NATIONAL FISHERIES DEVELOPMENT BOARD

SSS INDIA @ 2025
SUPER SUCCESS STORIES FROM INDIAN FISHERIES

NATIONAL FISHERIES DEVELOPMENT BOARD

Department of Fisheries
Government of India

SSS India @ 2025

Super Success Stories from Indian Fisheries

Published by
National Fisheries Development Board, Hyderabad, India - 500052

https://nfdb.gov.in

Released on March 8, 2025

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सचिव

भारत सरकार
मत्स्यपालन, पशुपालन एवं डेयरी मंत्रालय
मत्स्यपालन विभाग
कृषि भवन, नई दिल्ली–110001
Government of India
Ministry of Fisheries,
Animal Husbandry & Dairying
Department of Fisheries
Krishi Bhawan, New Delhi-110001

Foreword

The Indian fisheries sector requires innovative technologies to ensure its viability and sustainability. Such advancements will significantly boost fish production and fishers' income, consequently improving their livelihoods. The Government of India has introduced several initiatives to achieve this goal, such as the Pradhan Mantri Matsya Sampada Yojana (PMMSY) in 2020-21 aiming to foster inclusive and sustainable transformation, growth, and competitiveness in the sector and its sub-scheme Pradhan Mantri Matsya Kisan Sah Samridhi Yojana (PM-MKSSY) in 2024-25 and the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) in 2018-19.

The tireless working of policy makers, research institutions, cooperatives, entrepreneurs, fishers, fish farmers and other stakeholders in the sector has led to enhancing the fish production and productivity and the sustainability of the fisheries sector. It is crucial to translate research developments into actionable projects and widespread successful practices that benefit the community. This will lead to the development and adoption of innovative techniques to increase profits, reduce input costs, boost production and productivity, and ultimately improve livelihoods.

I am pleased to learn that the National Fisheries Development Board (NFDB) has taken the initiative to conceptualize the booklet: "SSS India @ 2025 | Super Success Stories from Indian Fisheries". This booklet narrates successful techniques and practices in fisheries and aquaculture across the country, providing valuable insights for fishers and fish farmers. I wholeheartedly appreciate the efforts of the NFDB in bringing out this booklet, which I believe will be highly beneficial in spreading best practices and success stories among the fishing communities and other stakeholders in India.

(Dr. Abhilaksh Likhi)

CONTENT

PREFACE

The National Fisheries Development Board (NFDB) has played a pivotal role in boosting fish production and productivity in India by effectively coordinating fishery development activities nationwide in an integrated and holistic manner. NFDB has promoted, coordinated, and funded various modern and feasible techniques among the fisher population, including seaweed cultivation, Recirculatory Aquaculture Systems (RAS), Biofloc, cage culture, and pen culture. Under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), NFDB has provided essential support and guidance to States and Union Territories (UTs) in preparing and submitting proposals.

As the nodal implementing agency for many Central Government Schemes, NFDB has been at the forefront of raising awareness by engaging with State governments, individual entrepreneurs, and networks of professionals. NFDB has promoted the dissemination of new and improved technologies and increased awareness of financial and infrastructure assistance schemes among fishers, fish farmers, and entrepreneurs. To further amplify these initiatives to a larger audience, the idea of creating a platform to showcase successful fisheries and aquaculture practices and techniques from across India was conceived.

NFDB published the first book in this series in August 2022. In 2025, we are excited to release the third book in this series, titled "SSS India @ 2025 | Super Success Stories from Indian Fisheries." This book showcases the successful experiences of practicing various techniques, including biofloc aquaculture, RAS, culture-based fisheries, seaweed culture, green mussel culture, ornamental fish culture, and the processing of value-added fish products, as well as institutional interventions. This book highlights how innovative practices in the field of fisheries have enabled fishers and farmers to achieve higher yields.

NFDB gratefully acknowledges the support and information provided by the Fisheries Departments of the States and UTs, ICAR institutions, and individual beneficiaries in making this book possible. We appreciate the efforts of NFDB officials and the ‘Programme Management Consultancy of Ernst & Young LLP for the implementation of PMMSY’ in the compilation, documentation, and editing of this book. We hope this book will be an invaluable resource for anyone looking to adopt or upscale any of the successful practices mentioned.

B. K. Behera
Chief Executive, NFDB

ABBREVIATIONS

AFDC	: Assam Fisheries Development Corporation Ltd
ATMA	: Agricultural Technology Management Agency
BR	: Blue Revolution
BSF	: Black Soldier Fly
CAA	: Coastal Aquaculture Authority
CoF	: College of Fisheries
DoF	: Department/ Directorate of Fisheries
DST	: Department of Science & Technology
DST-SEED	: DST- Science for Equity Empowerment and Development
EHP	: Enterocytozoon hepatopenaei
FCR	: Food Conversion Ratio
FCS	: Fishermen Cooperative Society
FFPO	: Fish Farmers Producer Organisation
FISHFED	: Assam Apex Cooperative Fish Marketing and Processing Federation Ltd
FPC	: Farmer Producer Company
GFFPO	: Gujarat Fish Farmers Producers Cooperative Society
GI	: Galvanised Iron
GI	: Genetically Improved
GIFS	: Genetically Improved Fish Species
GSM	: Grams per Square Metre
GoI	: Government of India
GPS	: Global Positioning System
HDPE	: High Density Polyethylene
ICAR	: Indian Council of Agricultural Research
ICAR-CIARI	: ICAR-Central Island Agricultural Research Institute
ICAR-CIBA	: ICAR- Central Institute of Brackishwater Aquaculture

ICAR-CIFA : ICAR-Central Institute of Freshwater Aquaculture

ICAR-CIFE : ICAR-Central Institute of Fisheries Education

ICAR-CIFRI : ICAR-Central Inland Fisheries Research Institute

ICAR-CIFT : ICAR-Central Institute of Fisheries Technology

ICAR-CMFRI : ICAR-Central Marine Fisheries Research Institute

ICAR-DCFR : ICAR-Directorate of Coldwater Fisheries Research

IFDS : Integrated Fisheries Development Scheme

IMC : Indian Major Carps

IoT : Internet of Things

ISO : International Organisation for Standardisation

ITMU : Institute Technology Management Unit

KCC : Kisan Credit Card

KVK : Krishi Vigyan Kendra

MoFAHD : Ministry of Fisheries, Animal Husbandry and Dairying

MPEDA : Marine Product Development Authority

NAARM : National Academy of Agricultural Research Management

NABARD : National Bank for Agriculture and Rural Development

NCDC : National Co-operative Development Corporation

NFDB : National Fisheries Development Board

NFDB-NFFBB : NFDB-National Freshwater Fish Brood Bank

NGO : Non-Governmental Organization

NGRC : Navsari Gujarat Research Center

NICRA : National Innovations in Climate Resilient Agriculture

NIFPHATT : National Institute of Fisheries Post Harvest Technology and Training

NPSSFW : National Platform for Small Scale Fish Worker

PMMSY : Pradhan Mantri Matsya Sampada Yojana

RAS : Recirculatory Aquaculture System

RKVY : Rashtriya Krishi Vikas Yojana

RGCA : Rajiv Gandhi Centre for Aquaculture

SAF : Society for Assistance to Fisherwomen

SDG : Sustainable Development Goals

SHG	: Self Help Group
SPF	: Specific Pathogen Free
TNJFU	: Tamil Nadu Dr J. Jayalalithaa Fisheries University
ToT	: Training of Trainers
UNDP	: United Nations Development Programme
UT	: Union Territory
WSSV	: White spot syndrome virus

INCREASED PRODUCTION BY ADOPTING BETTER MANAGEMENT PRACTICES

A tale of success from Andaman and Nicobar Islands

Mr C. Arjun, an engineering graduate from Port Blair, transformed his aquarium-keeping hobby into a business. In 2021, he opened a retail shop named "SSM Aquarium," offering 50 varieties of ornamental fish. He initially procured these fish from the mainland, particularly from Chennai. During the early phase of his business, he faced a 70-80% fish mortality rate. At this point, a team of scientists from ICAR-CIARI, including Mr. J. Praveenraj, Dr. K. Saravanan, and Dr. R. Kiruba Sankar, stepped in and provided him with technical know-how on quarantine practices, aquarium water preparation, and prophylactic measures.

C. ARJUN

The ICAR-CIARI in Port Blair, with funding support from NABARD, has established a hatchery. This hatchery is the back bone of SSM Aquarium in getting good quality broodstocks for ornamental fish breeding.

Mr Arjun attended a training session conducted by ICAR-CIARI, where he learned about best management practices, pre- and post-quarantine techniques, disease diagnosis, and prophylactic measures. Now, he treats the fresh ornamental fish stock with potassium permanganate and sodium chloride to mitigate stress. The pre-treated fish are quarantined before being transferred into tanks. After adopting these improved management practices, the fish mortality rate decreased to 5-10%, and his profits increased substantially. Additionally, he has started breeding ornamental fish, particularly egg bearer like *Betta* sp. and livebearers. Mr. Arjun plans to establish a live feed production unit, which he believes will not only provide high-quality feed for his aquarium fish but also generate additional income for him.

IMPACT AND RECOGNITION

Through his ornamental fish business, Mr. Arjun not only created a self-employment opportunity for himself but also provided jobs for two others. He was honored with special recognition from ICAR-CIARI for his successful adoption of Best Aquaculture Practices on their 45th Foundation Day in 2022.

PROFILE

Education: B. Tech.

District: South Andaman

UT: Andaman & Nicobar Islands

Fisheries Activity: Ornamental fish retail unit

Name of Establishment: SSM Aquarium, Port Blair

Year of Establishment: 2021

Technical Intervention: ICAR-CIARI

Production (FY 2023-24): 10,000 fishes

Turn-over (FY 2023-24): Rs 15 lakh

+91 9933247239

EFFICIENT LONG LINING WITH THE HELP OF HANDHELD GPS

A tale of success from Andaman and Nicobar Islands

Mr Junaid Ahmed, a resident of Teetop fishing village of Car Nicobar. He practices long lining in the inshore waters of Car Nicobar. Often, he explores deep-sea fishing grounds. On several such occasions, he was reported to have lost his way back to the village due to his limited knowledge of navigational aids. This issue was identified and addressed by ICAR-CIARI in November 2022 during their field surveys conducted under the DST-SEED funded project, as a part of establishing a coastal fisheries information hub on Car Nicobar Island.

JUNAID AHMED

In January 2023, Mr Junaid participated in a one-day exposure training organized by ICAR-CIARI, where he learned to use GPS for navigation and waypoint marking. He also conducted several field trials to better understand how to use GPS for navigating and returning to marked locations. Subsequently, ICAR-CIARI provided him with a new handheld GPS, which significantly supported his fishing activities and allowed him to explore distant fishing grounds.

IMPACT

Before the intervention, Mr Junaid primarily set long lines in the inshore waters near his fishing village. Following the intervention, he began using GPS to explore distant offshore fishing grounds, resulting in a more diverse fish catch. He now catches high-valued fish such as Seer fish and Marlin. This has led to an increase in his weekly income by 20-30%.

The handheld GPS helps him to navigate safely to reach the fishing grounds and back, and to significantly reduces the fuel cost and time spent on fishing activities.

PROFILE

Education: 12th Standard

District: Car Nicobar

UT: Andaman and Nicobar Islands

Fisheries Activity: Long lining using GPS

Technical Intervention: ICAR-CIARI

Year: 2023

Project: Augmenting livelihood, resilience, and knowledge generation through the coastal fisheries information hub for Nicobar tribes of Car Nicobar by ICAR-CIARI

Project Period: 2021-2025

Funding: DST-SEED

+91 9434270877

CONSERVATION OF SEA TURTLES BY RESIDENTS & RESEARCHERS

A tale of success from Andaman and Nicobar Islands

Aziz Ahmed

ICAR-CIARI, in collaboration with the local fishermen community, has been actively working to protect the sea turtle nesting site on Car Nicobar Island. To bridge the lack of information on sea turtle nesting data in the area, ICAR-CIARI organized Awareness Camps in May 2022, November 2022, and January 2023. These camps aimed to educate the Nicobarese people about the significance of sea turtle nesting for the coastal ecosystem and the importance of reporting turtle sightings to ICAR-CIARI for conservation efforts.

ICAR-CIARI

Inspired by this, Mr Aziz Ahmed, a tribal fisherman from Teetop fishing village, alerted ICAR-CIARI about a sea turtle nest sighting on the beach near Teetop Fish Landing Centre in the early hours of April 11, 2023. He witnessed a few baby sea turtles emerging from the sandy nest and protected

them from surrounding dogs and pigs. The ICAR-CIARI team identified the turtle species as Olive Ridley turtles (*Lepidochelys olivacea*) based on Mr. Ahmed's photos and videos. ICAR-CIARI prepared a report on the sighting, including the GPS location, and submitted it to the Department of Environment, Forests and Climate Change, Andaman and Nicobar Administration. This report will be valuable for marine spatial planning and coastal zone land use planning.

IMPACT

The collaboration between local communities and researchers has been instrumental in reducing threats to sea turtles, potentially saving these species from extinction. This conservation initiative has been successful, with over 150 fishers from Car Nicobar volunteering and committing to future conservation projects. On another occasion, Mr Aziz Ahmed rescued a juvenile hawksbill turtle (Eretmochelys imbricata) trapped in a ghost net in the waters of Car Nicobar. He is determined to engage his community and inspire others to participate in sea turtle conservation efforts on Car Nicobar Island.

> Based Mr Ahmed's early observations, it is considered that more than 50 sea turtle hatchlings have migrated to the sea. On the same day, ICAR-CIARI team along with the tribal fishers protected the journey of another batch of 70 turtles from their nest to the sea

PROFILE

Contact Person: Dr R. Kiruba Sankar

Designation: Senior Scientist, ICAR-CIARI

District: Nicobar

UT: Andaman and Nicobar Islands

Fisheries Activity: Conservation of sea turtle nesting habitats in Car Nicobar Island

Conservatory Intervention: ICAR-CIARI

Project: Augmenting livelihood, resilience, and knowledge generation through the coastal fisheries information hub for Nicobar tribes of Car Nicobar by ICAR-CIARI

Project Period: 2021-2025

Funding: DST-SEED

+91 3192250341

FOSTERING ENTREPRENEURSHIP IN AQUACULTURE

A tale of success from Andhra Pradesh

The hatchery was established with financial support of Rs 1.5 crore from NFDB, under the Entrepreneur Model of PMMSY. The Total Project Cost was Rs 15 crore.

Mr Manja Naik and his wife, Mrs Shilpa Bhima Naik, founded Shilpa Hatcheries LLP to produce high-quality shrimp seed, primarily *Penaeus vannamei*. The hatchery is located in Pentakota village, Andhra Pradesh.

