



NETFISH-MPEDA

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NETFISH - నెట్‌ఫిష్
NETWORK FOR FISH QUALITY MANAGEMENT
AND SUSTAINABLE FISHING
సమగ్ర వేట, సాంకేతిక మత్స్య యుగం
మత్స్యకారుల...

NETFISH-MPEDA

ANNUAL REPORT

2017-18



Network for Fish Quality Management and Sustainable Fishing (NETFISH)

(MPEDA, Ministry of Commerce & Industry, Govt. of India)

Vallarpadam P.O., Kochi - 682 504
www.netfishmpeda.org

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Major Objectives

- ❖ To function as the focal point for upgrading the technology and quality management of fishing and fish processing sectors at the grass roots level
- ❖ To organize appropriate training programmes on fish quality management and conservation of fishery resources in all the maritime states of India
- ❖ To network with stake holder organization by inducting their representatives in to the general body of NETFISH
- ❖ To assimilate, absorb and transfer technologies related to capture fisheries
- ❖ To develop systematic linkages between international & national institutions of excellence in the field of extension
- ❖ To facilitate public or private investment in infrastructure development

1. ABOUT NETFISH

Network for Fish Quality Management and Sustainable Fishing (NETFISH) is a registered society under the Marine Products Export Development Authority (MPEDA), Kochi. The society was formed in 2006 as per the Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act, 1955. Being the extension arm of MPEDA, NETFISH carries out fisheries extension activities at grass root level, with an aim to empower fishermen community particularly on fish quality management, conservation and sustainable fishing and thus to promote the quality and sustainability of sea food export from India. NETFISH has been conducting extensive outreach programmes among fishers and fishery stakeholders in all maritime states of India, since its inception in 2007 and during the 10 years period (till March 2017) 24,587 extension programmes benefitting around 7,98,303 stakeholders were executed successfully at areas in and around selected harbours and landing centres across the country.

In the financial year 2017-18, focus has been shifted towards conducting more livelihood improvement programmes for fishers. Apart from

the regular quality management and conservation activities, special trainings and mini projects on production of hygienic dry fish, production of value added fishery products, popularization of Square mesh cod ends, eradication of plastic from seas etc. have been initiated this year.

2. THE PRESIDENT

Dr. A. Jayathilak IAS, Chairman of MPEDA continued as the President, NETFISH during the year 2017-18.

3. THE EXECUTIVE COMMITTEE

The 11th Annual General Body Meeting held on 20th September 2017 reconstituted the Executive Committee of NETFISH by selecting new eight non-permanent members. The details of members of the Executive Committee for the year 2017-18 are furnished in Table 1.

4. MEETINGS

Review meetings with member NGOs were held during April 2017 in all the regions in the presence of MPEDA officials concerned and discussed on work done in previous years, its achievements

Table 1. Executive Committee members of NETFISH (2017-18)

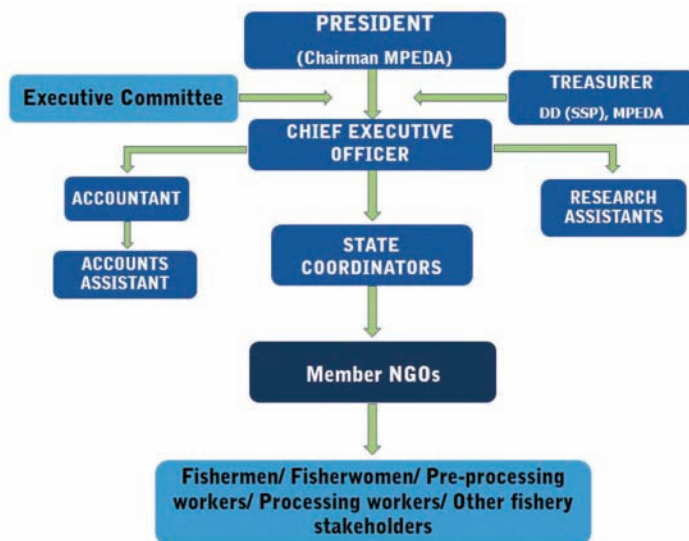
S. N.	Name	Designation / Address
1	Dr. A. Jayathilak IAS	Chairman, MPEDA
2	<i>Vacant</i>	Director, MPEDA
3	Mr. T. Dola Sankar	Director (M), MPEDA
4	Mr. B. Sreekumar	Secretary, MPEDA
5	Mr. V. Padmanabham	President, SEAI
6	Mr. Venkata Hari Krishna Pellakuri	Director, EP (MP), MoCI
7	Smt. Asha. C. Parameswaran	Jt. Director (QC), MPEDA
8	Dr. Ravishankar C.N.	Director, CIFT
9	Mr. R.C. Sinha	Director, CIFNET
10	Mr. K. Sivarajan	Deputy Director, MPEDA (SSP) & Treasurer, NETFISH
11	Dr. Joice V. Thomas	Chief Executive, NETFISH
12	Mr. B.K. Sengupta	Secretary, The Science Association of Bengal, West Bengal
13	Mr. Harekrushna Khataei	Secretary, RPRDS, Odisha.
14	Mr. Pardha Saradhi	Secretary, SEARCH, Bapatla, Andhra Pradesh
15	Mr. K. Singaravelan	General Secretary, FPO, TamilNadu
16	Mr. Suresh	Advisor, FDWC, Kerala
17	Mr. Venkatesh Naik	Secretary, SCODWES, Karnataka
18	Mr. Anil J. Gawade	Chairman, NBUSP, Sindhudurg, Maharashtra
19	Mr. Kanjibhai B. Jadav	President, B.A.Y.E.R.D.F.T., Gujarat



and shortfalls, and the methodology to be adopted to improve the activities. Action plan for the new fiscal year was also finalised during the meeting. The review of activities and achievements of all the State Coordinators was done at NETFISH HO, Vallarpadam on 15th June 2017. The 24th Executive Committee Meeting and the Eleventh Annual General Body Meeting of NETFISH were convened on 20th September 2017 at MPEDA Hq., Kochi.

project in Kollam. Also, programmes on Sea Safety & Navigation were started in this fiscal year in view of the cyclone Okchi, which devastated the southern coasts of India. Thus, this year has marked the initiation of a few new sort of extension activities by NETFISH. Apart from the intensive extension programmes, meetings and discussions were also held often with officials of central/state departments, institutes, agencies etc. concerned, in order to solve issues regarding

5. ORGANOGRAM



6. TARGET

Each region was assigned a minimum target of 150 programmes including regular awareness classes and special programmes. In total 1636 extension programmes were planned to be executed during 2017-18 as per the break-up given in Table 2.

fish quality management & sustainable fishing and also for the development of infrastructure facilities at harbours and landing centres. In total, NETFISH initiatives have helped fisher communities to further enhance their skill and knowledge in fish quality management, conservation of marine resources and livelihood development.

7. EXTENSION ACTIVITIES

A total of 1603 numbers of extension programmes were conducted by NETFISH during the financial year 2017-18, benefitting around 54338 fishers/fishery stakeholders, as per the details given in Table 3 & 4. Special efforts were taken to popularize square mesh cod-ends among fishers with a view to conserve young ones of fishes from destruction. A good number of hands on training programmes on Value addition of fishery products were also organized during the year especially for the fisherwomen, who can take it as an alternative livelihood. Another major activity to be mentioned during the year was the key role played by NETFISH for the initiation of ‘Suchitwa Sagaram’



Fig. Total No: of programmes conducted State-wise/ Region-wise



Table 2. Target set for 2017-18

Type of Programme	West Bengal	Odisha	Andhra Pradesh	TamiNadu North	TamiNadu South	Kerala South	Kerala North	Karnataka & Goa	Maharashtra	Gujarat	TOTAL
Onboard training	35	45	10	20	12	12	12	15	10	5	176
Awareness classes at landing sites	55	55	50	60	70	50	65	60	60	60	585
Pre-processing Centre programme	5	10	0	7	10	40	45	10	0	15	142
Processing Centre programme	15	5	0	5	5	6	0	10	0	15	61
Dryfish programme	25	12	40	25	20	12	20	25	30	16	225
Square mesh fabrication training	5				5	4	3	7	5	10	39
Training on Value Addition	5	5	30		6	5		15	6	5	77
GPS training				15	2			3	4		24
Sea safety programme					1				4		4
Other Livelihood Development Programmes	4				5	5	3			6	23
Tuna Processing training			10	10	2						22
Cuttle Fish Conservation					2			5			7
VHSE School programme	6	5	5			10	8		2		36
School programme	4			5	2				5	5	21
Exposure Visits		2	5			2	1		2	2	14
Clean-up programme	4			4	4	3	3			3	21
Sea Club programme					2		2				2
Black clam restoration programme								5			5
Oyster Conservation programme								5			5
Mussel culture/ Mud crab culture popularization programme					2			5			7
HACCP training									2		2
Other Special programmes including Street Plays	4	11			2	40	50		20	8	113
Grand Total	167	150	150	151	152	189	212	165	150	150	1636

Table 3. State-wise/ Region-wise details of Extension Programmes conducted & No: of beneficiaries

S.N.	State/Region	Total No: of Programmes	Total No: of Beneficiaries
1	West Bengal	168	4515
2	Odisha	173	4410
3	Andhra Pradesh	121	3417
4	TamilNadu North	159	5245
5	TamilNadu South	149	5451
6	Kerala South	221	8698
7	Kerala North	190	8073
8	Karnataka & Goa	142	5447
9	Maharashtra	152	4973
10	Gujarat	128	4109
	Grand Total	1603	54338



Table 4. Details of Extension programmes conducted during the year 2017-18

S. N.	Type of programme	Total No. of programmes	Total No: of Beneficiaries
1	Onboard training	178	2334
2	Square mesh popularization/Quality/Conservation programme at harbours/landing centres	636	18564
3	Pre-processing centre training	151	4258
4	Processing centre training	47	1386
5	Dryfish training	233	6829
6	Square mesh fabrication training	28	753
7	Value addition of fishery products	44	1125
8	GPS Handling/Eco sounder training	33	971
9	Sea safety programme	8	344
10	Other livelihood development programme	7	255
11	Tuna Processing training	12	263
12	Cuttle Fish Conservation programme	1	11
13	VHSE programme	18	759
14	School programme	21	1608
15	Exposure visits	4	69
16	Cleanup programme	21	1207
17	Sea Club programme	3	129
18	Other Special programmes including Street Play, Exhibition etc.	158	13473
	Grand Total	1603	54338

7.1 Onboard Programme:

Onboard programmes were aimed to render awareness and practical training to the boat owners, fishermen, boat crew members and workers about hygienic handling of fish and ice onboard and also about sustainable fishing practices and use of life saving equipment. The programmes included classes, demonstrations and subsequent discussions with trainees regarding various quality problems onboard. Leaflets and posters pertaining to hygienic handling practices onboard fishing vessels, responsible fishing etc. were explained and distributed to the trainees and short videos relevant to the subjects were also shown. Fishermen aid materials such as Life jackets, Plastic shovels, Plastic baskets etc. were also provided during the



Fishers given training on proper cleaning of utensils



State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Digha-10, Kakdwip-6, Freserganj-7, Raidighi-14	37
Odisha	Paradeep-64, Balaramgadi-1, Bahabalapur-3	68
Andhra Pradesh	Visakhapatnam-4	4
Tamilnadu North	Pondicherry-2, Cuddalore-5, Pazhaiyar-5	12
Tamilnadu South	Ramnad-2, Tajore-2	4
Kerala South	Thoppumpady-4, Kollam-5	9
Kerala North	Munambam-9, Munakkakadavu-2	11
Karnataka & Goa	Mangalore-2, Malpe-3, Gangolli-2, Bhatkal & Honnavar-4, Tadri & Belekeri-4, Karwar-4	19
Maharashtra	Harne-4, Ratnagiri-6	10
Gujarat	Veraval-4	4
	Total	178

programmes to boats to encourage the fishers to practice what was taught.

After attending the training programmes the fishers, skippers and boat owners became well aware about the quality of fish, how & why the fish get spoil and how to prevent it and hence they have started maintaining personal hygiene and proper sanitation conditions in fishing vessels. Thus the fishers are now getting better price for their catch.



Boat crews with plastic baskets supplied by NETFISH



Onboard training programme conducted in Tamil Nadu



7.2 Square mesh popularization/Quality/ Conservation programmes at landing sites

The aim of the extension activities carried out for the fishers, auctioneers, fish handling workers, ice handling workers etc. at landing sites were to generate awareness on conservation & sustainable fishing as well as on fish quality management among the fishers. Hygienic handling of fish, personnel hygiene, temperature and fish spoilage, proper use of ice, good quality water, importance of regular cleaning schedule and abuse of chemicals for fish preservation

were the major topics covered in the programme. The programmes also specially emphasised on creating awareness regarding the advantages of square mesh cod ends over the conventional diamond mesh. Interaction with trainees regarding various quality issues at landing centres were done after the lecture classes. NETFISH posters, leaflets, short films and animation films were also used in the programmes. Rubber gloves, plastic shovels, plastic baskets, T-shirts, caps etc. were distributed instead of stipend in most of the programmes.

