



Photo credit: Ceorghia Smith/WorldFish

Zambia Country Program

Achievement highlights under the implementation of the FISH CRP 2017-2021

Overview

During the CGIAR Research Program on Fish Agri-Food Systems (FISH), the Zambia Country Program focused on testing technologies that improve fisheries and aquaculture productivity and strengthen value chains in efforts to increase the incomes of those dependent on fish and other aquatic foods.

In the Barotse Floodplain of western Zambia, research activities focused on testing improved fish processing technologies and social innovations to reduce post-harvest losses and improve gender relations along fish value chains. In Zambia's Northern Province, the program, with support from local and international partners, has provided technical support to key institutions and stakeholders to improve fingerling production and distribution channels, tested improved fish feeds with rural women, men, and youth in Luwingu and Mbala Districts, and developed fish-based food products for rural and urban poor consumers. Through the Southern African Development Community (SADC), the country program assisted the Government of Zambia and others in the SADC in integrating fish into their national trade strategies and promoting cross-border trade at selected One-Stop-Border-Posts, including the construction of the storage shelter in Luangwa District. Particular advancements in capacity building have also been made, with an updated fisheries and aquaculture curriculum, the development of a tilapia-based e-learning platform, and the construction of the Aquaculture Skills Training Centre at the Natural Resources Development College. The enhancement of the vocational and entrepreneurship program has attracted interest from other training institutions and the private sector in Zambia and neighbouring countries.

Major Projects

European Commission	Improving Food Security and Reducing Poverty through intra-regional Fish Trade in sub-Saharan Africa	2013-2021
IFAD	Strengthening capacity of local actors on nutrition sensitive agri-food value chain in Zambia and Malawi	2016-2019
IFAD	Aquaculture Value Chain Development in DR Congo and Northern Angola	2017-2021
NORAD	AQTVET	2018-2021
GIZ	Piloting inclusive business and entrepreneurial models for smallholder fish farmers	2019-2022
USAID	Fish4Zambia & FishFirst!Zambia	2019-2023
AfDB	Zambia Aquaculture Enterprise Development Project (ZAEDP)	2019-2023



Partners

- African Development Bank (AfDB)
- Blue Planet
- Center for International Forestry Research (CIFOR)
- Civil Society Organization on Scaling Up Nutrition (CSO-SUN)
- Common Market for Eastern and Southern Africa (COMESA)
- Deutsche Gesellschaft für Technische Zusammenarbeit (GIZ)
- Economic Community of West African States (ECOWAS)
- European Commission
- Farm Africa
- Food and Agriculture Organization of the United Nations (FAO)
- Indaba Agricultural Policy Research Institute (IAPRI)
- International Fund for Agricultural Development (IFAD)
- International Institute of Tropical Agriculture (IITA)
- International Water Management Institute (IWMI)
- Ministry of Fisheries and Livestock
 - Department of Fisheries
 - Department of Veterinary Services
 - Kafue Fisheries Training Institute
 - National Aquaculture Research and Development Centre (NARDC)
- Mississippi State University
- Mulungushi University
- Musika Development Initiatives
- National Food and Nutrition Commission
- Natural Resources Development College (NRDC)
- Norwegian Agency for Development Cooperation (NORAD)
- South Africa Department of Agriculture, Forestry and Fisheries (DAFF)
- Southern African Development Community (SADC)
- United States Agency for International Development (USAID)
- University of Zambia
- World Bank
- World Wildlife Fund (WWF)

