



# ANNUAL REPORT 2011-12



**NETFISH**

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**Network for Fish Quality Management and  
Sustainable Fishing (NETFISH)**

**KOCHI**

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## 1. The NETFISH

Network for Fish Quality Management and Sustainable Fishing (NETFISH) is a society under the Marine Products Export Development Authority (MPEDA), Kochi. The Society is registered under the Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act, 1955. NETFISH was formed with a view to organize grass root level training programmes among fisher folk to change their mindset towards fish quality management and sustainable fishing. NETFISH organizes capacity building programmes in fishing and fish processing sectors in areas such as quality management, post-harvest handling and conservation of fishery resources.

## 2. President

Ms. Leena Nair IAS continued as the President of NETFISH during 2011-12.

## 3. Executive committee

The Executive Committee of the society for the year 2011-12 was reconstituted in the fifth Annual General Body Meeting held at MPEDA headquarters, Cochin on 26-09-2011. The new Executive Committee members of NETFISH are given in Table 1.

## 4. Meetings

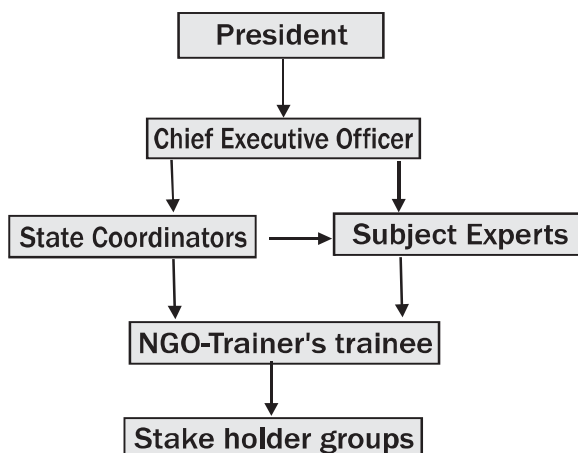
The Monitoring Committee consisting of Secretary and JD (QC) of MPEDA met 4 times during the year and scrutinized the monthly

**Table 1. Executive Committee members of NETFISH (2011-12)**

Sl.No	Name	Address
1	Ms. Leena Nair I. A. S	Chairman, MPEDA, Cochin
2	Shri. N. Ramesh	Director (M), MPEDA, Cochin
3	Shri. J. Ramesh	Secretary, MPEDA, Cochin
4	Shri. T.M. Shivakumar	Director, MoCI, New Delhi
5	Shri. Vimal Kumar K. N.	Jt. Director (Q.C.), MPEDA, Cochin
6	Dr. Sreenivasa Gopal	Director, CIFT, Cochin
7	Shri. R. C. Sinha	Director, CIFNET, Cochin
8	Dr. Joice V. Thomas	Chief Executive, NETFISH, Cochin
9	Shri. Anwar Hashim	President, SEAI
10	Shri. V. Vivekanandan	Chief Advisor SIFFS, Thiruvananthapuram
11	Shri. Harikrishna Khataei	Secretary, RPRDS, Orissa
12	Shri. Sreedhar U. Bhat	Project Co-ordinator, Sneha Kunja Trust, Karnataka
13	Shri. Ravindran C	Advisor, Chevaliar Roshe Society (CRS), Tamil Nadu
14	Shri. B. Nageshwara Rao	President, J.K.W.S., Andhra Pradesh.
15	Shri. N. B. Boghani	Executive Director, Manava Vikas Sevabhavi, Maharashtra
16	Shri. Bimal Kumar Sen Gupta	Resource Person, The Science Association of Bengal, Kolkata, West Bengal
17	Shri. M.S.H Sheikh	President, Brackish Water Research Centre, Gujarat

activities of NETFISH. The Executive Committee met twice on 24-05-2011 and 15-09-2011 during the year 2011-12. The Annual General Body meeting of the NETFISH was held at MPEDA headquarters, Cochin on 26-09-2011.

### 5. Office Structure



### 6. Target set for 2011-12

A target of 2400 programmes was set for NETFISH for the year 2011-12. The Target for each region was 240 programmes. The details of targets set for each region is given in the Table 2.

### 7. Extension Programmes 2011-12

During the year 2011-12, NETFISH conducted repeated training programmes at the

selected areas identified in each maritime state, mainly the fishing harbours and landing centres, based on its importance in terms of fishing and material taken for export. Various problems regarding fish quality management and sustainable fishing in these selected areas were thoroughly studied and programmes were organized in and around these selected areas based on the requirements.

NETFISH conducted 3144 extension programmes along the maritime states of India during the fiscal year 2011-12 (Table 3). Besides the regular training programmes on various aspects of fish quality management, conservation and sustainable fishing, NETFISH conducted special programmes such as Street plays (631 nos.), Medical camps (7 nos.), Harbour/coastal clean-ups (10 nos.), Rallies (2 nos.), school programmes (14 nos.), Door to door programmes (15 nos), Mass communications (73 nos.) and other special programmes (41 nos.) to spread the messages deep in to the minds of fisher folk.

#### 7.1 WEST BENGAL

In West Bengal, fishery is one of the most important livelihood enterprises in rural sector next to agriculture, with a contribution of 3.33% to the SDP and growth rate of 4-6%. The state has rich biodiversity and abundance of

**Table 2. Target 2011-12**

State/Region	Quality	Conservation	Onboard	Pre-Processing	Aqua-culture	Dry-fish	Total
West Bengal	75	30	20	25	70	20	240
Odisha	44	58	102	15	12	9	240
Andhra Pradesh	84	72	24	24	24	12	240
Tamil Nadu-South	90	90	20	20	20		240
Tamil Nadu-North	75	97	43	10		15	240
Kerala -South	50	50	20	120			240
Kerala - North	108	112	20				240
Karnataka /Goa	130	52	18	10	10	20	240
Maharashtra	72	72	24	24	12	36	240
Gujarat	107	69	10	30	19	5	240
<b>Total</b>	<b>835</b>	<b>702</b>	<b>301</b>	<b>278</b>	<b>167</b>	<b>117</b>	<b>2400</b>

multispecies resources in the marine sector. West Bengal has a 158 Km long coast line and 9629 Sq. Km of unique mangrove forest in India - "The Sundarban". There are 5 fishing harbours and 78 major and minor fish landing centres in the state. About 9000 (Mechanized: 4581; Non mechanized: 4483) boats are being operated in West Bengal waters. Gill net is the most dominated gear followed by trawl net, set bag net (*Behundi jal*), Shore seine (*Ber jal, Chorpata*) and Hooks (*Don*). Closed season is strictly followed in West Bengal for 47 days from 15<sup>th</sup> April to 31<sup>st</sup> May every year.

West Bengal has one of the largest impounded Brackish Water areas (210000 Ha) in the country, out of which 62000 ha. is under aquaculture. West Bengal contributes a lion share to shrimp production of the country. Major quantity of farm raised shrimp is being exported to different countries specially Japan, USA and

EU countries. Purba Medinipur, South 24 Parganas and North 24 Parganas are the major brackish water farming districts of the state.

NETFISH has been conducting wide awareness campaigns along the coastal regions of West Bengal since 2007 with a view to improving the quality of fisheries products that are being exported and also to conserve the marine resources for its sustainable use. During 2011-12, NETFISH conducted 348 programmes in West Bengal which included 249 regular programmes and 99 special programmes, with the active role of member NGOs - 'Saroday Sangha' and 'The Science Association of Bengal'. The selected areas for NETFISH activities in West Bengal for the year 2011-12 were Digha, Freserganj, Kakdwip and Raidighi.

#### DIGHA, PURBA MEDINIPUR

The District of Purba Medinipur is having

**Table 3. Details of extension programmes conducted by NETFISH during 2011-12**

State/Region	Regular Programmes							Special Programmes							Financial Year Total	
	Landing Centre - Quality	Conservation	On board	Pre-processing	Aqua farm	Dry fish	Total	Street-plays	Medical Camps	Harbour/coastal clean-ups	School programme	Door to door programme	Mass communications	Other special programmes		Total
West Bengal	84	31	24	20	70	20	<b>249</b>	84	1		5		2	7	99	<b>348</b>
Orissa	47	67	102	15	12	10	<b>253</b>	30	4					8	42	<b>295</b>
Andhra Pradesh	85	72	5	24	24	12	<b>222</b>	45					11	9	65	<b>287</b>
TN- North	82	94	21			10	<b>207</b>	65		1					66	<b>273</b>
TN- South	91	92	22	2	20		<b>227</b>	56		1	4				61	<b>288</b>
Kerala - South	72	36	14	120			<b>242</b>	70					7	4	81	<b>323</b>
Kerala - North	108	107	9				<b>224</b>	117		4			35	1	157	<b>381</b>
Karnataka/Goa	101	80	12	9	9	31	<b>242</b>	54	2	1	2	11		7	77	<b>319</b>
Maharastra	76	71	14	20	12	36	<b>229</b>	30		2			9	5	46	<b>275</b>
Gujarat	121	76	10	32		19	<b>258</b>	80		1	3	4	9		97	<b>355</b>
<b>Total Break-up</b>	<b>867</b>	<b>726</b>	<b>233</b>	<b>242</b>	<b>147</b>	<b>138</b>	<b>2353</b>	<b>631</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>73</b>	<b>41</b>	<b>791</b>	<b>3144</b>



17 fishermen blocks and 676 fishing villages and coast line of 68 km spread in 6 blocks namely Ramnagar 1&2, Contai – 1&2, Khajuri – 2 and Nandigram-1. There are two fishing harbours viz. Sankarpur and Deshapran and 42 major and minor fish landing centres. Deshapran fishing harbour is the only deep sea fishing harbour in West Bengal. Digha Mohana is one of the major and famous landing centres in West Bengal. This district offers an enough financial scope of lively hood among the fishing sectors.

**Problems identified**

- Lack of infrastructural facilities such as good auction hall, quality ice, water etc. at fishing harbour and landing centres
- Poor drainage system in landing centres & fishing harbour
- No proper cleaning system in fishing vessels, harbour & landing centre
- No proper transportation system from landing centre to auction market
- Siltation prevents smooth entry of vessels to the harbour
- Use of fishing boats for other purposes such as carrying fuel and other commodities which can affect the quality of fishes
- Improper handling of catch at auction market and landing centre
- Bamboo baskets are used in boats, landing centres and auction markets
- All the boats are not facilitated with insulated fish box
- Some of the ‘khuties’ are using harmful chemicals for preserving dry fish
- Lack of tube well / quality water at dry fish ‘khuties’
- Illiteracy among fishermen
- Introduction of more fishing vessels to offshore and inshore waters
- Bottom trawling by fishing vessels which can

deconstructs the marine resources, juveniles as well as bottom strata.

**Programmes conducted**

Sl. No.	Type of programme	Number
1	Fish Quality Management	20
2	Sustainable Fishing/Conservation	12
3	Onboard	8
4	Preprocessing	1
5	Dry fish training	16
6	Street-plays	76
7	Boat cleanup	4
8	School programmes	5
9	Mass communication	2
	<b>Total</b>	<b>143</b>

**Street Plays:** NETFISH organized 76 street play shows at the fishing villages, harbours, landing centres, maritime area and six aqua culture blocks of Purba Medinipur district to create awareness among fishers as well as general public regarding fish quality management, conservation of marine resources, sustainable fishing, Best Management Practices in aquafarms, post harvest handling of shrimp and different upcoming issue of government rules and regulations, etc. In the year 2011-12, a new Street play on aquaculture called “VIRUS” was also introduced. About 17000 people had visualized the street plays which helped NETFISH to spread its messages quickly and effectively among the fishermen communities and others.

**School Programmes:** In order to percolate the messages on Best Management Practices in aquafarms, post harvest handling of shrimp, Fish quality management and Conservation of fish resources & Sustainable fishing, NETFISH arranged 5 awareness programmes among the students of Class IX to X at selected schools in Purba Medinipur, so that these children can spread the knowledge among their parents and other family members, who are engaged in farming of shrimps, fishing and allied activities.

The programme included lectures on sustainable aqua farming, bio-security measures at farms, post harvest handling of shrimp, sustainable fishing and various aspects of conservation like protection of mangroves, marine turtles and fish seeds as well as the environment where they are dwelling. Topics such as present status of the fishery resources, exports from the state as well as from India, fish quality management, personal hygiene etc. were also covered in the programmes. NETFISH provided writing pad and pen to each student. Animation and documentary films were shown using LCD projector and leaflets and posters were distributed among the students and teachers. More than 600 students and teaching staffs attended the school programmes.

**Boat Cleanup programmes:** To encourage fishermen for keeping their boats neat and clean and to maintain hygienic conditions onboard, NETFISH conducted boat cleanup programmes at Sankarpur and Deshapran fishing harbours & Shoula landing centre. The programmes included lecture on significances of hygiene and cleaning of fishing boats, fish holds and other accessories. Practical demonstration on sanitation practices onboard was also conducted during these cleanup programmes. NETFISH provided liquid soap and chlorine to the beneficiaries to clean and sanitize fishing boats and equipments. Also, the fishermen were given instruction to not to use bamboo basket and not to practice dry fish activities onboard. Officers of State Fisheries and harbour engineering department also participated in the cleanup programmes and had interactions with boat owners and crew members of fishing boats regarding registration of fishing boats etc. Altogether 47 boats were cleaned as part of the programme.

**Mass Communication programmes:** Mass awareness was created among fishing boat owners, fishermen, stake holders and other people related to fishing and allied activities through Mass Communication programmes. It included mike announcements at Deshapran fishing harbour, Sankarpur fishing harbour,

Shoula landing centre, Digha mohana auction market of Purba Medinipur. During mike campaign the following aspects were communicated:

- ◆ Importance of maintenance of hygienic conditions onboard, at landing centres and fishing harbours.
- ◆ Handling and sorting of the catch onboard, at landing points & auction markets.
- ◆ Cold chain operation and introduction of insulated boxes and PUF fish hold.
- ◆ Personal hygiene.
- ◆ Use of plastic basket instead of bamboo basket.

**Outcomes:**

- Fishermen have started segregating the catch and export worthy fishes, especially shrimps, are immediately washed in chill water and preserved in plastic crates with proper icing in fish holds. This helped them to enhance the quality of fish as well as to fetch better price.
- In Deshapran Fishing Harbour, where NETFISH has fixed wall paintings on “Dos & Don’ts” in the auction hall, the sanitary and drainage systems have improved and auctioning is done on raised platform.
- More than 60% mechanized fishing boats are using insulated fish box and fish hold to preserve their catch.
- More than 80% of trawlers are using plastic baskets/perforated crates instead of bamboo basket for washing their catch.
- All the boats are carrying sufficient ice while going for fishing.
- NETFISH has pasted stickers on “Hygiene & sanitation practices” in the fishing boats and fishermen are now cleaning and maintaining boats, gears and other accessories properly.
- After getting awareness on impact of using harmful chemicals and pesticides on dry fish

almost all dry fish 'Khuties' at Purba Medinipur have stopped such practices.

- ❑ In Purba Medinipur fishermen strictly followed the 47 days closed season for fishing.

**FRESERGANJ, SOUTH 24 PARGANAS**

Freserganj is a potential fishing area in South 24 Parganas, located at the mouth of Bay of Bengal. Around the Freserganj harbour there are a numbers of fishing villages and landing centres (Kailaghata, Dash mile, Jetty ghat & Haripur). Two major fish drying 'Khuties' namely Uttar Bakkhali (Kalisthan) and Paschim Amarabati (Baliyara) are located at Freserganj. Most of the boats are using gill nets and set bag nets (*Behundi*) for fishing.

**Problems identified**

- ❑ Poor sanitation condition in most of the ice plants leads to inadequacy of good quality ice
- ❑ No proper lighting at auction hall and in harbour premises
- ❑ Poor drainage system for waste water and no proper waste disposal facilities in landing centre & fishing harbour
- ❑ No proper cleaning system followed in the fishing harbour & landing centre
- ❑ No proper transportation system from landing centre to auction market
- ❑ Siltation is one of the major problems in the harbour which prevent the smooth entry of vessels
- ❑ Improper handling of fish & ice at fishing harbour and landing centres
- ❑ No proper washing schedule is followed onboard
- ❑ Bamboo baskets are used in some of the boats as well as at landing centre and auction market
- ❑ All boats are not facilitated with insulated fish box

- ❑ Some of the khuties are using harmful chemicals for preserving dry fish
- ❑ At dry fish khuties fish could not be washed properly due to lack of tube well/quality water

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	22
2	Sustainable Fishing/conservation	5
3	Onboard	8
4	Dry fish training	4
5	Street-plays	4
6	Boat cleanup	1
	<b>Total</b>	<b>44</b>

**Street Plays:** Street play shows were arranged at Paschim Amarabati, Bijoybati, Kalilaghata and Dash mile which are located in an around Freserganj Fishing Harbour. Fishermen showed much interest in watching this kind of programmes and more than 1350 beneficiaries had visualized the shows. This programme helps to spread the message of the NETFISH quickly to fishermen community and others.

**Mass Boat Cleanup Programme:** In order to create awareness among fishing boat owners and fishermen about the proper hygienic and sanitation condition of fishing boats, fish hold and other accessories related to fishing, NETFISH took up mass boat cleanup programmes at Freserganj Fishing Harbour and Dash mile fish landing centre on 2<sup>nd</sup> June 2011. Sanitation kit consisting of 1 liter liquid soap, 1 kg of Bleaching powder and a coir brush were distributed to 27 boat owners. The programme included a lecture and practical demonstration on sanitation practices onboard. Secretary and President of Freserganj Fishermen Association and Sunderban Sibpur Dash mile Matsyajibi Welfare Samity attended the programme and distributed sanitation kits to boat owners and fishermen.

