

**ANIMAL HUSBANDRY, DAIRYING
AND FISHERIES DEPARTMENT**

FISHERIES

**POLICY NOTE
2018 – 2019**

Demand No. 7

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Minister for Fisheries,
Personnel and Administrative Reforms

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GOVERNMENT OF TAMILNADU
2018

“To develop fishing occupation which plays an important role in generating employment opportunities, providing protein rich food to the public, developing livelihood of fishermen, generating income, the Government under my leadership is implementing schemes such as development of New Fishing Harbours, Fish Landing Centres, Fish Processing Parks in Coastal Towns, improving Inland fisheries, motivating marketing of fish and modernizing market besides implementing fishermen welfare schemes.”

**Speech by Hon'ble Chief Minister
Selvi J Jayalalithaa**

“This Government, following the foot prints of Hon'ble Amma, continues to implement several welfare schemes to improve the living standard of Fishers.”

**Honourable Chief Minister
Thiru Edappadi K. Palaniswami**

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FISHERIES DEPARTMENT

POLICY NOTE

2018–19

1. INTRODUCTION

The Government of Tamil Nadu has pioneered the implementation of innovative developmental schemes in Fisheries sector. Tamil Nadu is enriched with Marine, Brackishwater and Inland fishery resources amenable for capture and culture fisheries. Substantial focus is being given on the economic and social dimensions of fishery resources by the Government of Tamil Nadu. The Indian Fisheries Act, 1897 enacted by the then Madras Presidency paved the way for the formulation of fisheries legislations across India. The Fisheries sector plays an important role in the socio-economic development of the country by providing livelihood to large number of fishers,

generating employment opportunities in allied sectors and ensuring nutritional security. The Government of Tamil Nadu reiterates its commitment to fulfil the vision of the late Chief Minister Dr. J Jayalalithaa with the objectives of ensuring security and welfare of fishermen of the State. The Government of Tamil Nadu is committed to protect the traditional fishing rights of our fishermen. Even though the Sri Lankan Navy continues to infringe upon the traditional rights of our fishermen in the Palk Bay area, the Government is taking earnest steps to ensure that our fishermen earn their livelihood peacefully.

The total fish production of the country in 2016-17 was 11.41 million metric tonnes. India is the second largest producer of fish in the world and occupies the second position in inland fish production. The fisheries sector contributes

1% of the GDP of the country. The total fish production of Tamil Nadu is estimated as 7.12 lakh tonnes during 2017-18. Tamil Nadu ranks 4th in total fish production of the country. Tamil Nadu exported 88,257 MT of marine products and earned a foreign exchange of Rs.4,341.78 crore during 2016-17.

The per capita consumption of fish in Tamil Nadu is 9.83 Kg as against the recommended requirement of 11.60 kg. With the increase in demand for fish, there is a need for augmenting the overall fish production of the State substantially from all the available fishery resources. The marine fishery resources of the State has almost been exploited whereas the inland resources are underutilized. However, aquaculture is emerging as a prominent activity for enhancing fish production and income generation in rural areas. Integration of fish culture with agriculture has proved to be an

option for augmenting the unit productivity from aquaculture systems. The Government is determined to enhance the inland fish production three-fold in the coming years.

2. FISHERIES POLICIES AND ITS PERSPECTIVES

The Fisheries policy perspective and objectives of Government of Tamil Nadu are to augment the fish production, enhance the income of the fishers/fish farmers and ensuring security and safety of fishermen.

2.1 Vision of Department

“Ensuring Safety, Security and Wellbeing of the Fishermen of Tamil Nadu by providing avenues for safe fishing, sustainable exploitation, utilization and management of fishery resources”.

2.2 Mission

- To provide fishermen, a safe and secured environment with enhanced livelihood opportunities
- To ensure social security and quality life for fishermen through multifarious developmental and welfare schemes
- To safeguard the traditional fishing rights of fishermen
- To create fisheries infrastructure facilities on par with international standards
- To provide facilities for quality enhancement of fish and fishery products which in turn will result in value addition
- Capacity building and Skill upgradation of fishers on post-harvest management
- Diversification of fishing efforts into deep sea
- To ensure the supply of quality and hygienic fish and fishery products to the common public at an affordable price

- Implementation of conservation measures for sustainable fisheries

2.3 Major Policies

The major policies of the Government is oriented towards achieving the following out comes :

1. Protection of traditional rights and welfare Fishermen of Tamil Nadu
2. Enhancing the productivity and production of fish from the Inland, Brackish and Marine Water resources
3. Capacity building and skill upgradation, technological intervention, Human Resource Development, Research & Development
4. Creation and Upgradation of infrastructure facilities such as Fishing Harbours (FH)/Fish Landing Centres (FLCs), cold chain, connectivity, forward and backward linkages
5. Bridging the gap between the demand and supply of fish for domestic consumption

