

Buying Fish Is Never
Complete
Without Telling The
Nustekar
To Show Some Generosity

ANI EK UDOI MAGE !!!



Goan Fish Trails

Vol.VI-2023

An Overview of
Department of Fisheries,
Government of Goa
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Panaji Goa

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MESSAGE

It gives me immense pleasure to launch the “Goan Fish Trails”; Volume VI, 2023, portraying an overview of the Department of Fisheries, Government of Goa which converses about the development of fishermen and fishing community of the State of Goa.

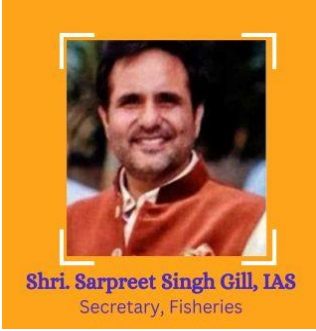
Fishing has traditionally been one of the chief occupation and the source of livelihood of the people living in the coastal areas of Goa.

Fisheries is a fast-growing sector in India, which provides nutrition and food security to a large population of the country besides providing income and employment to more than 28 million people in India.

The Directorate of Fisheries, Government of Goa is striving hard for the future and betterment of the fishing community with the vision to make the Fisheries Sector self-reliant in the State of Goa.

Lastly, I take this opportunity to acknowledge the Secretary, the Director and his team from the Fisheries Department for the worthy Publication.

(Nilkanth R. Halarnkar)
Hon'ble Minister for Fisheries



MESSAGE

On this platform, I am proud to announce the VIth edition of “Goan Fish Trails” 2023.

Fishing is a renewable resource, providing source of food and income for fishermen and their families and it also help to maintain the balance of the aquatic ecosystem by controlling population of certain species.

Fisheries is an economic activity that involves harvesting fish or any aquatic organism from the wild (Capture Fisheries) or raising them in confinement (Culture Fisheries/ Aquaculture).

I am delighted to appreciate all the work and efforts laid down by the Department for the growth of the fishing community and to enhance the fishing activity.

A handwritten signature in black ink, likely belonging to Sarpreet Singh Gill.

(Sarpreet Singh Gill, IAS)
Secretary (Fisheries)



Chief Editor's Note

It is a great pleasure to present before you all, the VIth edition of “Goan Fish Trails”, wherein all the efforts, new initiatives, achievements, and various training programs details are presented.

The fisheries sector of Goa contributes about 2.25 % of the total GSDP (Gross State Domestic Product) at current prices for the State of Goa for the year 2022-23.

Pradhan Mantri Matsya Sampada Yojana (PMMSY) is a flagship scheme of the Government of India that focuses on the sustainable development of the fisheries sector under which Department is funding the construction of Fish Market at Margao for the benefit of the fishermen community. Department is likely to build various other infrastructure at various points of Taluka under the components of PMMSY.

Another vital achievement is under Ease of Doing Business (G2C) wherein, 2 major schemes of this Department are onboarded on the Goa online portal.

Under the supervision of Hon'ble Minister (Fisheries) Shri. Nilkanth R. Halarnkar and the Secretary (Fisheries) Shri. Sarpreet Singh Gill (IAS), it is always great motivation and a learning process.

Last but not the least, I would congratulate and applaud each and every staff of this Department who works beyond the limits to achieve the various targets and support all fishing industry and for the betterment of the community.

(Deepesh Priolkar)
Director of Fisheries

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Errors if any may kindly be intimated to the Director of Fisheries, Panaji-Goa

I. OVERVIEW

Goan food is incomplete without “Xhit Kodi ani Nuste”. Goa welcomes many tourists all over India and Globe just to enjoy FRESH and DELICIOUS FISH. Two types of fishing operations are basically functional in Goa, i.e. **Marine** (fish in seawater or saltwater) and **Inland** (fishing operations taking place in freshwater).

This Department’s success stories and its various initiatives are put together for the readers in nutshells in this wonderful publication of “Goan Fish Trails”.

To commence with, Department has launched 02 major schemes online, providing convenient path to the beneficiary to avail Government schemes at door steps and it is also the biggest initiative of Government of Goa to go paperless.

Department has also conducted “Sagar-Parikrama” to resolve the grievances of fishermen and other stakeholders. Another major event organized by the Fisheries Department is “Aqua Goa Mega Fish Festival”.

Under Pradhan Mantri Matsya Sampada Yojana (PMMSY), Department has commenced Construction of wholesale Fish Market, and likely to carry out the project of installation of Artificial Reefs and Sea Weeds Cultivation etc. These various initiatives will also boost the Fishing Industry and also enhance the livelihood of population.

Under Various projects & schemes of this Directorate, altogether, 2381 individuals are benefitted incurring expenditure of Rs.1933.14 lakhs. This Directorate has also carried out successful repairing of Net Mending Sheds at various Talukas. The various ongoing and proposed projects will overall help the fishing community in building and improving infrastructure.

This Department has also participated in the Mock Drills organized by the National Disaster Response Force in both the districts to create awareness and for the preparedness towards Natural Calamities.

Fishing is a prehistoric practice dating back at least 70,000 years, which was an essential source of food in Prehistory and became a commercial activity in Antiquity.

II. VISION OF THE DEPARTMENT

Vision:

Sustainable and responsible increase in fish production in the State while contributing towards social and economic growth of the Fisher's and Fish Farmers and ensuing nutritional security of the State.

Objective of the Department:

To sustainably harvest Marine Fisheries resources, provide infrastructure, promote aquaculture and improve the Socio-economic conditions of the Fishermen and generate employment and food security in a holistic way.

III. GOA FISHERIES AT A GLANCE

Sr. No.	Fishing vessel types	Nos.
1	Non-motorized canoe	318
2	Motorized canoe	1909
3	Trawlers	450
4	Purse- Seiner	347
5	Trawler cum Purse- Seiner	059
6	Fishing gear	241

Sr. No.	Fisherman's profile	Nos.
1	Fishing villages	41
2	Fisheries societies	43
3	Fisher Folk Population (CMFRI census 2016)	12651
4	Fisherman population-Active (CMFRI census 2016)	2758

State Profile

Sr. No	Resources	Distance
1	Continental Shelf (upto 100 fathoms depth)	10,000 km ²
2	Coastal length	104 kms

Sr. No.	Infrastructure	Nos.
1	Fishing landing centre's (Major Jetties)	07
2	Fishing landing centre's (Ramps)	28
3	Ice plants	25
4	Cold storages	03
5	Processing units	14

Inland Profile

Sr. No.	Resources	WSA*
1	Reservoirs	3448 ha.
2	Rivers	338.5 km
3	Canal	240 km
4	Tanks & Ponds	101 ha.
5	Brackish water	198.86 ha.
7	No. of farm registered	44 nos.

*WSA-Water Spread Area

Department Profile

Sr. No.	Training courses	Duration
1	Fisheries Training Centre Ela, Old Goa	6 months
2	Training Course at CIFNET, Cochin	
a)	Vessel Navigator Course	2 years
b)	Marine Fitter Course	2 years
3	B.Sc. (Fisheries)	4 years

Sr. No.	Services
1	Registration of fishing vessels & fishing nets
2	Licensing of Fishing vessels & fishing nets
3	Kisan Credit Card
4	Registration of Fish seller
5	Registration of Aquaculture farms

IV. ACTS AND RULES



Sr. No.	Name of the Act, Rules, Regulation etc.	Brief list of the contents
1	Goa Marine Fishing Regulation Act, 1980	Licensing of Fishing Vessels, Registration of Fishing Vessels, Fishing Nets, Penalties for violations etc.
2	Goa Marine Fishing Regulation (1 st Amendment) Act, 1989	Definition of adjudicating officer
3	Goa Marine Fishing Regulation (2 nd Amendment) Act, 2019	Registration of Fishing Stake and licensing of Fishing Stake, Licensing of Fishing Vessel, Registration of Fishing Vessels and Fishing Nets, Penalties for violations etc.
4	Goa Marine Fishing Regulation Rules, 1982	Licensing of Fishing Vessels, Registration of Fishing Vessels, Fishing Nets, Penalties for violations etc.
5	Goa Marine Fishing Regulation (1 st Amendment) Rules, 2001	Licensing of Fishing Vessels and Registration of Fishing Vessels
6	Goa Marine Fishing Regulation (2 nd Amendment) Rules, 2003	Conditions of fishing license and form
7	Goa Marine Fishing Regulation (3 rd Amendment) Rules, 2012	Registration of Fishing Vessels
8	Goa Marine Fishing Regulation (4 th Amendment) Rules, 2014	Licensing of Fishing Vessels, Registration of Fishing Vessels

9	Goa Marine Fishing Regulation (5 th Amendment) Rules, 1982	Licensing of Fishing Vessels, Registration of Fishing Vessels
10	Goa Marine Fishing Regulation (6 th Amendment) Rules, 2021	Registration of Fishing Stake and licensing of Fishing Stake, Licensing of Fishing Vessels, Registration of Fishing Vessels and Fishing Nets, Penalties for violations etc.
11	The Goa Marine Fishing Regulation Rules, 2021 (7 th Amendment)	Amendment in the fees structure towards grants/renewal of fishing vessels license and net/gear license and revision in penalties imposed by Adjudicating officer for violating Goa Marine Fishing Regulation Act and its Rules there under.
12	Merchant Shipping Act, 1958	Registration of fishing vessels
13	Merchant Shipping (Registration of Indian Fishing Boats) Rules, 1988	Registration of fishing vessels
14	Merchant Shipping (Indian Fishing Boats Inspection) Rules, 1988	Inspection of fishing vessels
15	The Coastal Aquaculture Authority Act, 2005	Registration and renewal of Shrimp farm

V. POLICY DECISION/ NEW SCHEMES

Regulation and enforcement

I. The State Government under Marine Fishing Regulation Act, 1980, issued order for implementation of Monsoon Fishing Ban for period of 61 days from 1st June, 2023 to 31st July, 2023 for territorial waters of Goa.



Vessels anchored at Malim jetty during fishing ban period.

II. The Government has approved the quota to issue permission for the construction of 100 nos. of new fishing canoes all over Goa for the year 2022-23.



Newly constructed canoe

III. The Goa Marine Fishing Regulation Rules, 2021 (7th Amendment): - Amendment in the fees structure towards grants/renewal of fishing vessel license and net/gear license and revision in penalties imposed by Adjudicating Officer for violating Goa Marine Fishing Regulation Act and its Rules there under has been published in the official Gazette Series I no. 43 dated: 27/01/2023.

VI. ACHIEVEMENTS

A. Budget Provision

The Annual Budget of the Department for the year 2022-23 was Rs.12138.74 lakhs out of which an amount of Rs.4925.42 lakhs were utilized towards disbursement of subsidies, payment of salaries, office expenses, supplies and material, administrative charges, capital expenditure etc.

B. Revenue Generated

The total revenue generated during the year 2022-23 from License Fees, Sale of fish, Rent, etc. was Rs.587.29 lakhs.

C. Financial Assistance Scheme

Physical & Financial Achievements for the Financial Year 2022-23 under State Schemes:-

Sr. No.	Name of the scheme	No. of Beneficiaries	Expenditure (Rs. in lakhs)
STATE SCHEMES			
1	Financial Assistance for construction of Wooden / FRP Canoe	81	50.35
2	Financial Assistance to Fishermen for purchase of Fisheries Requisites	94	27.20
3	Financial Assistance for Purchase of Fuel (Petrol) to the Fishermen for operation of Out Board Motors	1360	407.32
4	Financial Assistance to purchase/construct new fishing craft less than 26 feet for fishing in Inland waters of Goa	15	4.38
5	Financial Assistance for the purchase of Barrier Nets and its accessories	07	1.67
6	Financial Assistance for the purchase of Stake net and its accessories	01	0.29
7	Financial assistance for Lifejacket and Lifebuoys	64	--
8	Interest subsidy on loans for Agriculture and allied activities	37	1.74
9	Goa Value Added Tax based subsidy on HSD Oil consumed by fishing vessel	577	947.39
10	Financial Assistance to Brackish water Aquaculture Farms	5	2.33
11	Financial Assistance for Brackish Water Aquaculture Farms for purchase of equipment	1	2.00
	TOTAL	2242	1444.67

Achievement under centrally sponsored Schemes for the year 2022-23			
Sr. No.	<i>Pradhan Mantri Matsya Sampada Yojana</i>	<i>Physical Achievement</i>	<i>Financial achievement (Rs. In lakhs)</i>
1	Construction of Biofloc ponds for brackish water	1	10.80
2	Construction of Fish Kiosk	5	27.51
3	Cold Storage of minimum 20 tonnes	2	57.00
4	Providing boats and nets to traditional fishermen	14	16.87
5	Insulated Truck	11	112.00
6	Motor Cycle with Ice Box	21	31.20
7	Three wheelers with ice box including e- rickshaw for fish vending	8	9.60
8	Fish value added enterprises unit	1	20.00
9	Refrigerated Vehicles (Truck)	1	15.00
10	Establishment of Small Biofloc culture system (7 tanks of 4m dia. And 1.5 mtr. High)	2	7.50
11	Establishment of Medium Biofloc culture system (25 tanks of 4m dia. And 1.5 mtr. High)	1	20.00
12	Establishment of Large Biofloc culture system (50 tanks of 4m dia. And 1.5 mtr. High culture system)	1	20.00
13	Installation of Cages in rivers	9	42.28
14	Installation of Medium scale ornamental fish rearing unit (Marine and fresh water fish)	1	3.20
15	Financial assistance towards Bi-valve cultivation (mussels, clams, pearls etc.)	7	2.00
16	Up-gradation of existing fishing vessels for export competency	15	74.96
17	Safety of Fishermen at Sea	40	15.90
18	Open sea cage culture	1	10.00
	Total A	141	495.82

VII. INFRASTRUCTURE

a. Infrastructure works ongoing during 2022-23: -

- Work for construction/ up-gradation of fish landing centre at Malim, Bardez-Goa.
- Urgent hot mixing of the road at Cutbona jetty including approach link road in Velim Constituency.

b. Infrastructure works completed during 2022-23: -

- Repair of existing Net Mending Shed at Talpona, Canacona.
- Installation of CCTV Camera at Khariwada Jetty, Vasco.
- Repairs and maintenance work of Khariwada Jetty in Vasco Constituency.
- Rewiring to Net Mending Shed at Fisheries Complex, Cutbona, Salcete.
- Repairs to the Net Mending Shed at Fisheries Complex, Cutbona in Velim Constituency.
- Repair of additional parapet wall for protection of ramp and fitting of grill to the existing shed at Karanzal, Ponda.
- Construction of 12 Seater portable toilets along with 20 KLD STP at Cutbona Jetty, Velim, Salcete-Goa.

c. Proposed works: -

- Repair of the Fishing Jetty at Cutbona Fisheries Complex, Velim, Salcete-Goa.
- Erection of Pipeline at Cutbona Jetty, Velim, Salcete-Goa.
- Construction of Security booths and repair of Auction shed at Cutbona Jetty, Velim, Salcete-Goa.
- Construction of Fifty Seater Sulabh Shauchalaya Complex including Bathroom at Cutbona Jetty, Velim, Salcete-Goa.
- Construction, Installation & Commissioning of Sewage Treatment Plant of capacity 50 KLD for Cutbona Jetty, Velim, Salcete-Goa.
- Repairs and grunting for existing water tank in Fisheries Complex at Colva, in Salcete Taluka in Benaulim Constituency.
- Repairs to existing building and converting it to Awareness Centre for Fisheries Complex at Colva in Benaulim Constituency.
- Repairs of first floor of administrative office building, fisheries complex, Malim, Bardez-Goa.
- Repairs of Compound Wall at Fisheries Complex, Malim, Bardez-Goa.
- Construction of Ramp and Net Mending Shed in Survey No. 157/1 at Dhaujowado in V.P. Cundaim, Ponda-Goa.