State / Region	Selected areas & no: of programmes conducted	Total No. of programmes
West Bengal	Digha-28, Kakdwip-14, Freserganj-10, Raidighi-6	58
Odisha	Paradeep-50, Balaramgadi-3, Chilka-22	75
Andhra Pradesh	Visakhapatnam-32, Machilipatnam-8, Nizampatnam-8	48
Tamilnadu North	Chennai-5, Pondicherry-8, Cuddalore-9, Pazhaiyar-15, Poombuhar-16, Karaikal-6, Nagapattinam-6	65
Tamilnadu South	Tuticorin-16, Ramnad-22, Kanyakumari-14, Tanjore-16, Puthukottai-6	74
Kerala South	Thoppumpady-11, Chellanam-10, Punnpra-6, Thottappally-6, Kayamkulam-6, Kollam-17, Vizhinjam-8	64
Kerala North	Beyepore-7, Puthiyappa-9, Munambam-16, Chettuva-14, Munakkakadavu-8	54
Karnataka & Goa	Mangalore-8, Malpe-15, Gangolli-9, Bhatkal & Honnavar-17, Tadri & Belekeri-6, Karwar-3, Cutbone-1, Malim-2	61
Maharashtra	Palghar-Thane-18, Raigad-19, Ratnagiri-07, Sindhudurg-18	62
Gujarat	Veraval-26, Mangrol-16, Porbandar-12, Vanakbara -15, Dholai-4, Umarsadi-2	75
	Total	636



Fishermen awareness programme at West Bengal





Awareness class at Chettuva harbour



Harbour workers with gloves supplied by NETFISH

7.3 Pre-processing Centre Programme

The quality issues especially with regard to the consignment rejections occurred in seafood industry mainly attributes to the lack of awareness

among the individuals involved in pre-processing centres. Therefore, NETFISH took initiatives to create awareness and train the workers on hygiene & sanitation practices and personal hygiene etc. This year 151 numbers of awareness programmes



Giving awareness on hygiene & sanitation to pre-processing workers

State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Kolkata 5	5
Odisha	Seafood units-5	5
Tamilnadu North	Chennai-1, Cuddalore-2, Poombuhar-2	5
Tamilnadu South	Tuticorin-6	6
Kerala South	Aroor-42, Ambalappuzha-17, Kollam-4	63
Kerala North	Njarackal-17, Edvanakkad-15, Munambam-14	46
Karnataka & Goa	Mangalore-3, Malpe-4, Gangolli-2	9
Gujarat	Veraval-7, Mangrol-1, Porbandar-3, Vanakbara-1	12
	Total	151





Pre-processing workers wearing the uniforms provided by NETFISH

were arranged for the workers, Technologist and Supervisors of Pre-processing centres. Practical demonstrations of change room activities, hand washing procedure were also done in the programme with the aid of NETFISH leaflets, posters and movies. Aprons, uniforms, caps, mouth cover and gum boots were distributed to pre-processing workers in selected PPCs using the stipend money. After attending the training programmes pre-processing workers have gathered knowledge on hygiene & sanitation practices and are maintaining better personal hygiene.

7.4 Processing Centre Programme:

During the year 2017-18, a total of 47 awareness programmes were organized at processing units, mostly on demand basis. The targeted beneficiaries were processing workers, supervisors and technologists of processing centers, to whom lectures on sanitation & hygienic practices in the processing centre, HACCP system, hygienic handling of shrimps, physical, chemical & biological hazards, role of ice, fish spoilage and the role of microbes, personal hygiene & habits, uses of change room, and



Awareness class for workers of processing unit



State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Purba Medinipur-4, Kolkata-8, North 24 Parganas-3	15
Odisha	Seafood Units-4	4
Tamil Nadu North	Chennai-5	5
Kerala South	Aroor-4	4
Karnataka & Goa	Cutbone (Goa)-2	2
Gujarat	Veraval-8, Mangrol-1, Porbandar-3, Vanakbara-5	17
	Total	47



Processing workers watching NETFISH awareness video

abuse of antibiotics were given. Film on sanitation and hygienic practices in seafood processing centre was shown to the participants and posters and leaflets were distributed and explained to them in the programme.

7.5 Dry fish Programme

A total of 233 training classes were conducted for the dry fish workers and the associated people engaged in dry fish industry during the year to create awareness on hygienic production of dry fish and to improve the export of dry fish products. The programme included lecture on Hygiene practice of dry fish and uses of solar dryer, abuse of harmful chemicals, pesticide on dry fish and subsidy schemes. The trainees were taught on good washing of fish, cleaning of fish contact surfaces, selection of raw materials, preparation of bed for drying, packaging

and storage of finished products and marketing. They were introduced to solar drying, drying rack structures made with pipes and net and rope drying practices as part of the programme. Also, some of the Dry fish women societies of selected areas were motivated for the utilization of infrastructures constructed by the Government for the purpose. Interaction with trainees on various quality problems in dry fish was also done in the programme. The programmes enabled the Fishers engaged in dry fish activities to understand the negative impact of using harmful chemicals in dry fish. They have requested to set up a laboratory for testing of chemical residue used in dry fish. Some of the fishers requested for training programme on packaging of dry fish as consumer pack. After intervention of NETFISH some fishers at New Jaldah and Gangasagar are drying fish in poly houses and producing better quality dry fish.



State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Digha-19, Kakdwip-3, Freserganj-3	25
Odisha	Chilka-15	15
Andhra Pradesh	Visakhapatnam-20, Machilipatnam-5, Nizampatnam-13	38
Tamilnadu North	Chennai –Kasimedu FH-4, Nagapattinam FH-4, Karaikal FH-6, Pondicherry FH-7, Cuddalore FH-13, Pazhayar FH-4, Poombuhar- 2	40
Tamilnadu South	Tuticorin-8, Ramnad-12, Kanyakumari-8	28
Kerala South	Andhakaranazhy-6, Thannermukkam-5	11
Kerala North	Munakkakadavu-8, Vallarpadam-1	9
Karnataka & Goa	Mangalore-3, Malpe-4, Gangolli-4, Bhatkal& Honnavar-10, Tadri& Belekeri-6, Karwar-4	31
Maharashtra	Palghar-Thane-10, Raigad-2, Harne-2, Ratnagiri-10, Sindhudurg-6	30
Gujarat	Umargam-2, Nargol-2, Umarsadi-2	6
	Total	233



The dryfish workers with plastic sheets provided by NETFISH

A special programme was conducted for the fishermen community living around the MPEDA Vallarpadam project complex on 29/6/2017, aimed to uplift their awareness about hygienic preparation of

dry fish. The programme was inaugurated by Smt. Viji Shajan, Mulavukadau Grama Panchayat President in a function presided over by the ward member Adv. Elsy George. The Panchayat President noted that





Awareness training for fisherwomen involved in fish drying

the initiative of NETFISH and MPEDA to conduct this kind of an awareness programme is a positive step encouraging the general public. The ward member Smt. Rose Martin and Sri. C.V. Prasannan, Vice President of the community organization Ananda Chindamani Sabha felicitated on the occasion and welcomed the move to invite the local community people for the awareness programme. Sri. K.Sivarajan Deputy Director MPEDA welcomed the gathering and Sri.Santhosh N K, NETFISH State Coordinator proposed the vote of thanks. After the inaugural function, two awareness classes were handled by State Coordinators Sri.Santhosh N.K and Smt. Sangeetha N.R. on the modern fisheries, ways to maintain the fish quality and methods for hygienic preparation of dry fish. Forty nine men and women members from fisher community participated in the programme.

7.6 Square mesh fabrication training

As part of its wide campaign to popularize square mesh cod-ends in trawl nets and thus to promote responsible fishing practices, NETFISH conducted 28 nos. of hands-on training programmes on 'fabrication of square mesh cod-ends' for the

fishers and net menders in Gujarat, Maharashtra, Odisha, Kerala and Karnataka. Square mesh cod-ends, compared to its diamond predecessor, has many advantages such as escapement of juveniles fish and other valuable marine organisms as well as less fuel consumption. Most of the trainings were carried out with the support of technical personnel from ICAR-CIFT and in a few of the programmes NETFISH trained net menders were the resource persons. First the trainees were shown how to convert diamond mesh net to square mesh ones and afterwards each group was made to fabricate square mesh net pieces using available diamond mesh nets. Because of this training, the trainees came to know about the simple method which can be used for square mesh fabrication. The net makers were happy about the simplicity of the methodology used for the conversion and expressed their satisfaction. In Karnataka, an onboard fishing trial was also conducted as part of the training, where the trainees were taken onboard a fishing vessel to show the efficiency of square mesh cod ends. In Kerala, a few square mesh cod ends were supplied by NETFISH to encourage the fishers to use such cod ends.

State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
Odisha	Paradeep-2	2
Kerala South	Thoppumpady-1, Kollam-1	2
Kerala North	Munambam-2	2
Karnataka & Goa	Mangalore-2, Malpe-2, Gangolli-1, Bhatkal & Honnavar-1, Tadri & Belekeri-1	7
Maharashtra	Sassoon dock-2, Raigad-5, Harne-1, Ratnagiri-1, Sindhudurg-1	10
Gujarat	Veraval-2, Mangrol-1, Porbandar-1, Vanakbara-1	5
	Total	28





View of various components of the square mesh cod end fabrication trainings



7.7 Training on Value addition of fishery products

With an aim to improve the living conditions of fisherfolk and to support the livelihood diversification of the fishermen community 44 nos. of Hands on training programmes on 'Preparation of Value Added Fishery Products' were conducted across the maritime states, especially for fisherwomen. Potential groups of women from the coastal villages who are interested to take up value addition of fishery products as a source of livelihood were mostly inducted for the training programmes and they were given hands on training on the preparation of items such as fish cutlet, fish finger, fish roll, fish samosa,

dry prawn masala, fish wafers, fish curry, fish pickle, dry prawn chutney, fish soup and traditional fish fry etc. Training materials consisting of details of ingredients and recipe for each product in local languages were given to all the participants. The trainees actively participated in the trainings and after tasting the prepared products, got themselves convinced about its quality and taste. They thanked NETFISH for providing such a valuable training. After attending the training programme a few of the fisher women SHGs have started setting up stalls in fares with different value added fishery products and had earned a good income.

State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Khejuri-1, Dadanpatrabar-1, New Jaldah-1, Freserganj-1, Canning-1, Dhamakhali-1	6
Andhra Pradesh	Visakhapatnam-15, Machilipatnam-3, Nizampatnam-4	22
TamilNadu South	Vellapatti-1	1
Kerala South	Chempu-3	3
Kerala North	Munakkakadavu-1 (at NIFPHATT, Kochi)	1
Karnataka	Mangalore-1, Karwar-3	4
Maharashtra	Palghar-Thane-2, Sindhudurg-4	6
Gujarat	Veraval-1	1
	Total	44



Fisherwomen in Andhra Pradesh with the finished product during value addition training





Fisherwomen SHG members in West Bengal engaged in preparation of value added products



A view of the participants of the training programme organized at NIFPHATT, Kochi

7.8 GPS Handling/Eco sounder training

NETFISH in association with its member NGOs and with the support of technical experts from GPS traders, executed 33 training programmes on handling of Global Positioning System (GPS) for the fishermen in various coastal states. The major objectives were to provide systematic training to fisher folks on GPS handling and troubleshooting techniques and thus to improve the fishing efficiency of fisher folk by reducing fish searching time, diesel consumption and the level of carbon emission as well as to ensure safe navigation.

The fishers were made aware on the following aspects such as functions of GPS, various GPS receivers, GPS accuracy, GPS signal reception, how to record a waypoint, how to navigate to the recorded waypoints, how to use GPS waypoints in rescue situations, function of proximity alarm, troubleshooting etc. Also the trainees were explained about latitude, longitude and how it relates to the degree, minutes and seconds of GPS coordinates. The combination of theory and practical sessions enabled the beneficiaries to understand many options and features available in GPS and its uses.

State / Region	Selected areas	Total No: of programmes
West Bengal	Kakdwip	1
Tamil Nadu North	Kasimedu-2, Nagapattinam-2, Karaikal-2, Pondicherry-2, Cuddalore-2, Pazhayar-2, Poombuhar-4, Mudasaloodai-2	18
Tamil Nadu South	Kadiyapattinam-1, Puthoor Mandaikadu-1, Arokyapuram-1, Kovalam-1, Keelamanakkudy-1, Manakkudy-1	6
Karnataka	Malpe-1, Gangolli-1, Bhatkal & Honnavar-1	3
Maharashtra	Ratnagiri-3, Sindhudurg-2	5
	Total	33



Hands on training to fishers on use and troubleshooting of GPS device





A view of the GPS training programme held at Manakkudy

7.9 Sea safety programme

NETFISH along with Fisheries Department, Coast Guard and member NGOs had jointly organized a few awareness programmes on ‘Sea Safety’ in TamilNadu, Kerala and Maharashtra. Officials from the Coast Guard explained in detail about ‘Distress alert and obtaining Coast Guard Assistance at sea’, ‘Importance of Automated Information System (AIS) in fishing vessels’, ‘Issues in using Chinese VHF sets onboard’, ‘Sea safety equipments needed onboard’ and ‘other security measures’ etc. Demonstration on proper usage of various sea safety equipments was also done in the

programme. A lecture along with demonstration on Cardiopulmonary Resuscitation (CPR) lifesaving technique was given by the station medical team during the programme. In one of the programmes, a video on Cardiopulmonary resuscitation procedure was also shown to the fishermen for better understanding. Fishermen were encouraged and given an opportunity to carry out the CPR procedure in presence of medical officer. Pamphlets emphasizing the checks that fishermen need to carryout prior venturing into the sea, while at sea and post fishing, were distributed to the fishermen on completion of the programme.