### Outcomes

- ❑ About 50% of boats are using plastic basket for handling of fish onboard as well as at landing centre and auction market
- ❑ Boat owners and fishermen are aware about MPEDA's schemes and some of the boats are now using insulated fish box and fetching better price
- ❑ Ice is transported from ice plant to harbour by covering with poly sheet to prevent possible chances of contamination and melting of ice
- ❑ Ice is not dragged on the mud/soiled jetty
- ❑ Fishermen are now carrying adequate ice while going for fishing
- ❑ NETFISH has pasted stickers on "Hygiene & sanitation practices" in the fishing boats and fishermen are now properly cleaning and maintaining boats, gears and other accessories
- ❑ Closed season was observed properly for 47 days at Freserganj fishing harbour and its surrounding landing centres
- ❑ Poor sanitation condition in most of the ice plant leads to inadequacy of good quality ice
- ❑ Proper drainage system for waste water and waste disposal facilities are not available in landing centre & fishing harbour
- ❑ No proper washing schedule is followed onboard
- ❑ Bamboo baskets are used in some of the boats as well as at landing centres and auction markets
- ❑ All the boats are not facilitated with insulated fish box
- ❑ Siltation is one of the major problems in the harbour which prevent the smooth entry of vessels

### KAKDWIP, SOUTH 24 PARGANAS

Kakdwip has a fishing harbour and 3 major fish landing centres namely Namkhana, Akshaynagar & Bhutbhutighat. Due to tidal amplitude fishing boats hardly enter the fishing harbour, instead most of the catch are unloaded at the above said landing centres. About 200 mechanized boats and 100 non mechanized boats are plying from Namkhana fish landing centre and about 3500 fishers are engaged in fishing and allied activities. A total of 650 mechanized fishing boats are operated from Kakdwip fishing harbour and its nearby landing centres. Gill nets dominate trawl nets and other fishing gears. About 25-30% of total catch are contributing for exports, besides that, good quantities of low valued fishes are processed for dry fish.

### Problems identified

- ❑ Lack of infrastructural facilities in the fishing harbour and landing centres

### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	30
2	Sustainable Fishing/ Conservation	10
3	Onboard	7
4	Street Plays	4
5	Medical camps	1
6	Boat cleanup	2
	<b>Total</b>	<b>54</b>

**Street Plays:** NETFISH arranged 4 street plays at Namkhana LC, Narayanpur, Chunpiri & Narayanpur bazar on 13.03.2012 to create awareness among fishers as well general public regarding fish quality management and conservation of fish resources. More than 700 people had visualized the shows. Fishermen are very interested to watch this type of programmes. The programme helps to spread the message of the NETFISH quickly to fishermen community and others.

**Medical Camp:** NETFISH organized free medical

camp on 24<sup>th</sup> March 2012 at Namkhana Fish Landing Centre, Narayanpur, South 24 Parganas to create awareness among fisher folks on health problems and personal hygiene. In the camp a doctor and his team performed various tests such as ECG, Pulmonary Function Test, Blood sugar, Blood Pressure and Blood Group to checkup the general health, Eye, Cardiac, Diabetics, Skin etc. of fisher folk and their family members. Free medicines were dispensed to the patients as per the doctor's advice. The Science Association of Bengal, member NGO of NETFISH, provided spectacles (power glass) in concession price. A register was maintained with all the data including blood group of individual fisher. In addition to this camp, awareness programme on environment aspect was also conducted and distributed leaflets among the fisher folks.

#### Outcomes

- ❑ About 70% boats are using plastic basket for handling fish onboard as well as at landing centre and auction market
- ❑ Boat owners and fishermen are aware about MPEDA's schemes and some of the boats are now using insulated fish box and fetching better price
- ❑ Ice is transported from ice plant to harbour after covering with poly sheet to prevent possible chances of contamination and melting of ice
- ❑ Ice are not dragged on the mud/soiled jetty
- ❑ Fishermen have started segregating the catch and export worthy fishes, especially shrimps, are immediately washed in chill water and preserved in plastic crates with proper icing in fish holds. This helped them to enhance the quality of fish as well as to fetch better price
- ❑ Fishermen are now carrying adequate ice while going for fishing
- ❑ NETFISH has pasted stickers on "Hygiene & sanitation practices" in the fishing boats and fishermen are now cleaning and maintaining boats, gears and other accessories properly
- ❑ At Kakdwip FH ice are kept on poly sheet to avoid contamination from soil, mud and also to prevent possible melting of ice
- ❑ Fishes are segregated on the poly sheet to avoid contamination from soil, mud and dirt at Kakdwip FH
- ❑ Closed season was observed properly at Kakdwip and its surrounding landing centres

#### RAIDIGHI, SOUTH 24 PARGANAS

Raidighi is 110 kms away from Kolkata, and known as the gateway of South Sundarban which is rich in biodiversity and covered with rivers, creeks and mangrove forest. Raidighi is connected with various islands and fishing villages. About 300 mechanized boats and 250 non mechanized fishing boats are being operated from Raidighi fish landing centre. Further, a numbers of boats from other landing centres of Sundarban are also unloading their catch at Raidighi landing centre. Raidighi has a fish auction market near to the landing centre.

#### Problems identified

- ❑ Boats, nets and other accessories are not properly cleaned in some of the boats
- ❑ Bamboo baskets are being used for washing and handling of catch onboard as well as at landing centre
- ❑ Lack of infrastructural facilities in landing centres and auction market
- ❑ Poor hygienic and sanitation condition at auction market
- ❑ Sanitation condition in some ice plants is poor
- ❑ Inadequacy of good quality ice
- ❑ Small meshed gill nets are being used by fishermen which leads to destruction of juvenile fishes
- ❑ Gill netters are not sorting and storing their catch separately. Instead they made a heap in the fish hold that may enhance the spoilage of fish



- ❑ Peeling is done at unhygienic conditions in landing centres and its surroundings.
- ❑ Most of the gill netters are facilitated with winch and other accessories to operate trawl net; as a result bottom trawling is destructing the marine resources, juveniles as well as bottom strata.

### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	12
2	Sustainable Fishing/ conservation	4
3	Onboard	1
	<b>Total</b>	<b>17</b>

### Outcomes

- ❑ Ice is not dragged on the mud/soiled jetty
- ❑ Fishermen are now carrying adequate ice while going for fishing
- ❑ A good number of boats have started using plastic basket for handling of fish
- ❑ After intervention of NETFISH some of the boats are now using insulated fish box
- ❑ Closed season is observed properly at Raidighi and its surroundings
- ❑ NETFISH has pasted stickers on “Hygiene & sanitation practices” in the fishing boats and fishermen are now cleaning and maintaining boats, gears and other accessories properly

### Programmes in areas other than selected areas/harbour

#### Aqua Farm programme:

NETFISH conducted awareness programmes at aqua farms in collaboration with State Fisheries Dept. and MPEDA SRC (Aqua), Kolkata. While conducting awareness programmes at aqua farms in Purba Medinipur, South 24 Parganas and North 24 Parganas districts, NETFISH campaigned on PHT and

registration of farm / bheries with the Coastal Aquaculture Authority of India (CAAI)/ designated authority (Fish Producer License). Notice was distributed among the farmers, auctioneers and stake holders to make them aware on abuse of antibiotics and need of Pre Harvest Test. District wise details of aquafarm programmes are given in the table below.

Sl. No.	Type of programme	Total Programmes Conducted
1	Purba Medinipur	50
2	South 24 Parganas	5
3	North 24 Parganas	15
	<b>Total</b>	<b>70</b>

In the year 2011-12 NETFISH has introduced a new Street play on aquaculture called “VIRUS” to create awareness among aquafarmers as well general public regarding Best Management Practices of Aquaculture shrimp, post harvest handling of shrimp, environment and different upcoming issue of government rules and regulations.

### Outcomes:

- ❑ After conducting continuous awareness programmes at aqua farms on abuse of antibiotics, no consignment of black tiger shrimp were rejected due to presence of residual antibiotic in West Bengal
- ❑ All the farms at Purba Medinipur are carrying adequate ice while harvesting of shrimp
- ❑ Chill killing and proper washing of shrimp in chill water after harvest are being followed in 80% of aqua farms at Purba Medinipur
- ❑ About 80% farms at Purba Medinipur have constructed sheds laid with poly sheet at the harvest point to protect the catch from direct sunlight
- ❑ After intervention of NETFISH, farmers are well aware about muddy-moldy smell problem in black tiger and they are removing

the black soil at the time of pond preparation

- About 60% of aqua farms are following bio-security measures such as using crab fencing, bird fencing, potassium permanganate solution for bleaching water etc
- About 20% of new farms were developed in Purba Medinipur district in the year 2011-12

**Training programmes to Preprocessing workers:**

For preprocessing workers NETFISH conducted 20 training programmes during 2011-12. The area wise details are as given in the table.

Sl. No.	Type of programme	Total Programmes Conducted
1	Purba Medinipur	1
2	Kolkata	11
3	South 24 Parganas	2
4	North 24 Parganas	6
	<b>Total</b>	<b>20</b>

**Plastic basket distribution programmes:**

NETFISH, Kolkata organized Plastic basket distribution programmes to create awareness among boat owners and fishers about hygienic handling of catch and avoid usage of bamboo baskets at different coastal districts of West Bengal. Round perforated plastic baskets, 500 nos., were supplied through Fishermen Associations to boat owners at Namkhana, Dashmile, Digha, Bijoybati, Raidighi and Kakdwip fishing harbours.

**Meetings and other activities**

- NETFISH participated in an awareness programme on 'Online registration of fishing boats', 'biometric identity card for fishers' and 'Safety at sea' organized by Asst. Director of Fisheries (Marine) and Coast Guard on 14<sup>th</sup> July 2011 at Kakdwip Fishing

Harbour. NETFISH activities and various subsidy schemes of MPEDA were briefed to the attendees by NETFISH NGO. Also, NETFISH distributed round plastic baskets to the boat owners to popularized plastic basket instead of using bamboo basket for handling of fishes.

- In an awareness programme on "Eco-Friendly and Sustainable Aquaculture" organized by MPEDA, SRC (Aqua) at Nodakhali, Budge budge-II, South 24 Parganas, NETFISH State Coordinator took a class on "Muddy – moldy smell problem in shrimp and scampi and abuse of antibiotics" and also highlighted on various schemes of MPEDA to develop aquaculture. About 80 farmers participated in the awareness programme.
- State Coordinator- NETFISH attended the farmer's meet organized by NaCSA on 18<sup>th</sup> August'11 at Meen Bhaban Contai. About 33 farmers from various societies of Purba Medinipur participated in the meeting. Sourcing of healthy seed, setting up nursery for shrimp seed by Society farmers, establishment of tube ice plant for farmers, licensing problem of aqua farms, PHT certificate etc. were discussed during the meeting.
- On 3<sup>rd</sup> November'11 State Coordinator had attended a meeting called by Managing Director of West Bengal Fisheries Corporation (WBFC) at Deshapran fishing harbour at Petuaghat, Purba Medinipur regarding up gradation and development of the harbour and starting auctioning at the harbour. About 60 boat owners attended the meeting. State Coordinator highlighted the importance of requirement of hygiene & sanitation condition in fishing vessels, fishing harbour etc.
- On 15<sup>th</sup> March & 22<sup>nd</sup> March 2012 State Coordinator attended two awareness programmes to SC/ST Farmers on Sustainable Aquaculture organized by MPEDA SRC (Aqua), Kolkata at Contai, Purba Medinipur and Bermajur, North 24 Parganas

respectively and delivered a talk on “Post Harvest Handling of Shrimps, different quality issues for export of shrimp, Pre-Harvest Test etc. and also shown documentary film on “Hygienic handling of Shrimp” and “Abuse of Antibiotics”.

## 7.2 ODISHA

Odisha has a coast line of 480 Km spread over the six marine coastal districts. The state offers scope of livelihood in fishing both in inland and marine sectors. The fishermen population is about 12 lakhs, of which about 8 lakhs are in inland and 4 lakhs in marine sector. The economic status of the fishermen is generally below poverty line. Paradeep and Dhamara are the two major harbours of the state complemented by 28 main landing centres.

In capture fisheries the different types of fishing method followed are trawler fishing, gill-netter, mechanized country boats, country boats, etc. In trawler and gill-netter the fish quality is better than other fishing method. In culture fisheries, prawn farming is important which includes both fresh water and brackish water farming. In Odisha brackish water prawn farming is dominant over fresh water prawn farming. Regarding quality management the culture fisheries quality is better than capture fisheries.

During 2011-12, NETFISH conducted 295 programmes in Odisha which included 253 regular programmes and 42 special programmes. The selected areas for NETFISH activities in Odisha for the year were Paradeep, Bahabalapur, Balaramgadi and Chilka.

### PARADEEP FISHING HARBOUR (P.F.H.)

Paradeep Fishing Harbour is one of the largest fishing harbours of Odisha. The fishing harbour was previously operated by Paradeep Port Trust, but on 27<sup>th</sup> September 2011 the harbour was handed over to State Fishery Dept. and at present the Harbour Management Society looks after the harbour. Most of the essential infrastructure facilities are available in the harbour. Around 550 nos. of mechanized

fishing vessels are operated from this fishing harbour. The state fisheries department has posted officials like Asst. Director of fisheries (ADF) and Junior Fishery Officer (JFO) to look after the day to day fishing and administrative activities at this harbour.

### Problems identified

- Damaged auction hall floor, walls, roof and drainage
- Lack of water and electricity supply to auction hall
- Siltation in harbour area
- Unhygienic practices like selling and chewing pan, smoking cigarettes inside auction hall
- Handling of fishery product on floor of auction hall
- Raised platform is not used for auctioning
- Auction hall not maintained and cleaned properly
- Harbour water is used for washing raw material during auctioning
- Ice is crushed on floor
- Harbour premises are not kept cleaned
- Bamboo baskets are used in all trawlers
- Fishing crafts are not cleaned properly
- Poor knowledge on fish quality among boat crew members

### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	10
2	Sustainable Fishing/ conservation	07
3	Onboard	26
4	Preprocessing	03
5	Dry fish training	03
	<b>Total</b>	<b>49</b>



**Outcomes**

- Most of the trawlers are carrying sufficient ice while going for fishing
- The system of ice crushing has improved. Block ice is crushed near the trawlers and collected directly in trawlers
- Due to NETFISH awareness programmes, a few trawler owners converted their traditional raw material storage system to crate type storage system
- All fishing vessels are cleaned regularly
- In trawlers, plastic baskets are being used instead of bamboo baskets
- Harbour premises are cleaned on daily basis
- Cleaning using detergent and hypochlorite is going on daily basis at old auction hall
- Paradeep harbour management society has been formed and is now looking after the overall development of the Harbour

**BAHABALAPUR FISHING HARBOUR**

Bahabalapur Fishing Harbour in Balasore district is one of the largest fish landing sites of Odisha. The fishing harbour operated under state fisheries department is having almost all the required infrastructure facilities. Around 250 nos. of mechanized fishing vessels are being operated from this fishing jetty. The state fishery official (A.D.F.) posted in this region is the administrative head and now FISCOFED a govt. approved federation looks after this fishing harbour.

**Problems identified**

- One part of the wharf is broken
- Auction area is not used by trawler members
- Boundary wall is absent in one side of the fishing jetty
- No security in main gate
- No management society
- Main gate is in broken condition

- Vehicle Parking space is not defined
- Use of bamboo baskets by trawlers
- No permanent sweeper for regular cleaning of the harbour
- Common toilet facility is not in regular operation
- No area is demarcated for net mending work
- Transportation of block ice without cover
- Non availability of cleaning and sanitizing materials in nearby area

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	10
2	Sustainable Fishing/ Conservation	06
3	Onboard	10
4	Preprocessing	02
5	Aqua farm training	04
6	Dry fish training	02
7	Street-plays	02
8	Other Special programmes	01
	<b>Total</b>	<b>37</b>

**Outcomes**

- Use of sufficient ice while going for fishing by trawlers and gill netters
- Crushed ice is collected directly in plastic crates from the crusher
- Ninety percent of trawlers and gill netters are equipped with crates for storage of their catch inside the fish hold
- Complete fishing ban was observed during ban period
- As a result of NETFISH awareness

programmes, the members of Bahabalapur Trawler Association constructed a new concreted auction area by their own with a cost of around Rs 50 lakhs

- ❑ Fifty percent of fishing boats are now using round plastic basket instead of bamboo basket

#### **BALARAMGADI FISH LANDING CENTRE**

Balaramgadi Fish landing centre in Balasore is also a large fish landing centre of the state. It is a natural fish landing centre having beach landing option. Around 600 nos. of mechanized fishing vessels are being operated from this landing centre. The landing centre is under the state fisheries department.

#### **Problems identified**

- ❑ The small jetty like structure in this landing centre is not useful for fishing boats to berth
- ❑ Fishing vessels are unable to land directly in the landing platform as there is no sufficient depth and water
- ❑ Small country boats carry raw material from trawlers and gill-netters to the shore and land the catch in open beach
- ❑ From the beach, rickshaws carry the catch to landing centre /procurement centres
- ❑ No auction hall and raised platforms in the landing centre
- ❑ Trawler owners auction the catch in their own go downs
- ❑ People sometime use the beach for toilet purpose
- ❑ Approach roads to landing centre not in good condition
- ❑ Around 13 nos. of unauthorized peeling sheds are running in this landing centre
- ❑ Bamboo baskets are used in trawlers and go downs
- ❑ No roof cover in Ice crushing centre

#### **Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	12
2	Sustainable Fishing/ conservation	08
3	Onboard	13
4	Preprocessing	10
5	Aqua farm training	03
6	Dry fish training	04
7	Street-plays	03
	<b>Total</b>	<b>53</b>

#### **Outcomes**

- ❑ Trawlers and gill netters are now carrying sufficient ice while going for fishing
- ❑ Crushed ice is collected directly from the crusher into plastic crates without allowing falling on floor
- ❑ Roof cover is made in most of the ice crushing centres
- ❑ Ninety percent of trawlers and gill netters are equipped with plastic crates for keeping their catch in the fishing vessel
- ❑ Fifty percent of fishing boats are now using round plastic basket instead of bamboo basket
- ❑ Insulated Fish Boxes are used for storage of economically important species
- ❑ Complete Fishing ban was observed during ban period
- ❑ Daily cleaning is going on in almost all procurement centres before and after work
- ❑ As a result of NETFISH awareness programmes, the members of Balaramgadi Trawler Association have constructed go down with concrete floor by themselves for auctioning

- Trawlers have started using plastic basket instead of bamboo basket

plastic bags/open trays/thermo cool boxes, etc.

**CHILKA**

Chilka, the largest brackish water lagoon in Asia is situated in the East Coast of Odisha. It is one of the main sources of capture fisheries of Odisha and the fisheries output shares more than 70% of Chilka’s economic value. Chilka provides livelihood to about 2,00,000 fishermen living in 127 villages located in and around Chilka. However it is of concern on the fisheries pressure due to vitalization of economic activities and increasing population. Since the traditional fishers depend on limited natural resources in the lagoon, their livelihood is quite vulnerable to these negative impacts. Therefore it is an important issue to improve and stabilize the livelihood of people in extreme poverty around the lagoon while simultaneously protecting the wetland.

The Chilka Development Authority (CDA) is an autonomous agency of government of Orissa which look after the overall development of the Chilka lagoon including fishery, tourism, conservation and protection of the lagoon. In order to promote awareness for conservation and sustainable use of natural resources in Chilka lagoon, CDA and NETFISH are conducting intensive extension training programmes jointly for fishers in the lagoon with the support of Orissa State Fisheries Department from the year 2009-10 onwards.

