



**ANIMAL HUSBANDRY, DAIRYING AND
FISHERIES DEPARTMENT**

FISHERIES

POLICY NOTE

2016-2017

DEMAND NO.7

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GOVERNMENT OF TAMILNADU
2016

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FISHERIES DEPARTMENT

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“The Government under my leadership accords utmost importance for the modernization of fisheries sector and to make Tamil Nadu a leader in sea food export.

- Honourable Chief Minister

1. INTRODUCTION

The Government of Tamil Nadu attributes utmost importance to the welfare of fishermen and for inclusive growth of the Fisheries sector. In tandem with this mission, the Government has boosted the Fisheries Sector development in the last five years by escalating the allocation of funds from Rs.193.33 crore during the year 2010-11 to

an all time high of Rs.743.79 crore in the 2016-17 budget estimates.

To provide a strong base for the holistic development of fisheries in an integrated way as a policy, the Government of Tamil Nadu under the leadership of the Hon'ble Chief Minister has been undertaking various innovative and novel programmes for increasing fish production, conservation of resources and ensuring sustainable exploitation of fisheries wealth and promotion of aquaculture practices, development of infrastructure facilities such as fishing harbours / fish landing centres for safe berthing of fishing crafts and providing shore based facilities for hygienic fish landing, strengthening domestic marketing of fish, strengthening human resource development in fisheries, providing protein rich hygienic

fish as food to the people and the upliftment and welfare of the fishers.

This Government's initiatives in providing relief assistance of Rs.4,000/- per family during the lean fishing season and a relief amount of Rs.2,000/- during the fishing ban period have alleviated the hardship faced by our fisherfolk. During 2014-15, the relief assistance under the National Savings cum Relief Scheme for fishermen and fisherwomen has been enhanced from Rs.1,800/- to Rs.2,700/-. In the last five years, under the above schemes, the Government credited an amount of Rs.749.60 crore directly into the bank accounts of marine fisher folk through National Electronic Fund Transfer (NEFT) within the shortest time ever taken for disbursing the relief. This Government's pioneering scheme in providing "50% subsidy assistance with maximum subsidy of

Rs. 30 lakh to fishermen for Procurement of new Tuna Long Liners cum Gillnetter” is the first of its kind in the country aimed to reduce the fishing pressure in the inshore waters and to harvest the untapped offshore/deep sea fishery resources. The Government has already provided Rs. 51.30 crore for the construction of 171 units benefitting 580 fishermen.

The Government has spearheaded the development of Fishing and Fisheries infrastructure in the state by sanctioning an amount of Rs.1,104.91 crore in its previous term of five years. In order to develop adequate infrastructure support required to sustain development in Fisheries Sector, four Fish Processing Parks are under progress in the districts of Thiruvallur, Thoothukudi and Kanniyakumari.

During the North-East monsoon 2015, the unprecedented torrential rain affected the normal life of people in the districts of Chennai, Thiruvallur, Kancheepuram, Cuddalore and Villupuram. A total of 2,278 fishermen with 691 motorised and non-motorized fishing crafts were mobilised and engaged by the Department of Fisheries in the rescue operations during the torrential rains and subsequent floods in 2015. The Government has released a sum of Rs. 24.07 crore as relief assistance to fishermen who lost their fishing implements.

To ensure the safety and security of the fishermen at mid sea, the Government has already provided 11,500 life buoys free of cost to traditional fishing crafts of Ramanathapuram, Pudukottai, Thiruvarur and Nagapattinam districts at a cost of Rs.1.62 crore. For the remaining coastal districts, life

buoys will be provided to all the traditional fishing crafts during the current financial year. Further, the Government under the leadership of Hon'ble Chief Minister has started to provide 30,000 Distress Alert Transmitter (DAT) at a cost of Rs.48 crore in a phased manner. The Government has also initiated steps to provide seamless communication network facilities by providing VHF equipment to all fishing crafts of Tamil Nadu at an estimated cost of Rs.62.14 crore under World Bank financial assistance. The development of Sport Fishing cum Eco Park at Chetpet, Chennai has earned an overwhelming public response besides bringing about the restoration of a water body to rejuvenate the ground water level. The Government has already initiated steps to establish a world class Oceanarium at Mamallapuram on PPP mode.

The Government has accorded top priority for augmenting inland fish production and shrimp production with improved technology such as cage culture, improving fishing efficiency, introducing suitable fish species for short seasonal tanks and development of hygienic domestic fish markets in the State.

The Government is committed to continue its initiatives for the development of Fisheries and welfare of fishers in the State in the coming years also.

2. FISHERIES POLICIES AND ITS PERSPECTIVES

The major Fisheries policies of the Government of Tamil Nadu are as follows:

- Protecting the traditional fishing rights of the fishermen.
- Ensuring safety of the fishermen while fishing at sea.

- Providing social security to the fishers through various relief schemes.
- Improving the standard of living of the fishers by implementing several welfare schemes.
- Developing / strengthening the infrastructural facilities for hygienic handling and processing of fish and thereby promoting domestic and overseas market.
- Conserving the fishery resources by enforcing statutory regulations such as mesh regulation, preventing use of destructive gears and stock enhancement and establishing artificial fish habitats.
- Managing the fishery resources by offering diversified fishing options to the fishermen to exploit offshore/ deep sea resources, especially Tuna by

providing financial assistance for deep sea fishing and establishing Mid-sea Fish carrier mother vessel.

- Promoting sustainable eco-friendly aquaculture practices / capture and foreign exchange earnings through export.
- Meeting the need for qualified manpower by Institutional strengthening of Fisheries training / Institutes.
- Generating rural employment opportunity.
- Strengthening the Fisheries Co-operatives.
- Affirming effective, efficient and transparent administration.

3. MAJOR ACHIEVEMENTS DURING THE LAST FIVE YEARS (2011-12 TO 2015-16)

The major achievements of the Department of Fisheries during the last five years (2011-12 to 2015-16) are as follows:

1. To provide relief assistance of Rs.4,000/- per marine fishermen family during the lean fishing season and a relief amount of Rs.2,000/- per marine fishermen family during the fishing ban period, a total amount of Rs.479.43 crore has been disbursed to the fishermen families.
2. During 2014-15, the relief assistance under the National Savings cum Relief Scheme for fishermen and fisherwomen has been enhanced from Rs.1,800/- to Rs.2,700/-. In the last five years, under the above schemes, this Government

credited an amount of Rs.270.17 crore directly into the bank accounts of marine fisherfolk through National Electronic Fund Transfer (NEFT) within shortest time ever taken for disbursing the relief.

3. "50% subsidy assistance with maximum subsidy of Rs. 30 lakh to fishermen for Procurement of new Tuna Long Liners cum Gillnetter" is first of its kind in the country to reduce the fishing pressure in the inshore waters and to optimally harvest the untapped offshore/deep sea fishery resources. The Government has provided Rs. 51.30 crore for the construction of 171 units benefitting 580 fishermen.
4. The Government sanctioned Rs.1104.91 crore in its previous term of five years for the holistic development

of Fishing and Fisheries infrastructure in the state.

5. In order to develop adequate infrastructure support required to sustain development in Fisheries Sector, four Fish Processing Parks are under establishment in the districts of Thiruvallur, Thoothukudi and Kanniyakumari.
6. During the North-East monsoon 2015, a total of 2,278 fishermen with 691 motorised and non-motorized fishing crafts were mobilised and engaged by the Department of Fisheries in the rescue operations and the Government released a sum of Rs. 24.07 crore as relief assistance to fishermen who lost their fishing implements.
7. With the unrelenting and assiduous efforts of the Hon'ble Chief Minister,

2,481 fishermen and their 357 fishing boats since May 2011, have been released from the Sri Lankan custody and repatriated to Tamil Nadu including the 5 innocent Rameswaram fishermen who have been arrested on false charges by the Sri Lankan Navy languishing in Sri Lankan jails since 29.11.2011.

8. Due to the continuous steps on a war footing basis taken by the Hon'ble Chief Minister of Tamil Nadu, 44 fishermen who were languishing in Iranian jail were released by Government of Iran. On the orders of the Hon'ble Chief Minister, the 44 fishermen were brought to Tamil Nadu on 3-03-2016 were sent to their respective villages at Government cost. Further, considering the poverty stricken families of the

fishermen, the Hon'ble Chief Minister of Tamil Nadu extended an ex-gratia amount of Rs.5 lakh each to fisherman from the Chief Minister Public Relief Fund (CMPRF).

9. Due to the continuous efforts of the Hon'ble Chief Minister of Tamil Nadu, 23 fishermen of Thoothukudi, Tirunelveli and Kanniyakumari districts who were stranded in Ajman and were neither allowed to carry out fishing nor return to Tamil Nadu, were repatriated to Tamil Nadu on 12.7.2016 and 14.7.2016 and sent to their respective native places at the cost of the Government.
10. The Government has already started to provide 30,000 Distress Alert Transmitter (DAT) at a cost of Rs.48 crore in a phased manner.

11. The Sports Fishing cum Eco Park at Chetpet, Chennai established at a cost of Rs 42 crore has earned an overwhelming public response besides bringing about the restoration of a water body to rejuvenate the ground water level.
12. To provide professionally qualified and skilled manpower resources in the State so as to augment fish production and exports, the Hon'ble Chief Minister established Tamil Nadu Fisheries University at Nagapattinam with a Vision of "Harnessing the Science of Fisheries for Food, Nutrition and Livelihood", which is first of its kind in India.
13. Tamil Nadu Fisheries University is offering a four year professional degree programme in Fisheries Science

(B.F.Sc.,) with an intake of 81 students per year. A four year professional Engineering degree programme i.e., B.E., (Fisheries) has been started in the College of Fisheries Engineering with an intake of 20 students.

14. It is estimated that 70 crore fingerlings are required for the State annually to achieve a potential inland fish production of 4.50 lakh tonnes. During 2014-15 the fish seed production was 45 crore leaving a gap of 25 crore. The fisheries department through several measures has increased the fish seed production of the State to meet out the fish seed demand of the state. An additional space of 34.8 ha has been created for fish seed rearing both in Government and private sector which increased the fish seed production to

61.27 crore during 2015-16, thereby reducing the fish seed gap from 25 crore to 8.73 crore.

15. This Government established a hatchery at Krishnagiri for GIFT (Genetically improved Farmed Tilapia) fish to ensure availability of fast growing GIFT (Genetically improved Farmed Tilapia) fish seeds to promote inland aquaculture especially for stocking in short seasonal tanks and farm ponds / multipurpose ponds.
16. The TNFDC has paid Rs.3.48 crore to the State Government as maiden dividend during the last five years.
17. In the Fisheries Department, 450 posts have been filled up under various categories since 2011-12.

4. FISHERIES IN TAMILNADU-AN OVERVIEW

Fishery resources of Tamil Nadu are categorised as Marine, Inland and Brackish water. The Total fish production of Tamilnadu during 2015-16 is 7.08 Lakh tons. Tamil Nadu stands 4th in total fish production of the country, besides exporting marine products of 85,063 MT and earning foreign exchange of Rs.4,184.06 crore during 2015-16.

4.1 Marine Fisheries

Tamil Nadu State with the second longest coastline in the country covers an area of 1,076 km comprising 13 coastal Districts with an Exclusive Economic Zone (EEZ) of 1.9 lakh sq. km and continental shelf area of 41,412 sq. km. The marine fisher population in TamilNadu is 9.64 lakh, living in 608 fishing villages. The inshore waters of

1,016 km length of the coast on the eastern side and 60 km length of the coast on the western side are found to be over-exploited, whereas the offshore and deep sea resources are yet to be exploited to its optimum levels. The marine fish production of the State presently is estimated to be 4.66 lakh tons against the estimated potential of 7 lakh tons.

An overview of the Marine Fisheries sector is given in Table-1.

Table: 1
Marine Fisheries Statistics- 2015-16

Coastal length	1,076 km
Number of Coastal Districts	13
Number of Fishing Villages	608
Marine Fisherfolk Population (Projected)	9.64 lakh *
Fishing Crafts Registered (online): as on 15.07.2016	
1.Mechanised Fishing boats	5,862
2.Traditional Crafts (motorised and non-motorised)	34,147 (28,886+ 5,261)

Infrastructural Facilities	
Major Fishing Harbours	4 (Chennai, Thoothukudi Chinnamuttom and Muttom (PPP)).
Major Fishing Harbours - under construction	3 (Thengapattinam, Colachel and Poompuhar)
Medium Fishing Harbours	4 (Phazhayar, Mallipattinam, Nagapattinam and Cuddalore)
Fish landing centres / Jetties	36
Fish Landing Points	254
Marine Fish Production 2015-16	4.66 lakh tonnes*
Marine Products Export (2015-16)	85,063 MT** value Rs.4,184.06 crore

Source: *Fisheries Statistics of Tamil Nadu, Fisheries Department

**Marine Product Export Development Authority (MPEDA)

4.2 Inland Fisheries

Tamil Nadu possesses 3.83 lakh ha of effective inland water resources comprising of reservoirs, major irrigation tanks, minor irrigation tanks and short seasonal tanks and ponds, rivers, backwaters and derelict water bodies. These water bodies mainly depend on the seasonal rains and the

water retention period of most of the water bodies in Tamil Nadu is very short. Poor and erratic rain fall, less retention of water in the water bodies, mismatch of breeding season of fishes with limited water availability for quality fish seed production, unavailability of low cost and quality feed are the factors responsible for limited inland fish production. The inland fisher population is about 2.28 lakh. The short water retention period in ponds and tanks due to erratic and scanty rain fall necessitates promoting and stocking of fast growing fish species in short duration such as Amur Carp, Genetically Improved Farmed Tilapia (GIFT), Jayanthi Rohu, Pangassius sp.,etc. Table 2 provides an overview of inland fisheries sector of the State.

Table: 2

Inland Fisheries Statistics- 2015-16

Inland Fishery Resources	3.83 lakh ha.
Reservoirs (78 Nos*)	62,015 ha.
Large irrigation and short seasonal tanks	2,65,819 ha.
Brackish water spread area	56,000 ha.
Population of Inland Fishers (projected)	2.28 lakh
<i>Fish seed production centres</i>	
i) Government Fish farm	8
ii) Private Fish farm	49
<i>Fish seed rearing centres</i>	
i) Government Fish farm	34
ii) Private Fish farm	180
Inland Fish Production 2015-16	2.42 lakh tons.

* 61 reservoirs taken over from PWD for fish culture by Fisheries department out of the total 78 reservoirs.

The Inland fisheries sector of the State has the potential to contribute 4.50 lakh tonnes of fish production in times of normal rainfall, for which 70 crore fingerlings are required. The Government through various schemes such as National Agriculture

Development Programme (NADP), National Fisheries Development Board (NFDB), Irrigated Agriculture Modernization and water bodies Restoration and Management (IAMWARM), Western Ghats Development Programme (WGDP), National Bank for Agriculture and Rural Development (NABARD) etc., has improved the Government fish farm facilities as well as encouraged the private farmers to create fish seed production / rearing farms. An additional rearing area of 34.8 ha has been created both in Government and private sector which led to achievement of an all time high fish seed production of 61.27 crore during 2015-16, thereby reducing the fish seed gap from 25 to 8.73 crore.