State / Region	Selected areas	Total No: of programmes
TamilNadu South	Tharuvaikulam-1, Mandapam-2, Sethubhavachatram-1	4
Kerala South	Kollam-1	1
Maharashtra	Ratnagiri-3	3
	Total	8



Demonstration of Life Buoy in the programme at Ratnagiri



State Coordinator, Tamil Nadu South addressing the fishers at Mandapam on Sea Safety



7.10 Other livelihood Development Programme

As an effort to bring out livelihood diversification of the fishermen community a few special awareness activities on livelihood development were carried out in West Bengal and Kerala during the year with an aim to develop capacity building and strengthen the Fisher women Self Help Groups.

In West Bengal fisherwomen of Self Help Group who are having kitchen pond (fresh water/ brackish water) or agricultural land or the fishers who are directly or indirectly involved in fishing or allied activities at coastal areas of South 24 Parganas and Purba Medinipur district were targeted by these livelihood development programmes. The NETFISH State Coordinator along with NGO member did an initial survey and prepared a note on the past experience, present activities of the SHG members, status of the group and future prospects etc. In the programme, it was discussed about Integrated Multi

Trophic Aquaculture System, agriculture of vegetable & mushroom, farming of poultry/duck/goat etc. beekeeping, fattening of mud crab or poly culture of fish & shrimp etc. The trainees were also advised to prepare different value added fishery products, prawn & fish pickles and make a stall near to the sea beach as it has good demand among the tourists. On 8th March 2018, an awareness programme was organized at Birampur, Junput, Purba Medinipur on the occasion of International Women Day, which had a participation of 8 SHGs and other fisher folks from in and around areas of Birampur, Samudrapur and Junput of Contai, Purba Medinipur. All the participants are engaged with dry fish activities in the nearby dry fish yard. They were enlightened about various alternative livelihood development activities such as Value addition of fisheries, Beekeeping, culture of Mushroom and culture of economic importance of fresh water fish and prawn culture etc. which may be helpful to fetch additional earning.

State / Region	Selected areas	Total No: of programmes
West Bengal	Namkhana, South 24 Parganas-1; Sagar, South 24 Parganas-1; Canning, South 24 Parganas-1; Junput, Purba Medinipur-1	4
Kerala South	Thottappally-1, Ambalappuzha-1, Kayamkulam-1	3
	Total	7



Giving awareness to fisherwomen on livelihood development activities





Fisherwomen of Alappad getting trained on production of eco-friendly bags

Out of the three livelihood development programmes organized in Kerala, two programmes were conducted at Thottappally and Ambalappuzha for fishermen Society in collaboration with CIFT, Kochi. More than 40 beneficiaries participated in both the programmes and they were introduced to different fish based livelihood options such as preparation of dried fish, battered and breaded products, manure making etc. Another livelihood training programme organized at Alappad, Kayamkulam was focused on skill development for preparation of Bags and Big shoppers by using paper material. This programme was jointly organized with Alapped Grama Panchayath and Coastal Police Neendakara which benefitted the women groups from the nearby fishing villages.

7.11 Tuna Processing training

Tunas, having red meat, are particularly considered as the most popular sashimi fish. Only those fish that are handled and packed fresh are suitable for exporting to sashimi markets and such genuine premium quality fish will fetch a good price in the export market. Awareness cum hands on training to fishers on the onboard handling

methods and processing of Tuna for sashimi is one of the focus areas of NETFISH. In this regard, 12 nos. of stakeholder participatory trainings were conducted during the year 2017-18 for fishers, especially the fishing crew members who are involved in Tuna long lining, at various localities in Tamil Nadu and Andhra Pradesh. Systematic training to fisher folks on Tuna Processing techniques to be adopted onboard fishing vessel was imparted to improve supply of export grade tunas for shashmi/sushi/canned product etc. The trainees were explained about production of sashimi grade tuna through proper hygienic handling methods followed onboard. The essential tools such as gloves, hammer, spike, monofilament nylon or stainless steel wire, drop blood knife, sharp knife, brush, coring tool etc. were familiarized to the trainees. Then hands on training on killing, spiking, bleeding, degilling, degutting, chilling in slurry ice, preservation and storage was given to the fishers during the programme. Tuna Kit of MPEDA was handed over to a few mechanized boat owners in some of the programmes and the Tuna handling training manual printed in local language were distributed to the trainees for future reference.



Familiarizing Tuna processing kits and its distribution to fishers



State/Region	Selected Area	No: of Programmes
Andhra Pradesh	Visakhapatnam-5	5
Tamil Nadu North	Kasimedu-2, Pondicherry-1, Cuddalore-2, Poombuhar-1	6
Tamil Nadu South	Tharuvaikulam-1	1
	Total	12



Training for fishers on processing of Tuna onboard

7.12 Cuttle Fish Conservation programme

The Palk bay, located in South East coast of India, offers a space for the natural breeding of many fish species including cuttle fish and squids which are having high export value. However, increased fishing pressure and lack of sustainable fishery practices leads to decline of fishery productivity. Hence a training programme was conducted by NETFISH along with OMKAR Foundation to improve the cephalopods fisheries in Palk Bay by employing eco-friendly Fish Aggregating Devices (FADs). The one day stock enhancement programme was conducted at Pillayarthidal in Thanjavur district, which was attended by 11 fishermen. At the onset of the programme, State Coordinator, NETFISH briefed the concept to the participants and explained about the importance of cuttle fish / squid stock enhancement in the present scenario. He also elaborated the deleterious effects of destructive jigging of mother cuttlefish/squid using FAD's made up of non-bio degradable materials.

During the demonstration session, FADs were deployed at a distance of about 2 km from the shore line, with the scientific intent that FADs deployed in the near shore waters increase the cuttle fish / squid population. FADs made of coconut leaves which is cost effective and biodegradable were deployed at a depth of about 4 metres. Deployment of FADs was carried out in selected sites without affecting normal near shore fishing activities. FAD mooring lines and attachment ropes were fixed using jute ropes and deployed on the seafloor using 25 kg sand bag by SCUBA divers. Further monitoring of the FADs was carried out by SCUBA divers on a monthly basis throughout the summer. Each coconut leaf was visually examined to count the number of eggs and brooders. The training helped the fishermen to gather knowledge on the importance of ecofriendly FADs and the need to avoid jigging of mother cuttle fish/squid and destruction of egg masses.





Demonstration of deployment of Fish Aggregating Device

7.13 VHSE programme

As part of familiarizing the vocational school students on various fishing methods, post-harvest handling, processing, fish farming, fishery conservation etc. NETFISH had organized 18 awareness programmes in vocational schools where fisheries/aquaculture is taught as a subject at plus two level. In the programme, models of

different types of fishing gears were exhibited and explained to the students and classes on hygienic fish handling and sustainable fishing were delivered. NETFISH Leaflets and posters were given to the students for better understanding of various topics. Documentary and animation films on Fish Quality Management and Conservation were also screened.

State / Region	Selected areas	Total No: of programmes
West Bengal	PurbaMedinipur-4, North 24 Parganas-1, South 24 Parganas-2	7
Andhra Pradesh	Visakhapatnam-1	1
Kerala South	Arthungal-1, Thevara-2, Vaikom-2, Perumbalam-2	7
Kerala North	VHSE, Kaipamangalam-1, VHSE, Kadamakkudy-1	2
Maharashtra	A. K. Junior College, Ratnagiri-1	1
Total		18



VHSE programme in West Bengal



Fishing net models displayed during VHSE programme in Maharashtra





Awareness programme for students at VHSE, Kadamakkudy

7.14 School programme

State / Region	Selected areas	Total No: of programmes
West Bengal	Purba Medinipur-3, South 24 Parganas-1	4
TamilNadu North	Chennai-5	5
TamilNadu South	Mallipattinam-1, Rajamadam-1	2
Maharashtra	Palghar-2, Ratnagiri-2	4
Gujarat	Veraval-3, Mangrol-2, Porbandar-1	6
	Total	21



Students of Rajamadam GHSS exposed to the wonders of marine life



To percolate the messages on Fish quality management, Conservation of fish resources, Sustainable fishing, Personal hygiene & sanitation, environment & ecology acts & rules of State & Central Govt. for fisheries conservation, Pollution etc. NETFISH arranged 21 awareness programmes at schools along the coastal villages, so that the children can aware their parents and other family members who are engaged in farming of shrimps, fishing and allied activities in the coastal areas. The programme mostly consisted of lectures on sustainable fishing, different aspects of marine conservation, protection of mangroves, marine turtles, sustainable fishing, pollution, etc. Besides, we also covered the present status of the fishery resources and exports of the State as well as from India, personal hygiene and environment & ecology acts & rules of State Govt. & Central Govt. regarding fisheries for fisheries conservation. The children were also shown animation and documentary films on relevant subjects and circulated leaflets and posters on the topics.

7.15 Exposure visits

A group consisting of 16 trawler crew members from Paradeep harbour was taken to a seafood processing unit at Paradeep on 11th March 2018, in

order to familiarise them about the quality standards maintained in processing units. The participants got opportunity to visualize facilities at the unit, processing activity and hygiene and sanitation maintained inside the plant while processing seafood. The exposure visit was arranged with an aim to change the mind-set of the participants towards better handling of their catch and its preservation in fishing vessels.

Similarly, in Andhra Pradesh a visit to a fish processing and exporting unit at Visakhapatnam was arranged for 10 nos. of Tuna fishing boat owners of Pudimadaka fish landing center on 24th August 2017 to observe the standards maintained in the processing plants while handling Tuna and to implement such standards at their work place. The MD and Managing partner of the company, during the programme, expressed their support to the fishers by keeping a purchase center at Pudimadaka for semi processed fish. The visit thus paved a platform to the exporters and primary producers for developing a business linkage among them.

The exposure visit of 20 Fisherwomen of Mangamaripeta, Visakhapatnam to NIFPHATT, Visakhapatnam was arranged on 14.03.2018, by which the participants were introduced to value

State / Region	Selected areas	Total No: of programmes
Odisha	Paradeep	1
Andhra Pradesh	Vizag	2
Kerala	Chempu	1
	Total	4



Trawler crews visiting a Seafood processing unit in Paradeep





Visit of Boat owners from Pudidmada to a processing plant



Fisherwomen of Mangamaripeta given exposure to value added fishery products at NIFPHATT

added fishery products like fish powder, pickle, fish wafer, tin fish products, dryfish products etc. and their processing with all hygienic measures. The preparation of Fish wafer was demonstrated and the trainees could involve in packing of Dry fish products.

For the 18 fisherwomen from Fishermen Development Welfare Co-operative Societies, Chempu, Kerala, who were given hands on training on production of value added fishery products, an exposure visit was arranged to CIFT, Kochi on 17th March 2018. The visit provided an opportunity for the ladies to see and understand the latest technologies involved in the processing of value added products. Also they could understand the importance of hygiene while preparing the products.

7.16 Clean-up programme

As fish is a highly perishable commodity it is necessary to keep all the fish contact surfaces free from dirt and other contaminants to maintain its quality. To create awareness among fishing boat owners and fishermen about the proper hygienic and sanitation conditions of fishing boats, fish hold, fishing accessories and fish landing sites clean-up programmes were organized at fishing vessels, landing sites and coastal areas. In West Bengal, mass boat cleanup programmes were organized with the involvement of boat owners, skippers and fishermen and cleaned & sanitized deck, fish hold as well as the necessary accessories used onboard. Sanitation kits consisted of liquid soap and brush were distributed among fishers to



State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
West Bengal	Deshapran-5, Sankarpur-1	6
Odisha	Paradeep-1	1
Andhra Pradesh	Visakhapatnam-1	1
Tamilnadu North	Karaikal-1, Nagapattinam-1 (WFD)	2
Tamilnadu South	Punnakayal-1 (ICCD)	1
Kerala South	Kollam-2, Vemebanadu lake-1	3
Kerala North	Beyppore-1, Munakkakadavu-1, Munambam-1, Chettuva-1	4
Karnataka & Goa	Belekeri-1	1
Maharashtra	Palghar-1	1
Gujarat	Porbandar-1	1
	Total	21

clean their boats and accessories. In the harbour and coastal clean-up programmes fishermen, harbour workers, students and general public had actively involved in removing plastic wastes and

other garbage from the area. Fishermen are now well aware about hygiene and sanitation and they have started following regular cleaning and good personal hygiene.



View of clean-up activities by NETFISH at harbours and beaches



7.17 Sea Club programme

NETFISH Sea Club at St. Albert's college, Ernakulam conducted a one day seminar on 'Adulterants in Sea foods' on 17th November 2017, with an aim to enlighten the awareness of the students regarding the subject. Smt. Priya E.R., Scientist, Quality Assurance and Management division, CIFT, Kochi inaugurated the programme and delivered the key note address. Dr. Sabu S., Assistant Professor, CUSAT, Kochi delivered a talk on the 'Importance of Freshness and Quality in Sea foods'. The seminar helped the students and other members of the Sea Club to know more about the most recent details regarding the issue of adulteration in sea foods. About 70 students in the Department of Fisheries and Aquaculture and the faculty members participated in the seminar.

The Seaclub at Department of Fisheries Biology and Resource Management, FCRI, Tuticorin conducted an awareness programme on *Endangered Marine Organisms* on 2nd March 2018 which was attended by 29 participants including fishermen and students from St. Mary's College, Thoothukudi. The

Dean, Fisheries College and Research Institute, Thoothukudi inaugurated the function and delivered the presidential address. Followed by the inauguration function, detailed lectures were delivered on Diversity of marine organisms, endangered marine fishes, endangered shellfishes and molluscs and endangered marine mammals.