6. Harnessing the opportunity of expanding export market for high value fish and fishery products
7. Generating additional rural employment opportunities through fish culture
8. Fisheries resource conservation, stock enhancement and management through enforcement of relevant Acts, Rules and Regulations
9. Re-assessment of the fishery resources and their potential in the State of Tamil Nadu

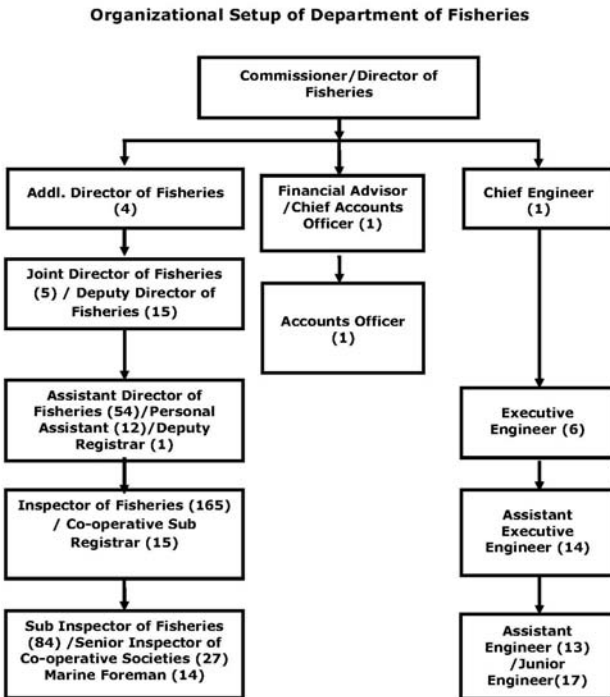
3. ADMINISTRATIVE SET UP

The Department is headed by the Commissioner/Director of Fisheries. The Commissioner/Director of Fisheries is also the Managing Director of Tamil Nadu Fisheries Development Corporation Limited (TNFDC Ltd.), the Functional Registrar of all Fishermen Cooperative Societies including Tamil Nadu State

Apex Fisheries Co-operative Federation Ltd., (TAFCOFED) and the Member Secretary of Tamil Nadu Fishermen Welfare Board (TNFWB).

The organisational setup of the Department is as given in Fig.1:

Figure:1



The total staff strength of Fisheries Department is 1,684 and the category-wise details are given below:

Table:1
Category wise staff strength

Sl.No.	Name of the post.	No.of Posts
1.	Additional Director of Fisheries	04
2.	Joint Director of Fisheries	05
3.	Deputy Director of Fisheries	13
4.	Financial Advisor & Chief Accounts Officer	01
5.	Deputy Director (Personnel)	01
6.	Deputy Director (Engg.)	01
7.	Asst. Director of Fisheries	54
8.	Personal Assistant	12
9.	Deputy Registrar	01
10.	Accounts Officer	01
11.	Inspector of Fisheries	165
12.	Cooperative Sub-Registrar	15
13.	Marine foreman	14
14.	Sub-Inspector of Fisheries	84
15.	Senior Inspector of Cooperative Societies	27
16.	Fishery Assistant	168
17.	Ministerial & Field Staffs	1018
	Total	1,584
Engineering Wing		
1.	Chief Engineer	01
2.	Executive Engineer	06

3.	Assistant Executive Engineer	14
4.	Assistant Engineer	13
5.	Junior Engineer	17
6.	Senior Draughting Officer	01
7.	Draughting Officer	08
8.	Junior Draughting Officer	04
9.	Divisional Accountant	04
10.	Technical Assistant	23
11.	Ministerial and supporting staff	09
	Total	100

4. FISHERIES SECTOR IN TAMIL NADU An overview

The maritime state of Tamil Nadu is blessed with 1,076 km long coast line and 41,412 km² continental shelf area with an Exclusive Economic Zone (EEZ) of 1.9 lakh sq. km, contributing 4.97 lakh tons of marine fish production. This supports the livelihood of 10.07 lakh marine fishers through 5,893 mechanised and 38,779 traditional fishing crafts which are actively engaged in fishing. Tamil Nadu possess 3.83 lakh ha. of effective inland water resources comprising reservoirs, major irrigation tanks,

minor irrigation tanks, short seasonal tanks, ponds, rivers, backwaters and derelict water bodies. The inland fisher population is 2.30 lakh (2017-18). An estimated brackishwater area of 56,000 ha. is under capture fisheries and an area of 6115.68 ha. is under coastal aquaculture production, mainly shrimp aquaculture.