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MANJA NAIK &
SHILPA BHIMA NAIK

The hatchery is registered with CAA for importing SPF *P. vannamei* broodstock for seed production. The imported broodstocks are given ample time for acclimatization over a period of 2 to 3 weeks. To facilitate optimal spawning, the temperature for male and female broodstocks is controlled using a specialized chiller maintaining the required temperatures of 27°C and 30°C respectively. Additionally, daily monitoring of water quality parameters viz. alkalinity, hardness, pH, salinity, ammonia, nitrite, iron, and temperature, is carried out. The broodstocks are fed with a balanced diet comprising live SPF polychaete worms, blood worms, frozen squids, clams, mussels, and oysters. To further ensure their health, the brood stocks are diligently screened for diseases. The entire workflow of the hatchery may be categorised into 4 sections viz. seawater filtration, maturation (from boordstock to nauplii), low salinity rearing (zoea to post-larvae stage) and packing.

SPECIALTY

The hatchery specialises in providing SPF shrimp seed, including WSSV and EHP disease resistant varieties. Currently, the couple is expanding the seed production unit, by constructing more space to it.

PROFILE

Education: M.F.Sc. and B. E. respectively

District: Anakapalli

State: Andhra Pradesh

Fisheries Activity: *P. vannamei* hatchery

Name of Establishment: Shilpa Hatcheries LLP

Year of Establishment: 2022

Scheme: Entrepreneur Model of PMMSY

Production (FY 2023-24): 200 million seed

Turnover (FY 2023-24): Rs 8-9 crore

Employment Generated: 150

+91 9494487111

CULTURE SEA BASS AND BE YOUR OWN BOSS

A tale of success from Andhra Pradesh

Mr Tirumani Nagaraju is a fish farmer from Mattagunta village in Andhra Pradesh. He started fish culture in 2010 in 3.09 ha and focuses on the culture of Sea bass, Catla and Rohu. He procures Sea bass seed either by wild collection and/ or from RGCA and stocks them at the size of ≈ 200 g. The culture period for Sea bass is 15 months per crop. The fishes are fed with live trash fish (small Murrels) procured from nearby farms. At the end of the culture period, the size of the fish ranges from 1 to 6 kg.

TIRUMANI NAGARAJU

Mr Nagaraju stocks advanced fingerlings so that the culture period is only 6 months.

During the initial period, he cultured Sea bass in 1 acre at the stocking density of 1,000 fingerlings per acre. The second crop onwards, he expanded the culture to 5 acres and the stocking density to 2,000 fingerlings per acre. The survival rate was about 90%. He also cultures Catla and Rohu in 18 acres. In FY 2021-22, he stocked 40,000 advanced fingerlings (300 g size) of Rohu. The size at harvest was ≈ 1 kg with 85% survival. The farm gate price of Sea bass and Rohu is Rs 500 and Rs 115 respectively per kg.

RECOGNITION

Mr Nagaraju also gives demonstrations in his farm to the interested farmers. In recognition of his effort, he was awarded as the Best Fish Farmer (Marine) by MoFAHD, GoI on World Fisheries Day-2022.

PROFILE

Education: Upper Primary

District: Eluru

State: Andhra Pradesh

Fisheries Activity: Grow-out fish culture (Sea bass, Catla and Rohu) in earthen ponds

Year of Establishment: 2020

Production (FY 2023-24): 70 tonnes

Turn-over (FY 2023-24): Rs 2 crore

Employment Generated: 5

+91 9949636779

REAPING REWARDS FROM RAINBOW TROUT FARMING

A tale of success from Arunachal Pradesh

Mr Dorjee Khandu Khrimey worked as a Senior Executive at Reliance Power Ltd. in Aalo, West Siang District, Arunachal Pradesh. In 2018, due to unforeseen circumstances, he resigned and returned to his hometown. During a visit to Shergaon Trout Farm, he discovered the potential and demand for trout farming. Inspired, he decided to pursue this new venture. Dorjee approached the DoF, Arunachal Pradesh to inquire about subsidies for trout farming in his state. Encouraged by their support, he established "Rainbow Farm" in Jigaon Village.

DORJEE KHANDU KHRIMEY

At present he owns 9 concrete raceways, 1 earthen raceway, 1 earthen pond. The total project cost was Rs 35.5 lakhs, with Rs 23.1 lakhs funded by the government under the BR and PMMSY. He has got sanctioned for establishment of 1 hatchery also under PMMSY. Mr Khrimey sources Rainbow trout seeds from the Government Trout Fish Hatchery in Shergaon. He stocks fingerlings, each weighing around 10 grams, in 50 cubic meter raceways at a rate of 1500 fingerlings per raceway. Dorjee rears the trout for approximately 7 to 12 months. Mr Khrimey takes utmost care in maintaining hygienic conditions on the farm, segregating fish every two months, and intervening promptly during disease outbreaks. These good management practices have helped him sustain farm productivity and profitability. The trout sells for Rs 1200 per kilogram. He markets his fish locally and in Itanagar, offering home delivery services as well.

IMPACT AND RECOGNITION

Trout farming has uplifted the livelihood of Mr Khrimey's family and provided employment to people in his village, helping them improve their standard of living.

At present, his farm is regularly visited by government officials, fish farmers, and tourists from other states who seek to gain knowledge about trout farming. In recognition of his exceptional work, Mr Dorjee Khandu Khrimey was awarded as the Best Fish Farmer in 2023 by both the District Administration and the Government of Arunachal Pradesh.

PROFILE

Education: B. A.

District: West Kameng

State: Arunachal Pradesh

Fisheries Activity: Trout fish culture

Name of Establishment: Rainbow Farm

Year of Establishment: 2018

Technical Support: ICAR-DCFR, West Kameng Office of the DoF, Arunachal Pradesh

Scheme: BR, PMMSY

Production (FY 2023-24): 1 tonne

Turnover (FY 2023-24): Rs 8.5 lakh

Employment Generated: 5

+91 8119025969

BLENDING INNOVATION INTO INDIGENOUS AQUACULTURE

A tale of success from Assam

Pabhoi Fish Farm in Assam, registered under the network hatchery of NFDB-NFFBB, is known for quality fish seed production, consultancy, training, etc. It is run by Mr Bhargav Kumar Bhagawati, who joined his parental business in 2014 after quitting his 5-years' corporate job. The fish seed produced in Pabhoi Fish Farm and its associated farms are sold in Assam, Arunachal Pradesh, Meghalaya and Nagaland.

Mr Bhagawati developed an indigenous breeding technique for Chital, Pabda etc.

BHARGAV KUMAR BHAGAWATI

Mr Bhagawati developed an indigenous breeding and larval rearing technique of Chital fish in biofloc tank. The male and female brooders of Chital kept together in a tank, are fed heavily with zooplankton and IMC spawn. During June-July, females lay eggs on submerged objects like tire, bamboo, pipe etc. The fertilized eggs are collected and kept for aeration in a biofloc tank. Chital hatchlings are aggressive biofloc eaters. After 5-6 days, these are fed with minor carp spawn followed by IMC spawn. He has also successfully done breeding of Pabda with the support of CoF, Lembucherra, Tripura and created a market for the same in the North bank region of Assam. In addition, Mr Bhagawati practices grow-out culture of Magur in biofloc system and polyculture of Chital, Pabda, Reba etc. He has currently taken up a project under the NFDB scheme 'Establishment of breeding units for locally important fish species of Northeast India' (mainly for Magur, Singhi, Pabda etc.).

IMPACT AND RECOGNITION

So far, Pabhoi Fish Farm has trained more than 5,000 youth in fish farming. In recognition of his achievement, Mr Bhagawati was awarded as the Best Fish Farmer of Assam by CoF, Lembucherra, Tripura on the occasion of National Fish Farmers Day- 2022.

PROFILE

Education: MBA in Marketing and Human Resource

District: Biswanath

State: Assam

Fisheries Activity: Hatchery (IMC, pabda) and grow-out culture

Name of Establishment: Pabhoi Fish Farm

Year of Establishment: 1995

Technical Support: ICAR-CIFA, DoF, Assam, CoF, Tripura

Funding: NFDB (FY 2021-22)

Production (FY 2023-24): 500 million spawn, 10-15 million fry, 300 quintals fingerlings and 500 quintal grow-out fish

Turn-over (FY 2023-24): Rs 1.25 crore

Employment Generated: 20 direct and 50 indirect

+91 8135997702

A MULTIFACETED AQUAPRENEUR'S INSPIRATION TALE

A tale of success from Assam

Mrs Chumi Borah Bordoloi is a fish farmer and an entrepreneur from Hationi Bheta village, Assam. Her farm was established 25 years back. She practices aquaculture of Fresh water prawn (192 Bigha), Grass carp and Rohu (122 Bigha) and Mola (263 Bigha). At present she is on the construction of a fish culture pond having (2 Bigha) under PMMSY.

She also runs a firm named 'Charu Food Processing', established in 2003 for making value added fish products. She underwent training on value added fish products' preparation and marketing from CoF, Assam

Mrs Bordoloi uses her farm grown indigenous fish as the raw material for value added products' preparation. The supply of other input material is done through FPCs and fisheries cooperatives. The firm has adopted modern techniques like solar fish drying and quality checking like aflatoxin testing.

CHUMI BORAH BORDOLOI

and KVK, Nagaon respectively. The firm produces and markets ready-to-eat fish pickle, fish finger, fish chutney, fish chakli, and ready-to-cook fish products. It has 2 units, together having a daily production capacity of 6 quintals of fish pickle and 2 quintals of other value-added fish products. The products are marketed through FISHFED, Assam and the departmental stores under the brand name Charu Products.

IMPACT AND RECOGNITION

The NGO 'Integrated Agrofarming Development Society' which she started in 2014 gives training in ornamental fish culture, fish feed preparation, preparation of value added fish products etc. More than 2000 people are trained so far. Mrs Chumi Borah Bordoloi was awarded for her effort and achievement by MoFAHD, GoI as the Best Fisheries Entrepreneur/ Proprietary Firm on World Fisheries Day-2022.

PROFILE

Education: MA Sanskrit

District: Nagaon

State: Assam

Fisheries Activity: Grow-out fish culture and value-added fish products' production

Name of Establishment: Charu Food Processing

Year of Establishment: 2021

Technical Support: CoF, Assam and KVK, Nagaon

Production (FY 2023-24): 8.97 tonnes of prawn, 20 tonnes of carp, 9 tonnes of mola

Turnover (FY 2023-24) from aquaculture: Rs 98 lakh

Turnover (FY 2023-24) from Charu Food Processing: Rs 15 lakh

Employment Generated: 21 direct and 30 indirect

+91 7896997057/

+91 8723003589

SPECIES DIVERSIFICATION FROM SEED TO TABLE-FISH PRODUCTION

A tale of success from Assam

Mr Debajit Barman from Nankarbhaira village practices fish culture since 1991. In 1998, he started an eco-hatchery and in 2006, he ventured into integrated pig cum fish culture. His 2nd hatchery was established in 2015, with the technical help of ICAR-CIFA by liaising with DoF, Assam, KVK, Nalbari, and CoF, Raha. Mr Barman has signed a MoU with ICAR-CIFA to procure breeder seed of Jayanti rohu and Improved catla for developing its broodstock and to achive its seed production. He has also taken up Amur carp seed production. He has developed integrated paddy cum fish farming system for Murrel culture. His farm has 2 eco-hatcheries, 18 ponds (12 ha) for rearing fry/ fingerlings and 17 ponds (15 ha) for grow-out fish culture.

DEBAJIT BARMAN

Mr Barman follows intermittent replenishment of brooders from a variety of sources to produce high quality fish seed. The active spawn (3-4 days old) are reared in nursery ponds till they reach fry stage (25-30 mm) and later, in rearing ponds till they reach fingerling stage (100-150 mm). He uses lime on water surface (75 to 90 kg per Bigha) as a prophylactic measure and farm prepared soap-oil emulsion as insecticide. The waste from pig unit is recycled into manure for fish pond and vermicompost.

> He experimented by advancing the fish seed production timing by two months from April to February. This, increased the growth of fish, customer demand and sustainability remarkably.

RECOGNITION

Recognizing his achievements, MoFAHD, GoI awarded him as the Best Fish Farmer from Hilly and North Eastern Hilly Region States on World Fisheries Day-2022. He was also conferred with Assam Gaurav, the highest civilian award of Assam by the State Government in 2023.

PROFILE

Education: B. Com.

District: Nalbari

State: Assam

Fisheries Activity: Seed production & grow-out culture (IMC, Silver carp, Grass carp, Common carp, Jayanti rohu, Amur carp, & GI Catla)

Name of Establishment: Debajit Barman Fish Seed & Piglet Producer and Supplier

Year of Establishment: 1991

Technical Support: ICAR-CIFA

Production (FY 2021-22): 165 tonnes of table fish, 40 lakh spawn/ cycle, 21 lakh fry/ ha & 2.1 lakh fingerling/ ha

Turnover (FY 2021-22): Rs 13 crore

Employment Generated: 45

+91 9957636338

FISHERIES COOPERATIVE NURTURES HOPE IN SONBEEL WETLAND

A tale of success from Assam

Sonbeel is the largest wetland in Assam and covers 3,000 ha area. The name 'Sonbeel' is a common name for a group 24 beels located within the area. In summer season, the entire Sonbeel is filled with water which flow-in from adjoining areas and in winter, it dries up. Sonbeel Fishermen Co-Operative Society Ltd (SFCSL), an FCS eases-in 400 ha of water area of the beel annually from AFDC at an approximate cost of Rs 19 lakh. SFCSL has 5,334 members of which 1,620 are women. The registered members of SFCSL can fish anywhere in the government beel.

SONBEEL FISHERMEN CO-OPERATIVE SOCIETY LTD

SFCSL runs 1 eco-hatchery and 5 ponds. Rearing is done in ponds and pens. The Society has 45 cage units. SFCSL also involves in paddy cum fish culture, duck farming and cultivation of maize, wheat, soybean and buro rice in the periphery of beel during winter till March. Production of quality fish seed and table fish is taken up through cage culture. Currently the Society has taken up the seed production of GI catla, Jayanti rohu, Amur carp and Mrigal and the grow-out culture of IMC. SFCSL distribute these fish seed not only within the country but also to Bhutan and Bangladesh. The society also has 110 motor cycles with ice box and 2 mobile fish retail units (4-wheeler), purchased during FY 2014-15 with NFDB funding.

> SFCSL assists its members to avail bank loan.