Another awareness programme on Illegal, Unreported and Unregulated fishing with special reference to Minimum Legal Size (MLS) was conducted by the SeaClub of Department of Fisheries Biology and Resource Management at Fisheries College and Research Institute, Tuticorin on 7th March 2018. Forty participants including fishermen and students from APC Mahalakshmi College, Thoothukudi attended the programme. Lectures on adoption of Minimum Legal Size fishing, Catch per unit effort, overfishing and illegal fishing were delivered in the programme. In both the programmes, the participants were taken to the museum and the importance of endangered marine organisms was explained to them. Certificates were also distributed to the participants.



Inauguration of Seaclub programme at St. Albert's College, Ernakulam by Smt. Priya E.R., Scientist, CIFT



Releasing leaflets on IUU fishing during the programme at FCRI, Tuticorin



Dr. David Kingston delivering his lecture on Endangered Marine Organisms to Fishermen and Students



7.18 Street Play

A total of 115 street plays were organized during the year, targeting fishermen, fish handling workers, harbour workers, net mending workers & costal population including men, women and children. Messages related to juvenile fishing, use of destructive

fishing methods, use of very big nets and high speed engines in fishing boats, abuse of chemicals for fish preservation, coastal pollution including use of sand beaches as toilet etc. were conveyed through the street plays. The shows attracted huge audience in all the regions.

State / Region	Selected areas & no: of programmes conducted	Total No: of programmes
TamilNadu South	Tuticorin-10	10
Kerala South	Kochi-5, Alappuzha-10, Kollam-10, Vizhinjam-10	35
Kerala North	Ponnani-10, Parappanangadi-10, Tanur-15, Tirur-5, Bepore-5, Kadalundy-5	50
Maharashtra	Thane-8, Ratnagiri-4, Sindhudurg-8	20
	Total	115



View of street plays organized by NETFISH in Kerala, Tamil Nadu and Maharashtra regions



7.19 Participation in Exhibitions

Aqua Aquaria India 2017: An exhibition stall was set up in AAI 2017 held at Mangalore, Karnataka during 14-16 May. There were good number of visitors in the stall comprising people from different walks of life such as fish farmers, fishermen, students, entrepreneurs, officers, delegates and the general public. The stall was set up in such a way to give an idea to the visitors about the various activities of NETFISH in all maritime states of India.

India International Seafood Show (IISS) 2018: NETFISH got opportunity to take part in the India International Seafood Show (IISS), jointly organized by the MPEDA and SEAI at Margao, Goa from 27th to 29th January 2018. A stall consisting of posters illustrating various activities of NETFISH and different topics dealt with as part of its extension activities across the country was arranged in the show. Apart from that, the various leaflets developed by NETFISH on hygienic handling and fishery sustainability aspects were kept in the stall for the needy and a screen was arranged by which the awareness videos and presentations of NETFISH were played continuously for the visitors. Various stakeholders of the seafood sector such as producers, processors, processing machinery manufacturers, linkage sectors, technical experts etc, as well as general public assembled for the expo and the event provided an excellent platform for NETFISH

to exchange its messages among them and to encourage sustainable development of fisheries.

SAFARI 2 Expo: NETFISH along with MPEDA RD, Kochi took part in the exhibition organized on the sidelines of the Second International Symposium on 'Societal Application in Fisheries & Aquaculture using Remote Sensing Imagery (SAFARI)' organized by CMFRI at Kochi during 15th to 17th January 2018. A stall displaying various posters depicting information on marine fisheries sector and different handouts illustrating fishery conservation measures, information on aquaponics etc. was arranged for the visitors. The expo received tremendous response from the public.

Albertian International Education Expo 2018: A stall was set up by NETFISH jointly with MPEDA Regional Division, Kochi in the 'Albertian International Education Expo' organized by St. Albert's College, Ernakulam during 4th to 6th January 2018 inside the college campus. The stall displayed various awareness posters of NETFISH, mostly on hygienic handling of fish and conservation of fishery resources. Brochures and leaflets depicting information on Aquaponics, nutritional value of fish, fish handling procedures, fishery conservation measures were kept for distribution among the needy. Students of the college as well as students from nearby educational institutes visited the stall and many of them showed keen enthusiasm in gathering information about our activities.



Visitors in NETFISH stall at Aqua Aquaria 2017





Visitors eagerly viewing NETFISH posters displayed at IISS 2018



MPEDA - NETFISH stall in SAFARI 2 & Albertian Expo

‘Matsyotsavam’: During the year, the Fisheries Department of Kerala had organized a fish festival named as ‘Matsyotsavam’ along the coastal districts of Kerala. NETFISH was invited for the event where a stall was set up by displaying various posters portraying crucial information and photos on Minimum Legal Size (MLS) in fisheries, fishing ban, impact of juvenile fishing, advantages of square mesh cod ends, decline in fish catch of Kerala, NETFISH and its activities, hygienic handling of fishes etc. Leaflets and brochures containing awareness messages related to fish quality management and sustainable fishing were distributed to the fishermen, fisher women, other stakeholders, fisheries officials, officials from related departments, students as well as general public visited the stall. The event proved a good

platform for NETFISH to meet up with more fishers and stakeholders who are involved in the sector and to spread its messages effectively among them.

“Karavali Utsav 2017”: Karavali Utsav was held from 8-10 December 2017 at Karwar. In the festival the ‘Gulabi Swasahaya Sangh’, a fisherwomen SHG trained by NETFISH had taken part by displaying their dry fish products and other value added fishery items. The posters of activity done by NETFISH and its member NGO, SCODWES were also exhibited in the stall. Prawns chutney powder, Croaker chutney powder, Anchovy chutney powder, Mackerel chutney powder and Dried Shark Moles produced by the group were kept for sale, to which the public showed very good response and the SHG could earn very good income.





NETFISH stall with awareness posters and leaflets in Matsyotsavam Expo at Ernakulam



Fisheries Minister Smt. J. Mercykutty/Amma visiting the NETFISH stall in Matsyotsavam at Kollam



Shri. T. Dola Sakar, Director (M), MPEDA visiting NETFISH stall in Matsyotsavam at Kozhikode

'Aqua Goa': NETFISH along with MPEDA participated in the 'Aqua Goa' mega fish festival organized by Directorate of fisheries, Government of Goa during 7-10 December 2017 at Panjim, Goa. Many dignitaries including ministers, scientists,

officials, fisher leaders, students and public visited the stall. MPEDA publications were displayed and sold and NETFISH leaflets on quality management and conservation of fisheries were distributed among the public.



The value added fishery products kept for sale at NETFISH stall in Karavali Utsav



MPEDA-NETFISH officials in the stall at Aqua Goa fish festival



7.20 Door to door programme

To create awareness among fishing communities regarding importance of hygienic handling in landing centers and fishing crafts, sustainable fishing practices, importance of conservation of critical ecosystem like coral reef, mangroves etc., two Door to door campaigns were conducted at Kovalam and Manakkudy, Kanyakumari on 21st and 23rd December 2017. About 25 student volunteers from Vivekananda College, Kanyakumari accompanied by faculty & non faculty staff participated in both the programmes. The Village Secretary, Priest of the Church, MSW student Volunteers from S.T. Hindu College, Nagercoil and local fishermen also took part in the programme. Hand-outs carrying awareness messages on sustainable

fishing and conservation, hygienic handling of fishes in harbours and fishing vessels, etc., were issued by visiting about 400 households. The villagers warmly greeted the volunteer team and also clarified their doubts and grievances regarding sustainable fishing, hygienic handling and conservation of coastal ecosystems.

7.21 Awareness campaign on IUU fishing

An awareness campaign cum stakeholders meeting on Illegal Unreported and Unregulated (IUU) fishing was conducted at Manakkudy in Kanyakumari District on 6th January 2018. SCO, NETFISH comprehended on how avoiding IUU fishing that will prevent destruction of the fishery stocks and



Door to door awareness campaigns held at Kovalam and Manakkudy fishermen villages



Awareness campaign at Manakkudy against IUU fishing



critical marine habitats. He also emphasized the negative impacts of cross-border fishing and the use of prohibited fishing crafts and gear. DD, MPEDA, inaugurated the function and emphasized the importance of registering the boat with the competent authorities. The role of Fisher Friend Mobile Application (FFMA) developed by MSSRF in alerting fishermen about strong winds and high waves, PFZ etc. was explained. Priest Church, Parish Council Member, Village Panchayat leader, Mechanized boat association members, Fishermen Cooperative society leaders and other stakeholders attended the programme. A documentary on sea safety by SIFFS in Tamil was also projected to the gathering. The fishermen were enlightened with information on IUU and took oath to strictly adhere to the deterrent policies of the Government on IUU fishing.

7.22 Mass communication by Installation of Signboards

As part of the efforts to popularize Minimum Legal Size (M.L.S.) among the fishers NETFISH had installed a few signboards at major harbours of Kerala, depicting information on the M.L.S. notified by Govt. of Kerala for 58 fishery items. Huge signboards of size 19 x 5 sq. ft were fixed inside the Munambam harbour, near to the entrance and in Chettuva harbour as well, to reach the masses. Another big signboard was installed at Sakthikulangara harbour, on the outside wall of the auction hall during February 2018. If M.L.S. is implemented effectively, it would be creating a new chapter by Kerala state in the history of marine fisheries resources management in India and it could be emulated to other maritime states in the country as well.



Chettuva Harbour



Munambam Harbour



Sakthikulangara Harbour

MLS Signboards fixed at Harbours by NETFISH



8. ACTIVITIES DESERVING SPECIAL MENTION

❖ SUCHITWA SAGARAM PROJECT

As an initiation to remove the plastic wastes from sea, NETFISH joined hands with Boat Operators Association Kollam district and started a pilot project on eradication of plastic wastes from sea at Sakthikulangara - Neendakara fishing harbours, Kollam, Kerala. Realizing the importance of the project, other departments such as Department of Fisheries, Harbour Engineering Department, Suchitwa Mission Kerala, Clean Kerala Company and SAF also joined to this endeavour turning it as big programme of this kind in the country. Boat operators made the announcement of the project "Suchitwa Sagaram" in their 43rd Annual body Meeting held on 22nd July 2017 at Sakthikulangara, where Hon'ble minister for Fisheries Smt. J. Mercykutty Amma was present as the Chief Guest of the programme. A sample bag for collecting plastic wastes by fishermen in sea, prepared by NETFISH, was also presented in the programme. On 5th August 2017 the Minister inaugurated the project by receiving the wastes collected during fishing by boats, in the bags supplied by NETFISH. The Harbour Engineering Department allocated a

place in the Neendakara harbour for operating a unit managed by the Suchitwa Mission for segregation of the collected waste for shredding and recycling and the shredding unit was officially inaugurated on 20th November 2017. This project is run by Department of Fisheries by engaging lady workers from Society for Assistance for Fisherwomen (SAF). A total of 30 workers are involved in this project for collecting the bags from fishing vessels, sorting/ segregation of plastic wastes, washing, drying and shredding. NETFISH provided 2000 eco-friendly sacs for this programme which were supplied at a rate of 2 nos. each to every fishing vessels, to collect the plastic material that come across while fishing at sea. Later on, 2000 more net bags were provided by NETFISH for the project. Awareness stickers were also developed by NETFISH for the project, which were pasted at fishing boats and harbours to provide information to the fishers about the project. Around 30-40 bags each containing about 40-50 Kgs. of plastic wastes are being landed daily at Sakthikulangara harbour. The shredded plastic will be used for suitable activities including road construction and initially HED will utilize the material in the road works they undertake.



Inauguration of the project by receiving the plastic waste containing bags from the fishers





1. Receiving waste containing bags from boats; 2. Workers carrying the bags in trolleys to segregating area; 3. Segregation of wastes; 4. Washing the plastic wastes; 5. Cleaned and dried wastes brought at shredding unit; 6. Loading the plastic wastes into the shredding machine; 7. Shredded plastic product; 8. Stored in sacs for further use





Minister of Fisheries of Kerala, Smt. J. Mercykutty Amma launching the bag for collecting wastes from sea



Awareness Sticker by NETFISH for pasting in fishing boats

❖ WORLD OCEANS DAY CELEBRATION

In view of 'World Oceans Day' a stake holder consultation on "Moving towards Sustainable Fishing" was arranged at Mangrol Fishing on 8th June 2017. Officials of Dept. Of Fisheries, CIFT, CMFRI, College of Fisheries, President & all members of Boat Association/FRP association, Officials of MPEDA and Authority member, MPEDA were present on the occasion. The dignitaries raised their voice for stopping

juveniles fishing. The present scenario of marine fish catch and Measures for sustainable fishing were explained in the programme the fishers were urged to stop juveniles fishing. The use of square mesh cod end in trawls to conserve the juveniles was also explained. The views of stake holders on "Moving Towards Sustainable fishing" were collected. In the end an oath was taken by all to avoid juvenile fishing and to implement 40mm square mesh cod end in trawlers.



Stakeholder's consultation meeting at Mangrol on World Oceans Day



❖ WORLD FISHERIES DAY CELEBRATION

NETFISH celebrated the *World Fisheries Day* with fishers by organizing special events across the coastal states of India, aiming to promote awareness about marine resources and to encourage fishers to practice hygiene and sustainable fishing.

In West Bengal a harbour clean-up programme was organized at Deshapran Harbour, with the active participation of VHSE students and teachers of Kishorenagar Siksha Sadan, Contai, Harbour Officials, NGO member, Harbour cleaning staff, fishermen and net menders. General awareness on hygiene in fishing harbour, personal hygiene,



Harbour cleanup at Deshapran with the involvement of VHSE students



Mass awareness meeting with fishery stakeholders at Pudimadaka





World Fisheries day programmes at Nagapattinam and Poombuhar

conservation of resources and sustainable fishing, different crafts & gears used for fishing etc. were provided in the event. All the participants equipped with cleaning tools, waste collection bags, hand gloves and caps removed plastic wastes, thermocol pieces, broken nets & ropes etc. from the harbour premises. The event opened up an opportunity for the VHSE students to know about infrastructural facilities available in the harbour, fishing boat and their utilities, different navigational equipments used in fishing boat, etc.

