



Joyful Nessa, one of the successful fish rearers through sustainable aquaculture in Assam.
Farmer Institution: Lajuki SHG, Manikpur block, Chirang, Assam, India

Empowering Fish Farmers Through Sustainable Aquaculture Sustainable Aquaculture for Food and Livelihood (SAFAL)

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Sustainable Aquaculture for Food and Livelihood (SAFAL)

The Indo-German Development Cooperation Project 'Sustainable Aquaculture for Food and Livelihood (SAFAL)*' is part of the GIZ Global Programme on Sustainable Fisheries and Aquaculture (GP Fish). SAFAL aspires to provide more fish products and higher income from sustainable and resource-efficient pond-based aquaculture for the food-insecure population in Assam and Odisha. Under the umbrella of the Special Initiative "Transformation of Agricultural and Food Systems" by the German Federal Ministry for Economic Cooperation and Development (BMZ), SAFAL operates in the sector of rural development and food security.

The project promotes the availability and access to fish as a nutrient-rich food, contributing to Sustainable Development Goal (SDG) 2 (Zero Hunger) as well as to SDG 1 (No Poverty) through productivity enhancement activities, improved business skills and promotion of income generating activities for small-scale fish producers, Farmer Producer Organisations (FPOs), multipliers and policymakers.



The project is intended to complement various government schemes, especially the Pradhan Mantri Matsya Sampada Yojana (PMMSY). The key outputs are increased production of fish from sustainable aquaculture and the associated increase in income and demand for labour. The political and institutional framework conditions for the implementation of sustainable and resource-saving aquaculture shall be improved.

OBJECTIVE: Improving food security by enhancing fish production and income levels from sustainable and resource-saving aquaculture in ponds.

More Fish



Kilogram fish production has increased

More Income/Jobs



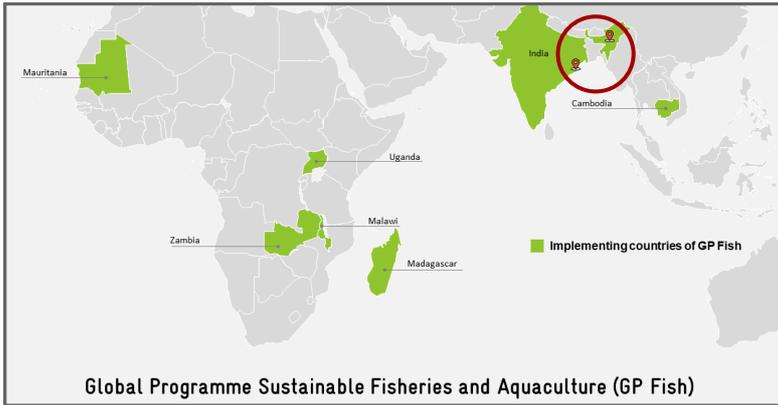
Average income has increased in selected value chains

FAO Measures

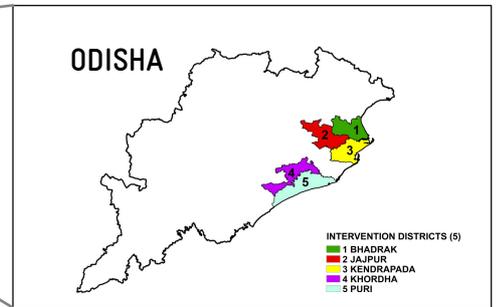
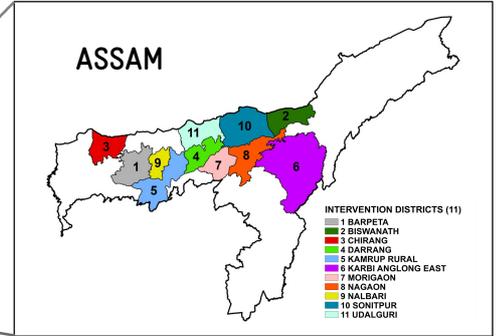
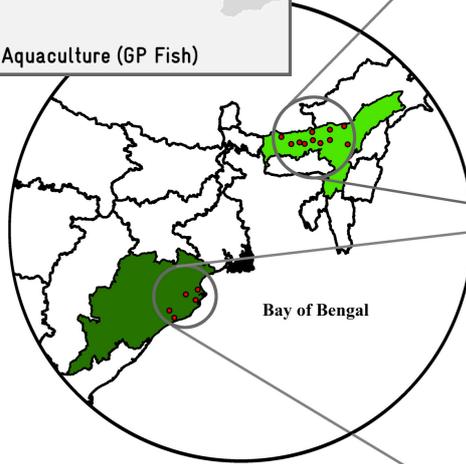