- Urgent Repairs/Renovation of the Fisherman Shed and Protection wall of the Light House at Jetty in Durbhat Panchayat, Ponda-Goa.
- Repair and extension of existing ramp at Talpona, Canacona-Goa.
- Repair of existing jetty at Talpona, Canacona-Goa.
- Installation of solar light at various fish landing centres in the State of Goa.



Ice Plant (Cutbona Fisheries Co-op Society)



New 12 seater Toilet block with STP



Net Mending Shed at Saleri



Net Mending Shed at Talpona



Net Mending Shed at Agonda



Net Mending Shed at Cola

VIII. TRAINING AND INTERACTION PROGRAMMES

1. Six Months Training Course:

Department conducts 06 months Certificate course for the fisher youth at Fishermen Training Centre, Ela Dauji, Old, Goa. The course is meant for training in Fishing Craft & Gear, Fundamentals of Navigation & Seamanship, Maintenance & Operation of Marine Diesel Engine, Weaving and Mending of Nets, Seafood Value Addition & Marketing, Aquaculture, Aquarium Fabrication & Swimming. The main objective of the scheme is to uplift the skill of enthusiastic youths who are eager to take fishery for self-employment and enabling them to profitably manage their respective business.

During the year 2022-23 the Department trained 13 nos. trainees under this course.



6 Months training course, held at Fisheries Training Centre, Ela Dhauji, Old Goa

2. Short Term Training Programme:

Short Term Training Programmes are imparted to fisher youth, fish farmers, entrepreneurs etc. interested in gaining in-hand training as well as theoretical knowledge in Fisheries oriented aspects. The training is held at Fisheries Training Centre (FTC), Ela Dauji, Old-Goa. A total of 100 nos. participants attended the Short Term Training Programmes. The details of training programmes held are as under:

Sr. No.	Short Term Training/Programmes	Venue	No. of Students
1	Sea Food Value Addition	V.P. Cola, Canacona	20
2	Sea Food Value Addition	V.P. Cola, Canacona	20
3	Sea Food Value Addition	Barcem, Quepem	20
4	Biofloc and RAS	V.P. Shiroda	20
5	Mussel Culture	Fishermen Training Centre	20



Training on Muscle culture at FTC, Old Goa and Bio Flock at V.P. Shiroda

3. Various training attended by the Officers & officials

- a. Attended 03 days training on **Reference point and harvest strategies for Sardin Stocks** at Ratnagiri, Maharashtra from 18th May, 2022 to 20th May, 2022 by Shri. Chandresh Haldankar, Supdt. of Fisheries.
- b. Attended **Pradhan Mantri Matsya Sampada Yojana (PMMSY) launch celebration** on 10th September, 2022 at New Delhi, India by Dr. Shamila Monteiro, Director of Fisheries & Smt. Megha S. Kerkar, Supdt. of Fisheries.
- c. Attended 03 days training on **Seaweed Cultivation** organized at CSMCRI, Mandapam, Tamil Nadu from 12th September, 2022 to 14th September, 2022 by Shri. Chandresh Haldankar, Supdt. of Fisheries & Shri. Pradeep Gawas, Asstt. Supdt. of Fisheries.
- d. Attended 02 days meeting on **Implementation of PMMSY Schemes** at New Delhi, India from 04th January, 2023 to 05th January, 2023 by Shri. Chandrakant Velip, Deputy Director of Fisheries & Shri. Chandresh Haldankar, Supdt. of Fisheries.
- e. Attended 05 days **FDA Good Aquaculture Practices (GAP) workshop** conducted by the Coastal Aquaculture Authority, Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India, Chennai, Tamil Nadu from 09th January, 2023 to 13th January, 2023 by Shri. Chandresh Haldankar, Supdt. of Fisheries & Shri. Sanil Naik, Asstt. Supdt. of Fisheries.
- f. Attended 03 days **Certificate Training Course on Water Testing Aquaculture** organized by the Krishi Vigyan Kendra, South under NABARD at CSIR-NIO, Dona Paula, Tiswadi-Goa from 16th January, 2023 to 18th January, 2023 by Shri. Chandan Shirodkar, Asstt. Supdt. of Fisheries, Miss. Gaitri Naik, and Miss. Aniya Naik, Fisheries Officer, Smt. Shenian Coutinho, Smt. Seema Shet Dessai, Shri. Harish Prabhu, Miss. Rajeshri Gaonkar and Shri. Lavkush Malik, Fisheries Surveyor, along with FTC Staff Shri. Shamrao Raikar, & Smt. Sharvi G. Naik, Jr. Technician.
- g. Attended 03 days Trainers Training Programme on **“The Fundamentals of Artificial Reefs for improving Marine Fisheries in India”** for the benefit of officials responsible for implementing the schemes in their coastal jurisdiction at Madras Regional Station of ICAR-CMFRI, Chennai, Tamil Nadu from 30th January, 2023 to 01st February, 2023 by Smt. Rohita Naik, Supdt. of Fisheries, Smt. Preetam Naik, Supdt. of Fisheries & Shri. Chandan Shirodkar, Asstt. Supdt. of Fisheries.

- h. Attended 02 days workshop on **NASPAAD** at Chennai, Tamil Nadu from 27th February, 2023 to 28th February, 2023 by Shri. Chandresh Haldankar, Supdt. of Fisheries and Smt. Jigyasa Murkar, Supdt. of Fisheries.
- i. Attended an interactive meeting at Hotel Viva Executive, Ratnagiri, Maharashtra regarding **Fishery Improvement Project on Indian Oil Sardines & Indian Mackerel** on 05th April, 2023 by Shri. Chandrakant Velip, Deputy Director of Fisheries & Smt. Megha S. Kerkar, Supdt. of Fisheries.
- j. Attended Steering Committee Meeting at Mumbai, Maharashtra regarding **Fishery Improvement Project for Trawl bycatches (Multispecies FIP)** on 06th April, 2023 organized by Omega Fishmeal & Oil Private Limited, Ratnagiri, Maharashtra by Shri. Chandrakant Velip, Deputy Director of Fisheries & Smt. Megha S. Kerkar, Supdt. of Fisheries.
- k. Attended 02 days Programme on **National Farmer's Day** at Mahabalipuram, Tamil Nadu from 10th July, 2023 to 11th July, 2023 by Shri. Deepesh Priolkar, Director of Fisheries & Shri. Chandresh Haldankar, Supdt. of Fisheries.
- l. Attended 03 days training programme from 04th January, to 06th January, 2023 on **"Video production technology for enhancing success story dissemination"** at Krishi Vigyan Kendra, South Goa, by 11 nos. Sagar Mitra's.

4. Awareness under "ATMANIRBHAR BHARAT" / "SWAYAMPURNA GOEM".

Various programmes were conducted at Panchayat level under "Swayampurna Goem" to create awareness of the State and Centrally Sponsored Schemes implemented by this Department. A total of 153 programmes were conducted, thereby providing information about the Department schemes at the village level for about 2500+ participants.



Awareness programme at Village Panchayat Rachol



Awareness programme at Palolem, Canacona

5. Awareness cum Awakening programme on Artificial Reefs in 7 coastal talukas

The Department of Fisheries, Government of Goa organized an awareness cum awakening programme from 3rd September, 2023 to 5th September, 2023 on “**Artificial Reefs**” in 07 coastal talukas i.e. Pernem, Bardez, Tiswadi, Salcete, Mormugao, Quepem and Canacona for deployment of Artificial Reefs in 14 locations of different fishing villages.

The project of **Artificial Reefs** has been initiated under a sub-component of “Integrated Modern Coastal Fishing Village” under Pradhan Mantri Matsya Sampada Yojana (PMMSY).

The Principal Scientist, Dr. Joe Khizakadun from CMFRI, Vishakapatnam, along with the officials of Fishery Survey of India (FSI), ICAR-CCARI and the officials of the Department conducted the confidence building programme amongst the fishermen.

During the said awareness programme, the fishermen were made aware of the importance of the **Artificial Reefs** along the coast and were informed to provide their consensus on the said project and to actively participate in the site selection and during the deployment.



Awareness Programme on Artificial Reef at Canacona & Bardez

IX. AQUACULTURE

1. FRESH WATER FISH SEED HATCHERY KERI, SATTARI, GOA.

The Fresh Water Fish Seed Hatchery produced quality fish seeds of Indian Major Carp and common Carp during the year 2022-23. A total of 13 lakhs fish seed were procured from outside the state and 1 lakh fish seed was produced within the state and supplied to the fish farmers at the reasonable rates. The revenue generated from the sale of fish seed during the year 2022-23 is Rs.2.61 lakhs.

Every year, the Department stocks Indian Major Carp i.e. Rohu, Catla and Mrigal along with other carps such as common carp, grass carp and silver carp in the reservoir with total quantity of 05 lakhs fish fingerling in each reservoir for the year 2022-23.



Fish Hatchery at Keri, Sattari



Release of Fish seeds by Hon'ble Minister for Fisheries in Reservoir

2. ORNAMENTAL UNITS AT KERI

The Department has initiated ornamental fish rearing and breeding units at the hatchery to promote ornamental fisheries. 2 units have been set up at the site. Around 10 to 12 species of ornamental fish are bred and reared.

a. Outdoor Ornamental Fish Rearing Unit (liner ponds)



Outdoor Ornamental Fish Rearing Unit at Keri, Sattari, Goa.

b. Indoor Ornamental Fish Breeding cum Rearing units



Indoor Ornamental Fish Breeding cum Rearing units at Keri, Sattari, Goa.

3. Seaweed Culture

The demand for seaweeds and their products have been growing globally and so has the interest in their production and the attraction of stakeholders to invest more widely in the production of various algal species that may fill different economic sector needs. The production of algae (seaweed) is extremely important to suppress the need to feed a growing population.

The Department of Fisheries, in collaboration with Devatha Agro Farm LLP and Fishermen from Cacara, initiated the trial cum demonstration unit of Seaweed culture (Raft method) at Cacara, Candolim and Raia.

Site (Candolim, North Goa)

The seaweed unit of kappaphycus was installed at Candolim, North Goa. The seed material was placed in the cage culture in the following methods:

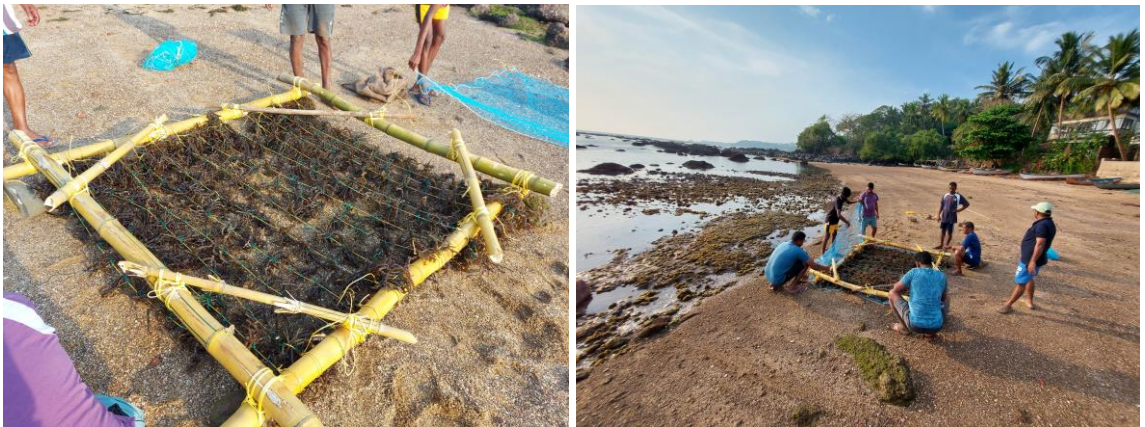
- a. Floating hanging method with 3-inch rope.
- b. Net bag method
- c. Tubular net method

Site (Cacara, North Goa)

The seaweed unit of kappaphycus was installed at Cacara near Goa University, North Goa. The seed material was placed on Bamboo Rack.

Site (Raia, South Goa)

The seaweed unit of kappaphycus was installed at Raia, South Goa. The seed was tied over Areca Stem floating Raft.



Sea Weed Culture Trail through Raft Method.

4. Pilot project on Mussel Farming

A pilot project on Mussel farming was initiated at Akhada, St. Estevam Island, Old Goa in the year 2022-23. The species selected for mussel culture was Green mussel (*Perna Viridis*). The average size of mussel seeds at the time of stocking was recorded 1 to 1.5cm and about 4-6 weeks old. A total of 200 mussel seeded ropes were procured and purchased at Rs.280/- per rope from Kundapura, Karnataka; out of which 146 nos. of ropes were sold to fish farmers. A total revenue collected was Rs. 40,880/-.

Total 32 Nos. of Mussel Seeded Ropes were installed in 3 x 3 m rack at Akhada, St. Estevam Island, Old Goa, on 31/12/2022. Salinity and pH readings were found optimum and the water temperature was recorded as 30⁰ C. Harvesting was done after 5 months i.e. on 26/05/2023. The mussels reached a marketable size of 5 cm to 7 cm. The rate of Green Mussel in market is Rs.400/- to Rs.500/- per kgs. depending upon the size. The Department has sold 32 kgs. of mussels and earned an amount of Rs. 12,800/-.

Also, an awareness programme on Mussel farming was conducted on 26/05/2023 at Akhada, St. Estevam Island, Old Goa. The programme was held in the presence of distinguished guest Hon'ble Minister for Fisheries Shri. Nilkanth Halarnkar, MLA-Cumbarjua Constituency Shri. Rajesh Faldessai, Director of Fisheries Dr. Shamila Monteiro and Sarpanch of Akhada.



Mussel farming project at Akhada St. Estevam Island Old Goa

X. PEOPLE AND EVENT AROUND US

AQUA GOA MEGA FISH FESTIVAL 2022-23.

