

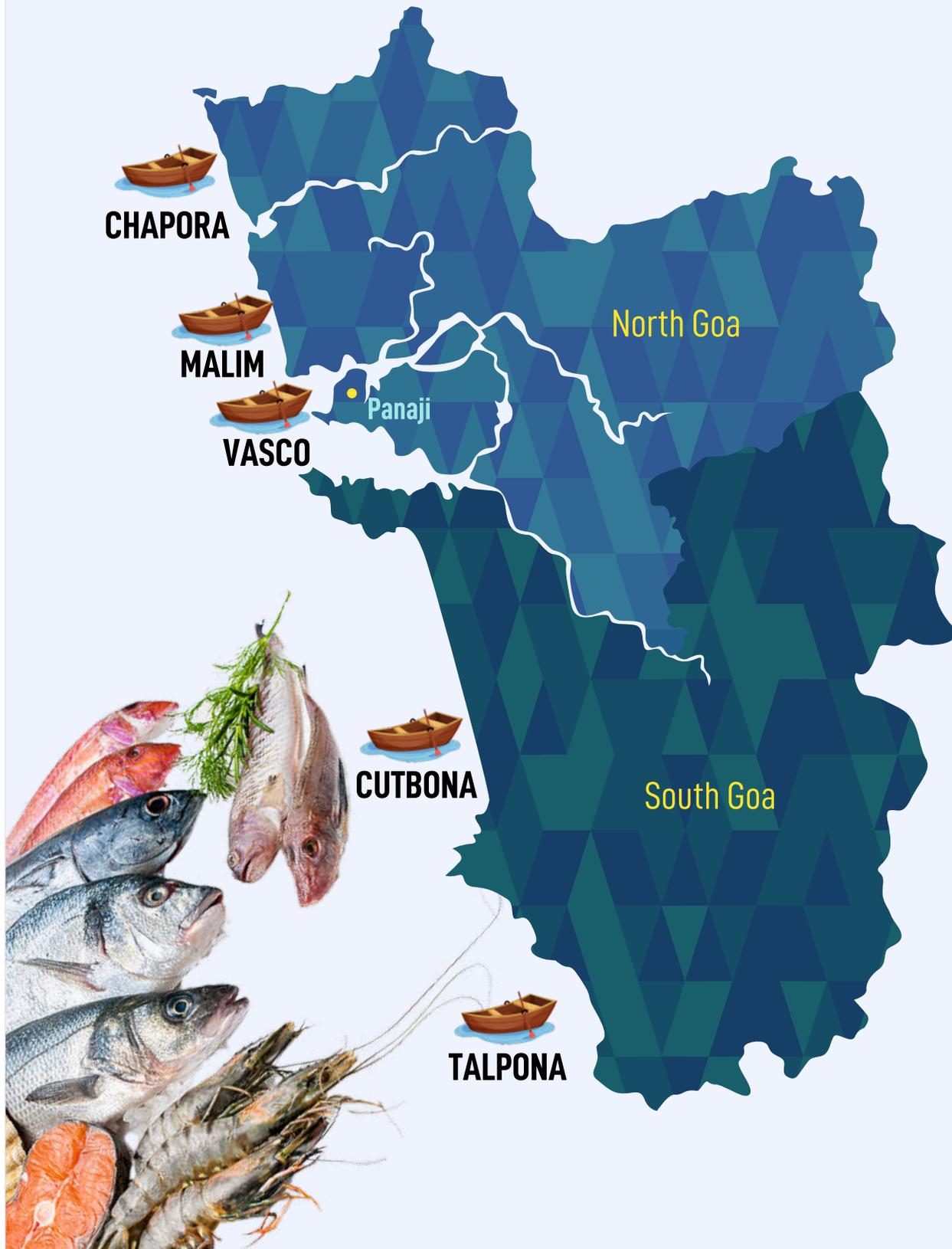
AN OVERVIEW OF
DEPARTMENT OF
FISHERIES-GOA

GOAN FISH TRAILS

Vol.-V-2022



Five major fish landing jetties of Goa





Goan Fish Trails

Vol.-V- 2022

An Overview of
Department of Fisheries, Government of Goa
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*Sharing the fun of fishing
turns strangers into
friends in a few hours.*

- Eugenie Clark

आमी नुस्तेखातें

नुस्तेकार राजा गोयचो
शेवता किद्याक ओगी.....
साथ दिवंक आयला तुका
नुस्तेखाते लागी....

Cage culture कर
वांगडा आमी आसतले...
नुस्ते पाळून व्हड जा
मनाक बरे दिसतले....

तुकाच लागोन पळय
schemes सरकारान हाडल्या....
Canoe आसा जाळे आसा
तुकाच सगळे रावल्या....

तू फक्त उलो मार
नुस्तेखाते पावतले....
Schemes घेवन व्हड जा
जीवित तुजे फुलतले...

माथ्यार घेवन नुस्ते विकप
दिस सोपले आता....
bike rickshaw Truck
सरकार तुका दिता...

धंदो घाल रडु नाका
राव नाका बैकार...
Kiosks , trawlers घेवन
घडय तुजो फुडार...

पावसा वाच्याक भियोन
राव नाका घरा....
Insurance घेवन तुमी
जीवित सालवार करी....

तुका लागोन नुस्तेखाते
शेवला आमचे उबे...
आधार घेवन आमचो तू
कर गोयं जागे...
कर गोयं जागे...

घरा देगेक व्हावता न्हय
वापर तेचो करून पळय..
Aquaculture करून
तू उदरगत मेळय...

विशाल गावस
Sagarmitra



Minister for Fisheries, Animal
Husbandry & Veterinary Services
and Factories and Boilers
Government of Goa

MESSAGE

I am very pleased that the Department of Fisheries is bringing out the Vol. V-2022 issue of their “GOAN FISH TRAILS”. I commend the team efforts of the Fisheries department for bringing out this issue.

The Department of Fisheries is taking great strides in promoting the Fisheries sector in the State of Goa. Special efforts taken to encourage the Public to take up aquaculture and other fishing activities in the State of Goa is noteworthy.

The Central Government Scheme “Pradhan Mantri Matsya Sampada Yojana” has given a big boost to the Fisheries sector in the State of Goa and it is the vision emboldened in the scheme that is reaping huge benefits to the Stakeholders of the Fisheries sector in the State.

I congratulate the Secretary, the Director and the team of the Fisheries Department for their dedication and hard work in bringing out this issue.

I am confident that this issue will serve as an important tool for the development of Fisheries sector in the State of Goa.

A handwritten signature in black ink, appearing to read 'N. Halarnkar', enclosed within a circular scribble.

Nilkanth R. Halarnkar



Arun Kumar Mishra, I.A.S.



Secretary (Environment, Fisheries,
Animal Husbandry, Agriculture),
Government of Goa

MESSAGE

This issue of “Goan Fish Trails Vol.-V, 2022” highlights the performance of the Department i.e. the achievement, training conducted, awareness camps etc taken up by the Department during 2021-22. The book highlights the measures taken towards social security of the fishermen and to develop the fisheries sector in the State. It is indeed a good effort made by the Department to compile this version of the publication.

The Central Government as well as the State Government has been continuously coming up with several schemes to encourage fisheries activities in the State. Foreseeing the immense potential for development of fisheries sector Government of India has approved “Pradhan Mantri Matsya Sampada Yojana” – A scheme to bring Blue Revolution through sustainable and responsible development of fisheries sector, for a period of 5 years from FY 2020-21 to FY 2024-25.

“Goan Fish Trails 2022”, is an attempt to publish the latest available data of fisheries sector of the State of Goa. It includes all the recent developments and progress made in the fisheries sector. I appreciate the efforts put in by the entire team of Directorate of Fisheries for bringing out this publication.

Arun Kumar Mishra, IAS



Directorate of Fisheries,
Government of Goa

Chief Editor's Note

With its 104 km long coastline, Marine fisheries have been contributing significantly towards economic growth of the fishing sector.

Goan fish trail Vol. V 2022 highlights the achievement, programmes implemented, awareness camps, infrastructure supports etc.

New activities have been initiated under the Centrally sponsored scheme Pradhan Mantri Matsya Sampada Yojana by the Department increasing the self employment opportunities to the youth of the state. This is significantly contributing towards the vision of the department to sustainably increase the fish production in the State. The Department also came up with a Mariculture policy to encourage and manage Open Sea Cage Culture.

The appointment of Sagar Mitras under PMMSY Scheme has added value to the outreach programme of the Department and the Department is able to reach each and every fisherman to promote various Fisheries schemes.

I am highly grateful to the Hon'ble Minister for Fisheries and the Secretary Fisheries for constant support, valuable suggestion and guidance to promote the fisheries sector in the State.

Dr. Shamila Monteiro

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

I. OVERVIEW

“Aiz nistem kitem randlem? (What fish did you cook today?)” is a rather common Konkani greeting and is proof of their love for fish. The traditional fish curry rice (Xitt Kodi) is Goa's staple meal and is prepared in most Goan homes. It is considered as a diet for more than 90% of the population of Goa.

Fisheries sector has been recognized as a 'Sunrise Sector' and has an immense potential for growth. Moreover, it has been instrumental in sustaining the livelihoods of vulnerable communities and has contributed towards socio-economic development of the fishing communities.

The State of Goa is having a vast potential for development of Fisheries sector in the state. Large coastal areas and continental shelves along numerous bays, creeks make it an ideal place for fisheries. Besides the actual fishing process, many ancillary and subsidiary activities like marketing, drying, processing and small scale vending also create livelihood for a significant section of the inhabitants.

Despite of the several constraints faced by the fishing industry during last two years the fish Catch in the State increased over 25% during 2021(as per the fish catch recorded calendar year wise). Major contribution came from the Vasco Jetty which is over 30294 tones.

It is known that aquaculture is one of the fast growing sector. This sector has now expanded in the new techniques such as Biofloc, RAS, Reservoir cages etc. in the State.

Since the year 2020-21, under Pradhan Mantri Matsya Sampana Yojana an amount of Rs.2243.59 lakh has been released by GOI to the State of Goa to achieve Blue revolution through sustainable and responsible development of the fisheries sector. Over 2620 Beneficiaries benefited under this Scheme giving employment to more than 450 people and covering around 2500 people under the Insurance Scheme of PMMSY.