4.1 Marine Fisheries

Tamil Nadu has the second longest coastline in the country with a coastal length of 1,076 km spread across 13 coastal districts. An overview of the Marine Fisheries sector is given below:

Table: 2
Marine Fisheries Statistics- 2017-18

Coastal length	1,076 km
Exclusive Economic Zone (EEZ)	1.9 lakh sq. km
Continental Shelf	41,412 sq. km
Coastal Districts	13
Fishing Villages	608
Marine Fishermen Population	10.07 lakh *

Fishing Crafts Registered (online): as on 20.05.2018	
1.Mechanised Fishing boats	5,893
2.Traditional Crafts (motorised and non- motorised)	38,779 (32,879+ 5,900)
Infrastructure Facilities	
Major Fishing Harbours	6(Chennai, Thoothukudi, Nagapattinam, Chinnamuttom, Colachel and Muttom (PPP))
Major Fishing Harbours - under construction	3 (Thengapattinam Poompuhar and Mookaiyur)
Medium Fishing Harbours	3 (Pazhayar, Mallipatnam and Cuddalore)
Fish landing centres / Jetties	36
Fish Landing Points	254
Marine Fish Production 2017- 18 (Provisional)	4.97 lakh tons*
Marine Products Export(2017-18)	Quantity:88257 MT** value :Rs.4341.78 crore

Source: *Fisheries Statistics of Tamil Nadu,
Fisheries Department

**Marine Products Export Development Authority (MPEDA)

4.2 Inland Fisheries

The Inland fishery resource of Tamil Nadu comprises of fish grown in major reservoirs, small lakes, big/small irrigation tanks and rural

fishery demonstration tanks. The overview of Inland Fisheries sector of the State is provided below:

Table: 3
Inland Fisheries Statistics- 2017-18

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	2.30 lakh
Inland Fisheries Infrastructure	
Fish Seed production centres	
i) Government Fish farm	11
ii) Private Fish farm	49
Fish seed rearing centres	
i) Government Fish farm	42
ii) Private Fish farm	180
iii) Fish Seed Rearing cages (Government)	3
Inland Fish Production 2017-18 (provisional)	2.15 lakh tons.

The Government with funding support from Blue Revolution, National Agriculture Development Programme (NADP), National

Fisheries Development Board (NFDB), Special Area Development Programme (SADP), National Bank for Agriculture and Rural Development (NABARD) etc., have upgraded the Government fish farm facilities and encouraged the private farmers to create fish seed production and rearing centres through various initiatives.

The Government has focussed its attention on development of inland fisheries resources and set a goal to enhance the inland fish production three fold from the present level of production at the end of this plan period under Blue Revolution schemes.

4.3 Aquaculture & Brackishwater Fisheries

In Tamil Nadu, an estimated brackish-water area of 56,000 ha. is under capture fisheries and an area of 6115.68 ha. 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, 1,859 shrimp farms (3,712.02 ha.) and 63 shrimp hatcheries have been registered under the Coastal Aquaculture Authority (CAA). In order to utilise the untapped coastal fallow lands, the Government has intended to conduct a survey to identify the land suitable for aquaculture and also to develop aquaculture parks.

Table: 4
District wise CAA Registered Shrimp farms and Hatcheries

Sl. No	District	Registered farms		Shrimp hatcheries
		Nos	Water spread area (Ha.)	Numbers
1	Thiruvallur	97	217.96	-
2	Kancheepuram	73	94.97	24
3	Villupuram	79	108.10	33

4	Cuddalore	130	227.94	1
5	Nagapattinam	824	1,541.84	4
6	Tiruvarur	154	394.45	-
7	Thanjavur	300	615.26	-
8	Pudukottai	57	121.15	-
9	Ramanathapuram	123	298.65	1
10	Thoothukudi	21	91.20	-
11	Kanniyakumari	1	0.5	-
	Total	1,859	3,712.02	63

5. MAJOR ACTIVITIES OF THE DEPARTMENT

The following are the major activities implemented by the Fisheries Department:

1. Fishermen Welfare Activities
2. Regulation and Enforcement of Acts and Rules
3. Conservation and management of fishery resources
4. Marketing of fish and fishery products
5. Rescue and Rehabilitation measures
6. Sea safety measures

7. Protection of traditional fishing rights of fishermen
8. Development of Inland Fisheries and Aquaculture
9. Development of infrastructural facilities
10. Skill development & capacity building of fishers
11. Outreach and extension activities
12. Management of Fisheries Co-operatives etc.,

5.1 FISHERMEN WELFARE SCHEMES

The Government guided by the principles of the Hon'ble Puratchi Thalaivi Amma always accord highest priority to improve the living standard 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 in a transparent manner, the Government is

crediting the financial assistance being extended under various welfare schemes directly to the bank account of individual beneficiaries through National Electronic Fund Transfer (NEFT). The State Government released a total sum of Rs.271.16 crore under various marine Fishers welfare schemes during 2017-18.