In a bid to promote Goa's fishing industry and to create awareness among the public about Pisciculture, the State Government had organized the VIth edition of the "*Aqua Goa Mega Fish Festival*" from 10th to 12th February, 2023 at the SAG Ground, Campal, Panaji. The event was inaugurated in the distinguished presence of Hon'ble Chief Minister of Goa, Dr. Pramod Sawant, Hon'ble Minister for Fisheries, Shri. Nilkanth Halarnkar, Hon'ble Minister for Tourism, Shri. Rohan Khaunte, Hon'ble Member of Legislative Assembly, Mandrem Constituency, Shri. Jit Arolkar, Secretary (Fisheries), Shri. Arun Kumar Mishra, IAS, and Director (Fisheries), Dr. Shamila Monteiro.

The event showcased Aquarium Fish Gallery, Live Fish Pond, exhibition on various subjects connected to Fisheries, commercial stalls, competitions/contests for children and adults as well as entertainment and cultural programmes.

Furthermore, Resource persons from renowned institutes such as National Bureau of Fish Genetic Resources (NBFGR, Kochi), National Fisheries Development Board (NFDB, Hyderabad), Indian Coast Guard, College of Fisheries (Ratnagiri), Central Inland Fisheries Research Institute (CIFRI, Vadodara Centre) etc. delivered lectures during the workshop/seminars scheduled for 3-days. The lectures were especially designed to showcase latest techniques/technologies available and this immensely benefited the student community.



Aqua Goa Fish Festival Van flagged off to create awareness about the festival

NARALI POORNIMA

This Department offered coconut to lord Varuna on the occasion of “**Narali Poornima**”, which was on 30th Aug, 2023, in the hands of Shri. Nilkanth Halarankar, Hon’ble Minister for Fisheries. Also, Shri. Sarpreet Singh Gill, Secretary Fisheries, Shri. Deepesh Priolkar, Director of Fisheries and various other dignitaries were present during the offering. On this occasion, Department also performed “**Satyanarayan puja**” in office premises, followed by Maha-Prasad to devotees.



Emersion of coconut in the sea by Hon’ble Minister of Fisheries on the occasion of “Narali Poornima” followed by the “Satyanarayan Pooja” in the office.

WORLD FISHERIES DAY

World Fisheries Day was joyfully celebrated at the picturesque location of Miramar, Goa on November 21st, 2022. The event was graced in the presence of distinguished guests, Dr. L. Murugan, Hon'ble Minister for State (Ministry of Fisheries Animal Husbandry and Dairying), Government of India, and Shri. Nilkanth Halarnkar, the Ministry for Fisheries, Animal Husbandry & Veterinary Services, Factories and Boilers, Government of Goa.

One of the noteworthy highlights of the event was the heartfelt felicitation of retired personnel from the Directorate of Fisheries. These dedicated individuals were honoured for their tireless contributions and invaluable service to the fisheries sector. Their commitment and hard work have undoubtedly played a pivotal role in shaping and advancing the industry.

A captivating presentation was also delivered, showcasing the remarkable achievements of the Department. This comprehensive overview highlighted the department's significant strides, innovative approaches, and impactful initiatives that have collectively propelled the fisheries sector forward. These accomplishments serve as a testament to the collaborative efforts and forward-thinking strategies that have been employed.

Furthermore, the event provided a platform to spotlight success stories and innovative initiatives within the realm of fisheries. These tales of accomplishment and pioneering ideas underscore the sector's potential for growth and development. By recognizing and celebrating these accomplishments, the event not only honours the individuals behind these endeavours but also inspires others to pursue innovative pathways in the field.

In essence, the World Fisheries Day celebration at Miramar, Goa, in 2022 was a grand and meaningful occasion. It brought together esteemed dignitaries, celebrated the contributions of retired personnel, showcased the department's accomplishments, highlighted success stories and innovations, and paid homage to the relentless efforts of fishermen. This event not only acknowledged past achievements but also inspired a future brimming with potential and prosperity for the fisheries sector.



World Fisheries Day programme inaugurated in the hands of Hon'ble Min. of State for Fisheries Dr. L. Murugan and other dignitaries

“SAGAR PARIKRAMA PHASE - V”



The main aim of the Sagar-Parikrama is to address the challenges faced by fishermen and other stakeholders promoting their economic up-liftment through various Government Schemes.

The Programme of “Sagar Parikrama Phase V” was held on 19th May, 2023. The interaction with fishermen were organized at different places that is at Khariwada Jetty, Katem-Baina, Desterro, Nanutel Hotel, Margao and Shri. Vitthal Rakhumai Hall, Rajbag, Canacona.

The following dignitaries had an interaction with the fishermen from both Traditional and Mechanized Sector who put forth their grievances/ issues like illegal fishing activities, issues related to jetties, led lights, welfare schemes of the Department before the Hon’ble Union Minister for Fisheries, Govt. of India.

Sr. No	Names	Designation
1	Shri. Parshottam Rupala	Hon’ble Union Minister of Fisheries, Animal Husbandry & Dairying, Government of India.
2	Shri. Ramesh Tawadkar	Hon’ble Speaker at Goa Legislative Assembly.
3	Shri. Vinay Tendulkar	Hon’ble Member of Parliament- Rajya Sabha, State of Goa
4	Shri. Nilkanth Halarnkar	Hon’ble Minister for Fisheries Government of Goa

5	Shri. Sankalp Amonkar	Hon'ble MLA, Mormugao Constituency
6	Shri.Krishna (Daji) Salkar	Hon'ble MLA,Vasco-Da-Gama Constituency
7	Dr. Abhilaksh Likhi, IAS	OSD Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying
8	Dr. J. Balaji (IAS)	Joint Secretary (Fisheries), Department of Fisheries, Government of India
9	Dr. L. Narasimha Murthy	Senior Executive Director, NFDB
10	Dr. Sanjay Pandey	Deputy Commissioner (Fy.) Department of Fisheries, Government of India
11	Dr. Shamila Monteiro	Director of Fisheries, Goa



Directorate of Fisheries Staff at Sagar Parikrama Phase V

FISHERIES SUMMER MEET 2023

The Fisheries Summer Meet 2023 on the occasion of National Fish Farmers Day, took place on 10th & 11th July, 2023 at Kaldan Samudhra Palace, Mahabalipuram, Tamil Nadu. These two days, the event was aimed to review the progress of various programs and schemes of the Department of Fisheries-Goa, with particular focus on Pradhan Mantri Matsya Sampada Yojana (PMMSY).

Shri. Nilkanth Halarnkar, Hon'ble Minister for Fisheries, Shri. Deepesh Priolkar, Director (Fisheries), Supdt. of Fisheries Shri. Chandresh Haldankar, attended the meet. The Department participated to review the progress of various schemes and projects under PMMSY which was followed by discussions and interaction on various aspects of fisheries/ policies/programs/ schemes for better and effective implementation at the ground level.



Fisheries Summer meet at Tamil Nadu on the occasion of National Fish Farmer's Day.

DISASTER MANAGEMENT MOCK DRILL

On the eventful day of March 3rd, 2023, Goa witnessed a remarkable State-level mock exercise aimed at stimulating a cyclone disaster scenario. In a display of proactive engagement, the Department of Fisheries played an integral role in this exercise by taking part in the process of disseminating crucial weather warnings to the entire fishing community across the state.

The mock drill conducted across both Districts of Goa, showcasing the comprehensive preparedness of the region. The Department of Fisheries took centre stage, ensuring that the communication channels were activated effectively. The Indian Metrological Department dispatch weather warning message to the Fisheries Department's control room. This pivotal hub acted as the nerve centre, co-ordinating the dissemination of critical information. From there, the message was rapidly relayed to all fisheries Officers stationed all across the State, the various Fishermen Societies and Associations, as well as all lined Departments.

The orchestrated chain of information ensured that no stone was left unturned in reaching out to those who needed to be informed. This comprehensive approach underscored the commitment of the Department of Fisheries to safeguard the well-being of the fishing community and the broader coastal populace.



Mock Drill conducted at both districts in Goa

SAGAR KAVACH

On 26th April, 2023, the coastal region of Goa became the stage for a significant event known as "***Sagar Kavach***," a meticulously orchestrated Coastal Security Exercise. This exercise brought together a range of stakeholders responsible for ensuring the safety and security of the State's coastal areas. The key participants were the Indian Navy, the Indian Coast Guard, and the Coastal Police, Captain of Ports, Police Department forming a formidable alliance to bolster coastal security. The Department of Fisheries is one of the important stakeholder with respect to coastal security as it monitors all the fisheries related activities. "***Sagar Kavach***" aimed to simulate various scenarios and challenges that could potentially threaten the security and integrity of Goa's coastal zones. By creating these realistic scenarios, it provides an invaluable opportunity to the participating agencies to evaluate their readiness, coordination, and response mechanisms.



Sagar Kavach exercise

COMMUNITY INTERACTION PROGRAMME

Every year, a community interaction programme are organized with the primary aim of raising awareness among fishermen about coastal security measures and the essential precautions they should adhere before embarking on their fishing expeditions. This initiative plays a vital role in ensuring the safety of the fishing community. Such programme is conducted twice a month at various locations covering each and every village of the State. The said programme is conducted in coordination with the Indian Coast Guard and the Indian Navy.

During these interactive sessions, fishermen are actively engaged to familiarize them with the coastal security protocols. They are provided with valuable insights on how to enhance their own safety and security while navigating the waters. Moreover, these gatherings serve as a platform for introducing the fishermen to the array of schemes offered by the Fisheries Department, designed to support and uplift their livelihoods.

Additionally, these sessions foster an understanding of responsible fishing practices and the significance of conserving fish stocks. The knowledge shared emphasizes the importance of sustainable fishing techniques, promoting a balance between fishing activities and the long-term health of marine ecosystems. By imparting this valuable information, the sessions encourage the fishing community to engage in practices that ensure the continued availability of fish resources for future generations.



Community interaction programme held at Canacona

THIRD ANNIVERSARY CELEBRATION OF PMMSY

The 3rd Anniversary celebration of the Pradhan Mantri Matsya Sampada Yojana (PMMSY) took place on 15th September, 2023, at the Brilliant Convention Centre in Indore, Madhya Pradesh. The event showcases the achievements of the PMMSY and various other Government of India schemes and projects.

The programme was attended by Dy. Director, Shri. Chandrakant Velip, Superintendent of Fisheries, Smt. Megha Kerkar, Shri. Chandresh Haldankar and Smt. Rohita Naik, and Assistant Superintendent of Fisheries, Shri. Sanil Naik. The Department erected the stall for making awareness of different schemes and showcasing the success of implementation of PMMSY and other State schemes.



3rd anniversary of PMMSY at Indore, Madhya Pradesh

“VIGILANCE AWARENESS WEEK”

The Fisheries Department celebrates “Vigilance Awareness Week” on topic *“CORRUPTION FREE INDIA FOR A DEVELOPED NATION”* from October 31st to November 06th, 2022. The Director of Fisheries reminded the staff to uphold the highest levels of integrity in their service. The staff celebrated “Vigilance Awareness Week” with full enthusiasm and imbibed the message of being on the lookout for corruption and not indulging in corrupt practices.

On this day various events were organised such as Mehandi Competition, Rangoli Competition, Stone Painting, Quiz Competition and Poster Drawing Competition. Staff displayed their artistic and other talents through the various competitions. This vigilance week helped the Department to become aware that corruption is an obstacle of making our country a developed Nation.



Vigilance Awareness Programme held at Directorate of Fisheries, Panaji, Goa.

ANNUAL MEET

The Department is keen to provide maximum benefits to the fishermen/fishers/fish farmers etc. However, it was observed that many difficulties/issues had come up at the Taluka level while implementing the schemes & services smoothly.

Hence, the Department conducted Annual Meet for all the staff of Fisheries Department at Fisheries Training Centre, Ella Dhauji, Old Goa on 28th January, 2023. The Hon'ble Minister for Fisheries Shri. Nilkanth Halarnkar and Director of Fisheries, Dr. Shamila Monteiro attended the Annual meet program.

The Hon'ble Minister for Fisheries conveyed his view on increasing the fish production and creating awareness of the departmental schemes from grass root level. Director addressed that Department will promote schemes to each and every village with the help of Sagarmitras and will also promote aquaculture activities.

Official at field level presented their annual report and various activities performed during the entire year. Further, Action Plan for the year 2023-24 for PMMSY was discussed with the Officers. Special session was also conducted to understand and discuss the difficulties faced by field officials while implementing various schemes and services of this Department.



Annual meet at FTC, Old Goa.

EMPOWERMENT OF YOUTH

The Government College of Arts, Science, and Commerce, Sanquelim, Goa orchestrated an enlightening workshop centred around the theme of "Value Added Fish Products." This event was held on the 22nd July, 2023, served as a beacon of practical education for the enthusiastic Goan youth. The programme was attended by Shri. Pradeep Gawas, Assistant Superintendent of Fisheries. He took up the role of a dedicated resource person, infusing the workshop with a wealth of knowledge drawn from his experiences in the field.

The workshop itself was a remarkable fusion of theoretical wisdom and hands-on engagement. A lively presentation showcasing various fish products was conducted, providing a step-by-step guide on how to prepare them. Participants were immersed in a hands-on learning experience, gaining practical skills in fish product preparation. Its primary aim was to equip the bright minds of the youths with a profound understanding of how to transform fish products into valuable commodities.



Workshop on Value Added Fish Products

LAUNCHING OF SOCIAL MEDIA PAGES OF DEPARTMENT OF FISHERIES

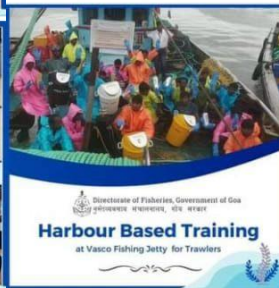
Shri. Nilkanth R. Halarnkar, Hon'ble Minister for Fisheries inaugurated the Fisheries Department Facebook and Instagram pages, marking a significant step towards establishing an online presence for the department to reach out wider public on the occasion of Narali Poornima.



Launching of Facebook and Instagram pages held at Directorate of Fisheries, Panaji, Goa.