**Problems identified**

- Poor infrastructure facilities in landing centres of Chilka area
- Ice plant is not available near to fisherman villages in Chilka area
- Most of Fishermen are illiterate and they are still using the traditional method during post harvest handling of fishery product
- In Chilka Lake the fishermen are not using ice
- All Fishermen are not using the insulated ice box to preserve their catch, instead are using

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	15
2	Sustainable Fishing/ conservation	45
3	Onboard	10
4	Street-plays	25
5	Medical camps	04
	<b>Total</b>	<b>99</b>

**Medical Camp:** In order to raise awareness as well as to build community relationships, NETFISH organized free medical camps during December 2011 for the fisher folks who depend on the Chilka resources for their livelihood. Four free medical camps were conducted benefitting the fishers from 6 fishermen villages along Chilka viz. Baghalanzi, Borakudi, Mota, Gopinathpur, Banamalipur and Gola. A pathologist and an assistant provided their service for the camps which were organized with the support of NETFISH member NGO, RPRDS.

The camps which functioned from 10 am to 4 pm every day were arranged at places where the fisher folks have easy access. More than 400 people turned up for the medical camps in which ‘blood group’ of all the attendees was determined and each was provided with a ‘blood group card’ consisting of their name, address, age, sex and blood group. NETFISH logo and contact details were also printed on the card. A register was maintained with all the data including blood group of individual fisherman. In addition, NETFISH used the camp as an opportunity to raise awareness on basic health issues, personal hygiene, fish quality, sustainable use of Chilka fishery resources, activities of NETFISH, need of activation of their Primary Fishermen Co-operative Society (PFCS) etc. It was also a chance for NETFISH to collect data on the villages and the main activities,

concerns, socioeconomic conditions, etc of the people in that area. The villagers responded positively to the discussions and expressed their appreciation for making an effort to bring attention to their issues. The camps which reached the door step of fisher folks to examine their blood created a great enthusiasm as this was a completely new experience for them. The main motive behind this medical camp was to involve all fisher folk of the particular fishermen village with NETFISH activities which was not possible alone by conventional extension training classes.

**Street Plays:** In the year 2011-12 a total of 25 street play programmes were conducted by NGO member-RPRDS in Chilka periphery to create awareness on fish quality management and sustainable use of Chilka resources. The subject covered mainly on use of ice, preservation of catch in ice boxes, use of insulated ice boxes provided through MPEDA subsidy schemes, activation of P.F.C.S., avoid zero net mesh during fishing, avoid 'Gheri' culture, avoid larvae collection, etc.

#### Outcomes

- ❑ Chilka fishers are using Insulated fish boxes (IFBs) supplied by M.P.E.D.A through C.D.A.
- ❑ 1545 nos. of insulated fish boxes are supplied through M.P.E.D.A. scheme till date
- ❑ Price of Chilka fishery product has increased by more than 30% after the use of IFBs
- ❑ New Ice plants have been set up in Chilka region by private parties due to high demand of ice by Chilka fishermen
- ❑ Due to NETFISH awareness programmes, few Primary fishermen co-operative societies have started their own fish trading business in Chilka area

#### Details of Programmes in areas other than selected areas/harbour

##### DHAMARA FISHING HARBOUR

Dhamara fishing harbour is the most modern fishing harbour in Odisha. An ice factory is being run by OPDC, a State Govt. Organization

inside Dhamara fishing harbour. The Harbour Management Society runs the Dhamara fishing harbour. This fishing harbour was developed through Technical Collaboration Project (TCP) by F.A.O.

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Sustainable Fishing/conservation	01
2	Onboard	43
3	Aqua farm training	05
4	Other Special programmes	08
	<b>Total</b>	<b>57</b>

#### 7.3 ANDHRA PRADESH

The State of Andhra Pradesh is having a bountiful of fishery resources with coast line of 974 Km spread in 9 coastal districts. The coast of AP is having 4 major fishing harbours namely 1.Visakhapatnam, 2.Kakinada, 3.Machilipatnam, 4.Nizampatnam and 36 major and minor fish landing centres. Andhra Pradesh ranks fifth in marine fish production. The inshore areas are relatively over-exploited while the off-shore marine fishery wealth is under-exploited. About 1240 Mechanized boats, 5056 Motorized boats and 17762 traditional boats are being operated in AP coast. Andhra Pradesh ranks first in brackish water shrimp production.

During 2011-12, NETFISH conducted 287 programmes in Andhra Pradesh which included 222 regular programmes and 65 special programmes. The selected areas for NETFISH activities were Visakhapatnam, Kakinada, Machilipatnam, Nizampatnam, Nellore and Bhimavaram.

##### VISAKHAPATNAM

The fishing harbour is operating with 600 mechanized fishing vessels. This harbour is in the premises of Visakhapatnam port trust. It is having fish landing centres of Pudimadaka and Mangamaripet which are beach landing centres

but the major landings are big size Tuna

**Problems identified**

- Use of bamboo baskets for handling catch
- Salt curing and drying practices inside the fishing harbour
- Unhygienic handling of ice by single day fishing vessels
- Lack of water supply for regular cleaning operations
- Improper sanitation activities in fishing harbour
- Landing of Tuna fish with low grade quality

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	48
2	Sustainable Fishing/ conservation	23
3	Onboard	3
4	Preprocessing	1
5	Street-plays	10
6	Boat registration campaigns	4
7	Mass communication	7
8	Ice Plants	2
	<b>Total</b>	<b>98</b>

**Plastic Basket Distribution Programme:** As per the decision of the committee, including State Fisheries Dept. officials, 2 Mechanized boat owners associations and NETFISH, formed for the distribution of plastic baskets, a programme was conducted on 18.05.2011 to distribute 750 small baskets purchased with contingency amount to the associations and 150 fishing vessels. The local fish traders were urged to avoid using small bamboo baskets which are causing financial loss to them. Now the traders are also pressurizing boat owners to keep small plastic baskets. Finally the mechanized boat

owners started purchasing more plastic baskets as per their requirement and now most of the fishing vessels are with small plastic baskets for handling fish as well as ice.

**Mass communication programmes:** At Visakhapatnam fishing harbour 4 mass communication programmes were conducted on 29.09.11 for motivating the fishermen to practice hygienic handling of catch onboard and at fishing harbours. Mass communication programmes were conducted by using mike canvassing in an auto. An audio cassette on Hygienic handling of ice and catch was prepared in Telugu for the purpose. As an after effect of these programmes now most of the traders are not disposing the wastes on roads. Instead, they are collecting the waste and keeping in one place for easy disposal by Visakhapatnam Port Trust.

**Ice Plant awareness:** NETFISH in association State fishery officials conducted 2 ice plant awareness programmes on 18.10.11 and advised ice plant owners to maintain hygiene while handling ice. During the programme Fishery Development Officer of State Fisheries Department, Visakhapatnam inspected the ice plants and issued the notices for rectification. As a result, all the ice plant owners have kept their ice crushers painted to avoid rusting and ice handling practices in ice plants have improved.

**Boat to boat awareness programmes:** NETFISH conducted 7 awareness programmes in which each boat is inspected and pasted the sticker depicting messages on 'Hygienic handling practices onboard' prepared in local language. The State fishery officials also associated with NETFISH in the programme. During the programme Harbour Hygienic Inspector and Assistant Director of State Fisheries Department, Visakhapatnam inspected the fishing vessels and issued the notices for rectification of deficiencies. As an impact of the awareness programmes, now most of the fishing vessels are kept clean by regular washing with detergent.



**Special awareness programme:** On 31.10.11 conducted a programme on hygienic fishing harbour at AP Mechanized Boat owners Welfare Association, Visakhapatnam. JD and AD of State Fisheries Dept., Visakhapatnam and Vice President and Secretary of Mechanized Boat Owner's Association attended the programme and had discussions with boat owners and Dry fishers regarding hygiene in fishing harbour.

**Street plays:** NETFISH conducted 10 street play shows in 2 days in Visakhapatnam fishing harbour and nearby major fish landing centres. The street plays covered aspects such as Fish quality management and Conservation of fishery resources. Street plays helped wide spread of NETFISH messages among all the fishermen communities. Fishermen are now aware on hygienic handling of catch and conservation of fishery resources.

**Awareness programmes** are conducted among the fiber boat owners of Pudimadaka and Visakhapatnam for the supply of fish in live condition to the mother vessels of exporters at sea. Sashimi grade Tuna and its export demand at International markets were explained to them. A direct linkage was developed among Fishermen societies and exporter to save the quality of tuna. Now the fiber boat owners have started supplying tuna fish to the mother vessels of exporters at sea.

#### Outcomes

- Mechanized fishing vessel owners have started using the newly introduced plastic baskets in their fishing vessels
- Plastic baskets are used for loading ice in the fishing harbour
- Local fish traders are habituating to the small plastic baskets
- Ice handling practices have improved in single day fishing vessels. The ice keeping area is cleaned before loading ice. The practice of loading ice directly from the truck to the fishing vessels is continuing
- Ice plant owners are interested in keeping automatic ice loading machines in the

fishing harbour due to hygienic and fast loading of ice in to multi day fishing vessels

- Cleaning of fish contact surfaces onboard using scrubbers and detergent were observed at Visakhapatnam fishing harbours
- Sanitation at Visakhapatnam fishing harbour has improved. The fishing harbour premises are cleaned on a regular basis.
- The boat owners association want state fisheries to hand over the cleaning machine to them and repairing with their own funds and making ready to use for regular cleaning operations with their own staff.
- Fiber boat owners have started supplying tuna fish to the mother vessels of exporters at sea
- Boat owners are supporting to avoid trash fish landing
- Some of the boat owners are changing their gear from trawl net to hook and line or gill net
- The fishing boats are carrying insulated boxes for chilling of Tuna

#### KAKINADA

The Kakinada fishing harbour is maintained by the Dept. of State Fisheries. Nearly 270 mechanized fishing vessels are being operated from this harbour. Uppada and Kumbabishekam are the nearby fish landing centres which are beach landing centres. The major landings are fishes and shrimps.

#### Problems identified

- Repacking of fish after auctioning is done outside the exporter cubicles
- Unclean fish contact surfaces in fishing vessels
- Usage of bamboo baskets
- Unhygienic ice loading practices
- Poor cold chain operation in fiber boats
- Unhygienic fish drying practices at Uppada fish landing centre

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	22
2	Sustainable Fishing / conservation	31
3	Onboard	2
4	Dry fish training	12
5	Preprocessing	3
6	Aqua farms	4
7	Street-plays	10
8	Boat to Boat campaigns	3
9	Mass communication	4
	<b>Total</b>	<b>91</b>

**Street Plays:** Apart from the regular extension programmes 10 street play shows were conducted in 2 days in Kakinada fishing harbour and nearby major fish landing centres. The street plays which covered fish quality management and conservation aspects were well accepted by the stakeholders.

**Boat to Boat Campaign:** In Kakinada harbour 3 boat to boat awareness programmes were conducted along with the State fishery officials. NETFISH sticker in local language on Hygienic handling practices onboard were pasted in 100 fishing vessels covered during the programme. Personal interaction with crew members on hygienic handling of catch were also carried out during the programme. Assistant Director and Harbour Hygienic Inspector of State fisheries Department inspected the fishing vessels and issued the notices for rectification of deficiencies. As an impact of the boat to boat canvassing programmes now most of the fishing vessels are carrying out regular cleaning activity using detergent.

**Mass communication programmes:** Auto canvassing on Hygienic handling of catch onboard and at fishing harbours was conducted

at Kakinada fishing harbour and nearby fish landing centres. Four such mass communication programmes were conducted during the year. An audio cassette containing messages on Hygienic handling of ice and catch was prepared in local language for the programme. As a result of these mass communication programmes now most of the traders are not disposing the wastes on roads. Instead they are collecting the waste and keeping in one place for easy disposal by sweepers engaged by Fishing Harbour Management committee.

**Outcomes**

- Improvement in hygienic handling of materials purchased by exporters. Most of the traders are using cubicles for auctioning. Most of the exporters are crushing ice directly from the ice truck
- Usage of plastic baskets is intensified at fishing harbour
- The fishing harbour is cleaned on regular basis and the wastes are disposed in waste bins provided by fishing harbour management committee
- Some of the boat owners are diverting their regular trawl fishing to more selective long line hook systems
- Dry fishers are using PVC sheets and covering the salt curing cement tanks with cemented lids
- Multi-day fishing Inboard motorized craft (IBM) are now carrying ice in insulated boxes in their fiber boats. They also seek MPEDA assistance for construction of permanent fish holds in the fiber boats
- Dry fishers of fishing harbour are shifting their activity to 1.5 acres of area officially provided to them by the Port Trust

**MACHELIPATNAM**

Machelipatnam fishing harbour is maintained by the Dept. of State Fisheries. About 97 mechanized fishing vessels operate from this harbour. Gilakaladindi and

Manginapudi are the nearby beach landing centres. The major landings at this harbour are of fishes and shrimps.

#### Problems identified

- No proper maintenance of infrastructure facilities
- Floors are damaged
- Lack of regular cleaning schedule
- Improper use of facilities

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	5
2	Sustainable Fishing / conservation	10
3	Preprocessing	11
	<b>Total</b>	<b>26</b>

#### Outcomes

- Stake holders are making proper use of infrastructure facilities available in the harbour
- Weighing of catch is done inside the auction hall
- Trolleys are used for transferring catch from the boat to packing section
- The fiber boat owners are carrying enough ice for keeping fish fresh. Some of the fiber boat owners are carrying ice in insulated boxes. Some of them are constructing permanent insulated boxes in their boats with puff
- 40 fishing boats are converted to Gill net fishing by modifying the regular trawl fishing vessel. They have modified the fishing vessel by replacing the cabin and making place for keeping around 3 tons gill net
- Awareness was created among the boat owners of Machelipatnam on MPEDA subsidy schemes for Insulated fish holds. Some of the boat owners have availed the MPEDA subsidy schemes

- At Pre-processing centers the premises are kept clean and all the utensils are properly cleaned. Floor peeling was changed to peeling on stainless steel tables in one pre-processing center. Shrimp cleaning tanks are constructed using tiles

#### NIZAMPATNAM

Nizampatnam fishing harbour is maintained by the Dept of State Fisheries and around 170 mechanized fishing vessels are being operated from this harbour. Odarev is the major fish landing centre near Nizampatnam harbour and it is a beach landing centre. The major landings are fishes and shrimps.

#### Problems identified

- Sanitation in the fishing harbour has to be improved
- Fishing vessels are not cleaned regularly
- Weighing and auctioning is mostly done outside the auction hall
- Boat owners are not utilizing the fish hold subsidy scheme
- Upgradation is required at Pre-processing centers

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	10
2	Sustainable Fishing / conservation	8
3	Preprocessing	9
	<b>Total</b>	<b>27</b>

#### Outcomes

- Trolleys are used to transfer crushed ice to the fishing vessel hygienically
- Traders have started using raised platforms to keep the landed materials
- As a result of NETFISH awareness programmes on hygienic fishing harbours, the stake holders and boat owners demanded for facility for regular cleaning



activities in the harbour and the Port has arranged separate bore well with pipe lines and hose for the purpose. Regular sanitation is observed in the harbour

- ❑ Some of the bottom trawlers are now converting to the gill net vessels for selective fishing
- ❑ Pre-processing centers are kept neat and clean. Workers are regularly cleaning the utensil and floor with detergent

**NELLORE & BHIMAVARAM**

Nellore in Nellore district and Narsapuram near Bhimavaram, in West Godavari District are very potential areas for aquaculture. The major aquaculture species are *Penaeus monodon*, *Macrobrachium rosenbergii*, *Litopenaeus vannamei* and a few carps. Aquaculture practices have intensified and have become the main cultivation in this area. In West Godavari District more than 75 thousand acres are brought under aquaculture and in that especially Narsapuram division alone 50 thousand acres are brought under aquaculture.

**Problems identified**

- ❑ Poor bio-security measures
- ❑ Poor in cold chain operation at aqua-farms
- ❑ Unhygienic handling during harvesting at culture ponds
- ❑ Improper knowledge on Post Harvesting Test (PHT) reports
- ❑ No pond registration systems with any authority
- ❑ Poor in record writing and keeping

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Aqua farm training in Nellore	11
2	Aqua farm training in Bhimavaram	9
3	Street Plays	25
	<b>Total</b>	<b>45</b>

**Street plays:** A new street play on aquaculture aspects such as BMPs, abuse of antibiotics in aqua farms etc. was developed during the year and performed 25 shows in 5 days covering Aqua feed and chemical shops, Atmakuru Bus stand, identified centers of Nellore town, Ramudupalem, Kudithipalem, Koraturu, Gangapatnam, Maipadu, Pudiparthi, Pallipalem and Gangapatnam villages. The major beneficiaries of the programme were the NaSCA Society farmers, small scale aqua farmers and farm workers. The street plays could create a very good response among them. Around 1700 aqua farmers have utilized the street play shows which brought better awareness among the aqua farmers, farm workers and other stake holders on banned antibiotics and Better management practices.

**Special Awareness Programmes:** In April and May 2011 NETFISH conducted special awareness programmes on banned antibiotics to the Aqua farmers Feed and chemical shops, Aqua labs and Hatchery owners. Also visited aqua-farms of NaSCA Societies along with NaSCA coordinator and Field Managers and fixed the posters containing information on banned antibiotics.

**Outcomes**

- ❑ The aqua-farmers in Narsapuram have started practicing chill killing
- ❑ Before going for harvesting farmers ensure enough quantity of ice at site
- ❑ Farmers are aware of PHT and are reporting with MPEDA ELISA labs
- ❑ Awareness was created among the aqua farmers to register their ponds with the departments concerned
- ❑ More numbers of aqua farmers are becoming members in NaSCA societies

**Other Activities**

- ❑ On 22.06.2011 State Institute of Fisheries Technology (SIFT) Kakinada organized a Coastal Fishermen Community leaders training programme. NETFISH State

Coordinator attended the programme as a special invitee to take a lecture class on Hygiene in Fishery products and Fishing harbours. The programme was attended by 25 trainees from 4 coastal districts of AP. NETFISH documentary on “Hygiene in Fishing Harbours” was also shown in the programme.

- On 09.02.2012 a platform was setup at Visakhapatnam for the Mechanized Boat owners for the registration and renewal of registration of their fishing vessels with MPEDA. The MPEDA subsidy schemes were explained to them at the counter. The programme was arranged with the cooperation of MPEDA RO, Vizag. Applications were accepted on the spot. About 20 applications for new vessel registration and 25 applications for renewal were received during the programme. As a result of this programme more boat owners are approaching MPEDA for renewal and new registrations.