Sustainable and resource-efficient aquaculture policy inputs are integrated in policies and programmes of government

Where we work



INDIA



Disclaimer: The geographical map used is for informational purposes only and does not constitute recognition of international boundaries or regions; GIZ makes no claims concerning the validity, accuracy or completeness of the maps nor assumes any liability resulting from the use of the information therein.

Partner Organisations

Government Partners



Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD), Government of India (National Lead)
State Departments of Fisheries, Assam and Odisha

Project Partners (Assam)



Project Partners (Odisha)



Project Highlights

Duration: May 2021 to October 2024

GOVERNMENT SCHEMES: PMMSY AND STATE SCHEMES

- Pradhan Mantri Matsya Sampada Yojana (PMMSY) and State Livelihood Mission.
- Improve the reach out and access to schemes via Community Information Centers and Satellite Centers for FPO members.
- Facilitate forward and backward linkages.
- Strengthen Farmer Institutions for the development of sustainable business models.



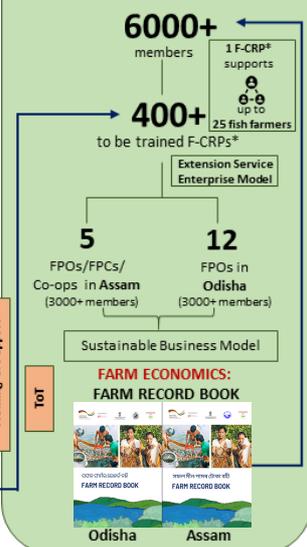
Capacity Building of DoF officials and block staffs, Assam and Odisha

POLICY DIALOGUE AND ADVISORY: MULTI STAKEHOLDER PLATFORM (MSP)



- Planned in Assam and Odisha.
- Could be an advisory role in the State Department.
- Identify scope for improvement
- Support policy-level decisions at the state level.
- Advisory support in drafting of State Fishery and Aquaculture Policy in Assam.

REPLICABLE & SCALABLE MODEL BUILDING



* F-CRPs: Fishery Community Resource Persons

AQUA ENTREPRENEURSHIP INITIATIVE

1000

Aqua-Entrepreneurs identification initiated



17

FPOs

11

Assam districts

5

Odisha districts

QUALITY ASSURANCE AND NATURAL FARMING: PGS CERTIFICATION

Participatory Guarantee System (PGS) for freshwater sustainable aquaculture; implemented with 500 women farmers in Morigaon district, Assam to promote natural farming of IMC.



Convergence with PGS India to incorporate freshwater aquaculture into their operational manual.

KNOWLEDGE PRODUCTS (CO-CREATED)



- Trainers Manual
- Farmers Handbook
- IEC Materials
 - Posters
 - Flipbooks
 - Pamphlets



Comprehensive Training & Support

ToT

Synergy Initiatives



Biodiversity

Project 'NERAQ'¹, GIZ India



Nutrition

WorldFish



Farming as Business

Department of Fisheries, Assam, Assam State Rural Livelihood Mission (ASRLM)



Energy

Project 'PSWP'², GIZ India



Self-Employment

Project 'ERADA'³, GIZ India, Department of Fisheries, Bihar, JEEViKA, MGNREGS.

