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India Country Program

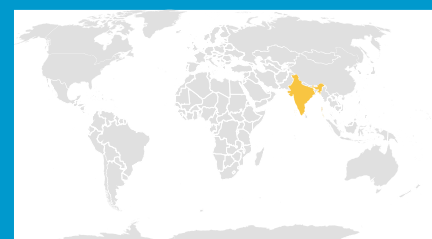
Achievement highlights under the implementation of the FISH CRP 2017-2021

Overview

India is a country that provides ample opportunities for scaling FISH technologies, tools, and practices to benefit small-scale fishers and farmers. The growing program in India has assisted the government and private sector in scaling various fisheries and aquaculture technologies.

Major Projects

Marine Products Export Development Authority, Government of India	Satellite Breeding Program for Genetically Improved Farmed Tilapia (GIFT)	2011-2023
Government of Odisha	Implementation of Odisha Fisheries Policy	2016-2022
BISA-CIMMYT, New Delhi	Field operations in India	2017
USAID India Partnership Program	Scaling innovative, nutrition-sensitive fisheries technologies to improve food and nutrition security in Odisha	2017-2020
World Bank via Assam Rural Infrastructure and Agricultural Services Society (ARIAS)	Assam Agribusiness & Rural Transformation (APART)	2018-2023
ICAR Fisheries Institutes (CIFA, CIFRI, CIFT)	Window 3 research collaboration	2019-2023
CCAFS - ICRISAT	Capacitating Farmers and Fishers to manage climate risks in South Asia (CaFFSA)	2017-2021
ICAR W3	ICAR Collaborative Work Program	2018-2024
GIZ	Taking nutrition-sensitive carp-SIS polyculture technology to scale	2021-2024



Partners

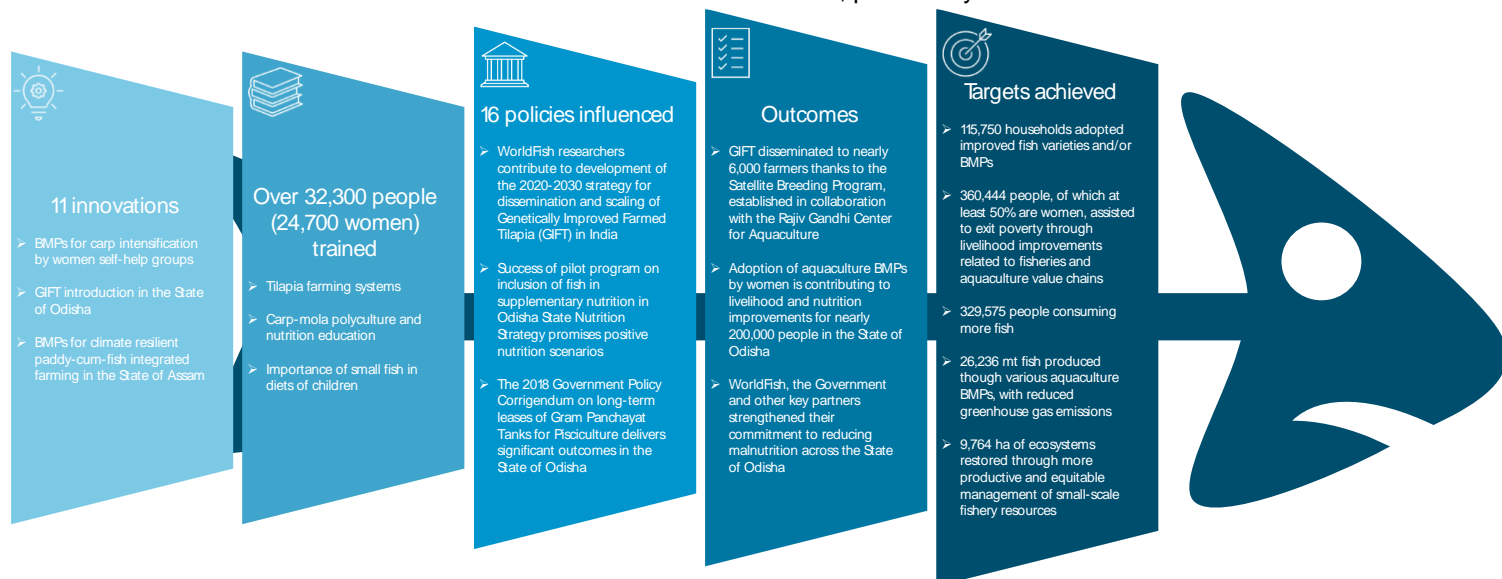
- Agriculture University (AAU), College of Fisheries
- Assam Rural Infrastructure and Agricultural Services Society (ARIASS)
- Borlaug Institute for South Asia (BISA)
- Falcon Marine Exports Ltd
- Government of Assam, Dept of Fisheries
- Government of India, Marine Products Export Development Authority (MPEDA)
- Government of Odisha, Dept of Panchayati Raj and Drinking Water (PR&DW)
- Government of Odisha, Dept of Women and Child Development
- Government of Odisha, Dept of Fisheries and Animal Resources Development (F&ARD)
- Government of Odisha, Mission Shakti
- Indian Council of Agricultural Research (ICAR) Fisheries Institutes
 - Central Institute for Freshwater Aquaculture (ICAR-CIFA)
 - Central Inland Fisheries Research Institute (ICAR-CIFRI)
 - Central Institute of Fisheries Technology (ICAR-CIFT)
- International Rice Research Institute (IRRI)
- Kalinga Institute of Social Sciences (KISS)
- Odisha Livelihood Mission (OLM)
- United States Agency for International Development (USAID)