#### 7.4 TAMIL NADU

Tamil Nadu is having a coastline of 1076 kms. It has 13 Coastal Districts and 591 fishing villages with a total marine fishers population of about 8.92 lakhs, of which 2.60 lakh fishermen are actively engaged in fishing. The marine fishery resources comprise of 1.9 lakh sq. km of Exclusive Economic Zone (EEZ) and a continental shelf of about 41,412 sq kms. The Fishing fleet strength of Tamil Nadu includes 6700 mechanized fishing crafts and 54163 traditional crafts (21898 vallams and 32,265 catamarans). Tamil Nadu ranks third in Marine fish production and the annual marine fish catch for the year 2010-11 was 4.04 lakh tonnes. The State has the potential to emerge as a major exporter of marine products. During 2010-11, about 84,495 M.T. of marine products valued at Rs.2802 Crores was exported from the state. There are 3 major fishing harbours (Chennai, Tuticorin and Chinnamuttam Fishing Harbours), 4 medium fishing harbours and 10 fish landing centres developed in the state, for safe berthing of boats and for hygienic landing and handling

of fish catches.

During 2011-12, NETFISH conducted 561 programmes in Tamil Nadu which included 434 regular programmes and 127 special programmes. The selected areas for NETFISH activities in Tamil Nadu for the year 2011-12 were Kasimedu, Cuddalore, Pazaiyar, Nagapattinam, Tuticorin, Chinnamuttam, Mandapam and Mallipattinam.

#### KASIMEDU FISHING HARBOUR

The fishing harbour at Chennai is one of the major fishing harbours on the East coast of the country. Over a dozen big deep-sea trawlers, more than 729 mechanized fishing boats, hundreds of motorized and rowed catamarans operate here, bringing annually around 2,000 tonnes of fish, half of which is exported. It is a place where some 20,000 people including fishermen, auctioneers, ice manufacturers and traders make their livelihood from. The Chennai Port Trust constructed the fishing harbour at Kasimedu, located adjoining the northern end of the port. The 24.28-hectare fishing harbour was commissioned in 1983 with a northern breakwater of 830 metre; eastern breakwater of 1,085 metre; a trawler wharf of 495 m and a large auction/packing hall. Due to poor construction, wharf and auction hall are severely damaged. Under NFDB and centrally sponsored scheme the harbour upgradation work has been started with construction of 495 m long new wharf and auction hall and other infra structure facilities.

#### Problems identified

- Lack of auction hall
- Dragging and crushing of ice on the floor
- Use of cod ends with mesh size less than 35 mm in trawl nets
- Usage of bamboo baskets
- No proper waste management
- Dumping of by-catch on the wharf
- People use beach as a toilet
- Unhygienic practices of dry fish handling

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	48
2	Sustainable Fishing/ conservation	39
3	Onboard	13
	<b>Total</b>	<b>100</b>

**Outcomes**

- Almost all mechanized boats have started using plastic baskets for handling export items
- Improved onboard hygienic handling of fishes such as washing of boat deck before and after fishing and proper storage of fishes in fish holds
- The FRP boat owners have started carrying enough ice for one day fishing
- NETFISH has propagated the information on MPEDA Fish Hold subsidy and as a result several fishermen have applied for the subsidy and some of them even collected advance approval
- As a result of onboard training programme, fishermen themselves are avoiding throwing plastic materials in to the sea

**CUDDALORE FISHING HARBOUR**

The Cuddalore District has a coastal length of 57.5 Km harbouring 49 marine fishing villages with a total population of 49,113. The Fishing fleet strength of Cuddalore District includes 672 mechanized boats, 1,111 FRP Vallams and 5,538 wooden catamarans. This Fishing harbour belongs to the Port Trust and is managed by State Fisheries Department. There are no infrastructure facilities available at the harbour except wharf and diesel bunks. The wharf is 280 m long and 5 m wide. For repairing of wharfs and other facilities at Cuddalore Fishing harbour state government has allotted Rs 11 Crores.

**Problems identified**

- Purse seine, which is banned by State government, is still in operation at Cuddalore FH
- Since there is no infrastructure facility, hygienic handling of fishes at fishing harbour is poor

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	7
2	Sustainable Fishing/ conservation	24
3	Onboard	5
4	Street-plays	52
	<b>Total</b>	<b>88</b>

**Street plays:** Fish quality management and conservation of marine fishery resources were the major themes of the street plays conducted in and around Cuddalore fishing harbour. A total of 52 programs were conducted during the year. Through the street play programmes, fishermen understand the impact of juvenile fishing and need for conservation of fishery resources.

**Outcomes**

- Plastic baskets have replaced bamboo baskets for loading and unloading fishes
- Fishermen are aware of impact of purse seine
- Improved onboard hygienic handling of fishes

**PAZHAIYAR FISHING HARBOUR**

Pazhaiyar fishing harbour is situated in Nagapattinam District. This Fishing harbour is owned and managed by State Fisheries Department. Around 238 mechanized boats are being operated from the harbour.

**Problems identified**

The length of wharf is not sufficient to harbour all the boats

The river mouth is often closed by sand bars and fishermen face hardship to venture into sea for fishing

Stagnation of water in front of the auction hall during the rainy season

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	9
2	Sustainable Fishing/ conservation	7
3	Onboard	2
4	Dry fish training	9
	<b>Total</b>	<b>27</b>

**Coastal cleanup:** NETFISH and MSSRF conducted an International Coastal cleanup day programme on 20<sup>th</sup> September 2011 to educate Students, fisher folks, service groups, and neighbours to join together, take care of our fragile marine environment, show community support for our shared natural resources, learn about the impacts of marine debris and how we can prevent them etc. This program was conducted with the objectives to create awareness among the coastal community of Pazhaiyar on Coastal Pollution and to remove the debris and other materials along the Pazhaiyar coast. The program was initiated with active participation of more than 100 Volunteers from Pudhupattinam HigherSecondary School students and Staff, President, Mechanized Boat Owners Association, and Village Head. A rally by students with banners and slogans about cleanliness and coastal pollution etc. was also conducted as part of the programme. NETFISH provided 2 dust bins for the auction hall and sign boards describing Do's and Don'ts were also fixed in the fishing harbour.

#### Outcomes

- Due to good rapport with Boat owners association, the Pazhaiyar fishing harbour is being maintained in good condition

- The hygienic handling of fishes at fishing vessels and harbours has improved

#### NAGAPATTINAM FISHING HARBOUR

Nagapattinam has a coast line of 188 Kms and the entire stretch is comprised of 51 fishing villages. The state government has decided to set up four fishing harbours in Nagapattinam District, of which construction work is in progress.

#### Problems identified

- No infra structure facilities are available for hygienic handling of fishes
- No space is available for drying of fishes

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	31
2	Sustainable Fishing/ conservation	9
3	Onboard	3
	<b>Total</b>	<b>43</b>

**Mass Communication programmes:** NETFISH and SEA TRUST has conducted Mass Communication Programmes at Nagapattinam on the MPEDA subsidy Schemes for fishermen. More than 100 Boat owners participated in the programme and DD RO Chennai explained the MPEDA Schemes and cleared the doubts raised by the participants. In the end of the programs 24 MPEDA Boat registration forms and more than 100 fish hold subsidy applications were distributed to the boat owners. Leaflets in Tamil language about fish hold subsidy schemes were also distributed.

#### Outcomes

- Many boats have started using plastic baskets for loading and unloading of export items
- Hygienic handling of fishes onboard has improved

- Boats and nets are washed before and after fishing
- After understanding the impact of plastic materials fishermen are now avoiding throwing plastic materials into the sea

**TUTICORIN FISHING HARBOUR**

The major harbour of Tuticorin is well known as a pearl diving and fishing centre. It is one of the oldest seaports in the world. The district is famous for marine fishing, pearl and Valamburi Chunk fishing. Tuticorin is the main centre for deep sea fishing in the district which has a lengthy coast-line of about 140 km. Prawn culture earns a considerable amount of foreign exchange. Fishes caught here are either sold locally or exported. Tuna which is caught here is dried and sold as Maasi. Dry fish from Tuticorin is sent to Sri Lanka and many parts of South India. The fish-cake produced here is used for food for prawns and other fishes. There are 11 marine fishing villages. There are 450 mechanised boats, 1300 vallams and 900 Kattamarans in this district. About 5,428 Fishermen families are directly engaged in fishing in these vessels.

**Problems identified**

- Tricycles, vans and motor cycles enter the wharf area for loading and transporting fishes
- The area allotted for auctioning of spoiled and waste fish for poultry feed is not maintained properly. The cement platform is damaged, which creates puddles, during rain with offal smell and worms
- Washing of boats is done only once in a week
- Washing of fish using the highly polluted harbour water
- The cod-ends of mesh size 5mm to 10 mm are found used in trawl nets
- Nobody is using TED (Turtle Excluder Device)
- Security arrangements and Scavenging systems are not available in the harbour

- Non availability of enough wash water and drinking water in the harbour
- Soaking of cephalopods is practiced by the merchants of the harbour
- No proper bathrooms, toilets and rest rooms in the harbour

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	34
2	Sustainable Fishing/ conservation	32
3	Onboard	8
4	Preprocessing	2
5	Street-plays	30
	<b>Total</b>	<b>106</b>

**Outcomes**

- Use of ice and ice box are popularized among traditional fisher folks
- Fisher folks are using ice in proper manner to keep the cold chain operation
- Mechanized boats started regular cleaning of their boats using detergent and bleaching powder
- Bamboo baskets are replaced by plastic crates
- Fishermen started avoiding plastics to carry food, water and materials while going for fishing
- Separate hygienic places are used for fish drying
- Reduced trash catch
- As a result of periodic meetings and discussions with AD (fisheries) and executive engineer (harbour division) the state government has sanctioned Rs.42 crores for modernization of Tuticorin fishing harbour



### CHINNAMUTTAM FISHING HARBOUR

Kanyakumari District is the smallest of the 32 districts of Tamil Nadu state with an area of 1672 sq.km. It ranks first in literacy among other districts in Tamil Nadu. Chinnamuttam is the only harbour located on the eastern side of the district and was built in 1984 to accommodate about 200 mechanized crafts of 32 feet length and 8 feet breadth. The district's long coastline extends 68 km embracing 43 fishing villages. Fishing is a major activity in coastal areas with more than 2 lakh people employed. About 1500 mechanised fishing vessels are involved in fishing operation and the number of traditional fishing craft operating in the district is estimated to be around 12,000.

#### Problems identified

- Washing of fish using the harbour sea water
- Selling of food materials, snacks and tea by the vendors in the wharf area
- Fishes are kept on floor in wharf area
- Ice is crushed on the ground without keeping plastic sheet
- No specified parking area for vehicles
- Boat cleaning and washing are done once in a week
- Harbour premises are unclean with torn nets, plastic cups and plastic bags
- Water points and tapes are not provided to clean the auction halls, packing sheds and wharf area with jet pressure pumps

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	14
2	Sustainable Fishing/ conservation	16
3	Onboard	2
4	School programmes	4
	<b>Total</b>	<b>36</b>

**School Programmes:** Special awareness programmes were organized for the school going children of fisher folks, mostly for the students of 6<sup>th</sup> to 12<sup>th</sup> standards. These children can act as an effective medium to spread the NETFISH messages among their family members who are involved in fisheries activities. The programmes were organized at selected schools in the coastal villages of Kanyakumari district. The programmes included lecture class on topics such as Fish quality management, Conservation of marine resources, Best Management Practices in Aquafarms, hygiene etc., description of various NETFISH posters, distribution of leaflets and documentary & animation film shows. Apart from these a few competitions were also organized for the students on topics like marine conservation.

#### Outcomes

- Use of ice and ice box are popularized among traditional fisher folks
- Fisher folks are using ice in proper manner to keep the cold chain operation
- Mechanized boats started regular cleaning of their boats using seawater, detergent and bleaching powder
- Bamboo baskets are replaced by plastic crates
- Fishermen started avoiding plastics to carry food, water and materials while going for fishing
- Separate hygienic places are used for fish drying
- Dumping of by-catch/ trash fish in jetties has completely stopped
- Started using cod ends of mesh size 32mm to 38mm
- As a result of periodic meetings and discussions with AD (fisheries) and executive engineer (harbour division) the state government has sanctioned Rs.70 crores for modernization of the harbour

### MANDAPAM FISHING HARBOUR

The Mandapam fish landing centre on the Gulf of Mannar side is a medium one. The jetty

was constructed by the erstwhile Indo-Norwegian Project for the berthing of its boats. The fishing trawlers are berthed at some distance away from the jetty. About 700 trawlers are operated from here. Fishing is conducted seasonally from October to March every year, after which all the boats will be shifted to the landing centre on the Palk Bay side. Three processing factories and three ice plants are located in the vicinity of the landing centre. Iced fishes are purchased by local fish merchants and sent to different parts of Tamil Nadu. Spoiled fishes are sundried and sent for making fish meal at Namakkal in Tamil Nadu and in some parts of Andhra Pradesh.

**Problems identified**

- A wharf is lacking in the northern side of the harbour
- The boats are cleaned only once in a week
- Fishes are cleaned using sea water, as good fresh water supply is not available at Mandapam
- Most of the fishes are auctioned either in the beach or on the floor of the auction halls in an unhygienic manner. Raised platforms are absent in the harbour.
- Sufficient ice is not used for fish packing
- Mesh size regulation is not adopted, by which small fishes and eggs are caught

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	15
2	Sustainable Fishing/ conservation	13
3	Onboard	4
4	Street-plays	26
5	Harbour or coastal cleanup	1
	<b>Total</b>	<b>59</b>

**Coastal Clean-up programme:** In connection with International Coastal Clean-up Day, NETFISH along with MSSRF took an opportunity to educate students, fisher folks, service groups and other stakeholders about the adverse impacts of marine debris and the mean to prevent it. The major objectives of the programmes were (i) to create awareness among the coastal community on coastal pollution and its bad impact and (ii) to remove debris and other waste materials along the coast and harbour for encouraging the local community in doing so. With this view a clean-up programme was organized at Mandapam in Ramnad District on 17<sup>th</sup> September 2011. The clean-up programme involved 200 volunteers including NSS volunteer from Schools, Youth Club members, Members of Boat owner’s association, NVA Fellows, Fisheries Officials, Scientists from CMFRI, Coast Guard officials, VKC Knowledge workers and MSSRF staff team. Coastal line of 500m was cleaned by the volunteers and removed the debris and garbage from the north part of Mandapam coast. After the coastal clean-up, bit notices were distributed to the fishing community by the volunteers to raise awareness on the importance of clean fishing harbour. Do’s and Don’ts banners were also prepared and pasted in the Mandapam fishing harbour for further reference of fisher folks. The clean-up programmes envisaged the creation of awareness among the coastal community of Mandapam and Pazhaiyar on coastal pollution, causes of litter and their impact and removal of waste along the coast.

**Outcomes**

- Fishermen have started using plastic crates instead of bamboo baskets
- Use of ice and ice box are popularized among traditional fisher folks
- Fisher folks are using ice in proper manner to keep the cold chain operation
- Mechanized boats have started regular cleaning of their boats using seawater, detergent and bleaching powder
- Fishermen started avoiding plastics to carry food, water and materials while going for fishing

- Hygiene has improved in fish drying activities
- Reduced trash catch

#### **MALLIPATTINAM FISHING HARBOUR**

Mallipattinam, situated in Pattukkottai Taluk of Thanjavur District is one of the biggest fishing areas in the Palk Strait.

#### **Problems identified**

- The entire harbour is not clean and requires a management committee, by which reformation could come
- Drying of waste fishes for poultry feed is done inside the harbour premises
- T-jetty is not cleaned properly, after auctioning
- Auctioning is done on the T-jetty wharf area
- The mechanized boat owners are more interested in catching more waste fishes for poultry feed than in catching quality fishes
- Pair-trawling is done by the mechanized boats in a particular season, which is banned by the Govt. of Tamilnadu
- Hygienic practice of handling fish is poor
- Icing and packing of fish is not done in 1:1 ratio and ice crushers are not much used
- The mechanized boats are not washed with detergent and bleaching powder before and after going to the sea for fishing
- Drinking water and wash water are not available in the harbour
- Drainage system is also not developed

#### **Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	28
2	Sustainable Fishing/conservation	30
3	Onboard	8
4	Aqua farm training	20
	<b>Total</b>	<b>86</b>

#### **Outcomes**

- Use of ice and ice box is popularized among traditional fisher folks
- Fisher folks are using enough quantity of ice
- Fishermen are avoiding plastics to carry food, water and materials while going for fishing
- Slow transition is found among fishermen in using plastic crates instead of bamboo baskets
- Dumping of trash is partially stopped

#### **7.5 KERALA**

Kerala is bordered on the west by the Arabian Sea, which is rich in marine flora and fauna. The coastline of the state runs to a length of about 590km. The potential of the state in terms of marine fisheries is believed to be about 5.17 lakh tones. NETFISH organised its training programmes in all major harbours and fishing villages of Kerala from Kasargod to Thiruvananthapuram. Due to the continuous effort by NETFISH hygienic standard in many harbours including Thoppumpady and Munambam was improved considerably. NETFISH closely monitor activities of all fishing harbours of Kerala and give advises and suggestions to fishermen and officials related to the fishing harbour. A total of 704 different types of awareness programmes were organised all over Kerala during 2011-12. NETFISH maintained a good relationship with various Govt. and non Governmental agencies working in the fisheries sector of Kerala. The selected areas for NETFISH activities in Kerala were Thoppumpady, Aroor, Ambalappuzha, Thottappilly, Arattupuzha, Kayamkulam, Sakthikulangara, Vizhinjam, Munambam, Munakkakadavu, Chettuva, Ponnani, Beypore, Puthiyappa, Chombala, Moppila Bay and Valapattanam.

#### **THOPPUMPADY FISHERIES HARBOUR**

Cochin Fisheries harbour (CFH) is one of the major fisheries harbours in the country. The existing harbour has got necessary



infrastructure for berthing, landing and auctioning of catch. The total area of CFH is 27.863 acres including reclaimed land of 4.25 acres. There are 750 mechanised and motorized boats operating from this harbour. Trawling, gillnetting, purse seining and ring seining are the major fishing activities at this harbour.