In Andhra Pradesh, a mass awareness meeting with fishery stakeholders and a landing centre clean-up at Pudimadaka were arranged along with Fishery Officials and the member NGO- DFYWA. Around 70 Tuna fishermen of Jalaripalem village of Pudimadaka, Visakhapatnam attended the event.

NETFISH in collaboration with Fisheries department and FPO, Nagapattinam organized an awareness rally & clean-up event at Nagapattinam

with active participation from fishers and fisheries officials. On the same day a Consultative Workshop on Sustainable Fisheries and Square Mesh Promotion was organized at Poombuhar in association with MSSRF. Fisherfolk from different villages in and around Poombuhar fishing harbour took part in this programme, which aimed to sensitize fishers on usage of square mesh cod end and its benefits.

To commemorate World Fisheries Day 2017, NETFISH in association with Tamil Nadu State Fisheries Dept. organized value added seafood making/seafood cooking competition for fisherwomen, essay writing and drawing completion for school children and swimming competition for fishermen. The swimming competition conducted on 20th of November at Chinnamuttom landing centre had a participation of 12 fishermen from Kanyakumari. On 21st November, at Colachel Harbour, an exhibition stalls displaying various extension posters, pamphlets and MPEDA publications were setup. Also, the use



Exhibition stall at Colachel harbour & Fisherwomen from Kanyakumari participating in cooking competition



of gumboots, gloves and plastic shovels for hygienic handling of fishes on-board and in the landing centers were emphasized by display of the sample items. The messages of NETFISH were spread through skits, plays, dramas, songs, music and dance. The seafood cooking competition was conducted on the day which was participated by 15 teams of fisherwomen. Later, a vehicle announcing fisheries related schemes of Govt. of Tamil Nadu, importance of sustainable fishing, hygienic handling, and information regarding endangered species, safety at sea etc. travelled all along the fishing villages of Kanyakumari.

In Kerala a harbour clean-up drive was arranged at Munakkkadavu harbour jointly with fishers



World Fisheries Day programme at Munakkkadavu

and Harbour Worker’s Coordination Committee. Fishermen and the workers in the harbour actively took part in the clean-up drive and the entire harbour area and premises were cleaned. NETFISH provided gloves, cleaning tools etc.

A harbour clean-up and fishing vessel clean-up demo were organized on 26th November at Belekeri harbour. The importance of hygiene and sanitation in work place was explained to the gathering and they were urged to practice hygienic fish handling on-board and inside harbour. The proper way of cleaning fishing vessel, fishing harbour and auction hall was demonstrated for the participants. Hygiene kit consisted of liquid hand wash, hair oil, comb, tooth paste & brush and fishing vessel cleaning materials such as Chlorine water, liquid detergent, buckets & brush, high quality hand gloves were distributed in the programme. A total of 25 boats were cleaned on the day and the remaining boat owners assured to clean their boats at fishing ground.

The beach clean-up programme conducted at Dahanu, Palghar district with the support of MVSS, Thane and Agricultural & Technical Vidyalay, Kosbad had participation of 20 students and teachers. They collected monofilament net pieces, thermocol, plastic bags, bottles, etc.



Boat clean-up demo at Belekeri





Beach clean-up at Dahanu



Harbour Clean-up at Porbandar to celebrate World Fisheries Day

A harbour clean-up programme was arranged at Porbandar, in collaboration with Porbandar Machhimar Boat Association, fishermen community of Porbandar and Porbandar Municipal Corporation. Around 200 volunteers joined the clean-up drive which started off from eastern end of the harbour and moved towards western end, whereby removing huge quantity of wastes from the harbour. The leaders of fishermen community urged the temporary both holders to keep clean their own premises and to keep sign boards.

❖ CELEBRATION OF INTERNATIONAL COASTAL CLEAN-UP DAY

A fish landing centre clean-up programme was conducted at Punnakayal Fish Landing Centre (FLC) on 16.9.17 to commemorate the “International Coastal Clean-up Day 2017” and Swacchh Bharat Abhyan. About 45 student volunteers belonging to the NSS wing of Kamaraj College, Tuticorin took part in the event with the main objective to remove debris from the sea coast, to clean up the FLC and





Harbour Cleanup at Punnakayal

to mark a model for the fisherfolk. Cleaning kits such as hand gloves, jute gunny bags, brooms, bamboo baskets, buckets, bleaching powder and disinfectant was provided. The participants along with local public went on for a procession through the village chanting slogans against marine pollution. The volunteers were divided into two groups - Group A cleaned the FLC by sweeping and removing physical debris, washing with clean water and disinfecting with bleaching powder and Group B collected debris from around the FLC which comprised mostly of plastic carry bags, nylon ropes, plastic cement bags etc. At the end of the cleanup

activity, the FLC was spotless clean which marked an example for fisherfolk.

❖ NATIONAL FISH FARMERS' DAY

NETFISH-MPEDA associated with College of Fisheries, ICAR-KVK and Department of Fisheries in organizing "National Fish Farmers' Day 2017" at Mangalore on 10th July 2017. Shri. Pramod Madhwaraj, Minister for Fisheries, Sports and Youth Affairs, Govt. of Karnataka inaugurated the programme by releasing the Amur carp into aquarium. Dr. M. N. Venugopal, Dean, College of Fisheries, Mangalore presided over the function. Mr. V. K. Shetty, Managing Director was



Celebration of National Fish Farmer's day 2017 at Mangalore



the chief guest. Dr Shivakumar Magada presented a concept explaining the purpose of celebrating fish farmers' day. Dr. Jayaraj welcomed the gathering and Mr. Mahesh Kumar, DD, Department of Fisheries proposed vote of thanks. Dr. Vijaykumar Yargal, DD, MPEDA, Karnataka and Goa and Dr. Asok Kumar, DD, MPEDA were present on the occasion. Around 120 farmers from different parts of Karnataka attended the event in which four success stories were presented by the progressive farmers and an open house interaction was conducted towards the end.

❖ AWARENESS ON ABUSE OF HARMFUL CHEMICALS IN FISH PRESERVATION

In the wake of widespread complaints on adulteration of fish being sold in local markets with toxic chemicals, NETFISH launched an initiative in Paradeep with the objective to ensure safety and hygiene at fish handling and distribution centres by creating awareness among the fishermen, sellers and consumers on how these chemicals affect the human body. On 28th August 2017 an awareness meeting and rally on *“Harmful effect of illegal chemical in fishery product, its prevention and control”* was organized in Paradeep harbour with a view to stop the practice of adding harmful chemicals like Formalin for preservative of raw

fish. SCO along with officials of Paradeep Harbour Management Society, Fisheries Dept. officials and member NGO took part in the event and gave proper awareness to the participants including 50 boat crews and boat owners, on ‘harmful impacts of illegal chemicals in consumers’. SCO also requested all the participants to come out with a solution on how to prevent and control the use of illegal chemicals in fishery products. All the participants had the opinion that a rapid test kit is required to identify the presence of harmful chemicals in the fishery product at the auction time itself. Also, they all agreed to avoid the use of illegal chemicals in fishery product in the harbour.

❖ EU MISSION VISIT AT PARADEEP FISHING HARBOUR

A team comprising 2 members from the European Commission visited Paradeep harbour on 21st November 2018 and monitored the facilities and activities in fishing vessels and the harbour. As part of the visit, a special awareness programme was conducted at Pradeep on 20th November 2017 during which NETFISH State Coordinator along with representatives of member NGO, SRMSS generated mass awareness among the fishing vessel crew, auction hall workers and supervisors on hygienic



Awareness rally on harmful effects of using illegal chemicals in fish preservation





EU Mission visit at Paradeep fishing harbour

practices to be followed in fishing vessels and harbours. The trawler crew members were provided with boots, t-shirts, hand gloves and caps as part of improving the hygiene while handling fishes.

❖ DISTRIBUTION OF FISHERMEN AID MATERIALS

West Bengal- Instead of disbursement of stipend NETFISH distributed T-shirts with slogans ('Use sufficient ice after catch', 'Use insulated fish box' and 'Improve quality of catch') or hand gloves to trainees. NETFISH has given 192 nos. PVC shovels with the help of Fishermen Aid Programme fund to popularize use of PVC shovels among fishermen and boat owners for eradicating cross contamination from iron shovel.



Odisha- To eradicate use of rusted iron shovels 184 nos. of PVC shovels were distributed through Trawler association in Paradeep Fishing Harbour.

Besides, round plastic baskets were also provided as an effort to stop the usage of bamboo baskets.



Andhra Pradesh- Tarpaulins, Plastic baskets, Hygiene kits (Brush, paste, soaps, Detergent, Dettol etc.,) and PVC shovels were supplied to the beneficiaries utilizing Fishermen Aid Programme fund as well as stipend money.

Tamil Nadu North- In Pazhaiyar 250 nos. of plastic shovels were distributed to the boat members. Instead of stipend money T-shirts, hand gloves, gum boots, hand gloves, plastic bucket, wipers, detergents etc. were provided to the participants during the programmes.

Tamil Nadu South- PPC Shovels were given to Fishermen of Tharuvaikulam, Mandapam and Sethubhavachatram under the Fishermen Aid Programme of NETFISH. The District Collector, KK





District initiated the 'NETFISH-MPEDA Fishermen Aid programme of distributing free Plastic shovels to fishermen beneficiaries for hygienic handling' to leaders of Fishermen Cooperative societies.

Kerala South- In the area from Aroor to Kollam aprons, uniforms, hair net and mouth cap were supplied instead of stipend during PPC programmes. Using the Fishermen Aid Programme fund 20 square mesh cod ends were procured during the year and distributed among selected fishing boats.

Kerala North- Rubber gloves, plastic shovels, plastic baskets and caps were supplied in different programmes utilizing the stipend money. Aprons, Uniforms, Caps, Mouth cover and gum boots were distributed to peeling shed workers using the stipend money in selected PPCs. A total of 81 Life jackets were provided to fishermen utilizing the fishermen aid fund.

Karnataka- A total of 35 nos. of Insulated fish boxes were distributed among fishers of Bhatkal, Tottam Gangolli and Tengingundi.

Maharashtra- To encourage fishers to use ice for fish preservation and thus to keep the quality of their catch, 50 nos. of insulated bags developed by CIFT were procured during the year for distribution among traditional fishers using outboard engine boats.

❖ TRAINER'S TRAINING PROGRAMME

To impart skill-based training to the trainers of NETFISH on different aspects of packaging related to production of value added quality fish products and their preservation a training on 'Packaging of Seafood Products' was arranged in collaboration with CIFT, Kochi during 12-17 June 2017, for trainers of NETFISH including NETFISH State Coordinators and representatives from member NGOs. The trainee's folk comprised of 11 NETFISH officials and 10 member NGOs were trained in 2 batches- first batch of training from 12-14 June 2017 and the second batch from 15-17 June 2017. The programme was formally inaugurated by Dr. Suseela Mathew, Principal Scientist and HOD, Biochemistry & Nutrition Division of CIFT in the presence of Dr. K. Asokkumar, Principal Scientist and HOD of Fish Processing Division. In the 3 days training programme, Scientists of CIFT- Dr. J. Bindhu, Dr. C.O. Mohan, Dr. George Nainan, Mr. Sreejith S. and Mrs. Laly S.J. explained on the topics 'An Overview of Packaging', 'Active, Intelligent



Distribution of insulated fish boxes to fishers





Trainees get hands on training on packing at CIFT

and Modified Atmosphere Packaging’, ‘Handling & Chilled Storage of Fish & Fishery Products’, ‘Testing & Safety of Packaging Materials’ and ‘Significance of HACCP’ respectively. The scientists along with Technical staff practically demonstrated the various packaging methods, testing of packaging materials, fish fillet preparation, preparation of fish finger, fish balls, fish cutlets etc.

❖ ASSOCIATION WITH ACTIVITIES ORGANIZED BY OTHER DEPARTMENTS/INSTITUTES

- From 22nd to 23rd August’17 SCO, NETFISH had participated in ‘Multi Stakeholder Consultation on Hilsa Conservation and Livelihoods: Bangladesh-India perspective’ at Kolkata, organized by International Water Association (IWA). Representatives from Universities of Bangladesh & India, Govt. Officials, Fishermen associations, Policy makers, Governor of Bangladesh Bank, Scientists from Bangladesh & India, Former Secretaries of Govt. of India, Ambassador of GOI & Representatives of IWA were present in the programme. Various aspects in connection with conservation of Hilsa in India & Bangladesh, trans-boundary issues, livelihood of Hilsa fishers, policies to conserve Hilsa in lower part and upper region of river have been discussed in the forum.
- On 24th November’ 17, State Coordinator act as a panel member in a programme organized by IWA in collaboration with Dept. of Fisheries, Govt. of West Bengal on policy Perspective on Hilsa Conservation & Screening of “ILISH PEOPLE” at Meen Bhavan, Chinsurah, Hooghly. Dr. Partha Sarathi Kundu ADF, Dr. P. Pathak ADM, Rep. of

IWA, ADM, Rep. from Bangladesh, Fishermen and Shri Bimal Kr. Sengupta had attended the programme, which discussed on ban period for Hilsa, mesh size regulation, destructive fishing practices such as bottom trawling, *Chorpata* & *Gherpata* net, mosquito net, juvenile fishing etc., poisoning in the river for fishing, fishing holidays, alternative livelihoods for fishers, making Cooperative society for fishers etc. State Coordinator raised an issue of harvest loss of Hilsa due to lack of infrastructural facilities in the Sudarban areas for proper preservation. He also stated that during the peak season good quantity of fishes are being discarded. He further stated that Govt. has to take initiatives to preserve such fishes and market during the off season.