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

1.	(a) Coastal length	104 kms.
	(b) Continental shelf (up to 100 fathoms depth)	10,000
2.	Inland waterways in Goa	250 kms.
3.	Inland water tanks (area)	100 ha.
4.	No. of Fishing talukas	7
5.	No. of Fishing villages (North)	17
6.	No. of Fishing villages (South)	24
7.	Fisher folk population upto 2016 (CMFRI census 2016)	12,651
8.	Active Fisherman population upto 2016 (CMFRI census 2016)	2758
9.	No. of Mechanized Trawlers up to Sept. 2022	870
10.	No. of Motorized crafts registered up to Sept. 2022	1835
11.	No. of Non-motorized crafts registered up to sept. 2022	279
12.	No. of Sport fishing vessel	11
13.	Fish landing centers (Major Jetties)	7
14.	Fish landing centers ramps	28
15.	(a) Fisheries Co-operative Societies (Boat Owners)	10
	(b) Fisheries Co-operative Societies/ Association (Canoe Owners)	28
16.	Annual Fish landing (in tonnes) 2021	
	Marine	1,21,469
	Inland	5,486
	Total	1,26,955

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 Vessel License, Registration of Fishing Vessels and 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 License, Registration of Fishing Vessels and Fishing Nets, Penalties for violations etc.
4	Goa Marine Fishing Regulation Rules, 1982	Licensing of Fishing Vessel License, Registration of Fishing Vessels and Fishing Nets, Penalties for violations etc.
5	Goa Marine Fishing Regulation (1 st Amendment) Rules, 2001	Licensing of Fishing Vessel License 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 Vessel, Registration of Fishing Vessels
9	Goa Marine Fishing Regulation (5 th Amendment) Rules, 1982	Licensing of Fishing Vessel, 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 Vessel License, Registration of Fishing Vessels and Fishing Nets, Penalties for violations etc.
11	Merchant Shipping Act, 1958	Registration of fishing vessels
12	Merchant Shipping (Registration Of Indian Fishing Boats) Rules, 1988	Registration of fishing vessels
13	Merchant Shipping (Indian Fishing Boats Inspection) Rules, 1988	Inspection of fishing vessels
14	The Coastal Aquaculture Authority Act, 2005	Registration and renewal of Shrimp farm



V. POLICY DECISION/ NEW SCHEMES

Regulation and enforcement

1. 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 2022 to 31st July 2022 for territorial waters of Goa.



Vessels at Malim Jetty During fishing ban

2. The Government has taken a policy decision to allow Fishing Vessels owners having two fishing vessels in his/ her name to be permitted to purchase third fishing vessel or transfer permission for construction of new fishing vessel under replacement in his/ her name subject to the condition that atleast one out of three fishing vessel shall be used for the purpose of Deep sea fishing by availing benefit under PMMSY. This will help the fishermen to exploit the untapped resources of the deep sea and increase the fish production.

3. Government has approved to revise quota for issue of permission to construct New fishing Canoe from 40 nos. to 100 nos. all over Goa for the year 2021-22.

4. The Goa Marine Fishing Regulation Rules, 2021 (6th Amendment) has been published in official Gazette Series I no. 41 dated 06/01/2022.

New State Schemes Notified during 2021-2022:-

1. Financial Assistance to purchase/ construct new fishing Craft less than 26 feet for fishing in inland waters of Goa.:- The scheme has been introduced to uplift the sizeable community of traditional Fishermen, by providing them financial help in the form of a subsidy on construction/ purchase of Fishing Craft less than 26 feet for fishing in inland waters of Goa.
2. Financial Assistance to purchase Outboard Motor of 2HP to 5 HP for fitting to the fishing canoe:- This Scheme has been introduced to grant financial assistance in the form of subsidy on purchase of outboard motor of 2HP to 5 HP for the operation of the fishing canoe below 26 feet.
3. Financial Assistance for purchase of Barrier net and its accessories:- Barrier net is a trap for catching fish in inland water. It is one of the traditional methods of catching fish practiced by the fishermen residing near the bank of the river. Under this Scheme financial assistance is provided in the form of a subsidy on purchase of barrier nets and its accessories for the fishermen.
4. Financial Assistance for purchase of Stake net and its accessories:-
Under this Scheme financial help is provided in the form of a subsidy on purchase of Stake nets and its accessories for the fishermen.
5. Financial Assistance to the Fish Vendors registered with the Directorate of Fisheries to purchase the accessories requires for fish vending such as crates, weighing balance, insulated box, gloves, stool, platform to keep fish/ shed/ umbrella, choppers and other equipment related to fish vendor.:- This scheme has been introduced to grant financial assistance in the form of subsidy on purchase of accessories required for fish vending so that the fish can be reached to the people in hygienic conditions.

VI. ACHIEVEMENTS

A. Budget Provision

The Annual Budget of the Department for the year 2021-22 was Rs. 6866.80 lakh out of which an amount of Rs. 4717.91 lakh was utilized towards disbursement of subsidies, payment of Salaries, office expenses, supplies and material, administrative charges, capital expenditure etc.

B. Revenue Generated

Total Revenue generated during the year 2021-22 from License Fees, Sale of fish, Rent, etc. for the year 2021-22 was Rs. 584.14 lakh.

C. Financial Assistance Scheme

Physical & Financial Achievement for the Financial Year 2021-22 under State Schemes

Sr.No.	Name of the scheme	No. of Beneficiaries	Expenditure (Rs. in lakh)
1	Financial Assistance for construction of Wooden / FRP Canoe	49	29.30
2	Financial Assistance to Fishermen for purchase of Fishery Requisites	20	4.98
3	Financial Assistance for Purchase of Fuel (Petrol) to the Fishermen for operation of Out Board Motors	579	173.30
4	Tribal Sub Plan for Scheduled Tribe Development Schemes	116	39.99
5	Interest Subsidy on loans for Fisheries and Allied Activities	5	1.73
6	Financial assistance for Lifejacket and Lifebuoys	237	--
7	Supply of Insulated Boxes	162	13.01
8	The Goa value added Tax based subsidy on HSD Oil consumed by fishing vessel	463	940.01
9	Financial Assistance to Brackish water Aquaculture Farms	5	2.16
10	Financial Assistance for fresh water Aquaculture Farms	1	1.33
		1508	1192.49

Achievement under centrally sponsored Schemes for the year 2021- 2022

<i>Pradhan Mantri Matsya Sampada Yojana</i>	Physical Achievement	Financial achievement (State + Central) (Rs. In lakh)
Construction of Biofloc ponds for brackish water	1 ha.	14.40
Construction of Kiosk including kiosk of aquarium/ ornamental fish	2	8.00
Providing boats and nets to traditional fishermen	20	24.28
Insulated vehicles	10	100.00
Motor Cycle with Ice Box	7	2.40
Three wheelers with ice box including e- rickshaw for fish vending	3	4.20
Refrigerated Vehicles	4	47.26
Upgradation of existing fishing vessel	6	25.49
Total A	57	233.23
<i>Blue revolution</i>		
Financial Assistance for the Purchase of Insulated Truck of a minimum 10 tonne capacity	4	42.00
Setting up of Mobile/Retail fish Outlet	1	4.00
Safety Fishermen at Sea	33	14.31
Artisanal/ Traditional craft	08	7.66
Input cost of brackish water fish/ shrimp culture	1	2.11
Input cost of brackish water fish/ shrimp culture ST/ SC	1	1.35
Cages in reservoir/ open water cages	1	4.80
Total B	49	76.23

VII. INFRASTRUCTURE

A) Infrastructure works completed during 2021-22:-

- Construction of compound wall / gate for the Administrative Building at Fisheries complex, Cutbona
- Repair of Net Mending Shed at Durbhat
- Repair of net mending shed at Kindlebag ward No. VI, in Canacona.
- Installation of Solar Green House Driers at Fisheries Training Centre at Ela Dhauji, Old Goa.
- The work of construction of plinth and installation of STP at Cutbona Jetty, Salcete.
- The work of Construction of Fishing ramp at Muxer, Velim for traditional fishermen to land and berth the fishing vessel (canoe).
- Installation of solar lamps at Santrem landing Centre, Vasco.
- The work of repair of existing Net Mending shed at Talpona.
- The work of rewiring of fisheries complex at Colva in Benaulim Constituency.



Repair of Bunds and fish tanks at Estuarine fish farm, Ela Dauji

B) Status of the ongoing works is as under:-

- Work for construction/ upgradation of fish landing Centres at Malim in North Goa is in Progress.
- Work towards Development of Ela Farm:-
 - The work towards “Development and repairs of bunds, fish tanks and water channels and reconstruction of office building at Estuarine Fish Farm at Ela Old Goa” has been started by WRD.
- Work towards development of Keri Farm:-
 - The work of Construction of compound wall of half masonry wall and half chain link fencing at Fresh Water Fish Seed Hatchery at Keri, Sattari Goa.
 - The work of Repairs and renovation of the entire existing shed and other Miscellaneous works at Fresh Water Fish Seed Hatchery at Anjunem Keri, Sattari.
 - The work of Repairs and renovation to the office building at Fresh Water Fish Seed Hatchery at Anjunem, Keri Sattari.

c) Proposed work:-

- 1 **Chapora Jetty**- Reconstruction of Chapora Jetty, Anjuna, Caisua.
- 2 **Ponda Block**-
 - a) Construction of fishing ramp and net mending shed at Dhaujowada, Cundaim, Ponda.
 - b) Repair/ Renovation of fishermen shed and protection wall at jetty in Durbhat Panchayat.
- 3 **Salcete Block**- Repair of net mending shed at Cutbona Jetty.
- 4 **Vasco Jetty**- Repair and maintenance work of Khariwada fishing jetty at Vasco.
- 5 **Malim Jetty**- Upgradation of Malim Fishing Jetty
- 6 **Cortalim Jetty**- Upgradation of Cortalim Fishing Jetty
- 7 **Cutbona Jetty**- Upgradation of Cutbona fishing Jetty
- 8 **Fresh water finfish Hatchery, Keri**- Brooder tank, Nursery tank.
- 9 **Estuarine Farm**- Protection wall, compound wall

d) Other infrastructure related work

Development of Integrated Modern coastal village under PMMSY

Administrative approval of the Government is hereby accorded to develop the following village as Integrated Modern coastal village under PMMSY:-

- 1 Village Panchayat Amona, Bicholim Goa
- 2 Village Panchayat Nerul, Bardez, Goa
- 3 Village Panchayat Anjuna, Caisua , Bardez Goa
- 4 Village Panchayat Cola, Cancona, Goa
- 5 Village Panchayat Querim, Pernem, Goa
- 6 Village Panchayat Asolna, Salcette, Goa
- 7 Village Panchayat Assolna, Oxel, Bardez

DHARASHAW and Co. Pvt. Limited has been appointed as the consultant for the preparation of the detailed project report.

VIII. TRAINING AND INTERACTION PROGRAMMES

1. Six Months Training Course:

Department conducts six 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.

For the year 2021-22 Department trained 9 trainees under this course.



6 Months training programme held at Ela Dauji, 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, Ela Dauji, Old Goa. The details of training programmes held are as under:

Sr. No.	Short Term Training Programmes	Date	No of students/ fish farmers/entrepreneurs
1	Ornamental Fisheries and fabrication of Aquarium tank	12/10/2021 to 13/10/2021	23
2	Seafood Value Added Fish Product preparation	21/10/2021 to 22/10/2021	37
3	Biofloc and RAS culture System.	28/10/2021 to 29/10/2021	42
4	Shrimp Farming	11/11/2021 to 12/11/2021	50



Short term training programme held at Ela Dauji, Old Goa

3. Awareness under “ATMANIRBHAR BHARAT” / “SWAYAMPURNA GOEM”.

The Department conducted various programmes at Panchayat Level under Swayampurna Goem to create awareness of the State Schemes and PMMSY Schemes of the Department. A total of 130 programmes were conducted, thereby providing information about the Department schemes at the village level for about apprx. 4379 participants.