IMPACT AND RECOGNITION

Focussing on tourism development of the area, SFCSL promotes recreational activities (boating, rowing (paddle boats)) and actively involves in providing drinking water, sanitation, setting up of hygienic dry fish unit, fisheries infrastructure, boat making, providing fishing craft and gear etc. In recognizing SFCSL's activities, MoFAHD, GoI honoured them with Best Fisheries Cooperative Society/ FFPO/SHG Award on World Fisheries Day-2022

PROFILE

Contact Person: Tapan Kumar Das

Designation: Secretary

State: Assam

Fisheries Activity: Supply of fish seed, feed and fishing gear, net and boat making, Infrastructure development, grow-out fish culture

Year of Establishment: 1975

Funding: NFDB (FY 2014-15)

Production (FY 2023-24): 230 crore no. of spawn, 55 crore no. of fry, 60 lakh no. of fingerlings and 120 tonnes of yearlings

Turnover (FY 2023-24): Rs 7.5-8.0 crores

Employment Generated: >53 direct and >100 indirect

+91 9401325809/

+91 9401028386

CULTURE BASED FISHERIES IN KOTHIA MAUN

A tale of success from Bihar

Kothia maun is a seasonally open floodplain wetland located in Tetaria block of East Champaran, Bihar. The productivity of this wetland was low due to failure in auto recruitment, predators, unavailability of quality fish seed, insufficient stocking with inappropriate fish species, lack of seed rearing facility etc. The FCS, Tetaria Prakhand Matsyajivi Sahyog Samiti Ltd. carries out fisheries in this wetland.

In 2018-19 with the financial support of NFDB, ICAR-CIFRI implemented a pilot project to develop fisheries in this wetland. Accordingly,

ICAR-CIFRI encouraged the FCS to follow the standard protocol devised by ICAR-CIFRI for culture-based fisheries management i.e. selecting the suitable fish species and their composition, seed size, stocking density, stocking season, and harvesting schedule.

ICAR-CENTRAL INLAND FISHERIES RESEARCH INSTITUTE

advanced fingerlings of IMC, Common carp and Grass carp were released to the open water in a staggered manner @ 1500-2000/ ha. Pen culture (1 CIFRI Pen HDPE of 0.2 ha) and cage culture (6 CIFRI GI Cages of 6x6x4 m3) were initiated for the in-situ production of quality fingerlings and table fish respectively. The fishers were trained in rearing and production of overwintered seed in excavated nursery ponds. Harvesting was started in February and continued up to May.

IMPACT

Before 2018-19, the productivity and the fishing employment days of this wetland were only 20-27 kg/ ha/ year and 45 days/ year respectively. After ICAR-CIFRI's intervention, the average fish production got increased to 40.42 kg/ ha in 2018-19, 96.28 kg/ ha in 2019-20 and 111.1 kg/ ha in 2020-21. Despite the Covid-19 pandemic and total lockdown, 6667 kg fish production and 109 fishing employment days equivalent to 32000 man-days were achieved in 2020-21. This has led to reduction in the migration of fishers to other states for employment.

PROFILE

Contact Person: Dr B. K. Das

Designation: Director, ICAR-CIFRI

District (Project site): East Champaran

State (Project Site): Bihar

Technical Intervention: ICAR-CIFRI, Kolkata

Project Period: 2018-19 to 2020-21

Production (FY 2020-21): 6667 kg fish

Project: Fisheries development in Kothia maun of Bihar - A pilot project

Funding: NFDB

Employment Generated: 32,000 man-days in 2020-21

+91 3325921190/

+91 3325921191

DIVERSIFICATION COUPLED WITH SUSTAINABLE PRACTICES

A tale of success from Chhattisgarh

'Bharatbala Aqua Culture' established by Mr Mustak Khan is well known for farming of a wide range of fish species viz., IMC, Pangasius, Tilapia, Magur, Grass carp, and Chital. The firm practices diversified activities such as reservoir fish culture, pond fish culture, cage culture and seed production through eco-hatchery, etc. The firm has also adopted innovative technologies such as seepage control system, water recharge system, biofloc technology, culture of GIFS, ornamental fish culture and lab.

MUSTAK KHAN

Each farm under the Bharatbala Aqua Culture has its own water recharge system. To prevent the water seepage in ponds, they use 150 GSM tarpaulin. The firm has taken up aquaculture activities in Bagoud (30-acre reservoir periphery area), Banjari (6-

acre pond culture), Kusumkhuta (12 culture ponds, 30 acre), Chawdi (12-acre pond culture), Hardi belodi (13 culture ponds, 25 acre), Bhothidih (4 culture ponds, 13 acre), Rajadera Dam (54 cages), and Ballar Dam (54 cages).

IMPACT AND RECOGNITION

The firm provides technical assistance to fish farmers at each level of production. They regularly conduct awareness programs, ToT programs, exposure visits, campaigns, seminars, workshops, etc. to disseminate knowledge on fish farming. The firm collaborated with DoF, Chhattisgarh under the Reservoir Seed Stocking Scheme to contribute towards increasing the reservoir productivity. Considering the entrepreneurial achievement of Bharatbala Aqua Culture, Mr Mustak Khan was awarded as the Best Fisheries Entrepreneur/ Proprietary Firm by the MoFAHD, GoI on World Fisheries Day-2022.

As an ecofriendly venture, 'Bharatbala Aqua Culture' modified an abandoned mining area for fish farming.

PROFILE

Education: Under-Graduation

District: Dhamtari

State: Chhattisgarh

Fisheries Activity: Grow-out fish culture, fish seed production and consultancy

Name of Establishment: Bharatbala Aqua Culture

Year of Establishment: 2017

Production (FY 2021-22): 1.07 lakh tonnes of table fish, 0.31 lakh tonnes of fish seed and 4.00 lakh tonnes of fish feed

Turnover (FY 2021-22): Rs 3.14 crore

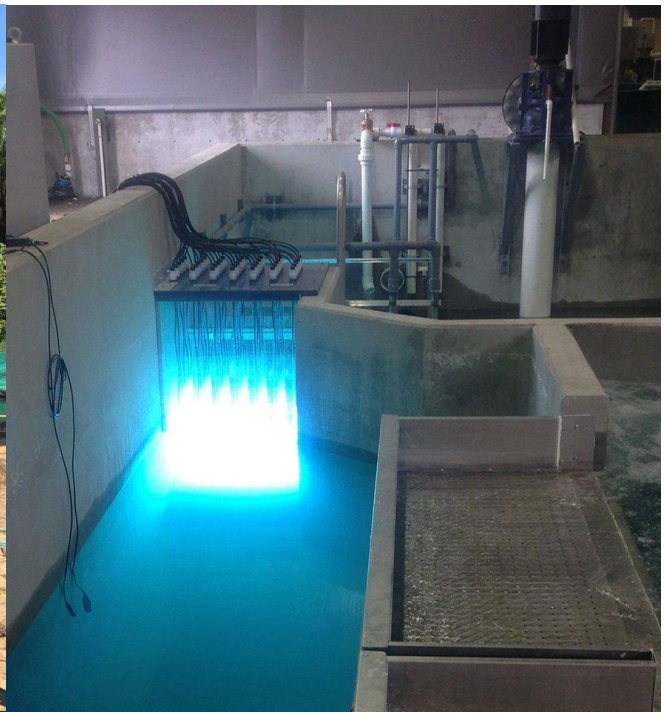
Employment Generated: 110 direct and 400 indirect

+91 9575458590/

+91 8718977077

AN ENGINEER'S ONE-STOP SOLUTION FOR AQUACULTURE

A tale of success from National Capital Territory of Delhi



R. S. Polymers was founded by Mr Vimal Mehta, a mechanical engineer in 1988. The firm initially focused on infrastructure projects, including the establishment of power plants and canal linings across India. The company expanded its operations in 2012 to promote intensive fish farming practices. It is one of the leading companies in manufacturing and supply of aeration systems, aquaculture cages, various types of aquaculture tanks including biofloc and RAS systems, high-quality geomembranes to be used in ponds, etc. The firm has a demonstration cum research and development farm in Delhi, which offers free technical training with live demonstration in aquaponics, biofloc technology, etc. Around 400 fishers are trained in this centre every year. In order to maintain high quality and hygienic seed with a verified count, R.S. Polymers has set up its own seed bank in Delhi which offers fish seed to nearby states. The firm also offers turnkey cold storage solutions for frozen seafood consisting of blasting chambers, ante room, pallets and racks, heating doors, digital displays, compressors etc. The company has introduced a smart

VIMAL MEHTA

system in Haryana for fish processing with blast chamber and cold storage. It has the processing capacity up to 4 tonnes per day and the storage capacity of 60 tonnes. R.S. Polymers recently signed a MoU with the Government of Uttar Pradesh to establish of an Aquapark which entails a private investment of Rs 25 crores. The aquapark is envisioned to serve as a hub for aquaculture innovation, training, and resource provision.

R. S. Polyplast, a sister concern to R. S. Polymers, also offers a comprehensive range of products essential for the successful implementation of Biofloc systems, RAS, and in-house manufacturing plants. The firm promotes backyard RAS systems under their initiative "Eat Fresh with Grow Fresh", enabling farmers to produce and supply fresh fish to local markets.

Through 'Engagement through Biofloc' programme in collaboration with Indian Air Force, R. S. Polyplast supported ex-servicemen by engaging them in small scale fish farming. Similarly, another program 'Employment through modern aquaculture' in convergence with Indian Army was conducted for supporting the widows and differently abled people to generate income.

RECOGNITION

R. S. Polymers is empanelled by NFDB as a technical consultant, manufacturer and supplier under PMMSY. In recognition of their efforts, R. S. Polyplast and R. S. Polymers bagged the 'Best Fisheries Best Fisheries Individual Entrepreneur-2020' and 'Best Fisheries Entrepreneur/ Proprietary Firm Award-2022' respectively by MoFAHD, GoI.

PROFILE

Education: B.E.

District: North West Delhi

UT: NCT of Delhi

Fisheries Activity: Manufacturing and supply of aquaculture tanks, cages, pond liners, etc.

Name of Establishment: R. S. Polymers

Year of Establishment: 1988

Turnover (FY 2024-25): Rs 56.01 crore

Employment Generated: 42 direcrt and >1000 indirect

+91 7838383639/

+91 9310670971

BUMPER REAP FROM ROPE: GREEN MUSSEL FARMING

A tale of success from Goa

Mussel farming offers a valuable source of food and protein, supporting livelihoods while causing minimal greenhouse gas emissions and environmental impacts. Mrs Bindiya Sawant from Akhada village in Goa began farming green mussels (*Perna viridis*) in 2022 with her husband's assistance. She received mussel farming training from the DoF, Government of Goa, and set up the mussel farm through the CSS component of PMMSY, receiving financial assistance of Rs 36,000.

BINDIYA SAWANT

Mrs Sawant obtained green mussel seed from Andhra Pradesh. Approximately 150 seeded (spat) ropes, were hung from a raft established in the River Mandovi. Mosquito net clothing was used for covering the seed around the rope. The raft frame was provided by the DoF, Government of Goa. The culture period lasted six months, starting in November or December and extending until May, with the harvest taking place before the onset of monsoons in June to prevent salinity from affecting the mussels. At the end of the culture period, the harvested, fully grown green mussels were sold in the local market at a price of Rs 400-500 per kg, depending upon the size of the mussel.

IMPACT

Green mussel farming has empowered Mrs Bindiya Sawant to achieve financial independence. She serves as an inspiration to women in her community, encouraging them to pursue mussel farming as well.

Mussel farming is environmentally friendly, as it requires no additional inputs like feed, fertilizers, or other materials. Consequently, maintaining the culture system is relatively simple.

PROFILE

Education: 10th Standard

District: North Goa

State: Goa

Fisheries Activity: Green mussel farming

Year of Establishment: 2022

Technical Intervention: DoF, Goa

Scheme: Centrally Sponsored Scheme component of PMMSY

Turnover (FY 2022-23): Rs 6 lakh

Employment Generated: 2

+91 9822128892

A HOME MAKER TASTES SUCCESS IN RIVERINE CAGE CULTURE

A tale of success from Goa

Mrs Silvia Fernandes, a resident of Ullando Curtorim, Goa belongs to fisher family. She decided to take up aquaculture as an additional income generating activity to support her family. With the assistance of DoF, Goa she got subsidy assistance under PMMSY to set up river cages. DoF, Goa provided her technical guidance on Sea bass culture in cages and technical assistance in setting up the unit and arranging inputs like seed and feed.

SILVIA FERNANDES

Mrs Fernandes cultures Sea bass in cages. She has installed 3 cage units (4 x 4 x 4 m^3) in the River Zuari at Sanvoxem, Ullando Curtorim Goa. The total project cost was Rs 9.21 lakh, for which Rs 3.6 lakh was received as subsidy assistance under PMMSY. She maintains the stocking density in cages as 1000 per cage. The Sea bass seed of 3.5 to 4.5 cm is stocked. The very first stocking was done in the month of December 2022. In May-June 2023, she partially harvested the cages. Within 7 months, the fish reached a size of approximately 1 kg. The remaining fishes in the cages were maintained up to one year so that those fishes grew to the approximate size of 1.8-2 kg. The fish is marketed through direct sale in a nearby fish market, and through the social media platforms like Facebook and WhatsApp. Sea bass fetches nearly Rs 700 per kg.

KEY TAKEAWAY

Mrs Silvia Fernandes segregates the stocked fish seed after one month based on their growth. She puts the bigger and smaller fishes in separate cages to ensure better growth.

PROFILE

Education: 12th Standard

District: South Goa

State: Goa

Fisheries Activity: Grow-out fish culture (Sea bass) in cages

Year of Establishment: 2022

Technical Intervention: DoF, Goa

Scheme: PMMSY

Production (FY 2022-23): 1.5 tonnes

Turnover (FY 2022-23): Rs 10.5 lakh

Employment Generated: 2

+91 9923320104

THE COMPLETE JOURNEY OF SHRIMP: FARM TO FORK

A tale of success from Gujarat

Dr Manoj Mohanlal Sharma is a fisheries graduate. He began his career in aquaculture in 1994 as a technician in a small aqua farm at Olpad, Gujarat. He realised that the salt-affected land in Gujarat has a potential for shrimp farming. Initially, he demonstrated the giant freshwater prawn culture to the people across Olpad area. Later, he turned into *P. monodon* culture and founded Mayank Aquaculture in 1996 which became incorporated as Mayank Aquaculture Pvt Ltd in 2005. In 2013, he launched an aquaculture probiotic product line, in collaboration with HTS BIO, France. The company also owns a state-of-art hatchery established in 2014 which produces quality shrimp post larvae for in-house production and to supply to partners and associated farms.