2022

2023

- Assam State Fishery and Aquaculture policy inputs for management of natural water bodies.
- Arrangement of joint symposium and seminar.
- Exposure visit for NERAQ beneficiaries to the SAFAL intervention site.
- Use of SAFAL knowledge products and support in training activities and capacity building.
- Exploration of alternative income generation through seed bank/stunted/advance fingerling reserve.

- Tripartite MoU, 2023 on establishment of Aquaculture Business School for development of training pool for empowering farmers on business decision making and risk handling.

- Assam State Fishery and Aquaculture policy support.
- Training of aquaculture entrepreneurs on Decentralised renewable energy (DRE) technologies.
- Multi-Stakeholder Platform (MSP) development support.

- Use of SAFAL IEC material on Carp and Small Indigenous Species (SIS) polyculture economics.
- Training support, IEC material provision, aqua entrepreneurship development.
- Aqua entrepreneurs visit to SIS breeding hatchery.
- Identification of nutritional health benefits.
- "Taking nutrition-sensitive carp-SIS polyculture technology to scale".

- Contextualisation of Knowledge products and translation of IEC material to Hindi language for easy adoption.
- CRP model to be tested in Araria district, Bihar and training of CRPs as per Assam model.

¹ Project 'Protection and Sustainable Management of Aquatic Resources in the North-Eastern Himalayan Region of India (NERAQ)', GIZ India

² Project 'Promotion of Solar Water Pumps (PSWP)', GIZ India

³ Project 'Enhancing Rural Resilience Through Appropriate Development Actions (ERADA)', GIZ India

Project SAFAL Approach



Knowledge adoption and sustainable tools

Through dynamic resource kiosk on Sustainable Aquaculture (Cluster Information Centre CIC/Satellite Centre SC), the project co-created knowledge products (Farmers Handbook, Trainers Manual, Didactics), IEC materials, digital tools, 2D animated videos, board games and Farm Record book.



Financial sustainability and FPO business model

Supported capacity building of Board of Directors (BODs) of farmer institutions, initiatives for development of sustainable business models of FPO/SHG/PG/Co-operatives, and enhancing service delivery and extension services through Community Resource Persons (CRPs).



Aquaculture entrepreneurship

Creation of platform for training and handholding, linking for convergence with government and financial institutions to enhance production and creation of new jobs in the fish value chain thereby contributing to total protein production.



Community Resource Person (Self-financed extension service workers)

Development of Aquaculture Service Providers (ASPs) or CRPs along with trainers for sustainable aquaculture, who are also stakeholders of farmer institution and owners of seed bank as an empowered driving force.



State-level Multi-Stakeholder Platform (MSP)

Network initiative undertaken for stakeholders mapping, formation of Secretariat to explore challenges and finding tested solution in aquaculture sector. The platform can also function as an advisory role in the State Department to support state policy-level decisions.



Participatory Guarantee System (PGS) Model

An innovative drive to incorporate freshwater aquaculture in PGS India guidelines through PGS (natural farming) model development among 500 women fish farmers in Assam.



Development of decision making tools

Block wise pond mapping, land use pattern, pond area estimation, and estimated conversion of agricultural land to pond will help fish farmers to make informed decision to improve their current aquaculture practices.