4.3 Brackishwater Fisheries

In Tamil Nadu, the total extent of brackish water area is estimated as 56,000 ha which is used for capture fisheries. Apart

from this, about 7,100 ha area is under coastal aquaculture production mainly shrimp aquaculture. In Tamil Nadu, shrimp farming has grown considerably and has emerged as a major commercial activity owing to the introduction of Specific Pathogen Free (SPF) Shrimp, *Litopenaeus vannamei*. So far, 1,734 shrimp farms (3,514.65 ha) and 51 shrimp hatcheries have been registered under the Coastal Aquaculture Act (CAA), 2005. The Government has initiated action against 428 shrimp farms which were established by encroaching Government Poromboke lands, Forest lands and in patta lands without valid CAA registration.

The details of District wise shrimp farms and hatcheries with CAA registration are given in Table.3

Table: 3

District wise shrimp farms and hatcheries registered with CAA

Sl. No	District	Registration of Shrimp farm		Approved Shrimp farms for <i>L. vannamei</i>		Shrimp hatchery
		Nos.	Water Spread Area (in ha)	Nos.	Water Spread Area (in ha)	Nos.
1	Thiruvallur	52	159.36	7	67.38	
2	Kancheepuram	74	96.18	12	27.84	18
3	Villupuram	25	44.68			28
4	Cuddalore	129	227.46	8	49.95	1
5	Nagapattinam	809	1,512.55	56	257.59	3
6	Tiruvarur	154	394.45	10	70.64	
7	Thanjavur	301	618.86	18	129.79	
8	Pudukottai	57	121.15			
9	Ramanathapuram	111	252.68			1
10	Thoothukudi	21	86.78	2	37.02	
11	Kanniyakumari	1	0.5			
	Total	1,734	3,514.65	113	640.21	51

5. ADMINISTRATIVE SET UP

The Commissioner of Fisheries is the Head of the Department, the Managing Director of Tamil Nadu Fisheries Development Corporation Limited, (TNFDC Ltd.) a Public

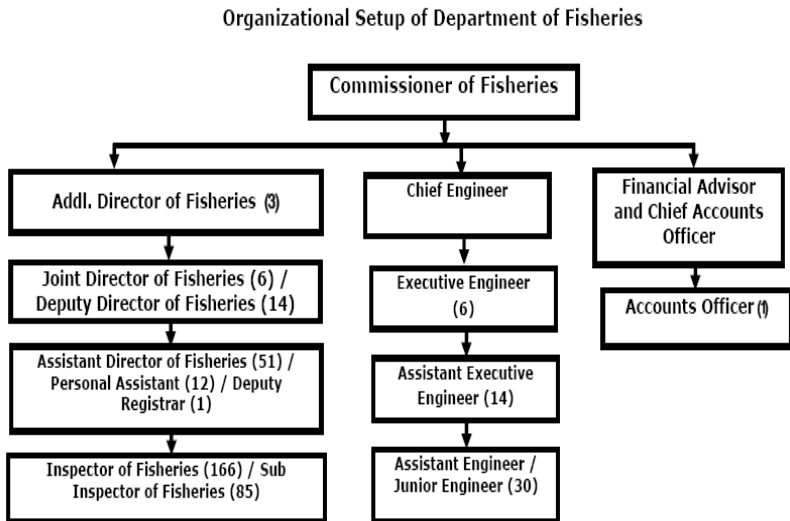
sector undertaking of the Tamil Nadu Government, the Functional Registrar of all Fishermen Cooperative Societies including Tamil Nadu State Apex Fisheries Cooperative Federation (TAFCOFED) and also the Member Secretary of Tamil Nadu Fishermen Welfare Board (TNFWB).

The State is divided into 10 regions, out of which 3 regions are headed by Joint Directors of Fisheries (Chennai, Nagapattinam and Thoothukudi) and 7 regions are headed by Deputy Directors of Fisheries (Cuddalore, Tiruchirapalli, Madurai, Ramanathapuram, Nagercoil, Dharmapuri and Bhavanisagar) who monitor and supervise the activities of 47 Assistant Directors of Fisheries and implement various developmental and fishermen welfare schemes. The Engineering wing of Fisheries Department headed by the

Chief Engineer has four divisions at Chennai, Nagapattinam, Thoothukudi and Nagercoil to monitor the engineering works that are being carried out by the 13 sub-divisions.

The organizational setup of Fisheries Department is depicted below in figure I.

Figure 1:



The total staff strength of Fisheries Department is 1,687 and the category wise details are given in Table.4.

Table:4
Category wise staff strength

Sl.No	Name of the post.	No.of Posts
1.	Additional Director of Fisheries	03
2.	Joint Director of Fisheries	06
3.	Deputy Director of Fisheries	12
4.	Deputy Director (Engg.)	01
5	Financial Advisor & Chief Accounts Officer	01
6.	Deputy Director (Personnel)	01
7.	Asst. Director of Fisheries	51
8.	Personal Assistant	12
9.	Deputy Registrar	01
10.	Accounts Officer	01
11.	Inspector of Fisheries	166
12.	Cooperative Sub-Registrar	15
13.	Marine foreman	14
14.	Sub-Inspector of Fisheries	85
15.	Senior Cooperative Inspector	27
16.	Others	1,191
	Total	1,587
Engineering Wing		
Sl.No	Name of the post.	No.of Posts
1.	Chief Engineer	01
2.	Executive Engineer	06
3.	Assistant Executive Engineer	14
4.	Assistant Engineer / Junior engineer	30
5.	Senior Draughting Officer	01
6.	Draughting Officer	08
7.	Junior Draughting Officer	04

8.	Divisional accountant	04
9.	Technical Assistant	23
10.	Others	09
	Total	100

The Department of fisheries during 2015-16, have filled up 73 posts at various levels. Apart from that, 109 vacancies in different cadres will be filled up through the Tamil Nadu Public Service Commission.

5.1 Hon'ble Chief Minister's Special Cell Petitions

For the year 2015, 475 petitions were received from Hon'ble Chief Minister's Special Cell and all were disposed. For the year 2016, 191 petitions were received (Till 25.07.2016) and 159 petitions were disposed. The details of action taken have been sent to the concerned petitioner.

6. PROTECTION OF TRADITIONAL FISHING RIGHTS OF TAMIL NADU FISHERMEN.

6.1. Retrieval of Katchatheevu: Issues and Status

Retrieval of “Katchatheevu” back to India and restoration of the traditional fishing rights of Indian fishermen in the Palk Bay area, are topmost on the agenda of the Government of Tamil Nadu.

An Unanimous resolution was passed in the Tamil Nadu Legislative Assembly in 2011 to implead the Revenue department in the Writ Petition W.P. (Civil) No.561/2008, filed before the Supreme Court of India in 2008, by the Hon’ble Chief Minister of Tamil Nadu, in her individual capacity for retrieval of Katchatheevu. Consequently an ‘Implead petition’ was filed by the Revenue department

in the above writ petition and Government of Tamil Nadu impleaded itself in this case.

Further, the Government passed another resolution in the Tamil Nadu Legislative Assembly unanimously on 03.05.2013, urging the Government of India to retrieve Katchatheevu, questioning the legal validity of the 1974 and 1976 Indo-Sri Lankan Agreements, in the light of the judgment issued by the Hon'ble Supreme Court of India in 1960 in "Berubari" case that any agreement on the cession of Indian territory to another country should be ratified by Parliament through an amendment of the Constitution. The Government passed another resolution in the Tamil Nadu Legislative Assembly unanimously on 05-12-2014, urging the Government of India to retrieve

Katchatheevu to restore the traditional fishing rights of the fishermen of Tamil Nadu.

The memorandum submitted by the Hon'ble Chief Minister to the Hon'ble Prime Minister on 3.6.2014, 7.8.2015 and 14.6.2016 have reiterated the need for abrogation of the 1974 and 1976 agreements and retrieval of Katchatheevu to permanently restore the traditional fishing rights of the Tamil Nadu fishermen

Further in the memorandum submitted by the Hon'ble Chief Minister to the Hon'ble Prime Minister on 14.6.2016, it has been pointed out the proposed additional new construction to the existing St. Antony's Church at Katchatheevu by the Sri Lankan Government and also the presence of substantially stepped up Sri Lankan Navy on the island of Katchatheevu. The apprehension of the Tamil Nadu fishermen is that the

Sri Lankan Government is moving towards further curtailing and restricting the access that they have traditionally and historically enjoyed to the Katchatheevu.

This Government reiterates its consistent stand that a permanent solution to this vexatious problem faced by our fishermen will be possible only by restoring India's sovereignty over Katchatheevu thereby restoring their rights to fish in their traditional waters.

6.2. Efforts taken by Government to prevent Harassment/Release of Tamil Nadu Fishermen and their fishing boats

The Government of Tamil Nadu accords top priority for the safety and security of our fishermen who eke out their livelihood by fishing in their traditional fishing waters. The Hon'ble Chief Minister is determined to ensure

that the traditional fishing rights of our fishermen which have been continuously enjoyed by them since time immemorial are well protected. The right of life, livelihood and the right to carry on fishing in the traditional waters of Palk Bay are continuously infringed upon by Sri Lankan Navy's recurrent unabated apprehension, attack and harassment of our innocent fishermen. With a deep sense of concern on the repeated incidents of attack, harassment and apprehension of Tamil Nadu fishermen by the Sri Lankan Navy and prolonged incarceration of our innocent fishermen in Sri Lankan jails, the Hon'ble Chief Minister has written as many as 102 letters bringing the above incidents to the notice of the Hon'ble Prime Minister of India.

The Hon'ble Chief Minister has constantly demanded that the Government of

India to decisively use all available diplomatic channels to secure the immediate release of apprehended fishermen of Tamil Nadu and also to prevent the recurrence of such incidents.

The Government passed a resolution in the Tamil Nadu Legislative Assembly unanimously on 05.12.2014 urging the Government to take immediate steps to release the 79 boats detained by Sri Lanka. Due to the untiring efforts of the Hon'ble Chief Minister the remaining 80 boats which were in Sri Lankan custody since June 2014 have also been released. Out of 80 boats 34 boats on 19.03.2015 in the first phase and 30 boats on 30.04.2015 in second phase have been brought back to Tamil Nadu. The remaining 16 boats could not be retrieved back to Tamil Nadu since they were drowned. Efforts are also being taken to release the

102 fishing boats detained by the Sri Lankan Government as on date.

With the unrelenting and assiduous efforts of the Hon'ble Chief Minister since May 2011, 2,481 fishermen and their 357 fishing boats, have been released from the Sri Lankan Jails and repatriated to Tamil Nadu as detailed below:

Table :5
Details of Fishermen and Boats released from Sri Lanka

Year	Fishermen released	Boats released
2011	222	40
2012	219	39
2013	645	119
2014	787	158
2015	378	1
2016	230	0
Total	2,481	357

In an unprecedented move, the High court of Colombo delivered a Judgement convicting and sentencing 5 innocent

Rameswaram fishermen with death penalty who have been arrested on false charges by the Sri Lankan Navy and languishing in Sri Lankan jails since 29.11.2011. Since, their arrest in 2011, Hon'ble Chief Minister had taken various legal and diplomatic steps to secure their release. Due to the efforts taken by the Hon'ble Chief Minister, the 5 fishermen were released on 19.11.2014 and repatriated to Tamil Nadu on 20.11.2014. As ordered by the Hon'ble Chief Minister, the fishermen were sent safely to their native place. The Government sanctioned a total sum of Rs.65.10 lakh as relief assistance and also legal fees for the release of fishermen.

6.3 Indo-Sri Lankan Fishermen-Level Talks

In view of the sentiments and desires of the Fishermen Associations of Tamil Nadu to have direct talks with their counterparts in

Sri Lanka and in the interest of keeping a channel of communication open between the fishermen communities of both countries, the Hon'ble Chief Minister of Tamil Nadu had proposed to the Government of India that arrangements may be made to have talks between fishermen belonging to Tamil Nadu and their counterparts in Sri Lanka at Chennai. As per the orders, the first round of talks were held at Chennai on 27.01.2014, the next round of talks were held at Colombo on 12.05.2014 and third level talk held at Chennai on 24.3.2015.

During the talks held on 24.3.2015, the Indian (Tamil Nadu and Puducherry) fishermen put forth their demands. The Sri Lankan fishermen stated that the demands of the Indian fishermen would be presented and discussed with the fishermen of North and

Eastern Provinces of Sri Lanka and the decision would be communicated.

In response, the Deputy High Commissioner of Sri Lanka at Chennai in his letter has informed that the Representatives of Fishermen Association of North East province of Sri Lanka, during the meeting on 14.05.2015 have resolved not to allow Indian fishing in Palk Bay region of Sri Lankan territory and also furnished the copy of the minutes of the meeting.

The Government of Tamil Nadu is committed to continue the bilateral fishermen level talks.

7. MARINE FISHERIES

A. WELFARE SCHEMES

The Government under the guidance of Hon'ble Chief Minister always accords highest priority to improve the standard of living of

fishers in the State by implementing several welfare schemes. In order to ensure that the benefits of welfare schemes reach the beneficiaries in the shortest span of time and in a transparent manner, for the first time the Government disbursed the financial assistance being extended under various welfare schemes to the individual beneficiary's Savings bank account directly through National Electronic Fund Transfer (NEFT). The details of various welfare Schemes are given below:

7.1 National Savings-cum-Relief Scheme (NFSRS) for Marine Fishermen

Under this Scheme relief assistance provided to the beneficiaries is shared equally between the Centre and the State and the relief amount is being disbursed to the

marine fishermen every year, during lean fishing months.

The Hon'ble Chief Minister made an announcement under Rule 110 on the floor of Legislative Assembly during the Budget 2014-15 to enhance the relief amount from Rs.1800/- to Rs.2,700/-.

Based on the revised pattern of assistance approved by the Government of India, a fisherman contributes Rs.900/- at the rate of Rs.100/- per month as his share for nine months. The contribution is matched with the total amount of Rs.1,800/- shared equally by the Central and State Governments (i.e. Rs.900/- each). Thus, a sum of Rs.2,700/- including the fisherman's contribution is disbursed to the beneficiaries during the lean months.

For the year 2015-16, Government sanctioned an amount of Rs.37.40 crore as its

share (both Central and State) and Rs.36.87 crore has been disbursed to 2,04,814 marine fishermen of 13 coastal districts. The relief amount was disbursed directly to the beneficiary's account through National Electronic Fund Transfer (NEFT).

This scheme will be continued for the year 2016-17 also.

7.2 Savings-cum-Relief Scheme for Marine Fisherwomen

This Scheme is being implemented as a State Sector Plan Scheme similar to the guidelines of the scheme for marine fishermen. Since this scheme is being implemented based on the guidelines issued for implementing the scheme for fishermen, the Hon'ble Chief Minister of Tamil Nadu made an announcement under Rule 110 on the floor of Legislative Assembly during the

Budget 2014-15 to enhance the relief amount totaling from Rs.1,800/- to Rs.2,700/-.

Under the revised pattern of assistance, a fisherwoman contributes Rs.900/- at the rate of Rs.100/- per month as her share for nine months. The contribution is matched with the total amount of Rs.1,800/- provided by State Government. Thus, a sum of Rs.2,700/- including the fisherwoman's contribution is disbursed to the beneficiaries during the lean months.