More ▾



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XI. STATISTICS

- No. of Vessels (Trawler/Purse – Seiners) Operated at Major Landing Centres for the year 2022-23.**

Sr. No	Mechanised fishing vessel	Total Nos.
1	Purse Seiner	347
2	Trawler cum Purse-seiner	59
3	Trawlers	450
	Total	856

- Total Motorized and Non-Motorized Canoe**

Sr. No.	Block-wise	Non- Motorized Canoe	Motorized Canoe	No. of Fishing Canoe registered under MS Act
1	Bardez	85	398	483
2	Tiswadi	55	336	391
3	Pernem	13	170	183
4	Vasco	59	489	548
5	Salcete	34	198	232
6	Canacona	69	313	382
7	Ponda	03	05	08
	Total	318	1909	2227

- Fishing Licence:**

The Department issues fishing license to the fishing vessels which is mandatory documents to be kept onboard. The total number of new fishing license issued to the trawlers/purse-seiners and fishing canoes for the year 2022-23 is as follows:

Sr. No.	Type of Vessel	Licences issued for the year 2022-23
1	Canoe (motorized and non-motorized)	1565
2	Mechanized fishing vessel	468
	Total	2033

• **Block wise total no. of canoes registered for the year 2022-23**

Tiswadi		
1	Agassaim	3
2	Bambolim	1
3	Chimbel	1
4	Chodan	1
5	Chorao	2
6	Divar	1
7	Dona Paula	2
8	Nauxim	4
9	Ribandar	2
10	Santa Cruz	1
11	Siridao	7
12	Taleigao	3
Total		28

Pernem		
1	Arambol	7
2	Mandrem	1
3	Querim	1
Total		9

Bardez		
1	Arpora	1
2	Assagao	1
3	Betim	1
4	Calangute	12
5	Candolim	2
6	Nerul	2
7	Penha-de Franca	1
8	Reis Magos	2
9	Siolim	1
	Total	23

Salcete		
1	Benaulim	18
2	Betalbatim	1
3	Betul	2
4	Cavelossim	1
5	Colva	4
6	Curtorim	1
7	Orlim	1
8	Varca	2
9	Velim	3
Total		33

Mormugao		
1	Bogmalo	5
2	Cansaulim	2
3	Cortalim	1
4	Kantem Baina	2
5	Velsao	2
Total		12

Canacona		
1	Agonda	1
2	Cola	4
3	Colomb	1
4	Galgibag	2
5	Kindlebag	1
6	Palolem	2
7	Sadolxem	1
8	Talpona	3
Total		15

Ponda		
1	Bandora	1
Total		1

- **Sport Fishing Vessel:**

Sport fishing is a major draw for tourist in any State. The Department has 14 Nos. of Sport fishing vessels registered up to 2022-23.

- **Water Sports**

The Department issues no objection certificate to the Water Sports vessels operating at different beaches of Goa. The taluka-wise NOC’s granted for the year 2022-23 are as follows:

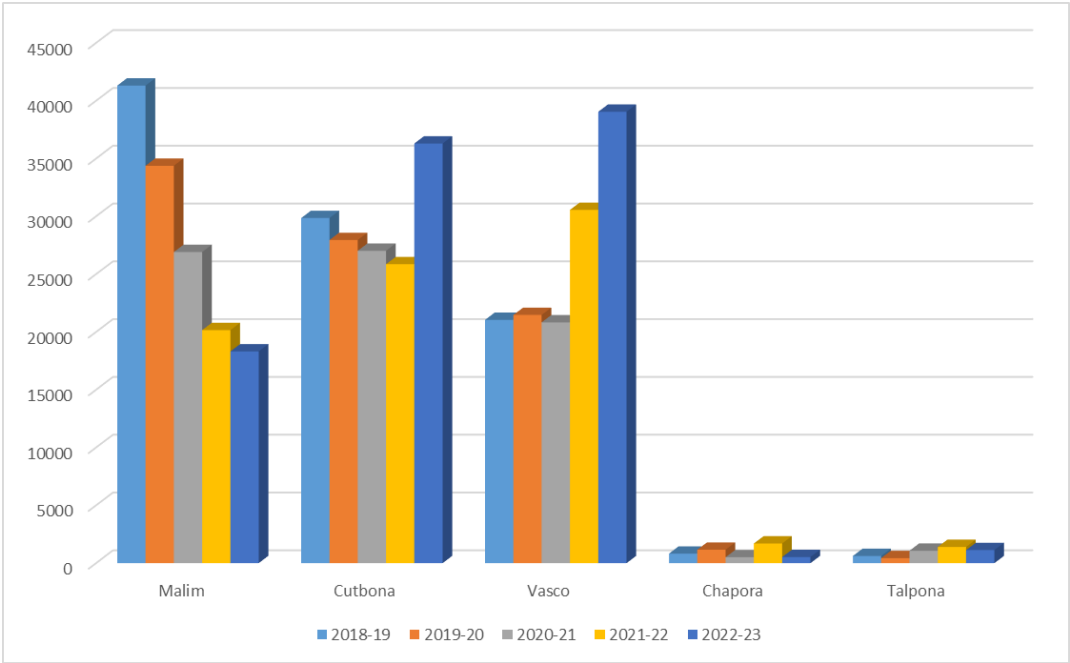
Sr. No.	Taluka	No. of Water Sports Vessels
North Goa		
1	Bardez	879
2	Pernem	10
3	Tiswadi	22
	Total	911
South Goa		
1	Canacona	107
2	Salcete	168
3	Vasco	19
	Total	294
	Inland waters	59
	Total	1264

TALUKA WISE FISHING GEARS REGISTERED (2022-23)

Type of Gear	Tiswadi	Bardez	Ponda	Pernem	Canacona	Mormugao	Salcete	Total
1	2	3	4	5	6	7	8	9
Sea gill net	38	21	1	19	27	10	30	146
Sea cast net	--	--	--	--	--	--	--	--
River gill net	17	11	4	5	4	--	3	44
River cast net	--	--	--	--	--	--	--	--
Rampon net	--	--	--	--	3	--	3	6
Drag net	3	--	--	--	--	--	--	3
Purse-seine net	--	1	--	--	--	3	9	13
Trawl net	--	--	--	--	--	--	6	6
Barrier (Futauni)	1	1	7	--	1	--	--	10
Sluice gate	--	--	--	--	--	--	--	--
Stake net	--	--	1	--	--	--	--	1
Kadsari net	--	--	--	--	--	--	--	--
Other net	--	--	--	--	--	--	--	--
Ormol net	--	--	--	--	--	--	--	--
Singel net	--	--	--	--	--	--	--	--
Hook & line	--	1	--	--	--	--	8	9
Net not described above	--	--	--	--	--	--	3	3
Total	59	35	13	24	35	13	62	241

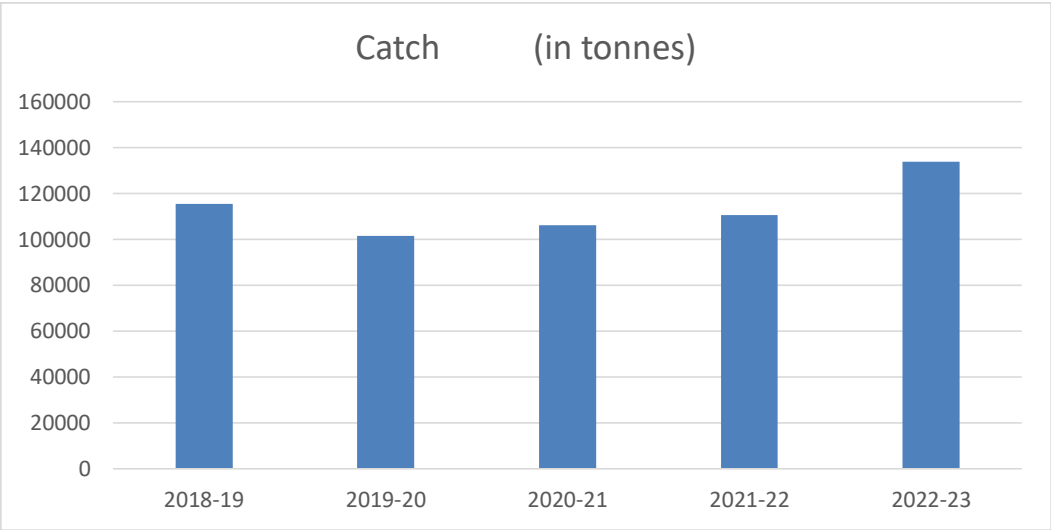
Major Jetty Wise Marine Fish Catch from 2018-19 to 2022-23 (in tonnes)

Year	Malim	Cutbona	Vasco	Chapora	Talpona	Total (Jetties)	Others	Total
1	2	3	4	5	6	7	8	9
2018-19	41313	29855	21046	821	619	93654	21805	115459
2019-20	34376	27951	21471	1163	436	85397	16069	101466
2020-21	26915	27022	20830	511	1073	76351	29808	106159
2021-22	20160	25861	30557	1701	1402	79681	31043	110724
2022-23	18314	36300	39051	530	1129	95324	38646	133970



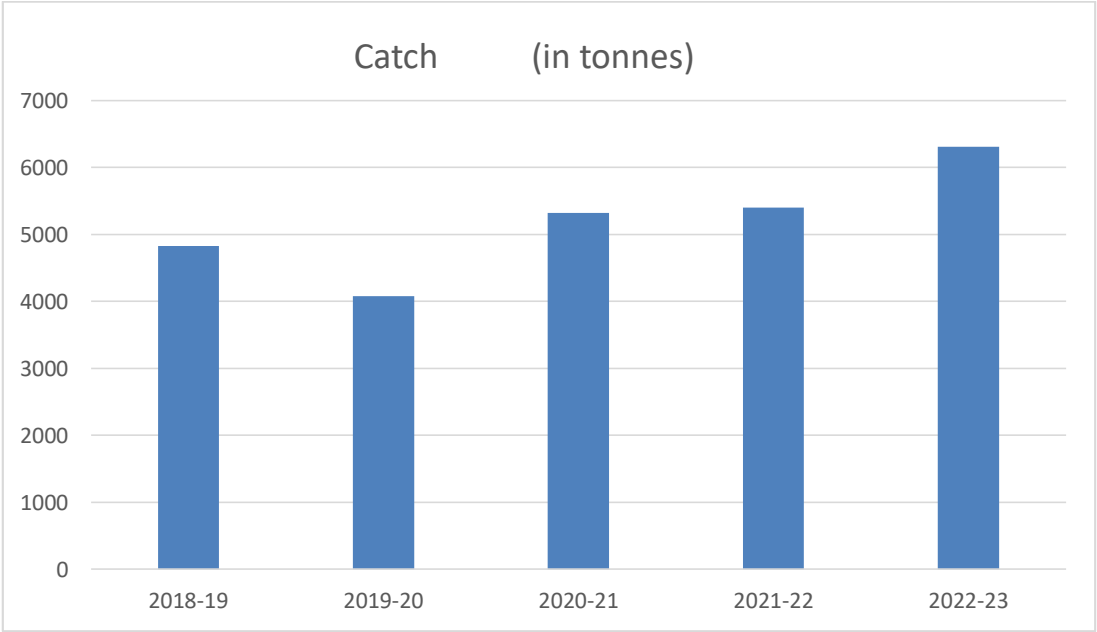
Marine Fish Production of Goa for the period from 2018-19 to 2022-23
(in tonnes)

Year	2018-19	2019-20	2020-21	2021-22	2022-23
Catch (in tonnes)	115459	101466	106159	110724	133970



Inland Fish Production of Goa for the period from 2018-19 to 2022-23
(in tonnes)

Year	2018-19	2019-20	2020-21	2021-22	2022-23
Catch (in tonnes)	4829	4081	5325	5402	6308



**Financial Year-wise Marine fish production (Species wise) for the last five years
(in tonnes)**

Sr. No.	Species	2018-19	2019-20	2020-21	2021-22	2022-23
1	Mackerals (Bangdo)	37514	28519	28703	26188	55843
2	Sardines (Tarlo)	15451	12647	5218	13124	23719
3	Cat Fish (Sangot)	262	1205	424	209	148
4	Shark fish (Mori)	1041	716	891	407	246
5	Seer Fish (Wiswan)	1288	2860	4031	2927	1796
6	Prawns (Sungtam)	6825	6262	5470	4807	6810
7	Pomprets (Paplet)	495	1353	1522	1823	449
8	Cuttle Fish (Manki)	2201	3757	1862	2748	1607
9	Tuna (Bokdo)	9614	8478	9915	15490	11212
10	Ribbon Fish (Balle)	1618	1669	2704	3251	2791
11	Reef Cod (Gobro)	1376	547	271	624	288
12	Kowala kowal (Velli)	749	496	420	319	518
13	Golden Anchovy (Kapsale)	121	75	71	63	15
14	Silver Belly (Kampi)	5366	6385	7280	5071	2223
15	Soles (Lepo)	2203	1166	1741	1982	1400
16	Silver Bar (Karli)	184	271	433	496	80
17	Crabs (Kurlio)	740	1003	2168	1572	1250
18	Sciaenoids (Dodiario)	1435	2870	2773	2582	2196
19	Butter Fish (Soundale)	647	573	881	758	716
20	Others	26329	20614	29381	26283	20663
	Total	115459	101466	106159	110724	133970

**Financial year-wise Inland fish production (Species wise) for the last five years
(in tonnes)**

Sr. No.	Name of the Fish	2018-19	2019-20	2020-21	2021-22	2022-23
1	Prawns					
a	<i>Big</i>	240	109	185	134	241
b	<i>Medium</i>	159	54	175	180	302
c	<i>Small</i>	309	281	415	648	394
2	Lady Fish	110	61	136	193	209
3	Mullets	644	461	598	560	609
4	Gerres	71	41	95	80	92
5	Lutianus	166	75	123	106	241
6	Cat Fish	546	399	566	408	526
7	Anchovy	62	25	51	42	107
8	Pearl Spot	364	328	446	420	430
9	Betki	164	61	128	102	230
10	Milk Fish	15	2	3	5	30
11	Megalops	30	9	25	24	67
12	Scatophagus	55	36	87	57	99
13	Ambasis	304	262	364	224	430
14	Crabs	455	382	567	410	548
15	Black Water Clamps	42	133	198	233	72
16	False Clamps	111	227	200	311	566
17	Oysters	108	282	169	103	186
18	Mussel	139	90	83	72	91
19	Lepo	1	--	13	-	--
20	Indian Salmon	--	--	--	-	--
21	Balle Reddish	--	5	--	-	--
22	Sciaenoids	--	--	--	-	--
23	Others(Palu)	68	--	--	-	--
24	Others(Vagolem)	--	--	--	-	--
25	Others (Leather Jackets)	--	--	--	-	-
26	Others	--	41	36	8	51
27	Miscellaneous	666	717	662	1082	787
	Total	4829	4081	5325	5402	6308

Export of Marine Fish and Fishery Products for the last 5 years

Quantity in M.tonnes
Value in Rs. lakhs

Sr. No.	Item		2018-19	2019-20	2020-21	2021-22	2022-23
1	Fr. Shrimps	Q	1908	1526	4756	3578	3959
		V	7392	6304	21357	18826	19015
2	Fr. Cuttle Fish	Q	1265	1718	1123	1173	59
		V	3813	4535	2340	3511	192
3	Fr. Squids	Q	5746	3517	2522	2805	4594
		V	12216	7607	7239	10633	18399
4	Fr. Fresh Fish	Q	24289	5533	7909	28104	53460
		V	33843	8113	11924	39412	60949
5	Fr. Tuna	Q	-	-	-	-	-
		V	-	-	-	-	-
6	Ribbon Fish	Q	-	-	-	-	-
		V	-	-	-	-	-
7	Indian Mackerels	Q	-	-	-	-	-
		V	-	-	-	-	-
8	Reef Cod	Q	-	-	-	-	-
		V	-	-	-	-	-
9	Fr. Seer Fish	Q	-	-	-	-	-
		V	-	-	-	-	-
10	Other fishes	Q	4590	2404	239	398	1261
		V	4554	2292	665	683	2206
11	Dried Fishes	Q	140	-	-	-	-
		V	149	-	-	-	-
	Total	Q	37938	14698	16549	36058	63333
		V	61967	28851	43525	73065	100761

Source: Marine Product Export Development Authority(MPEDA), Mangalore, Karnataka.

