. By the end of 2014 its accumulated budget was USD 85 million, of which 47% was Window 1 and 2 type funding.

The program introduced an approach termed “Research in Development” (RinD), in which agricultural research is embedded in the development context. AAS has sought to operationalize RinD through participatory action research (PAR) within the geographically defined hubs, which entail close collaboration with stakeholders from community to national levels. AAS research was justified by the “paradox” that high prevalence of poverty, vulnerability and inequity exist in aquatic agricultural systems in spite of their high agro-ecological productivity potential.

## Evaluation Methodology

The Evaluation addressed two sets of evaluation questions. The first was a set of generic evaluation questions that refer to the standard criteria applied across the CRP evaluations: relevance, quality of science, likely effectiveness, expected impact, gender, capacity development and partnerships, program governance and management. The second set of questions referred specifically to the AAS RinD approach, including its uniqueness, its implementation and its potential as a model for CGIAR research.

Taking the program’s focus on participatory action research into account, the Evaluation Team developed a “case-based, multi-level, mixed methods” evaluation approach. Case studies formed an essential building block of the Evaluation, with two types of cases (“roll-out” cases and “bilateral projects”) conducted in four countries that represent three types of aquatic agricultural systems: Bangladesh and Cambodia for the mega deltas of Asia; Solomon Islands for the island systems of Southeast Asia and the Pacific; and Zambia for Africa’s inland waters. Methods included an intensive review of documents, interviews with staff and stakeholders, and participatory methods and field observations during community and field visits. The information from the case studies was combined with data collected through desk review of key program documents; reviews of previous evaluations,



interviews of over 200 CRP stakeholders and staff, as well as bibliometric analysis of CRP AAS publications and peer review analyses of a sample of 83 publications.

### Main Findings and Conclusions

Overall, the Evaluation concluded that aquatic agricultural systems present issues of sufficient importance and relevance to justify further investment in research by the CGIAR. It also concluded that CRP AAS has a number of important achievements, such as thorough situation assessment in national context preceding roll-out, joint identification of hub challenges with local development communities, community engagement promoting self-reliance, and strong commitment to promoting a Gender Transformative Approach during the roll-out process.

However, the Evaluation also concluded that the program faces a range of obstacles and challenges, affecting quality of science, relevance and effectiveness, which, to be overcome, will require substantial changes in key areas including program design, staffing and implementation.

In terms of program design and leadership, the Evaluation found that the systems research aspects of the program remain underdeveloped. The educational profiles of AAS research staff varied significantly over the hubs and themes, leading to the conclusion that the ratio of senior to junior researchers was in many cases too low to assure design, implementation and publishing of high quality, cutting-edge research.

#### Program focus, relevance, quality of science and likely effectiveness

The Evaluation Team's analysis led to a number of reservations concerning the roll-out process that affected the quality of science and cost-effectiveness. The process was not found to be informed by a critical review of earlier approaches to farming systems research, participatory research or PAR within or outside the CGIAR. Furthermore, the Evaluation found that there was little indication that the roll-out process was leading to an interdisciplinary systems-oriented research approach.

Placing PAR as a central component of the program was an innovative aspect of AAS. However, the potential of PAR to contribute to the relevance and effectiveness of the program had not been realized or convincingly demonstrated, mostly due to limitations of the way in which PAR was implemented. Most PAR activities related to productivity focused on individual components of aquatic agricultural systems rather than systems productivity, and some faced technical challenges. Progress in leveraging expertise across the CGIAR system to strengthen integrated productivity research was found to be limited.

Research on policies and institutions benefitted from the established expertise of WorldFish in the area of governance. Research on this theme demonstrated that if a coherent conceptual framework is developed and applied consistently, broadly relevant knowledge that address cross-hub issues can be produced in a relatively short time. The thematic work on nutrition was found to be highly relevant, considering that aquatic resources offer a high potential for nutrition, which is one of the rationale for investing research on aquatic agricultural systems. The legacy research on value chain studies of WorldFish was found to be excellent. The ongoing work in the hubs had important positive features, such as a high buy-in of stakeholders in Zambia, but it was also characterized by delays and the lack of an analytical cutting edge.

Work on Gender Equality was identified as one of the major achievements of the program. While the Gender Transformative Approach is not new, the Evaluation found its systematic application across a number of aquatic agricultural systems to be innovative. The Evaluation Team highlighted that this area of work has the potential to make an important contribution to understanding changes in gender norms, perceptions and relations, and to have impact beyond the boundaries of the program.

