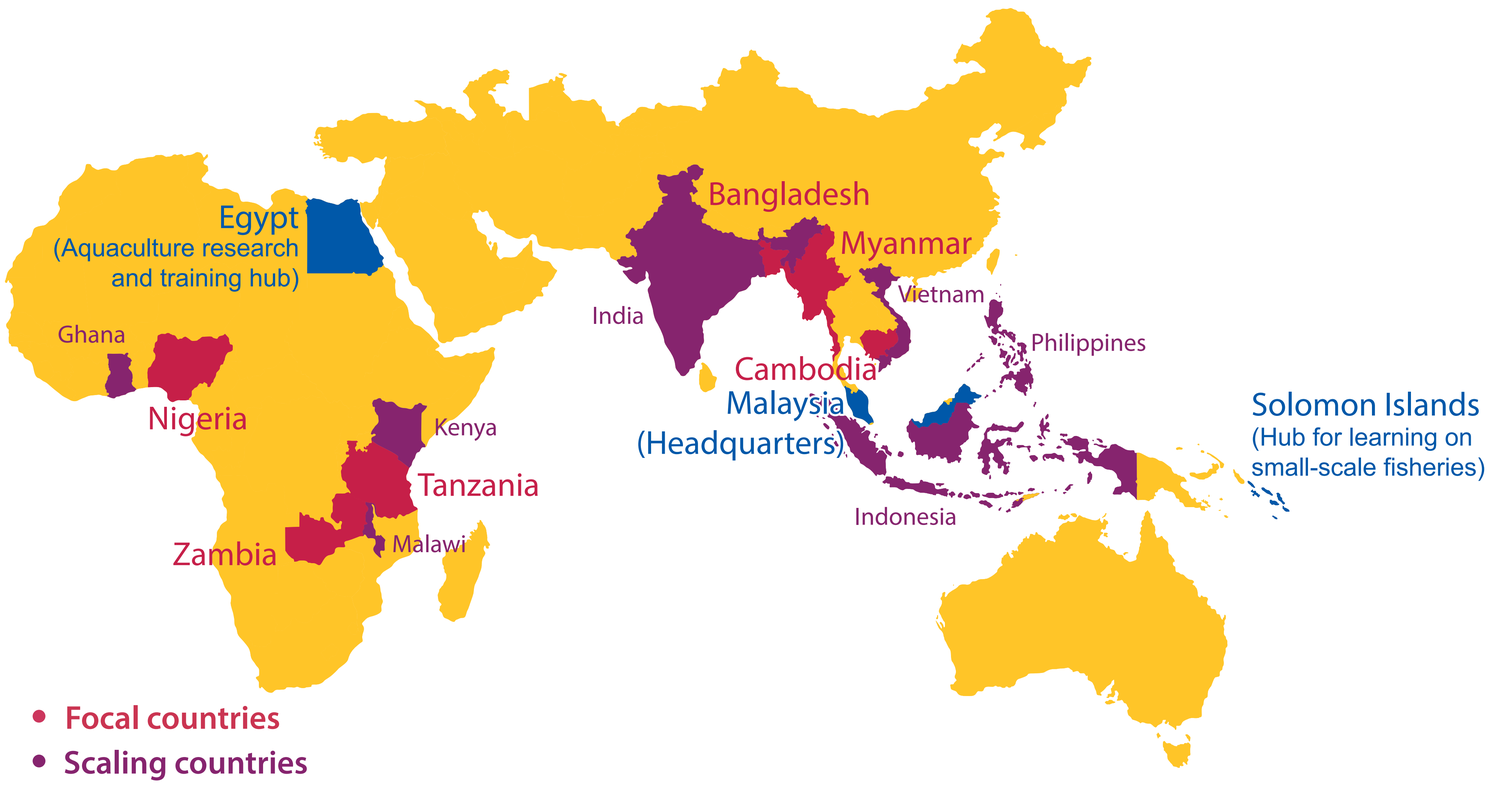
CGIAR Research Program on Fish Agri-Food Systems (FISH)

Proposed research in fish feeds and nutrition

FISH is a collaborative global partnership to sustainably improve the productivity of aquaculture and fisheries and enhance the contribution of fish to global development goals.

WorldFish leads the **six-year (2017–2022)** CGIAR RESEARCH PROGRAM ON Fish

The program comprises **two 'flagships'** focused on the interlinked challenges of sustainable production from aquaculture and small-scale fisheries, with the **cross-cutting themes** of gender, youth and capacity development, in focal and scaling countries.



Sustainable aquaculture flagship

focuses on enhancing the contribution of fish farming to livelihoods, without creating adverse socioeconomic or environmental impacts.

Capitalizing on synergies within the broader CGIAR portfolio and working collaboratively with multiple research and delivery partners, CGIAR RESEARCH PROGRAM ON Fish conducts research in **three clusters**:

1. Fish breeds and genetics

2. Feeds, fish nutrition and health

3. Aquaculture systems

Research on **fish feeds and nutrition** will lead to the use of locally-available novel ingredients to develop sustainable aquafeeds, supporting the growth of aquaculture in Africa and Asia. To achieve this, research focuses on **four main areas**:

1. **Sustainable ingredients**: survey and selection of novel ingredients; lab analyses; digestibility tests; feed formulation; establishment and management of ingredient databases.	2. **Nutrient requirements of fish**: requirements of improved strains; feed intake and utilization in mono- and polyculture; feeding frequency; nutritious pond technology.	3. **Nutrient efficiency and management of the system**: environmental impact of tilapia farming by selecting different feed ingredients.	4. **Feed for health**: feed additives.
By 2022, novel sustainable ingredients will be identified and used in the FISH countries, and supported by tools such as online ingredient databases that allow feed mills to formulate sustainable feeds with local ingredients.	By 2022, novel feeds and feeding strategies will be available and utilized to improve the production of tilapia and carps in focal countries.	By 2022, a model to analyze the nutrient and production efficiencies of tilapia will be validated and tested for other fish species; farmers will have adopted better management practices related to feeds in focal countries.	By 2022, feed additives that reduce disease incidence will be incorporated in commercial feeds in focal countries.

Overall goal

By 2022, **2.5 million farm households** will have adopted disease-detection and control strategies, **cost-effective and sustainable aquafeeds**, and/or improved aquaculture management practices.

Rodrigue Yossa*, Johan Verreth

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CGIAR RESEARCH PROGRAM ON Fish