**Problems identified**

- Damaged floor of the auction hall
- Harbour is not having confined packing section
- Use of bamboo basket for fish handling
- Habit of using betel, chewing pan and spitting of it in auction hall and harbour surroundings
- Unhygienic fish handling practices onboard fishing vessels
- Poor handling of ice, crushing on unhygienic floor, crushing by means of rusted ice crushing machine
- Irregular cleaning system
- Fish cutting in the auction hall
- Stacking crates on the raised platforms and the waste water oozes out to the auction hall

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	31
2	Sustainable Fishing/ conservation	19
3	Onboard	10
	<b>Total</b>	<b>60</b>

**Outcomes**

- Damaged floor of the auction hall completely replaced by dewatering concrete
- Construction of two packing hall has started
- 80% bamboo baskets are now replaced by plastic baskets

- As a result of NETFISH awareness training and meeting, spitting inside the auction hall is reduced
- Improved hygienic condition and handling of fish onboard
- NETFISH-MPEDA suggested Cochin Port Trust to replace all rusted ice crushing machine and to provide stainless steel ice crusher, and it was agreed by Port Trust
- Cleaning of auction hall by out sourcing workers is continuing as per NETFISH proposal
- Fish cutting in the Cochin Fisheries Harbour is reduced
- Stacking crates on the raised platform is also controlled

**AROOR**

There are 32 Pre-processing centers located in the Aroor region. All of them availed financial subsidy from MPEDA for construction of PPCs with modern facility but are not utilizing the facility properly.

**Problems identified**

- Floor peeling
- Unhygienic condition in peeling sheds

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Preprocessing	46
	<b>Total</b>	<b>46</b>

Due to the NREG Programme and other factors, pre-processing sectors of Kerala face drastic labour problem. A number of discussions were made with officials of Panchayaths especially of Aroor and Ambalapuzha region. Peeling shed owners were also present to raise their problems. Their main demand was to merge pre-processing sector to NREG programme.

# West Bengal



A meeting on Development of Fishing Harbours



Boat Clean-up Programme



Dryfish Awareness Programme



Free Medical Camp



Mike Campaign



Plastic Basket Distribution



Street Play on Aquaculture



Writing Do's & Don'ts on walls at Deshaparan Harbour



# Odisha



Discussion with Trawler Association members



Fishermen Programme



Free Medical Camp



Onboard Programme at Chilka



Regular Cleaning of Auction Hall at Paradeep



Regular cleaning of boats



Use of Insulated Fish Box in Chilka



Use of Plastic Baskets in Trawlers



# Andhra Pradesh



Boat to Boat Awareness



Distribution of Plastic Sheets



Mass communication programme



Onboard Hygienic practices



Plastic Basket Distribution



Regular Cleaning Activity at Kakinada harbour



Regularly cleaned Auction hall at Machilipatnam



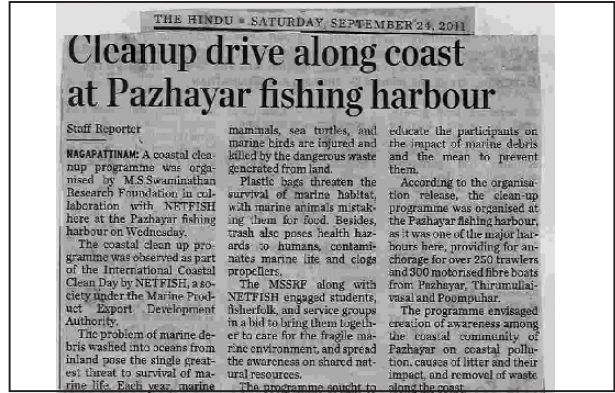
Small Boats carrying enough ice while going for fishing



# Tamil Nadu North



Coastal Clean-up Programme at Pazhaiyar



Costal Clean-up at Pazhaiyar in news



Mass Communication Programme



Rally associated with clean-up programme



Regular Cleaning of boats



Reopened Toilet at Kasimedu harbour



Stall at Chennai Science Festival



Stall at Seafood Show



# Tamil Nadu South



Boat cleaning



Coastal Clean-up at Mandapam



Fishermen Programme



Plastic Basket Distribution



Pre-processing programme



School Programme



School Programme



Students cleaning the beach at Mandapam



# Kerala South



Fishermen training programme



Improved condition of Thopumpady fisheries harbour



NETFISH replaced bamboo baskets with plastic baskets at Kayamkulam fisheries harbour



Plastic basket distribution at Kayamkulam harbour



Special peeling table designed by NETFISH for aged peeling workers



Training programme for fisherwomen



Training programme for harbour workers



Using plastic sheets for degilling



# Kerala North



Coastal cleanup programme at Chettuva harbour



Fishermen training programme



Harbour cleanup programme at Munakkakadavu harbour



Onboard training programme



Street-play programme



Training programme for harbour workers



Trolley distribution at Baypore harbour



Trolley distribution at Puthiappa harbour



# Karnataka



Clean-up Programme at Mangalore



Coastal cleanup programme at Karwar



Harbour cleanup programme at Mangalore harbour



Hoarding on Sustainable Fishing fixed at Mangalore



Mass communication programme at Mangalore harbour



Medical camp at Honnavar fishing harbour



School children programme



Street-play programme



# Maharashtra



Boat cleanup programme at Karla



Demonstration of Squar mesh conversion to fishermen



Demonstration of the use of Bycatch Reduction Devices



Distribution of NETFISH sticker on hygienic practices to boats



NETFISH organised Seminar at Udambar



Onboard training programme



Training programme on value added products at Ratnagiri



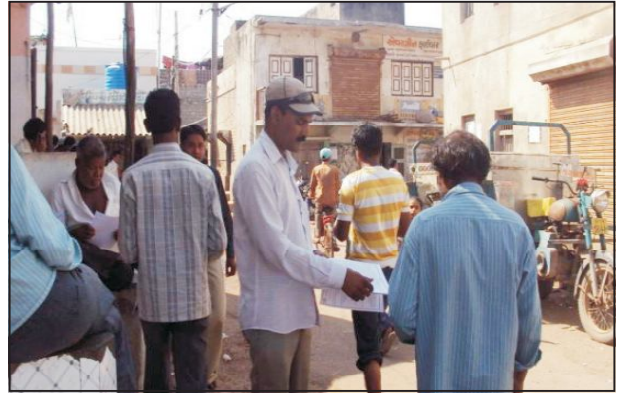
Use of plastic baskets in fishing vessels



# Gujarat



Cleaning the premises of Porbandar landing centre



Door to door awareness programme



Improved condition of Mangrol fishing harbour



Improved condition of Veraval fishing harbour



New big meshed trawlnet cod ends distributed by Dept. of fisheries Gujarat



Plastic basket distribution by NETFISH at Umersadi landing centre



School children programme



Regular cleaning of fishing boats & equipments

**Outcomes**

- Started table peeling in the selected PPCs
- Hygienic conditions have improved in the selected PPCs

**AMBALAPUZHA**

Ambalapuzha is one of the major areas of Kerala where large numbers of peeling sheds are located. There are about 200 small scale peeling sheds scattered in this coastal village Kerala.

**Problems identified**

- Hut peeling
- Floor peeling
- Unhygienic condition of small scale peeling centres
- Rehabilitation of hut peeling workers to CPC Ambalapuzha

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Preprocessing	43
	<b>Total</b>	<b>43</b>

**Outcomes**

- Selected MPEDA subsidy availed PPC's have changed from floor peeling to table peeling
- 50% of small scale peeling units are using plastic sheets to keep the material
- Overall hygienic standards of the peeling sheds have improved

**THOTTAPPILLY-ARATTUPUZHA****Problems identified**

- Juvenile fishing
- Unhygienic situation in the landing centre
- Unhygienic situation in the peeling centers of Thottappilly & Arattupuzha
- Unhygienic onboard fish handling practices

- Use of bamboo basket for fish handling

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	11
2	Sustainable Fishing/conservation	10
3	Onboard	2
4	Pre-Processing	11
	<b>Total</b>	<b>34</b>

**Outcomes**

- Juvenile fishing is very well controlled
- 90% of mini-trawling have converted to gillnetting
- Night trawling is stopped
- Onboard fish handling practices have improved considerably. Fishermen have started using plastic baskets instead of bamboo baskets.
- Hygienic standards of small peeling sheds have improved

**KAYAMKULAM-SAKTHIKULANGARA**

Sakthikulangara Fishing harbour is one of the major fisheries harbours of Kerala located in Kollam district. The fishing harbour has landing and berthing facility and more than 2000 mechanised boats are operated from the harbour. The harbour has almost all the necessary infrastructure for landing and auctioning of fish and berthing of fishing vessels. Kayamkulam fisheries harbour is located at the coastal village of Azheekal in Kollam district. There are about 300 mechanised boats and 40 country crafts.

**Problems identified**

- Use of bamboo basket for fish handling
- Valam fishing (Trawling waste are dumped in to the harbour for drying and it is used as fertilizer)

- Cleanliness of harbour and surroundings are not satisfactory
- Unhygienic handling of ice for packing of fish
- Lack of infrastructure facility

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	17
2	Sustainable Fishing/ conservation	6
3	Onboard	2
4	Pre-processing	18
	<b>Total</b>	<b>43</b>

**Plastic basket distribution at Kayamkulam fisheries harbour**

Handling of fish using bamboo basket was found to create a lot of hygienic problems. The bamboo baskets are difficult to clean and therefore the fish particles stuck on it will lead to the growth of microbes. To control the usage of bamboo baskets and to gradually eradicate it from the harbour NETFISH emphasized the demerits of bamboo baskets to the fishermen through its awareness programmes. As an effort to initiate the use of plastic baskets instead of bamboo baskets NETFISH conducted a programme on 22<sup>nd</sup> August 2011 in which 150 baskets were distributed to the loading-unloading workers of the Kayamkulam fisheries harbour.

**Outcomes**

- Bamboo baskets are completely replaced by plastic baskets from Kayamkulam, Sakthikulangara and Neendakara harbour
- Completely stopped the practice of Valam fishing
- Regular cleaning of harbour and its surroundings is taking place
- Stake holders has agreed to handle the crushed ice in hygienic manner

**PULLUVILA-VIZHINJAM**

Pulluvila is located at the coastal village of Vizhinjam at Trivandrum district. About 3000 fiber boats operate from Vizhinjam to Pulluvila.

**Problems identified**

- Auctioning on the unhygienic floor
- Mixing of unhygienic sand with fish

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	16
	<b>Total</b>	<b>16</b>

**Outcomes**

- Started onboard auctioning
- Mixing of sand with fish was controlled

**MUNAMBAM HARBOUR**

Munambam harbour is the model harbour of India. Nearly 400 boats and 100 big Vallams are operating from this harbour. About 3000 workers are involved in the fishing and allied activities in the harbour. A harbour management society is looking after the day to day activities of the harbour. The harbour management committee was formed of NETFISH State Coordinator, officials from Harbour Engineering department, State Fisheries Department and Stakeholder groups. One hygienic Inspector was appointed by the Harbour Management Society to supervise the hygiene standard of the harbour.

**Problems identified**

- Workers were not using hand gloves
- Handling the fish with leg
- Catching large quantities of juveniles especially threadfin bream
- Smoking, chewing pan and spitting in the auction hall



- Throwing plastic bottles, plastic cover and remaining of nets in the harbour
- Put crushed ice on floor

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality and conservation trainings	8
2	Mass communication	35
3	Harbour cleanup programme	1
4	Street-play	5
	<b>Total</b>	<b>49</b>

#### Outcomes

- The practice of handling the fish with leg is reduced to a considerable extent by continuous awareness programmes to the stake holders.
- A sweeper is appointed at the harbour to clean the harbour premises and so the harbour premises are now neat and clean.
- Harbour management committee plans to distribute stainless steel trays to stop the practice of keeping crushed ice on floor

#### MUNAKKAKADAVU FISHERIES HARBOUR

Munakkakadavu fisheries harbour is located in Trichur district of Kerala. The harbour has a small auction hall, wharf and parking area. Harbour is clean. Stakeholders approach Government for increasing the wharf area and parking space. 80 numbers of boats and more than 100 vallams are operating from this harbour.

#### Problems identified

- Unclean environment
- No proper drainage
- Toilets are not in working condition
- No drinking water facility

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & conservation trainings	22
2	Onboard training	1
3	Harbour cleanup programme	2
4	Street-play	10
	<b>Total</b>	<b>35</b>

#### Harbour cleanup programme

NETFISH organized a harbour clean-up programme at Munakkakadavu fishing harbour to make the stakeholders aware of the importance of harbour cleanliness. NETFISH provided cleaning materials such as brooms, baskets, bleaching powder, spades etc. to the stakeholders for cleaning. Panchayat President, Vice-president and news reporters were present at the programme which received wide coverage in news papers and TV channels. As agreed by the Panchayat President, 5 members of "Deshiya Thozilurappu Paddhathi" were engaged for cleaning the harbour once in a week. NETFISH also provided 3 dust bins for proper waste disposal so as to keep the harbour premises clean.

#### Outcomes

- Drinking water facility was made available in the harbour by HED
- Panchayat arranged ladies from "Thozhil Urappu" schemes for cleaning harbour and premises
- Continuous awareness classes were given to stakeholders and as a result the hygienic condition of the harbour was improved considerably
- By using stipend of two classes of NETFISH, stakeholders made a borewell at the harbour and water from this is now using for washing and use in toilets

#### CHETTUVU HARBOUR

Chettuva harbour is a main harbour in Thrissur district. 150 numbers of boats and 150



numbers of vallams are operating from this harbour. Harbour Engineering Department is now renovating this harbour.

**Problems identified**

- Unclean environment
- Poor fish handling practices
- No proper drainage system
- No toilet facilities

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality and conservation trainings	15
2	Onboard trainings	1
3	Street-plays	10
	<b>Total</b>	<b>26</b>

**Harbour cleanup programme:** A harbour clean-up programme was conducted at Chettuva harbour on 22<sup>nd</sup> September 2001 in association with stakeholders and Panchayat. The Panchayat engaged 15 ladies from the “Thozhilurappu Padhathi” for the cleaning activities. The Panchayat also agreed to send 5 ladies to clean the premises of the harbour once in a week. Entire premises of the harbour were cleaned during the programme. All the stakeholder groups were actively participated in the cleaning programme.

**Outcomes**

- With the recommendation from NETFISH, Panchayat provided two workers from “Gramina Thozhilurappu Padhathi” to clean the harbour and as a result the premises of the harbour is now clean
- Fish handling practice was improved due to the continuous training classes by NETFISH
- Drainage channel was constructed near the auction hall and the renovation work of toilet is going on

**PONNANI HARBOUR**

Ponnani harbour is located in Malappuram district and 250 boats and 200 vallams are operating from here. More than 1000 fishermen from nearby villages are working at this harbour. The hygienic condition of the harbour was very poor. Now a new harbour is being constructed here with all necessary infrastructure facilities. NETFISH organized an array of programmes here to change the behavior of people working at the harbour.

**Problem identified**

- Poor hygienic condition in the harbour
- New harbour is not used by stakeholders

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & conservation trainings	34
2	On board trainings	2
3	Street plays	20
	<b>Total</b>	<b>56</b>

**Outcomes**

- Hygienic condition will improve if stakeholders use the new harbour.
- Berthing of boat is difficult in the new harbour as the boat struck at the wharf while entering due to shallowness in the channel. A meeting of stakeholders, Harbour Engineering Department, Ministers of Kerala Govt. and MPEDA officials was convened to discuss the feasibility of constructing a breakwall to facilitate the easy entry of boats to the harbour.

**BEYPORE HARBOUR**

Beypore harbour is one of the important harbours of Calicut. More than 2000 fishermen are working at this harbour. Nearly 500 boats and more than 200 vallams are bringing catch to this harbour. Now the length of the wharf has

extended and a second auction hall has been constructed. Parking space for the vehicles is also extended and the entire hygienic condition of the harbour is improved.

#### Problems identified

- Improper drainage system
- Poor hygienic conditions
- Improper parking of vehicles

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & conservation trainings	41
2	Onboard	2
3	Mass communication programme	1
4	Street play	20
	<b>Total</b>	<b>64</b>

#### NETFISH provided trolleys for Beypore fishing harbour to ensure hygienic handling of fish

In order to ensure hygienic handling of seafood as well as to maintain international standard in fish handling NETFISH provided ten big trollies for the workers of Beypore harbour. These trollies can carry 12 to 14 crates at a time and will be highly useful to carry fish from boats to auction hall, ice from vehicles to boats, auctioned fish to vehicles, etc. These trollies can eliminate the earlier practice of carrying fish and ice over head in bamboo baskets, and while doing so the dress of workers became dirty with the dripping water from the bamboo baskets. This also will lead to the complete replacement of bamboo baskets from Beypore harbour, which is very difficult to clean and causes damages to the fish, with more easy to use plastic crates and baskets..

NETFISH has been organizing wide campaign during the last three years at Beypore harbour under the leadership of its State Coordinator, Mrs. Aliamma Kuriachan

to upgrade the quality standards of seafood and also to ensure conservation and sustainable fishing practices. NETFISH has been organizing training classes, street-plays, documentary shows and meetings for stake holders to create awareness among them towards this. During these classes the stake holders were continuously demanding for the trollies and other essential infrastructure facilities at the harbour to maintain required quality standards.

These trollies were distributed to workers by NETFISH State Coordinator, Smt. Aliamma Kuriachan in a function organized by Harbour Vikasana samiti on 19-04-2011 at Beypore harbour. The function was inaugurated by Kozhikode corporation councilor Smt. P. Jalaja and was presided over by Shri. Preman, President, Harbour Vikasana samiti.

#### Outcomes

- Cleared the drainage system with the help from HED
- Renovation of harbour is almost completed
- Improved the hygienic conditions
- Made arrangements for proper parking of vehicles

#### PUTHIYAPPA HARBOUR

Puthiyappa harbour is one of the big harbours in Calicut. 350 boats and 200 vallams are operating from this harbour. The hygienic condition is poor because of the lack of essential infrastructure facilities. Renovation work of the harbour is going on with the fund from NFDB.

#### Problems identified

- Auction hall is in poor condition with broken floor and damaged roof
- No proper parking area
- No proper drainage system
- Outside waste is also dumped in the harbour

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & Conservation trainings	36
2	Onboard	2
3	Mass communication	1
4	Street-play	15
	<b>Total</b>	<b>54</b>

**Trolley distribution at Puthiyappa fishing harbour:**

At Puthiyappa Harbour NETFISH has been organizing wide awareness campaigns during the last three years to upgrade the hygienic standards at the harbour and also to ensure conservation of fish resources as well as sustainable fishing. As part of these campaigns and to encourage and ensure hygienic handling of fishes at harbours, NETFISH provided ten big trolleys for the loading unloading workers of Puthiyappa harbour. These trolleys are capable of carrying 12 to 14 crates/boxes at a time and will be highly useful for the transport of fish from boats to auction hall, ice from vehicles to boats, auctioned fish to vehicles, etc.