### Summary of Recommendations

**The primary recommendation of the Evaluation Team is that CGIAR should justify further investment in aquatic agricultural systems more on the grounds of its established expertise and comparative advantage rather than focusing only on entirely new research approaches.**

This recommendation has a number of implications, including the need to:

- Strengthen and nuance the conceptualization of aquatic agricultural systems so that there is a more coherent and compelling justification for geographic hubs
- Use the AAS paradox to strengthen the strategic aspects of the research program;
- Shift the focus away from PAR as the core research methodology
- Significantly increase the proportion of PhD-level researchers working at field level
- Significantly strengthen the capabilities for systems research; and
- Move toward a truly collaborative, multi-center research program

**Specific recommendations are the following:**

#### **1 Strengthen research strategy and design by :**

- Comparing and contrasting the Research-in Development approach with other approaches and identify its comparative advantages;
- Re-focusing research questions on the AAS paradox; and
- More effectively engaging with, benefitting from and contributing to existing bodies of experience and scholarship around agricultural systems and the methods used to study and improving them.

#### **2 Strengthen research capacity: AAS management should re-think its approach to staffing and to the allocation of human resources by:**

- Basing more experienced senior researchers in the hubs;
- Undertaking a detailed analysis of the factors that constrain the hiring and retention of qualified research staff, particularly in the hubs; and
- Ensuring a critical mass of research capacity to a level that would justify expenditure in relation to any given hub – theme combination.

**Until these concerns are addressed, the Evaluation Team recommends that no expansion into new hubs or research themes should be contemplated.**

#### **3 Revise the roll-out process: any continuation or extension of the roll-out process would benefit from:**

- Allowing for experimenting with different approaches to community engagement and priority setting in ways that allow results to be compared;
- Ensuring that adequate time and resources are available to conduct in-depth, critical reviews of the relevant research-based literature and experience;
- Ensuring a much greater level of direct involvement by senior researchers; and
- Striving toward the development of an explicit and robust systems perspective using an

interdisciplinary research approach.

- 4 Increase alignment of AAS activities:** The decision to associate bilateral projects with AAS should be based primarily on their potential to further the AAS research agenda. In the design and implementation of all bilateral projects, maximum synergies with W1/W2 funded work should be sought.
- 5 Partnership and capacity building strategies:** AAS management should undertake a strategic review of both the program's partnership and capacity development activities.
- 6 Potential to generate broadly relevant knowledge:** AAS research management should take more active steps to ensure that research activities in the hubs are conceived and planned in ways that will allow widely relevant knowledge, including IPGs, to be generated so as to ensure that Impact Pathway 3 can function.
- 7 Strengthened governance:** In order to fulfil its oversight role, and thus provide AAS with a more robust governance structure, the position of the Project Oversight Panel must be significantly strengthened in relation to both the program management and WorldFish.
- 8 Clarification of roles:** Management of AAS and WorldFish should clarify the roles, responsibilities and reporting relations of WorldFish staff relative to AAS staff, and in particular as they relate to scientific management.
- 9 Management information:** A functional research management information system should be established. This system should make it possible for AAS management to monitor and assess key program indicators such as the distribution of resources and the research outputs produced by hubs and themes.

### Management Response

The AAS management, Program Oversight Panel and WorldFish Board of Trustees provided a response to the Evaluation, fully accepting nine out of the 10 recommendations. The response particularly welcomed the overall conclusion of the evaluation, indicating that *“aquatic agricultural systems present issues of sufficient importance and relevance to justify investment by the CGIAR.”* The response further indicated the usefulness of the analysis provided in the Evaluation, which allowed for careful reflection and reconceptualization of specific areas of the program.

The response rejected recommendation 7 (strengthening governance) and questioned the analysis behind it. The response stated that the recommendation represented a misunderstanding of the role of the POP, and provided further detailed explanation.

The response listed a number of short and long-term actions being undertaken by the CRP to address the Evaluation findings and recommendations. In addition, a matrix was included detailing the response, timeframe and associated costs, if any, to each individual recommendation.

### Further Information

Visit the IEA website for Evaluation outputs and information (team profiles, TORs, Inception Report, Final Evaluation Report, and Annexes) as well as the CRP Management Response, and Consortium Response to the report and CRP management:

<http://iea.cgiar.org/evaluating/crp-evaluation-of-aquatic-agricultural-systems-aas/>