XII. ARTICLES BY DEPARTMENT PERSONNEL

Skill Development Programmes and Opportunities Available in Fisheries Sector



Shri. Chandresh P. Haldankar
Superintendent of Fisheries

Skill development plays a crucial role in driving a country's financial growth and community development. The skills and knowledge acquired by a community empower individuals and improve their social acceptance. However, it is essential for skill development to align with economic growth and employment opportunities to meet the aspirations of the youth. This requires a significant expansion in skill development facilities and a focus on improving their quality. India aims to become a global economic powerhouse in the near future, and to achieve this, it must develop a workforce with employable skills and knowledge to transform into a developed economy.

Many organizations prioritize skill development, and they either hire skilled employees or provide training to ensure their workforce has the best possible skills for their roles. This places a high value on skill development in the job market. Various types of skills are essential for individuals to excel in their professions and for businesses to thrive with a highly skilled workforce.

What is Skill Development? Skill development can be defined as the process of:

- Enhancing proficiency.
- Acquiring the ability to perform specific tasks.
- Improving one's skill sets.

Becoming capable of completing tasks with a higher rate of success and within the required timeframe.

Skill Development in the Fisheries Sector in India: -

India is the second-largest fish producer globally, following China. The fisheries sector is a significant source of revenue and contributes to the nutritional security of the country. With an extensive coastline of 8118 km, India's fishing industry employs over 14 million people. However, the fisheries and allied sector have historically not received the attention it deserves, leading to inefficiencies in various activities within the sector.

To address this, there is a need for policy changes that prioritize mandatory skills training in fisheries for unemployed youths. Such policy shifts will benefit individuals, the industry, the government, and the economy by providing employment, increasing productivity, and ultimately boosting the nation's GDP.

There are several areas within the fisheries sector where skill-based training can be explored. These training opportunities can benefit both educated and uneducated unemployed youths and women from fisher communities, contributing to community development and the nation's self-dependency. Here are a few areas of skill development in the fisheries sector:

1. **Fishing Operation:** The basic area under the fishing operation for skill based training are familiarization of fishing terminologies; practice on Swimming; operation of onboard fish handling; safety, use and maintenance of store tools & equipments; operation in fishing and navigational aids; familiarization with different methods of preservation of nets and their maintenance; visit to a fish processing Industries to understand different handling and processing methods etc.
2. **Operation, Maintenance & Repair of Fishing Boat Engines:** The basic area under the operation, maintenance & repair of fishing boat engines for skill based training are - practice on personal hygiene and Safety; use and maintenance of store tools & equipments; practice on starting and maintaining two stroke and four stroke marine engines; practice on fuelling and its functions; practice on overhauling of engine and its cooling systems; practice on overhauling of transmission systems; practice on fixing of electrical systems in the engine; etc.
3. **Aquarium Fabrication and Maintenance:** This is one of the potential business areas in the field of fisheries where numbers of opportunities for skill development are available. The few areas of training are demonstration on aquaria and its construction; practice in assembly of glass tank and frame and testing; preparation different kind of wooden roofs / hoods. Installation practice on aerators, sand bed preparation, bedding of pellets, installation of cleaning devices; planting of aquatic plants & other artifacts; methods of aquarium electrification; preparation and installation of aquarium items in brick work tank; using water quality testing kits and tools; practice on methods of fish quarantine and use of chemotherapy; etc.
4. **Crab Culture and Fattening:** In this area the training in skill development can be undertaken for identification of different crabs site selection and design of proper enclosures; identification of culturable crabs, practice on collection and transportation of crab juveniles & monitoring practice on water quality testing kits, practice on harvesting; handling of live crabs and its transportation; etc..
5. **Fish Feed Preparation:** The fish culture and rearing businesses are in its peak for food fishes and aquarium fishes. Hence, there is wide scope for feed preparation units and number of skill development trainings can be undertaken such as - identification and sourcing of common feed ingredients; practice in the operation of different feed equipments; practice in preparation of formulated feed and their packing etc.

6. **Breeding of Ornamental Fish (Freshwater):** The ornamental fish culture is a business which can be undertaken by an individual as secondary business. The area in which skill development trainings can be undertaken are – requirements and design of breed tank; brood fish identification (male & female) and breeding techniques, transportation, packaging and marketing, etc.
7. **Multiplication of Aquatic Ornamental Plants:** For the ornamental fish business, aquatic plants are also demanded in large quantity. The ornamental plants can be also multiplied and is also one of the avenues for income generation. The areas for skill development training in ornamental plants business are - differentiating floating type plant and submerged plants; planting of floating type plant in tank and its protection; planting submerged type plant in a tank and its care choosing and selection of healthy plants for the aquarium and its set up; anti infection process of plants before planting in aquarium; etc.
8. **Breeding of Carps:** The basic area under the breeding of carps for skill based training are selection and identification of fish; ponds requirement and design; nursery/ rearing pond preparation & management; induce breeding techniques; rearing of fish seed; water quality monitoring using water testing kits; fish seed packing; fish seed transportation.
9. **Operation and Basic Maintenance of Marine Refrigeration and Marine Electronic Equipment:** The majority of the fishing vessel equipped with refrigeration and electronic equipments which can be repair, maintained properly if the skill development training provided for marine refrigeration and electronic equipments. The area for training are - safety practice in using the refrigeration system and cleanness; visualizing the different components in the refrigeration system; demonstration and use of refrigeration tools; correct use and operation of VHF Communication equipment, Echo Sounder, GPS, EPIRB, (Emergency Position Indicating Radio Beacon); use of different power supplies for the equipments, handling and maintenance of Lead Acid batteries and charging system; daily and weekly maintenance of equipments, etc.
10. **Shrimp Hatchery and Farming:** Shrimp is the major item in aquatic farming system. It has huge potential as an alternate business activity for fisher community. It has number of skill based training areas such as shrimp breeder maintenance; shrimp breeder feeding; artemia hatching; microalgal culture; collection & maintenance of breeders for hatching; collection and cleaning of eggs and hatching of eggs to nauplii; collection of nauplii and transferring them to rearing tanks; seed packing & transportation; larvae acclimatization; checking of DO, pH, salinity, etc; feed monitoring; growth monitoring; feeding (time and how), disease monitoring and treatment, harvesting and transportation, etc.

11. Fish Processing and Value-Added Seafood Products: The fish processing is important aspect for preservation of fishes and making it available whenever required. Also, the preparation of value added products from fishes is lucrative business activity. Hence, this is one of the potential area for skill development, which includes - practice hygiene handling of fish, selection of fishes for different methods of salting; smoking of locally available fishes; practice in packing fishes; identification of different ingredients used for preparation of value added products; practice in preparation of fish processed pickles, fish wafers, soup powder, masmin, ready fry fish etc.

Skill development in the fisheries sector can lead to increased employment, improved productivity, and greater self-sufficiency, benefiting individuals, the industry, and the nation's economy.

Source: Training Manual by College of Fisheries, Ratnagiri.

Traditional Fishing in Goa



Smt. Roshini Naik

Assistant Superintendent of Fisheries

The rich waters of the rivers and sea has enriched the life of Goan's and made it vibrant. Being situated on the coast, fishing is a major activity and a central occupation for Goan's. The fishing community in Goa is a key coastal business of the local populace in Goa. Fishing communities are identified by their surnames- *Kharvi, Nustekar, Arrikar, Kantaikar, Magkar, Pagelkar and Ranponkar*.

Fishing in Goa is done in a myriad of ways. Many Goan's have grown up learning to catch fish with their bare hands when fish gather in shallow waters. This traditional knowledge is put to use to make up for the reduced fish supply when mechanized fishing is banned in Goa. The monsoon also replenishes the water bodies providing ample opportunity for use of these methods.

Fish caught by hand is invariably considered superior by local population. Though huge trawlers and mechanization have largely replaced traditional methods of fishing, many still retain their expertise in catching fish the eco-friendly way. Despite modernization of fishing, simple but methodological ways of fishing with some improvisation have been more effective in protecting nature.

Traditional fishing methods are suitable and respectful of nature's cycles, since they have not been motivated by profit. These age-old traditions speak of different techniques used for fishing over the eras. The key to catching fish is studying the type of fish in a sure region and use of specific net accordingly.

Porxevonni/ Porxevopp /Posovap



In shallow waters at low tide, one or more persons muddy the waters with their hands and feet so the fish stay still. Then a person dips his hands in water and as soon as a fish is felt it is caught.

This method is practiced by fishermen during the monsoon in the river system of Goa. Retaining walls are built between paddy fields and the river to prevent saline water ingress. The stones of the retaining wall serve as traps as fishermen muddy the water near them to catch fish with bare hands or by dropping a net onto the muddied riverbed.

Gorovop /Rod fishing



This is a method of angling where a nylon string is tied to a wooden or bamboo stick. Baits (*haains*) and hooks (*gari*) attached to the string vary depending on the type of fish one wants to catch. Smaller fish and rice dough are common as bait.

Poler/ Line fishing



This method is similar to angling where a fish-hook is tied to a nylon thread and left in water with more alluring bait like a big prawn/ crab to catch slightly bigger variety of fish.

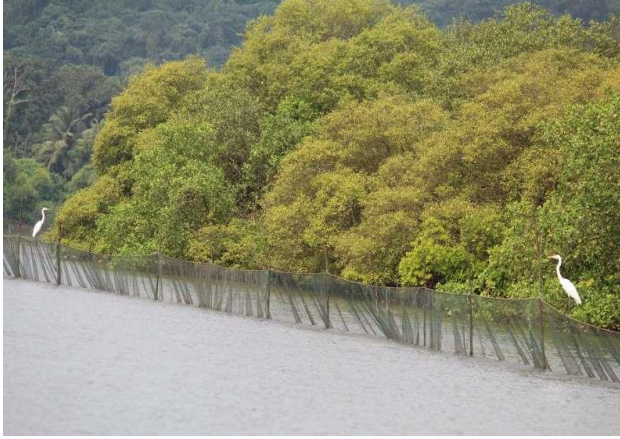
Kanni/ Zaali /Barrier net fishing



This is a method that requires two or more people to carry out fishing depending on the catch. Two pieces of bamboo are tied on either side of a rectangular net. Holding the bamboos vertically on either side, two fishermen move in shallow water like sluice gates. The net sweeps across the bed of the water body and is then hauled up catching fish.

Fishermen use bigger nets called *Orbol* and more men help in pulling it in a deeper water body like a pond. The same method is called *Zaali* when the net used is semicircular in shape attached to a bamboo frame used to catch shrimp in muddy sections of shallow waters.

Khutani/ Khutavanni/ Futaavni/ Stake fishing



In this method at low tide wooden poles/ bamboo sticks are staked in river bed at inlet. A net is tied across them in a circular fashion so it runs across the breadth of the water body. The fish that come over or around the net during high tide are trapped in the net during low tide. The fish are then harvested at low-tide. This method is commonly used in monsoon season to catch *Tambuso* (Red snapper), *Chonak* (Sea bass) and *Dodiyare* (Croaker).

Kaathalli



This method involves a 200 to 300 meters long net with small floats attached across the length of the net on one side and sinkers on the other. The net is laid straight across the breadth of the water body where the floats enable the net to fall over the water like a screen with the sinkers assisting in holding the net up-straight. Fish moving in the water are trapped in it. To direct the fish into the net, the water is disturbed, forcing the fish to move in the direction of the net. With *Kaathalli*, fishermen snare *Khorsani* (Butter fish), *Shevtali* (Mullet), *Conge* (Apple snails) and *Thigur* (Walking catfish).

Cast net /*Paguer*



This is a type of conical circular net with small sinkers along the circular edge forming pockets and rope tied to conical end. The net is cast by a single person forming a circular pattern over the water surface and settling over the bottom. Then the net is dragged slowly over the bottom and hauled up with the catch.

Jhaari/ Kobli/ Zari



It is a special trap made of circular metal frame lined with nylon net used to catch crabs. The metal frame settles on the river bed keeping the net at uniform level. Such *Koblem* are laid in clusters at a time, 50 meters apart with string tied and secured to some objects on the banks. When fishermen detect movement in the string, it indicates the crab's presence and the *Koblem* are pulled out of the water.

Harvesting of clams/ oysters



Fishermen venture into waters with a canoe and dive in the water to gather clams from the bed by hand. For oysters, the rock surfaces on river banks and seashore is chipped with a sharp metal object.

Dipkavnni



In this method, fish are caught by flashing bright artificial lights, ranging from paraffin lamps to kerosene ones and now high beam torches in shallow waters. As the light strikes the eye of the fish it disorients and stays still. They are then easily collected in a traditional handheld net with circular frame made of bamboo called *Kobli*.

Raampann/ Ramponn



It is a traditional technique of sea fishing for commercial purposes. Around six people equipped with an enormous net tied by a long and strong coir rope row the boat out to the sea. The net is cast into the deep sea in a semi-circular manner at about two-three kilometers from the shore.

This huge net is known as ***Raampann***. It is made up of coir woven by hand by skilled persons. The boat returns with the strong rope tightened to the inner single net. Twenty to twenty-five people are needed to pull this net ashore. It needs strength and team coordinated effort through the rhythmic sounds of melodious words. The catch is full of fish of various varieties. All the people engaged in this business equally share the fish so caught.

Yet another larger form of ***Ramponn*** i.e. at least a kilometer in length is called *Voge*. While casting it, people from four to six wards (*vaddos*) come together. A single traditional boat (*vhodem*) is used to go out, about three kilometers to the sea. At least ten-experienced fisherfolk are required to throw the net in by moving in a semi-circular manner in the sea. At shore 50-60 people pull this net together and the haul is sorted to distribute among the workers. Their leader, who is chosen by all of them, regulates this *Rapankar* group and he takes important decisions regarding fishing.

Maanas



The *Maanas* or *Maanos* is a major source of fish catch and is practiced in Goa as a commercial venture. It was owned mainly by Comunidades and auctioned for three or five years for a particular sum.