The trolleys were distributed in a function organized on 30<sup>th</sup> November 2011 at Puthiyappa harbour. Councilor, Shri. V.K. Mohandas and NETFISH State Coordinator, Smt. Aliamma Kuriachan handed over the trolleys to Shri. Balakrishnan, Secretary of Harbour Vikasanasamithi and Shri. Ramachandran, President of B.M.S Union. The Executive Engineer of Harbour Engineering Department, Smt. Latha also attended the programme.

**Outcomes**

- Renovation work of harbour is going on with fund from NFDB
- Renovated the auction hall
- Parking area is concreted
- Other works are continuing

- Waste dumping practice in the harbour is stopped

**CHOMBALA HARBOUR**

Chombala harbour is in Kozhikode district. 100 vallams and 80 boats are operating from this harbour. It is very difficult to enter boats to the harbour due to sand bank and so vallams are used to carry fish from boats to the harbour.

**Problems identified**

- Poor hygienic conditions
- No proper drainage system
- No proper parking space for vehicles
- Toilets are not in usable condition

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & Conservation trainings	13
2	Onboard	1
3	Street-play	5
	<b>Total</b>	<b>19</b>

**Outcomes**

- Hygienic condition of the harbour was improved due to continuous training programmes by NETFISH
- NFDB allotted fund for the renovation of the harbour
- HED is all set to construct auction hall, drainage system and parking space and toilets in the harbour
- NETFISH is in close contact with HED for renovating the harbour in a proper way

**MOPPILA BAY**

Moppila bay is a big harbour in Kannur district. Only vallams are operating from this harbour. This harbour is surrounded by lots of fishermen villages. Boats cannot enter this harbour due to narrow sea mouth and sand bank.

**Problems identified**

- Potable water is not available in the harbour
- Height is not suitable for the berthing of vallams
- Hygienic condition of the harbour is very poor
- Drainage is filled with waste materials like broken pieces of nets and plastics

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & Conservation trainings	11
2	Onboard	1
3	Street-play	15
	<b>Total</b>	<b>27</b>

**Outcomes**

- With NETFISH recommendation HED made arrangements for the availability of potable water in the harbour
- Cleaned the drainage by HED with the recommendation by NETFISH
- An auction hall was made for the berthing of vallams

**VALAPATTANAM HARBOUR**

Valapattanam harbour is located in Kannur district. More than 500 boats and 300 vallams are operating from this harbour and 3000 fishermen are working there. NETFISH has initiated the steps to improve the condition of the harbour and due to the pursuance; a new harbour with lengthy wharf is constructed. A big net making factory made by Matsyafed is also attached to the harbour.

**Problems identified**

- Poor hygienic conditions
- Quarrel between workers of boats and vallams on the area of fishing

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Quality & conservation trainings	31
2	Street-play	15
	<b>Total</b>	<b>46</b>

**Outcomes**

- Overall hygienic condition of the harbour was improved by the intervention of NETFISH. Renovation of harbour is going on.
- NETFISH with State Fisheries Department contacted the fishermen of vallams and boats and made a settlement between them on the quarrel about the area of fishing

**Other Activities**

**Street-plays:** 115 street-play programmes were organised in different fishing villages and harbours of northern region of Kerala during 2011-12. The street-play was designed by including different aspects of fish quality management and sustainable fishing mixed with folksongs. The programme attracted huge audience in all parts and people were readily accepted the messages NETFISH tried to convey.

**Mass communication programmes:** Mike announcement campaigns were organized in different harbours of Kerala during the peak hours to invite the attention of workers who are busy with their work and not available for other type of programmes. One of the advantages with this type of programme is its wide reach and workers can listen to the messages even while in their work. General hygienic practices that has to be followed in the fishing harbour and any special message that NETFISH was liked to convey to large number of audience in a short span of period were announced through mike during the campaign.

**7.6 KARNATAKA & GOA**

Karnataka and Goa states have 405 km coast line with a continental shelf area of

47,000 sq.km and 10000 hectare of potential brackish water resources for aquaculture. The fisheries sector plays an important role in the socio-economic development of both the states, in view of its contribution to the food basket, nutritional security, large foreign exchange earnings, employment generation and income. The fish production in Karnataka is around 3.3 lakh tons with the contribution of Marine sector being 64 % and Inland sector 36%. The fish production from the state contributed about 5 % of India's total fish production. The marine fisheries sector of Goa has attained the status of a capital-incentive industry. About 75% of the marine fish production comes from the mechanized sector and 25% from the traditional sector. Goa has 47 licensed aquaculture farms covering 200 hectares and an estimated 400 tidal fish / prawn filtration farms. The occurrence of solar prawns in tonnes for a short period during July-August is an important feature of the Goa coast. The fish production from the state is around 0.7 to 0.9 lakh tons. Goa has 71 fishing villages and 22,000 fishermen, fishermen from 8 taluks are involved in fishing activities and fishermen from 42 villages are involved in marine fishing. The estimated population of fishermen in the state is over 30,000 and population of active fishermen is 12,000. Currently the Goa state has a registered fleet of 1,134 mechanized boats, 755 country crafts, 1,963 non-motorized country crafts and 6,463 nets; there are 5 fish landing centres and 14 fish landing ramps. Over-exploitation of marine resources and excessive mechanization were responsible for the fall in the quantity of fish catch. A policy is being followed as regards total ban on the registration of new fishing trawlers.

Regional meeting with NETFISH member NGOs was held on 08.04.2011 at Snehakunja, Kasarkod for planning of NETFISH action for the financial year 2011-2012. During 2011-12, NETFISH conducted 319 programmes in Karnataka & Goa. The selected areas for NETFISH activities in the states for the year were Mangalore, Malpe, Honnavar, Tadri, Karwar and Malim.

### MANGALORE FISHING HARBOUR

Mangalore is one of the major fishing harbours of Karnataka. About 2000 mechanized vessels and 7500 non-mechanized vessels are operating from this harbour. NETFISH has been organizing regular training programmes at this harbour to educate fishermen on the hygienic handling of fish. NETFISH intervention has made several significant changes at this harbour

#### Problems identified

- Washing of jetties and auction hall is irregular
- Dumping of ice and fish on floor
- Retail selling on the jetties
- Fish cutting in the auction hall
- Fish drying in jetties
- Petty shops in the landing centre
- Improper parking of vehicles

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	39
2	Sustainable Fishing	11
3	Onboard	2
4	Preprocessing	8
5	Dry fish training	5
6	Street-plays	18
	<b>Total</b>	<b>83</b>

**Mass communication programme:** A mass communication programme was arranged at Mangalore fishing harbour on 8-9-2011 in association with College of Fisheries, Mangalore. NETFISH State Coordinator coordinated the event and a hoarding on sustainable fishing was unveiled during the function.

**Harbour clean-up programme:** NETFISH organized a mass awareness programme and



harbour clean-up programme at Mangalore fishing harbour on 19-11-2011. Deputy Director, State Fisheries Dept. presided over the function. Assistant Director, State fisheries dept. welcomed the gathering. NETFISH state coordinator briefed the public regarding the importance of cleanliness of fishing harbours. Deputy Director, Export Inspection Council, Assistant Director, MPEDA and PC fishing harbour also addressed the gathering.

#### Outcomes

- Dumping of by-catch/ trash fish in jetties is completely stopped
- Fish drying almost stopped in harbour area
- Petty shops partially shifted, new permission is prevented
- During peak hours one-way traffic is made by strict monitoring
- Handling practice in ice plant is improved
- Regular washing of the fishing harbour

#### MALPE FISHING HARBOUR

Malpe is also a major fishing harbour of Karnataka. More than 2100 mechanised vessels and 1300 non-motorized vessels are operating from this harbour. Several fish drying units are located in and around the harbour. NETFISH interferes in the day to day activities of the harbour to enable the fishermen to handle fish and ice hygienically

#### Problems identified

- No washing of jetties, auction hall
- Dumping of fish on the floor
- Dumping of by-catch/trash on the jetties; retail selling on the jetties
- Dressing of finfish/shell fish in auction hall; drying the fish on jetties
- Petty shops in the landing centre
- Improper parking of vehicles

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	16
2	Sustainable Fishing	14
3	Onboard	2
4	Preprocessing	1
5	Dry fish training	9
6	Street-plays	10
7	Mass communication	3
8	Other Special programmes	2
	<b>Total</b>	<b>57</b>

#### Outcomes

- Daily washing in harbour is being practiced now
- Fish drying near the jetties is almost stopped
- Dumping of by-catch/ trash is decreasing

#### HONNAVAR FISHING HARBOURS

More than 850 mechanized boats and 6400 non-motorized vessels are bringing their catch to this harbour for sale. About 46000 fishermen are living in and around Honnavar. About 10% of the marine export of Karnataka is from Honnavar. General fish quality standard of the harbour was very poor before NETFISH interference.

#### Problems identified

- Improper washing of jetties and auction hall
- Dumping of fish on the floor
- Dumping of by-catch/ trash on the jetties
- Retail selling in jetties
- Fish cutting in auction hall
- Fish drying in jetties
- Petty shops inside the landing centre



**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	5
2	Sustainable Fishing	10
3	Onboard	3
4	Aqua farm training	2
5	Dry fish training	6
6	Street-plays	8
7	Medical camps	1
8	Other Special programmes	1
	<b>Total</b>	<b>36</b>

**Outcomes**

- Washing of jetties at regular intervals is being practiced

**TADRI FISH LANDING CENTRE**

As the infrastructural facilities are meager in this landing centre, during 2008-09 a grant of Rs.80 lakhs was released for taking up renovation of Tadri Fishing harbour

**Problems identified**

- Improper washing of jetties and auction hall
- Dumping of fish on the floor
- Dumping of by-catch/trash on the jetties
- Retail selling; on the jetties
- Dressing of finfish/shell fish in auction hall
- Drying the fish on jetties
- Petty shops in the landing centre
- Catching of banned sea animals

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	13
2	Sustainable Fishing	10
3	Onboard	3
4	Aqua farm training	1

5	Dry fish training	8
6	Street-plays	10
7	Medical camps	1
8	School programmes	1
9	Other Special programmes	1
	<b>Total</b>	<b>48</b>

**Outcomes**

- Washing jetties at regular intervals
- Stopped catching of banned sea animals
- Fish drying practice shifted to separate area

**KARWAR FISHING HARBOUR**

Karwar is one of the main fish landing centres in Karnataka. More than 750 boats and 3600 vallams are operating from this harbour. Aqua farms are also located in Karwar region.

**Problems identified**

- Improper washing of jetties and auction hall
- Dumping of fish on the floor
- Dumping of by-catch/ trash on the jetties
- Retail selling in jetties
- Dressing of finfish/shell fish in auction hall
- Drying the fish on jetties
- Petty shops in the landing centre

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	16
2	Sustainable Fishing	20
3	Onboard	2
4	Aqua farm training	6
5	Dry fish training	3
6	Street-plays	8
7	Harbour clean-up	1
8	School programmes	1
9	Other Special programmes	1
	<b>Total</b>	<b>58</b>

**Coastal cleanup programme:** A coastal cleanup programme was organized at Karwar fishing harbour on 17-9-11. During the programme the entire coastal area was cleaned with the help of students from nearby colleges. NETFISH posters and leaflets on various topics were also distributed to the participants during the programme.

#### Outcomes

- All the unwanted things are removed from the harbour premises
- Jetties and auction hall are being washed the at regular intervals

#### MALIM

Malim is the major landing centre of Goa and more than 350 boats are operating from this landing centre.

#### Problems identified

- Using bamboo baskets for loading and unloading ice
- Retail selling; petty shops in the landing centre
- Improper parking of vehicles
- Less working space in the harbour

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	12
2	Sustainable Fishing	15
3	Mass communication	2
	<b>Total</b>	<b>29</b>

#### Outcomes

- Fishermen has started using plastic baskets instead of bamboo baskets

#### Other Activities

**Fisheries information camp at Uppunda:** Fishers of Uppunda village organized a fisheries information camp at Uppunda on 3<sup>rd</sup> April 2011.

Various state fishery officials and professors from fisheries college Mangalore gave lectures on their respective departmental activities related to fisheries. MPEDA AD gave a lecture on MPEDA schemes for fishers. NETFISH State coordinator attended the programme with member NGOs and NETFISH leaflets were distributed among the fishers. Local fisher leaders urged the SCO to conduct NETFISH training programmes in their village also.

**Door to door awareness:** Six doors to door programmes were conducted in Mangalore, Malpe and Malim between 1.11.2011 to 10.11.2011. The aim of the programme was to meet fishermen at their house hold and discuss various issues regarding fish quality management and sustainable fishing. Almost all fishermen households around Mangalore, Malpe and Malim fisheries harbour were visited during this venture.

**Uniform for seafood workers:** As per EIA guidelines to fishing harbours, it is mandatory to wear uniform inside the fishing harbour. Due to continuous effort by Assistant Director, MPEDA and NETFISH State Coordinator, Seafood Merchants Association could be persuaded to provide uniforms for their workers.

**Participation in Workshop:** NETFISH State Coordinator participated in a work shop on 'Culture of Sea bass in pond' organized by CIBA at Karwar on 28-6-2011. Director of CIBA, Scientist from CMFRI, Professors, State Fisheries officials and farmers of Uttara Kannada district attended the workshop. State Coordinator also attended a 3 days workshop on 'Co-management in Fisheries" organized by College of fisheries, Mangalore and Dakshin Foundation from 8-12-11 to 10-12-11.

#### 7.7 MAHARASHTRA

NETFISH organized 275 extension programs in Maharashtra during 2011-12. Special efforts were made like arrangement of mass boat clean-up programs in selected landing centres to make fishermen habituate in cleaning/ washing of fishing vessels. During fishing ban period/closed season a workshop exclusively for

boat owners was conducted to create awareness regarding fish quality management, conservation of marine environment and sustainable fishing.

About 6000 numbers of on-board stickers were distributed/ pasted in fishing vessels to create awareness among boat owners and crew members. Posters were pasted in public places, fishing villages, fishermen co-operative societies, etc. Leaflets were distributed among target group during training programs. Documentaries prepared by NETFISH on fish quality management, conservation of marine environment and sustainable fishing were also shown to participants of the training programme which help the fisher community to grasp the concepts easily. The selected areas for NETFISH activities in Maharashtra were Sasson Dock, Ratnagiri and Harne.

**SASSON DOCK FISHING HARBOUR**

Sasson Dock fishing harbour, Mumbai is managed by Mumbai Port Trust. Essential infrastructures like acution halls, water, wharf etc are available in this harbour.

**Problems identified**

- Juvenile fishing
- Use of purse seine nets in coastal waters
- Unavailability of sufficient quantity of good quality ice and potable water
- Use of bamboo baskets in old fish jetty
- Poor sanitary conditions in ice plants
- Raised platforms are not used for keeping fish at the time of auction
- Chewing Pan, Tobacco, Gutkha, smoking Cigarettes and drinking alcohol is a regular practice of some fishermen or fish workers in fishing vessels, fishing harbour.
- Wash fish with dirty water
- Fishermen are not using Insulated fish boxes
- Fiber boats or small motorized boats do not carry ice while going for single day fishing
- Improper handling of ice such as ice

crushing on floor, dragging of ice on floor, etc.

- Selling food material, snacks, and tea in the busy wharf area
- Packing and loading of fish in the wharf area. Fish is spread in the wharf floor before packing.
- Dump trash fish and fish waste in harbour premises
- Fish cutting and peeling activities in harbour premises
- Use of small mesh size nets
- Inshore trawling/purse seine operation, night trawling, juvenile fishing is in regular practice
- No regular practice of washing with clean water and detergent of fishing vessels, nets, and other accessories before and after fishing
- Peeling on floor/ground/road side is a regular practice in fishing harbour
- Unauthorized peeling sheds run in the harbour premises
- Poor personal hygiene of peeling shed workers

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	31
2	Sustainable Fishing/ Conservation	26
3	Preprocessing	14
4	Aqua farm training	12
5	Dry fish training	12
6	Street-plays	10
7	Mass communication	9
	<b>Total</b>	<b>114</b>

**Street-plays:** 5 Street-play programmes were organized on 25-06-2011 at Revadanda School, Agrav, Ravdanda, Thal Chalamala, fishing villages around Sasson Dock fisheries harbour. Street plays successfully conveyed the message of fish quality management, conservation to fisher folk. About 550 fishermen viewed the programs.

**Distribution of stickers to fishing vessels:** 6000 stickers were distributed to the boats of Maharashtra regarding hygienic practices onboard fishing vessels. Stickers were distributed to individual boats and ensured that it was pasted on boats.

#### Outcomes

- Dry fish handling is improved in Sassoon dock area
- It is observed that fishermen have completely stopped fishing activities during closed season in selected places of Maharashtra, except small fishing boats with outboard engines
- Fishermen and fisherwomen from Rewas and Bodni fishing villages (Sasson dock area) came forward to purchase plastic baskets and decided to replace bamboo baskets with plastic baskets

#### RATNAGIRI HARBOUR

Mirkarwada fishing harbour, Ratnagiri is operated/managed by State Fisheries Department. Harbour area consists of 4 wharfs in which length of jetties (04 wharfs) are 140 meters (a), 175 meters (b), 150 meters (c), 160 meters (d) and the width of each wharf is 4.5 mts average.

#### Problems identified

- Sufficient ice is not available at landing centre
- Potable water is not available at landing centre to clean fishing vessels
- Unhygienic handling of fishes at fishing harbours
- Use of bamboo baskets in fishing vessels,

fish markets, auction markets and in landing centres/fishing harbours.

- Poor sanitary conditions and improper handling of ice
- Chewing Pan, Tobacco, Gutkha, smoking Cigarettes and drinking alcohol is a regular practice of some fishermen, fish workers in fishing vessels/landing centres/fishing harbours
- Fiber boats or small motorized boats do not carry ice while going for single day fishing
- Retail selling of fish in jetties/landing centres/harbour
- Fish cutting and peeling in jetties/landing centres/harbour
- Open transportation of fish material from harbour to processing plants
- Open transportation of ice
- Use of small mesh size nets
- Petty shops inside the harbour premises
- No proper arrangement for daily washing of harbour

#### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish quality management	25
2	Sustainable Fishing	25
3	Onboard	8
4	Preprocessing	6
5	Dry fish training	12
6	Street-plays	10
7	Mass Boat clean-up	2
	<b>Total</b>	<b>88</b>

#### Training programme on Value added fishery products

NETFISH has conducted programs on value added fishery products on 27-04-2011 at

Bhagawati Bandar, Ratnagiri and on 28.04.2011 at Kasarweli and Ratnagiri along with its regular dry fish training programmes. The trainers used prawn which was caught during on-board training program to prepare prawn pickle. Fisherwomen from SHGs have shown great interest in such programs.