State Coordinator act as a panel member in the Hilsa Conservation programme

- From 5th to 7th January’18, the Dept. of Fisheries, Govt. of West Bengal had organized “Bengal Fish Fest 2018” at Nalban, Salt Lake City, Kolkata in which MPEDA Regional Division, Kolkata had actively participated by setting a stall. The stall was decorated with colourful posters of different fish and fisheries products. Dy. Director, Asst. Director, other staff of MPEDA and NETFISH SCO had attended the stall. MPEDA’s publications were displayed and sold out in the stall and NETFISH leaflets and posters were distributed among the visitors. Various documentary and animation films of NETFISH and RGCA were shown continuously in the stall.
- On 17th January’18 State Coordinator had attended Sea Food Festival and Ganga Utsav at Digha Mohana, Purba Medinipur organized by Digha Fishermen & Fish Traders Association.



Prof. Jyotirmoy Kar MLA- Ramnagar, Shri. Akhil Gir MLA- Pataspur, Panchayet Pradhan, President, Secretary of DFFTA, Shri.Ujjwal Kr. Sar, Chairman, Secretary & other member of DFTFA and about 500 fishermen and Boat owners had attended the programme. NETFISH SCO highlighted on fish quality and significances of using PVC baskets and PVC shovels in the fishing boats and fish markets to handle the fishes and also emphasized on development of modern fish market at Dighamohana.



NETFISH State Coordinator on the dias along with other dignitaries in the Sea Food Festival

- **Fisheries Village Management Council:** In Kerala the Department of Fisheries had

conducted a series of awareness programmes on formation of Fish Management Council in which NETFISH was specially invited to deliver awareness classes regarding responsible fisheries and KMFRA. The programme held at Kozhikode, Eravipuram, Vadi, Neendakara and Payyoli were attended by CE NETFISH and State Coordinator. CE talked about the ill effects of cases of destructive fishing and the need to follow KMFRA amendments in the current scenario. SCo described the need of responsible fishing and various regulations followed for responsible fishing. The programme was attended by over 100 people including fishermen and women.



NETFISH CE delivering a class on responsible fisheries and KMFRA in the FMC meeting

9. SPECIFIC OUTCOMES ACHIEVED DURING THE YEAR

9.1 WEST BENGAL

No:	Previous condition	Condition in April 2018
1.	Improper icing of catch in traditional boats at Namkhana, Freserganj, Sultanpur, Jaldah, New Jaldah & Dadanpatrabar landing sites.	Now fishermen are preserving their catch in insulated fish box with proper icing and thus fetching better price.
2.	In Freserganj, Sankarpur, Deshapran, Raidighi, Namkhana, Kakdwip & Shoula, manually crushed ice was used to preserve the catch.	Now ice crushers are being used in trawlers & landing sites so that the fishes can be preserved in small and uniform sized ice pieces thereby minimizing damage to fish.
3.	Fishes were carried in bamboo baskets at Namkhana, Freserganj, Kakdwip, Deshapran, Dighamohana, Raidighi & Sultanpur.	Now plastic crates and insulated fish boxes are being used in fishing boats and to transfer fish from landing site to auction market & processing plant.
4.	Ice blocks were dragged on mud or on jetty in Freserganj, Deshapran, Namkhana & Kakdwip.	Now ice blocks are handled either hanged by rope & pole or carried on head by the porters.
5.	In boats at Deshapran, Sankarpur, Freserganj & Kakdwip harbours ice was handled with bare hand and leg.	Now fishermen are using rubber gloves to handle the ice block which can minimize the cross contamination and using gum boots in the fish hold.



6.	Chill killing practice was not followed in the fishing vessel at Sankarpur, Deshapran, Raidighi, Sultanpur, Raidighi & Freserganj.	Fishermen are now following chill killing and cold chain system in their fishing vessels as well as in the landing centre until it reach to the auction market or to the processing plant.
7.	Rusted iron shovels were used for handling fish onboard at Sankarpur, Deshapran, Raidighi, Sulatnpur, Raidighi, Freserganj, Kakdwip & Namkhana.	NETFISH has popularized PVC shovels by giving 192 nos. of them to fishermen and boat owners and afterwards some of the boat owners purchased PVC shovels by themselves and in the auction market at Diamond Harbour and Kakdwip auctioneers are using PVC Shovel for fish handling.
8.	In Namkhana, Freserganj, Kakdwip, Deshapran & Dighamohana fishes were transported in open condition.	Now poly sheets/ tarpaulin sheets are used to cover the crates to avoid contamination by dust and dirt while transportation.
9.	Fishes were kept on mud or sand for sorting at Akshaynagar, Gangasagar, Beguakhali, Kulpi, Kakdwip & Sultanpur.	Now fishes are sorted on polysheet to avoid contamination from dirt and mud.
10.	In Namkhana, Kakdwip, Deshapran & Sankarpur, crates were not cleaned properly after disposal of catch.	Crates and nets are properly cleaned using detergent after every disposal of lot to the auction market.
11.	Earlier all fishes, shrimps etc. were kept together in the fish hold in trawlers.	After NETFISH intervention fishermen are segregating their catch on the deck and storing species wise in crates.
12.	Observation of improper fishing ban.	61 days fishing ban period from 15th April to 14th June is strictly observed in West Bengal.
13.	Catching and killing of marine turtle and Gangetic dolphin.	Fishermen are releasing turtle and dolphin in live condition if caught in net.
14.	Fishers in Namkhana, Canning, Jharkhali Freserganj, Sagar, Digha & Khejuri used to destroy soft mud crabs.	After demonstration project of NETFISH on Mud Crab, fishers are now engaged for crab fattening in their kitchen pond and fetching good price.
15.	Harmful chemicals were used in dry fish.	The practice has been stopped.
16.	Drying of fish was done on mud or sand.	Now drying is done on cemented raised platform, net/mat and racks.
17.	No lifesaving equipment in fishing vessel.	After distribution of Life jackets to the boats by NETFISH and continuous preaching to the fishermen, now adequate no. of life jackets are kept in boats. State Fisheries also took initiative to implement the same in MFR act.
18.	In New Jaldah and Gangasagar drying of fish was done by traditional methods	Now fishes are dried in poly house and produce better quality of dry fish as well as saving dry fish during adverse climatic condition.
20.	Fishers were not much aware about means for alternative livelihood.	After attending NETFISH training the fisher women SHG at New Jaldah, Mandermoni, Purba Medinipur had setup stalls in Fish Fare at Nachinda, Purba Medinipur and in the <i>Bengal Fish Fest 2018</i> at Salt Lake City, Kolkata with different value added products, fish & prawn pickles and dry fish items and earned good returns.





Drying of fish in the poly house at New Jaldah khuti

9.2 ODISHA

No:	Previous condition	Condition in April 2018
1.	In Paradeep, Balaramgadi & Bahabalapur bamboo baskets were used in fishing vessels.	Bamboo baskets are now completely replaced by plastic baskets in fishing vessels.
2.	Only 6 nos. of cleaning workers were engaged by harbour management society in Paradeep for looking after sanitary and hygiene condition of the auction hall and surrounding areas.	Now harbour management society is taking more interest in sanitation and hygiene of the auction hall and surrounding areas and had appointed 16 nos. of cleaning workers. NETFISH trained them on cleaning method and schedule.
3.	Tea stalls and pan shops were located around the auction hall.	The tea stalls and pan shops are shifted to distant place due to NETFISH initiative.
4.	Single day fishing boats and country boats were not taking ice, while going for fishing.	Now they are taking enough ice, while going for fishing.
5.	Fish drying was common in the fishing vessels at Paradeep.	The practice has been stopped at the harbour.
6.	No EIA approved harbours.	By the effort of NETFISH, Paradeep fishing harbour got EIA Approval during the year 2017-18.
7.	Open transportation of ice in trucks at Balaramgadi & Bahabalapur.	Now all trucks transporting crushed ice collected directly from ice crushers in fully covered condition.
8.	In Bahabalapur, all the fishing vessels were not cleaned regularly before and after fishing.	Now all the fishing vessels are cleaned regularly before and after fishing.
9.	The auction area at Bahabalapur is not maintained hygienically.	The auction area at Bahabalapur is maintained hygienically.
10.	Insulated Fish Boxes were not used by Chilka fishermen for fish preservation.	Now they are using Insulated Fish Boxes (IFB) for preservation of their catch.
11.	Previously fishermen co-operative society of Chilka was not active.	After NETFISH training, the society has started own trading.



9.3 ANDHRA PRADESH

No:	Previous condition	Condition in April 2018
1.	Bamboo baskets were used in boats and landing sites.	Now all the boat owners, crew, auctioneers and traders prefer small plastic baskets for auction and big plastic baskets for handling of ice.
2.	Rusted iron shovels were used at Visakhapatnam and Kakinada harbours.	80% of rusted iron shovels are replaced with fiber shovels for handling of crushed ice and catch. Boat owners have started buying PVC Shovels.
3.	Fish dried in poor conditions.	Fisherwomen were given training in the Model Fish Drying unit and now they are making packed good quality dryfish products and supplying to the shops by which earning Rs.5-7 in extra per kg.
4.	Iron wire ropes were used in boats which caused hygiene problem due to rusting as well as by greasing activity at harbour jetties.	A model of concealed platina rope was shown to fishermen by NETFISH and kept in 2 vessels by the boat owners of Visakhapatnam and Kakinada. Now 95% of fishing boats are using combination and concealed wire ropes instead of open metal wires for connecting trawl nets. Some boats are using Platina ropes without steel. The Mechanized boat owners associations have given representations to Dept of Fisheries to support subsidy to upgrade to platina rope from combination rope.
5.	At Machilipatnam crushed ice was kept on floor before transferring to fish hold.	The boat owners have arranged three raised cement platforms to the height of ice van connected with crusher and now the crushed ice is directly collected in crates and shifted to fish holds.
6.	Diamond cod-ends are used in trawls.	After NETFISH classes fishers have requested for readymade square mesh cod-ends and NETFISH has made arrangements with net manufactures for the production of square mesh cod-ends.
7.	Water stagnation, holes and cracks on auction hall floor at Machilipatnam.	NETFISH generated awareness on harbour cleanliness and because of which the mechanized boat owners association repaired the floor of auction hall with their own money.
8.	Poor ice handling practice in Visakhapatnam.	Ice handling practice has improved and crushed ice is directly transferred to fishing vessel.
9.	Crushing ice blocks on jetty at Nizampatnam.	With the guidance of NETFISH ice traders of Nizampatnam has established two conveyor ice loading system.
10.	Poor handling of tuna onboard.	Onboard handling of Tuna fish was improved and now boat owners are bringing semi processed de-gilled and de-gutted fish.
11.	Improper icing of catch.	All the motorized crafts are constructed with insulated fish holds with the capacity to carry 0.5-3 tons of ice and hence catch is preserved with proper icing.
12.	Fisherwomen were not much involved in production and selling of Value added fishery products.	Now they are making more ready to eat products after the hands on training programmes. The society is expanding their business with another Fish nutricart at Gajuwaka in Visakhapatnam.





Conversion of iron ropes to Insulated ropes in trawlers

9.4 TAMIL NADU NORTH

Sl. No	Previous condition	Condition in April 2018
1.	In Kasimedu, Cuddalore, Pazhaiyar and Nagapattinam fishers were using bamboo baskets.	Bamboo basket has been completely removed and now only plastic baskets are being used for handling of fish.
2.	The quality of dry fish was poor in Kasimedu, Cuddalore, Pazhaiyar & Nagapattinam.	Hygienic preparation of dry fish has increased.
3.	Unhygienic conditions in Kasimedu, Pondicherry, Cuddalore, Karaikkal & Nagapattinam harbours.	Dumping of by-catch/ trash fish in jetties is completely stopped. The Boat owner association has taken steps to clean the harbour premises. SHG members were appointed to clean the Pondicherry harbour thrice a week. A Harbour management committee was formed in Pazhaiyar and appointed two people for auction hall cleaning on a daily basis.
4.	Improper icing of catch at Kasimedu, Pondicherry, Cuddalore, Pazhaiyar, Karaikkal & Nagapattinam	Use of ice and ice box is popularized among traditional Fishers. Fishers are now following icing at 1:1 ratio.
5.	The toilet building was not functional in Kasimedu & Karaikkal harbours.	The Association took steps to open the toilet facility in the harbour.