A channel is made for the inlet water to move in and out of the field. The field has a gate for its *Bundara* (bundh), called *Maanas*. On both sides two pillars are erected of laterite or concrete. A wooden plank is placed between the pillars, making it an effective door. During high tide, incoming water along with fish comes in and is trapped in the bay and so begins to breed. During low tide these fish are pulled out by the force of water and are caught in the net tied to the *Maanas* on the outer side. The fish get trapped in large quantities mostly during low tide at night because during the day fish prefer to stay hidden.

The water inflow to the *Maanas* moves through naturally created canals known as *Poy*. *Poy* has great depth so that inward bound fish could be stored for a period and caught whenever required. The net that is used to catch fish is called *Yeni*, which is ten to twelve hands long and needs two people to hold it with bamboo sticks attached to either side. Another net that is used during this fishing process in this area is known as *Kaateri*, which is held by a single person. It has *bhoy*(wood balls) which float on water. *Shishem* (lead balls) attached to the net, sink because of the weight.

Khaane

In the month of January, the *Maanas* is opened and the fields are filled with seawater and during low tide, when the water flows away from fields, the *Maanas* is shut down. It is done by putting a hard stick known as *Tami* in the gaps, which are locally known as *Vaajri*. These doors are shut down for around two to three months. During this period, fish breed in the *Poy* in large numbers, till then there is no fishing activity.

After two months, a net called *MaanshecheJaal* is used in a manner that both its ends touch the concrete surface. It is narrow in the middle and longer than a *Yeni*. This net is used when the doors are open. As the doors are opened a large number of fishes are caught in the net. This process of catching fish is known as *Khaane*.

Seaweeds

The Untapped Potential for India's Coastal Communities



Shri. Sanil Naik

Asst. Superintendent of Fisheries

Seaweeds are macroalgae, generally occurring in marine habitats, and are multicellular which will be seen with the eye, and are different from the higher plants as they do not possess true roots, stems, or leaves, making them thalloid in nature. Seaweeds, comprising three main types - green, brown, and red algae. Seaweeds in India represent a hidden treasure and can benefit the economy and coastal communities due to long coastline.

About 844 species found in Indian seas. Among them are commercially valuable species like *Gelidiella acerosa* and *Gracilaria edulis*, used for agar production, and *Sargassum*, which is employed for alginates and liquid seaweed fertilizer. These seaweeds have been traditionally harvested from natural stocks, but their overexploitation has led to scarcity, highlighting the need for cultivation and sustainable management.

The Central Salt Marine Chemical Research Institute and Central Marine Fisheries Research Institute have developed techniques for the cultivation of commercially important seaweed species in India, encouraging the involvement of Self Help Groups, Village Youth Groups, and NGOs in promoting seaweed cultivation as an alternative livelihood for coastal communities.

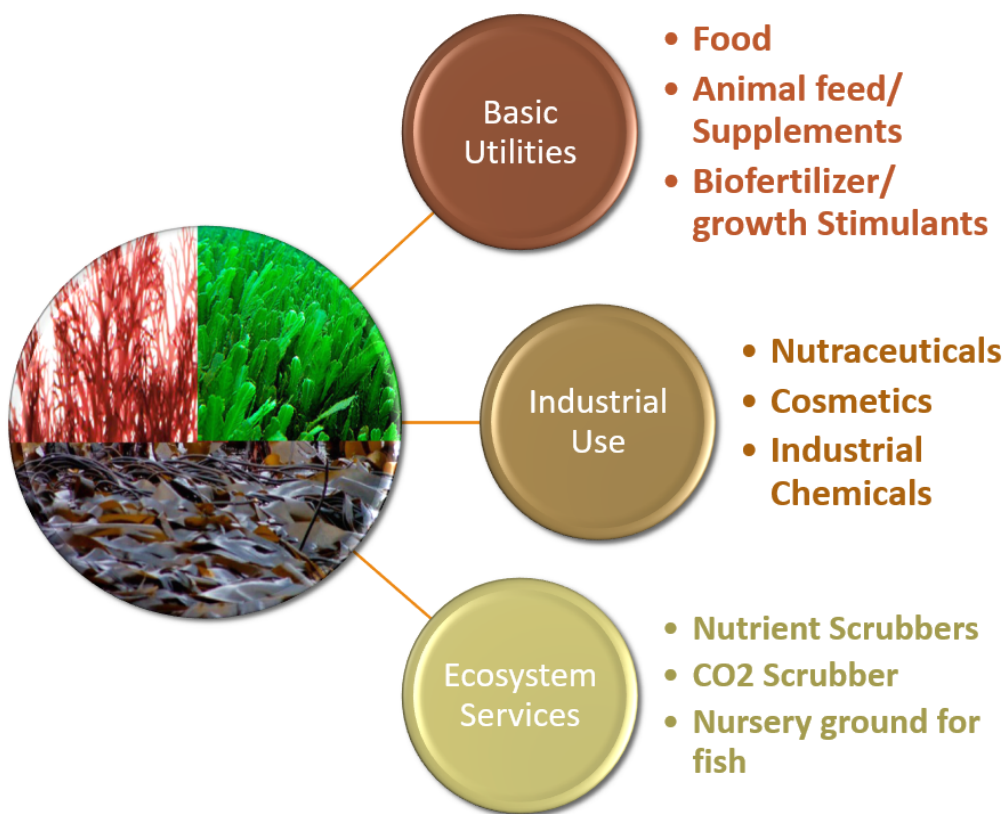
India's seaweed industry, though currently limited in scale, is gaining momentum. In 2018, India produced 5,300 tonnes of seaweed, and its potential for growth is enormous. With over 80% of global seaweed production concentrated in China, Korea, and Japan, India has the opportunity to catch up and contribute significantly to this booming industry.

Seaweed cultivation is a highly lucrative activity with a low-cost, low-maintenance technology and a short grow-out cycle. Beyond its economic potential, seaweed farming offers several environmental benefits. It helps treat coastal pollution by absorbing excess nutrients and can play a role in mitigating CO₂ emissions, making it eco-friendly. Furthermore, seaweed polyculture, in association with mollusks and fishes, has the potential to increase harvests and profits while addressing environmental concerns like eutrophication.

While the potential of seaweed cultivation in India is vast, there are challenges that need to be addressed. Overexploitation of natural seaweed stocks, poor-quality raw materials, and the lack of technology for processing are some of the obstacles to be overcome.

Efforts should be made to disseminate seaweed cultivation technologies effectively, identify suitable sites for large-scale cultivation, and develop hybrid seaweed species with superior growth and nutritional characteristics. The public sector must create an enabling environment and promote the development of the seaweed sector through licensing, financial support, and other mechanisms. Moreover, increasing public awareness of the environmental and socio-economic contributions of seaweeds is essential.

Seaweeds have the potential to transform India's coastal communities by offering new livelihood opportunities and contributing to the country's economy. With the right support, infrastructure, and awareness, India can harness the hidden potential of seaweed cultivation, increase its share in the global phycocolloid and biochemical business, and become a major player in this lucrative industry. As the world continues to recognize the importance of seaweeds in various sectors, India can secure its place as a leading producer, making the most of its extensive coastline and abundant seaweed resources.



Source: *Aquaculture Asia Journal*.

Farming in Biofloc System



Shri. Shubham Majik
Fisheries Officer

The rich waters of the rivers and sea has enriched the life of Goan's and made it vibrant. Being situated on the coast, fishing is a major activity and a central occupation for Goan's. The fishing community in Goa is a key coastal business of the

Biofloc farming is a sustainable aquaculture method gaining popularity for its efficiency and environmental benefits. The system involves cultivating aquatic organisms in a controlled environment where microorganisms form flocs, creating a self-regulating ecosystem. This article will explore the key aspects of biofloc farming, its advantages, challenges, and its potential impact on the future of aquaculture.

Introduction:

The Biofloc technology is revolutionizing traditional aquaculture by promoting a closed-loop system that minimizes environmental impact. The method relies on creating favourable conditions for the formation of bioflocs, which are clusters of bacteria, algae, and other microorganisms. These flocs provide a natural food source for the cultured species, creating a symbiotic relationship that enhances overall productivity.

Key Components of Biofloc System:

Floc Formation:

The heart of biofloc farming lies in the formation of these microbial aggregates. This process is stimulated by controlling carbon and nitrogen ratios in the water, encouraging the growth of beneficial microorganisms.

Aeration and Water Quality:

Proper aeration is essential to maintain oxygen levels and promote floc formation. Additionally, continuous monitoring of water quality parameters such as pH, ammonia, and nitrite levels ensures a stable and healthy environment for the aquatic organisms.

Cultured Species:

The Biofloc technology is versatile, accommodating various aquatic species like shrimp, fish, and crustaceans. The system's adaptability makes it suitable for different farming goals and regional requirements.

Advantages of Biofloc Farming:

Water Conservation:

The closed-loop nature of biofloc systems significantly reduces water usage compared to traditional aquaculture. This is especially crucial in regions facing water scarcity.

Improved Feed Conversion:

The microbial flocs serve as a natural food source, reducing the reliance on external feeds. This not only cuts costs but also enhances feed conversion rates, making the farming process more efficient.

Disease Control:

The Biofloc systems create an environment that suppresses harmful pathogens, lowering the risk of diseases among cultured species. This reduces the need for antibiotics and other chemical interventions.

Environmental Sustainability:

By minimizing water discharge and promoting natural nutrient cycling, biofloc farming minimizes the environmental impact associated with aquaculture. It aligns with the principles of sustainable and responsible farming practices.

Challenges and Considerations:

Initial Investment:

Setting up a biofloc system requires an initial investment in infrastructure, aeration equipment, and training. However, this cost is often offset by long-term savings in water and feed.

Management Expertise:

Successful biofloc farming demands a good understanding of microbial ecology, water quality management, and system dynamics. Adequate training and expertise are crucial for optimal results.

Species Suitability:

While biofloc systems can accommodate various species, some may be more suitable than others. Selecting the right species for a specific environment is essential for maximizing productivity.

Future Prospects:

Biofloc farming holds great promise for the future of aquaculture. As the global demand for seafood rises, the need for sustainable and efficient farming practices becomes paramount. Biofloc technology addresses these concerns by offering a scalable and eco-friendly solution that aligns with the principles of responsible aquaculture.

Conclusion:

In conclusion, biofloc farming represents a significant leap forward in aquaculture practices. Its ability to conserve water, improve feed conversion, and reduce environmental impact makes it a compelling choice for farmers aiming for sustainability. While challenges exist, ongoing research and advancements in technology are likely to further enhance the efficiency and accessibility of biofloc systems, paving the way for a more sustainable and resilient future in aquaculture.



Bioflock unit

Source: 1. *Practical Manual, College of Fisheries, Ratnagiri*
2. *National Fisheries Development Board Manual.*

XIII. SUCCESS STORY

VERTICAL CRAB CULTURE

REGAL PESCA TECH PVT. LTD.

LOCATION-H.NO. 10/A/663, BIUNSA, CUNCOLIM, SOUTH GOA.

Regal Pesca Tech having a vision to modernize the harvesting and supply chain of aquaculture believe in automation and alternate methods of fish farming can accelerate state transition to sustainable aquaculture.

With this vision Regal Pesca Tech establish vertical crab culture system using Recirculatory aquaculture system. This technology is based on the use of mechanical and biological filters and the method can be used for any species grown in aquaculture.

Vertical crab culture system set up by Regal Pesca Tech is first of its kind in the State of Goa. Wherein the Mangrove Mud Crab of size 200-300 grams are used for stocking which were placed in the crab boxes. This crabs are fed with thresh fishes and once crabs gain weight of around 600-900gms harvesting is done. Harvested crabs are supplied to local markets and Restaurants on demand basis.

The Department of Fisheries, Government of Goa forwarded the detailed project proposal of Regal Pesca Tech to NFDB for financial assistance under the innovative activity of NFDB.

Further NFDB, Ministry of Fisheries, Govt. of India approved the project under direct beneficiary oriented activities undertaken by entities of NFDB and sanctioned central assistance of 40% for General Category. Total subsidy of Rs.11.31 lakhs was released to Regal Pesca Tech.



Crab Culture at Regal Pesca Tech Pvt. Ltd. Cuncolim, Goa.

CONSTRUCTION OF BIOFLOC PONDS FOR BRACKISH WATER

KRISH MARKETING

PROP: - Shri. RAJU K. FADTE

LOCATION- XELDEM, QUEPEM GOA

Shri. Raju Fadte Proprietor of Krish marketing established a Brackish water pond Biofloc under PMMSY Scheme. This farm is situated at Deussua Village in Salcete Taluka. Biofloc system is super intensive system of Aquaculture in which the production level can be increased to 10 times of the conventional level. In this system the use of basic natural resources like land and water is minimal and there is environmental problem due to waste output.

He has developed 1 ha area, 4 culture ponds, 5 Nursery Tanks. The species cultured is *L.vannamei*. The target production is 15 tons per ha. per crop. The average size of shrimp is 40 grms. The crop harvested is supplied to local markets and for export as per demand.

The Department of Fisheries, Government of Goa has released the subsidy to beneficiary under General category for Construction of Biofloc pond for Brackish water under Pradhan Mantri Matsya Sampada Yojana (PMMSY) as under:

Sr. No.	Name of the Applicant	Units Installed	Financial Assistance
1.	KRISH MARKETING PROP:- RAJU K. FADTE	Biofloc pond 0.2 ha	Rs. 14,40,000/-



Brackish water Bio Flock Ponds at Krish Marketing, Quepem, Goa.

BACKYARD ORNAMENTAL FISH REARING UNIT
PROPRIETERS: - ANITA MASCARENHAS, BLISS FARM
LOCATION- BHIRONDEM, VALPOI, SATTARI GOA

Culture of ornamental fish is one such diversification that involves the culture and propagation of fish and other aquatic organisms for its economic and aesthetic values. Considering the increased popularity of ornamental fish at household level, captive seed production and rearing of exotic species and indigenous species, Anita Mascarenhas resident of Bhirondem Valpoi Sattari has taken initiative and has set up Backyard Ornamental Fish Rearing Unit in her Property at Bliss Farm.

Anita Mascarenhas, is the first Women Entrepreneur to set up the Backyard Ornamental Fish Rearing Unit, this unit has huge potential for Ornamental Fish lovers who would like to take up ornamental fishes as pet or as hobby. Ornamental species such as koi carps, koi angels, Hifin Swordtail, sunset plety, Golden Severam, Guppies, green widow, red carp etc. are reared in this unit.

The unit consists of 9 fish tanks including crab tank stocked with various fresh water ornamental fish species. Such Backyard ornamental unit is a way forward for enhancing the ornamental fish production in the State. This will create a huge awareness among the different stakeholders specially the women/youth and SHGs.