For the year 2015-16, the Government sanctioned an amount of Rs.34.98 crore as its share, Rs.34.56 crore has been disbursed to 1,92,020 marine fishermen of 13 coastal districts. The relief amount was disbursed directly to the beneficiary's account through National Electronic Fund Transfer (NEFT).

This scheme will be continued for the year 2016-17 also.

7.3 Financial assistance of Rs.2,000/- to Marine Fishermen Families during Fishing ban period

In order to conserve the marine fishery resources, seasonal fishing ban is imposed for 45 days since 2001 (i.e. from April 15th to May 29th in the East Coast region and June 15th to July 29th in the West Coast region). The fishermen who are engaged as crew / labourers in the fishing boats have no other source of income during the ban period leading to much hardship in maintaining their families. To alleviate the sufferings of the poor fishermen crew / labourers who are actually involved in marine fishing activities, this Government after assuming office during 2011, enhanced the relief assistance given to marine fishermen families from Rs.1,000/- to Rs.2,000/-.

For the year 2015-16, Rs.31.50 crore has been disbursed to 1.57 lakh fishermen families as relief assistance. For the year 2016-17, the Government sanctioned Rs.33.10 crore for extending fishing ban relief assistance to 1.65 lakh fishermen families. So far, relief assistance amounting to Rs.30.62 crore has been disbursed to 1,53,112 families. The relief amount was disbursed directly to the beneficiary's account through National Electronic Fund Transfer (NEFT).

As ordered by the Hon'ble Chief Minister of Tamil Nadu and subsequent announcement made during Budget session 2016-17, the existing fishing ban relief assistance of Rs.2,000/- has been enhanced to Rs.5,000/- and will be implemented during this year.

7.4 Special Allowance of Rs.4,000/- to Marine Fishermen Families during Lean Fishing Season

Subsequent to the announcement made by the Hon'ble Chief Minister of Tamil Nadu in the State Legislative Assembly during August 2011, the Government introduced a new Scheme for disbursement of a Special Allowance of Rs.4,000/- to each of the marine fishermen families in coastal Districts to mitigate their sufferings in the lean fishing months. This is being implemented since 2011.

For the year 2015-16, Rs.63.70 crore was disbursed to 1,59,274 fishermen families of 13 coastal districts. The relief amount was disbursed directly to the beneficiary's account through National Electronic Fund Transfer (NEFT).

As ordered by the Hon'ble Chief Minister of Tamil Nadu and subsequent announcement made during Budget session 2016-17, the special allowance for lean fishing season has been enhanced from Rs.4,000/- to Rs.5,000/- per fishermen family and will be implemented during this year.

7.5 Group Accident Insurance Scheme for Fisherfolk

This is a Centrally Sponsored scheme equally Shared by both State and Central Government. Under this scheme, insurance premium is not collected from the fishermen. In the event of death, missing and permanent disability relief assistance of Rs.2,00,000/- will be given. In the event of partial disability, relief assistance Rs.1,00,000/- with a cover of Rs.10,000/- towards hospitalization expenses will be paid.

A sum of Rs.72.60 lakh (as State's share) has been paid to FISHCOPFED (National Federation of Fishermen's Co-operatives Ltd), New Delhi, towards insurance premium covering 7,16,284 active marine and inland fishers and fishers enrolled in Tamil Nadu Fishermen Welfare Board (TNFWB) as fishers in allied activity for the period from 10.12.2015 to 9.12.2016. The insurance relief paid for 2014-15 till 15.7.2016 is detailed below.

Table :6

Fishermen Group Accident Insurance Scheme- Details of beneficiaries and Insurance claim

Year	Beneficiary	Relief amount Rs.in lakh
2014-15	119	113.00
2015-16	133	118.00
2016-17 (till 15.7.16)	103	175.00

This Scheme will be continued during 2016-17.

7.6 Motorisation of Traditional Crafts

The Government is providing subsidy assistance towards the purchase of Out Board Motors (OBM) / In Board Engines (IBE), to be fitted in the traditional crafts of fishermen. The fishermen will be provided with 50% subsidy of the unit cost of the engine or Rs.30,000/- whichever is less which will be shared equally between Centre and State under the scheme.

This scheme will be continued for the year 2016-17 also.

7.7 Supply of Distress Alert Transmitters to the fishermen/ fishing vessels of the State with 90% subsidy assistance

The fishermen who venture into sea to eke out their humble livelihood are faced with dangerous situations risking their lives. It is

further aggravated by the absence of means for communicating their distress at mid sea to the authorities concerned at the shore.

Taking this into consideration, Government has introduced a scheme of supplying Distress Alert Transmitters to the mechanized fishing boats and motorized country crafts of Tamil Nadu. This is a satellite based distress transmission device. This scheme was inaugurated by the Hon'ble Chief Minister on 27.02.2016.

Under this scheme, the Distress Alert transmitters will be supplied to 30,000 boat owners – fishermen in a phased manner at a total cost of Rs.48 crore. Under Phase I- distribution of 1,600 units of DAT to mechanized fishing boat owners is in progress.

7.8 Issuance of Biometric Identity Cards to marine fishers

a) Marine Fishermen

The Government of India introduced a Central Sector Scheme for “Issuance of Biometric Identity Cards to marine fishermen” to ensure coastal security in the aftermath of 26/11 Mumbai terrorist attack. A sum of Rs.1.16 crore was allocated for this purpose to Tamil Nadu. It is proposed to issue Biometric ID cards to about 2.06 lakh active marine fishermen. The work was entrusted with “M/s.BEL Ltd” Bengaluru.

Under this scheme 1,36,146 cards have been distributed to the marine fishermen.

b) Marine Fisherwomen

The Government has accorded sanction to issue biometric identity cards to fisherwomen. Under this scheme, 34,130 cards have been received from M/s. BEL

Bengaluru and distributed to the marine fisherwomen.

During the Mop Up round, Biometric features have been captured for 1.42 lakh left over fishermen and fisherwomen. On receipt of Biometric Identity cards they will be distributed to the fishermen and fisherwomen.

7.9 Online Registration of Fishing Vessels

For ensuring coastal security, a scheme of "Online registration of fishing vessels" has been introduced and implemented at a cost of Rs.1.33 crore in Tamil Nadu.

A total of 5,862 mechanised fishing boats, 28,886 motorised and 5,261 non-motorised traditional crafts have been registered till 15.07.2016.

7.10 Sales Tax Exemption on Sale of High Speed Diesel to Fishermen

The Government of Tamil Nadu provides 100% sales tax exempted High Speed Diesel for mechanised fishing boats and motorised country crafts registered in the Fisheries Department. The mechanised boats can avail Sales Tax exempted diesel, subject to a maximum of 15,000 litres per boat/per year (during active fishing months) and motorised country crafts can avail a maximum of 3,600 litres per craft per year.

This Scheme is being continued for the year during 2016-17 also.

7.11 Subsidised and Sales Tax Exempted Industrial Kerosene to the Traditional Crafts

The Government provided Sales tax exempted industrial kerosene at the subsidised rate of Rs.25/- per litre (200 litres

per craft per month) till 2011-12 to the fishermen of Thoothukudi, Tirunelveli and Kanniyakumari Districts who own motorised traditional crafts fitted with kerosene driven motors.

The Hon'ble Chief Minister of Tamil Nadu enhanced the limit of Sales Tax exempted and subsidised industrial kerosene from 200 litres to 250 litres per craft per month during 2012-13, so as to reduce the increasing operational expenses of traditional fishermen. For the year 2015-16, the Government sanctioned an amount of Rs.2,260.38 lakh for implementing the scheme which benefits 4,565 traditional crafts. Industrial kerosene is being issued to country crafts driven by Kerosene of Thoothukudi and Tirunelveli districts through TAFCOFED and for Kanniyakumari through TNFDC.

This Scheme will be continued during 2016-17 also.

7.12 Cash Awards to 10th and 12th Class Students of Fishing Community

To encourage the students of fishing community to pursue higher education, the Government of Tamil Nadu is providing cash award and merit certificates to the boys and girls of fishermen community who have secured top ranks in 10th and 12th standard examinations at District and State level as furnished in Table 7.

Table: 7
Details of Cash Awards

Sl. No	Category	Cash Awards (in Rs.)		2014-15 Academic Year			
				12 th Std		10 th Std	
		12 th std	10 th std	Boys	Girls	Boys	Girls
1	State level - 1 st mark	10,000/-	6,000/-	1	1	2	1
2	District level - 1 st mark	6,000/-	2,000/-	24	21	25	22

3	District level – 2 nd mark	Nil	1,000/-	0	0	21	22
4	District level – 3 rd mark	Nil	600/-	0	0	20	22
Total				25	22	68	67

During 2015-16 a sum of Rs.5.42 lakh was disbursed to 182 students of fishermen community for the academic year 2014-15.

This Scheme will be continued during 2016-17.

7.13 Reconstruction of Thiruchinankuppam Fishermen Tenements and Construction of fishermen houses

An amount of Rs.24.60 crore has been sanctioned by the Government towards Re-construction of 492 tenements at Thiruchinankuppam in Thiruvallur District through Tamil Nadu Slum Clearance Board. Presently, the 492 tenements have been dismantled and construction work is under

progress by the Tamil Nadu Slum Clearance Board.

B. RELIEF SCHEMES

7.14 Daily Relief to Marine Fishermen apprehended in other Countries

The Government supports the families of fishermen who are apprehended by the neighbouring countries while fishing by providing daily allowance of Rs.50/-. The present Government after taking charge during 2011-12, enhanced the daily allowance from Rs.50/- to Rs.250/- to the family of the apprehended fisherman. The scheme is being implemented through the District Collectors for providing immediate relief. For the year 2015-16 a sum of Rs.31.31 lakh has been released as relief to the 414 fishermen families.

This Scheme will be continued during the year 2016-17.

7.15 Daily Relief to the Families of Missing Fishermen

During the year 2012, this Government after assuming charge, enhanced the daily allowance from Rs.50/- (i.e. Rs.1,500/- per month) to Rs.250/-(i.e. Rs.7,500/- per month) to the families of fishermen who went missing while fishing at sea

For the year 2015-16 a sum of Rs.22.37 lakh has been released as relief to the 30 fishermen families.

This Scheme will be continued during 2016-17 as well.

7.16 Relief to the families of deceased / injured fishermen due to shooting by Sri Lankan Navy and others

The fishermen of coastal Districts, who fish in their traditional waters of the Palk Bay

are apprehended / harassed and sometimes even shot at by the Sri Lankan Navy.

The Government is providing an ex-gratia payment of Rs.3 lakh from the Chief Minister's Public Relief Fund to help the family of fishermen who die as a result of shooting at sea. In the case of the deceased fisherman being the sole breadwinner of the family, an Ex-gratia amount of Rs.5 lakh is provided. If the fishermen sustain major and minor injuries, an ex-gratia amount of Rs.50,000/- and Rs.20,000/- respectively is provided. Due to the continuous efforts taken by the Government after taking charge in 2011, there were no incidents of shooting on Tamil Nadu fishermen by Sri Lankan Navy.

7.17 Corpus Fund for extending financial assistance for pursuing higher education to the Children of Missing / Deceased Fishermen due to Shooting during fishing

The financial relief assistance provided to the families of the missing fishermen / deceased fishermen who died of shooting by Sri Lankan Navy is insufficient for meeting their day-to-day expenses and in most of the cases, the families experience much hardship for providing/continuing their son /daughter's education as they are financially not sound. The children of the deceased / missing fishermen therefore, are forced to discontinue their education and seek employment to maintain their families.

Considering the above plight, on order of the Hon'ble Chief Minister of Tamil Nadu a Corpus fund of Rs.25 lakh in Tamil Nadu Fishermen Welfare Board has been created

to meet the full expenses of the higher studies of the children of the families of missing / deceased fishermen who die due to shooting incidents.

The Scheme will be continued during 2016-17.

C. RESOURCE/PRODUCTION ENHANCEMENT

7.18 Conservation and Management of Fishery Resources

Imposing seasonal fishing ban, stock enhancement, habitat development like sea ranching programme, installation of artificial reefs and diversified fishing methods are some of the conservation/ stock enhancement measures, being adopted by the Fisheries Department.

7.19 Setting up of Artificial Reefs

Artificial reefs act as habitats to marine aquatic organisms, help in enhancing the fish production through increased breeding activity and survival of young ones and a barrier for bottom trawling operations. The Government has taken steps for development of fish habitats, by setting up of artificial reefs in the inshore waters as a conservation / stock enhancement measure. So far, 37 artificial reefs have been setup along the Tamil Nadu coast.

This scheme will be continued during 2016-17 also.

7.20 Subsidy assistance to fishing crafts in the west coast to take up squid jigging

The Indian Squid is available throughout the coast and is predominant in the catch in the west coast of

Kanniyakumari district. To take up diversified fishing, this Government during the year 2012-13 have introduced a scheme of extending financial assistance to fishermen for procurement of squid jigging materials with 50% subsidy assistance.

For the year 2016-17, subsidy assistance of Rs.50 lakh will be extended to 200 fishermen of Kanniyakumari district for procurement of squid jigging materials.

7.21 Providing 50% subsidy for fishermen to procure New Tuna Longliner cum Gill Netter

In order to safeguard the coastal fishery resources for sustainable fisheries and to support the fishers to harvest the unexploited/ underexploited oceanic fishery resources like tuna and tuna like fishes, the Hon'ble Chief Minister of Tamil nadu

announced a pioneering scheme of 'Providing 50% subsidy for fishermen to procure New Tuna Longliner cum Gill Netter' boats for the first time in the Country. Under this scheme 50% of the estimated unit cost of Rs.60 lakh or upto a maximum of Rs.30 lakh/unit is provided as subsidy for construction of new Tuna Longliner cum-Gill Netter boat.

Under this scheme 580 beneficiaries have been selected and 171 work orders have been issued for construction of tuna longliner boats. Construction of boats by fishermen beneficiaries is in active progress and a total of Rs.2.98 crore has been released as stage I subsidy for 30 units. 94 boats are under construction so far.

7.22 Deep Sea Fishing – Stationing of Mother Ship Concept

In continuation of the announcement of the Government for an innovative project on establishment of “Mid Sea Fish Processing Units–cum–Carrier Mother Vessel” under Public Private Partnership (PPP) mode, M/s Mahindra Consulting Engineers Ltd, Chennai was appointed as Consultant to implement this project. The Consultant submitted the concept and feasibility report after several studies, based on which it was decided to implement this project on a pilot basis in Kanniyakumari District and a private developer has also been selected through International Competitive Bidding Process to operate two carrier mother vessels.

This ‘Carrier Mother Vessel’ will have facilities like Refrigerated Sea Water (RSW) system and refrigerated fish storage facility

to store the fishes onboard. The mother vessel will act as a source of essential inputs for the 'baby vessels' involved in fishing in the deep sea and it will also provide the service to transport the catch to the shore immediately. This will greatly reduce the operating cost of the fishing vessels towards frequent visits to the shore and the fish will be stored in good condition on par with export quality aiding the fishermen to get good price for their catch.

D. DEVELOPMENT OF INFRASTRUCTURAL FACILITIES

7.23 Construction of Fishing Harbours under Centrally Sponsored Scheme

i) Fishing Harbour at Colachel (sharing cost on 50:50 basis between Centre and State)

The Government accorded revised administrative approval for construction of Fishing Harbour at Colachel in Kanniyakumari District at a cost of Rs.87.75 crore under Centrally Sponsored Scheme (50:50). So far, a total sum of Rs.68.44 crore has been released for this project, of which the Central Government has released a sum of Rs.24.57crore and the State Government has released its total share of Rs.43.87 crore.