Swayampurna Goem Programme at Village panchayat Macazana



Swayampurna Goem Programme at Village panchayat Cansaunlim

4. Total 14 nos. of Community Interaction Programmes were held for sensitizing fishermen about Coastal Security, Safety of Fishermen at sea and the Schemes of the Department.
5. Officials of the Department were deputed to create awareness about the schemes of the department through the various programmes organized by the State Government as under:

Sr. No.	Programme	Date
1	Government at your door steps/ Sarkar tumchya Dari	Officers/ Officials were deputed in 10 programmes of Sarkar tumchya dari organized by the State Government, at the various places to create scheme awareness of the department.
2	Swayampurna Yuva	Officers/ Officials were deputed in 2 programmes of Swayampurna Yuva organized by the State Government, at the various places to create awareness regarding employment opportunities in fisheries sector thereby promoting schemes of the department.
3	Scheme awareness programme at Village Panchayat, Navelim	Programme was conducted on 11/11/2021 to promote schemes of the department
4	Krishi Mahotsav at Quepem and Sankhali.	On 04/01/2022 and 05/01/2022
5	SARAS organized by Rural development Agency North Goa.	From 05/01/2022-16/01/2022

Awareness Programmes conducted at various places



Awareness program conducted at Canacona



Awareness program conducted at Valvoi panchayat



Awareness program conducted at Nerul



Awareness programme conducted at Pernem



Awareness program conducted at Reis Magus Village Panchayat



Awareness program conducted at Shiroda, Ponda



Awareness program conducted at Margao Municipality



Awareness programme conducted at Cuncolim

6. Workshop on promotion of Ornamental Fisheries

As a part of Azadi ka Amrit Mahatsov, a celebration to commemorate 75 years of Independence, The Directorate of Fisheries, Goa organized Campaign on Promotion of Ornamental Fisheries in school under Pradhan Mantri Matsya Samapada Yojana (PMMSY) sponsored by National Fisheries Development Board (NFDB), Hyderabad from 26/07/2022 to 08/08/2022.

Awareness programme on the theme “Introduction to Ornamental Fisheries and Fabrication of Aquarium” was conducted at 5 Schools. The said program emphasized on “Ornamental Fisheries” the types of ornamental species, their feeding habits, accessories required for setting up of ornamental tank and type of fish diseases and its solution followed by demonstration of fabrication of aquarium. Around 588 no. of students participated in 5 different school. Information pamphlets and also the refreshment were distributed to the students.



Date: 26/07/2022, Venue:
Government High School, Bicholim



Date: 27/07/2022, Venue:
Government High School, Ponda



Date: 08/08/2022, Venue: Bal Bharati
Vidhyamandir, Ribandar



Date: 28/07/2022, Venue: Loyala High
School, Margao

IX. AQUACULTURE

1. Coastal aquaculture authority

06 nos. of renewal cases of shrimp farms have been recommended to Coastal Aquaculture Authority under CAA Act. Also, inspections of various farms registered under CAA were conducted.



Inspection of Aquaculture farms

2. Fresh water fish seed hatchery keri, sattari, goa

The Fresh Water Fish Seed Hatchery produced quality of fish seed of Indian Major Carp and common Carp during the year 2021-22. It produced 1 lakh advance fingerlings of good quality besides additional 3.29 lakh fingerlings were procured from outside the State and supplied to the fish farmers at reasonable rates. Further, 1.50 lakh fingerlings were release in Amthane, Anjunem and Chapoli Reservoir.



Fish seed sale at Fresh water fish seed hatchery, Keri

3. Estuarine fish farm, ela dhauji, old goa.

Sea bass fingerlings were released in the ponds of Estuarine Fish Farm, Ela Dhauji, Old Goa. The fish was harvested from the ponds of the farm and 0.196 tonnes were sold to the general public.



Fish harvested at Estuarine fish farm Ela Dauji, Old Goa

4. River Cages

The Department has assisted the interested fish farmers/entrepreneurs to set up cages for fish culture in inland rivers. 20 river cages have been installed at various inland rivers. This has enabled utilization of open water bodies for fish production and livelihood generation. The Department also provides Financial Assistance under PMMSY for installation of cages in river.



River cages at Akhada



River Cages at Batim

5. Mussel Culture

The Department provides Financial Assistance under PMMSY for setting up of Raft Culture and Rack Mussel Culture. Department has assisted 10 fish farmers to set up mussel culture units in the inland brackish water areas.



Mussel culture under PMMSY

6. OTHER ACTIVITIES

(a) Constitution of Divisional Level Committee (SDLC) and District Level Committee (DLC)

The CAA has amended the CAA Rules 2005 accordingly, as per the Notification G.S.R. 216 (E) dated 22/03/2022, issued by Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India regarding Coastal Aquaculture Authority (Amendment) Rules 2022, published on the Gazette of India No.2013 dated 22/03/2022. The Government of Goa has constituted The District Level Committee (DLC) and Sub-Divisional Level Committee (SDLC) (Block wise) in order to ease and speed up the process of recommendation for registration/renewal as per the guidelines for registration of coastal aquaculture farms. The same is notified vide official Gazette No. Series II No.8 dated 26/05/2022.

(b) Constitution of District Level Committee (DLC) and Task Force Committee (TFC)

The Directorate of Fisheries, Government of Goa has constituted a District Level Committee (DLC) and Task Force Committee (TFC) to undertake stringent measures to curtail the usage of Banned Antibiotics in Aquaculture and the same is notified vide Official Gazette No.20, Series.II dated:18/08/2022.

X. OTHER INITIATIVES

1. Issuance of Aadhaar card enabled QR code:

Recently, as per Government of India Guidelines, regarding use of “UIDAI Database for verifying Antecedents of Marine Fishermen in the High Seas” Aadhaar card enabled with QR code is made mandatory document as fishermen ID cards. Approx. 2330 fishermen are enrolled for Aadhaar enabled QR code during this fishing season.

2. Kisan Credit Card:

Kisan Credit Card (KCC) is a scheme specifically designed by NABARD to provide farmer with technical support.

Collateral security is waived for KCC limit upto Rs. 1.60 Lakh. Loan upto Rs. 2.00 Lakhs @ 7% interest is provided to Fishermen under KCC facility to meet their working capital requirement.

The benefit of the Kisan Credit Card has been extended to 488 fishermen of the State and have disbursed an amount of Rs. 5.01 Crore under this scheme. The department has conducted 88 camps at various places in Goa.



KCC awareness camps by the officials of the Department

3. Group Accident Insurance scheme of PMMSY

The details of the scheme are as follows:

Policy	Description	Coverage	Sharing pattern	State share premium 40% in Rs.	Central share premium 60 % in Rs.	Total Share premium
Policy -1	Group Janata Personal Accident Policy (GJPA) covering death & permanent total disability (PTD) with CSI of Rs. 5.00 lakhs	Death: 100% CSI PTD: 100% CSI	60:40 between the Central and General State Govt.	27.38	41.06	68.44
Policy-2	Special Contingency policy covering Permanent Partial Disability (PPD) and Hospitalization	PPD: Upto Rs. 2,50,000/- Hospitalization Rs. 25,000/-		1.6	2.40	4.00
	TOTAL			28.98	43.46	72.44

The Department has sent 2500 nos. of application and also deposited State Contribution to NFDB.

- Under the initiative of **Registration of Fish Sellers and Fish Agents**, Total 1729 fish sellers are registered with the department. Department has conveyed the approval of the Government for registration of fish traders in the State of Goa. Accordingly for every fishing season Department is inviting applications from the eligible individuals/ Agency to recognize as “Fish traders for purchase of fish in bulk quantity from the registered fishing vessels in the State of Goa.

5. Under the Scheme **Natural calamity relief for Fishermen** compensation of Rs. 75.25 Lakh is disbursed to 26 fishermen, whose vessels were damaged by the natural calamity at sea.



6. Financial relief to fishermen towards tauktae cyclone in year.

61 No. of fishermen given compensation amounting to Rs. 11,15,000/- through Goa Coastal Zone Management Authority towards loss of fishing nets and loss to huts due to cyclone tauktae.

5 No of aquaculture farmers were given compensation amounting to Rs. 2,76,652/- under State Disaster Response Fund by District Disaster Management Authority towards loss due to natural calamity (floods & cyclone).

99 No of fishermens were given compensation amounting to Rs. 4,27,200/- under State Disaster Response Fund by District Disaster Management Authority towards loss to fishing nets/boats/huts due to natural calamity (floods & cyclone).

7. Green house Solar Drying platform

The Directorate of Fisheries had installed and commissioned a demo unit of Solar Green House Drier at Fisheries Training Center at Ela-Dhauji. The main aim of the project is to reduce the post harvest losses. The excess fish catch is normally dried in the sun on open grounds such as roads, highways, beaches and near sea shores for about 3-5 days. However the method of drying fish in the open ground is unhygienic as it attracts flies and other animal as well accumulation of dust.

Solar Green House Driers reduces time for drying fish in a hygienic and eco friendly environment. In addition it plays an important role in reducing the post harvest losses.



Solar Green House Drier at Fisheries Training Center at Ela-Dhauji

7. Solar light

The department has completed the work of Installation of the solar light Panel system through the Goa Energy Development Agency at the following locations:

- a) Fishing ramp at Santrem.
- b) Existing retaining wall constructed by WRD for the Fishermen at Bandirwada in ward no. 3
- c) Existing ramp at Vagator beach in ward no. 1

8. Installation of CCTV Cameras

CCTV Cameras has been installed at fishing ramp at Oxel in Siolim Constituency and also put barbed wire fencing to stop dumping of the illegal extraction sand in Government property.

9. Cleanliness drive conducted by Directorate of Fisheries

The Directorate of fisheries, Government of Goa had conducted cleanliness drives at Malim Jetty on (05/7/2022), Cutbona Jetty (6/7/22), Chapora Jetty (07/07/2022), Vasco Jetty (08/07/2022), Ramp at Cacara (11/7/22), Ramp at Siquerim (12/7/2022) Ramp at Asolna and Saleri Cola (18/6/22). The drive was held along with the Officials of Fisheries Department, Health Department, respective village Panchayats and fisherman.

The drive was to clear abandoned vessels, nets, unwanted wastes and to create awareness about health and hygiene to the fishermen.



Cleanliness drive conducted at various landing centers and jetties

10. “Swatchh sagar surakshit sagar”/“clean coast safe sea” campaign

The Department organised “Swatchh Sagar Surakshit Sagar”/ “Clean Coast Safe Sea” campaign, which was a nationwide citizen led Campaign for 75 days to clean up 75 sea beaches organized by Ministry of Earth Sciences(MoES) and cumulating on International Coastal Clean-up (ICC) Day on 17th September 2022. Among the 75 beaches 5 beaches of Goa were listed i.e. Baina, Bogmalo, Colva, Velsao and Miramar.

Accordingly, Department conducted awareness camps on Swatchh Sagar Surakshit Sagar involving the local fishermen and their societies and associations creating awareness on Marine Pollution, waste management of ghost gears.

Speakers from Goa waste management corporation, Coastal Impact NGO were invited to deliver lecture covering above topics Also Officials of directorate of Fisheries spoke on health and hygiene of fishermen and departmental schemes.

The awareness programmes were conducted as below:

Sr. No.	Date	Location/ Beach	Venue	Fishing Societies Involved
1.	09/09/2022	Baina	Baina Fishermen Society Hall	<ul style="list-style-type: none"> • Baina Ramponkar & Fishing Canoe Owners Society • Desterro Fishermen Association • Baina Fishermen Society
2.	10/09/2022	Colva	Fisheries Complex, Colva	<ul style="list-style-type: none"> • Niz Goencho Ramponkarancha Ekvott
3.	12/09/2022	Velsao	Velsao Village Panchayat Hall	<ul style="list-style-type: none"> • Goenche Ramponkarancha Ekvott • Velsao Fishing Canoe Owners Society
4.	13/09/2022	Miramar/ Caranzalem	Our Lady of Rosary Church	<ul style="list-style-type: none"> • Caranzalem Ramponkar and Traditional Fishermen Association • Donapaula Fishermen Association • Shree Shantadurga Fishermen Association • Siridao Traditional Fishermen Association • Shree Sateri Fishermen Association • Odxel Fishermen Association

Also, various competitions like drawing, stone painting and poster making for the fishermen children were organized by the Department on the theme “Swatchh Sagar Surakshit Sagar/ Clean Coast Safe Sea”. There was a good response for the same.