**Boat clean-up programme in Karla & Golap:** NETFISH conducted the boat cleanup program on 08.09.2011 in Karla landing centre in Ratnagiri area. Total 40 nos. of fishermen/boat owners participated in this programme. Buckets, brushes, detergent powder, bleaching powder and potable water were provided by NETFISH. 10 fishing vessels were cleaned in this program. This program was made successful by the active cooperation of Nagarik Bahu Uddeshiy Seva Pratishthan, Sindhudurg. Similar kind of a boat cleanup programme was organized at Golap another fishing village near to Ratnagiri harbour on 09.09.2011.

**Street plays:** Street-play programmes were organised on 17.12.2011, at Mirkarwada, Bahagawati Bandar, Kasarweli, Sakhartar and on 18.12.2011 at Karla, Navanagar, Bhatye, Golap, Pawas, fishing villages around Ratnagiri harbour. These street play programmes got very good response from fishermen community.

**Outcomes**

- It is observed that some of the fishermen from Ratnagiri area started using detergents and sanitizers on fishing vessels
- Fishermen attitude is changing towards avoiding by-catch. Majority of fishermen who participated in onboard training programmes agreed that BRD should be used to avoid juveniles and by-catch
- Boat owners from Ratnagiri area have purchased insulated fish boxes
- Improved hygienic conditions on fishing vessels and handling of fish
- Fishermen have completely stopped fishing activities during closed season.

**HARNE PORT**

Harne port is a beach and small jetty is constructed towards rocky side but fishing

vessels cannot be moored properly on that jetty because of shallow water depth. Auction takes place on Harne port beach. This place become overcrowded at the time of morning and evening hours at the time of landing the fish catch, auctioning the fish catch with handcarts, vehicles, petty shops, etc. Fishermen and fisher women gather from nearby fishing villages at morning and evening hours for buying and selling the fish.

**Problems identified**

- Unavailability of ice and potable water at the harbour
- Unhygienic fish handling practices
- Use of bamboo baskets for handling fish
- Open transportation of fish and ice
- Chewing Pan, Tobacco, Gutkha, smoking Cigarettes and drinking alcohol is a regular practice of some fishermen in fishing vessels/landing centres
- Use of beach as toilets
- Single day fishermen do not carry ice
- Selling food material, snacks, and tea inside landing centre
- No regular practice of cleaning fishing vessels
- Unhygienic fish drying practices on roads, roadside, on sand, in open space on soil, etc.

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	20
2	Sustainable Fishing/Conservation	20
3	Onboard	6
4	Dry fish training	12
5	Street-plays	10
6	Mass communication & Work shop	2
7	Mass Boat clean-up	3
	<b>Total</b>	<b>73</b>



**Seminar at Utambar and Veldur:** NETFISH organized a seminar for fishermen at Veldur and Utambar fishing villages on 26.08.11 and 27.07.11 respectively to spread NETFISH messages. 65 participants from fisher community participated in this seminar from Veldur and 72 boat owners/fishermen (mainly trawler owners) participated in the seminar from Utambar. Leaflets are distributed to participants and NETFISH documentaries were also shown to them.

**Street play:** Street-play programmes were organized at several fishing villages near to Harne port to convey NETFISH messages to large number of fishermen at a time in an attractive manner. The street-play was designed in such a way that to include folk songs, stories and NETFISH messages mixed in an enjoyable manner by the spectators. Street-plays attained wide attraction from people and even demanded repeated performance of the programme.

#### Outcomes

- ❑ Fishermen from Harne area started using detergents and sanitizers on fishing vessels.
- ❑ Fishermen of Harne area completely stopped fishing activities during closed season
- ❑ Boat owners from Harne area purchased big size insulated fish boxes.
- ❑ Remarkable changes were observed among fishermen in Veldur, Dabhol fishing villages in Harne area. It is observed that fishermen started replacing bamboo baskets with plastic baskets.

### 7.8 GUJARAT

Gujarat has the longest coast-line in India extending to about 1663 km and thus constitutes about 22 per cent of country's total coastal length. Gujarat coast is distinct from the other coasts of the country with its shallow depth, wider continental shelf and vast stretch of saline and tidal mudflats. The economy of Gujarat, to a significant level is linked to the coastal region the coastal regions face

pressures from the different driving forces of economic development like industries, infrastructure development, energy development etc. This independently and also collectively cause many serious environmental problems in the coastal and marine environment.

Gujarat tops the list of the maritime states of India in terms of marine fish export. The state exported 1,98,318 tonnes of fish worth Rs. 2,156.21 crores during 2010-11. Fishing industry generates substantial foreign exchange and employment for about 1, 60,000 fishermen in Gujarat. The State is divided into 25 revenue districts of which Kutchh, Rajkot, Jamnagar, Porbandar, Junagadh, Amreli, Bhavnagar, Kheda, Anand, Bharuch, Surat Navsari and Valsad are the coastal districts.

During 2011-12, NETFISH conducted 355 programmes in Gujarat. The selected areas for NETFISH activities in Gujarat for the financial year were Veraval, Porbandar, Mangrol, Vanakbara-DIU, Jakhau, Dholai (with surrounding landing centre Umersadi and Nargol at South Gujarat).

#### VERAVAL FISHING HARBOUR

Fisheries have always been the main industry in the town and are dominated by the Kharwas (fisher folk). Fishing is done mostly on traditional boats and trawlers. Veraval has large number of fish processing factories which export prime quality seafoods. The seafood-industry which was started through government initiative is in its prime now and many importers are attracted towards Veraval from around the globe. Its importance now is as a fishing port which is one of largest in India. The total fishermen population of Veraval fishing industry is around 70000, around 2091 trawler and 600 small fiber glass fishing vessel are operating in this area, 40% share of total economy is from fisheries sector in Veraval and around 50000 people depends on income of seafood/fish processing plants. The main fish landing is Ribbon fish, Croaker fish, Squid & Cuttle fish, Shrimps and Pomfret.



**Problems identified**

- Lack of proper sanitation and hygiene practices in handling fish
- Ice dumping on dirty floor
- Poor personal hygiene of fishermen, crew members as well as pre-processing workers
- No regular cleaning of fishing vessels
- Not carrying ice for single day fishing
- No proper infrastructure
- Dumping of thermocol, plastics, waste wood, net pieces, oil, diesel etc. in to harbour premises
- Open transportation of fish material from harbour to processing plant
- Cod end mesh size particularly in trawl boat is below 5 mm
- Juvenile fishing
- Industrial pollution in Fishing Harbour

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	26
2	Sustainable Fishing/conservation	12
3	Onboard	7
4	Preprocessing	16
5	Street-plays	32
6	Coastal cleanup	1
7	Door to door programme	2
8	Mass communication	1
9	Mike announcement	3
	<b>Total</b>	<b>100</b>

**Street play:** In an effort to convey NETFISH message in a better manner, organized 32 street play programmes on “hygienic handling fishes at harbours” at Veraval Harbour. It is also observed that fishermen are more interested to

see such kind of programmes. More than 10000 people participated in the 8 days programme.

**Mass Communication:** NETFISH arranged a Mass communication Programme at Veraval fishing harbour on 30<sup>th</sup> October 2011, The Deputy Director, Asst. Director Regional Office Veraval, Officials of Dept. of Fisheries, all members of Akhil Gujarat Machhimar Maha Mandal were present during occasion. The objective of the programme was to give awareness to stake holder groups of fishing industry on hygienic handling of fishes, conservation of fishery resources and importance of sustainable fishing practices. The programme was a big success with active participation by the fishermen community.

**Mass Boat Clean Up:** Organized one day Mass boat and harbour cleanup programme on 16<sup>th</sup> November 2011 at Veraval fishing harbour. NETFISH provided liquid soap, brushes, wipers etc., to crew members. Department of fisheries provided borewell water, hose pipe and four workers to clean the boats with good water instead of dirty harbour-water. Students of college of social welfare, Sutrapada also took part to educate crew member about importance of cleaning of fishing vessels, crates and fish contact surfaces and also to maintain good personal hygiene. Around 63 fishing vessel were cleaned spreading message to fishermen community that cleaning of vessel is equally important as keeping fish fresh. Shri. B.A. Yadav Education & Rural Development Foundation Trust, NGO Member made all efforts to pass message among fishermen community.

**Mass Communication Programme:** To cover up a large number of fishermen living around the harbour and to pass message of various issues of fishing harbour, NETFISH organized a mike announcement programme on 8<sup>th</sup>, 10<sup>th</sup> and 13<sup>th</sup> of November 2011 to convey the message of personal hygiene and hygienic handling of fish.

**Door to Door Programme:** Door to door awareness programme was organized on 15<sup>th</sup> and 16<sup>th</sup> November 2011 by visiting each household of fishermen community in and around Veraval fishing harbour to spread

NETFISH message more effectively. During the visit leaflets and charts on hygienic handling of fishes and sustainable fishing practices were distributed to fishermen.

### Outcomes

- ❑ As one of the major achievements of NETFISH, Gujarat boat owners stopped trawling from April 30<sup>th</sup>, much prior to the start of regular trawling ban period on June 10<sup>th</sup>, to avoid capturing juvenile ribbon fishes at Mangrol, Veraval and Vanakbara fishing harbours
- ❑ Govt. of Gujarat have started supplying free 40mm sized square meshed cod ends to fishing vessels in all the fishing harbours of the state as part of NETFISH campaign and serious efforts were taken on conservation of fishery resources.
- ❑ Sanitation of the auction hall is improved
- ❑ Trawl net cod end mesh size increased
- ❑ Fishermen started cleaning fishing vessel before and after each fishing trip
- ❑ Personal hygiene and sanitation conditions in pre-processing centers is improved

### MANGROL FISHING HARBOUR

Mangrol is an important fishing harbour in Gujarat. Fishing here is done mainly with small fiber glass and mechanized trawlers. There are around 990 trawlers and 405 gill-netters operating in this area and the main catch is Ribbonfish, Croaker fish, Seer fish, Mackerel, Squid, Cuttle fish and Prawns.

### Problems identified

- ❑ No proper sanitation and hygienic practices
- ❑ Poor personal hygiene of workers
- ❑ No proper maintenance of fishing vessel
- ❑ Fishermen do not carry ice for single day fishing
- ❑ Cod end mesh size particularly in trawl boat is below 10mm

- ❑ Open transportation of ice
- ❑ No proper maintenance of fishing vessel
- ❑ Fishing during monsoon ban by small mechanized fishing vessel
- ❑ Poor handling of fishes for domestic markets

### Programmes conducted

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	18
2	Sustainable Fishing/conservation	12
3	Onboard	2
4	Street-plays	24
5	School programmes	2
6	Mass communication	1
7	Mike announcement	2
	<b>Total</b>	<b>61</b>

**Street play:** Street play programme was organized at Mangrol harbour and surrounding areas and around 7000 people watched the 6 days programmes. Street-play programmes won in arousing the interest of people as it was designed so attractively.

**Mass communication programme:** NETFISH arranged a mass communication programme at Mangrol fishing harbour on 25<sup>th</sup> October 2011 to inform fishermen about the importance of keeping fishing harbour clean. To cover up large number of fishermen around the harbour and to pass message on various issues regarding fishing harbour, NETFISH organized a mike announcement programme on 9<sup>th</sup> & 11<sup>th</sup> of November 2011. The programme was conducted by engaging an auto rickshaw which announced NETFISH messages round the clock surrounding the harbour.

**School children programme:** As a part of more awareness on conservation and sustainable fishing NETFISH has conducted certain

programmes for the children of fishermen community to pass message up to grass root level. School programmes on conservation for students of Parmesh High School, Mangrol of standard 9<sup>th</sup> & 10<sup>th</sup> was conducted On 30.07.11 & 03.09.11. President and members of Fishermen community, Mangrol also attended this programme. The lecture on conservation of marine resource is delivered to student. Various posters, leaflets, documentary and animations films were shown to them.

**Outcomes**

- Fishermen use plastic sheets to cover fish and ice while transport on three wheelers as a result of NETFISH awareness programmes
- Started to clean fishing vessel before and after each operation
- Fishermen started using trawl nets with cod end mesh size 25mm; before it was 5mm

**VANAKBARA FISHING HARBOUR**

Vanakbara is a minor harbour located near to DIU (UT) Island adjacent to Gujarat. Around 40 thousand fishermen are living in the village. More than 499 trawlers, 316 OBM, 219 IBM gillnetter and 321 non motorized vessels are operating in this area. The main catch is fishes like ribbon fish, croaker fish, ghol fish, seer fish, king fish, pomfrets and prawns. Majority of the catch is going to Veraval fish processing industry because only two fish processing plants are available at DIU. Basic facilities are not available at this harbour except wharf. The central government has sanctioned a full harbour development project of around Rs.5 crore to upgrade the harbour. In this context NETFISH has made an attempt to form a harbour management committee with the help of Gram Panchayat and Department of Fisheries.

**Problems identified**

- Unhygienic fish handling practices
- Ice dumping on dirty floor for bunkering in fishing vessels
- Poor personal hygiene of workers

- No regular practice of cleaning fishing vessel before and after each fishing trip
- Fishermen going for single day fishing do not carry ice
- Dumping waste at harbour premises
- Open transportation of fish material from harbour to Booth/processing plant
- Cod end mesh size particularly in trawl boat is below 5mm
- Juvenile fishing

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	13
2	Sustainable Fishing/conservation	6
3	Preprocessing	5
4	Street-plays	8
5	School programmes	1
	<b>Total</b>	<b>33</b>

**Street play programmes:** Street-play programmes were organised around Vanakbara harbour for 2 days and which attracted more than 2500 people.

**School children programme:** In an effort to spread NETFISH messages to the children of fishermen community, school children programmes were organised at Government high school, Vanakbara, DIU on 25.08.11. The Vice President of Gram Panchayat, Vanakbara, leaders and Principial of High School were invited for the programme. A lecture on conservation of marine resource was delivered to students and NETFISH posters, leaflets and video films were also shown to them during the programme. At the end of the programme feed backs were collected from children.

**Outcomes**

- Awareness among fishermen to use 35 mm mesh sized cod end is increased

- Fishermen going for single day fishing have started to carry ice
- Fishermen have started to maintain wharf/berth clean
- Booth holders keep their booth clean
- Personal hygiene of workers of the pre-processing plant is improved and they maintain a clean environment in PPC

#### **PORBANDAR FISHING HARBOUR**

Porbandar is the second biggest harbour in Gujarat, with more than 1133 trawler and 539 small fiber glass vessels operating from this harbour. 40% of the population of the city belongs to fishermen community and the main business is fishing, sea food supply and export. There are 7 fish processing plants are located in this region.

#### **Problems Identified**

- Unhygienic fish handling practices
- Poor personal hygiene of workers
- No proper maintenance of fishing vessels
- Fishermen going for single day fishing do not carry ice
- Cod end mesh size particularly in trawl boat is below 10mm
- Fishing by small mechanized fishing vessels during monsoon trawl ban period

#### **Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	25
2	Sustainable Fishing/conservation	18
3	Preprocessing	7
4	Street-plays	16
5	Door to door programme	1
6	Mass communication	2
	<b>Total</b>	<b>69</b>

**Street plays:** NETFISH organized a four day street-play programme in and around Porbandhar fisheries harbour. It was observed that fishermen are interested to watch such kind of programmes. Almost 5000 people participated during the 4 days programme.

**Mass communication:** NETFISH arranged a Mass communication Programme at Porbandar Fishing harbour on 2<sup>nd</sup> November 2011. Officials of Dept. of Fisheries, the port officer, members of Porbandar boat association, President, Porbandar Kharwa Samaja, exporters and suppliers were invited for this programme.

**Door to door awareness programmes:** To approach individual fishermen and to create more awareness among them on various issues of fishing harbour, a door to door awareness programme was organized on 15<sup>th</sup> November at Porbandar fisheries harbour.

#### **Outcomes**

- Port office issued a letter to Superintendent of fisheries for land allotment to build a training center near to fishing harbour
- Fishermen started washing fishing vessel before and after each fishing trip
- Workers in the harbour maintain good personal hygiene

#### **DHOLAI HARBOUR, UMERSADI AND NARGOL LANDING CENTRE**

Dholai port is minor fishing harbour developed by MOA/GOG in Navsari Dist. The port has very good infrastructure like auction hall, rest shed, net mending hall, office, good landing facility, electricity etc but it is not fully operational due to non availability of water. So most of the fisherman is migrating to Bhaw cha Dakka in Maharashtra for better price. Now only around 30 boats are coming to this harbour. No ice factory is nearby so the shortage of ice is intense there. The marine fish production is 36347 tonnes/year. The average fisher population of Navsari district is 36,000.

Umersadi is famous for Bombay duck fishery and dry fish production. Dried Bombay



duck is exported through Bombay. There are 250 boats in Ummersadi region. The fishermen population of the landing centre is more than 5000.

Nargol region is having 250 boats in operation. The main fish catch is Bombay duck, ghol, pomphret shrimp, lobster etc. The landing centre has no basic infrastructure facility. Catch is landed to sea shore and segregated by fisherwomen on plastic sheet. Approximate fishermen population is 8000.

**Problems identified**

- Poor basic infrastructural facilities
- Auction hall is not operational
- Shortage of ice as no ice plant is near around
- Unhygienic fish handling practices
- Prevalent use of bamboo baskets for handling fish
- Poor personal hygiene of workers
- Small mesh sizes in dol nets
- Mangrove destruction

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish quality management	31
2	Sustainable fishing	20
3	Onboard	1
4	Preprocessing	4
5	Dry fish training	15
6	Door to door programme	1
	<b>Total</b>	<b>72</b>

**Door to door awareness programmes programme:** Door to door programmes were organized at Dholai port by distributing NETFISH leaflets to educate fishermen on various aspects of fish quality management.

**Outcomes**

- Bamboo baskets were replaced by plastic baskets

- Observe fishing ban during monsoon at Dholai, Nargol and Umersadi landing centres
- Improvement in handling of fishes
- Fish material wash with fresh water instead of muddy polluted sea water as practiced earlier

**JAKHAU/RANDH FISHING HARBOUR**

Jakhau is a big harbour located in Kutch region of Gujarat. More than 1000 vessels are operating from here. Main varieties of fish landed in this harbour are prawns, lobster and pomfrets. Majority of fishes harbouring the area around Jakhau harbour are migratory in nature so during monsoon season there is no activity in the harbour. There are no fish processing plants or Ice plants near to this harbour so scarcity of Ice is always a problem here.