Improved Ice handling onboard fishing vessel

9.5 TAMIL NADU SOUTH

Sl.No:	Previous condition	Condition in April 2018
1.	Use of inadequate quantity of ice observed at harbours	Awareness about usage of Ice improved and fishers have started preserving their catch with enough ice. The quality of ice used has also improved.
2.	Use of Bamboo baskets for fish handling.	Now most of the Fishers are using plastic baskets.
3.	Purse-seine operations by traditional fishermen of Mandapam area and Tsunami colony area.	Purse-seining activity considerably reduced and official vigilance increased.
4.	Heavy trade of ovigerous blue crabs was seen.	Ovigerous blue crabs are released back in Vellapatti and Vethalai.
5.	Fishing ban violations	Reduced East coast-West coast fishing ban violations due to change in boat colour
6.	Less sea safety measures were taken by fishers.	Use of GPS, Fish finders & life saving equipments has increased due to NETFISH awareness.
7.	Landing of intentionally caught juvenile fishes as trash for use in poultry feed and fish meal.	Awareness has increased on laws rules and regulations regarding juvenile fishing and the practice is regulated to certain extent. Bottom trawlers are willing to use square mesh panel at the cod-end and are asking for govt. subsidies.
8.	Rusted iron shovels were used	Now PVC shovels are being used for fish handling
9.	Ice crushing done on floor	Ice crushing is done on tarpaulin sheets



9.6 KERALA SOUTH

Sl. No:	Previous condition	Condition in April 2018
1.	In Thoppumpady ice blocks were dragged over the floor to conveyor crusher.	A new conveyor ice crusher was installed outside the auction hall by which ice blocks can be loaded directly to the crusher.
2.	Using bamboo baskets in Chellanam landing centre	Bamboo baskets are completely replaced with 4 handled plastic baskets.
3.	Juvenile Fishing	Juvenile fishing stopped to a great extent by awareness programmes and action taken with the help of Marine Enforcement wing of Department of Fisheries.
4.	Plastic wastes were a menace for fishers at sea while fishing.	A plastic eradication project was initiated at Kollam named as 'Suchitwa Saagaram', with the support of Boat owners, Fisheries dept. and other State agencies.
5.	Peeling inside Sakthikulangara harbour	Peeling workers were shifted to CPC
6.	In Neendakara fish vending inside the harbour, empty boxes tied inside the auction hall etc. were hindering the hygiene of the harbour.	Awareness classes were given to fishers and a proposal for harbour upgradation was collected from Harbour Engineering department.



Fishing vessel coated with fiber at deck area



9.7 KERALA NORTH

Sl.No:	Previous condition	Condition in April 2018
1	In Chettuva harbor: a) There was not any system for solid waste collection b) Occasional Juvenile fishing was reported c) The fish carrying plastic boxes were worn out	a) Four waste bins were placed in the harbour for putting the plastic wastes materials. b) Stake holders were sensitized and the fishermen, harbour workers and auctioneers are cooperating with government notifications on juvenile fishing. A large sign board on M.L.S. was also placed in the harbour. c) Fifty numbers of new plastic boxes were given to the workers.
2	Inadequate system of harbour cleaning and monitoring was observed at Munakkakadavu.	Regular harbour cleaning is in place. Toll collecting agent is held responsible for this and Harbour labour union coordination committee is monitoring this.
3	In Munambam: a) Iron shovels were used for ice handling b) Worn out sign boards in the harbour c) Boats with inadequate life saving equipments d) Congested vehicle parking ground. e) PPC workers without uniforms.	a) Reduced the use of iron shovels by providing fibre shovels to workers for ice handling. b) All the worn out sign boards of NETFISH were renewed. In addition to this a new sign board enlisting minimum legal size of 58 fishes was placed inside the harbour. c) Sensitized the fishermen on the need of having essential life saving equipments and 81 Life jackets were provided to fishermen utilizing the fishermen aid. d) The harbour management society had constructed a new vehicle parking ground. e) Two more pre processing centers in Munambam region has started to use uniforms due to NETFISH intervention. The personal hygiene and cleanliness is improved in all PPCs in the region where NETFISH conducted training classes.
4	a) In Beypore Harbour cleaning programmes were conducted by NETFISH alone. b) Gaps in the awareness on personal hygiene and use of rubber gloves.	a) The different stake holder groups in the harbour came forward to conduct harbour cleaning in association with NETFISH. b) Workers were sensitized on the matter and now more workers are using rubber gloves for fish and ice handling.
5	a) Gaps in the awareness on personal hygiene and use of rubber gloves in Puthiyappa. b) No trolley for ice sellers.	a) Workers were sensitized on the matter and now more workers are using rubber gloves for fish and ice handling. b) Trolleys were provided to ice sellers



NETFISH Signboards at harbour



Improved icing of the catch





Improved fish drying practice at Karwar

9.8 KARNATAKA & GOA

Sl.No:	Previous condition	Condition in April 2018
1	In Mangalore and Malpe harbours plastic crates were dumped in packing area, parking area & auction hall and fish cutting was done inside the harbour.	Regular cleaning schedule is being followed.
2	In Gangolli, plastic crates were dumped in parking area.	Cleaning schedule is followed and monitored regularly; Unauthorized huts were removed.
3	Parking of vehicles inside the auction hall observed at Bhatkal & Honnavar.	Now two wheelers are being parked outside the auction hall
4	Parking of vehicles inside the auction hall observed at Tadri & Belekeri. Auction hall not utilized by the stakeholders in Tadri.	Auction hall is utilized by the stakeholders in Tadri.
5		
6	In Karwar, Cutbone and Malim infrastructure facilities were poor.	Conditions have improved and trolleys are being used while handling fish and ice.

9.9 MAHARASHTRA

Sl. No:	Previous condition	Condition in April 2018
1	In Mirkarwada harbour, Harne area and Sassoon dock harbour mesh size was about 18 mm to 22 mm.	Mesh size has increased in Harne, Ratnagiri and Sassoon dock area. Many fishers have started using 40 mm mesh size fishing nets. (As per MFRA 40 mm Square mesh is mandatory for trawls)
2	Bamboo baskets use was more in all harbours.	Increased use of plastic baskets in all selected area due to NETFISH awareness programmes.
3	In all selected areas fish drying was done on bare soil, rocks, road side, on bamboos, etc.	In Palghar, Sindhudurg districts fishers started using raised bamboo structures for drying fish hygienically.
4	Fishers were not showing much interest in saving turtles.	Fishers actively involved in saving marine endangered animals like turtles if trapped in fishing nets.



9.10 GUJARAT

Sl.No:	Previous condition	Condition in April 2018
1	Open transportation of fishes at Veraval, Porbandar, Mangrol & Okha	Now fishermen are using insulated vehicles or covering with plastic sheet in three wheelers
2	In Veraval, Mangrol, Porbandar, Vanakbara, Okha, Dholai fishermen were not cleaning their vessel before and after fishing	It is noticed that now majority of fishermen are cleaning their vessel before and after their fishing trip
3	Personal hygiene of pre-processing & processing workers was poor in all selected areas.	Improved personal hygiene of workers at PPCs and PCs
4	Mesh size was small in trawl nets	Mesh size increased up to 30-35 mm
5	Dry fish quality was poor at Umarsadi, Nargol & Umargam	Dry fish quality has improved and are fetching better price
6	Ice crushing on dirty floor at Veraval & Vanakbara. Trucks dump ice blocks on floor.	Hygienic ice crushing facility was created by boat association of Veraval. Ice blocks are loaded directly from trucks to crushers and boat owners are paying waiting charge for trucks. Small conveyor type ice crusher is developed by fishermen at Vanakbara.
7	Diamond mesh cod-ends are used in trawls at Veraval, Mangrol, Porbandar & Vanakbara	NETFISH conducted training to fishers on Square mesh cod-end and now some of the trainees are using square mesh cod-end in their vessel.
8	Insufficient icing of catch	Fishermen are carrying sufficient ice while fishing
9	Lack of signboards on hygienic handling of fish at harbours	Signboards were fixed at Veraval, Porbandar & Mangrol harbours by NETFISH
10	In Umargam, Nargol & Umarsadi mangroves were cut for fuel	Now it is stopped
11	Violation of fishing ban	Now complete ban is being observed



Increased mesh size in Gujarat



'FISH NUTRI CART' - A mobile food truck by fisherwomen of Visakhapatnam



The fisherwomen collective from Mangamaripeta, a coastal village near Visakhapatnam, had launched a mobile vending van for value added fishery products named as 'Fish Nutri Cart', during April 2017. The venture was first of its kind in Andhra Pradesh and the fisherwomen are doing good business by selling superior quality seafood items like fish cutlets, fry, shrimp pakoda and fish samosa etc. at Beach Road during evening time. NETFISH and its member NGO- District Fishermen Welfare Association (DFYWA), Visakhapatnam had played a laudable role in developing this fisherwomen entrepreneur. NETFISH along with DFYWA has been organizing various training programmes for fisher SHGs for enhancing their livelihood opportunities through value addition. One among the groups is from Fisher Folk Foundation, formed of 129 fisher women members, who had registered as a Small Fisher Folk Producer Organization. Hands on training programmes on hygienic handling of fishery products and production of value added fishery products were arranged for this fisherwomen group by NETFISH at CIFT, NIFPHATT, SIFT etc. to improve their hands-on skills for preparing variety of fish products so as to satisfy consumer appeal and also coordinated in sanctioning fund from Department of Fisheries to set up a mobile vending unit. Finally, the 'Fish Nutri Cart' came in to operational. NETFISH plans to emulate this into other maritime states by involving different agencies/groups as did in Andhra Pradesh.

Establishment of a model dry fish unit at Mangamaripeta



A model fish drying unit was installed by NETFISH with the support of NGO, DFYWA at Mangamaripeta, Bheemili beach road, Visakhapatnam to test feasibility of Model fish drying unit. The unit possessed an outer dimension of 24 m length, 12 m width and 3m height and it was externally covered with 2 layers of fly proof net supported with poles and pipes. In the inner side the unit possessed 4 raised drying racks of height 2 m from the ground and with free space in between racks. The capacity of the model dry fish unit is 300 Kgs. and the total project cost was 1.5 lakhs rupees. The demonstration project on model dryfish unit, the first one of the kind in Andhra Pradesh was carried out with dual objectives of poverty alleviation among the fisherwomen and demonstrating hygienic drying method to fishers. About 15 training benefitting 450 fishers were conducted in the unit and many of the trainees have started preparing and selling good quality dryfish.



10. MEMBER NGOS OF NETFISH FOR THE YEAR 2017-18

- 1) **The Science Association of Bengal (SAB)**, Barisha P.O, Kolkata, West Bengal.
- 2) **Sarboday Sangha (SS)**, P.O Ajoya, Khejuri, Medinipur (East), West Bengal.
- 3) **Subha Rashmi Mahila Seva Samiti (SRMSS)**, Balasore District, Odisha.
- 4) **Rangalata Peoples Rural Development Society (RPRDS)**, Bentapur, Puri District, Odisha.
- 5) **District Fishermen Youth Welfare Association (DFYWA)**, Vivekananda Bhavan, Vishakapatnam, Andhra Pradesh.
- 6) **Socio Economic Alternatives Research Resource Community for Humanity (SEARCH)**, Guntur District, Andhra Pradesh.
- 7) **Village Resource Centre of MSSRF**, Kurusady, Nagercoil, Kanyakumari District, Tamil Nadu.
- 8) **Village Resource Centre of MSSRF**, Thangachimadam, Ramanathapuram District, Tamil Nadu.
- 9) **Chevaliar Roshe Society (CRS)**, Derose Centre, Polpettai, Thoothukudi, Tamil Nadu.
- 10) **Organization for Marine Conservation, Awareness and Research (OMCAR Foundation)**, Pattukottai (Post), Thanjavur (Dist) Tamil Nadu- 614601.
- 11) **GAIA International Organization (GIO)**, First Main Road, Kamaraj Nager, Thiruvannamiyur, Chennai, Tamil Nadu.
- 12) **S.O.H.E.S.**, Pillayar Kovil Street, Kanchipuram District, Tamil Nadu.
- 13) **Fisheries Professionals Organization (FPO)**, Chennai, Tamil Nadu.
- 14) **Fish For All - Research and Training Centre**, M.S.Swaminathan Research Foundation (MSSRF), Poombuhar-PO, Nagapattinam-Dt, Tamil Nadu.
- 15) **FDWC**, Kollam, Kerala.
- 16) **Sahyadri Community Development & Women Empowerment Society (SCODWES)**, Savinilaya Building, Maratikoppa Main Road, Sirsi, Karnataka.
- 17) **Coastal And Rural Empowerment Society (CARES)**, Ranson Villa, Perlaguri Near Padavinangadi, Kavoor Post, Mangalore - 575 015, Karnataka.
- 18) **Manav Vikas Sevabhavi (MVS)**, Chandranagar, Thane District, Maharashtra.
- 19) **Nagrik Bahu Udeshiya Seva Pratistan (NBUSP)**, Sindhudurg, Maharashtra.
- 20) **Jan ShikshanSanstha (JSS)**, Raigad, Maharashtra.
- 21) **Brackish Water Research Centre (BWRC)**, KasbaMohalla, Mougul Street, Surat District, Gujarat.
- 22) **Shri.B.A.Yadav Education & Rural Development Foundation Trust (BAYERDFT)**, Hatina, Junagadh, Veraval, Gujarat.
- 23) **Chamunda Vikas Trust (CVT)**, Bhalpara Main Raod, Veraval-362268, Gujarat.
- 24) **Shivam Education & Charitable Trust (SECT)**, Pipaliya Nagar, MadhiRaod, Junagadh, Gujarat.



11. AUDIT REPORTS FOR THE YEAR 2017-18

ROSHAN THOMAS & Co.
CHARTERED ACCOUNTANTS
Partners :

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ACA, DISA (ICA)

CA. SHARON LISS AUGUSTINE
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INDEPENDENT AUDITOR'S REPORT

To

The Members

NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH)

We have audited the attached Balance Sheet of NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH) as at March 31, 2018 also the Income and Expenditure Account and Receipts and Payments Account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Standards on auditing issued by the Institute of Chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit includes performing procedures to obtain audit evidence about the amounts and disclosure in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risk of material misstatement of the financial statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the financial statement in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by the management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.