The Department of Fisheries, Government of Goa has released the subsidy to beneficiary under Women category for setting up Backyard Ornamental Fish Rearing Unit under Pradhan Mantri Matsya Sampada Yojana (PMMSY) as under:

Sr. No.	Name of the Applicant	Units Installed	Financial Assistance
1.	Anita Mascarenhas	1 unit (unit cost Rs.3.00 lakhs per unit)	Rs. 1,80,000/-



Ornamental Fish Rearing Unit at Bliss Farm, Valpoi, Sattari, Goa

XIV. HUMAN RESOURCE

- List of staff retired during the year 2022-23**

Sr. No.	Name of the Official	Designation	Date of retirement
1	Shri. Digambar V. Kalapurkar	Deputy Director (Planning & Statistics)	28/02/2023
2	Shri. Govind Zilu Naik	Driver	30/04/2023

- List of staff promoted during the year 2022-23**

Sr. No.	Name of the Official	Designation	Promoted to
1	Smt. Zigyasa A. Murkar	Asst. Supdt. of Fisheries	Supdt. of Fisheries
2	Dr. Sunita R. Pauskar	Asst. Supdt. of Fisheries	Supdt. of Fisheries
3	Shri. Alec Santaba De Souza	Fisheries Officer	Asst. Supdt. of Fisheries

List of staff recruited during the year 2022-23 by direct recruitment

Sr. No.	Name of the Official	Designation
1	Shri. Sanil Babu Naik	Assistant Supdt. of Fisheries
2	Dr. Richita Vernekar	Fisheries Officer
3	Smt. Akshata Naik	Fisheries Officer
4	Kum. Gaitri R. Naik	Fisheries Officer
5	Kum. Aniya Naik	Fisheries Officer
6	Shri. Udaykumar Gaonkar	Fisheries Officer
7	Shri. Shubham Majik	Fisheries Officer
8	Smt. Sharvi Naik	Junior Technician
9	Shri. Viplesh Parwar	Fisheries Surveyor
10	Shri. Akshay Mandrekar	Junior Deckhand
12	Shri. Sahil Bandodkar	Junior Deckhand
12	Shri. Sagar Purshottam Gaude	Fieldman
13	Shri. Suraj Anand Lone	Fieldman
14	Shri. Narendra D. Malik	Fieldman
15	Shri. Rangesh Ramdas Morje	Fieldman

This Directorate has appointed 38 nos. Sagar Mitras under Centrally Sponsored Scheme Pradhan Mantri Matsya Sampada Yojana (PMMSY) to facilitate smooth implementation of various schemes.

Training/workshop programme for Administrative staff for the year 2022-23

Sr. No.	Name of the Officer/Officials	Designation	Training Date	Subject
1	Shri. Dina Volvoikar	Storekeeper	12 th to 14 th December, 2022	Training on Public Procurement, Process, GeM, PFMS & GST at
2	Smt. Janaki R. Govenkar	Office Suptd.	20 th to 21 st December, 2022	Training on Financial Rule
3	Shri. Prathamesh Shirodkar	LDC		
4	Shri. Uday Khanolkar	Fisheries Officer	6 th to 8 th January, 2023	Purple Feast 2023 for Disabilities employees
5	Shri. Prabhakar Shetgaonkar	LDC		
6	Shri. Janardhan Naik	Wireless Operator		
7	Shri. Gaston Da Silva	LDC		
8	Shri. Ratnakar Khanolkar	Watchman		
9	Shri. Filomeno Hendry C. Carvalho	MTS		

Name and Designation of the Staff of Directorate of Fisheries.			
Sr. No.	Name	Designation	Mobile No.
1	Shri. Deepesh Priolkar	Director	9158910500
2	Shri. Chandrakant Velip	Deputy Director	9923499855
3	Dr. Smita Mazumdar	Deputy Director	8806086860
4	Smt. Megha S. Kerkar	Superintendent of Fisheries	9420162084
5	Shri. Chandresh Haldankar	Superintendent of Fisheries	9764480663
6	Smt. Rohita Naik	Superintendent of Fisheries	9764239688
7	Smt. Preetam Naik	Superintendent of Fisheries	8806839645
8	Smt. Zigyasa Anup Murkar	Superintendent of Fisheries	8407973579
9	Dr. Sunita Pauskar	Superintendent of Fisheries	9850764554
10	Smt. Chitra Dhavlikar	Asstt. Accounts Officer	9823107577
11	Smt. Janaki R. Govenkar	Office Superintendent	9765493405
12	Smt. Sheetal P. Naik,	Research Assistant	9689424467
13	Smt. Kshama P.S. Navelkar	Head Clerk	9423075353
14	Shri. Deepak Vaigankar	Accountant	8806474430
15	Shri. Suryakant Naik	Accountant	9960404545
16	Shri. Chandan Shiroadkar	Asst. Supdt. of Fisheries	9270067014
17	Shri. Pradeep Gawas	Asst. Supdt. of Fisheries	9403175091
18	Shri. Ravi Rodrigues	Asst. Supdt. of Fisheries	9921948844
19	Smt. Roshini Komarpant	Asst. Supdt. of Fisheries	9764243587
20	Shri. Sanil Babu Naik	Asst. Supdt. of Fisheries	8551989071
21	Shri. Alec De Souza	Asst. Supdt. of Fisheries	9604033152
22	Shri. Narayan Naik	Bosun	8275622373
23	Smt. Priya Madkaikar	Statistical Assistant	8329614469
24	Shri. Nath Bhagat	Statistical Assistant	9762179423
25	Smt. Gautami Shetye	Statistical Assistant	9763409320
26	Shri. Vipul Mapari	Fisheries Officer	8806407880
27	Dr. Christabelle Fernandes	Fisheries Officer	9764320787
28	Shri. Joel Diniz	Fisheries Officer	9923972603
29	Shri. Sagar Naik	Fisheries Officer	7798889240
30	Shri. Uday Khanolkar	Fisheries Officer	9422018550
31	Shri. Divakar Korgaonkar	Fisheries Officer	9423837493
32	Shri. Saby Moraes	Fisheries Officer	9763555380
33	Shri. Shubham Majik	Fisheries Officer	8766924001
34	Smt. Akshata P. Naik	Fisheries Officer	9637997994
35	Kum. Gaitri R. Naik	Fisheries Officer	9158345637
36	Kum. Aniya Anand Naik	Fisheries Officer	7507105631
37	Shri. Udaykumar V. Gaonkar	Fisheries Officer	9420210506
38	Dr. Richita S. Vernekar	Fisheries Officer	9923257389
39	Shri. Shamrao Raikar	Jr. Technician	9923159494
40	Smt. Sharvi Girish Naik	Jr. Technician	7972348318

41	Smt. Marcia Fernandes	Jr. Stenographer	9168790606
42	Shri. Deepak Kunkoliker	Marketing Inspector	8806624355
43	Smt. Priyanka Nayak	Investigator	9923653639
44	Shri. Prakash Gaude	Investigator	9096617178
45	Shri. Joao Mascarenhas	UDC	8322787090
46	Smt. Roshan Taluanekar	UDC	9049270608
47	Smt. Palhavi Dangui	UDC	9850183385
48	Shri. Samir Parab	UDC	8390829693
49	Shri. Uday Kamat	UDC	9923748915
50	Smt. Ujwala V. N. Shirodkar	UDC	9860032006
51	Shri. Lavu Gauns	UDC	7774953547
52	Shri. Dina Volvoikar	Store Keeper	9049600907
53	Shri. Ganpat Chari	Net Mending Instructor	9765157218
54	Shri. Siddesh Kerkar	Mechanical Instructor	9421248792
55	Shri. Dilesh Pagui	Engine Driver	9823672438
56	Shri. Keshav Dessai	Engine Driver	9822048383
57	Shri. Devanand Lone	Fisheries Surveyor	9823679921
58	Shri. Mahesh N Volvoikar	Fisheries Surveyor	9922598437
59	Shri. Domingo Fernandes	Fisheries Surveyor	9421246892
60	Shri. Anand Gaude	Fisheries Surveyor	9673243231
61	Shri. Kamalakant Gaude	Fisheries Surveyor	9422845037
62	Shri. Gopal Zuvatkar	Fisheries Surveyor	9923040949
63	Shri. Harish Prabhu	Fisheries Surveyor	9545225033
64	Shri. Avinash Arondekar	Fisheries Surveyor	8806753314
65	Kum. Rajeshri.. Gaonkar	Fisheries Surveyor	9923850398
66	Shri. Shyamsundar Mishal	Fisheries Surveyor	7588674297
67	Shri. Prathamesh Khandeparkar	Fisheries Surveyor	9673272527
68	Shri. Damodaran Naik	Fisheries Surveyor	9923843930
69	Shri. Vinayak Pednekar	Fisheries Surveyor	8806474529
70	Shri. Amogh Mahavarkar	Fisheries Surveyor	9960365724
71	Smt. Saily Madkaikar	Fisheries Surveyor	9673257293
72	Shri. Lavkush Malik	Fisheries Surveyor	9673549177
73	Shri. Subhash Gaonkar	Fisheries Surveyor	9579302298
74	Shri. Nikhil Betkikar	Fisheries Surveyor	7038474124
75	Shri. Vishal Pagi	Fisheries Surveyor	9764682588
76	Shri. Bablo Kalangutkar	Fisheries Surveyor	9823352145
77	Shri. Vedanand Shirodkar	Fisheries Surveyor	8308364110
78	Shri. Ankush Shirodkar	Fisheries Surveyor	7798124462
79	Shri. Kishen Borcar	Fisheries Surveyor	8411953837
80	Shri. Kalpesh Gaonkar	Fisheries Surveyor	9764937170
81	Shri. Mahadev Gaonkar	Fisheries Surveyor	9420158813

82	Smt. Nishi Naik	Fisheries Surveyor	9860435071
83	Shri. Anil Naik	Fisheries Surveyor	9823137561
84	Smt. Seema Dessai	Fisheries Surveyor	9850104424
85	Smt. Shenia Coutinho	Fisheries Surveyor	9923033457
86	Shri. Sujay Dessai	Fisheries Surveyor	9665216551
87	Shri. Krishna N. Naik Shirodkar	Fisheries Surveyor	7798676067
88	Shri. Rajesh Nechkankar	Fisheries Surveyor	9765973713
89	Shri. Nitin Anandache	Fisheries Surveyor	9673601030
90	Shri. Parvinder Lone	Fisheries Surveyor	9923478888
91	Shri. Anand Naik	Fisheries Surveyor	9158345953
92	Shri. Rohan Morajkar	Fisheries Surveyor	9823880829
93	Shri. Nitin Sawant.	Fisheries Surveyor	9923348696
94	Shri. Sameer Velip	Fisheries Surveyor	8390829693
95	Shri. Viplesh Parwar	Fisheries Surveyor	7378844790
96	Shri. Hari Palyekar	Junior Deckhand	7798104790
97	Shri. Gopal Naik	Junior Deckhand	9881779052
98	Shri. Subhash Shetkar	Junior Deckhand	9623325335
99	Shri. Prajay Parulekar	Junior Deckhand	8421137017
100	Shri. Anay Halarankar	Junior Deckhand	9860314936
101	Shri. Vidhyanand Phadte	Junior Deckhand	8830774170
102	Shri. Indur Kankonkar	Junior Deckhand	9923085532
103	Shri. Pravin Shirodkar	Junior Deckhand	8888632301
104	Shri. Shashikant Pagi	Junior Deckhand	9923749464
105	Shri. Prasanna Pagi	Junior Deckhand	9763741525
106	Shri. Flavio Fernandes	Junior Deckhand	9822689563
107	Shri. Shubham Naik	Junior Deckhand	7507641767
108	Shri. Rahul Tari	Junior Deckhand	9049245236
109	Shri. Sagar Korkankar	Junior Deckhand	9075941026
110	Shri. Shubadeen Naik	Junior Deckhand	8788384420
111	Shri. Sahil S. Bandodkar	Junior Deckhand	9049670676
112	Shri. Akshay Anand Mandrekar	Junior Deckhand	9764694657
113	Shri. Soccoro Pinto	Fieldman	9921879257
114	Shri. Siddarth Mishal	Fieldman	9923112651
115	Shri. Narendra D. Malik	Fieldman	9307531402
116	Shri. Rangesh R. Morje	Fieldman	7875912250
117	Shri. Sagar Gaude	Fieldman	9158088506
118	Shri. Suraj Anand Lone	Fieldman	8483973357
119	Shri. Florence Rebello	Wireless Operator	8411993438
120	Shri. Janardhan Naik	Wireless Operator	8007382769
121	Shri. Shivanand Surlakar	Wireless Operator	8408872613
123	Shri. Ramesh Gawas	Wireless Operator	9552080099

124	Shri. Umesh Kulkarni	LDC	8411025887
125	Shri. Siddesh Naik	LDC	9823454593
126	Smt. Anita Madkaikar	LDC	9637017392
127	Shri. Damodhar Kalangutkar	LDC	7588454082
128	Smt. Prajakta Haldankar	LDC	9823987389
129	Smt. Steffi Pires	LDC	9822518207
130	Smt. Renisha Cardozo	LDC	8805232307
131	Smt. Sonia Naik	LDC	8975101221
132	Shri. Prathamesh Shiroadker	LDC	9881211999
133	Shri. Richard Raicar	LDC	9765468413
134	Smt. Frida Barreto	LDC	7721889747
135	Smt. Ashwini Gaonkar	LDC	9765848696
136	Smt. Canira Raicar	LDC	9552981383
137	Shri. Gaston Silva	LDC	9011124435
138	Shri. Prabhakar Shetgaonkar	LDC	9423154373
139	Shri. Sucorro Dias	Driver	7507626467
140	Shri. Swapnesh Adel	Driver	9923657475
141	Shri. Satish Gawas	Driver	9420744956
142	Shri. Vishant Narvekar	Driver	7887991333
143	Shri. Francis Santan Cruz	Driver	8888802875
144	Shri. Filomeno Henry Columbano Carvalho	MTS	9881882360
145	Shri. Bhiva Gawas	MTS	8805336547
146	Shri. Chandrakant Narulkar	MTS	9823535646
147	Shri. Mohan Garudi	MTS	9226792539
148	Shri. Bhupal Phadte	MTS	9881732250
149	Smt. Shobha Parab	MTS	9637749551
150	Smt. Sudha Gaude	MTS	9764775953
151	Smt. Gauri Chodankar	MTS	8390203141
152	Smt. Niella Fernandes	MTS	8888184392
153	Smt. Pritam Shiroadker	MTS	9822824456
154	Shri. Felipe Colaco	MTS	8380958978
155	Shri. Norman Soares	MTS	8308765217
156	Shri. Gangaram Rathod	MTS	8550900815
157	Shri. Pradip R. Rane Sardesai	MTS	9420193153
158	Shri. Ibrahim Saha	Watchman	9822686515
159	Shri. Vaibhav Tamboskar	Watchman	9823188233
160	Shri. Sambhaji Sawant	Watchman	9420897288
161	Shri. Ratnakar Kanolkar	Watchman	9923651057