MANOJ MOHANLAL SHARMA

In 2017, Dr Sharma started a shrimp (*P. monodon*) farm at Mandroi, Gujarat. It has 45 ponds ranging from 0.3 to 0.4 ha area. The ponds are stocked with 30-40 no. SPF shrimp seed per square metre. The shrimps are usually harvested at 30-33 g size against 80% survival. Dr Sharma employs two-phase culture system in order to reduce grow-out time and the biological risk associated with it, potentially enabling more farming cycles per year. Nursery rearing of shrimp larvae is done in an indoor semi-biofloc system upto a size of 200 mg which is then transferred to grow-out farming system. In 2023, with the subsidy assistance of Rs 10 lakh from MPEDA, Dr Sharma set up a Shrimp Handling Centre against the total project cost of Rs 25 lakh. He has opened a restaurant "Zhingalala" in Surat in 2019, as their front-end service which curates shrimp delicacies.

> The very first shrimp farm in India received SHAPHARI certification intended to promote sustainable farming, superior quality produce and traceability by MPEDA is the farm of Dr Manoj Mohanlal Sharma located at Mandroi

RECOGNITION

In 2016, ICAR-CIFE honoured Dr Sharma with Leadership Award. His firm also bagged the Best Technology Infusion/ Innovative Idea Award by MoFAHD, GoI on World Fisheries Day- 2021.

PROFILE

Education: Ph.D.

District: Surat

State: Gujarat

Fisheries Activity: Shrimp (*P. monodon* & *P. vannamei*) farm and Shrimp Handling Centre

Name of Establishment: Mayank Aquaculture Pvt Ltd

Year of Establishment: 2017

Scheme: Individual Beneficiary Scheme of MPEDA

Funding: MPEDA (for Shrimp Handling Centre)

Production of Shrimp (FY 2023-24): 580 -600 tonnes

Turnover from Shrimp (FY 2023-24): Rs 35 crore

Employment Generated: 40-50

+91 9825412857

UPLIFTMENT OF TRIBAL COMMUNITY THROUGH INTEGRATED FARMING

A tale of success from Gujarat

The village Singod falls in Navsari, Gujarat. Most of the village people belongs to Scheduled Tribe community and practices agriculture as their main occupation. They have formed a SHG named 'Singod Halpati Samaj Yuva Matsya Udhyog Juth' with 40 tribal members. The SHG had leased in 1.8 ha pond from DoF, Gujarat for IMC culture. However, they could generate merely Rs 1.5 lakh in the 1st year due to lack of technical knowledge. In this backdrop, they decided to develop the pond into an integrated aquaculture unit with the help of NGRC of ICAR-CIBA.

ICAR-CENTRAL INSTITUTE OF BRACKISHWATER AQUACULTURE

The model has 4 components viz. (i) Grow-out cage culture (4 x 4 x 2 m^3- 25 no.) of Pangasius, Roopchand (20000 no. each), Tilapia (18000 no.) and Pearlspot (3000 no.), (ii) polyculture of catla & rohu (20000 no. each) (iii) Farming of vegetables viz. brinjal, chilly, cauliflower & tomatoes (500 no. each), coriander & fenugreek (500 g seed each), and fruit bearing trees like mango, guava, banana & dragon fruit (10 no. each) and coconut (15 no.) on the dykes of the pond (400-500 m^2) (iv) farming of Cobb broiler poultry (1000 no.) and Surti goat (12 no.) in sheds (12 × 6 m^2 and 6 x 3.6 m^2 respectively) erected on the other side of the dykes. NGRC provided them with inputs viz. GI pipes, roof sheets, garden fencing net, boat, cement poles, solar street lamps, cage nets & frames, fish seed & feed, poultry chicks, goat kids etc.

The beneficiaries were trained in management of cages, fish feeding & handling, sampling, fish health management etc. 'Multiple stocking and harvesting model' was followed for culture in order to ensure a continuous revenue. Drip irrigation technique is used in vegetable and fruit farming. Grass from the pond dyke and nearby shrubs were utilised as goat feed. Under NGRC's guidance, the SHG also developed a live fish sale counter at the farm.

IMPACT

The SHG have become self-sustained through this activity. Following the success of this model GFFPO, Navsari, signed a MoU with ICAR-CIBA, for the demonstrations of different brackishwater aquaculture technologies for the livelihood upliftment of its tribal members. Accordingly, NGRC of ICAR-CIBA adopted 20 ST members of GFFPO and renovated 4,000 m^2 pond at Mendhar, Navsari for the demonstration of brackishwater integrated aqua-agri-poultry-goat farming model, under Scheduled Tribe Component.

PROFILE

Contact Person: Bikhu Bhai Halpati

Designation: President, SHSYMUJ

District: Navsari

State: Gujarat

Fisheries Activity: Integrated aqua-agri-goat-poultry farming

Technical Intervention: NGRC-ICAR-CIBA

Physical Input: ICAR-CIBA

Scheme: Scheduled Tribe Component

Production (Sept 2021-Sept 2023): (i)16.75 tonnes of fish (Pangasius, 500g-1kg size; Tilapia, 300-500 g; Rohu & Catla, 1-2 kg size; Roopchand, 300-600 g size)

(ii) 2.21 tonnes poultry birds (1.6-2 kg size)

(iii) 15 goats of 20-40 kg size

(iv) Vegetables (1.14 tonne)

Turn over (Sept 2021-Sept 2023): Rs 24.55 lakh

Employment Generated: 100

+91 9624149461

FARM TO STORE: MULTIDIMENSIONAL AQUA ADVENTURE

A tale of success from Himachal Pradesh

Dr Karan Joshi is a fish farmer from Dhar Ki Ber Village in Himachal Pradesh. He is also the founder and director of Pine Trails Jungle Camp, Kasauli- an adventure resort. He started 'Anaya Fish Farm' in 2017 at Nalagarh. The farm has one eco-hatchery, brooder ponds, nursery ponds and grow-out ponds. Initially he established 7 fish ponds in 4.4 ha area for which he received financial support of Rs 3.99 lakh under the BR scheme of Government of India in 2017. In FY 2020-21, Dr Joshi availed financial assistance of Rs 10 lakh under PMMSY and constructed a carp hatchery in 1.2 ha area. He established a biofloc aquaculture system of 7 tanks of 15000 litre capacity also under PMMSY.

KARAN JOSHI

Dr Joshi practices polyculture of IMC in ponds to exploit the different feeding habitat of these fishes. He stocks the pond with IMC fingerlings at the rate of 5000-6000 per acre and cultures for 8 months to 1-year period. The harvest ranges in 1 to 2 kg per fish. Dr Joshi cultures Pangasius in biofloc tanks for 3 to 4 months. During this period the fish grows up to 250-300 g from the initial size of 8-10 g. The stocking density followed for Pangasius is 400 per tank. The farm produce is sold through local traders and through his own fish kiosk established in 2021.

> He regularly checks the quality of soil and water parameters in his farm and maintains regular fertilization, weed eradication etc.

IMPACT AND RECOGNITION

Dr Karan Joshi organises aquaculture training programs in his farm which benefits students and aquaculture enthusiasts of the area. Dr Karan Joshi was awarded as the Best Fish Farmer on the occasion of National Fish Farmer Day-2022 by the Assistant Director of Fisheries, Saharanpur, Uttar Pradesh.

PROFILE

Education: Ph.D. Business Management

District: Solan

State: Himachal Pradesh

Fisheries Activity: Hatchery (IMC), grow-out fish culture (IMC and Pangasius), fish retailing

Name of Establishment: Anaya Fish Farm

Year of Establishment: 2017

Scheme: BR Scheme, PMMSY

Production (FY 2023-24): 22 tonnes table fish and 9 lakh fish seed

Turnover (FY 2023-24): Rs 60 lakh

Employment Generated: 4

+91 9805364413

SALINE SOIL AND GROUNDWATER: BLESSING IN DISGUISE

A tale of success from Haryana

Mr Gurdeep Singh, an agricultural farmer from Raghuana village in Haryana's Sirsa district, faced significant challenges in traditional farming due to saline groundwater and inadequate canal irrigation. These issues resulted in poor crop yields and financial instability. Determined to find a solution, he explored modern farming techniques and discovered shrimp farming in saline soils through seminars and YouTube videos. Inspired by success stories and supported by technical guidance from the Haryana State Fisheries Department, he decided to embark on shrimp farming. In 2019, Mr Singh developed two ponds covering 1 hectare with a total investment of Rs 14 lakh, receiving a 40% subsidy amounting to Rs 3.43 lakh under the RKVY scheme. In 2021-22, under the PMMSY, he constructed two more ponds.

GURDEEP SINGH

Mr Gurdeep Singh cultivates whiteleg shrimp (*P. vannamei*) because of their high productivity and demand. He stocks post-larvae (PL) of size 9-10 in his ponds at a density of approximately 25-32 per square meter and rears them for around 120-130 days. By the end of the culture period, the shrimp typically reach a size of 30-35 g. On average, he achieves an 85% survival rate. Mr Singh sells his shrimp through wholesalers and direct contracts with seafood exporters, ensuring better profit margins. Additionally, he is a distributor of shrimp seed, feed, and shrimp medications in Sirsa.

> He regularly checks the quality of water parameters in his farm and maintains regular fertilization, weed eradication etc.

IMPACT

Mr Gurdeep Singh's shrimp farming venture has significantly improved his family's financial stability and provided job opportunities for local workers. His success has motivated other farmers in his village to consider shrimp farming as an alternative to traditional agriculture. Although he initially faced challenges such as disease outbreaks and fluctuating market prices, he successfully overcame them by implementing biosecurity measures, using probiotics to manage water quality, and diversifying his sales channels.

PROFILE

Education: B. Tech

District: Sirsa

State: Haryana

Fisheries Activity: Shimp farming, distributing shrimp seed and feed

Year of Establishment: 2019

Scheme: RKVY, PMMSY

Production (FY 2023-24): 21 tonnes

Turnover (FY 2023-24): Rs 65 lakh

Employment Generated: 10 direct and 15 indirect

+91 9813707575

DISPLACED TO DEVELOPED: SUCCESS FROM CAGE CULTURE

A tale of success from Jharkhand

Mr Bimal Chandra Oraon from Chandil, Jharkhand is an internally displaced person who has taken up aquaculture as his livelihood. His economic condition before taking up grow-out cage culture was below par. He doesn't have land for starting pond fish culture and didn't have a steady income source before venturing into cage culture. He is a member of the Chandil Bandh Visthapit Matsyajibi Swawlambi Sahkari Samiti (CBVMSSS). The CBVMSS has been involved in cage culture as an employment generation model for displaced people as part of the Central Government's National Mission for Protein Supplement Scheme.

BIMAL CHANDRA ORAON

Thus, in FY 2017-18, with the support of Saraikela office of the State Fisheries Department, he got one battery of two cages (8 x 6 x 5 m^3) installed in Chandli reservoir and received input (seed and feed) cost for the first-year crop under the Centrally Sponsored Scheme on BR. The financial assistance he received as input cost under the scheme was Rs 51000. He underwent two trainings organized by the State Fisheries Department to upgrade himself with the necessary skill in cage culture. Mr Oraon cultures pangasius and tilapia in these cages. The Samiti provides jeera-sized fish seed to him. He stocks them at the rate of 5000 seed per cage and cultures pangasius for 1 to 1.5 years and tilapia for 1 year. At the end of culture period, pangasius reaches the size of 0.8 to 1 kg and Tilapia, 0.6 to 1 kg. Pangaisus fetches Rs 120 per kg and Tilapia Rs 100 per kg.

IMPACT

Mr Bimal Chandra Oraon is now earning a handsome income after taking up cage aquaculture.

Now he owns a concrete house, a motor cycle and a refrigerator and he is able to provide better education for his children all because of cage aquaculture.

PROFILE

Education: Matriculation

District: Saraikela

State: Jharkhand

Fisheries Activity: Grow-out cage culture (Tilapia and Pangasius)

Year of Establishment: FY 2017-18

Scheme: Centrally Sponsored Scheme on BR (2017-18)

Production (FY 2023-24): 2.5 -3.0 tonnes

Turnover (FY 2023-24): Rs 2.5 lakh

Employment Generated: 2

+91 7762080551

AQUA STARTUP ACCELERATES SEED PRODUCTION

A tale of success from Karnataka

The story of Canares Aquaculture LLP began at the College of Fisheries, Mangaluru. While pursuing B.F.Sc., three roommates- A. H. Kaushik, V. S. Karthik Gowda, and S. V. Sachin- envisioned to become aquapreneurs. They started their journey with careful planning, attending training programs, gathering crucial data from aqua-farmers and experts. They underwent a six-month internship at the shrimp hatchery of CPF India Pvt Ltd in Nellore and specialized training programs in mud crab and Asian sea bass production at RGCA, thus gaining hands-on experience.

CANARES AQUACULTURE LLP

The pivotal moment came during their visit to ICAR-CIBA, Chennai where they conceived a plan to address the market gap in supply of marine finfish seed by establishing a

Asian sea bass and a mud crab hatchery with the technological support of ICAR-CIBA. They started a Asian sea bass nursery unit in Kundapur by obtaining the spawn and early fry from ICAR-CIBA. Canares Aqua LLP was supplied fertilised Asian sea bass eggs and was given technical know-how on larval rearing, live feed production and broodstock development on satellite mode by ICAR-CIBA. In 2020, the trio presented their business idea to the industrialist duo Mr Gajanan H. S. and Mrs Shubha Gajanan and secured their financial investment. Thus, Canares Aquaculture LLP was launched under the collective partnership of five individuals. The firm partnered with ICAR-CIBA to facilitate the technology transfer for Asian sea bass seed production. They get the Sea bass eggs, fries and brooders from ICAR-CIBA, rear it in tanks for about two and a half months and then sell it to the farmers. With 80 tanks, their yearly capacity is three million sea bass fries and two million fingerlings.

IMPACT

This is the first attempt in the country in setting up a Sea bass hatchery in private sector on a start-up mode.

In FY 2023-24, the company also started production of silver pompano. Company aims to standardize the spawning methods for other fin fish species such as Red Snapper and Cobia in its facility.

PROFILE

Name of Establishment: Canares Aquaculture LLP

District: Uttara Kannada

State: Karnataka

Fisheries Activity: Marine finfish hatchery and supply of feed

Year of Establishment: 2020

Technical Intervention: ITMU of ICAR-CIBA

Production (FY 2023-24): 3 million fry and 2 million fingerlings

Turn over (FY 2023-24): Rs 6-7 crore

Employment Generated: 70

+91 6360299159

EMPOWERED WOMEN: EMPOWERED AND STABLE HOUSEHOLD

A tale of success from Kerala

Muthu Activity Group of SAF (Society for Assistance to Fisherwomen) is formed by three fisher women- Mrs Mary Joseph, Mrs Rinta Simon and Mrs Mercy Antony residing in the coastal village of Kandakkadavu of Chellanam Gramapanchayath. Before starting their microenterprise under SAF they were homemakers who were struggling for their livelihood. These women wanted to start some income generating activity for improving their living standards and to bring up their children by giving good education and good facilities. He nce, they ventured into preparation and sale of dry

MUTHU ACTIVITY GROUP

fish products in nearby householders. In the beginning, their clientele consisted of neighborhood houses only. Even though the income was meagre, they continued this activity for more than a year and tried to improve their business.