Further, A beach clean-up drive was conducted as on 17th September 2022 at the 5 beaches listed by the Ministry of Earth Science involving all the fishermen and fishing stakeholders.

Awareness Programmes conducted at Caranzalem on 13/09/2022



Awareness Programmes conducted at Baina Bogmalo



Awareness Programmes conducted at Colva





Awareness Programme at Velsao



Beach Clean Up Campaign



XI. Centrally Sponsored Scheme Pradhan Mantri Matsya Samapada Yojana

The Government of India has approved the “Pradhan Mantri Matsya Sampada Yojana” (PMMSY) - A scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India.

PMMSY is designed to address critical gaps in fish production and productivity, quality, technology, post-harvest infrastructure and management, modernization and strengthening of value chain, traceability, establishing a robust fisheries management framework and fishers' welfare.



Financial assistance is provided to 7 beneficiary under the Scheme Motor Cycle with Ice box



Financial Assistance provided to 8 beneficiaries to procure Auto rickshaw with Ice Box

During 2020-21, Department of Fisheries, Government of India has released an amount of Rs. 596.74 lakhs under PMMSY to the State of Goa.



Financial Assistance is provided to 4 applicants under the component of Refrigerated vehicles



Assistance provided to 13 beneficiaries under the Scheme Insulated Truck

During 2021-22, an amount of 648.80 lakh was released by Government of India as against the action plan submitted during the year 2021-22. Rs. 10.00 crores was released towards Landing and berthing proposal for four major jetties previously sent to GOI in the year 2014.



Financial Assistance is provided to 35 applicants under the component of Providing boats (Replacement) and nets for traditional fishermen



Financial Assistance is provided to 6 applicants for Up gradation of existing fishing vessels for export Competency



Biofloc unit set up under PMMSY



Re-circulatory Aquaculture System (RAS)

XII. PEOPLE AND EVENTS AROUND US

Narali Poornima

Department celebrates “Narali Poornima” Festival in the office premises every year. Department had celebrated the same on 11/08/2022. During Narali Poornima day, coconut pooja is performed followed by emersion of coconut in the sea.

After this function, the Annual Satyanarayan Pooja was performed in the premises and devotees are served with Maha Prasad. The function gets over after the sunset.



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



XIII. STATISTICS

• WATER SPORTS

The Department issues no objection certificate to the Water Sports vessels operating at different beaches of Goa. The total number of NOC's granted for the year 2021-22 Taluka - wise are as follows:

Sr. No.	Taluka	No. of Water Sports vessels
NORTH GOA		
1	Bardez	982
2	Pernem	10
3	Tiswadi	60
	TOTAL	1052
SOUTH GOA		
1	Canacona	76
2	Salcete	172
3	Vasco	24
	TOTAL	272
	Inland waters	77
	Total	1401

- No. of vessels (trawler/purse – seiners) operated at major landing centres for the year 2021-22.

Sr. No.	Mechanised fishing vessel	Total Nos.
1	Purse Seiner	320
2	Trawler cum Purse-seiner	60
3	Trawlers	490
	Total	870

- **SPORT FISHING VESSEL:**
- Sport fishing is a major draw for tourist in any State. The Department has 11 Nos. of Sport fishing vessels registered up to 2021-22.

• Block wise total canoes registered for the year 2021-22

TISWADI		SALCETE	
Agassaim	03	Benaulim	09
Caranzalem	04	Betalbatim	01
Divar	01	Betul	02
Dona Paula	02	Cavellossim	04
Goa Velha	01	Chinchinim	01
Neura	01	Colva	03
Ribandar	01	Velim	03
Siridao	03	Total	23
St. Estevem	01	MARMUGAO	
Taleigao	04	Cansaulim	04
Total	21	Cortalim	03
PERNEM		Desterro	01
Arambol	02	Kantem Baina	04
Mandrem	02	Khariwada	02
Morjim	02	Quelossium	01
Total	06	Vaddem	01
BARDEZ		Velsao	11
Anjuna	03	Total	27
Arpora	01	CANACONA	
Assagao	01	Cola	02
Calangute	08	Columb	02
Candolim	03	Kindlebag	01
Nerul	05	Loliem	02
Parra	01	Palolem	01
Reis Magos	01	Panyefond	01
Siolim	01	Poiguimim	03
Total	24	Talpona	02
PONDA		Total	14
Madkai	02		
Total	02		

Total motorised and non motorised canoe

Sr. No	Traditional fishing vessels	Total Nos.
1	Non Motorised canoe	279
2	Motorised canoe	1835
TOTAL		2114

Total motorised and non motorised canoe

Sr. No	Taluka	Motorized	Non Motorized	Total
NORTH GOA				
1	Bardez	388	71	459
2	Pernem	160	13	173
3	Tiswadi	326	48	374
SOUTH GOA				
1	Canacona	302	63	365
2	Ponda	003	02	005
3	Salcete	178	31	209
4	Vasco	483	54	537
TOTAL		1840	282	2122

- 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 2021-22 is as follows:

Sr. No	Category	No. of Vessels
1	Purse seiner	314
2	Trawler cum Purse seiner	059
3	Trawlers	495
Total		868

Taluka wise fishing gears registered (2021-22)

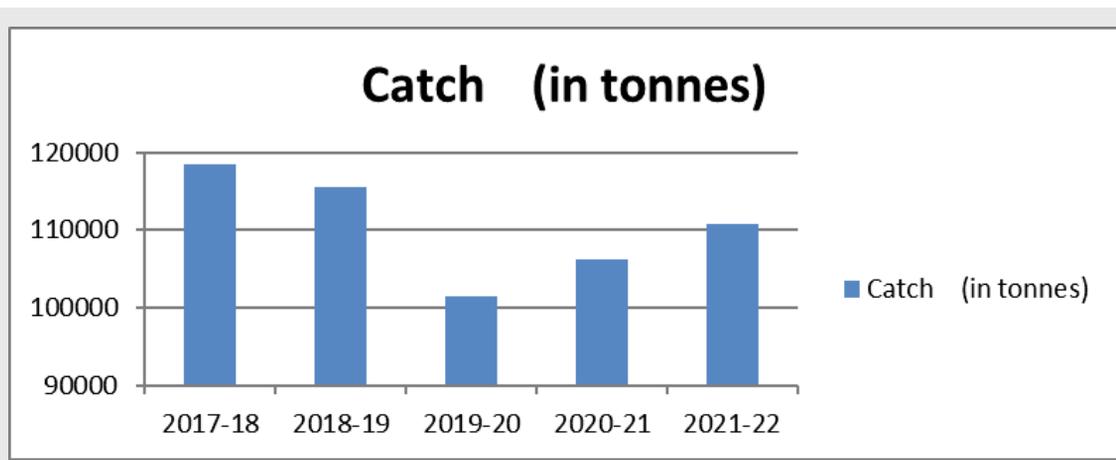
Type of Gear	Tiswadi	Bardez	Ponda	Pernem	Canacona	Mormugao	Salcete	Total
Sea gill net	30		3	5	27	25	27	117
Sea cast net								
River gill net	4						13	17
River cast net								
Rampon net							4	4
Drag net	1							1
Purse-seine net	9	3				1	18	31
Trawl net	3	1				3	14	21
Barrier (Futauni)	2					2		4
Sluice gate								
Stake net								
Kadsari net								
Other net								
Ormol net								
Singel net								
Hook & line	1							1
Total	50	4	3	5	27	31	76	196

Major jetty wise marine fish catch from 2017-18 to 2021-22 (in tonnes)

Year	Malim	Cutbona	Vasco	Chapora	Talpona	Total (Jetties)	Others	Total
2017-18	24782	37312	24288	1127	1389	88898	29567	118465
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

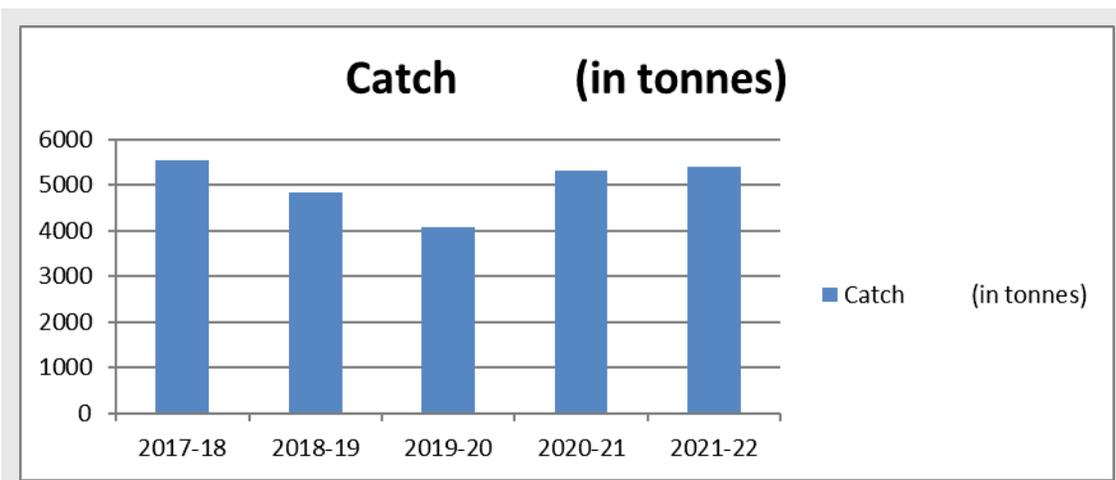
Marine fish production of Goa for the period from 2017-18 to 2021-22

Year	2017-18	2018-19	2019-20	2020-21	2021-22
Catch (in tonnes)	118465	115459	101466	106159	110724



Inland Fish Production of Goa for the period from 2017-18 to 2021-22

Year	2017-18	2018-19	2019-20	2020-21	2021-22
Catch (in tonnes)	5542	4829	4081	5325	5402



Financial Year-wise Marine fish production for the last five years

Sr. No.	Species	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
1	Mackerals (Bangdo)	33422	37514	28519	28703	26188
2	Sardines (Tarlo)	33745	15451	12647	5218	13124
3	Cat Fish (Sangot)	467	262	1205	424	209
4	Shark fish (Mori)	207	1041	716	891	407
5	Seer Fish (Wiswan)	1822	1288	2860	4031	2927
6	Prawns (Sungtam)	9806	6825	6262	5470	4807
7	Pomprets (Paplet)	1361	495	1353	1522	1823
8	Cuttle Fish (Manki)	1425	2201	3757	1862	2748
9	Tuna (Bokdo)	9277	9614	8478	9915	15490
10	Ribbon Fish (Balle)	1026	1618	1669	2704	3251
11	Reef Cod (Gobro)	685	1376	547	271	624
12	Kowala kowal (Velli)	1269	749	496	420	319
13	Golden Anchovy (Kapsale)	279	121	75	71	63
14	Silver Belly (Kampi)	3030	5366	6385	7280	5071
15	Soles (Lepo)	1237	2203	1166	1741	1982
16	Silver Bar (Karli)	376	184	271	433	496
17	Crabs (Kurlio)	1059	740	1003	2168	1572
18	Sciaenoids (Dodiario)	1715	1435	2870	2773	2582
19	Butter Fish (Soundale)	618	647	573	881	758
20	Others	15639	26329	20614	29381	26283
	Total	118465	115459	101466	106159	110724