In this Fishing Harbour, 540m long Western Main Breakwater and 230m long Eastern Leeward Breakwater have been completed and a tranquil water basin of 5.90 hectare area has been created so that the fishermen can venture out into sea and return back to land safely and easily. In this water basin a wharf for berthing 250 Mechanized fishing vessels and a sloping yard have been constructed. Further, facilities have been created for safe landing of 100 traditional boats. In this harbour, landside facilities such as Auction hall, Net mending shed, Administrative office building, Radio communication building, Sewage Treatment Plant, Canteen and Rest shed have been created in a land area of 3.80 hectare. With these facilities, the fishing harbour can function as a safe and hygienic harbour under the control of the Management Committee.

**ii) Fishing Harbour at Thengapattinam
(sharing cost on 50:50 basis between
Centre and State)**

The Government accorded revised administrative approval for construction of Fishing Harbour at Thengapattinam in Kanniyakumari District at a cost of Rs.97.40 crore under Centrally Sponsored Scheme (50:50). A total sum of Rs.81.70 crore has been released so far (Central Government share of Rs.33 crore and the State Government share of Rs.48.70 crore).

In this Fishing Harbour, 630m Long Western Main Breakwater and 120m Long Eastern Leeward Breakwater have been completed and a tranquil water basin of 16.56 hectare area has been created so that the fishermen can venture out into sea and return back to land safely and easily. In this

water basin construction of two wharves for berthing 750 Mechanised Fishing Vessels is in progress. In this harbour, work on landside facilities such as Auction hall, Net mending shed, Administrative office building, Sewage Treatment Plant, Canteen and Rest shed in land area of 16.19 hectare is to be taken up.

In line with the recommendation of the 13th Finance Commission for coastal shore protection, an amount of Rs.82.73 crore has been allocated as a mitigation measure towards protecting the shore of eastern coastal villages of Thengapattinam fishing harbour. The entire shore protection works have been completed.

**iii) Fishing Harbour at Poompuhar
(sharing on 75:25 & 50:50 basis
between Centre and State)**

The Government accorded administrative approval for the construction

of Fishing Harbour at Poompuhar in Nagapattinam District at a cost of Rs.78.50 crore with Central and State contribution on 75:25 basis. Subsequently the revised administrative approval was accorded for Rs.148 crore with Central and state contributions on 75:25 basis for Rs.78.50 crore and 50:50 basis for Rs.69.50 crore. So far, a total sum of Rs.77.38 crore has been released for this project including Central Government share of Rs.23 crore and the State Government share of Rs.54.38 crore.

In accordance to the revised design, the construction of Southern Main Breakwater and Northern Leeward Breakwater has been completed for 880m (Total-1100m) and 390m (Total 390m) respectively. The placing of Tetrapod units are in progress. A wharf for 350 Mechanized fishing vessels is in progress.

Construction work on landside facilities such as Auction hall, Net mending shed, Administrative office building, canteen, Rest shed in a land area of 16.52 hectare is to be taken up. On receipt of Central share, this project will be completed in this financial year.

iv) Expansion of Fishing Harbour at Chinnamuttom (sharing on 75:25 basis between Centre and State)

The Government accorded administrative approval for expansion of the Fishing Harbour at Chinnamuttom in Kanniyakumari District at a cost of Rs.73.52 crore (75:25 pattern). So far, a total sum of Rs.45.47 crore has been released for this project, including Central Government share of Rs.27.09 crore and the State Government share of Rs.18.38 crore.

In this Fishing Harbour, 405m long Western Main Breakwater and 100m long Eastern Leeward Breakwater have been completed and a tranquil water basin of 32 hectare area has been created so that the fishermen can venture out into sea and return back to land safely and easily. In this water basin a wharf for berthing 350 Mechanised Fishing Vessels and a sloping yard have been constructed. Landside facilities such as Auction hall, Net mending shed, Administrative office building, Sewage Treatment Plant and Canteen have been created in an area of 8.89 hectares and the harbour has been put into use.

v) Reconstruction of Fishing Harbour at Mookaiyur, Ramanathapuram District

As a sequel to the efforts of Hon'ble Chief Minister of Tamil Nadu to implement the

reconstruction of Fishing harbour at Mookaiyur with a view to decongest the Palk straits near Rameshwaram and to support the livelihood of fishermen at Mookaiyur and nearby villages with infrastructure facilities such as breakwater, wharf, fish auction hall, protection wall, drying platform and net mending centre with the participation of Central and State Governments, the Project Sanctioning Committee (PSC), Govt. of India approved this project at a total cost of Rs.113.90 crore with 50% central assistance. Administrative approval of Govt. of India is awaited.

7.24 Construction of Fishing Harbours under Public – Private Partnership (PPP) mode

i) Construction of Fishing Harbour at Manakudy in Kanniyakumari District

The Government issued orders to build a Fishing Harbour at Manakudy in Kanniyakumari District in the Public Private Participation mode. M/s. WAPCOS (Water and Power Consultancy Services) Ltd., has been appointed as the Consultant for preparation of Techno Economic Feasibility Report (TEFR) for identifying PPP operator. The Tamil Nadu Infrastructure Development Board approved the Project of Construction of Fishing Harbour at Manakudy at an estimated cost of Rs.72.44 crore. Tender has been called for and letter of award has been issued to the successful tenderer.

7.25 The World Bank Assisted Coastal Disaster Risk Reduction Project (CDRRP)

Fisheries sector and the fishing community are the most vulnerable to natural calamities, climate change and degradation of marine environment. In order to promote sustainable marine fisheries and for securing livelihood of the fishing community, the World bank has sanctioned "Coastal Disaster Risk Reduction Project (CDRRP) at an estimated cost of Rs.321.30 crore given in the table 8.

Table:8

Details of Fund allocation under CDRRP Scheme

I.	Fisheries Infrastructures	Amount (Rs. in Crores)
a)	Ongoing ETRP works	Rs.132.30
b)	New Works (2 projects)	Rs.78.00
c)	Studies for New Projects	Rs.10.00
	Sub Total	Rs.220.30
II.	FIMSUL	Rs.38.86
III.	Providing Wireless Communication facilities	Rs.62.14
	Total	Rs.321.30

7.26.1 Fishery Infrastructure (Rs.220.30 crore)

In order to help complete the works taken up earlier under Emergency Tsunami Rehabilitation Project, this fund has been sanctioned. The details of sanctioned works are tabulated below.

Table:9
Details of works sanctioned under
Emergency Tsunami Rehabilitation
Project

Sl.No.	Name of work	AS Amount (Rs. in Crores)	Major Infrastructure works completed
I) Expansion of Fishing Harbours			
1.	Nagapattinam	45.21	Diaphragm wall and Retaining wall on the North and South side of Kaduvaiyar river, Auction hall, Net Mending Shed and Sewage Treatment Plant are provided.
2.	Pazhayar	32.22	Groynes, Diaphragm wall, Approach Road and Sewage Treatment Plant are provided.

II) Stabilization of Bar Mouth			
1.	Uppanar	8.03	Dredging and side channel guide bund of Uppanar river at Tirumullaivasal were completed.
2.	Vellar	14.45	Dredging and side channel guide bund of vellar river were completed.
III) Construction of Fish Landing Centres			
1.	Nagore	12.99	Diaphragm wall, Landside facilities and STP are provided. Hon'ble Chief Minister inaugurated on 15.07.2015.
2.	Parangipettai-Anannkoil	18.91	Diaphragm wall, Dredging, Landside facilities and STP are provided. Hon'ble Chief Minister inaugurated on 27.06.2014.
IV) Construction of Tube Ice Plant			
1.	Chinnamuttom	0.50	Tube Ice Plant with Chill room facilities provided in the Auction hall has been handed over to TAFCOFED for operation.

V) Modernisation of Mallipattinam Fishing Harbour in Thanjavur District

The Government proposes to reconstruct and modernise the fishing harbour at Mallipattinam at an estimated cost of Rs. 60 crore under Coastal Disaster Risk Reduction Project (CDRRP). The main components are L-Jetty, diaphragm wall, net mending shed, auction hall and dredging. The Detailed Project Report (DPR), Environment Impact Assessment (EIA) report and Social Impact Assessment (SIA) reports have been sent to the World Bank for approval. The process of obtaining the necessary clearances for this project is being carried out by the Consultant.

VI) Stabilisation of Barmouth at Punnakayal in Thoothukudi District

The Government proposes to stabilize the bar-mouth at Punnakayal in Thoothukudi District at an estimated cost of Rs. 18 crore in order to ensure safe navigation of fishing crafts. The main components are dredging, berthing structure, approach roads and linking structure. Detailed Project Report has been approved by World Bank. Tenders have been received and sent to World Bank for approval. Work will commence shortly.

VII) Conducting studies for New Fishing Harbour Projects

The World Bank has sanctioned Rs.10 crore under Coastal Disaster Risk Reduction Project (CDRRP) to undertake studies for establishment of 8 new fishing harbours including mandatory studies for the

Techno economic feasibility and preparation of Detailed Project Report (DPR). The selection of consultancy firm for 4 works is in progress and will be decided shortly for the remaining 4 harbours.

7.26.2 Fisheries Management for Sustainable Livelihood-II (FIMSUL-II) project (Rs.101 crore)

The coastal marine fishing community are the most vulnerable to natural calamities, affecting their livelihood and at times even causing danger to their lives.

Under the World Bank funded CDRRP - Fisheries Management for Sustainable Livelihood- II (FIMSUL-II) project, the following sub components were sanctioned.

- A. Marine Fisheries Co-Management (Rs.23.03 crore)

- B. Improved Capacities & Knowledge Management (Rs.5 crore)
- C. Fisheries Livelihood Support (Rs.6.85 crore)
- D. Management support (Rs.3.98 crore)
- E. Providing wireless communication network facilities to ensure sea safety (Rs.62.14 crore)

(A) Marine Fisheries Co-Management (Rs.23.03 crore)

The following activities are to be undertaken under this sub component.

- In order to ensure equitable distribution of the fisheries resources among the stakeholder groups and for better management of marine fisheries resources, it is proposed to establish Co-management councils at Village level, District level and

regional level in all 13 coastal districts and a State Level Committee also be formed.

- A State Level Technical Committee consisting of experts from Central Fisheries Institutes and Tamil Nadu Fisheries University has been formed for providing technical guidance to the fisheries management units and livelihood programmes.
- The Fisheries Department has formed Asset Management committees in all fishing harbours / fish landing centres involving local fishermen stakeholders. These committees would generate revenue and follow better management practices in the fishing harbours / fish landing centres and thereby promoting hygiene and ensuring the quality of fresh fish.
- “Fisheries Information and Service Centers” (FISC) are proposed to

be established in 6 Districts viz. Chennai, Cuddalore, Nagapattinam, Ramanathapuram, Thoothukudi and Kanniyakumari at an estimated cost of Rs.1.20 crore and would be a single window information centres responsible for data collection on landings, resources, dissemination of information about the Potential Fishing Zone, various Government welfare schemes, weather warning and distress monitoring / reporting.

- In order to ensure safety and security of the fishermen while fishing at sea, it was decided to provide with 2 life buoys each are to be provided for all the motorized traditional crafts of the coastal districts. In the first phase, a total of 11,500 Life buoys were distributed to traditional fishermen of Nagapattinam, Tiruvarur, Pudukkottai and Ramanathapuram districts at a cost of

Rs.1.62 crore. In the second phase, 38,000 Life buoys will be provided to the traditional boats in the remaining coastal districts.

- To ensure inputs for enabling the co-management council to take appropriate decisions on fisheries co-management strategies and to help the Government in policy making, marine fisheries landing data are being collected by data collection assistants engaged under this project. An amount of Rs.51.84 lakh has been earmarked for this purpose.
- For better management of marine fisheries, specific studies have been taken up at a cost of Rs.10 lakh to arrive at appropriate decisions for the benefit of marine fisher folk.
- The Government has sanctioned Rs.75 lakh, to impart training in various fields of

fisheries, such as operation and hygienic maintenance of Fishing Harbour/ Fish Landing Centre, hygienic handling of fishes, sea safety, open sea cage farming, seaweed culture, Co-operative administration, management, entrepreneurship and skill improvement etc.,

- The World Bank has sanctioned Rs.2.89 crore for reimbursement of expenditure on routine operation & maintenance works in fishing harbours/fish landing centres upto 75% of total expenditure during the first year and 60% during the second year to the respective fishing harbour/fish landing centre management committees in order to encourage continuous management of the fishing harbour/fish landing centres by the stakeholders.

(B) Improved Capacities and Knowledge Management (Rs.5 crore)

In order to provide exposure and training to the fisheries field officials on the various developments in livelihood programmes and fisheries co-management, the department staff will be taken for an overseas training programme. The Commissionerate of Fisheries would be equipped with a Central library and a Meta data centre.

(C) Fisheries Livelihood support (Rs.6.85 Crore)

This component aims on providing livelihood enhancement and diversification both in fisheries and non-fisheries activities for the benefit of stakeholders. The stakeholders are given training in specific livelihood programmes such as training in cage culture, seaweed

culture, preparation of value added fishery products, entrepreneurship training in marketing etc., Marine cage culture activity has been taken up by the fishers in 10 places along the Tamil Nadu coast with 100% subsidy assistance.

To support the livelihood widows of fishermen in the coastal districts of Tamil Nadu, 12 modern fish kiosks were established at a total cost of Rs.55 lakh in Kancheepuram, Villupuram, Cuddalore, Nagapattinam, Thanjavur, Pudukottai, Ramanathapuram, Thoothukudi, Thirunelveli and Kanniyakumari districts and handed over to them to run.

**(D) Management Support
(Rs.3.98 crore)**

Under this component, the Government has accorded administrative sanction for Rs.3.98 crore for establishing an exclusive Project Monitoring and Implementation Unit (PMIU) for co-ordinating the implementation of project activities.

**(E) Providing Wireless Communication facilities to ensure Sea safety
(Rs.62.14 crore)**

To ensure the safety and security of the fishermen at sea, to disseminate information about weather warnings and availability of fishery resources, the World Bank has sanctioned a scheme to provide Wireless communication network facilities to all registered fishing crafts operating in Tamil Nadu at a cost of Rs.62.14 crore.

Under this component, it is proposed to establish wireless communication network facility by construction of new VHF tower and control rooms and procurement of VHF sets to be supplied to the fishers.

7.27 Construction of Fish Landing Centres under Tsunami Rehabilitation Programme (TRP)

The Government has sanctioned a total amount of Rs.49.97 crore for the construction of ten new fish landing centres (FLC) at various coastal villages. Among them, construction of all Fish Landing Centres except at Annamalaichery and Periyamangodu in Tiruvallur District has been completed and put into use. On receipt of clearance from National Board for Wild Life Annamalaichery and Periyamangodu works will be taken up.

7.28 NABARD Schemes

a) 2014-15 (RIDF XX)

The Government has accorded administrative sanction for Rs.79.40 crore for the construction of 9 fish landing / beach landing centres and development of 4 fish seed farms. The details of works sanctioned are given in the table below.