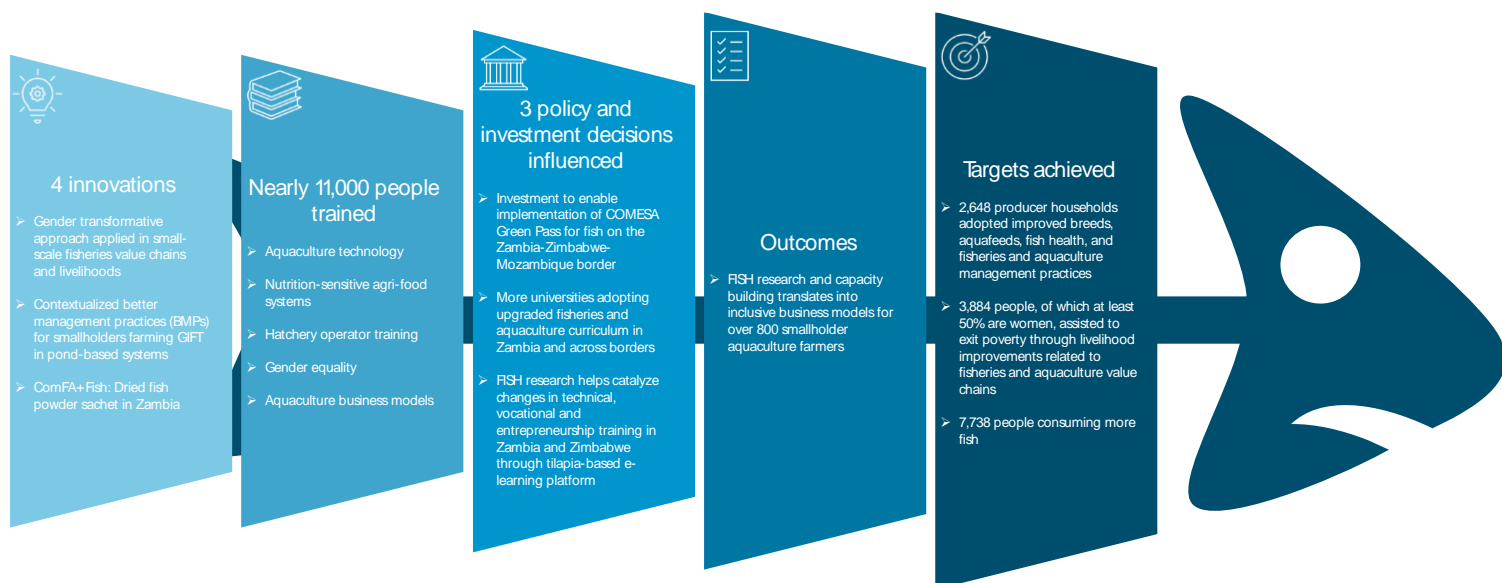
Research Focus

- Increasing production/productivity of improved indigenous tilapia, *Oreochromis macrochir*, *tanganicae* and *andersonii*
- Increasing fish consumption for improved nutrition
- Integrating and enhancing the role of fish in domestic and regional trade
- Reducing post-harvest fish losses
- Building training capacity of tertiary institutions
- Strengthening aquaculture value chains and entrepreneurial capacity of small-scale aquatic farmers

Achievements

Key research outputs in Zambia for sustainable aquaculture include: (i) establishing a national breeding center in Kitwe, (ii) improving production and productivity of Kafue bream (*Oreochromis andersonii*), (iii) developing a national aquatic animal health and biosecurity strategic plan, (iv) developing and testing pro-poor fish feed solutions, (v) establishing aquaculture markets by linking smallholders to input and output markets, (vi) increasing number of human resources in fisheries and aquaculture, and (vii) setting up inclusive business and entrepreneurial models, especially with rural women and youth. Notably, FISH researchers assessed 2,341 farmers in northern Zambia in preparation for linking them to input and output markets, with a first [AQUA-shop opened in Kasama](#), the provincial capital of the Northern Province, and capacity building through [private sector partnerships](#).

In partnership with the Zambian Department of Fisheries, key outputs for small-scale fisheries include: (i) integrating and enhancing the role of fish in domestic and regional trade, (ii) reducing postharvest losses, (iii) increasing fish consumption for improved nutrition, (iv) illuminating hidden harvests and actors to strengthen contributions in national development and policy agendas, (v) documenting social, economic, physical, and legal aspects and entry points of fish trade, (vi) enhancing integrated fisheries, landscape and water management plans in Kafue, Barotse and Bangweulu Floodplains, and (vii) testing models for scaling nutrient-dense, fish-based products. Research on fish trade has produced particularly visible contributions in Zambia, Malawi, Uganda and Kenya as well as in the regional economic communities SADC, [COMESA](#) and ECOWAS, with complementary efforts in capacity building with the African Women Fish Processors and Traders Network (AWFishNet).



The Way Forward

The Zambia Country Program has been able to (i) effectively evaluate the impact of investments made under various projects based on clear output and impact indicators, helping ensure there is value for money in project implementation, (ii) effectively track progress during project implementation, (iii) link and align FISH investment to priorities under national development plans, (iv) galvanize stakeholder support for project initiatives as evidenced in increased partnership agreements, (v) improve communication (awareness and advocacy) of the successes (i.e. impact-based communication) achieved by the country program to various stakeholders including donors and government, (vi) re-align talent in the country program required to achieve impact, and (vii) document lessons learned for scaling. However, some of these efforts were

challenged by (i) limited resources, especially labor and funding, (ii) broader stakeholder expectations, and (iii) the COVID-19 pandemic and its effects on project delivery.

Further work by the Zambia Country Program will focus on building sustainable national innovation systems for aquatic food systems, including synthesis and production of robust and coherent performance data, co-designed integrated packages and investments to apply at scale a suite of multifunctional water and landscape innovations, and national innovation platforms to scale proven innovations and accelerate co-creation of future innovations.



References

Innovations

- Gender transformative approach to Small-Scale Fisheries (SSF) value chains and livelihoods
- Contextualized better management practices (BMPs) for smallholders farming tilapia (GIFT) in pond-based systems in Zambia
- ComFA+Fish: Dried fish powder sachet in Zambia

Policies

- Investment to enable implementation of the COMESA Green Pass for fish on the Zambia-Zimbabwe-Mozambique border
- More universities are adopting the upgraded fisheries and aquaculture curriculum in Zambia and across borders
- Fish research helps catalyze changes in technical vocational and entrepreneurship training in Zambia and Zimbabwe through a tilapia-based e-learning platform

Outcomes

- FISH research and capacity building translate into inclusive business models for over 800 smallholder aquaculture farmers in Zambia
- Improving Food Security and Reducing Poverty through intra-regional Fish Trade in sub-Saharan Africa

Acknowledgments

This work was undertaken as part of the CGIAR Research Program on Fish Agri-Food Systems (FISH) led by WorldFish. The program is supported by contributors to the CGIAR Trust Fund.

Citation

This publication should be cited as: WorldFish. 2022. Zambia Country Program: Achievement highlights under the implementation of the FISH CRP 2017-2021. Penang, Malaysia: CGIAR Research Program on Fish Agri-Food Systems.

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