Financial year-wise Inland fish production for the last five years

Sr. No	Name of the Fish	2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7
1	Prawns					
a	Big	206	240	109	185	134
b	Medium	326	159	54	175	180
c	Small	428	309	281	415	648
2	Lady Fish	174	110	61	136	193
3	Mulletts	738	644	461	598	560
4	Gerres	113	71	41	95	80
5	Lutianus	151	166	75	123	106
6	Cat Fish	619	546	399	566	408
7	Anchovy	97	62	25	51	42
8	Pearl Spot	446	364	328	446	420
9	Betki	129	164	61	128	102
10	Milk Fish	16	15	2	3	5
11	Megalops	30	30	9	25	24
12	Scatophagus	56	55	36	87	57
13	Ambasis	403	304	262	364	224
14	Crabs	607	455	382	567	410
15	Black Water Clamps	56	42	133	198	233
16	False Clamps	96	111	227	200	311
17	Oysters	85	108	282	169	103
18	Mussel	131	139	90	83	72
19	Lepo	3	1	--	13	-
20	Indian Salmon	--	--	--	--	-
21	Balle Reddish	--	--	5	--	-
22	Sciaenoids	--	--	--	--	-
23	Others(Palu)	85	68	--	--	-
24	Others(Vagolem)	--	--	--	--	-
25	Others (Leather Jackets)	--	--	--	--	-
26	Others	--	--	41	36	8
27	Miscellaneous	547	666	717	662	1082
	Total	5542	4829	4081	5325	5402

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

Quantity in M. tonnes

Value in Rs. Lakhs

Sr. No	Item		2017-18	2018-19	2019-20	2020-21	2021-22
1	2	3	4	5	6	7	8
1	Fr. Shrimps	Q	3327	1908	1526	4756	111
		V	14879	7391.89	6304	21357	468.66
2	Fr. Cuttle Fish	Q	1404	1265	1718	1123	003
		V	4360	3812.86	4535	2340	06.16
3	Fr. Squids	Q	5307	5746	3517	2522	571
		V	9537	12215.55	7607	7239	2134.89
4	Fr. Fresh Fish	Q	34984	24289	5533	7909	5697
		V	37307	33843.35	8113	11924	8270.05
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	1815	4590	2404	239	100
		V	1593	4554.25	2292	665	244.67
11	Dried Fishes	Q	3733	140	-	-	196
		V	3517	149.35	-	-	172.95
	Total	Q	50570	37938	14698	16549	6678
		V	71193	61967	28851	43525	11297

XIV. ARTICLES BY DEPARTMENT PERSONNEL

Marine pollution: its impacts on marine life and on Human Health.



Smt. Rohita Naik
Superintendent of Fisheries

Introduction

The ocean contributes about 91 percent of earth surface. They play an important role in the chemical and biological balance of the life on the earth. Ocean life ranges in size from the smallest living things, microbes to the largest animal on earth, the blue whale. It provides food in the form of fish and shellfish, used for transportation, mined for minerals and drilled for crude oil.

In recent years with development of the world industry, the pollution of the ocean is becoming more and more serious. “Marine Pollution” is a combination of chemical and trash, most of which comes from land sources and is washed or blown into the ocean. (Fig. 1) Marine pollution result in damage to the environment, to the health of marineorganism, hindrance to marine activities including fishing, impairment of quality for use of seawater and to financial structure worldwide. It also has negative impacts on human health and wellbeing.

In the face of increasing marine pollution, we cannot continue to sit quiet; the protection of the marine environment should be regarded as most important topics of human development. Everyone should contribute to the protection of the marine environment.



Fig 1. Sources of Marine pollution

Types of Marine Pollution: Sources and their effects

Plastics

The ever-growing dependence of human population on plastic has filled the oceans and the land; it consists of 80 percent of the debris found in the oceans. Macroscopic plastic wastes, such as bottle caps, can be ingested by fish, seabirds, and marine mammals that mistake them for food. Undigested plastic accumulates in these animals' gastrointestinal tracts where it can cause obstruction that leads to malnutrition, reproductive impairment and death. Nylon fishing nets which are lost in the ocean, are called ghost nets, they continue to catch fish for many years.

Oil Spills

Crude oil and petroleum products are complex mixtures of light and heavy hydrocarbons, toxic metals, and other chemicals. It lasts for years in the ocean and is difficult to clean. When oil spills and leaks release these toxic chemicals into the marine environment, they can bioaccumulate in the food web; kill fish, birds and marine mammals; destroy commercial fisheries, aquaculture operations, and shellfish beds.

Eutrophication

When there is increase in nutrient content such as nitrates and phosphates in the water it leads to Eutrophication or nutrient pollution. Eutrophication decreases the level of oxygen, reduces the quality of water, makes water inhabitable for fish, affects breeding process within the marine life and increases the primary productivity of the marine ecosystem.

Acidification

Oceans act as a natural reservoir for absorbing the carbon dioxide from the earth atmosphere. But due to increase in level of carbon dioxide in the atmosphere, the oceans across the world are becoming acidic in nature; as a consequence, it leads to acidification of oceans. There is a strong concern that acidification might lead to dissolution of calcium carbonate structures that can affect the shell formation in shellfish and also the corals

Pesticides

Pesticides are organically active chemicals which are used for killing the pests. They may enter the ocean from the atmosphere after aerial spraying or from overland runoff of sprayed areas. These are more concentrated in fish, seals, penguins and marine planktons. They have been found to have serious effect on aquatic animals' reproductive cycle.

Heavy Metal

Heavy metals are generally referred to as those metals which possess a specific density of above 5 gm/cm³ and adversely affect the environment and living organisms. The metals are transported by the runoffs from villages, towns, cities and industries which accumulate in the sediments bodies. The use of antifouling paint on the bottom of boats has been implicated as the major source of heavy metals in water. Mercury pollution presents a major threat to human health.

A Threat to human health

Pollutants in the ocean make their way to the humans. Small organism ingest toxins and are eaten by larger predators, many of which are seafood that we eventually eat. When the toxins in contaminated animals get deposited in human tissue, it can lead to long-term health conditions, cancer and birth defects.

Steps to prevent marine pollution

- One of the simplest ways to reduce ocean pollution is to properly dispose of plastics and other recyclable materials, so they don't end up in the ocean. Do not throw plastic cans, nets, tyre and plastic bags into the sea. opt for reusable bottles and utensils.
- Improvement in collection and management of solid waste is a key strategy for prevention and control of marine plastic pollution.
- Organize a cleanup drive at the beaches. The more trash you pick up and properly dispose of, the less waste goes into our oceans.
- Excess chemical fertilizer eventually makes its way into the oceans. Choose organic fertilizers, which tend to be lower in nutrients, and use them at half strength or half as often as suggested.

- Cessation of coal combustion will not only slow the pace of climate change and reduce particulate air pollution, but will also greatly reduce the atmospheric emissions of mercury, thus reducing deposition of mercury into the oceans.
- Do not dump waste generated like oil and grease during hull and engine maintenance into the sea.
- Use public transport and reduce the carbon footprint by taking small and substantial measures that will not help in reducing the pollution from the environment but will ensure a safe and healthy future for the upcoming generations.
- Reduce Release of Animal Waste, Industrial Discharges and Human Sewage into Coastal Waters.
- Creation of Marine Protected Areas will safeguard critical ecosystems, protect vulnerable fish stocks, and enhance human health and wellbeing.
- Spread awareness among people about the conservation and importance of the marine environment.

Conclusion: If the marine life affected by the pollution and if they carry pollutants in its biomass, the human population may get the impact while consuming such resources. Hence it is necessary to aware about the marine pollution and to protect the marine water from the pollutants. Let us save our ocean and the huge marine ecosystem.

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Role of fisheries in combating Marine Biodiversity Loss (MBL) caused by Marine pollution.



Human pressures are driving the unprecedented decline of marine habitats and biodiversity throughout the global ocean. The marine environment is a vital resource for life on earth. It plays a key role in number of environmental functions such as regulation of climate, prevent erosion, absorb carbon dioxide etc.

Over the last 50 years, the area under protection has expanded by more than 30% but biodiversity continues to decline. Human activities like fishing and shipping are key drivers of Marine Biodiversity Loss (MBL).

Fishing and pollution from fishing are the largest contributors to the decline in ocean health and water quality. Fishing gear like drift nets and long-line equipment that are wearing down by use, lost or thrown away, buoys, etc. account for more than 2/3rds of large plastic debris found in the ocean thereby threatening marine life.

Marine life interacts with such debris in two ways; either entanglement (ghost fishing) or ingestion (micro plastics), causing harm to animals. Marine debris consisting of abandoned, lost or discarded fishing nets lead to ghost fishing and continuously entangle and capture marine life for years. Fishing gear becomes lost for many reasons including bad weather, gear failures, damage, snagging on bottom habitat and other causes. Ghost nets or nets abandoned/lost in the ocean create extreme disaster on the wildlife and ecosystem they interrupt. Ghost nets choke coral reefs, damage marine habitats and entangle fishes, marine mammals and sea birds, also may cause damage to boats by catching in vessel propellants.

Apart from entanglement, fish and wildlife are becoming intoxicated with the plastic pollution in the oceans. Nets are largely made of plastic and nylon which do not biodegrade, whereas they break up into tiny pieces (micro plastics) that are consumed by fishes and wildlife, thereby entering human food chain through contaminated fish. Human activity has led to micro plastic contaminations throughout the marine environment. Oceans cover 70% of earth's surface hence wastes are frequently dumped in coastal and ocean waters by human habits based on the assumption that marine water have unlimited capacity to mix and disperse wastes.

Fishing industry can help mitigate marine pollution by use of recyclable and degradable fishing gear/products to replace plastic use. Further, should responsibly dispose fishing nets rendered useless to reduce entanglement of marine life through ghost fishing. Seizing waste at source is important to avoid further disposal of plastic into our environment. Fishers and fishing vessels should take efforts to collect/retrieve lost or damaged fishing gears/plastics from oceans and dispose them wisely. Government and society should work hand in hand to build infrastructure for collection, reduction and segregation of waste at source i.e. beaches/fisheries operation sites. Further there is a need for Government to create policy decisions to incentivize collection, segregation, recycling and disposal of wastes.

It's high time that humans realize disposal of wastes and other materials into oceans degrades marine resources and poses human health risks. Only when society shall shift towards a culture of reduction, reuse and recycle plastics/non-biodegradable products, we can truly contribute towards making a sustainable planet.

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2. Ms. JoahannaDoerpinghaus, Ms. Jana hack and Mr. AmarnathMunnolimath-adelphi, Germany, Dr. MaliniBalakrishnan and Dr, VidhyaBatra- The Energy and Resources Institute (TERI), India- Policy Brief: Prevention of Marine Litter in India.
3. Current Conservation, Vol. 14 Issue 3.

XV. SUCCESS STORIES

1) Establishment of Medium RAS (with 6 tank of minimum 30m³/tank capacity 10ton/crop)

M/s. ZashFarm

Proprietors: Zaheer Karmali and Dr. Priya Prabhu Verlekar, Location: Keri Sattari Goa

Success story

More than 90% of the population in Goa is fish eaters. Zash Farms urge to diversify into something which is not only promising but also sustainable. “Due to the rising demand prospects and economic viability, aquaculture interested the applicant and interacted with finest aquaculture consultants from across the country. But since this is a first-of-its-kind project, it was new for everyone and challenging!” says Zaheer Karmali.