Table :10
Schemes sanctioned under NABARD-RIDF XX
(2014-15)

Sl. No.	Name of work	AS Amount (Rs. in Crore)	Present Stage
i) Construction of Fish Landing Centres			
1.	Dhanushkodi, T.Mariyur, Pamban, Muguntharayachatram, Thangachimadam and Vedhalai in Ramanathapuram District.	44.70	Works are in progress.
2.	Thoothur and Iraiyumanthurai in Kanniyakumari District	12.15	Works completed.
3.	Kovalam in Kancheepuram District	5.00	FLC works will be taken up after protecting the shore.

ii) Development of Fish Seed Farms				
1.	Bhavanisagar, Parangipettai, Dam, Kodaikanal	Vaigai	17.55	Bhavanisagar, Parangipettai works are completed. Vaigai Dam is in progress. Kodaikanal fish farm work is to be commenced after getting due clearance.

b) 2015-16 (RIDF XXI)

The Government accorded administrative sanction for Rs.68.30 crore for the construction of 5 fish landing centres , development of 10 fish seed farms in Tamil Nadu and shore protection of Kovalam coastal stretch in Kancheepuram District. The details of works sanctioned are given in the table below.

Table:11
**Schemes sanctioned under NABARD-
 RIDF XXI (2015-16)**

Sl. No.	Name of work	AS Amount (Rs. in Crore)	Present Stage
i) Construction of Fish Landing Centres			
1.	Pettodai in Cuddalore District, Singithurai, Pazhayakayal in Thoothukudi District, Samanthanpettai and Thirumullaivasal in Nagapattinam District	25.00	Works are in progress.
ii) Development of Fish Seed Farms			
1.	Poondi in Thiruvallur district, Kulithalai, Thirukkampuliyur in Karur district, Chinnar in Dharmapuri District, Pambar in Krishnagiri District, Thattankulam in Thanjavur District, Anaipetti in Dindigul District, Piravalur and Managiri in Sivagangai District and Manimuthar in Tirunelveli District	25.00	All Fish Farm works except Managiri are in progress. Athur Fish Farm in Kancheepuram District has been identified as alternate for Managiri.
iii) Shore Protection at Kovalam in Kancheepuram District			
1.	Kovalam in Kancheepuram District	18.30	Agency has been fixed. Action is being taken to get CRZ clearance at State level.

7.29 Other Schemes

i) Corpus fund for conducting model studies

A separate corpus fund of Rs.2 crore has been created for preparation of Techno-Economic Feasibility Report and conducting Model Studies for construction of New Fishing Harbours / Fish Landing Centres. By utilizing the fund, Detailed Project Report has been prepared for the construction of Tharangambadi Fishing Harbour in Nagapattinam District.

ii) Permanent stability of barmouth with Training wall at Pulicat Lake in Thiruvallur District

The Government has accorded administrative approval and financial sanction for Rs.40 lakh for the preparation of Techno – Economic Feasibility Report and conduct of model studies for the permanent stability of

bar mouth with Groynes at Pulicat lake in Tiruvallur district. IIT, Madras has prepared the Detailed Project Report.

Action is being taken to appoint the consultant for the preparation of Environment Impact Assessment (EIA) report.

iii) Construction of Integrated Office buildings at Nagapattinam and Ramanathapuram

The Hon'ble Chief Minister has announced under Rule 110 in the Legislative Assembly on 04-08-2014, that integrated office buildings will be constructed at Nagapattinam and Ramanathapuram at a cost of Rs.3.60 crore. Accordingly, the Government has accorded administrative approval for the construction of integrated office building at Nagapattinam and Ramanathapuram at a cost of Rs. 1.80 crore each. As per the architect design, the

integrated office buildings at Nagapattinam and Ramanathapuram Districts have been completed.

iv) Construction of Office building at Kodaikanal

Under part II scheme 2014-15, the Government has sanctioned Rs.15 lakh for construction of new office building to the Sub Inspector of Fisheries at Kodaikanal, Dindigul District. After getting Clearance from Hill Area Conservation Authority (HACA) the work will be continued.

v) Studies for construction of Fishing Harbours at Ennore and Vellapallam and renovation of Cuddalore old town Fishing Harbour. (Rs.4 Crore)

Consultants have been appointed for preparation of Detailed project report for Tuna Fishing Harbour at Ennore in Tiruvallur District, Fishing Harbour at Vellapallam in

Nagapattinam District and Renovation of existing Fishing Harbour at Old Town in Cuddalore District and Draft Detailed Project Reports have been received.

7.30 Koodankulam Nuclear Power Project Neighbourhood Development Programme

Koodankulam Nuclear Power Project Neighbourhood Development Programme earmarked Rs.500 crore for the overall development of neighbourhood villages of Koodankulam Nuclear Power Plant, the Government has allocated Rs.92 crore for marine infrastructure development for the benefit of fishermen. The project details are given below.

- Construction of Cold storage and Modern Fish market at Uvari (Rs.5 crore) is in progress.

- Construction of Fish Landing Facilities at Uvari Village at a cost of Rs.66.70 crore is in progress.
- Construction of Groynes at Koothankuzhi and Perumanal at a total estimated cost of Rs. 20 crore (Rs.10 crore each) have been completed.
- Construction of net mending shed at Koottapanai an estimated cost of Rs.30 lakh near Koodankulam has been completed.

7.31 Establishment of Fish Processing Parks in Tamil Nadu

In Cuddalore, Nagapattinam, Ramanathapuram and Kanniyakumari districts, suitable sites have been identified for the establishment of fish processing parks. Tender was floated for providing land on long term lease basis to the prospective developers for establishment of fish

processing parks in these districts. The land allotment order has been issued to the prospective developer for establishing fish processing park in Kanniyakumari District and works are in progress. Also, for establishment of Fish processing park in Thiruvallur and Thoothukudi districts, land allotment orders have been issued to the prospective developers by State Industries Promotion Corporation of Tamil Nadu (SIPCOT), for which obtaining mandatory clearances from various departments are in progress.

7.32 Setting up of a world class Oceanarium at Mamallapuram

In order to establish a World Class Oceanarium at a cost of Rs.258 crore under Public Private Partnership (PPP) mode at Mamallapuram near Chennai, Tamil Nadu Tourism Development Corporation's (TTDC)

land to an extent of 13.07 acres has been identified. After several studies by M/s Darashaw Private Limited, Mumbai who was appointed as consultant to conduct Techno Commercial Feasibility Study and Transaction Advisory Services, detailed concept and related entertainment facilities have been finalized.

Global tender for inviting Request for Qualification (RFQ) has been floated to implement this scheme.

7.33 Renovation and Establishment of Sports Fishing-cum-Eco Park at Chetpet lake, Chennai

The Sports Fishing-cum-Eco Park at Chetpet lake, Chennai was inaugurated by the Hon'ble Chief Minister of Tamil Nadu on 27.02.2016 and opened to public. The following facilities viz., boating jetty, angling

spots, Multi Level Car Parking (MLCP), park, recreation centre, food court, walking and jogging tracks, children play area, sewage treatment plant have been created in this Eco-park at a cost of Rs.42 crore. This landmark facility in the heart of the city has received overwhelming response from the general public, besides supporting ground water recharge of that area through rain water harvesting.

7.34 Modernization of Fish Markets

Fish markets play a crucial role in supplying hygienic good quality fish to the consumers. Most of the fish markets in the state are under the control of the Civic bodies/ fishermen co-operative societies. Upgradation of these fish markets with cold storage and other hygienic modern facilities will enable fishermen to fetch a fair price for

their catch besides providing quality fish to the public. In continuation to the action taken during 2015-16 to modernize 23 fish markets of the State with the financial support of the National Fisheries Development Board (NFDB), the NFDB has accorded administrative sanction for 40% financial assistance in the project estimates for modernizing of 20 fish markets.

Considering the financial deficit of the civic bodies/ fishermen co-operative societies, the Government will provide 50% financial support for the remaining 60% amount required for implementation of this scheme. The civic bodies /Fishermen co-operative societies should contribute 10% of the project cost from its own funds. The works will be commenced shortly.

8. INLAND FISHERIES

In the inland fisheries sector, aquaculture is poised to play a pivotal role in increasing fish production, ensuring food security and enhancing the growth in State's economy. The traditional carp culture including composite fish culture requires water for a period of 8 to 12 months to undertake fish culture. Thus there are difficulties in undertaking carp culture does not suit short seasonal water bodies which have water retention for 4 to 5 months only. In order to overcome the limitations, the Fisheries Department is taking the following measures:

- Adopting Eco friendly and sustainable fish / shrimp aquaculture
- Introduction of fish seed rearing in floating cages in water bodies

- Adopting intensive cage farming in reservoirs
- Creation of fish seed banks to ensure the availability of fish seeds throughout the year
- Undertaking intensive fish culture in irrigation tanks
- Integrating fish culture in farm ponds / multipurpose farm ponds with agriculture to provide additional income for Farmers.
- Introduction of culture technology for fast growing fishes viz., Amur Carp, Jayanthi Rohu, Genetically Improved Farmed Tilapia (GIFT) and Pangassius, dissemination of knowledge for its propagation and establishing hatcheries for these species.
- Encouraging farmers by providing subsidy for setting up of infrastructural

facilities for fish/prawn hatchery, fish culture in grow out ponds, feed mill and hygienic marketing infrastructure.

- To enhance the fishing efficiency of Inland fishermen.
- Creating job opportunities by promoting ornamental fish culture to rural women and youngsters.

8.1 Reservoir Fisheries

In Tamil Nadu there are 61 reservoirs under the control of the Fisheries Department comprising of major, medium and small reservoirs. Among these, 53 reservoirs are directly under the control of the Fisheries Department and 8 reservoirs are under the control of Tamil Nadu Fisheries Development Corporation Limited (TNFDC).

- The objective is to increase fish production and to increase the revenue of the Inland fishers who depends on

the resource for their livelihood. The fishery rights in 53 reservoirs which are managed by the Fisheries Department are being leased out.

- Leasing out of these reservoirs are being carried out in a phased manner. The reservoirs are leased out for a period of 5 years with an escalation of 10% per year, the lessee should employ the traditional fishermen and share fishermen who depend on these reservoirs.
- So far, 36 reservoirs have been leased out and the Government has realised Rs.23.96 crore. Action is being taken to lease out the remaining reservoirs.

8.2 Fish seed Production / Fish seed Rearing Centres

- There are 8 Fish Seed Production Centres functioning under the control

of Fisheries Department. One fish seed production centre is functioning at Sathanur in Tiruvannamalai District under TNFDC. A record production of 41.31 crore early fry was produced in the year 2015-16 which is the highest ever fish seed production from the departmental fish seed production centres so far.

- There are 34 fish seed rearing centres functioning under the control of the Fisheries Department and 5 fish seed rearing centres under the control of Tamil Nadu Fisheries Development Corporation (TNFDC). During 2015-16, 329.77 lakh late fry and 415.66 lakh fingerlings have been produced from the fish seed rearing centres under the control of Fisheries Department and supplied for stocking

in Government and Private water bodies.

- The annual requirement of Fish fingerlings for the state is estimated as 70 crore. The fingerling production of Tamil Nadu during 2015-16 was 61.27 crore with a gap between seed demand and supply standing at 8.73 crore.
- The fisheries department has undertaken the repair and renovation of Government fish seed farms as well as construction of new fish seed farms by Government and Private entrepreneurs under various schemes such as National Agriculture Development Programme (NADP), National Mission for Protein Supplement (NMPS), Tamil Nadu Irrigated Agriculture Modernization

and water bodies Restoration and Management (TN-IAMWARM), National Bank for Agriculture and Rural Development (NABARD) etc, and an additional space of 34.8 ha has been created by both Government and private farms. Due to this effort the gap between demand and supply of fish fingerlings during previous years was reduced from 25 crore to 8.73 crore.

8.3 District Fish Farmers Development Agencies (DFFDA)

- In Tamil Nadu, the newly formed District Fish Farmers Development Agencies (DFFDA) created by merging Freshwater Fish Farmers Development Agency (FFDA) and Brackish water Fish Farmers Development Agency (BFDA) have started functioning in

31 districts except Chennai, in order to popularise fish culture activities and to generate employment opportunities in rural areas.

- The main activities are providing technical guidance and encouraging farmers to take up fish culture by extending subsidy assistance, besides imparting technical training and extension support to fish farmers. These District Fish Farmers Development Agencies are functioning under the Chairmanship of the respective District Collectors.
- Through DFFDA, an area of 7000 ha has been brought under fish culture. Further, under Intensive Inland Fish Culture and Marketing schemes, the ponds and tanks covering an area of

24,600 ha are also being utilized for fish culture.

- In order to develop eco-friendly and sustainable brackish water aquaculture, the DFFDAs functioning in the coastal districts are coordinating with Coastal Aquaculture Authority (CAA) to develop and regulate Brackish water aquaculture. So far 1,734 shrimp farms have been registered with CAA.

8.4 Development of Cold Water Fisheries

The upland / cold waters in The Nilgris district and in some parts of Western Ghats are suitable for sport fishery. This department takes pride in operating the only trout hatchery in Southern India at Avalanche since 1906. The trout fingerlings produced from this hatchery are stocked in the trout streams for stock enhancement.

8.5 Fish Health Diagnostic Centre

The Fisheries Department has been strengthened with a Fish Health Diagnostic Centre and Mobile laboratory at Chetpet, at a cost of Rs.1.25 crore through financial support from NADP. This laboratory is catering to the needs of aqua farmers and ornamental fish culturists in the state. In addition, a well equipped mobile laboratory has been established for analyzing soil and water quality at field level.

9. EXTENSION AND TRAINING

The Fisheries department is well equipped with Extension & Training wing for effective propagation of welfare schemes of the Government, to the fishers, fish farmers and other stakeholders.

- Five propaganda vehicles have been exclusively designed with inbuilt

extension aids for conducting awareness campaigns and used in various marine and inland fishing villages.

- The Fisheries Department participates in various exhibitions and trade fairs, and disseminates technical knowledge to fishermen/farmers.
- Various need-based training programmes for stakeholders are being conducted with the funding aid of National Agriculture Development Programme (NADP) and National Fisheries Development Board (NFDB) and Government of India.

9.1 Fisheries Statistics

The Fisheries Statistical data as well as achievements of the Department are being published every year through an annual Publication titled "Fisheries Statistics". This

publication is useful to Planners, Research scholars and Policy makers and to frame suitable measures for conservation and sustainable use of resources.

9.2 Maritime Education for Fisher Youth

The Government, with the intention of improving skills and creating employment opportunities to the fisher youth, extends financial assistance to the children of active fishermen families at the rate of Rs.50,000/- per person for undergoing 6 specific courses on Maritime Education notified by the Government. During the year 2014-15, an amount of Rs.50 lakh has been sanctioned by the Government and an amount of Rs.30 lakh has been released to 87 fisher youth.

10. SPECIAL PROJECTS

10.1 Tamil Nadu Irrigated Agriculture Modernisation and Water Bodies Restoration and Management (TN-IAMWARM) project

The World Bank funded TN-IAMWARM Project envisions improving the service delivery and enhancing unit productivity of water in selected sub basins. In order to improve the fish productivity of the water bodies, quality fish seeds are produced and stocked. Several activities such as aquaculture in farm ponds, fish seed rearing in cages, construction of earthen fish seed rearing farms, improving the existing Government fish seed rearing farms, cage farming, promoting ornamental fish culture and setting up of fish kiosks for fish marketing have been undertaken.