In 2008 they owned a small rental shop by availing a loan from Co-operatiive bank for display and marketing of their dry fish. Soon they started sale of fresh fish also. In 2010, they joined the SAF family through the Theeramythri Project. In 2015, the activity group has purchased the rental shop as their own with the assistance of rupees 105 lakhs from SAF. SAF provided an amount of Rs 535000 as interest free working capital revolving fund. As the location has easy access to landing centers, Vembanad lake and nearby prawn filtration fields, raw material availability was not a problem for the business. Soon they recognized that they can fetch higher pricesand more number of customers if the materials they sold is dressed and cleaned. Thus they ventured into fish value addition business too. Now they have valued customers like hotels and resorts in and around Kochi & Kumbalanghi.

IMPACT AND RECOGNITION

There are a lot of fisher women engaged in “Hand Picking” of fish in the nearby areas of Chellanam. Daily marketing of their handpicked fishes and clams was difficult to these poor women. Muthu Activity Group intervened to help them and now purchases this fresh fish from them for reasonable prices and thereby enhanced their livelihood.

As the micro enterprises goes on progressing and fetching more and more financial benefits to their family, their men have started serving the activity group for external works such as purchasing and marketing of the product. Still, the three-room shop is fully managed and run by these active fisherwomen entrepreneurs. This Group was presented the Best Activity Group Award in the year 2017 as part of Saphalam beneficiary meet programme of SAF.

PROFILE

Name of Establishment: Muthu Activity Group

District: Ernakulam

State: Kerala

Fisheries Activity: Preparation of valued added fish products and its marketing

Year of Establishment: 2008

Funding: SAF

Technical intervention: ICAR-CIFT, NIFPHATT

Turnover (FY 2022-23): ≈ Rs 12.53 Crore

Employment Generated: 3 direct and 25 indirect


+91 8606169251

FINANCIAL STABILITY AND SUSTAINABILITY BY MICRO ENTERPRISE

A tale of success from Kerala

Kudampulikoottu Seafood Restaurant is established by a group of women under Theeramythri Seafood Restaurant Project of SAF. The members of this group are selected from different wards of Ezhikkara grama panchayath of Ernakulam district. In this group, 5 members are there; Laisa Sabu, the Leader, Hima Sajesh, the treasurer and Jyothy Madhu, Simi Rijesh and Asha Vineeth the other members.

KUDAMPULIKOOTTU ACTIVITY GROUP

The total financial investment of the project is Rs 667000, of which Rs 500000 was the grand from SAF, Rs 133400- bank loan with 5% interest rate and Rs 33600- beneficiary contribution. SAF also provided them with skill trainings in hotel management, cooking and in customer care. These trainings have improved their confidence level. The restaurant is located in Perumpadanna, North Paravur Municipality

area in Ernakulam District. The unit started its working on 31st July 2021. The main food they served are fried/ roasted/ curried fish such as Sardine, Mackerel, Anchovy, Tuna, Milk Fish, Crab, Prawn, Squid, etc along with rice and other delicacies. They are also engaged in catering works and takes orders online too.

IMPACT

The average monthly sales volume of this group is between Rs 2 to 3 Lakh and the average monthly salary for each member is Rs 15000. With this salary they are able to ensure the financial stability of their family. They contribute a major part of their salary for education of children, housing loan and other financial requirements. They have developed good saving habit. Before entering this project, the group members were engaged in various works like day care centre jobs, dosa batter packing etc., but with meagre income. After being a part of Theeramythri livelihood programme by SAF, they started getting a stable income and financial security.

> The activity provided the women group with a stable and sustainable income.

PROFILE

Name of Establishment: Kudampulikoottu Seafood Restaurant

District: Ernakulam

State: Kerala

Fisheries Activity: Restaurant and Catering business

Year of Establishment: 2021

Funding: SAF

Technical intervention: Human Welfare Council

Turnover (FY 2023-24): ≈ Rs 28 Lakh

Employment Generated: 4 direct and 2 indirect

+91 9567218797

FRUIT TO FISH CROP: A CONTRACTOR'S JOURNEY OUTSIDE HIS DOMAIN

A tale of success from Kerala

Mr Martin George is a contractor for State Public Works Department, Kerala. He is also an enthusiastic agriculturist practicing fruit crops and horticulture. He entered into aquaculture in 2011. Presently, he practices semi-intensive grow-out culture of Pangasius and Tilapia in ≈25 ha area of leased-in land which is distributed in Thalayolaparambu (14 ponds) and Kattappana (13 ponds) area of Kottayam. In the first two years, he concentrated on infrastructure development and got installed feed mixer, dryer, floating pelleted fish feed making machine in his farm. In FY 2018-19, Mr George got the financial assistance of Rs 11 lakh under Janakeeya Matsyakrishi project of Government of Kerala for expansion of his farm activities and business against the total project cost of Rs 23 lakh.

MARTIN GEORGE

Mr Martin George follows the stocking density of 35000 pangasius seed (0.4 g size) per ha in his farm. During the culture period of 15 months, the average size of the fish at harvest is 2.5 kg. A few shooters may reach up to 3 to 4 kg. The farmer observed the FCR in the range of 1 to 1.5 and the survival at the rate of 72%. He sells the fish at Rs 60-70 per kg. The fishes are fed with farm made pelleted floating feed made from a mixture of poultry slaughterhouse waste, mustard oil cake and cotton seed oil cake after removing the excess fat and moisture content. Mr George uses three channels for marketing his harvest. A major portion of the farmed fish is marketed through hatchery agents from whom he collects the fish seed. Another considerable quantity of fish is distributed through the online marketing platform 'Fresh to Home'. A small portion is sold through the local dealers.

Since Mr Martin George practices batch wise stocking and harvesting, he gets crop throughout the year.

RECOGNITION

Mr Martin George keeps on updating himself by attending training. He was bestowed with the Best Fish Farmer (Freshwater Aquaculture) of the District by the Kottayam District Office of the DoF, Kerala in 2023 and the Second-Best Fish Farmer (Freshwater Aquaculture) of the State by the DoF, Government of Kerala in 2024.

PROFILE

Education: Pre-Degree

District: Kottayam

State: Kerala

Fisheries Activity: Grow-out fish culture of Pangasius and Tilapia

Year of Establishment: 2011

Scheme: Janakeeya Matsyakrishi (FY 2018-19)

Production (FY 2023-24): 140 tonnes of Pangasius and 55 tonnes of Tilapia

Turnover (FY 2023-24): Rs 1.35 crore

Employment Generated: 5

+91 9446488466

HUSSAIN'S HOPE: RAINBOW TROUT CULTURE

A tale of success from Ladakh

Mr Ghulam Hussain, hailing from Goshan village in Drass Tahsil, Ladakh, is a small-scale rainbow trout farmer with 15 years of experience. Drass, situated at an elevation of 10,800 feet above sea level, is the second coldest inhabited place in the world. Due to the harsh cold climatic conditions, agriculture farming is unsuitable here. Trout culture is gradually gaining traction in the region, providing job opportunities for unemployed youth. The high demand for farm-fresh rainbow trout, coupled with this employment avenue, motivated Mr. Hussain to adopt raceway culture for rainbow trout. He has undergone training programs conducted by the Fisheries Department in trout culture and breeding.

GHULAM HUSSAIN

In 2008, with assistance from the State Government, Mr Hussain constructed an earthen raceway measuring 60 by 30 square feet. He stocks it with rainbow trout fingerlings (5-10 inches in size) at a rate of 2,000 per raceway,

by purchasing the fingerlings from the Fisheries Department at Rs 20 per seed. The fish are fed based on their biomass, within a range of 0.5% to 2% of their body weight. Water quality parameters are regularly monitored by Fisheries Department officials. The culture period fo r rainbow trout lasts approximately two years. Mr Ghulam Hussain employs batch-wise stocking and partial harvesting. The size of the fish at harvest can reach up to 1.5 kg, with an annual harvest ranging from approximately 0.1 to 0.5 tonnes of table fish. By using batch-wise stocking, he can ensure a continuous harvest throughout the year. The harvested fish are sold at a rate of Rs 800 per kg.

An earthen raceway offers the benefit of lower capital costs compared to concrete raceways. Due to the pond not being lined, there is a higher availability of natural feed, which leads to faster fish growth rates.

FUTURE PLAN

The Union Territory of Ladakh has chosen to brand its trout as organic fish and market it both within and outside the region. Mr. Ghulam Hussain plans to seize this opportunity and expand his farm to increase production.

PROFILE

Education: Matriculation

District: Kargil

UT: Ladakh

Fisheries Activity: Grow-out culture of Rainbow trout in raceways

Year of Establishment: 2008

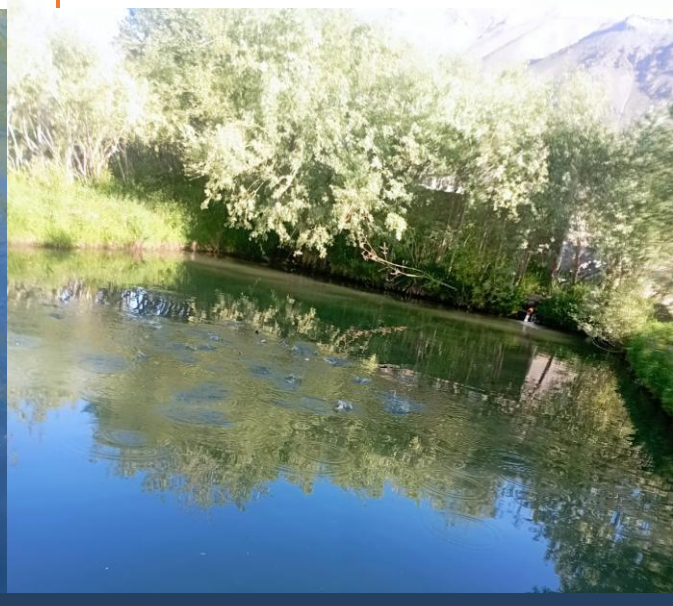
Funding and Technical Intervention: State Fisheries Department (2008)

Production (FY 2023-24): 300 kg

Turnover (FY 2023-24): ≈ Rs 2.4 lakh

Employment Generated: 2

+91 9906844653/
+91 9797243538



SEAWEED FARMING: WOMEN WEEDS OUT UNEMPLOYMENT

A tale of success from Lakshadweep

The saga of Lakshadweep seaweed enterprises development started with the farming trials by the ICAR-CMFRI and the joint efforts with the Lakshadweep Administration in up-scaled trials, capacity building of potential entrepreneurs and consultations with the industry. Taking forward the ICAR-CMFRI's research revelation on potential of seaweed enterprises in Lakshadweep's economy, the TSC Purple Turtle Pvt Ltd (TPTPL), Tuticorin, tasted grand success in commercial scale pilot seaweed farming during 2022-23 season in terms of production, productivity and the provision of livelihood to the local folks. The CMFRI's guidance under the NICRA of the ICAR and the support and facilitation by the Lakshadweep

ICAR-CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

Administration has been the pillar of strength in this success.

TPTPL carried out its commercial scale pilot seaweed farming in Chetlath island from September 2022. Initially, 6 plots (each stocked with 100 tube nets of 10 m length seeded with Gracilaria edulis, an indigenous edible seaweed) were established in Chetlath lagoon. Within 45 days, the seed biomass of 3 tonnes yielded a harvest of nearly 15 tonnes. The entire harvest was used to expand the farm horizontally, increasing the farm size to 30 plots by the end of November 2022. Subsequent harvests in every 35 days were used for horizontal expansion in Chetlath, Kiltan and Kadmat.

IMPACT AND RECOGNITION

Twenty women belonging to different SHGs of Chetlath island directly benefitted from the programme.

The project generated nearly 3000 man-days during the 8-month culture period, with an average daily earning of Rs 380 per person. The women SHGs got a golden opportunity to get trained on seaweed farming. The SHGs have included seaweed farming and value addition in their business plan. The success of this venture caught the attention of the Honourable President of India Smt. Droupadi Murmu during her visit to the Lakshadweep islands in April 2023. Subsequently, a delegation of the women beneficiaries of the seaweed enterprise development programme were invited for a meeting with her on 19th April 2023 at Kavaratti.

PROFILE

Collaborators: ICAR-CMFRI, TPTPL and NICRA

Islands (Project site): Chetlath, Kiltan and Kadmat

UT (Project site): Lakshadweep

Fisheries Activity: Seaweed culture

Technical Intervention: ICAR-CMFRI

Employment Generated (FY 2022-23): 3000 man-days in 8 months

+91 4842394357 /12

(ICAR-CMFRI)

COOPERATIVE DRIVES SUCCESS IN FISHERS AND AQUACULTURE

A tale of success from Madhya Pradesh

Prathmi Saraswati Machua Sahakari Samiti is a well-recognized Fisheries Cooperative Society in Ukwa Village of Madhya Pradesh. Established in 2006, the society has been actively engaged in fisheries-related activities, benefiting local fishermen and fisherwomen. Currently, the society has 42 employees. The Cooperative has played a crucial role in facilitating financial assistance to its members through government schemes like GAIS and welfare schemes and bank loans through KCC, fish seed production and supply, and infrastructure development such as kiosks and marketing centres.

PRATHMI SARASWATI MACHUA SAHAKARI SAMITI

Prathmi Saraswati Machua Sahakari Samiti has developed and manages a fish seed supply chain. In FY 2022-23, it supplied 38.00 lakhs of fish seed to its members. Additionally, the cooperative facilitated its 30 members to avail loans worth Rs 30 lakh till FY 2022-23. The cooperative is also involved in fish seed stocking in reservoirs viz. Hudinala Jalasay (12 ha) and Amananala Jalasay (37 ha) under a 10-year lease. To enhance market linkages, the society established a Fish Kiosk having a daily producttion capacity of 10 quintals in 2022-23 with the total outlay of Rs 10 lakh. The Society also initiated monthly wholesale marketing of raw materials to support local fish farmers. The cooperative promotes modern prawn cultivation, integrated farming, Pangasius culture to improve productivity and income generation for its members.

IMPACT AND RECOGNITION

Prathmi Saraswati Machua Sahakari Samiti emphasizes capacity building through exposure visits, awareness programs, and financial literacy training among its memebers. More than 100 ftakeholders have benefitted through this. Recognising their achievement in fisheries sector, Prathmi Saraswati Machua Sahakari Samiti was awarded as the Best Fisheries Cooperative Society/ FFPO/ SHG by MoFAHD, GoI on World Fisheries Day-2023.