**Problems identified**

- Unhygienic environment and practices in the harbour
- Poor personal hygiene of workers
- Unclean fishing vessels
- Basic infrastructure facilities were developed by state fisheries but not in operational condition so fishing activity is still going on at old jetty area
- Cod end mesh size particularly in trawl net is below 10mm
- Juvenile fishing
- Mangrove destruction
- Unhygienic fish drying practices

**Programmes conducted**

Sl. No.	Type of programme	Total Programmes Conducted
1	Fish Quality Management	8
2	Sustainable Fishing	8
3	Dry fish training	4
	<b>Total</b>	<b>20</b>

## Outcomes

- ❑ Drying Bombay duck properly by washing and hanging them at proper distance with ropes at Randh Bandar
- ❑ Fishermen clean boats before and after each fishing operation
- ❑ Fishermen started using square meshed cod ends in trawl nets
- ❑ Awareness increased among fishermen on the use of insulated fish boxes
- ❑ Fishermen get increased price for their products as the quality improved due to improved handling practice because of NETFISH training programmes

## 8. Member NGOs of NETFISH for the Year 2011-12

1. **Setu Information Center**  
Bhadreshwar, Kutch District, Gujarat
2. **Brackish Water Research Centre (BWRC)**  
Kasba Mohalla, Mougul Street, Surat District, Gujarat
3. **Development Foundation Trust**  
Maliya, Hatina District, Junagadh, Veraval, Gujarat
4. **Siddharth Development Foundation**  
Bilkha Road, Dr. Aambedkar Nagar, Ranvalikhan, Junagadh, Gujarat
5. **Nagrik Bahu Udeshiya Seva Pratistan**  
Sindhudurg, Maharashtra
6. **Manavvikas Sevabhavi**  
Chandranagar, Thane District, Maharashtra
7. **Snehakunja Trust (Regd No. E - 237 KWR)**  
Honnavaara, Post Kasarkod, Uttara Kannada District, Karnataka
8. **Ashika Trust**  
No.1, Padmatara Apartments, 1<sup>st</sup> Cross, Monkey Stand New Road, Mangaladevi, Mangalore, Karnataka
9. **Sahyadri Community Development & Women Empowerment Society (SCODWES)**  
Savinilaya Building, Maratikoppa Main Road, Sirsi, Karnataka
10. **Shri.Mustafa.K**  
Thalakkalakam Parambu, West Hill, Kozhikode, Kerala
11. **South Indian Fisherman Federation Society (SIFFS)**  
Karamana, Trivandrum, Kerala
12. **Social And Environment Awareness Trust**  
Kasipuram, B Block, Royapuram, Chennai Tamil Nadu
13. **S.O.H.E.S.**  
No 5/378, Pillayar Kovil Street, Kanchipuram District, Tamil Nadu
14. **GAIA International**  
1st Floor, First Main Road, Kamaraj Nager, Thiruvanmiyur, Chennai, Tamil Nadu
15. **Village Resource Centre**  
M.S.Swaminahan Research Foundation, 23, South Palpannaicherry, Nagapattinam, Tamil Nadu
16. **Scuba Social Service Organisation ( SCUBA)**  
Singapore Plaza, Sethu Road, Adiramapattinam, Thajavur District, Tamil Nadu
17. **Chevaliar Roshe Society (CRS)**  
Derose Centre, Polpettai Opp. New Bus Stand, Thoothukudi, Tamil Nadu
18. **Village Resource Centre of MSSRF**  
3/1944, Iraiয়ারasu Valagam, Thangachimadam, Ramanathapuram District, Tamil Nadu
19. **Village Resource Centre of MSSRF,**  
145, Salai Road, Kurusady, Nagercoil, Kanyakumari District, Tamil Nadu
20. **AP State Fishermen Development And Welfare Association**  
Hyderabad, Andhra Pradesh
21. **Jnankalyan Welfare Society**  
Durganagar, 2<sup>nd</sup> Street Mallayapet, Rajahmundry, Andhra Pradesh
22. **Socio Economic Alternatives Research Resource Community For Humanity (SEARCH)**  
Guntur District, Andhra Pradesh
23. **District Fishermen Youth Welfare Association**  
Vivekananda Bhavan, Vishakapatnam, Andhra Pradesh
24. **Subha Rashmi Mahila Seva Samiti (SRMSS)**  
Balasore District, Orissa
25. **Rangalata Peoples Rural Development Society (RPRDS)**  
Bentapur, Puri District, Orissa
26. **The Science Association of Bengal**  
104, Diamond Harbour Road, Barisha P.O, Kolkata, West Bengal
27. **Sarboday Sangha**  
Vill 7 P.O AjoyaKhejuri, Medinipur (East), West Bengal

## 9. Audit Report

# Ananthan & Sundaram

Chartered Accountants  
www.aandscas.com



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### Audit Report

We have examined the balance sheet of **NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING** (NETFISH ), Reg. No.ER 509/06 as at 31<sup>ST</sup> March,2012 and the Income &Expenditure Account for the year ended on that date which are in agreement with the books of account maintained by the said institution.

We have obtained all the information and explanations, which to the best of my/our knowledge and belief were necessary for the purposes of the audit. In our opinion, proper books of account have been kept by the head office and the branches of the above-named trust / institution visited by us so far as appears from our examination of the books and proper returns adequate for the purposes of audit have been received from branches not visited by us subject to the comments given below: -

In our opinion and to the best of my/our information, and according to information given to me/us the said accounts give a true and fair view: -

- (i) In the case of the balance sheet, of the state of affairs of the above named trust/institution as at 31.03.2012 and
- (ii) In case of the Income & Expenditure Account, of the excess of expenditure over income of its accounting year ending on 31.03.2012.

Place : Kochi

Date : 16-07-2012

For Ananthan & Sundaram  
Chartered Accounts  
Sd/-  
P.K. Raju FCA. DISA  
Partner (M No. 216569)  
Firm Regn No. 000148 S

**NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH), KOCHI (REG.NO. ER 509 / 06)  
BALANCE SHEET AS ON 31-3-2012**

As on 31-03-11	LIABILITIES		As on 31-03-12		ASSETS		As on 31-03-12	
	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
1,536,114	<b>CAPITAL FUND</b> Opening balance Add: Fund received from MPEDA during the year Less : Excess of Expenditure over income for the year	1,934,656	-	39,545	<b>FIXED ASSETS</b> Computer Equipments-Op.Bal Add: Additions during the year Less: Depreciation for the year <b>25,538</b> Furniture & Fittings-Op. Bal Add: Additions during the year Less: Depreciation for the year 117,040	39,545	-	
16,000,000		20,000,000				24,300		
(15,601,458)		21,934,656	5,589,506			63,845		
1,934,656		16,345,150		124,597		124,597		
	<b>OTHER LIABILITIES &amp; PROVISIONS</b> Salary Payable Expenses Payable Audit Fee Payable Income Tax TDS Payable			164,142	<b>LOANS &amp; ADVANCES</b> Salary & TA Claim Receivable From MPEDA Advance to Staff	5,448	142,578	
547,882		506,300		549,307		140,000		
35,759		44,152		8,793		-		
6,618		6,618		558,100				
7,785		-						
598,044			557,070					
2,532,700			<b>6,146,576</b>	1,810,458	<b>CASH &amp; BANK BALANCE</b> Cash in hand Balance with banks	5,863,998	5,863,998	
				2,532,700				<b>6,146,576</b>

Notes forming part of Accounts - attached as Schedule 2

As per our report of even date attached

Sd/-  
Chief Executive OfficerSd/-  
TreasurerSd/-  
SecretarySd/-  
Auditor



**NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH), KOCHI (REG.NO. ER 509 / 06)  
INCOME & EXPENDITURE STATEMENT FOR THE YEAR ENDED 31-03-2012**

Previous Year	Expenditure	For the year ended 31-3-2012	Previous Year	Income	For the year ended 31-3-2012
	<b>Extension Activities - Sch : 1(a)</b>			<b>Miscellaneous Income</b>	
2,952,249	Training - Fishermen	2,889,896	2,000	Application Fee	-
721,783	Training - Pre- Processing	667,876	2,500	Membership Fee	1,500
1,348,224	Training - Onboard	1,762,910	3,200	Renewal Fee	400
283,199	Training - Tuna/Dry Fish/On Shore	370,100	7,700		1,900
1,702,710	Training - Conservation & Sustainability	1,705,906			
349,897	Training - Aquaculture	356,750			
95,291	Boat Registration Campaign	-			
116,529	Trainers Training Programme	-			
1,088,059	Street Play	1,619,558	15,601,458	Excess of Expenditure over income for the year	16,345,150
179,674	Other Extension Programmes	189,949			
395,423	Fishermen Aid Programmes	711,284			
425,884	Publicity & Literature	185,754			
1,847	Catch Certificate Prog.	-			
-	FVO Visit	146,589			
412.722	Travelling For Extension Training Staff	513,915			
-	Training	33,090			
180,000	Animation Charges				
82,935	Documentary				
<b>10,336,426</b>					<b>11,153,577</b>
	<b>Employee Cost- Sch: 1(b)</b>				
480,000	Salary - Chief Executive	480,000			
3,240,436	Salary - State Co-ordinators	3,240,000			
480,000	Salary - Research Assistant	480,000			
192,750	Salary - Staff	191,100			
<b>4,393,186</b>					<b>4,391,100</b>

Contd.

								16,347,050
<b>Other Charges- Sch-1 (c)</b>								
Advertisement for Recruitment	55,773			-				
Audit Fee	6,618			6,618				
Bank charges	9,615			12,914				
Internet & Website	70,635			73,744				
Insurance & AMC	48,819			9,647				
Meetings	164,933			191,881				
Miscellaneous & Contingent Expenses	57,966			51,185				
Telephone/Mobile charges	74,772			71,857				
Postage & Telegram	23,066			22,060				
Printing & Stationery	64,832			81,324				
Repairs & Maintenance	-			35,393				
Taxation/other consultancy	3,309			3,309				
Travelling Expenditures	227,316			191,129				
	<b>807,654</b>					<b>751,061</b>		
	71,892					51,312		
Depreciation on Fixed Assets	15,609,158					16,347,050		15,609,158

Notes forming part of Accounts - attached as Schedule 2

As per our report of even date attached

Sd/-  
Chief Executive Officer

Sd/-  
Treasurer

Sd/-  
Secretary

Sd/-  
Auditor

**NETWORK FOR FISH QUALITY MANAGEMENT & SUSTAINABLE FISHING (NETFISH ), KOCHI ( REG.NO. ER 509 / 06 )  
RECEIPTS & PAYMENT ACCOUNT FOR THE YEAR ENDED 31-03-2012**

Receipts	(Rs)	(Rs)	Payments	(Rs)	(Rs)
Opening balance			Payments for Extension Activities		
Cash			Training Programmes		7,976,477
Bank	1,810,458		Publicity & Literature		185,754
Funds received from MPEDA		1,810,458	Fishermen Aid Programme		711,284
Other Income		20,000,000	Travelling For Extension Training Staff		513,915
Salary, TA to Technical and Field Staff paid (MPEDA a/c)		1,900	Documentation		-
		2,157,670	Mass Awareness		1,766,147
			Salary - CEO, SCO's etc		4,390,015
			Salary, TA to Technical and Field Staff paid ( MPEDA a/c)		1,791,030
			Establishment & Other Items		741,660
			Fixed Assets Purchased		29,748
			Closing balance		
			Cash in hand		-
			Balance with banks	5,863,998	5,863,998
		<b>23,970,028</b>			<b>23,970,028</b>

Sd/-  
Chief Executive Officer

Sd/-  
Treasurer

Sd/-  
Secretary

Sd/-  
Auditor

**Schedule-1(a)- Extension Activities (HO & Regions)**

	KOCHI	KOLLAM	CHENNAI	TUTICORIN	VERAVA	VISAG	BBNSR	KOLKOTA	MUMBAI	MNG	HO	TOTAL
<b>a) Training Programmes</b>												
1) Trg. Fishermen	823553	248273	177710	281348	304416	211591	104430	252619	227582	258374		<b>2889896</b>
2) Trg. Pre Processing	376912			7650	79726	56811	18982	54994	46494	26307		<b>667876</b>
3) Trg. ONBOARD	156659	225890	220680	275914	93140	63082	187386	231289	167951	140919		<b>1762910</b>
4) Trg. Tuna/Dry Fish/On Shore/Others			22757		47931	30479	16205	60073	105790	86865		<b>370100</b>
5) Trg. Conservation & Sustainability		111874	231897	286318	212042	174393	163658	88737	209719	227268		<b>1705906</b>
6) Trg. Aquaculture				65122		41985	16350	201597	31696			<b>356750</b>
7) Boat Registration Campaign												<b>0</b>
8) Trainers Training Prog.												<b>0</b>
9) Street Play	289600	199500	149025	197650	175575	90317	101146	148343	74902	193500		<b>1619558</b>
10) Other Extension Programme	30205		20798	30000	11580		21892	23167	18562	33745		<b>189949</b>
11) Fishermen Aid Programme	100000	84469	74970	25680	79842	85050	78116	84597		98560		<b>711284</b>
12) Publicity & Literature			18201		7665				41410		118478	<b>185754</b>
13) Catch Certificate												
14) FVO Visit	34388	16959			21585	24650		15545	6262	27200		<b>146589</b>
Travelling For Extension Training Staff	38032	13360	42446	63894	58696	87787	49429	87503	65465	7303		<b>513915</b>
Training											33090	<b>33090</b>
Animation												<b>0</b>
Documentary												<b>0</b>
<b>Total</b>	<b>1472437</b>	<b>1277237</b>	<b>958484</b>	<b>1233576</b>	<b>1092198</b>	<b>866145</b>	<b>757594</b>	<b>1248464</b>	<b>998833</b>	<b>1100041</b>	<b>151588</b>	<b>11153577</b>

Sd/-  
Chief Executive OfficerSd/-  
TreasurerSd/-  
SecretarySd/-  
Auditor



**Schedule:1(b)- Employee Cost (HO & Regions)**

	KOCHI	KOLLAM	CHENNAI	TUTICORIN	VERAVA	VISAG	BBNSR	KOLKOTA	MUMBAI	MNG	HO	TOTAL
<b>Salary</b>	324000	324000	324000	324000	324000	324000	324000	324000	324000	324000	1151100	<b>4391100</b>
<b>Schedule : 1(c) - Other Charges (HO &amp; Regions)</b>												
Audit Fee											6618	<b>6618</b>
Bank Charges			1402	1651	1551	1254	1256	1772	1293	1722	1013	<b>12914</b>
Internet & Website		5000	6000	6000	5500	6000	6000	6000	6000	6000	21244	<b>73744</b>
Insurance & AMC											9647	<b>9647</b>
Meetings			4815	18165	32903	16749	17643	20855	8377	13209	59165	<b>191881</b>
Miscellaneous & Contingent Expenses			965		942	500	2989	36	307	759	44687	<b>51185</b>
Mobile & Telephone Charges	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	11857	<b>71857</b>
Postage & Telegrams			1034	1383	1176	2029	2316	3068	3261	437	7356	<b>22060</b>
Printing & Stationery		526	2717	3261	2359	2578	3000	2852	2941	513	60577	<b>81324</b>
Repairs & Maintenance				4875	500	2800	3200	1918			22100	<b>35393</b>
Taxation/Other Consultancy											3309	<b>3309</b>
Travelling Expenditures											191129	<b>191129</b>
<b>Total</b>	<b>6000</b>	<b>11526</b>	<b>22933</b>	<b>41335</b>	<b>50931</b>	<b>37910</b>	<b>42404</b>	<b>42501</b>	<b>28179</b>	<b>28640</b>	<b>438702</b>	<b>751061</b>
Depreciation											51312	51312

 Sd/-  
Chief Executive Officer

 Sd/-  
Secretary

 Sd/-  
Auditor

## Schedule 2

**NOTES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31-03-2012**

## 1. Significant Accounting Policies

## a. Basis of Accounting-

Accounts are prepared on accrual basis of accounting

## b. Capital Fund-

Funds received from MPEDA (author/founder of the society) are credited to Capital fund. Excess of Income over Expenditure/ (Excess of Expenditure over Income) for the year is also added/ (deducted) to/from the Capital Fund.

## c. Fixed Assets-

Fixed assets are stated at cost less depreciation

## d. Depreciation-

Depreciation is provided as per the rates prescribed under the Income Tax Act 1961 as below:

Computer and accessories -60% under WDV method

Furniture and fittings -10% under WDV method

Depreciation has been provided on assets acquired during the year. 50% of the normal depreciation has been charged in case of assets acquired after 30<sup>th</sup> September of the year.

2. NETFISH is a society registered under the Travancore -Cochin Literary, Scientific & Charitable Societies Registration Act, 1955 and the income of the society is exempted under section 12AA of the Income Tax Act, 1962 vide orders of the Commissioner of Income Tax Kochidtd 21.07.2008.
3. During the year 2011-12, an amount of Rs.2,00,00,000 has been received as fund transfer from MPEDA (author/founder of the Society) and the same has been credited to Capital fund.
4. Travelling Expenses incurred by State Co-coordinators and Field Staff inconnection with extension activities are also classified under “ Extension Activities “ (Schedule I(a) )
5. Previous year’s figures were regrouped wherever necessary.

Sd/-  
Chief Executive Officer

Sd/-  
Treasurer

Sd/-  
Secretary

Sd/-  
Auditor



## OFFICE BEARERS



Ms. Leena Nair, IAS  
President



Dr. Joice V. Thomas  
Chief Executive



K.N. Vimal Kumar  
Treasurer



Atanu Ray  
SCo, West Bengal



S. Mohapatra  
SCo, Odisha



P.Hanumantha Rao  
SCo, Andhra Pradesh



K. Anandan  
SCo, Chennai, TN



Dr. R. Balasubramanian  
SCo, Tuticorin, TN



Dr. S. Shassi  
SCo, Kerala-South



Aliamma Kuriachan  
SCo, Kerala-North



K.A. Narayana  
SCo, Karnataka



Santhosh Kadam  
SCo, Maharashtra



Jignesh V.  
SCo, Gujarat



Deepu A.V.  
Research Assistant



Afsal V.V.  
Research Assistant



Remya K.R.  
Accountant





Network for Fish Quality Management  
(NETFISH)

A registered society of  
Vallarpadam P.O., Kochi  
210001  
www.netfishmpeda.org

## Network for Fish Quality Management & Sustainable Fishing (NETFISH)

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

Vallarpadam P.O., Kochi- 682 504

Ph: 0484 2100012 | E-mail: [netfishmpeda@gmail.com](mailto:netfishmpeda@gmail.com) | [www.netfishmpeda.org](http://www.netfishmpeda.org)