Based on the success of this project, TN-IAMWARM-II – Project will be commenced

soon for which DPR preparation is under progress at a tentative cost of Rs.50 crore

10.2 National Agriculture Development Programme (NADP)

2015-16

The following schemes are being implemented under NADP during 2015-16 at a cost of Rs.6.88 crore.

Table:12

National Agriculture Development Programme (2015-16)

Sl. No.	Name of the Scheme	Project Cost (Rs. in lakh)	Present Stage
1	Development of a Model Fisheries Village in Tirunelveli District	25.00	A model inland fisheries village is established at Puliyarai village of Sengottai Taluk in Tirunelveli district by involving the agri farmers in various fisheries activities to generate additional income by utilizing the existing natural resources in the village. This scheme is in progress.

2	Upgradation of fishing efficiency of inland fishermen of Tamil Nadu	160.00	50% subsidy to the members of Inland fishermen cooperative societies is provided to purchase new Fishing Nets and Coracles. So far 1,455 Inland fishermen have been benefitted. Scheme is in progress
3	Effective brood stock management through electronic tagging at Government fish seed production centres in Tamil Nadu	77.77	Tagging of brood stock has been introduced for the first time in Government fish seed production centers. This enables selection of breeders from various sources preventing inbreeding depression and production of quality fish seeds. The brood stock in the Government fish seed farm will be tagged for better management of brood stock to produce quality fish seeds. Scheme is in progress
4	Fish Seed rearing in floating cages in reservoirs of Tamil Nadu	215.00	Seed rearing in High Density Poly Ethylene (HDPE) floating cages in selected reservoirs will be undertaken to rear additional fingerlings. Installation of cages is in progress.

5	Fisheries Development in System tanks of Thiruvallur and Kancheepuram Districts	210.00	The system tanks in Kancheepuram and Thiruvallur District in Tamilnadu are being stocked with 100 gm size fish seeds enabling to attain marketable size within short span. Scheme is in progress.
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2016-17

The following schemes are being implemented under NADP during 2016-17 at a cost of Rs.11.02 crore.

Table:13
National Agriculture Development
Programme (2016-17)

Sl. No.	Name of the Scheme	Project Cost (Rs. in lakh)	Project Details
1	Biological control of aquatic weeds by stocking of grass carps in Aquatic weed infested water bodies of Tamil Nadu	202.50	Grass carp fish seed will be stocked as a biological weed control in the Weed infested water bodies of Tamil Nadu. 10,000 ha area of water bodies will be stocked with 50 lakh Grass carp fish seed in this scheme during this year.

2	Expansion of fish culture area by encouraging farmers of Tamil Nadu	106.00	Subsidy will be provided @ Rs.2.10 lakh per ha to the interested farmers for excavation of fish pond and for purchase of fish seeds. 50 ha area will be covered under this scheme during this year.
3	Cage culture of Cobia and Lobster at Sippikulam and Keelavaipar coastal villages in Thoothukudi District	107.26	Cage culture of Cobia and lobster is an alternative livelihood activity and will be provided to members of Marine fishermen Cooperative societies. 20 cages will be installed in Sippikualm and Keelavaipar coastal villages in Thoothukudi district and each cage will be allotted to 4 fishermen cooperative society members. 80 FCS members will be benefitted.
4	Establishment of stunted fingerlings production unit and renovation of nurseries at Manimuthar	160.73	Additional infra-structure facilities will be created at Manimuthar Government Fish seed farm. To ensure availability of

	Government Fish farm		major carp fish seeds throughout the year and to meet the fish seed demand of Tirunelveli and adjacent districts by producing stunted fingerlings. 10 to 15 lakh stunted fingerlings expected to be produced every year.
5	Improvement of fish farm, Tilapia hatchery and Seed rearing unit in Krishnagiri Government fish farm	400.00	Additional infra structure facilities will be created in the Government GIFT Fish Seed Hatchery at Krishnagiri to enhance the GIFT seed production.
6	Intensive fish seed rearing with aeration and water quality maintenance with probiotics in government fish seed farm at Lalpettai, Cuddalore District	10.95	This project envisages use of aerators with uninterrupted power supply and use of probiotics in the Government fish seed rearing farm at Lalpettai to enhance fingerling production by improving better water quality management.

7	Increasing Fishing Efficiency of Inland Fishermen and Fish Farmers of Tamil Nadu	113.63	Fishing Nets and Coracles will be provided at 50% subsidy to the members of Inland fishermen cooperative society.
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10.3. Schemes under National Fisheries Development Board – Inland Fisheries

2014-15

Creating employment opportunities to rural women by establishing ornamental fish hubs

Under this scheme, 25 units of ornamental fish rearing units is to be established in 10 selected districts of Tamil Nadu at a total cost of Rs 2.13 crore with an aim of creating employment opportunities to rural women in ornamental fisheries.

Each beneficiary to be provided with Rs.50,000/- as 50% back ended subsidy. Accordingly, an amount of Rs.67.91 lakh has been released to 250 eligible women

beneficiaries as first instalment. Formation of ornamental fish farmers cooperative societies and the establishment of ornamental fish units by the beneficiaries are in progress.

2015-16

The National Fisheries Development Board (NFDB), has extended financial assistance of Rs.65.13 lakh for the year 2015-16 for undertaking the following inland fisheries activities in Tamil Nadu.

Table:14
Schemes under National Fisheries Development
Board –2015-16

Sl. No.	Name of the Proposal / Training	Total Amount (Rs. in Lakh)	Project Details
1.	Hands on training in multiple breeding and cryopreservation of Gametes of Major Carps to the staff of the department of fisheries at CIFA, Bhubaneswar.	4.00	Training for 1 st batch of 25 officials of Fisheries Department has been completed. Training for 2 nd batch will be commenced in December 2016.

2.	Hands on training in Breeding, Seed production & Culture of Asian Catfish (Magur) to the staff of the department of fisheries at CIFA, Bhubaneswar	4.00	Training for 1 st batch of 25 officials of Fisheries Department will be commenced during August 2016.
3.	Hands on training in fish and shell fish health management to the staff of the department of fisheries at CIFA, Bhubaneswar.	4.00	Training for 50 officials of Fisheries Department are to be provided in two batches. 1 st batch will be commenced during December 2016.
4.	Training Programme on Basics of Seamanship and Navigation, Electronic equipments and Maintenance of Marine Engine to deep sea going Fisherman of Tamil Nadu	21.25	1000 deep sea going Fisherman are to be provided training on Basics of Seamanship and Navigation, Electronic equipments and Maintenance of Marine Engine. Training completed for 175 deep sea going Fishermen.

5.	Training Programme on Value added fish products for the members of Fisherwomen cooperative societies in coastal districts of Tamil Nadu	31.88	2500 members of fisherwomen cooperative societies are to be provided training on Value added fish products. Training completed for 120 fisherwomen.
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11. FISHERIES CO-OPERATIVE SOCIETIES

The Fisheries Co-operative Societies play a pivotal role in the upliftment of fishermen and fisherwomen in the State. The Department is executing various welfare schemes to fishermen / fisherwomen through Fisheries Co-operative Societies. About 7.21 lakh fishermen / fisherwomen have been enrolled as members of 1,418 primary Fishermen / Fisherwomen Co-operative Societies / District Co-operative Federation / Apex Co-operative Federation. Fishermen Cooperative Societies are operating

51 full time Fair Price Shops and 15 part time Fair price shops.

Elections were conducted for 1,418 Fisheries Cooperative Societies functioning under the control of Commissioner of Fisheries and 10,002 democratically elected Board of Directors assumed charge of these Societies. Presently all the Fisheries co-operative societies are managed by the Elected Board of Management of the societies.

The details of the Societies / Members are given in the following Table.

Table: 15
Details of Members of Fisheries Co-operative Societies

Society	No. of Societies	Members enrolled
Primary Co-operative Societies		
Marine Fishermen Co-operative Societies	557	3,66,272
Marine Fisherwomen Co-operative Societies	458	2,50,226
Inland Fishermen Co-operative Societies	297	87,207

Inland Fisherwomen Co-operative Societies	68	7,758
Other types	26	7,283
Total Number of societies and members enrolled.	1,406	7,18,746
District Fishermen Co-operative Federation	11	975
Tamil Nadu State Apex Fisheries Co-operative Federation	1	785
TOTAL	1,418	7,20,506

12. TAMIL NADU FISHERMEN WELFARE BOARD (TNFWB)

Tamil Nadu Fishermen Welfare Board established with a view to ensure social security and well being of fishermen and labourers engaged in fishing and allied activities, is functioning with its Head Office at Neelankarai, Chennai. A total of 4.38 lakh fishermen / fisherwomen labourers are enrolled as members in the Board. As per the provisions of the TNFWB Act, so far a sum of Rs.14.85 crore has been collected as contribution from various agencies.

The Welfare schemes being implemented by the Tamil Nadu Fishermen Welfare Board are as follows:

Table: 16
Details of Welfare Schemes being implemented
by the Fishermen Welfare Board

Sl. No	Details of Relief Assistance	Relief / Assistance per beneficiary (Amount in Rs)
1.	Accident Relief	
	a) Death due to Accident	1,00,000
	b) Loss of both hands	1,00,000
	c) Loss of both legs	1,00,000
	d) Loss of one hand and one leg	1,00,000
	e) Loss of sight in both eyes	1,00,000
	f) Loss of one hand or one leg	50,000
	g) Loss of limbs due to Major injuries other than the above items	20,000
2	Death during fishing or after fishing due to reasons other than Accidental death	1,00,000
3	Fishermen Missing during fishing	1,00,000
4	Natural Death	15,000
5	Funeral Expenses	2,500

6	Assistance for Education to son and daughter of the Members	Day scholar		Hostellier	
		Boys	Girls	Boys	Girls
	a) Pass in 10 th Std	1,250	1,500	---	---
	b) Pass in 12 th Std	1,750	2,000	---	---
	c) ITI and Polytechnic	1,250	1,750	1,450	1,950
	d) Bachelor Degree	1,750	2,250	2,000	2,500
	e) Post Graduate Degree	2,250	2,750	3,250	3,750
	f) Under Graduate Professional Courses (Law, Engineering, Medicine, etc.)	2,250	2,750	4,250	4,750
	g) Post Graduate Professional Courses	4,250	4,750	6,250	6,750
7	Marriage Assistance			Male	Female
	a) Marriage Assistance to Member			3,000	5,000
	b) Marriage Assistance to son / daughter of a Member			3,000	5,000
8	a) Delivery @ Rs.1,000/- per month for 6 months				6,000
	b) Miscarriage				3,000
	c) Termination of Pregnancy				3,000
9	Old Age Pension (Above 65 Years)				400 per month

➤ During 2015-16, the Tamil Nadu Fishermen Welfare Board (TNFWB) has settled 5,491 claims amounting to Rs.3.08 crore, and 1,948 claims have

been settled to the tune of Rs.96 lakh (upto 15.07.2016) for the year 2016-17 under various welfare schemes.

- In order to ensure transparency in disbursement of relief/ assistance that too within shortest period of time, the relief assistance is being disbursed to beneficiaries through National Electronic Fund Transfer (NEFT).

13. TAMILNADU STATE APEX FISHERIES CO-OPERATIVE FEDERATION LIMITED (TAFCOFED)

Tamil Nadu State Apex Fisheries Co-operative Federation Ltd., (TAFCOFED), has been registered under Tamil Nadu Co-operative Societies Act, 1983 and functioning since 19.10.1992 with its headquarters at Chennai. At present, 477

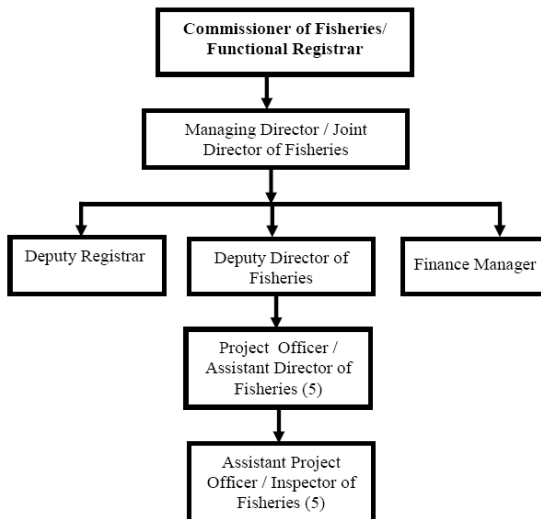
Marine Fishermen Co-operative Societies, 141
Inland Fishermen Co-operative Societies, 158
Fisherwomen Co-operative Societies and 9
District Fishermen Co-operative Federations
have been enrolled as members in TAFCOFED
with a total share capital of Rs.91.43 lakh.

TAFCOFED is administered by the
25 elected Board of Directors comprising
17 elected Board of Directors,
7 Government nominees and one co-opted
member.

The organisational setup of Tamil Nadu
State Apex Fisheries Co-operative Federation
Limited (TAFCOFED) is depicted below: -

Figure:2

Organizational Setup of Tamil Nadu State Apex Fisheries Cooperative Federation



TAFCOFED is implementing various Fisheries department schemes for welfare of fisher folk. TAFCOFED is also involved in diversified business activities to improve the Federation revenue. The following are the major activities being carried out by TAFCOFED.

13.1 Sale of Outboard Motors / Inboard Engines

The Department of Fisheries has authorised TAFCOFED for supplying Outboard Motors/Inboard engines to the traditional fishermen under Central and State subsidy schemes. During the year 2015-16, 540 OBM/IBM have been supplied with a subsidy amount of Rs.161 Lakh.

13.2 Supply of sales tax exempted Subsidised Industrial Kerosene to the Traditional Motorised Fishing Crafts

TAFCOFED is supplying sales tax exempted subsidised Industrial Kerosene to the traditional motorised fishing crafts in Thoothukudi and Tirunelveli Districts through 13 primary co-operative societies. Under this scheme 3,712 KL of Industrial Kerosene was

supplied during 2015-16 and 808 KL was supplied up to June, 2016.

13.3 Supply of Sales Tax exempted Diesel for Fishing Crafts

TAFCOFED is supplying sales tax exempted diesel to Mechanised and Motorised fishing boats through 12 diesel bunks established in coastal districts. 17,491 KL of sales tax exempted diesel was supplied during the year 2015-16 and 3,124 KL of sales tax exempted was supplied up to June, 2016.

13.4 Fish Marketing

13.4.1 Retail Fish Outlets

TAFCOFED is running two Retail fish outlets at Neyveli Lignite Corporation Ltd., (NLC) Township and another one at Ariyalur.

13.4.2 Modern Fish Stalls

In order to strengthen fish marketing of the Apex Federation and member societies and also to supply good quality fish to general public at a reasonable price. The construction of two modern fish stalls, one at Chennai and another at Bharathinagar, Ramanathapuram in Ramanathapuram District with 40% financial assistance from National Fisheries Development Board (NFDB) with a total project cost of Rs.20 lakh is in progress.

13.4.3 Fish marketing vehicles

TAFCOFED supplied 3 Mahindra Bolero pickup vehicles to primary co-operative societies to support fish marketing at a total cost Rs.21.96 lakhs with 40% subsidy of Rs.8.79 Lakhs under NFDB.