Research Focus

- Introduction and dissemination of productive and resilient Genetically Improved Farmed Tilapia (GIFT).
- Transformation of fish agri-food systems towards improved nutritional outcomes for women and children.
- Empowerment of women through carp polyculture and women self-help groups in village (Gram Panchayat) ponds, a convergence program among the Government of Odisha, Departments of Fisheries, Mission Shakti and Panchayati Raj.
- Reservoir and beel fisheries productivity enhancement.
- Inclusion of nutritious fish in School Mid-day Meals and Integrated Child Development Schemes (first 1000 days of human life).
- Improving efficiencies and opportunities for women in fish value chains.
- Promotion of Better Management Practices (BMPs) for sustainable inland fish production, including:
 - quality seed production and early breeding programs,
 - multiplication centres for genetically improved strains,
 - improving the productivity of beels,
 - improving fish value chains,
 - nutrition-sensitive fish culture by promoting carp-mola-small indigenous species polyculture,
 - promoting climate-resilient fish production technologies,
 - gender transformative approaches for sustainable aquaculture and fisheries, and
 - capacity building programs.

Achievements

A series of innovations have been introduced in India under FISH, the scaling of which have been supported by extensive capacity development activities with significant engagement of women. Innovative and tailored solutions and technologies guided by FISH research activities and implemented through development projects have been fundamental in guiding policy work. Strategic partnerships have also played a key role in scaling innovation and advancing policies, contributing to tremendous outcomes in the State of Odisha for livelihoods and nutrition, particularly for women.



Progress made during FISH has built a strong foundation, with growing interest in fisheries and aquaculture supported by a series of prospective investments and shifting policies, especially in the State of Odisha. Aquaculture is expected to play an increasing role in reaching national livelihood and nutrition targets.

The Way Forward

Further work by the India Country Program will focus on building sustainable national innovation systems for aquatic food systems, including synthesis and production of robust and coherent performance data, establishing novel and co-producing partnerships that bridge sectors and levels of governance, and accelerating the development of better-performing strains of widely farmed fish and their uptake.