Zash Farms is a successful group of aqua farmers who took up growing and rearing of Sea bass in biofloc tanks. It is a medium RAS where in 8 tanks of 1,50,000 litres capacity each are set up. The unit is a fusion technology of Biofloc and RAS system. Each tank has individual equipments which makes the unit more efficient. The unit is located at Keri Sattari Goa.

The applicant has successfully harvested the first crop. It is employing about 18 people. It can produce approximately 5 tonnes per year. Currently an adult Chonak weighing between 600g – 2 kg is sold at Rs.750/kg.

The Department of Fisheries, Government of Goa has released the subsidy to the beneficiary for 2 units under Pradhan Mantri Matsya Sampada Yojana (PMMSY) towards the Establishment of Medium RAS (with 6 tank of minimum 30m³/tank capacity 10ton/crop) as under:

Sr. No	Name of the Applicant	Financial Assistance Released
1.	M/s Zash Farms, Marad Mapusa Goa	Rs. 20,00,000/-



2) INSTALLATION OF RIVER CAGES IN MANDOVI RIVER
SMT. BINDIYA SAWANT & SMT. HARSHA SAWANT
LOCATION: AKHADA TISWADI GOA

Success story

Smt. Bindiya Sawant & Smt. Harsha Sawant residents of Akhada, are the first women entrepreneurs who has set up riverine cages in the river Mandovi at Akhada Tiswadi Goa. Both entrepreneurs basically belong to fishermen family decided to have additional income to their family and were exploring the activities which would help them to achieve it.

After the launch of PMMSY schemes, they decided to take up the activity of river cages and seek help from the Department of Fisheries, Government of Goa where they acquired proper guidance and support after which they developed more interest in upcoming seabass river cage farming.

Department provided technical assistance while setting up of the unit and arranging inputs, like seed and feed. Total 5 cages were installed by both applicants.

In the month of June 2022 both of them successfully harvested their first seabass crop with a total harvest of approx. 1 ton and marketed their crop @ Rs.500/kg. after successful implementation of river cages both developed more interest and have also taken up mussel culture as an integrated activity along with cages.

The Department of Fisheries, Government of Goa has released the subsidy to the beneficiary under Women Category for setting up of 3 cages towards the Installation of River Cages under Pradhan Mantri Matsya Sampada Yojana (PMMSY) as under:

Sr. No	Name of the Applicant	Units Installed	Financial Assistance Released
1.	Smt. Bindiya D. Sawant, (Women Category)	3 cages (Unit cost Rs. 3.00 laks per cage)	Rs.5,40,000/-
2.	Smt. Harsha Sawant	2 cages (Unit cost Rs. 3.00 laks per cage)	Rs.3,60,000/-



3) Construction of Fish Kiosks including Kiosks of aquarium/ornamental fish

FISH BUBBLE Proprietor: ALVITO TRINDADE

LOCATION: DONA PAULA TISWADI GOA

Success story

Fish Bubble is a retail store situated at Dona Paula involving marketing and selling of ornamental fishes, aquariums, fish food and other aquarium products. The main aim of this business is to provide quality in its products and increase its customer base.

Alvito Trindade, the proprietor who manages the store with the help of his family, says his mission is to be the best and the most known in the area. His retail store is located in the main residential area and has a huge potential for customers who will like to take up ornamental fishes as a pet or as a hobby.

Fish bubble guides the customer on setting up of ornamental fish tanks aquascaping, different types of fish species, their feeding and management during the purchase. Their services also include online purchase promising proper care during packaging and transportation of the orders, home delivery and assistance with setting up of their aquarium tanks.

The Department of Fisheries, Government of Goa has released the subsidy to the beneficiary for setting up the unit towards the Construction of Fish Kiosks including Kiosks of aquarium/ornamental fish under Pradhan Mantri Matsya Sampada Yojana (PMMSY) as under:

Sr. No	Name of the Applicant	Bills/Estimate Submitted	Financial Assistance Released
1.	Shri. Alvito Bruno Trindade	Rs.10,20,790/- (Unit Cost R.10.00 lakh)	Rs. 4,00000/-



XVI. HUMAN RESOURCE

List of staff retired during the 2021-22 upto March 2022

Sr. No.	Name of the Official	Designation	Dated of retirement
01.	Shri Joaquim Sequeira,	Messenger	31/07/2021
02.	Shri Vikas S. Faldessai	Jr. Deckhand	31/08/2021
03.	Shir Subhash R. Salgaonkar	Driver	30/09/2021
04	Shri Sudesh Volvoikar	Research Assistant	31/03/2022

List of staff promoted During the year 2021-22 upto March 2022

Sr. No.	Name of the Official	Designation	Promoted to
1.	Shri. Lavu Gauns	LDC	UDC
2.	Shri. Shamrao Raikar	Lab. Assistant	Jr. Technician
3.	Shri. Rohan Morajkar	Junior Deckhand	Fisheries Surveyor
4.	Shri. Anand Naik	Junior Deckhand	Fisheries Surveyor
5.	Shri. Sameer Velip	Junior Deckhand	Fisheries Surveyor
6.	Shri. Parvinder Lone	Junior Deckhand	Fisheries Surveyor
7.	Shri. Nitin Sawant.	Junior Deckhand	Fisheries Surveyor
8.	Shri. Siddesh Kerkar	Mechanic Diesel(Grade-I).	Mechanical Instructor
9.	Shri. Prabhakar Shetgaonkar	MTS	LDC
10.	Shri. Saby Moraes	Fisheries Surveyor	Fisheries Officer
11.	Shri. Flavio Fernandes	Fieldman	Junior Deckhand
12.	Shri. Prasanna Pagi	Fieldman	Junior Deckhand
13.	Shri. Shubham Naik	Fieldman	Junior Deckhand
14.	Shri. Rahul Tari	Fieldman	Junior Deckhand
15.	Shri. Sagar Korkankar	Fieldman	Junior Deckhand
16.	Shri. Shubadeen Naik	Fieldman	Junior Deckhand

Training programs for Technical Staff

- (a) Two Days Training Programme on Initiation and DPR preparation of High value Infrastructure Projects under FIDF and PMMSY organised by NFDB, Hyderabad from 9th to 10th June, 2022. The said training was attended by Shri. Chandresh Haldankar, Supdt. of Fisheries, Smt. Sunita Pauskar, Asst. Supdt. Of Fisheries, Smt. Zigyasa A. Murkar, Asst. Supdt. of Fisheries. The training was focussed on the large infrastructure technologies to be adopted, modelling studies, procedures, and approaches to envisioning a fishing harbour/fish landing centre, DPR preparation, clearance required etc.
- (b) One-day Consultative Workshop on Way Forward for Enhancement of Seafood Exports from India, jointly organised by MPEDA and CAA and supported by NFDB was held on 17th June, 2022 at Chennai. The said workshop was attended by Dr. Shamila Monteiro, Director of Fisheries and Shri. Chandresh Haldankar, Supdt. of Fisheries.
- (c) Two days Training workshop on “Sustainable Utilization of Mangrove Ecosystem” organised by Mangrove Society of India was held on 26th & 27th July, 2022 at NIO, Donapaula Goa. The training focused on protection, conservation, management and sustainable utilization of mangroves of Goa.
- (d) One-day meet was held on: i-CEN70a (Hybrid Mode) on “Products and Services for Aquaculture Industries” organised by CSIR-National Institute of Oceanography, Dona Paula with a mission to continuously improve our understanding of the seas around us and to translate this knowledge to benefit all. The said meet was attended by the officials of the Department and the Sagar Mitra.
- (e) Three days National Symposium on “Self Reliant Coastal Agriculture” was held from 11th to 13th May, 2022 at ICAR, Old Goa organised by Association for Coastal Agricultural Research (ACAR) and ICAR-Central Coastal Agricultural Research Institute (ICAR-CCARI). The Department had set up a stall showcasing all the Department activities and schemes.

- (f) One day workshop to create awareness among the bankers about the FIDF schemes and entrepreneur model under PMMSY in the south region State and union territories on 29/04/2022 at nation institute for micro, small and medium enterprises (NI- MSME), Hyderabad was attended by Supt. of Fisheries Smt. Smt. Megha Kerkar and Smt. Rohita Naik and ASF Smt. Roshini Naik.
- (g) Two days training program on 8th and 9th March, 2022 on Solar framing as Mitigation option for climate change risk in Agriculture attended by Supt. of Fisheries Smt. Megha Kerkar, Smt. Preetam Naik and Asst. Supt. Smt Zigyasa Murkar, Shri Chandan Shirodkar, Dr. Sunita Pauskar and Smt Roshni Naik.
- (h) 1 Day training programme on 27/05/2022 on Potentials and opportunities in Mariculture in the State of Goa was attended by the Fisheries surveyors and Sagar Mitras.

Training/workshop programme for Administrative staff

Sr. No.	Name of the Officer/Officials	Designation	Training Date	Subject
01	Kshama P.S. Navelkar,	Head Clerk	13 th to 15 th July, 2021	Noting Drafting & Service Rule
02	Marcia Furtado	Jr. Steno		
03	Sidhesh Naik	LDC		
04	Smt. Sonia A. Naik	LDC	14 th to 16 th July, 2021	Issues relating to Family Welfare
05	Shri Damodar Kalngutkar	LDC		
06	Ms. Firda Barreto	LDC		
07	Shri Umesh D. Kulkarni	LDC	11 th to 13 th August, 2021	Managing Stress at Work and Home
08	Janaki R. Govekar	Office Supt.	6 th to 8 th June, 2022	Office Management including office procedure, Noting Drafting & Record Management
09	Dina Volvoikar	Store Keeper		
10	Dr. Christabelle Fernandes	Fisheries Officer		
11	Deepak Kunkolienkar	Marketing Inspector		
12	Roshni Naik	ASF		
13	Lavu Gauns	UDC		