Opinion

In our opinion and to the best of our information and according to the explanation given to us, the financial statement give a true and fair view in accordance with the accounting principles generally accepted in India.

- (a) in case of the Balance Sheet, of the state of affairs of the Society as at 31st March 2018
- (b) in the case of the Income and Expenditure Account of the Excess of Expenditure over Income for the year ended on that date and
- (c) in the case of Receipts and Payment Account of the receipts and payments for the year ended on that date

Place : Kochi

Date : 31-07-2018

For ROSHAN THOMAS & Co
CHARTERED ACCOUNTANTS
FRN - 0136115

CA. ROSHAN THOMAS, FCA, DISA (ICA)
Membership No : 228912



NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH)

KOCHI (REG. NO ER 509/06)
AUDITED BALANCE SHEET AS AT 31-03-2018

(In Rs. Ps.)

LIABILITIES	Sch.	As on 31.03.18	As on 31.03.17
CAPITAL FUND			
Opening balance		3355673.69	1789132.56
Add: Fund received from MPEDA during the year		20000000.00	19600000.00
Less: Excess of Expenditure over income for the year		-17946848.87	-18033458.87
		5408824.82	3355673.69
UNDP PROJECT FUND			
UNDP Fund received from MPEDA		16175000.00	16175000.00
Add: Project Expenses Payable		.00	25928.00
Less: Amount repayable to UNDP		-1096044.45	.00
Less: Amount utilised towards Mangrove Crab Project, Mumbai		-15078955.55	-14917274.55
		.00	1283653.45
TOTAL		5408824.82	4639327.14
ASSETS			
FIXED ASSETS			
	1		
Opening WDV		1124527.97	232640.94
Less: Depreciation		-106501.00	-59766.00
Closing WDV		1018026.97	172874.94
CURRENT ASSETS, LOANS AND ADVANCES			
Cash & Bank Balance			
Cash in hand			-
Balance with banks	2	5227063.30	5089223.17
LOANS & ADVANCES			
Advance to Staff		.00	15347.00
Advance to Supplier		456340.00	.00
Tour Advances		.00	68367.00
Salary & TA Claim Receivable from MPEDA		1231987.00	623950.00
		6915390.30	5796887.17
CURRENT LIABILITIES AND PROVISIONS			
OTHER LIABILITIES & PROVISIONS			
Expenses Payable	3	78186.00	130569.97
Salary Payable	4	1211372.00	1188365.00
Sundry Creditors Payable	5	127190.00	
Audit Fee Payable		11800.00	11500.00
Mangrove crab Project Payable		1096044.45	
		2524592.45	1330434.97
NET CURRENT ASSETS		4390797.85	4466452.20
TOTAL		5408824.82	4639327.14

Subject to notes forming part of accounts and our report of even date


 (Chief Executive Officer)


 (Treasurer)


 (Secretary)




 (Auditor)



NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH)

KOCHI (REG. NO ER 509/06)

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2018

(In Rs. Ps.)

		For the year ended 31-03-2018	For the year ended 31-03-2017
INCOME			
Fund Received from NFDB		236000.00	.00
Fund Received from NFDB (MLS Workshop)		100000.00	.00
OTHER INCOME			
Membership Fee		500.00	500.00
Renewal Fee		400.00	600.00
Training Fee		14450.00	.00
		15350.00	1100.00
TOTAL		351350.00	1100.00
EXPENDITURE			
Extension Activities	6	9794893.00	9859733.00
Employee Cost	7		
Salary-Chief Executive		763044.00	728991.00
Salary - State Co-ordinators		4849536.00	4640058.00
Salary - Research Assistant		690132.00	655105.00
Salary - Staff		385419.00	431518.00
Employer Contribution to PF		352027.00	371724.00
		7040158.00	6827396.00
Administrative Expenses	8	1356646.87	1287663.87
Depreciation	1	106501.00	59766.00
TOTAL		18298198.87	18034558.87
Excess of Expenditure over Income		-17946848.87	-18033458.87

Subject to notes forming part of accounts and our report of even date


 (Chief Executive Officer)


 (Treasurer)


 (Secretary)


 (Auditor)


NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH), KOCHI

REG. NO ER 509/06

RECEIPTS AND PAYMENT ACCOUNT FOR THE YEAR ENDED 31.03.2018

Receipts	(Rs.)	Payments	(Rs.)
Opening balance - 01.04.2017		Payments for Extension Activities	
Cash			
Bank	5089223.17	Training Programmes	8919715.00
		Training Programmes	193011.00
Funds received from MPEDA	20000000.00	Travelling for Extension Training Staff	682167.00
Funds received from NFDB	236000.00		
Funds received from NFDB (MLS Workshop)	100000.00	UNDP Project	187609.00
Other Income	15350.00		
Salary, TA to Technical and Field Staff paid (MPEDA a/c)	6747071.00	Payment to Employees	7017151.00
		Salary, TA to Technical and Field Staff paid (MPEDA a/c)	7355108.00
		Establishment & Other Items	1408730.87
		Fixed Assets Purchased	825163.00
		Advances (Including Tour advances)	372626.00
		Advances MPEDA	
		Closing balance - 31.03.2018	
		Cash in hand	.00
		Balance with banks	5227063.30
	32188344.17		32188344.17

Subject to notes forming part of accounts and our report of even date.



(Chief Executive Officer)



(Treasurer)



(Secretary)




(Auditor)



NETFISH POSTERS

NETFISH-MPEDA

Minimum Legal Size (M.L.S.) in Fisheries

The Govt. of Kerala has issued Gazette Notifications imposing minimum legal size for 59 commonly caught marine fishery species.

Setting of M.L.S. is a major need to reduce over-exploitation to protect fish stocks being caught until they have spawned.

Sl. No.	Species Name	Minimum Legal Size (cm)
1	Bluefin Trevally	10
2	Blacktip Shark	150
3	Common Snappers	10
4	Yellowtail Snappers	10
5	Parrotfishes	10
6	Groupers	10
7	Sea Breams	10
8	Sea Anchovies	10
9	Sea Sardines	10
10	Sea Herrings	10
11	Sea Carps	10
12	Sea Catfishes	10
13	Sea Eels	10
14	Sea Mussels	10
15	Sea Shrimps	10
16	Sea Crabs	10
17	Sea Prawns	10
18	Sea Squids	10
19	Sea Octopuses	10
20	Sea Cuttlefishes	10
21	Sea Starfishes	10
22	Sea Urchins	10
23	Sea Anemones	10
24	Sea Jellyfishes	10
25	Sea Sponges	10
26	Sea Corals	10
27	Sea Sea Anemones	10
28	Sea Hydroids	10
29	Sea Bryozoans	10
30	Sea Tunicates	10
31	Sea Molluscs	10
32	Sea Bivalves	10
33	Sea Gastropods	10
34	Sea Nudibranchs	10
35	Sea Polychaetes	10
36	Sea Annelids	10
37	Sea Cnidarians	10
38	Sea Ctenophores	10
39	Sea Comb Jellies	10
40	Sea Scyphozoans	10
41	Sea Jellyfishes	10
42	Sea Stolidobranchia	10
43	Sea Chaetognaths	10
44	Sea Appendicularians	10
45	Sea Thaliaceans	10
46	Sea Siphonophores	10
47	Sea Hydrozoans	10
48	Sea Scyphozoans	10
49	Sea Jellyfishes	10
50	Sea Stolidobranchia	10
51	Sea Chaetognaths	10
52	Sea Appendicularians	10
53	Sea Thaliaceans	10
54	Sea Siphonophores	10
55	Sea Hydrozoans	10
56	Sea Scyphozoans	10
57	Sea Jellyfishes	10
58	Sea Stolidobranchia	10
59	Sea Chaetognaths	10

TODAY'S JUVENILE FISHES ARE TOMORROW'S WEALTH

NETFISH-MPEDA

MONSOON TRAWL BAN PERIODS IN INDIA

State	Period
West Bengal	61 days
Odisha	61 days
Andhra Pradesh	61 days
Tamil Nadu	47 days
Kerala	47 days
Goa & Karnataka	61 days
Maharashtra	61 days
Gujarat	61 days

West Coast

Gujarat, Maharashtra, Goa, Karnataka

61 days
(1st June to 31st July)
Complete Fishing Ban
Relaxation: for traditional vessels

East Coast

West Bengal, Odisha, Andhra Pradesh

61 days
(1st April to 14th June)
Complete Fishing Ban
Relaxation: for traditional vessels

Kerala

(1st June to 31st July)
Fishing ban for Travel boats only
Relaxation: for traditional vessels and inboard vessels

Tamil Nadu

(1st April to 31st May)
Relaxation: for traditional vessels

NETFISH-MPEDA

WANTON DESTRUCTION OF JUVENILE FISHES

A threat to Fishery Sustainability

- Huge quantities of undersized fishes are being destroyed for producing fishmeal and manure.
- Juveniles of commercially important fish species like sardine are being sold to fishmeal factories.
- Juvenile fish has become a target fishery for some of the fishing vessels.
- Juveniles of white fish, squid, leather jacket, ribbon fish, pomfrets, threadfin breams, mackerel and sardine are being destroyed by this illegal practice.
- It is distorting our ocean balance and hindering evergreen fishing.
- Juvenile fishing has become a threat for our food security, health security, job security and financial security.

NETFISH-MPEDA

SQUARE MESH COD ENDS FOR SUSTAINABLE FISHING

Diamond mesh cod end

- Will shrink to more minimum size by the pulling pressure
- Juveniles and sub adults of all kinds of organisms will remain entangled in the net
- More by-catch
- Upsets the balance of the ecosystem
- Need more time to sort the catch on-board
- More diesel consumption

Square mesh cod end

- Less shrinkage while pulling
- Juveniles and sub adults get space for escapement
- Less by-catch
- Causes less destruction to marine ecosystem
- Less sorting time of the catch
- Good eye appeal to the fish in cod ends
- Less diesel consumption - saves up to 2 litres diesel/ hr

From mesh fishery practices to fishery shift to NETFISH

NETFISH-MPEDA

COASTAL POLLUTION

Destroys marine ecosystem Causes decline of fishery resources

Waste-dumping in coastal waters a big worry

Plastic wastes, broken net pieces and other non-biodegradable materials reaching sea destroy marine ecosystem

X years will have more plastic than fish by 2050

Degradation time for various plastic materials

Monofilament net	600 years
Plastic bottles	450 years
Aluminum cans	200 years
Thermocol floats	80 years
Thermocol cups	50 years
Nylon cloths	40 years
Plastic carry bags	20 years
Cigarette butts	5 years

Do not litter on sea, lake and stream with non-biodegradable wastes
Protect our water bodies from pollution

NETFISH-MPEDA

SAFETY AT SEA FOR FISHERMEN

- Fishing at sea is probably the most dangerous occupation in the world.
- Safety at sea depends on fishing vessel design and safety equipments carried on-board.
- Ensure the prescribed standards for boat design and materials used.
- All MPFRAs recommend the need for carrying Life Saving Apparatus on-board. Govt. should ensure it during boat registration and licensing process.
- Follow weather forecasts and warnings.
- Leave information at shore about voyage plan, fishing area and crew members.

COMPULSORY SEA SAFETY EQUIPMENTS NEEDED ON-BOARD

- LIFE JACKETS
- LIFE BUOYS
- SATELLITE BASED AUTOMATIC IDENTIFICATION SYSTEM (AIS) / VESSEL MONITORING SYSTEM (VMS)
- EMERGENCY POSITION INDICATING RADIO BEACON (EPIRB)
- VHF COMMUNICATION SET
- GLOBAL POSITIONING SYSTEM (GPS)
- NAVIGATION LIGHTS
- FIRE EXTINGUISHER
- DISTRESS ALERT TRANSMISSION SYSTEM (DATS)

Save Marine Life. Save Our Livelihood.

NETFISH-MPEDA

SUCHITWA SAAGARAM

A project for plastic free sea in Kerala

- Joint effort by NETFISH-MPEDA, Kallam Boat Operators Association, State Fisheries Dept., Suchitwa Mission, Clean Kerala Company, HED and SAF to remove plastic wastes from the sea and fishing harbours.
- Mechanized fishing boats operating from Sakthikulangara and Noondankara harbours in Kollam, Kerala stopped dumping plastic waste into sea and bring back plastic materials that come across during fishing, to shore.
- NETFISH supplied waste collection bags to boats.
- Collected wastes are segregated and supplied to plastic shredding unit established at Noondankara harbour, under the project.
- The plastic wastes are shredded / recycled and used for various activities including road construction.

Awareness sticker for fishing boats by NETFISH

NETFISH-MPEDA

VALUE ADDITION OF FISHERY PRODUCTS

Increase the market of a fishery product by adding some extra stuff to it

- Value Addition means any additional activity that changes the nature of a product thus adding to its value at the time of sale.
- Value Addition in an expanding sector in food processing industry especially in export markets.
- To improve the livelihood of fisherfolk NETFISH conducts hands on training for fisherwomen on "Preparation of Value Added Fishery Products".

Value Added Fishery Products

- Fish Cakes
- Fish Finger
- Fish Ball
- Fish Sausage
- Fish Wafers
- Fish-Fruit Pickle
- Breaded Shrimp
- Dried Prawns
- Dried Prawns Chutney
- Fish Soap

Save Marine Life. Save Our Livelihood.



OFFICE BEARERS 2017-18



Dr. A. Jayathilak IAS
President, NETFISH & Chairman, MPEDA



Shri. K. Sivarajan
Treasurer, NETFISH & DD (SSP), MPEDA



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