PROFILE

Contact Person: Karuna Barve

Designation: President

District: Balaghat

State: Madhya Pradesh

Fisheries Activity: Fish seed production, grow-out fish and prawn culture, supply of input materials (seed, feed and net/ gears)

Year of Establishment: 2006

Employment Generated: 51

+91 9752762026

AESTHETICS BUSINESS AND AQUAPRENEURSHIP HAND IN HAND

A tale of success from Maharashtra

Mrs Amita Badal Dhawan of Holkarwadi Village is running a beauty parlour business. With the help of district fisheries officials and along with her husband Mr Badal Dhawan, she set up a small scale biofloc fish culture system (7 tanks of 4 m diameter and 1.5 m height) on 0.28 ha area. The total project cost was

During Covid-19 lockdowns, she struggled to make the business sustainable and could not depend solely on it for livelihood. During that period, she realised that 'fisheries and aquaculture' is considered as a profitable business and it would provide her an alternative livelihood opportunity.

AMITA BADAL DHAWAN

Rs 7.5 lakh of which Rs 4.5 lakh was received as subsidy under PMMSY.

Mrs and Mr Dhawan keep the day to day activities of the fish culture system under their close watch. They ensure that optimum water quality parameters (DO, turbidity, ammonia etc.) are maintained in the tanks by daily observation, continuous aeration, biofloc management and regular cleaning of tanks. Initially they cultured Tilapia in bifloc tanks. Tilapia seed of 0.2 g were stocked at the rate of 1200 per tank and cultured for 7 months. The size at harvest was 400-450 g. At present they culture Pangasius in biofloc tanks. The culture period for Pangasius is more than 8 months and the stocking density is 1100 per tank. They get the harvest at 800 g size from the initial size of 3-4 inch Pangasius seed. The survival rate for tilapia was 85% whereas for Pangasius it was 80%. The harvest is sold through local dealers in live condition at the rate of Rs 120 per kg for both tilapia and Pangasius.

FUTURE PLAN

Mrs Amita and Mr Badal Dhawan are happy today that they are leading a comfortable life because of this aquaculture initiative. They plan to expand the business further using larger tanks (6 m diameter) and to venture into aquarium fish breeding.

PROFILE

Education: Under Graduation

District: Ahmednagar

State: Maharashtra

Fisheries Activity Grow-out culture (Tilapia and Pangasius) in biofloc tanks

Year of Establishment: FY 2020-21

Technical Intervention: District office of DoF, Maharashtra

Scheme: PMMSY

Production (FY 2021-22): 5 tonnes

Turnover (FY 2021-22): Rs 5 lakh

Employment Generated: 4

+91 8308706879

A MEDICAL REPRESENTATIVE TURNS INTO FISH FARMING

A tale of success from Maharashtra

Mr Haresh Baliram Bangalekar from Bagmala village of Maharashtra is a medical representative. Since he is from the fisher community and has interest in aquaculture, he ventured into biofloc fish culture in 2021 in addition to the pharmaceutical marketing. He established a fish farm having a small scale biofloc culture system (7 tanks of 4 m diameter and 1.5 m height) each having the capacity of 10000 litre under PMMSY.

The total project cost was Rs 7.5 lakh of which Rs 3 lakh was received as subsidy under PMMSY

HARESH BALIRAM BANGALEKAR

Mr Bangalekar practices Asian sea bass culture in the biofloc tanks. The tanks are stocked at the rate of 300 fish seed (2.5-inch size) per tank. After 7 months of rearing, the fish reaches upto 700-750 g size. The fish is sold locally by his mother at the rate of Rs 400-600 per kg depending on the size of the fish. Mr Haresh Baliram Bangalekar maintains

separate nursery and grow-out culture so that he is able to do batch wise culture throughout the year and achieve better growth for the fish. For grow-out fish culture, he constructed a larger capacity cement tank (1 lakh litre capacity). The nursery rearing of the Asian sea bass seed is done for 6 months in the 10000 litre capacity biofloc tank after which the juveniles are transferred to the larger capacity tank for grow-out culture at the rate of 2000 per tank. Here, it will be cultured for another 5 months. Mr Bangalekar is expecting a size of 1-1.5 kg per fish at the time of harvesting.

IMPACT

Mr Haresh Baliram Bangalekar manages his fish farm along with his pharmaceutical sales career. This helps him to generate better income and support his family.

PROFILE

Education: B. Com.

District: Raigad

State: Maharashtra

Fisheries Activity: Sea bass culture in biofloc tank

Name of Establishment: Sara Biofloc Fish Farm

Year of Establishment: 2021

Technical Intervention: DoF, Maharashtra

Scheme: PMMSY

Production (FY 2023-24): 750 kg

Turnover (FY 2023-24): Rs 3.75 lakh

Employment Generated: 1 direct and 6 indirect

+91 8605772055

SEED TO TABLE FISH: PROGRESS TOWARDS SUSTAINABILITY

A tale of success from Manipur

Mr Oinam Jenish Singh of Khordak Village in Manipur is a fish farmer who is practicing aquaculture for last 20 years. He set up 4 ponds in 2013 in 2 ha area. and expanded the farm in 2019 and constructed additional 7 aquaculture ponds in 4 ha. The total project cost for the expansion was Rs 8 lakh and he received the financial assistance of Rs 86000 under BR scheme. He also availed loan from Manipur State Cooperative Bank Ltd for completing the project. Mr Singh has a hatchery for IMC seed production also.

OINAM JENISH SINGH

Mr Singh mainly practices integrated aquaculture of IMC along with vegetables and poultry. The stocking density of IMC and Common carp (100-150 g size) is maintained at the rate of 10000-12000 per ha. The stock is reared for 3 to 6 months depending upon the desired harvest size and market demand. The size at harvesting varies from 200 to 300 g. The produce is sold in local markets at the rate of Rs 250 per kg. The seed for the culture is produced from his own hatchery. The rest of the seed produced in the hatchery is marketed locally.

Mr Singh has also adopted the technology 'Short Cycle Aquaculture with Diversified Fish Species' propagated by the ICAR Research Complex for NEH Region.

RECOGNITION

Mr Oinam Jenish Singh secured first position in overall fish production in the 'Fish Fair cum Fish Crop Competition-2020' organized by DoF, Manipur. He was also awarded as the 'Best Farmer from Manipur- 2021' by CoF (CAU), Lembucherra, Tripura.

PROFILE

Education: Higher Secondary

District: Bishnupur

State: Manipur

Fisheries Activity: Seed production and integrated fish culture

Year of Establishment: ≈20 years ago

Technical Intervention: DoF, Manipur and ICAR Research Complex for NEH Region

Scheme: BR

Production: 15-20 tonnes of grow-out fish and 50 lakh seed

Turnover: Rs 20 lakh

Employment Generated: 4

+91 9366827272

BUILDING FUTURE: AQUACULTURE CUM ANGLING

A tale of success from Meghalaya

Mr John Builder Kshiar from Umling village, Meghalaya ventured into fish farming about four years ago. His father was a fish farmer and had a culture pond of 0.1 ha area but the fish production was meagre. Mr Kshiar wanted to expand it, took assistance from the DoF, Meghalaya and underwent training in aquaculture. Later he received Rs 5.1 lakh as financial assistance of under the BR scheme for constructing a pond of 1 ha area. The total project cost was Rs 8.5 lakh. His farm has poultry, livestock and agriculture crops in addition to fish. The main fish species that he cultures are IMC, exotic carps and minor carps. The farm is secured from predators by fencing around

> Mr Kshiar does liming the pond once a month and manuring twice a month. This improves plankton growth in the pond and in turn increases natural feed availability for the fish.

JOHN BUILDER KSHIAR

the boundary.

Fish feed is made at farm level by mixing mustard oil cake and rice bran in the ratio of 1:1. He procures seed from hatchery owners within the State. The pond is stocked with IMC, exotic carps, and minor carps @ 7000, 3000 and 2000 per ha respectively. He harvests the pond once in a year. Since IMC has high market demand, he gets the sale price at Rs 300 per kg for IMC. The exotic carps and minor caprs fetch around Rs 200 and Rs 30 0 per kg. Most of the fish harvested is sold outside the State, mainly in Beltola, Assam.

IMPACT

Mr Kshiar offers recreational fishing activity in his fish farm Monday to Saturday which gives him additional income. The anglers are charged at the rate of Rs 300 to 500 per fishing rod. This has helped him to meet the daily operational expenditure of the farm. He plans to diversify the species cultured to high value species like walking catfish, scampi etc. in future.

PROFILE

Education: Master Degree

District: Ri Bhoi

State: Meghalaya

Fisheries Activity: Integrated fish farming of IMC, exotic carps and minor carps

Year of Establishment: ≈20 years ago

Technical Intervention: DoF, Meghalaya

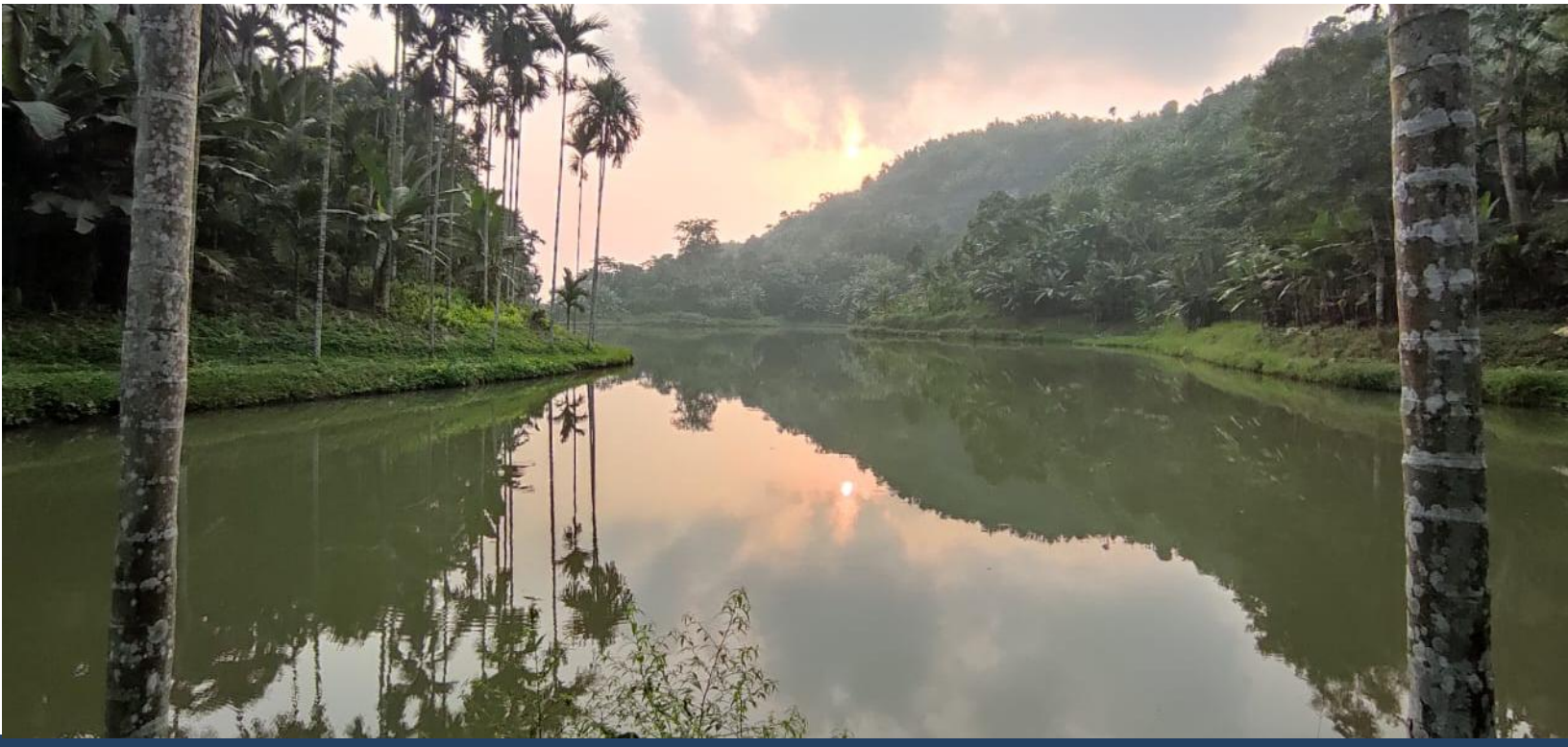
Scheme: BR Scheme (FY 2018-19)

Production (FY 2021-22): 1.05 tonnes

Turnover (FY 2021-22): Rs 2.62 lakh

Employment Generated: 3

+91 7005372534



AGRICULTURE TO AQUACULTURE: CULTIVATING FUTURE

A tale of success from Mizoram

Mr F. Laldingliana, a farmer from Champhai District, owns a 2-hectare plot of land in Tlangsam Village. This region is renowned for its fertile soil and ample water supply, making it ideal for fisheries and related activities. Before venturing into fisheries, Mr Laldingliana practiced mixed agricultural cropping. Recognizing the growing demand for fish and high-quality fish seed in the area, he decided to focus on producing premium fish seed. He participated in a training program organized by the District Fisheries Development Officer, where he learned advanced fish breeding techniques. This training enabled him to produce top-notch fish seed, primarily for IMC and exotic carps.

F. LALDINGLIANA

In FY 2017, he successfully constructed 19 ponds within a two-hectare area under the BR scheme. The total project cost was Rs 8 lakhs, with Rs 1.73 lakhs provided as financial assistance for the first year. The remaining Rs 6.27 lakhs was invested by himself. In 2020-2021, Mr Laldingliana established a finfish hatchery funded

under PMMSY with assistance from the Department of Fisheries, Mizoram. The project's total cost amounted to Rs 25 lakhs. He received a subsidy of Rs 15 lakhs, and contributed Rs 10 lakhs from his personal savings to cover the rest. The hatchery infrastructure includes an 80,000-liter water tank, a hatching pool, a spawning pool, and an egg collection chamber. His hatchery runs 30 breeding cycles each year. In each cycle, he uses 10 female and 30 male broodfish to produce 7.5 lakh fry. He sells the fish seed, which are 2-3 inches in size, at Rs 10 each, ensuring a stable and profitable business.

CHALLENGES AND IMPACT

Transitioning from agriculture to aquaculture required significant investment and expertise. Limited access to high-quality fish feed and technical knowledge posed challenges, but through self-learning and undergoing scientific training, Mr Laldingliana overcame these obstacles. Market fluctuations and seasonal demand variations also impacted sales, but by building strong relationships with local fish farmers and market vendors, he maintained consistent business operations. His vision includes integrating sustainable aquaculture practices, improving water management systems, and expanding market linkages beyond Mizoram. His enterprise has also generated employment, directly employing five men and three women from the local community. Recognized for his contributions, he was awarded as the Best Fish Farmer of North Eastern Indian States by NFDB on National Fish Farmers Day, 2019.