Name and Designation of the Staff of Directorate of Fisheries.			
Sr. No.	Name	Designation	Mobile No.
1.	Dr. Shamila Monteiro	Director Fisheries	9326125026
2.	Shri. Chandrakant Velip	Dy. Director Fisheries	9923499855
3.	Dr. Smita Mazumdar	Dy. Director Fisheries	8806086860
4.	Shri. Digambar Karapurkar	Dy. Director Fisheries (Plan&Stat)	9765327980
5.	Smt. Megha Kerkar	Superintendent of Fisheries	9420162084
6.	Shri. Chandresh Haldankar	Superintendent of Fisheries	9764480663
7.	Kum. Rohita Naik	Superintendent of Fisheries	9764239688
8.	Smt. Preetam Naik	Superintendent of Fisheries	8806839645
9.	Shri. Richard Simoes	Asstt. Accounts Officer	9922969860
10.	Smt. Janaki R. Govekar	Office Superintendent	9765493405
11.	Smt. Kshama Navelkar	Head Clerk	9423075353
12.	Shri. Deepak Vaigankar	Accountant	8806474430
13.	Shri. Suryakant Naik	Accountant	9960404545
14.	Shri. Chandan Shirodkar	Asst. Supdt. of Fisheries	9270067014
15.	Smt. Zigyasa Murkar	Asst. Supdt. of Fisheries	8407973579
16.	Dr. Sunita Pauskar	Asst. Supdt. of Fisheries	9850764554
17.	Shri. Pradeep Gawas	Asst. Supdt. of Fisheries	9403175091
18.	Shri. Ravi Rodrigues	Asst. Supdt. of Fisheries	9921948844
19.	Smt. Roshini Naik	Asst. Supdt. of Fisheries	9764243587
20.	Shri. Alec De Souza	Fisheries Officer	9604033152
21.	Shri. Vipul Mapari	Fisheries Officer	8806407880
22.	Dr. Christabelle Fernandes	Fisheries Officer	9764320787
23.	Shri. Joel Diniz	Fisheries Officer	9923972603
24.	Shri. Sagar Naik	Fisheries Officer	7798889240
25.	Shri. Uday Khanolkar	Fisheries Officer	9422018550
26.	Shri. Divakar Korgaonkar	Fisheries Officer	9423837493
27.	Shri. Saby Moraes	Fisheries Officer	9763555380
28.	Shri. Shamrao Raikar	Jr. Technician	9923159494
29.	Marcia Fernandes	Jr. Stenographer	9168790606
30.	Shri. Deepak Kunkoliker	Marketing Inspector	8806624355
31.	Shri. Dina Volvoikar	Store Keeper	9049600907
32.	Smt. Priya Madkaikar	Statistical Assistant	8329614469
33.	Shri. Nath Bhagat	Statistical Assistant	9762179423
34.	Smt. Gautami Shetye	Statistical Assistant	9763409320
35.	Smt. Sanchita Nagvekar	Investigator	9049170956
36.	Smt. Priyanka Nayak	Investigator	9923653639
37.	Shri. Joao Mascarenhas	UDC	8322787090
38.	Smt. Roshan Taluanekar	UDC	9049270608
39.	Smt. Palhavi Dangui	UDC	9850183385
40.	Shri. Samir Parab	UDC	8390829693

41.	Shri. Uday Kamat	UDC	9923748915
42.	Smt. Ujwala V. N. Shirodkar	UDC	9860032006
43.	Shri. Lavu Gauns	UDC	7774953547
44.	Shri. Umesh Kulkarni	LDC	8411025887
45.	Shri. Siddesh Naik	LDC	9823454593
46.	Smt. Anita Madkaikar	LDC	9637017392
47.	Shri. Damodhar Kalangutkar	LDC	7588454082
48.	Smt. Prajakta Haldankar	LDC	9823987389
49.	Smt. Steffi Pires	LDC	9822518207
50.	Smt. Renisha Cardozo	LDC	8805232307
51.	Smt. Sonia Naik	LDC	8975101221
52.	Shri. Prathamesh Shirodker	LDC	9881211999
53.	Shri. Richard Raicar	LDC	9765468413
54.	Kum. Frida Barreto	LDC	7721889747
55.	Smt. Ashwini Gaonkar	LDC	9765848696
56.	Smt. Canira Raicar	LDC	9552981383
57.	Shri. Gaston Silva	LDC	9011124435
58.	Shri. Prabhakar Shetgaonkar	LDC	9423154373
59.	Shri. Narayan Naik	Bosun	8275622373
60.	Shri. Florence Rebello	Wireless Operator	8411993438
61.	Shri. Janardhan Naik	Wireless Operator	8007382769
62.	Shri. Shivanand Surlakar	Wireless Operator	8408872613
63.	Shri. Ramesh Gawas	Wireless Operator	9552080099
64.	Shri. Sucorro Dias	Driver	7507626467
65.	Shri. Swapnesh Adel	Driver	9923657475
66.	Shri. Lenin Aguiar	Driver	9823672438
67.	Shri. Satish Gawas	Driver	9420744956
68.	Shri. Govind Zilu Naik	Driver	9881744298
69.	Shri Vishant Narvekar	Driver	7887991333
70.	Shri Francis Santan Cruz	Driver	8888802875
71.	Shri. Dilesh Pagui	Engine Driver	9823672438
72.	Shri. Keshav Dessai	Engine Driver	9822048383
73.	Shri. Devanand Lone	Fisheries Surveyor	9823679921
74.	Shri. Mahesh N Volvoikar	Fisheries Surveyor	9922598437
75.	Shri. Domingo Fernandes	Fisheries Surveyor	9421246892
76.	Shri. Anand Gaude	Fisheries Surveyor	9673243231
77.	Shri. Kamalakant Gaude	Fisheries Surveyor	9422845037
78.	Shri. Gopal Zuvatkar	Fisheries Surveyor	9923040949
79.	Shri. Harish Prabhu	Fisheries Surveyor	9545225033
80.	Shri. Avinash Arondekar	Fisheries Surveyor	8806753314
81.	Kum. Rajeshri Gaonkar	Fisheries Surveyor	9923850398
82.	Shri. Shyamsundar Mishal	Fisheries Surveyor	7588674297

83.	Shri. Prathamesh Khandeparkar	Fisheries Surveyor	9673272527
84.	Shri. Damodaran Naik	Fisheries Surveyor	9923843930
85.	Shri. Vinayak Pednekar	Fisheries Surveyor	8806474529
86.	Shri. Amogh Mahavarkar	Fisheries Surveyor	9960365724
87.	Smt. Saily Madkaikar	Fisheries Surveyor	9673257293
88.	Shri. Lavkush Malik	Fisheries Surveyor	9673549177
89.	Shri. Subhash Gaonkar	Fisheries Surveyor	9579302298
90.	Shri. Nikhil Betkikar	Fisheries Surveyor	7038474124
91.	Shri. Vishal Pagi	Fisheries Surveyor	9764682588
92.	Shri. Bablo Kalangutkar	Fisheries Surveyor	9823352145
93.	Shri. Vedanand Shirodkar	Fisheries Surveyor	8308364110
94.	Shri. Ankush Shirodkar	Fisheries Surveyor	7798124462
95.	Shri. Kishen Borcar	Fisheries Surveyor	8411953837
96.	Shri. Kalpesh Gaonkar	Fisheries Surveyor	9764937170
97.	Shri. Mahadev Gaonkar	Fisheries Surveyor	9420158813
98.	Smt. Nishi Naik	Fisheries Surveyor	9860435071
99.	Shri. Anil Naik	Fisheries Surveyor	9823137561
100.	Smt. Seema Dessai	Fisheries Surveyor	9850104424
101.	Kum. Shenia Coutinho	Fisheries Surveyor	9923033457
102.	Shri. Sujay Dessai	Fisheries Surveyor	9665216551
103.	Shri. Krishna Nandkishore Naik Shirodkar	Fisheries Surveyor	7798676067
104.	Shri. Rajesh Nechkankar	Fisheries Surveyor	9765973713
105.	Shri. Nitin Anandache	Fisheries Surveyor	9673601030
106.	Shri. Parvinder Lone	Fisheries Surveyor	9923478888
107.	Shri. Anand Naik	Fisheries Surveyor	9158345953
108.	Shri. Rohan Morajkar	Fisheries Surveyor	9823880829
109.	Shri. Nitin Sawant.	Fisheries Surveyor	9923348696
110.	Shri. Sameer Velip	Fisheries Surveyor	8390829693
111.	Shri. Ganpat Chari	Net Mending Instructor	9765157218
112.	Shri. Siddesh Kerkar	Mechanical Instructor	9421248792
113.	Shri. Hari Palyekar	Junior Deckhand	7798104790
114.	Shri. Gopal Naik	Junior Deckhand	9881779052
115.	Shri. Subhash Shetkar	Junior Deckhand	9623325335
116.	Shri. Prajay Parulekar	Junior Deckhand	8421137017
117.	Shri. Anay Halarnkar	Junior Deckhand	9860314936
118.	Shri. Vidhyanand Phadte	Junior Deckhand	0832-2224838
119.	Shri. Indur Kankonkar	Junior Deckhand	9923085532
120.	Shri. Pravin Shirodkar	Junior Deckhand	8888632301
121.	Shri. Shashikant Pagi	Junior Deckhand	9923749464
122.	Shri. Prasanna Pagi	Junior Deckhand	9763741525

123.	Shri. Flavio Fernandes	Junior Deckhand	9822689563
124.	Shri. Shubham Naik	Junior Deckhand	7507641767
125.	Shri. Rahul Tari	Junior Deckhand	9049245236
126.	Shri. Sagar Korkankar	Junior Deckhand	9075941026
127.	Shri. Shubadeen Naik	Junior Deckhand	8788384420
128.	Shri. Soccoro Pinto	Fieldman	9921879257
129.	Shri. Siddarth Mishal	Fieldman	9923112651
130.	Shri Filomeno Henry Columbano Carvalho	MTS	9881882360
131.	Shri. Bhiva Gawas	MTS	8805336547
132.	Shri. Chandrakant Narulkar	MTS	9823535646
133.	Shri. Mohan Garudi	MTS	9226792539
134.	Shri. Bhupal Phadte	MTS	9881732250
135.	Smt. Shobha Parab	MTS	9637749551
136.	Smt. Sudha Gaude	MTS	9764775953
137.	Smt. Gauri Chodankar	MTS	8390203141
138.	Smt. Niella Fernandes	MTS	8888184392
139.	Shri. Rajendra Naik	MTS	9823783647
140.	Smt. Pritam Shirodker	MTS	9822824456
141.	Shri. Felipe Colaco	MTS	8380958978
142.	Shri. Norman Soares	MTS	8308765217
143.	Shri. Gangaram Rathod	MTS	8550900815
144.	Shri Pradip R. Rane Sardesai	MTS	9420193153
145.	Shri. Ibrahim Saha	Watchman	9822686515
146.	Shri. Vaibhav Tamboskar	Watchman	9823188233
147.	Shri. Sambhaji Sawant	Watchman	9420897288
148.	Shri. Ratnakar Kanolkar	Watchman	9923651057

XVII.