References

Innovations

- [Better Management Practices for Carp Intensification adopted by Women Self-Help Groups in India](#)
- [Better Management Practices for Carp Polyculture in Assam](#)

- Genetically Improved Farmed Tilapia (GIFT) introduction in Odisha State (India)
- Better management practices (BMPs) for Indian major carp hatcheries in India
- Standard Operating Procedure (SOP) for the inclusion of dried small fish in the Supplementary Nutrition Program (SNP) in Odisha, India
- Standardized processing methods for boneless rohu (*Labeo rohita*) products in Odisha, India
- Project Monitoring Unit (PMU) with GIS based Management Information System (MIS), Web and Mobile application adopted by the Government of Odisha
- Better Management Practices (BMPs) for climate resilient paddy-cum-fish integrated farming in Assam, India
- Better Management Practices (BMP) for Beel (wetland) fisheries in Assam, India
- Generation 8 of genetically improved farmed tilapia (GIFT) has been produced in India
- Standard operating procedure (SOP) for tagging Indian major carps with Passive Integrated Transponder (PIT) tags in India

Policies

- The Government Policy Corrigendum on Grant of Long-term lease of Gram Panchayat Tanks for Pisciculture is a new policy promulgated in Odisha (India) in 2018
- Investment approved for the genetically improved farmed tilapia (GIFT) Multiplication Center and Hatchery establishment at Government Fish Farm in Odisha (India)
- Inclusion of nutritious Small Indigenous Fish in regular school meal program for 30,000 students in Odisha State (India)
- WorldFish technical inputs to the Government on supplementary nutrition contribute to the inclusion of fish in the newly launched State Nutrition Strategy in Odisha, India
- FISH research activities in India provide robust foundations for the Government of Odisha in securing funding USD 25.41 million towards unleashing the Blue Revolution
- FISH research helps the Government of Odisha (India) in securing funding for transforming the livelihoods of Tribal communities dwelling in mineral-bearing districts through fisheries
- The successful nutrition results in Odisha, India, attract additional funding from the Ministry of Micro, Small & Medium Enterprises (MSME) to promote hygienic fish products
- USD 7.92 Million grant by the World Bank allocated to promote the aquaculture development in the State of Odisha, India, based on FISH research and technical inputs
- WorldFish assisted the Government of Odisha (India) in preparing the policy guidelines for taking up of Fish Cage Cultures in Reservoirs by private sector actors
- Odisha Government Orders on emergency responses during and after India's COVID-19 lockdown, based on the co-designed recommendations by WorldFish
- Technical collaboration of WorldFish with the Government of Odisha (India) unveiling of a "Master Plan for Fish Seed Production in Odisha"
- FISH reports on COVID-19 impacts and recommendations contribute to the World Bank India's post-COVID fisheries sector recovery program under Ministry of Fisheries, India
- FISH supports the digitalization in the Government of Odisha (India) to facilitate real-time information for decision-making in the implementation of several schemes

Outcomes

- Small fish as nutrition add-on in school feeding program in Odisha, India
- Successful establishment of the GIFT Satellite Breeding Program in India with more than 4,000 grow-out farmers
- The adoption of aquaculture Best Management Practices to benefit the livelihoods and nutrition of more than 2,000 Women Self-Help Groups in Odisha, India
- WorldFish, the Government and other key partners come together to strengthen their commitment to reducing malnutrition across the State of Odisha, India
- Delivering climate information services for climate-smart fish pond and disease management to more than 1 million fish farmers in the State of Odisha, India
- The adoption of Aquaculture Best Management Practices by fisherwomen is contributing to livelihoods and nutrition improvements for nearly 200,000 people in Odisha, India
- The Genetically Improved Farmed Tilapia (GIFT) has been disseminated to nearly 6,000 farmers in India thanks to the Satellite Breeding Program, established in collaboration with the Rajiv Gandhi Center for Aquaculture (RGCA)

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