PROFILE

Education: Bachelor's Degree

District: Champhai

State: Mizoram

Fisheries Activity: Finfish hatchery, grow-out ponds

Year of Establishment: 2017

Scheme: BR, PMMSY

Production (FY 2023-2024): 3 lakh fingerlings

Employment Generated: 8

+91 8414962807

SEIZING THE OPPORTUNITY: FISH FEED MANUFACTURING

A tale of success from Nagaland

Fisheries and aquaculture is vital to the livelihoods of numerous communities in Nagaland. Traditional fishing techniques and aquaculture practices have been part of their way of life for centuries. Recent initiatives have further enhanced the potential of this sector, positioning it as a significant contributor to the state's economy. To support the increasing number of fish farmers in the State and to benefit economically, Mr Ashika Sema from Nagaland ventured into the fish feed manufacturing business in 2024. As a fish farmer himself, he had a clear understanding of the importance and demand for fish feed in the state. With assistance from the Directorate of Fisheries and Aquatic Resources, Nagaland, he received financial aid of Rs 18 lakh under the PMMSY scheme. This, combined with his own investment, enabled him to construct a mini fish feed mill with a daily capacity of 2 tonnes.

ASHIKA SEMA

Currently, the unit manufactures both prawn and fish feed in pelleted form using an extruder. Mr Sema sources raw materials locally, including oil cakes, corn flour, soybean cake, and small-sized dry fishes. Other ingredients such as amino acids (like lysine powder), vitamins, and minerals are procured from Hyderabad, Jaipur, and Mathura. The fish feed is sold within Niuland District and neighboring districts, particularly in Niuland, Dimapur, and Chumu localities. The prices are as follows: Rs 1000 for 20 kg of 2 mm diameter feed, and Rs 1400 for 30 kg of both 3 mm and 4 mm diameter feed.

Mr Ashika Sema leverages social media platforms such as WhatsApp and Facebook to advertise his fish feed products, thereby boosting sales.

FUTURE PLAN

Mr Ashika Sema is facing challenges with inconsistent electricity supply. Due to intermittant power outages, he is unable to utilize the mini fish feed mill upto its maximum daily capacity. To address this issue, he plans to purchase and set up an electricity generator.

PROFILE

Education: 12th Standard

District: Niuland

State: Nagaland

Fisheries Activity: Fish Feed Production Unit

Year of Establishment: 2024

Scheme: PMMSY

Production (August-December 2024): 80 tonnes

Employment Generated: 8

+91 9612881711

HOBBY TURNED BUSINESS: ORNAMENTAL FISHERIES

A tale of success from Nagaland

Mr Yarangjang Imchen began his journey in the IT sector but found his passion in ornamental fish breeding. In 2021, this self-taught entrepreneur founded Imchen Aquatics as a side business, starting with just one aquarium fish tank. Today, his startup has expanded to over 150 tanks, becoming a prominent name in the ornamental fish industry. The venture, located in Dimapur, Nagaland, specializes in breeding a variety of ornamental fish such as guppies, zebra fish, goldfish, red-cap oranda, lemon-head oranda, oscar, albino oscar, neon tetra, black neon tetra, and various crustaceans. In addition to fish breeding, Imchen Aquatics also offers services like aquascaping, filtration systems, and custom aquarium tank assembly.

YARANGJANG I

Mr Imchen sources ornamental fish broodstock from Bengaluru, Kolkata, Kerala, Indonesia, and Malaysia. Last year, he set up an additional ornamental fish rearing unit with the fincancial assistance of Rs 1.80 lakh received under PMMSY. The tanks were later convereted to RAS units. The fish seed are reared in these RAS tanks. He

meticulously monitors the water quality, ensuring optimal temperature, dissolved oxygen, pH, ammonia levels, and turbidity and checks the plumbing and filtration system to ensure uninterrupted water flow. The ornamental fises are sold to individuals and aquarium shopkeepers within and around the neighboring districts, averaging a sales of 1,500 fish per month. The startup has recently entered the commercial fish farming industry, self-funding its venture. It's concentrating on tilapia and Australian redclaw crayfish, utilizing RAS technology. The facility currently operates with 8 RAS grow-out tanks for Australian redclaw crayfish and 4 RAS grow-out tanks for tilapia, with an annual production estimate of 65 kg of crayfish per tank and 175 kg of tilapia per tank.

CHALLENGES AND OPPORTUNITIES

One significant challenge Mr Yarangjang Imchen faces is the cold winters in Nagaland, which last for 4-5 months. Since most ornamental fish are tropical, a good heating system is essential to keep the tanks warm during winter. Currently, he uses immersion heating rods, which increases electricity costs and is not entirely effective, leading to fish mortalities in winter. He observes that the closed systems like RAS require constant monitoring and a reliable power backup in addition to regular cleaning of the plumbing and filtration system, and weekly draining of bottom sludge from the tanks to prevent diseases.

> Despite challenges, Mr Imchen believes that RAS offers numerous advantages, including a fully controlled environment for the fish, low water usage, efficient energy and land use, optimal feeding strategy, easy grading and harvesting of fish, full disease control, and high production from a small area.

PROFILE

Education: BCA

District: Dimapur

State: Nagaland

Fisheries Activity: Ornamental fish culture

Year of Establishment: 2021

Technical Intervention: Directorate of Fisheries and Aquatic Resources, Nagaland

Scheme: PMMSY

Production (FY 2023-24): 5.5 lakh ornamental fishes

Turnover (FY 2023-24): Rs 6.5 lakhs (ornamental fish culture)

Employment Generated: 4

+91 7005660066

REAPING REWARDS BY MOVING TO INTEGRATED AQUACULTURE

A tale of success from Odisha

Mr Sarat Kumar Rout, a resident of Balianta block of Khordha was a successful paddy seed producer and grower. In 2015, he diversified his farming activity into grow-out fish culture along with paddy farming. He also established a carp hatchery in 2019-20 with the technical guidance of KVK-Khordha, ICAR-CIFA. He underwent training programmes and exposure visits organised by ICAR-CIFA for strengthening his knowledge in fish breeding and seed production. Later, he established a biofloc based seed rearing facility and integrated fish farming with poultry rearing. These aquaculture and allied activities were developed through the subsidy assistance he availed under different schemes of State Plan of Odisha, which are (i) Support to private fish hatcheries for adoption of early breeding and year round seed production technology and for hatchery accreditation and seed certification, (ii) Bio-floc

SARAT KUMAR ROUT

technology for shrimp and fish farming of 90 cubic meter capacity (Brick masonry) under the scheme 'Promotion of intensive aquaculture' and (iii) Promotion of integrated farming.

Mr Rout has installed automated sensors in carp hatchery to regulate the water supply to the hatchery and to reduce water wastage. Excess water from the hatchery (from spawning and breeding pool) is utilized in watering the vegetable crop. The poultry farm waste is utilized for fertilising the pond and manuring the agriculture crop. Mr Rout practices both seasonal and early breeding of IMC which helps him to produce seed even in off-season.

> He replaces at least 20% of broodstock every year to reduce inbreeding.

IMPACT AND RECOGNITION

Mr Sarat Kumar Rout supplies fish seed to more than 500 farmers covering 7 districts of Odisha. His farm is used for conducting field trials by KVK-Khordha and ICAR-CIFA. He was felicitated as progressive integrated farmer by KVK-Khordha, ICAR-CIFA on World Food Day, 2021.

PROFILE

Education: 12th Standard

District: Khordha

State: Odisha

Fisheries Activity Fish breeding, Seed production, Integrated fish farming

Name of Establishment: Brothers' Hatchery and Integrated Farm

Year of Establishment: FY 2018-19

Technical Intervention: KVK of ICAR-CIFA

Scheme: State Plan of Odisha

Production (FY 2022-23): 110 crore spawn, 35 lakh fry, 10 lakh fingerlings, 4.0 quintal yearling

Turnover (FY 2022-23): Rs 25 lakh

Employment Generated: 6

+91 9439851028

INSTITUTIONAL INTERVENTION DOUBLES FARMER'S INCOME

A tale of success from Odisha

Mr Bishnu Charan Nayak is a farmer who practices horticulture, livestock rearing and fish. He has a pond (1 acre) in his farm. Till 2016, this pond remained under-utilised through major part of the year owing to lack of his knowledge and skill which are needed for scientific fish farming. He used to practice fish farming traditionally using locally available resources, with yield levels around 4 quintal/acre/year. In this juncture, ICAR-CIFA under their 'Farmer First project' provided him technological support as well as skill training in scientific fish farming.

BISHNU CHARAN NAYAK

Under the guidance of scientists from ICAR-CIFA, Mr. Nayak was encouraged to adopt composite carp culture in his pond, which included Indian Major Carps (IMC), Silver Carp, Grass Carp, and Common Carp. He underwent expert training to ensure success. To estimate the survival rate and potential yield of IMC, soil and water quality analyses were

performed. The pond's water level was consistently maintained at an effective depth of 2 meters throughout the year to sustain optimal stocking density. An integrated fish farming system combining horticulture, poultry, and dairy was developed. Following ICAR-CIFA's recommendations, Mr. Nayak stocked his pond with larger, high-quality Carp fingerlings at a rate of 8000 per hectare. He provided supplementary feeding with pelleted feed at 2% of body weight, applied lime according to the water pH, and took other measures to maintain favorable conditions.

IMPACT AND RECOGNITION

By implementing this practice, Mr Nayak now gets a productivity of 9 quintals/acre/year from aquaculture. As a result, his gross income increased by approximately 163% compared to that of previous years.

In 2022, Mr Bishnu Charan Nayak was conferred with 'Innovative Farmer Award' under the theme 'Doubling Farmers Income' by ICAR-NAARM on its 47th foundation day celebration.

PROFILE

Education: 10th Standard

District: Balianta

State: Odisha

Fisheries Activity: Integrated grow-out fish culture

Year of Establishment: 2011

Technical Intervention: ICAR-CIFA

Project: Promoting improved agriculture and allied sector technologies through 'Farmer FIRST Programme (FFP)'

Project Period: 2016-2023

Production (FY 2021-22): 9 quintals

Turnover (FY 2021-22): Rs 1.26 lakh

+91 9668312120

GOVERNMENT BACKED RAINBOW TROUT REVOLUTION

A tale of success from Sikkim

Mr Samdup Bhutia, a resident of Upper Sreebadam is a rainbow trout farmer and an experienced trout breeder. He started rainbow trout farming in 2012 and received financial assistance for the construction of 1 raceway unit (60x9x4 ft3) along with 1st year inputs (seed and feed) by the DoF, Sikkim. Later in 2017, he started a small scale hatchery (6 troughs and 24 trays) for the production of trout seed under BR scheme. He has also set up another two raceway tanks (57x7x4 ft^3) under BR scheme. In FY 2021-22, he got sanctioned 1 raceway and a hatchery under PMMSY. At present he has 6 units of raceways for grow-out trout culture of which 2 are completely self-funded.

SAMDUP BHUTIA

Mr Bhutia sources clean water for the farm from uphill. A major portion of the fingerlings produced in his hatchery are bought by the State Fisheries Department itself and a small portion by the local farmers. A carefully selected portion will be raised as brooders. The raceways are usually stocked with the farm produced fingerlings at the rate of 2000 (minimum of 30 mm size) per unit. The culture period for rainbow trout is approximately 10-12 months. At times, the customer may demand to get small fish of 400 g size. The table size fish usually weigh from 1.25 kg to 1.5 kg and fetches Rs 800 per kg. Since the locality is a tourist attraction, most of the end consumers are tourists. Feed procurement for the fish is done through the linkage with Feed Companies in Andhra Pradesh.

Partial harvesting is practiced depending on the size of fish and consumer demand.

RECOGNITION

Mr Samdup Bhutia serves as the Vice President of "Trout Rearing Cooperative Society', Upper Sribadam. He was awarded as the Best Fish Farmer-2015 by the CoF, Lembucherra, Tripura during the National Fish farmers Day-2016 celebrations.

PROFILE

Education: 8th Standard

District: Soreng

State: Sikkim

Fisheries Activity: Hatchery and grow-out culture (raceway) of Rainbow trout

Year of Establishment: 2012

Technical Intervention: DoF, Tripura, CoF, Lembucherra and ICAR-DCFR

Scheme: DoF, Sikkim, BR scheme and PMMSY

Production (FY 2021-22): 4.5 tonne fish and 5.32 lakh fingerlings

Turnover (FY 2023-24): Rs 56 lakh

Employment Generated: 4

+91 9735950203

RISING TO NEW HEIGHTS: BHARAT RHINO BIOTECH

A tale of success from Tamil Nadu

Bharath Rhino Biotech is a leading manufacturer, supplier and exporter of feed supplements and aqua care products for commercial scale fish and shrimp culture. The firm also offers services related to disease diagnosis and treatment, consultancy in farm development and operations. The firm is located in Thanjavur. Their services cover both Tamil Nadu and Andhra Pradesh. Dr M. Srinivasan is the founder, CEO and scientific advisor for the company. Mr Srinivasan constantly updates his knowledge and skill by undergoing training.

M. SRINIVASAN

Their products include regular seed stage diet, regular adult stage feed supplement, rescue feed supplement against bacterial diseases, pond fertility management products, water quality management products, rapid screening test kits etc. for fish and shrimp. The firm signed a MoU with TNJFU in 2019 for research and development activities viz., feed

formulation research projects, field trials, etc. About 80% of manufacturing process of Bharath Rhino Biotech is outsourced from third party manufactures as a cost cutting strategy. Establishing their own processing plant is under development. The company has also adopted franchisee model with venture capital investment. It collaborated with Jagvaas Biologicals Pvt Ltd to jointly develop commercially viable products. Indo-Asia Aqua-Clinic, another venture by Dr Srinivasn provides on-site customer care for disease management with technical support.

IMPACT AND RECOGNITION

Awareness programmes, training, ToTs, exposure visits, workshops, etc. are organized regularly by Bharath Rhino Biotech for fishers, students, departmental officials etc. Considering the achievement of the firm, it was awarded as Best Fisheries Entrepreneur/ Proprietary Firm by MoFAHD, GoI on World Fisheries Day-2022. The firm recently signed a MoU with NIFTEM-T, GoI to become partner in their industrial projects related to Fisheries and Aquaculture.