DIRECTORY OF FISHING SOCIETIES

1.	Cutbona Fisheries Co-operative Society Ltd. P.O. Velim, Cutbona, Salcete-Goa
2.	Mandovi Fishermen Marketing Co-operative Society Ltd. Malim Jetty, Betim, Bardez Goa 403101
3.	South Goa Mechanised Boat Owners Co-op and Marketing Society Ltd. Velim, Salcete-Goa
4.	Vasco Fishing Boat Owners Marketing Co-operative Society Ltd., Behind T.B. Cunha Chawk, Vasco – Goa
5.	Xapora Fishing Boat Owners Fisheries Co-operative Society Ltd., Chapora, Bardez- Goa.Near Chapora jetty, P.O. Vagator, Chapora, Bardez, Goa, 403509
6.	Zuari Fishermen Marketing Co-operative Society Ltd Near Acid Tank, Vasco Fishing jetty, Vasco-da-Gama, Goa,
7.	A.V.C.B. Traditional Fisherman Association 44/A/I Passagem, Assolna, Salcete-Goa 403701
8.	Akhil Goa Kshatriya Pagui Samaj. H.No.6/203, Rajbaga Canacona Goa 403702
9.	All Goa Fisherman's Co-op. Association Ltd. C/o. The Sahaiddhar Urban Credit Co-op. Society Ltd., Fernandes Building, Malim, Betim, Bardez Goa.
10.	All Goa Purse-seine Boat Owners Association, AS/5, Mohidin Towers D.B.Road Panaji Ilhas Goa
11.	Baga Sant Khuris Fishermen Association, Calangute, Bardez Goa.
12.	Baina Ramponkar & Fishing Canoe Owner's Society, Katem Baina, Vasco-da-Gama, Goa.
13.	The Cutband Boat/Trawler Owners Association, P.O. Velim, Salcete- Goa
14.	Desterro Fisherman Association, Near Desteirro Church, Vasco-da-Gama, Goa.
15.	Dona Paula Fishermens Association H.No.C-22/48, Antiza Mansion, Dona Paula, Tiswadi Goa.
16.	Goa Fishing Boat Owners Association, Behind T.B. Cunha Chowk, Vasco Fishing Jetty, Vasco-da-Gama , Vasco Goa
17.	Goenche Ramponkarancho Ekvott (GRE) P. O. Cansaulim Goa
18.	Nirvikar Fishing Co-op. Society Ltd. Tembwada, Morjim, Pernem Goa.
19.	Niz Goenche Ramponkarancho Ekvott H.No. 1393/A, S-1, Ground Floor, Menino Jesus Cottage, Mazilvaddo, Benaulim, Salcete

20.	Odxel Fishermen Association Odxel, Taleigao, Tiswadi, North Goa. PO Goa University 403206
21.	Old Cross Fishing Canoe Owners Co-op. Society Ltd. H.No.116, Non-Mon, Dempo bhatt, Vasco-da-Gama Goa.
22.	Ovleshwar Fisherman Association, Firguebhat, Nerul, Bardez Goa.
23.	Shree Ganesh Traditional Fisheries Association Gabitwada, Talpan, Canacona, Goa.
24.	Shree Sateri Fisherman Association, Near Goa University, Cakra, Tiswadi, Goa.
25.	Shree Shantadurga Fisherman Association Near Goa University Cakra Tiswadi Goa
26.	St. Andrews Canoe Owners –Vasco Society H. NO. 257, Behind Tilak Maidan, Khariwada, Vasco-da-Gama, Goa
27.	St. Francis Xavier Canoes Owners Vasco Society, H. No. 134, Non-Mon, Dempo Bhat, Vasco da Gama, Goa
28.	The Canacona Taluka Gabit Fisherman Trawler/Mechanised, Craft Owners Co-op. Society Ltd., Talpona, Sadolsem, Canacona-Goa
29.	The Purse Seiners Boat Owners Cooperative Society Ltd House No. 797, Cutband, Velim, Salcete, Goa. 403723
30.	Traditional Fisherman’s Association of North Goa Firangebhat, Nerul, Bardez Goa
31.	Vailankani Saibin Fisherman Association, Dandadi, Nerul, Bardez Goa
32.	Vasco Ramponkarancho –Magkarancho Ekvott, Near Old Cross No.181 Khariwada Vasco-da-Gama Goa
33.	Velsao Fishing Canoe Owners Society, H.No.220, Velsao Dando, Cansaulim.
34.	Pescador Canoe Society Vasco Goa H, No. 15/124(60), Pixem Dongri, Vasco da Gama, Goa. 403802
35.	Kshatriya Maratha Paramparik Macchimar Sanghatana, Rangallim, Velim, Salcete, Goa
36.	Akhil Goa Harkari Sahari Sauntha, Durbhat, Ponda Goa
37.	Siridao Traditional Fishermen Association Siridao Tiswadi Goa
38.	Baina Fishermen Society Katem Baina, Vasco-da-Gama Goa

XVIII. PHOTO GALLERY

Awareness programs at various places



Sarkar tumchya dari, Canacona



Awareness program at Carambolim



Scheme awareness program at Chodan, Madel



Awareness program at Navelim, Sankhalim



Awareness camps by Sagar Mitras



Awareness camps by Sagar Mitras



“Clean Coast Safe Sea” campaign at Baina, 9th September



“Clean Coast Safe Sea” campaign at Caranzalem on 13th September



Awareness camp at Malim Jetty organized by MPEDA



Training program at Krishi Bhavan, Caranzalem by Directorate of Agriculture on Up-Gradation of HRD skills for Extension personnel



Visit of Secretary Fisheries, DADF



Reservoir cage culture at Chapoli, Canacona



Inauguration of river cage unit at Amona, Sakhalim



Keri, Farm



Zash Farm receiving award during State credit seminar organized by NABARD

Photographs Of Impounded Vessel



Fish harvested at Ela Farms



Annual Mass



Monthly Meeting of Sagar Mitras



Short term training program





Fish caught at malim jetty



Swordfish caught at Cutbona Jetty

..अखेर डॉल्फिन मृत्युशी झुंज हरला

वाचवण्याचे प्रयत्न अपयशी, उपचारांची गरज असल्याने इस्पितळात नेण्याचा प्रयत्न

लोकमत न्यूज नेटवर्क

वास्को: काटे बायणा येथील समुद्रातून किनाऱ्यावर आलेल्या डॉल्फिनला वाचवण्यासाठी तेथील पारंपारिक मासेमारी बांधव संतोष गवणे यांनी भरपूर प्रयत्न केले, मात्र अखेरीस ते प्रयत्न अयशस्वी ठरले. किनाऱ्यावर आलेल्या त्या डॉल्फिनला अनेकवेळा समुद्रात ढकलण्यात आले, मात्र पुन्हा पुन्हा डॉल्फिन किनाऱ्यावर येऊ लागला. डॉल्फिनला उपचारांची गरज असल्याचे दिसून आल्यानंतर त्याला एका रिक्शेत घालून (रिक्शेत पाणीभरून) उपचारासाठी नेण्यात येत होते, मात्र त्या डॉल्फिनचा नंतर मृत्यू झाला.

सोमवारी पहाटे ६ च्या सुमारास ही घटना घडली. काटे बायणा वास्को येथील समुद्र किनाऱ्याच्या जवळ राहणाऱ्या संतोष गवणे याला त्याच्या घरामागील किनाऱ्यावर एक डॉल्फिन येथून पडल्याचे आढळून आले. समुद्रातून येऊन किनाऱ्यावर पडलेला हा डॉल्फिन सुमारे १०० किलो वजन



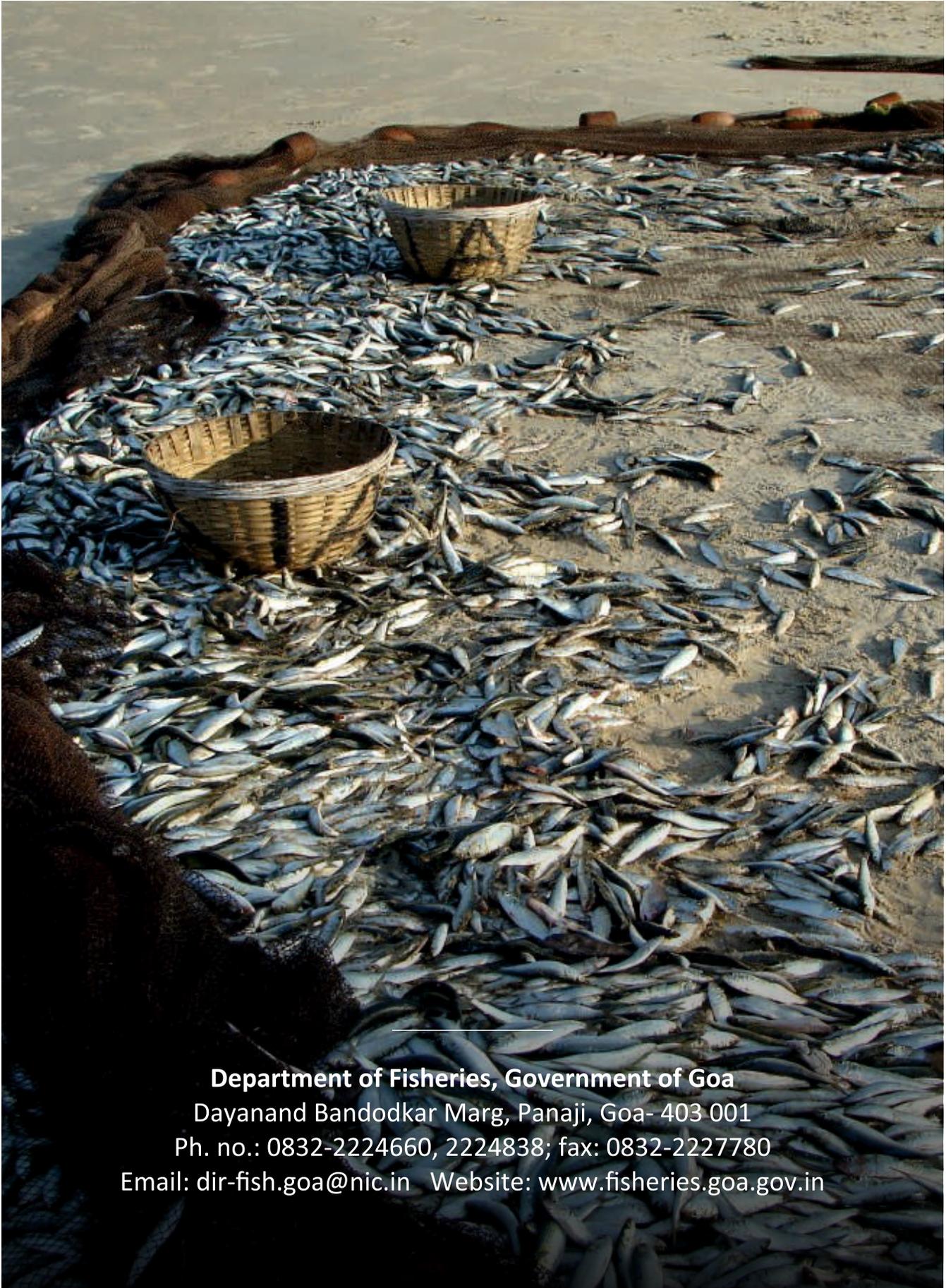
समुद्रातून किनाऱ्यावर येऊन पडलेल्या डॉल्फिनला वाचवण्यासाठी त्याला पुन्हा समुद्रात टाकण्याचे अशाप्रकारचे अनेक प्रयत्न करण्यात आले.

आणि २ मीटर लांब असल्याची येऊन पडल्याने त्या डॉल्फिनचा जीव माहिती प्राप्त झाली. किनाऱ्यावर धोक्यात असल्याने त्याला

वाचवण्याकरिता संतोषने त्याला अनेक वेळा ढकलून समुद्रात टाकण्याचे प्रयत्न केले. मात्र पुन्हा पुन्हा तो डॉल्फिन येऊन किनाऱ्यावर पडू लागला. डॉल्फिनला समुद्रात टाकण्याचे प्रयत्न अपयश ठरत असल्याने नंतर सकाळी ८.३० च्या सुमारास 'दुप्टी' च्या कर्मचाऱ्यांना याबाबत माहिती देण्यात आली. डॉल्फिनला उपचाराची गरज असल्याचे दिसून येताच नंतर चिकित्सकाला (वेटनरी डॉक्टर) बोलवण्यात आले.

त्या डॉल्फिनला उपचाराकरिता इस्पितळात नेण्यासाठी एका रिक्शेत पाणी भरून त्याला नेण्यात येत असतानाच डॉल्फिनचा मृत्यू झाल्याची माहिती प्राप्त झाली. समुद्रातून किनाऱ्यावर येऊन पडलेल्या त्या डॉल्फिनला संतोष गवणे आणि इतरांनी वाचवण्याचे अनेक प्रयत्न केले, मात्र अखेरीस ते अयशस्वी ठरले. त्यामुळे हळहळ व्यक्त केली जात असल्याचे दिसून येत आहे.





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