Business decision making

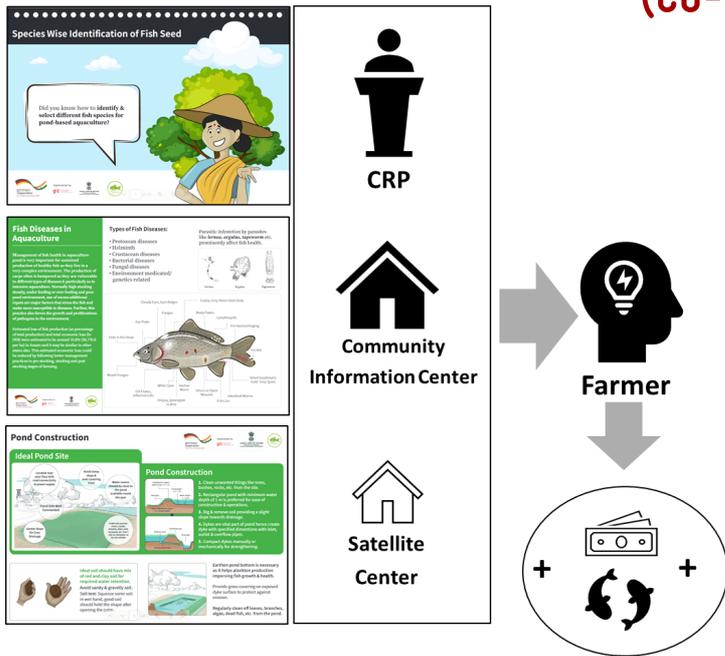
Empowering individuals and communities in business decision making through Aquaculture Business School (ABS) in collaboration with Department of Fisheries (DoF), Assam and Assam State Rural Livelihood Mission (ASRLM) for improved income and livelihood through tri-partite MoU.



Cost optimisation

Awareness and training on the use of natural feed and EM (effective micro-organism for maintaining availability of planktons) for enhanced production of fish without increasing input cost.

Knowledge products and IEC materials (co-created)



In a meticulous process, 37 manuals were studied for aquacultural practices and themes. Aquaculture topics were analysed, and didactical effectiveness was evaluated. Collaborative efforts led to the selection of topics, subtopics, and artistic elements for farmers handbook and trainer manuals.

In addition, an informative diadactical sheet and IEC materials were developed.

These knowledge products would go a long way in helping the pond-based fish farmers in their effort to practice sustainable aquaculture in an environment-friendly and profitable manner.

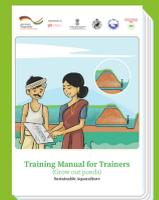


400+

CRPs from Assam and Odisha are trained on sustainable aquaculture practices

Total pond area practicing sustainable aquaculture in India

1,000 hectares



Co-created knowledge products to be distributed among

5 Farmer Institutions and 43 Producer Groups in Assam

12 Farmer Institutions in Odisha

From humble beginnings to thriving aquaculture

Mukunda Chetry is the sole provider for his family and engaged in various agricultural activities including fish farming in his 0.5 bigha (669 square meter) area pond. In 2021, he joined the fishery training programme under the Indo-German development cooperation project 'Sustainable Aquaculture for Food and Livelihood' (SAFAL) implemented by GIZ India in cooperation with the local NGO, Kalong-Kapili through his Farmer Producer Organisation (FPO).

Mukunda used to release various types and quantities of fish seeds indiscriminately into the same pond along with leftover rice, chemical fertilisers and supplementary feeds. Despite feeding the fish 3-4 times daily, the growth was limited to 600-700 grams per year, with a total production of 50-60 kilograms. After completing the 18 days training, he immediately applied his newfound knowledge such as preparing natural feed and feeding twice daily using rice bran, mustard oil cake and occasionally banana leaf while cow dung is used for pond fertilisation.

He also constructed an additional pond area of 0.5 bigha (669 square meter) in April 2023, bringing his total fish farming area to 1 bigha (1338 square meter). Mukunda happily shares that his current fish production surpasses that of the previous year. He released 15 kilograms of fingerlings, which grew to 2-3 kilograms each and sold a total of 200-220 kilograms of fish to a local vendor, earning more than 50,000 rupees from a single stock.

He says, "Fish Farming is less time-consuming compared to other crops, and it allows for higher profits at a lower cost."

Today, he oversees 15 cluster members and plans to expand his fish culture ponds.





Madhab Sahu, making fish feeds out of locally available raw materials.
Farmer Institution: Bhargabi Farmer Producer Company, Khorda, Odisha, India

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For more information on the project, visit www.giz.de/en/worldwide/122386.html

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