PROFILE

Education: Ph.D. Aquaculture

District: Thanjavur

State: Tamil Nadu

Fisheries Activity: Manufacture and supply of feed supplements and aqua care products for fish and shrimp culture

Name of Establishment: Bharath Rhino Biotech

Year of Establishment: 2017

Turnover (FY 2023-24): Rs 13.20 lakh

Employment Generated: Direct-7

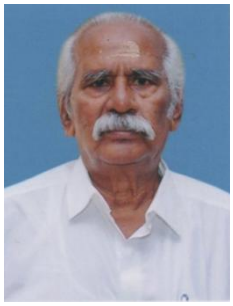
Indirect-15

+91 9080934885

VOYAGING TOWARDS ENERGY CONSERVATION IN FISHING VESSELS

A tale of success from Tamil Nadu

SM Engineering Works is a marine machinery service firm started in 1962 by Mr S. Murugan. The company has ISO 9001:2015 certification. The firm started as a company which involves in 'Maintenance Repair and Overhaul' of marine engines, gearboxes, marine power take-off (PTO) pumps, sea water pumps, marine generator sets etc. and maintenance contracts for fishing boats. With the research and development activities in their in-house facility, the company later developed its own marine PTO pumps, sea water pumps, propeller shaft, propeller stern tube, rudder shaft and other associated accessories.



S. MURUGAN

Gradually it ventured into constructing customized seaworthy fishing vessels. The firm has been empanelled by the Department of Fisheries and Fishermen Welfare, Tamil Nadu as an authorized boat building yard for the works under BR Scheme sub-component 'Subsidy assistance to traditional fishers for construction of new deep sea tuna fishing vessels'. Under the Scheme, the firm built 16 long liners (18-24 m) for harvesting deep sea tuna with unit cost of Rs 80 lakh.

IMPACT AND RECOGNITION

SM Engineering works is a pioneer in launching marine hydraulic gearboxes and heavy-duty marine diesel engines in Indian fishing sector. The firm is on the path of developing marine engines with fuel options like CNG, LNG and methanol in place of fossil fuels like petrol, diesel and kerosene which will be cost effective and improve energy efficiency. The company has a network of more than 50 units covering India's maritime States and UTs. In recognition of their achievement, SM Engineering Works was honoured with Best Enterprise/ Pvt Ltd/ Partnership Firm/ LLP Award by MoFAHD on World Fisheries Day-2022.

> The company has also taken up a project 'ELMA 23' to develop electricity driven marine engines for fishing boats.

PROFILE

Education: Pre-University Certificate

District: Kanyakumari

State: Tamil Nadu

Fisheries Activity: Boat building, manufacturing and servicing of marine engines and accessories

Name of Establishment: S.M. Engineering Works

Year of Establishment: 1962

Production (FY 2021-22): 7 Deep-sea fishing vessels

Turnover (FY 2021-22): Rs 9.52 crore

Employment Generated: Direct-150, Indirect-300

+91 9488941025/
+91 4652269500

EMPOWERING THE FISHERS: COOPERATIVE SAGA

A tale of success from Telangana

The Fishermen Cooperative Society Ltd, Mylaram of Rayaparthy, operates in Mylaram Village, Te langana and has 169 members. The FCS is collaborating with the State Fisheries Department under NCDC sanctioned IFDS scheme for seed procurement, infrastructure development etc. It has supplied 15 mopeds and 2 luggage autos, both with vending units to its members under IFDS.

The FCS procures fish seed and prawn seed under the State Government Scheme 'Supply of Fish Seed and Prawn Juveniles on 100% Grant'. Stocking of pond (20 acre) and Mylaram Balancing Reservoir (1500 acre) with fish and prawn seed are being done annually through the State Fisheries Department. Monitoring the fish growth and disease

FISHERMEN COOPERATIVE SOCIETY LTD, MYLARAM

surveillance are done through trial netting by FCS-members. They use the nets of 50 to 100 mm mesh size to prevent the catching of under sized fish. The FCS has also taken up fish seed production in pens to become self-sufficient for stocking in the existing water bodies.

IMPACT AND RECOGNITION

The FCS supplies fresh fish and prawn directly to Kolkata Fish Market to get better profit. This was made possible by an exposure visit organised by the society to get direct link in Kolkata. Another exposure visit to KVK, Mamnoor, Telangana and subsequent training equipped the members in preparation and marketing of fish value added products. The value added fish products produced by the members are being sold in local markets and in Hyderabad. The Society bagged the award for Best Fisheries Cooperative Society/ FFPO/SHG by MoFAHD, GoI on World Fisheries Day-2022.

> These activities helped the members of the FCS to improve their technical skill and in turn created a hike in their per capita income, from Rs 9000 to Rs 21935, after the implementation of the scheme.

PROFILE

Contact Person: Boini Kumar

Designation: President

District: Warangal

State: Telangana

Fisheries Activity: Fish seed and table fish production, fish seed and feed supply, prawn cultivation, supply of fishing gears, marketing of fish, infrastructure development and welfare activities

Year of Establishment: 1970

Scheme: Integrated Fisheries Development Scheme (IFDS) and 'Supply of Fish Seed and Prawn Juveniles on 100% Grant'

Funding: State Government

Production (FY 2023-24): 75 tonnes of table fish and 8 tonnes of prawn

Turnover (FY 2023-24): Rs 60-70 lakh

Employment Generated: 9 direct and 90 indirect

+91 6303339812

MAJUMDAR'S MAGIC IN INTEGRATED AQUACULTURE

A tale of success from Tripura

Mr Biswajit Majumder is a successful farmer from Sabroom Nagar-Panchayath. He has established a Farmers Club in his village. Mr Majumdar integrates aquaculture, agriculture, horticulture, apiculture and piggery in his farm. He is an important link between the local farmers and scientists of the ICAR and KVK in his locality.

BISWAJIT MAJUMDER

He makes fish feed using pig manure, cow dung and mustard oil cake sourced from the farm. The residue from making mustard oil from his mustard crop is being used to prepare the mustard oil cake.

Mr Majumder has 8 ha area for fish culture, of which 6.4 ha is leased-in land. The total number of ponds in this area is 13. The financial requirement of the fish farm was met with own fund and the loan he availed from Punjab National Bank under KCC scheme. The main species cultured are IMC, exotic carps (Common carp, Grass carp and Silver carp) and Puti (Puntius sp.). Stocking is done twice a year and

partial harvesting is done three to four times based on the market demand. The size at stocking is 7-10 g for IMC and exotic carps and 5-7 g for Puti. The stocking density of IMC is 2500-3000 per bigha. The fishes are harvested at the size of 150-200 g for IMC and common carp, 400-500 g for silver carp and grass carp and 100-150 g for Puti. In 2024, Mr Majumder got sanctioned Rs 15 lakh as subsidy under PMMSY for establishing a finfish hatchery which is under construction. In addition to fish farming, Mr Majumder practices poultry (chickens and ducks) farming and swine farming.

IMPACT AND RECOGNITION

Mr Biswajit Majumdar has delivered many awareness classes on aquaculture. He is also a member of Regional Council to look after the work of NPSSFW in the North-East and participated in North-East Regional Meeting of NPSSFW held in 2021 at Imphal. He was awarded Pandit Deendayal Upadhyay Antyodaya Krishi Puruskar for Zone VII (comprising of the Eastern States of Tripura, Nagaland, Manipur, Mizoram and Meghalaya) in 2016.

PROFILE

Education: Higher Secondary

District: South Tripura

State: Tripura

Fisheries Activity: Integrated fish culture

Scheme: KCC, PMMSY

Year of Establishment: 2007

Technical Intervention: KVK, South Tripura, DoF, Tripura and ICAR Centre, Tripura

Production (FY 2023-24): 35 tonnes

Turnover (FY 2023-24): Rs 60 lakh

Employment Generated: 10

+91 9612117277/
+91 9089576358

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ZERO-POINT SIZE FISH CULTURE: DECREASE IN MORTALITY

A tale of success from Uttar Pradesh

Mr Sujeet Kumar Chaudhary was an engineer prior to venture into aquaculture. He worked a couple of years for different multi-national companies in USA before returning to India in 2016. In FY 2019-20, he established a fish farm in Bawan Buzurg Balla village. Later he received 40% subsidy under PMMSY (FY 2021-22) for constructing another pond of 2 ha for the total project cost of Rs 8.4 lakh. At present he focuses on semi-biofloc culture of Pangasius, Singhi and IMC in ponds spread over 18 ha.

SUJEET KUMAR CHAUDHARY

The high density stocking in nursery pond is done usually in the month of May with 1 g sized fingerlings and is reared up to November till they reach 200 g. This size is called as zero-point size. Later these 'zero-point sized fishes' are transferred to grow-

out ponds and reared up to March till the fishes reaches 0.8 to 1 kg size. Once the nursery ponds are cleared in November, those are restocked with 2nd batch of fingerlings. This enables him to reduce the mortality in grow-out ponds and to get 2 crops per year. The water from the ponds is re-utilized to irrigate nearby paddy fields. Mr Chaudhary buys fish seed and feed from certified hatcheries and manufacturers after analysing them for any signs of stress. IoT devices likes sensors are used to monitor and control water quality parameters automatically and to monitor and predict fish growth. The fish is distributed to self owned and other retail units, by farm-owned vehicles.

> The fish, especially the fingerlings are fed with BSF larvae as a source of protein, organic growth supplements and probiotics.

IMPACT AND RECOGNITION

Mr Chaudhary has started private co-operative farming by on-boarding 5 economically backward farmers. He has also ventured into shrimp farming in saline waters with the assistance of the DoF, Uttar Pradesh. Mr Sujeet Kumar Chaudhary was awarded as the Best Fish Farmer (Inland) by MoFAHD, GoI on World Fisheries Day-2022.

PROFILE

Education: B. Tech.

District: Raebareli

State: Uttar Pradesh

Fisheries Activity: High density semi-biofloc grow-out fish culture (IMC, Pangasius, Singhi, shrimp)

Name of Establishment: V2S Aqua Pvt Ltd

Year of Establishment: FY 2019-20

Technical Intervention: DoF, Uttar Pradesh

Scheme: PMMSY (FY 2021-22)

Production (FY 2023-24): 317 tonnes of Pangasius, 450 tonnes of IMC, 800 kg of Singhi and 11 tonnes of Shrimp

Turnover (FY 2023-24): Rs 8.80 crore

Employment Generated: 54

+91 9818647551

SUSTAINABILITY THROUGH SPECIES & SYSTEM DIVERSIFICATION

A tale of success from Uttarakhand

KAPIL TALWAR

Mr Kapil Talwar is a native of Khatima in Uttarakhand. His father started 'Talwar Farms' as an agriculture farm in the 1960s. In 2020, Mr Kapil Talwar started aquaculture in this farm. He set up the district's largest biofloc fish farm, under PMMSY in FY 2020-21, with the technical guidance of DoF, Uttarakhand. Under the scheme, he received 40% of the total project cost i.e. Rs 20 lakh as subsidy. The biofloc unit has 50 tanks of 4m x 1.5m (diameter x height) size. He currently cultures Pangasius and Koi carp in biofloc tanks with the survival rate of 85-90%. Implementing biofloc technology for fish culture has reduced water consumption by 50% and feed consumption by 40% compared to traditional fish culture. Additionally, Mr Talwar does Murrel culture in 2 ponds of area of 10 m x 10 m. The culture period for Pangasius and Murrel is roughly 4 and 8.5 months respectively and it reaches 400 g (plate size) and 950 g respectively upon harvest.

In 2023, Mr Talwar ventured into ornamental fish breeding, mainly goldfish. He uses small PVC tanks for accommodating and breeding ornamental fishes in this unit. The Talwar Farms has also done a pilot scale processing and distribution of rainbow trout in Delhi as part of their Farm to Home program. The gutted rainbow trout procured from Himachal Pradesh was vacuum packed and sold under this initiative.

IMPACT AND RECOGNITION

In recognition of his efforts, Mr Kapil Talwar was selected as the Best Farmer (Fish Farming) (2020-21) in the District by 'Support to State Extension Programmes for Extension Reforms (ATMA) scheme'. He was also presented with SDG Goalkeeper Award 2021 (Thematic area: Sustainable livelihood) instituted by CPPGG, Department of Planning, Uttarakhand in collaboration with UNDP.

PROFILE

Education: B. A.

District: Udham Singh Nagar

State: Uttarakhand

Fisheries Activity: Grow-out fish culture and ornamental fish breeding

Name of Establishment: Talwar Farms

Year of Establishment (Fisheries activity): 2020

Technical Intervention: DoF, Uttarakhand

Scheme: PMMSY (FY 2020-21)

Production (FY 2023-24): 225 kg Koi per tank, 300 kg Pangasius per tank and 800 kg Murrel per pond

Turnover (FY 2023-24): Rs 12 lakh

Employment Generated: Direct-4 & Indirect-15

+91 9811607283

FFPO MAKING RIPPLES OF DEVELOPMENT IN FISHERS' LIFE

A ta le of success from West Bengal

Patashpur-II Farmers Producer Company Ltd is a well-recognised FFPO among the local villagers of Purba Midnapore district. It has 1500 fishermen and women members. At present, the FFPO has 20 permanent employees. Another 7-8 employees are recruited temporarily as and when it is needed. The major activities of this FFPO involve around fisheries related projects. In addition to this, the FFPO is involved in paddy seed and fertilizer supply. The major fisheries activities the FFPO has taken up are production and supply of fish seed, running of a rural mart and assistance to members to avail bank loan.

PATASHPUR-II FARMERS PRODUCER COMPANY LTD

Patashpur-II FPC focuse on shrimp culture and other brackish water fish farming. The FFPO operates fish breeding units and owns a fish seed hatchery. The major seed produced are of Catla, Rohu, Common carp and Silver carp. The FFPO has their own outlets for selling various products. The FFPO also assists its members to get Joint Liability Group Loan through Bank.

IMPACT AND RECOGNITION

The Patashpur-II Farmers Producer Company Ltd also runs a mobile mart for the supply of seed. Rural mart helps to promote entrepreneurship among producer communities and provide market link for domestic products manufactured by the rural community. A van was purchased for the supply of seed under the Rural Mart scheme of NABARD with 50% subsidy. The mobile mart goes to villages twice a week and covers the 180 villages in a row. Recognising their achievement in fisheries sector Patashpur-II Farmers Producer Company Ltd was awarded as the Best Fisheries Cooperative Society/ FFPO/ SHG by MoFAHD, GoI on World Fisheries Day-2022.

PROFILE

Contact Person: Sangram Mazumdar

Designation: Director

District: Purba Midnapore

State: West Bengal

Fisheries Activity: Production and supply of fish seed

Year of Establishment: 2020

Scheme: NABARD (Rural mart)

Production (FY 2023-24): 1224.75 tonnes of fish seed

Turnover (FY 2023-24): Rs 14.81 crore

Employment Generated: Direct-28 & Indirect-400

+91 9002595927/

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सत्यमेव जयते

मत्स्यपालन विभाग भारत सरकार

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