13.4.4. Fish Transport Vehicle under State Balanced Growth Fund (SBGF)-State Planning Commission

In order to remove the hardships of fisher folk who are engaged in retail fish marketing and also to transport the catch to the nearby markets on time and to fetch better price, TAFCOFED supplied 10 fish transporting vehicles at a cost of Rs.71 lakh to Marine/Inland Fisheries Cooperative Societies in Backward Blocks under State Balanced Growth Fund (SBGF)-State Planning Commission.

13.4.5 Two Wheeler Mopeds fitted with Insulated Ice Boxes

TAFCOFED supplied two wheeler mopeds fitted with insulated ice boxes with 25% subsidy (30% in case of SC/ST) with financial assistance from NFDB – Retail fish marketing- Special drive , in order to handle

more volume of fish and to supply good quality fish to the consumer. During the year 2015-16, 1,000 mopeds fitted with insulated ice boxes were supplied to the beneficiaries with a subsidy amount of Rs.95.05 lakh.

13.5 Supply of Distress Alert Transmitters (DAT)

TAFCOFED is implementing the scheme of Supply of Distress Alert Transmitters (DAT) to fishing crafts registered under Real craft registration system with financial assistance from Centre and State. Under this programme 30,000 DATs at a total cost of Rs.48 crore will be supplied. Hon'ble Chief Minister inaugurated the scheme on 27.02.2016

13.6 Supply of Insulated Ice Boxes under Marine Products Export Development Authority (MPEDA) subsidy

TAFCOFED had supplied Insulated Ice boxes of various capacities to Tamil Nadu fishermen with 50% subsidy assistance from Marine Products Export Development Authority (MPEDA). During the year 2015-16, 657 Insulated Ice boxes with Rs.21.45 lakh subsidy had been supplied.

13.7 Training Programmes

TAFCOFED is conducting various need based training programmes for fisher folk with the funding support of National Fisheries Development Board (NFDB), National Agriculture Development Programme (NADP) and Government of India for effective transfer of technology and propagation of welfare schemes of the Government.

As a measure of offering alternative livelihood to marine fisherwomen, TAFCOFED had conducted training programme on 'Solar Lantern fabrication and servicing' to fisherwomen belongs to 13 maritime districts of Tamil Nadu, with NFDB financial assistance of Rs.5.42 lakh for 260 coastal fisherwomen. This will help the fisher women to become a self-entrepreneur in production and servicing of Solar Lanterns.

TAFCOFED is also conducting Training programme on "Basics of Seamanship and Navigation, Electronic equipments and Maintenance of Marine Engine" to deep sea going fishermen of Tamil Nadu with technical assistance from Central Fisheries Nautical Engineering Technology (CIFNET) and with financial assistance from NFDB. 1,000 fishermen in 40 batches will be trained under this programme. 235 deep sea going

fishermen were already trained in four batches at Fishermen Training Centre, Colachel, Kanniyakumari district.

TAFCOFED is conducting training programme on “Value added fish products” for members of fisherwomen co-operative societies in coastal districts of Tamil Nadu. In the first phase 2,500 fisherwomen will be trained in 125 batches at a cost of Rs.31.87 lakh under NFDB assistance.

13.8.1 Establishment of Retail Outlet for selling of Diesel and Petrol at OMR, Chennai

In order to improve the Federation revenue and towards self sufficiency TAFCOFED is in the process of setting up a Retail Outlet for selling of Diesel and Petrol at Vanianchavadi in survey No.105, Kazhipattur village in Kancheepuram District at a cost of

Rs.80 lakh. The construction work is in progress.

13.8.2 Establishment of Modern Fish Food Restaurant

Tamil Nadu State Apex Fisheries Cooperative Federation will establish a Modern Fish Food Restaurant at a cost of Rs.1.50 crore at Vanianchavadi in survey No.105, Kazhipattur village in Kancheepuram District. Rs.89 lakhs from NADP assistance and the remaining Rs.61 lakh will be met from the federation funds. The construction work is in progress.

14. TAMIL NADU FISHERIES DEVELOPMENT CORPORATION LIMITED

The Tamil Nadu Fisheries Development Corporation Limited was established in 1974 as a State Owned Public Sector Undertaking

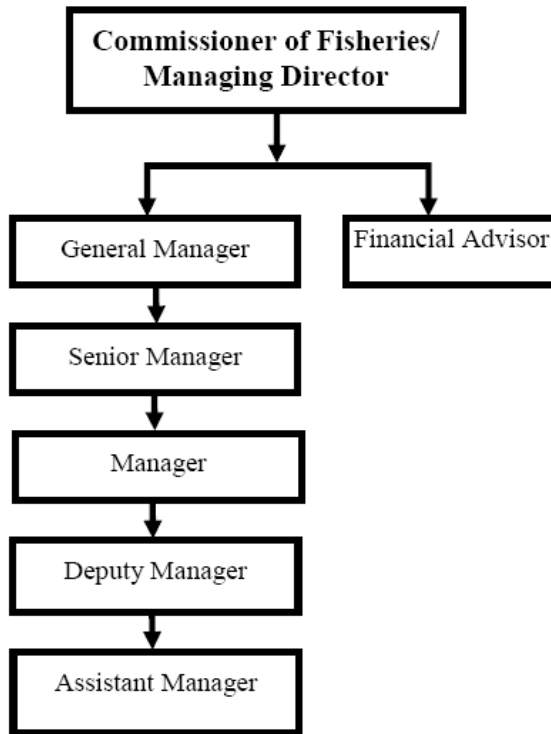
with an authorized Share Capital of Rs.5 crore and a paid up Share Capital of Rs.4.45 crore.

- The Board of Directors are appointed by the Government of Tamil Nadu.
- 126 employees are working at present in various categories.

The organizational setup of Tamil Nadu Fisheries Development Corporation Limited is depicted below: -

Figure:3

Organizational Setup of Tamil Nadu Fisheries Development Corporation



14.1. Fish seed Production

Tamil Nadu Fisheries Development Corporation Limited is having a total fish seed

rearing area of 3.83 hectares at Sathanur Dam, Aliyar, Amaravathy, Thirumoorthy, Palar & Porandalar Reservoirs. Fish seeds produced by the TNFDC are stocked in the reservoirs managed by the TNFDC besides supplying to the Fisheries Department and private farmers.

During the financial year 2015-16, the Corporation has produced 167.07 lakh of early fry and 38.66 lakh of advanced fingerlings and realized a revenue of Rs.66.18 lakh from the fish seed farms. Up to June'16, 56 lakh of early fry and 5.3 lakh of advanced fingerlings have been produced and a sum of Rs.11.48 lakh revenue is realized.

14.2. Reservoir Fisheries Management

Systematic scientific stocking of fish seeds is being done for sustainable fish production in eight reservoirs which are

managed by Tamil Nadu Fisheries Development Corporation Limited.

To supplement the revenue of the Tamil Nadu Fisheries Development Corporation Limited, the fishing rights of Bhavanisagar, Aliyar, Amaravathy, Thirumoorthy, Palar & Porandalar and Perumpallam reservoirs have been leased out to Private Fish Farmers. Action is being taken to lease out Uppar & Sathanur reservoirs to private parties.

In the Financial year 2015-16, TNFDC exploited 713.38 tonnes of fish from the reservoirs to the tune of Rs.587.95 lakh. Upto June 2016, 159.54 tones of fish are exploited and revenue of Rs.156.40 lakh realized.

14.3. Production and Marketing of Ornamental Fishes

TNFDC has established ornamental fish breeding & production centers at Aliyar and

Thirumoorthy Nagar. Ornamental fish sales centre-cum-Aquarium has been functioning at Aliyar, Thirumoorthy Nagar and Chennai.

During 2015-16, Rs.20.78 lakh was realised through the sale of ornamental fishes and accessories. Rs.5.07 lakh revenue has been realized upto June'16.

14.4. Fish Marketing

Tamil Nadu Fisheries Development Corporation Limited is marketing fresh fish through its chain of retail fish stalls and mobile sales units in Chennai, Madurai, Coimbatore, Tirupur, Pollachi and Thiruvannamalai. During the year 2015-16, 930.12 tonnes of fish have been marketed, earning a profit of Rs.101.43 lakh. The Corporation has been operating fish food courts and mobile food court units in Chennai, Coimbatore and Tirupur. Upto

June'16, 236.83 tones of fish are marketed and a profit of Rs.27.92 lakh is earned.

14.5. Diesel Outlets

The Corporation is operating 30 diesel outlets in the Fishing Harbours and fish landing centres located all along the coastal area in the State to supply Sales Tax exempted high speed diesel to the traditional and mechanized fishing craft owners. The Corporation had sold 86,702 KL of high speed diesel during 2015-16 and realized a profit of Rs.8.49 crore. Upto June'16, 15,179 KL of diesel has been sold and through which a profit of Rs.154.55 lakh is earned.

14.6. Supply of sales tax exempted subsidised Industrial Kerosene to the Traditional Motorised Fishing Crafts

Tamil Nadu Fisheries Development Corporation Limited is supplying sales tax exempted subsidized kerosene to the

traditional fishing crafts in Kanniyakumari District. 5,584 KL of Kerosene has been supplied during the financial year 2015-16, earning a profit of Rs.17.06 lakh. Upto June'16, 1,228 KL of kerosene sold and a profit of Rs.5 lakh is earned.

14.7. Other Schemes

The following are the new schemes that are under implementation: -

14.7.1. Construction of additional administrative office building

It is proposed to construct an additional administrative office building for Chennai fish marketing division at Santhome at an estimated cost of Rs.2.50 crore with TNFDC's own funds and the construction work is under progress.

14.7.2. Establishment of Fish Handling Centre with cold storage facilities at Kuruchi, Coimbatore

The Tamil Nadu Fisheries Development Corporation Limited established a fish handling centre at Kuruchi, Coimbatore District with cold storage facility for hygienically handling the fish caught in the Reservoirs from distant places with a financial assistance of Rs.70 lakh from National Fisheries Development Board.

14.7.3. Establishment of a Modern Fish Landing Centre at Bhavanisagar Reservoir, Erode District.

The Tamil Nadu Fisheries Development Corporation Limited established a Modern Fish Landing Centre (FLC) at Bhavanisagar Reservoir, Erode District for hygienic handling of fish caught along with infrastructure facilities viz., fish auction hall and fish net

mending shed at an expenditure of Rs.60.44 lakh under NFDB financial assistance.

14.8. Financial position

The Tamil Nadu Fisheries Development Corporation Limited by undertaking various commercial activities such as fresh fish marketing, sea food courts, diesel / kerosene sale and reservoir management etc. earned an unaudited profit of Rs.9.75 crore for the year 2015-16.

14.8.1. Payment of dividend to Government

During the year 2015-16 the Tamil Nadu Fisheries Development Corporation Limited has paid a sum of Rs.1.58 crore to State Government as dividend.

14.8.2. Contribution of TNFDC Ltd., for Fisheries projects and Fishermen Welfare Schemes

TNFDC had paid a sum of Rs.105.33 lakh as its contribution to Tamil Nadu Fishermen Welfare Board.

The TNFDC has also contributed a sum of Rs.27.99 lakh to some of the fisheries projects and Fishermen Welfare Schemes from its Corporate Social Responsibility (CSR) Fund as detailed below: -

Turtle excluder device awareness campaign programmes	-Rs.1,62,500/-
Modernization of fish market at Neelankarai	-Rs.20,21,600/-
Modernization of fish market at Besant Nagar	-Rs.1,50,000/-
Fishermen Welfare	-Rs.4,45,282/-
Missing fishermen searching operation expenses	-Rs.20,000/-
Total	Rs.27,99,382/-

14.9. New Schemes:

The TNFDC has taken over Operation & Maintenance of Chetpet Eco Park with effect from 27.02.2016 onwards with activities such

as fish angling, Boating, Food Kiosks, Multi Media Centre, Amphitheatre, Multi Level Car Parking and Restaurant. Upto June 2016, 1,23,808 visitors have visited the Park.

15. Tamil Nadu Fisheries University (TNFU)

Tamil Nadu Fisheries University (TNFU) is the State funded, specialized University for Fisheries Science in India imparting professional Fisheries education, research and training to enhance fish production and utilization by following the State Agricultural University (SAU) pattern and syllabi.

To provide professionally qualified and skilled manpower resources in the State so as to augment fish production and exports, the Hon'ble Chief Minister announced the establishment of Tamil Nadu Fisheries University at Nagapattinam on 13.09.2011 in the Assembly. In pursuance thereof to the

announcement, the Tamil Nadu Fisheries University, the first of its kind in the country, came into being since 19.06.2012.

15.1. Vision of the University

The vision of the University is "Harnessing the Science of Fisheries for Food, Nutrition and Livelihood".

15.2. Objectives

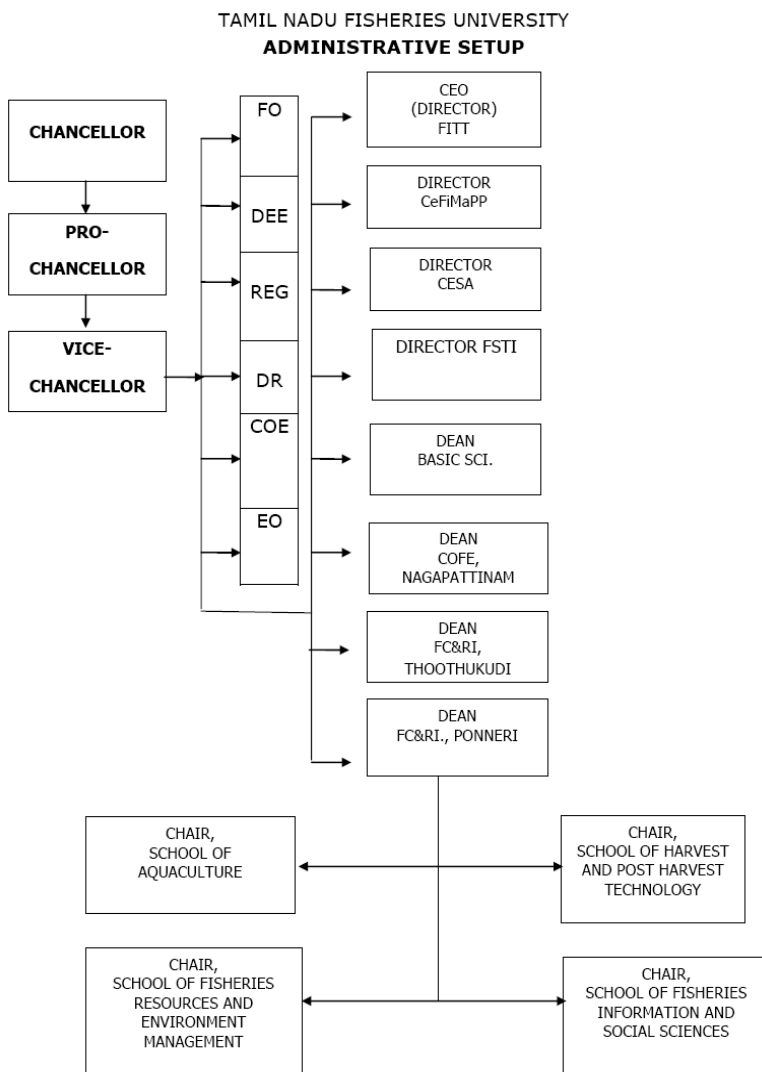
The objectives of Tamil Nadu Fisheries University (TNFU) are as follows:

- To impart quality professional education in different branches of Fisheries Sciences as the University may determine;
- To conduct organized research in frontier areas with the objective of developing cutting edge technologies in Fisheries Sciences;
- To provide extension services like training, consultancy, project

formulation to fish farmers, fisher folk, unemployed youth and entrepreneurs in Fisheries Sciences;

- To facilitate comprehensive development of Fisheries Sciences for increased contribution to State economy and set bench mark standards through appropriate interventions in fisheries teaching, research and extension;
- To generate baseline data on aquatic biodiversity and fisheries resource potential;
- To generate high quality professionals in Fisheries Sciences by following Veterinary Council of India regulations as a model;
- To create better opportunities for marketing and value addition of fish and fishery products;
- To set up an aquatic disease diagnosis and surveillance system in the State;

Figure:4



The Fisheries College and Research Institute, Thoothukudi, the second oldest college in the country was established in 1977. It offers B.F.Sc., M.F.Sc., and Ph.D., degree Programmes. The Institute of Fisheries Technology started during 2012 at Ponneri in Thiruvallur District was upgraded to Fisheries College and Research Institute during 2014 for imparting the B.F.Sc., degree course and 40 students were admitted during this academic year 2015 -16. In Nagapattinam, Institute of Fisheries Technology was upgraded to College of Fisheries Engineering for offering the B.E., (Fisheries Engineering) course first time in India. During this academic year (2015 -16) 20 students were admitted. Madhavaram and Vaniyanchavadi Campuses of this University are recognized for Post-Graduate Research Programmes.

