



Overview

Research and innovations across fish agri-food systems, from processing to retailing and consumption, have the potential to help meet future fish demand. To boost aquaculture productivity and enhance food and nutrition security in Nigeria, the CGIAR Research Program on Fish Agri-Food Systems (FISH) built on WorldFish's long history of work in Africa and extended its activities to Nigeria. The FISH Country Strategy in Nigeria focused on filling knowledge gaps in local fish agri-food systems, including the roles of small-scale producers, current fish consumption patterns and related nutritional aspects.

FISH research is helping build the foundation for sustainable growth of diversified aquaculture in Nigeria that can deliver livelihood and food and nutrition benefits. This is in part due to findings that have catalysed partners and the private sector to invest in and scale up innovative fish production and value chain models. Enabling policies for gender equity and women's empowerment has also been recognized as key aspects to achieve poverty reduction and nutrition security at scale. Implementation of the strategy in Nigeria has involved a mix of CRP and bilateral investments, policy dialogues and influence, capacity building, and private sector agreements to enable innovation and scaling. The ultimate outcomes and impacts of this program are expected to extend beyond FISH with appropriate support from the government, development agencies and the private sector.

Major Projects

African Development Bank via IITA	Technologies for African Agricultural Transformation (TAAT)	2018- 2021
Bill & Melinda Gates Foundation	IDEA project	2018- 2024
USAID via Mississippi State University	Analysis of the Aquaculture Post- Harvest Chain in Nigeria	2019- 2020
International Fund for Agricultural Development	ProSCAWA	2020- 2022
USAID via Mississippi State University	Lean Production System, Improving Biosecurity, Nourishing Nations, Fish Innovation Lab	2020- 2023
USAID via West Africa Investment Trade Hub	Creating a GIFT seed supply chain and piloting GIFT-seed-based aquaculture business/industry in Nigeria	2021- 2024











Partners

- African Development Bank
- African Union Inter-African Bureau for Animal Resources (AU-IBAR)
- Ahmadu Bello University (ABU)
- Bill and Melinda Gates Foundation (BMGF)
- Catfish Farmers Association of Nigeria (CAFAN)
- Economic Community of West African States (ECOWAS)
- Federal Ministry of Agriculture and Rural Development
- Fisheries Extension Personnel of the Nigerian Agricultural Development Projects (ADPs)
- Fisheries Society of Nigeria (FISON)
- Foundation for Partnership Initiatives in the Niger Delta (PIND)
- International Fund for Agricultural Development (IFAD)
- International Institute of Tropical Agriculture (IITA)
- Mississippi State University
- National Agricultural Extension and Research Liaison Services (NAERLS)
- Skretting Africa
- Tilapia Aquaculture Developers Association of Nigeria (TADAN)
- United States Agency for International Development (USAID)
- University of Ibadan
- University of Calabar
- World Bank

Research Focus

- Disseminating genetically improved fish strains, including Genetically Improved Farmed Tilapia (GIFT) and improved catfish strains
- Researching fish feed (low-cost, high quality) and health (diagnostics, management, epidemiology and health economics)
- Influencing policies that improve participation of women and youth in aquaculture and aquaculture-related activities and increase benefits derived
- Improving the efficiency of aquaculture value chains
- Capacity building for proven aquaculture technologies
- Promoting consumption of fish by pregnant and lactating women and by infants
- Reducing postharvest waste and loss in fish value chains
- Integrating and enhancing the role of fish in domestic and regional trade

Achievements

The Nigeria Country Program focused on research activities and partnerships to build knowledge and a robust enabling environment for aquaculture. FISH's comprehensive scoping research helped fill critical knowledge gaps, including challenges and opportunities to improve aquaculture production and increase fish consumption across sub-Saharan Africa, and can inform future investment decisions to facilitate inclusive growth of Nigeria's aquaculture sector.

The Nigerian aquaculture sector supports some socioeconomic inclusion in post-harvest aquaculture activities, which are often performed by women and youth, but has great potential to do more. Further investments in fish value chains are expected to deliver economic benefits to diverse value chain actors and offer new opportunities for many vulnerable social groups. FISH research and partnership development have successfully attracted attention and investment from various partners and donors.

The Technologies for African Agricultural Transformation Aquaculture Compact implemented activities in 15 states (Abia, Anambra, Bayelsa, Delta, Eboyin, FCT Abuja, Imo, Kwara, Kogi, Lagos, Niger, Ogun, Ondo, Osun and Oyo) representing 3 agro-ecological zones in Nigeria. Aquaculture technologies demonstrated and deployed include African catfish and mono-sex tilapia seed production, fish value addition, Better Management Practices (BMPs) and improved rearing systems. The prospects for Nigeria remain highly positive with expected growth in investment to boost the aquaculture sector and contribute to national development goals.



The Way Forward

During the first half of 2021, the implementation of the Nigeria Country Program was largely hampered by the COVID-19 pandemic and related rules restricting field research. However, progress on promoting the use of GIFT in aquaculture was made in the latter half of 2021, including an agreement with the largest local tilapia breeder and outgrower to introduce GIFT from WorldFish Headquarters in Malaysia. Guidelines for risk management during GIFT introductions and transfers were also developed and can be adapted for transfers in other countries.

A key research output, Nigeria Fish Futures, provides a comprehensive analysis of the Nigerian aquaculture sector and outlines evidence-based opportunities for increasing the contribution of fish value chains to people in Nigeria, especially the rural poor and smallholders. This is complemented by the FISH assessment of COVID-19 impacts on fish value chains and supply- and demand-side policy recommendations. Further work will be done to support the implementation of these opportunities and recommendations for increased incomes, diet diversification, and gender equality and social equity.

References

Research Outputs

- WorldFish Nigeria Strategy: 2018-2022
- Affordable local ingredients for fish feeds in low-income contexts: A social and gender risk and opportunity analysis
- COVID-19 impacts and adaptation in aquatic food supply chains in Nigeria One year into the pandemic
- Four pathways to achieve gender equality and women's empowerment in small-scale fisheries and aquaculture: Insights from FISH research
- Nigeria Fish Futures
- Performance analysis of existing catfish and tilapia value chains and market systems in Nigeria: A post-farmgate value chain scoping study

Policies

- WorldFish facilitates the launching of Nigeria's Fish Futures to nourish a nation
- WorldFish legal agreement with private sector opens the path to investments and future growth of Genetically Improved Farmed Tilapia (GIFT) based aquaculture industry in Nigeria

Outcomes

Significant new investment in aquaculture to increase income, diversify diets, and empower women



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