



CRP 2020 Reviews: FISH



Advisory
Services

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CRP Background

The CGIAR CAS Secretariat is conducting independent reviews of 12 CGIAR Research Programs (CRPs), including FISH.

FISH is led by the CGIAR center WorldFish, together with the International Water Management Institute (IWMI) and three research institutes: The Aquaculture and Fisheries Group at Wageningen University (WUR), the Australian Research Council Centre of Excellence in Coral Reef Studies at James Cook University (JCU), and the Natural Resources Institute (NRI) at the University of Greenwich. FISH has 2 Flagships (FPs): Sustainable Aquaculture (FP1) and Sustainable Small-Scale Fisheries (FP2). Enhancing Contribution of Fish to Nutrition and Health of the Poor (FP3) was integrated into FP1 and FP2 and is also related to other cross-cutting themes.

FISH CRP Review

The FISH CRP review builds upon past research conducted under the Livestock & Fish (L&F) CRP which was [evaluated in 2016](#)¹. It covers activities from Phase II (2017–2019) and attempts to generate insights about quality of science (QoS), effectiveness, and future orientation, answering three questions. The review used mixed methods of data collection: review of program documents, Altmetric and bibliometric data (160 peer-reviewed journal articles and 527 grey outputs), key informant interviews (30 KIIs), and analysis of 2 Outcome Impact Case Reports (OICRs).

¹ FISH was initiated only in 2017. During 2012–16 it was a component of the Livestock & Fish (L&F) CRP.

Photo: Small fish for nutrition, Cambodia. WorldFish/N. Palmer

Q1: To What Extent Does FISH Deliver Quality of Science (2017–2019 Work)?

FISH has a high quality, extremely hard-working, and dedicated scientific team with the appropriate mixture of skills, experience, and training. The research is enhanced by strong multi-disciplinary approaches. A total of 685 authors were included on 159 papers, and the average number of coauthors per paper was 5.97, a strong indicator of collaborative research. Authorship was distributed among scientists from 59 countries with an average of 7.6 citations per document. In addition, FISH has produced numerous award-winning outputs, including, for example, 'Harnessing Global Fisheries to Tackle Micronutrient Deficiencies (published in 'Nature' with an impact factor of 42.8, and 92 citations over 2017–2019). The outstanding germplasm output from FISH and CRP's legacy is well known in tilapia aquaculture (ADB, 2005). GIFT tilapia and Abassa tilapia have been widely distributed in low-income and high-income countries. This is one of the best examples of genetic enhancement in aquaculture. Further evidencing the high quality of science, 29 outputs or programs received awards, recognitions, or scholarships.

Q2: What Outputs and Outcomes Have Been Achieved, and What is the Importance of Those Identified Results?

Out of 43 milestones, 39 (91%) have been reached, with only 4 requiring an extension. A total of 29 OICRs were almost equally split between FP1 and FP2 (15 FP1, 14 FP2). More than

half of 87 innovations (58%) produced were generated in Asia; the rest 18.6% from Africa, 11.6% from the Pacific, 3.5% were regional and 34.9% were global). FISH is high quality and effective regarding the impact on policies for both aquaculture and fisheries—46 policies have been produced or influenced. Policy change has led to the establishment of rice-fish gateways, refuges, and ecosystems providing impact towards multiple SLOs.

Significant progress has been made along the Theory of Change (ToC) with evidence of increasing impact. Income, empowerment and nutrition have improved for hundreds of thousands of individuals in low-income countries.

Cross-Cutting Themes

FISH cross-cutting themes collaborate with four global integrative CRPs: 1) Policies, Institutions, and Markets; 2) Climate Change, Agriculture and Food Security; 3) Agriculture for Nutrition and Health; and 4) Water, Land, and Ecosystems.

Capacity development activities have been plentiful and effective. FISH capacity development activities targeted researchers, national partners, farmers, and communities: 552,998 people received training in low-income countries with the majority (70%) being women, including 55,385 farmers/producers. Short-term vocational, practical training in aquaculture was offered by FISH through the Africa Aquaculture Research and Training Center in Egypt to 323 participants (70 of them women) from 32 countries.

Type	People	Female (%)
Short-term	552998	69,8
Long-term	59	37,3
Short-term vocational	332	70

Table 1. Number of people trained (2017–19)

Within 29 OICRs, 48% included capacity development. Training efforts emphasize gender inclusion as 75% of training has been geared toward women and gender takes many creative approaches to its research and developed innovative training methods. **Gender** has significantly increased the participation of women in fisheries and aquaculture, their empowerment in family contributions, their income, and their access to nutritious foods. FISH CRP generated 30 journal articles examining gender in aquaculture, small scale fisheries, gender preferences, and the value chain. Gender's innovative approaches even allow gender research related to genetics, feeds, and

biodiversity. Within 29 OICRs, 65.5% addressed gender. **Youth:** Despite low funding, youth was addressed in 17% of OICRs. **Climate change** has produced extremely high-quality outputs and has progressed in the ToC with an increase of 37% in fish production and 22% in water usage and greenhouse gas reduction. 20.7% of OICRs addressed climate change.

Q3: Future Orientation

Past and current accomplishments of FISH CRP, resources, inputs, networks, and collaborations predict that high-quality science and effectiveness will continue. Shortcomings in resources and inputs were overcome by leveraging, and partnering with, expert scientists from universities, research institutions, NGOs, and other CRPs creating a large web or network. This strategy should continue.

Key Lessons

- Involving small communities can be highly effective in sustaining and increasing a natural resource that ultimately impacts the income and nutrition of low-income communities.
- Partnering and involvement of medium and large enterprises in technology transfer to the poor can increase the likelihood of successful dissemination with benefits to the entire value chain.
- Facilitating communication between men and women can break down barriers, resulting in greater empowerment and participation of women while increasing their income and self-satisfaction.
- Retention of knowledge, and performance of outputs and tools must be measured.

Recommendation for CGIAR

- QoS and effectiveness would benefit from avoiding delays in funding and early termination of CRPs.
- Enhancing the contribution of fish for the nutrition and health of the poor should receive increased support in the future.
- While leveraging resources is key, more support would likely result in good return on investment.
- More funding needs to be devoted to research on impact assessment and to the highly impactful work on small-scale fisheries.

Read the full report:

<https://cas.cgiar.org/evaluation/crp-2020-fish>