XV. DIRECTORY OF FISHING SOCIETIES

North Goa

Sr. No.	Name of the Society	Mobile No.	President / Chairman
Pernem			
1	Nirvikar Fishing Co-op. Society Ltd.	9049571055	Shri. Bheem Pednekar
Bardez			
2	All Goa Fisherman's Co-op. Association Ltd.	0832-2475099	Adv. Chandrakant V. Chodankar
3	Candolim Fisherman Association	9960193399	Shri. Domnic Joao Fernandes
4	Baga Sant Khuris Fishermen Association	9822986108	Shri. Ronny P.D'Souza
5	Ovleshwar Fisherman Association,	9850764148	Shri. Bhau S. Kalangutkar
6	Traditional Fisherman's Association of North Goa	8698576557 9970318296	Shri. Peter Menon
7	Vailankani Saibin Fisherman Association	9860765641	Shri. Caetano Fernandes
Bicholim			
8	Kharvi Samaj Vishwasth Mandal Society	9422448662 7507214621	Adv. Narayan Putu Sawant
Tiswadi			
9	Dona Paula Fishermens Association	9049813389	Shri. Ivo Nunes
10	Caranzalem Raponkar Traditional Fisherman Association	9822175766	Shri. Francisco Zacarias Vaz
11	Odxel Fishermen Association	9011307797	Shri. Ajay Diukar
12	Siridao Traditional Fisherman Association	9822147576	Shri. Dilip Kankonkar
13	Shree Sateri Fisherman Association	9834664264	Smt. Sumitra Fatarpekar
14	Akhil Goa Harkari Sahari Sauntha	9657364587	Shri. Gajanan Halarnkar
15	Shree Shantadurga Fisherman Association	9923284676	Shri. Sanjay Pereira

South Goa

Sr. No.	Name of the Society	Mobile No.	President / Chairman
Salcete			
1	A.V.C.B. Traditional Fisherman Association	9326120155	Shri. Prashant N. Gokarnkar
2	Niz Goenche Ramponkarancho Ekvott	9823180200	Shri. Saby Fernandes
3	Kharvi Bhavancho Ekvott	7774902290	Shri. Jose Fernandes
4	Traditional Fisherman Association of Colva	7743898880	Shri. Tomas Rodrigues
Canacona			
1	Akhil Goa Kshatriya Pagui Samaj	9511630921, 9923403683	Shri. Ashok Apa Dhuri
2	Dev Dungeshwar Gabit Fishermen's Society	9834533046, 7875231848	Shri. Siddesh s. Salgaonkar
3	Shree Ganesh Traditional Fisheries Association	7821885890	Shri. Vishnu Keluskar
Vasco			
1	St. Andrews Canoe Owners –Vasco Society	9860123987	Shri. Sebastiao De Souza
2	Baina Ramponkar & Fishing Canoe Owner's Society,	9822177346	Shri. Santo Andre Gurjao
3	Baina Fisherman Society	9850189991	Shri. Alcantro Gurjao
4	Desterro Fisherman Association,	9923633360	Shri. Domingos Mendes
5	St. Francis Xavier Canoes Owners Vasco Society	7758901464, 9765974569	Shri. Lourence D'Souza
6	Old Cross Fishing Canoe Owners Co-op. Society Ltd.	9637891412, 9545401532	Shri. Custodio D'souza
7	Goenche Ramponkarancho Ekvott (GRE)	9623269344	Shri. Agnelo Rodrigues
8	Velsao Fishing Canoe Owners Society	9579594289, 9552617383, 8805599143	Shri. Lourence Mascarenhas

TRAWLERS/ PURSE SEINERS

North Goa

Sr. No.	Name of the Society	Phone/ Mobile No.	President/ Chairman
1	All Goa Purse-seine Boat Owners Association	9920616891	Shri. Harshad Dhond
2	Mandovi Fishermen Marketing Co-operative Society Ltd.	0832-2413656, 0832-2415447, 9822482551	Shri. Francisco D'souza
3	Xapora Fishing Boat Owners Fisheries Co-operative Society Ltd.,Chapora, Bardez- Goa.	9822142230	Shri. Balbhim Malvankar

South Goa

Sr. No.	Name of the Society	Phone/ Mobile No.	President/ Chairman
CUTBONA			
1	Cutband Boad/Trawler Owners Association	0832-2775915 9822132008	Shri. Jose Roque Dourado
2	Cutbona Boat Owners Development Society	8322775915	Shri. Savio Dsilva
3	Cutbona Fisheries Co-operative Society Ltd.	9822382924	Shri. Vinay Tari
4	South Goa Mechanised Boat Owners Co-op and Marketing Society Ltd.	9822589549	Shri. Antonio Fernandes
5	The Purse Seiners Boat Owners Cooperative Society Ltd	9822583707	Shri. Sebastiao Cardozo
6	Deep Sea Fishing and Marketing Co-operative Society Ltd	7798252525	Shri. Joyston D. Rodrigues
VASCO			
1	Goa Fishing Boat Owners Association	9822941761, 7498419106	Shri. Jose Philip
2	Vasco Fishing Boat Owners Marketing Co-operative Society Ltd.	9822139521	Shri. Minguel Cardoz
3	Zuari Fishermen Marketing Co-operative Society Ltd	0832-2501110, 9923037926, 9326127387	Shri. Jerry Fernandes Shri. Rony Fernandes
CANACONA			
1	The Canacona Taluka Gabit Fisherman Trawler/ Mechanized, Craft Owners Co-op. Society Ltd also known as The Canacona Taluka Fishermen Trawler/ Mechanized, Craft owners Co-op. Society Ltd	9673743171, 9423888339	Shri. Ditosa Barreto

PHOTO GALLERY



National Fish Farmers Day Meet - 2023 celebrated on 10th July 2023 at Colva Fisheries Sub office Colva Salcete Goa



National Conference on KCC for Fisheries, Animal Husbandry and Dairying held on 4th September 2023 at Colva Fisheries Sub office Colva Salcete Goa



Field visit to Krishi Vigyan Kendra for learning model concept and working of Fish dryer in hygienic conditions held on 14th September 2023 by Dr. Hrishikesh Pawar



Beautiful Blue-line Grouper caught by Mr. Ravi Rodrigues, ASF and later released back into the water



International Costal Cleaning Day at Bogmalo Beach



Janata Darbar at Ravindra Bhavan Sanquelim, Goa



Community interaction programme at Chapora jetty



Fisheries officials from BDO office, Canacona participated in the celebration of the "meri maati ,mera desh" programme along with other staff at Canacona.



Fishermen Pele in Delhi as representative of Fishermen Community for Independence Day Programme



Community Interaction programme at Tonka-Madkai, Ponda, Goa.



Form distribution of KCC at Cutbona jetty



Krishi Mahotsav 2023 at Ponda



Awareness program at V.P Goltim, Navelim



Schemes awareness programme under Atmanirbhar Bharat at V.P Mulgao, Bicholim.



Awareness programme at village Panchayat Thivim



Awareness programme at Village Panchayat marna, Siolim



Visit of Chief Executive NFDB to various units sanctioned under PMMSY



Visit of Shri. Rohit Monserrate to Open Sea Cage Culture at Candolim



Planning & Statistics staff visit to Malim Jetty



Fish for Auction at Malim Jetty



Fishing vessel stuck in cyclone at Galgibag rescued by fishermen at Colomb



Planning & Statistics team visit to Blue Harvest Farm, Sal Bicholim



Community interaction programme by IMD & Indian Coast Guard at Sub office Colva



Celebration of 100th Episodes of Maan Ki Baat



Union Minister for State along with Hon'ble Min. of Fisheries on National Fish Farmers day



Training on Good Aquaculture Practices held at Chennai



Felicitation of retired staff during World Fisheries Day



Sanction order distribution to beneficiaries during World Fisheries Day

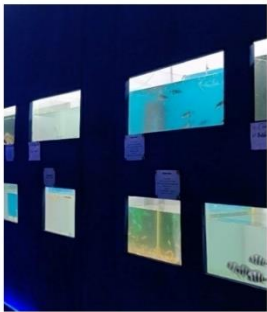


Value added Fish Products Workshop conducted by ASF Shri. Pradeep Gawas



Food products made at Value Added Fish Products Workshop

Aqua Goa Mega Fish Festival 2023



PHOTOGRAPHS OF IMPOUNDED VESSEL



5 Unregistered coracles and sea gill net impounded from Chicalim by the Department Officials.



2 fishing canoes without valid vessel registration certificate, fishing license or Net license were apprehended along Zuari river

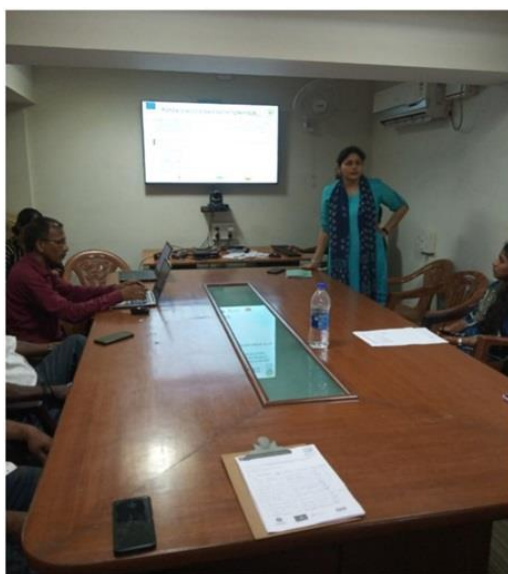


1 fishing canoe was apprehended while engaging in illegal fishing activities along the coast of Cakra on 11/02/2023.

Annual Mass



Annual mass of Directorate of Fisheries was held on 13/09/2023 at Immaculate Conception Church, Panjim, Goa.



*Presentation on discarded fishing nets by Dr Ashwini
Pai Panandiker from TERI.*

मासळीची करणार पैदास : किनारपट्टीतील 14 गावे निश्चित; जनजागृती अभियान सुरू

केंद्राकडून मिळाली 'आर्टिफिशल रिफ'ला मंजूरी

धीरज हमलकर

पणजी, ता. ४ : राज्यातील १४ किनारी गावांमध्ये 'आर्टिफिशल रिफ' उपक्रम राबविण्यासाठी केंद्राकडून मान्यता मिळाली आहे. राज्यात हा उपक्रम पहिल्यांदाच राबविला जात असून त्याबाबत मत्स्यविभाग जनजागृती करण्यात व्यस्त आहे. सध्या नेरुल, वेळसाव, कोलवा, आगांव अशा अनेक किनारीपट्टीतील गावांमध्ये ही मोहीम राबविली जात असून, विविध मत्स्यप्रजातींची वाढ होऊन त्यांचे संगोपन होण्यास मदत होणार आहे.

याबाबत मत्स्यविभागाचे उपसंचालक चंद्रकांत वेळीप यांची भेट घेतली असता त्यांनी सांगितले की, या उपक्रमाअंतर्गत विशिष्ट प्रकारच्या सिमेंटापासून बनविलेले ब्लॉक्स खाडी, समुद्राच्या तळाशी ठेवले जातात, ज्यात



...तर मच्छीमारांना होणार फायदा

कृत्रिम रिफसाठी जागा निवडताना, ती किनारी गावाजवळ असावी. सपाट तळ आणि वाळू असलेली जागा केव्हाही चांगली. पारंपरिक मच्छीमारांनी ही योजना व्यवस्थित समजून घेतली तर त्यांना नक्कीच फायदा होईल, असे मत्स्यविभाग उपसंचालक चंद्रकांत वेळीप यांनी सांगितले.

विविध माशांची पैदास होण्यास मदत होते. हा प्रकल्प केंद्र सरकार पुरस्कृत असून निधीही आलेला आहे. 'आर्टिफिशल रिफ' बाबत लोकांमध्ये जागृती करण्यासाठी कोचीन येथून एक मत्स्यशास्त्रज्ञ गोव्यात

आला असून तो विभागातील कर्मचाऱ्यांना हा उपक्रम यशस्वीरित्या राबविण्यास मदत करत आहे. आम्ही लोकांपुढे हा उपक्रम घेऊन गेले आहोत, कारण त्यांचा विश्वास संपादन करणे महत्वाचे आहे, असे वेळीप

म्हणाले. कृत्रिम रिफवर अवलंबून असलेल्या माशांच्या अनेक गटांसाठी योग्य निवारा मिळतो. तसेच मच्छीमारांना मासे गोळा करण्यासाठी आवश्यक वेळ आणि इंधनाचा वापर कमी होण्यास मदत होते.

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Goa News Hub
@goanewshub

1st Marine Cage Culture Farm under Mariculture policy inaugurated at Candolim. Sheldon Fernandes, a resident of Candolim, North Goa became 1st entrepreneur in the State to start an Open Sea Cage Farm under Goa State Mariculture Policy.



4:28 PM · 01 Nov 22 · Twitter for Android

Goa News Hub
@goanewshub

Nuvem MLA and former minister Aleixo Sequeira was amongst the visitors for ongoing Aqua Goa Mega Fish Festival currently underway at Campal, Panaji.

@ReginaldoGoa



Goa News Hub
@goanewshub

Speaker Ramesh Tawadkar participated in fishing activitie (Paayvado) with locals at Galjibag beach Canacona



10:15 am · 24 Aug 23

NEWS UPDATE

RDX
GOA



AAP Benaulim MLA Capt. Venzy Along With Local Boat Owners, Submitted Plans Of Proposed Training Wall At NOSTIAR Mobor To Union Minister Of Fisheries Parshottam Rupala.



www.rdx9media.com

NEWS UPDATE

RDX
GOA



AAP MLA Capt Venzy met fisheries department officials, discussed Canoe insurance and other fisheries Dept schemes. Supt of fisheries, Asst Supt fisheries & Fisheries Officer were part of the meeting



www.rdx9media.com

NEWS UPDATE

RDX
GOA



St. Andre MLA Viresh Borkar Along With Fishermen & Fisheries Department Official Inspected The Streetlight Poles At Nauxim Bay



www.rdxgoa.com

NEWS UPDATE

RDX
GOA



Fisheries Minister, Nilkant Halarankar Attended National Fish Farmers day Meet, 2023 at Mahabalipuram, Tamil Nadu organised by Ministry of Fisheries, Government of India



www.rdxgoa.com

NEWS UPDATE

RDX
GOA



AAP Benaulim MLA Capt. Venzy Along With Local Boat Owners, Submitted Plans Of Proposed Training Wall At NOSTIAR Mobor To Union Minister Of Fisheries Parshottam Rupala.



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NEWS UPDATE

RDX
GOA



Department of Fisheries will be soon going online for all type of schemes and services : Minister for Fisheries Nilkanth Halarankar



www.rdx9media.com