15.3. Activities of Tamil Nadu Fisheries University

The activities of TNFU in the areas of Education, Research and Extension services are outlined below:

15.3.1 Education

Details of students admitted during the year 2015-16 at TNFU are furnished in Table 17.

Table: 17

Students' admission strength

Course	FC&RI Thoothukudi		FC&RI Ponneri		CoFE Nagapattinam		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
B.F.Sc.,	20	20	26	15	--	--	81*
B.E., (Fisheries Engineering)	--	--	--	--	10	10	20
M.F.Sc.,	19	12	--	--	--	--	31
Ph.D.,	5	5	--	--	--	--	10
Total							142

**Includes International Student (1 No.)*

- The University is extending financial assistance in the form of State and Central Government scholarships and fellowships to the students for undergoing their undergraduate and postgraduate degree programmes. P.G and Ph.D., Students who are all admitted through TNFU entrance exams were given TNFU merit scholarship Rs.4,000/- and Rs.5,000/- respectively. Various student amenities including a Placement Cell, are available in the University to promote the interests of students in acquiring knowledge on various aspects of fisheries science as well as in finding their suitable placements.
- The second Convocation of Tamil Nadu Fisheries University was held at Raj Bhavan in the gracious presence of His Excellency, Governor of Tamil Nadu

and the Chancellor of the University,
Dr.K.Rosaiah on 27.02.2016.

15.3.2. Research

- Centre for Marine Finfish Hatchery was established during 2014 – 15 under the funding support of NADP (Rs.185.40 lakh) in Mandapam. The research and production activities related to Marine Finfish breeding and seed production works have been planned. As the first step awareness on marine finfish farming has been created among the coastal fish farmers and marine ornamental fish trading has been promoted as an alternative occupation for fisherman in the coastal districts.
- Centre for Shrimp Brood Bank was established during 2014-15 at Kanniyakumari district. Two quarantine unit and one multiplication centre are

being created with funding support of NADP (Rs.198.91 lakh). Quarantine services and development of disease free shrimp broodstock are the proposed activities in this centre.

- In Tilapia Research Centre, Barur facilities such as hatchery, Broodstock, nursery tanks and other supporting facilities have been created under NADP support (Rs.121.04 lakh). The hatchery is in operation and tilapia seeds have been produced and supplied to the farmers. Farmers have been encouraged to take up tilapia farming in Krishnagiri and Dharmapuri districts.
- Under ICAR-Niche Area of Excellence scheme, fish safety and quality assurance, microbial risks and chemical residues associated with shrimps and cephalopods were assessed. Genetic

markers for authentication of processed tunas by molecular method were developed

- In Centre for Inland Fish Broodstock Development (CIFBD) Thanjavur under National Fisheries Development Board (NFDB) financial assistance (Rs. 46.04 lakh) 250 fishermen were trained in freshwater aquaculture techniques. Soil and Water quality laboratory construction work is in progress.
- A budget of Rs. 10.30 crore has been sanctioned for the establishment of Aquatic Rainbow Technology Park at Madhavaram Milk Colony, Chennai. Basic research works carried out on live feed culture, ornamental fish breeding and disease diagnosis were initiated.
- Gulf of Mannar Marine Biosphere Reserve Trust, Ramanathapuram

extended a funding support Rs.10.05 lakhs to analyze the impact of anthropogenic activities and seasonal variations in primary and secondary plankton biomass in the region of Gulf of Mannar Marine Biosphere Reserve, Thoothukudi District.

- Under the National Surveillance programme for Aquatic Animal Diseases (NSPAAD) six awareness programmes were conducted in the three districts viz. Nagapattinam, Pudukottai and Thanjavur of Tamil Nadu which was attended and benefitted by over 370 active shrimp and fish farmers of the region. The analysis revealed that the shrimp farms in the districts are free from AHPND (Acute Hepatopancreatic Necrosis Disease). EHP (Enterocytozoon Hepatopenaei) screening conducted in

the above districts showed that the EHP is prevalent at 29.6 %. Other important pathogens detected in the farmed shrimps included white spot disease virus (WSDV) and Infectious Hypodermal and Haematopoietic Necrosis Virus (IHHNV).

15.4. Memorandum of Understanding and Cooperation with overseas University/Institute

Tamil Nadu Fisheries University signed Memorandum of Understanding (MoU) / Co-operative Agreement between International Universities / National fisheries organizations, universities, private aqua farms, and feed industries. The Universities such as University of Las Palmas De Gran Canaria (ULPGC), Spain, James Cook University (JCU), Australia, Curtin University (CU), Australia,

Shanghai Ocean University (SHOU), China, Indian Institute of Technology (IIT), Kharagpur, Ghent University, Belgium etc are notable among them.

15.5. Infrastructure Facilities

Details of Infrastructure facilities inaugurated / foundation stone laid by Hon'ble Tamil Nadu Chief Minister during 2015-16

With the view to improve infrastructure facilities of Tamil Nadu Fisheries University, Hon'ble Chief Minister of Tamil Nadu laid foundations and inaugurated for the following infrastructure worth Rs.51.30 crore.

Table:18

**Details of Infrastructure facilities inaugurated /
foundation stone laid by Hon'ble Tamil Nadu
Chief Minister during 2015-16**

Sl. No.	Campus	Infrast ructure details	Area (Sq. M)	Date	Value (Rs.in Lakhs)
Foundation stone laid					
Tamil Nadu Fisheries University, Nagapattinam					
1.	Tamil Nadu Fisheries University Administrative Building		5109	15.07.15	1102
2.	College of Fisheries Engineering Academic Block		4988	13.11.15	1074
3.	Marine Engineering Workshop		210	13.11.15	45
Inaugurated					
Fisheries College and Research Institute, Ponneri					
1.	Academic Block		5574	13.11.15	1200
2.	Teaching and Non teaching staff residential quarters		650	13.11.15	140
3.	Ladies and Gents Hostel		1765	13.11.15	380
4.	Business incubation Centre in Fish processing		280	13.11.15	60
5.	Sea food restaurant and knowledge centre		140	13.11.15	30
Fisheries College and Research Institute, Thoothukudi					
1.	Vocational Training Centre		454	13.11.15	97.65
2.	Marine Engineering Work Shop		420	13.11.15	90.40
3.	Sea food restaurant and knowledge centre		226	13.11.15	48.60
4.	Tilapia Research centre		210	15.07.15	45
5.	Fish and Fish product Quality Testing Centre		120	15.07.15	25
6.	Marine Bio Laboratory		80	15.07.15	15
7.	Fish Quality Assurance and Management Centre		280	15.07.15	65

Tamil Nadu Fisheries University Campus, Madhavaram				
1.	Raceway Water recycling lab	260	15.07.15	56
2.	Aquarium Fish Hatchery	830	15.07.15	50
3.	Fish farming and Bio- Technology Lab	80	15.07.15	15
Other Research Centres				
1.	Regional Fisheries Research and Extension Centre(Tilapia Research Centre), Krishnagiri	540	15.07.15	121.04
2.	Disease free native shrimp brood bank, Kanniyakumari	910	15.07.15	198.91
3.	Marine Fin Fish Hatchery, Sathankonvalasai, Mandapam	850	15.07.15	185.40
4.	Carp hatchery and Aquarium fish farming complex	233	15.07.15	50
5.	Raceway Water Recycling, OMR, Vaniyanchavadi, Chennai.	180	15.07.15	36
	Total			5130

15.6. Advocacy / Certification / Consultancy services

- This University is involved in certification of the seafood products through the Fish Quality Monitoring and Certification Centre at Thoothukudi.
- One State Referral Laboratory at Madhavaram, Chennai and one Regional Laboratory at Thoothukudi is

functioning for aquatic animal diseases surveillance.

The laboratories established at the Fish Quality Monitoring and Certification Centre at the Dept. of Fish Quality Assurance and Management of Fisheries College and Research Institute, Thoothukudi and the Disease Diagnosis Laboratory of Fisheries Research and Extension Centre, Madhavaram, have been put into use for testing water, fish, shrimp, and seafood samples for various quality parameters and earned a revenue of Rs.71.17 lakh during 2015-16.

15.7. Extension Activities

This University is instrumental in bringing out developments in the fisheries sector in the State of Tamil Nadu through various extension and training programs covering all aspects, including farm advisory services, answer to farmers' queries,

organizing Mass awareness programmes, Fish farmers' meets, Stakeholders linkage through mass media, Industry-Institute meets and Exhibitions. The University has been conducting various training programmes with the objective of planning and execution of all outreach programmes in close coordination with other line departments / agencies such as the Dept. of Fisheries, Tamil Nadu Fisheries Development Corporation and other Government organizations.

During 2015-16, a total of 1,917 persons were trained at various centres of Tamil Nadu Fisheries University in fish farming and various fisheries technology. (Table 19)

Table:19
Important Training Programmes conducted
during 2015-16

S.No.	Colleges / Centres	No. of Trainees attended		Total
		Male	Female	
1.	FC&RI, Thoothukudi	400	431	831
2.	FC&RI, Ponneri	108	107	215
3.	CoFE, TNFU, Nagapattinam	80	149	229
4.	FTRC, Parakkai	95	259	354
5.	FTRC, Thanjavur	145	53	198
6.	FREC, Madhavaram	--	27	27
7.	TRC, Barur	62	1	63
Total		890	1027	1917

- Participated in the AGRI INTEX CODISSIA trade fair complex, Coimbatore from 17.07.2015 to 20.07.2015
- Directorate of Extension Education organized a stake holders consultative meet on sustainable shrimp farming at Velankanni on 21.09.2015.

15.8. Future Programmes

- Establishment of 'Jayanti Rohu' Multiplier System at Centre for Freshwater Aquaculture at Bhavanisagar, Erode district

15.9. Thrust areas of Research

- ❖ Biodiversity and stock assessment and management of threatened and commercially important fish and shellfish
- ❖ Reproductive endocrinology of various fish and shellfish
- ❖ Nutritional requirement studies in fish and shellfish
- ❖ Cage culture of fishes in open water bodies
- ❖ Biofloc technology in fish farming
- ❖ Culture of *L. vannamei* in freshwater
- ❖ Nanotechnology in fisheries

- ❖ Broodstock rearing and seed production of mangrove jack (*Lutjanus argentimaculatus*) and pompano (*Trachinotus* sp.)
- ❖ Artificial Fish bait development
- ❖ Design improvement of Long line fishing gears
- ❖ Encapsulation of Omega-3 fatty acids from fish oil
- ❖ Value added products from freshwater fishes
- ❖ Assessment of microbial risks and chemical residues in fish and shellfish
- ❖ Development of genetic markers for the authentication of fish products
- ❖ Development of peptides from fish processing wastes as dietary supplement
- ❖ Development of marine nutraceuticals

- ❖ Development of vaccines, herbal ingredients with nutraceutical and immuno stimulant formulations for the control of fish and shellfish diseases
- ❖ Development of technology for the farming of Indian spiny loach, *Lepidocephalus thermalis* along with Indian major carps
- ❖ Assessment of pollution and productivity studies in Gulf of Mannar
- ❖ Development of biofuel technology using fish wastes and marine algae
- ❖ Better Management Practices and Biosecurity in shrimp farming.

16. FISHERIES DEPARTMENT - BUDGET ALLOCATION FOR THE YEAR 2016-17

For the year 2016-17, a sum of Rs.743.79 crore has been provided in the budget. Out of this, the projected revenue

expenditure is Rs.429.57 crore and the capital expenditure is Rs.314.22 crore.

17. CONCLUSION

“Fishermen will get complete benefits and prosperity in their life besides increasing fish production due to the schemes implemented under my leadership”

- Honourable Chief Minister

Fisheries is transforming into a multifaceted important economic sector, in recent years due to exploitation of deep sea fishery resources, introduction of package of practices of sustainable aquaculture, development of ornamental fish culture, fisheries eco tourism, development fish processing parks, development of mid sea fish processing units.

Though fishing plays a vital role in generating employment opportunities, supply

of protein rich food and contributes substantial foreign exchange, the fishermen who eke out fishing as their livelihood faces lot of hardships. Considering the difficulties faced by the fishermen the Hon'ble Chief Minister of Tamil Nadu enhanced the fishing ban relief amount and special allowance for lean fishing season to Rs.5,000/- per fishermen family.

This Government reiterates its commitment to find a pragmatic and permanent solution to the issues faced by our fishermen in Palk Bay by retrieving the Katchatheevu islet back to India and restoring the right to conduct fishing in the traditional and historical fishing grounds of the Palk Bay, to the Tamil Nadu fishermen.

The Hon'ble Chief Minister of Tamil Nadu who always gives top priority for the safety of fishermen has ordered for providing

VHF radio sets to the fishing crafts at subsidized cost and establishing communication towers facilitating the fishermen to easily contact the shore when in distress.

The Government spearheaded the development of Fishing and Fisheries infrastructure in the State by sanctioning an amount of Rs.1,104.91 crore. During the last five years, 35 Fish landing centres have been constructed and 7 Fishing harbours were improved. Further, works are in progress for the construction of Fish landing centres in 14 places, and for 3 fishing harbours along the coast of Tamil Nadu besides development of Fish seed farms. The Government has already initiated steps to modernize fish markets in selected towns with cold chain facilities to improve hygiene standards.

The Government is taking several steps to maximise fish production from inland fisheries sector in Tamil Nadu, to ensure food safety, to enhance the income of fish farmers, rural youth and women by creating additional employment opportunity and growth of rural economy.

The path breaking initiatives of the Hon'ble Chief Minister of Tamil Nadu will boost the fish production of Tamil Nadu manifold in the near future. This Government will continue to strive hard for the development of Fisheries sector and the economic development of fishers of Tamil Nadu in the coming years also.

D.Jayakumar
Minister for Fisheries