I STATE SCHEMES

5.1.1 Financial assistance of Rs.5000/- to Marine Fishermen Families during Fishing ban period

In order to conserve the marine fishery resources, seasonal fishing ban is imposed every year since 2001. The fishing ban period has been increased from 45 days to 61 days from 2017 (i.e. from April 15th to June 14th in East Coast region and June 1st to July 31st 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.

The Government is implementing a scheme for providing financial assistance of Rs.5,000/- to each marine fishermen family in coastal districts to mitigate their sufferings during fishing ban period.

During the year 2017-18, a sum of Rs.79.75 crore was credited directly into the bank accounts of 1,59,506 fishermen families through National Electronic Fund Transfer (NEFT) in 13 coastal districts.

This scheme will be continued in the year 2018-19 also.

5.1.2 Special Allowance of Rs.5000/- to Marine Fishermen Families during Lean Fishing Season

The Government is implementing a scheme for providing Special Allowance of Rs.5,000/- to each of the marine fishermen

families in coastal districts to mitigate their sufferings in the lean fishing months especially during North-East monsoon period.

For the year 2017-18, the Government sanctioned an amount of Rs.82.50 crore towards disbursement of special allowance to marine fishermen families. So far, Rs.69.52 crore has been credited directly into the bank accounts of 1,39,045 marine fishermen families of 11 coastal districts through National Electronic Fund Transfer (NEFT).

This scheme will be continued in the year 2018-19 also.

5.1.3 Savings-cum-Relief Scheme for Marine Fisherwomen

This scheme is being implemented as a State scheme for Marine Fisherwomen following the pattern of the Centrally Sponsored scheme for marine fishermen.

In accordance with the announcement made during the Budget Speech 2017-18, the Government issued an order for the enhancement of relief under Tamil Nadu Saving-cum-Relief Scheme for fisherwomen from Rs.2,700/- to Rs.4,500/- by suitably increasing the State's contribution.

For the year 2017-18, the Government sanctioned an amount of Rs.59.65 crore for disbursement to 1,98,833 fisherwomen, out of which relief amount of Rs.59.63 crore was disbursed to 1,98,783 fisherwomen.

This scheme will be continued in the year 2018-19 also.

5.1.4 Tax Exemption on Sale of High Speed Diesel to Fishermen

The Government of Tamil Nadu provides Tax exempted High Speed Diesel for mechanised fishing boats (18,000 litres per craft per year)

and motorised country crafts (4,000 litres per craft per year) registered in the Fisheries Department.

5.1.5 Subsidised and Tax Exempted Industrial Kerosene to the Traditional Crafts

The Government provides Tax exempted industrial kerosene at a subsidised rate of Rs.25/- per litre (3,400 litres per craft per year) to the fishermen of Thoothukudi, Tirunelveli and Kanniyakumari districts who own motorised traditional crafts fitted with kerosene driven motors.

5.1.6 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.250/- to the family of the

apprehended fisherman. The scheme is being implemented through the District Collectors for providing immediate relief. For the year 2017-18, a sum of Rs.22.91 lakh has been released as relief to the 208 fishermen families.

This Scheme will be continued during 2018-19 as well.

5.1.7 Daily Relief to the Families of Missing Fishermen

The State Government is providing the daily allowance of Rs.250- (i.e. Rs.7,500/- per month) to the families of fishermen who went missing while fishing at sea. For the year 2017-18, a sum of Rs.25.08 lakh has been released as relief to the 128 fishermen families.

This Scheme will be continued during 2018-19 as well.

5.1.8 Relief to the families of deceased / injured fishermen due to shooting incidents 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 such an eventuality. 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 fisherman sustains major and minor injuries, an ex-gratia amount of Rs.50,000/- and Rs.20,000/-, respectively is provided.

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

A Corpus fund of Rs.25 lakh has been created in Tamil Nadu Fishermen Welfare Board to meet the full expenses of the higher studies of the children of the families of missing / deceased fishermen due to shooting incidents as the financial relief assistance provided to the affected families is insufficient for meeting their day-to-day expenses and in most of the cases, the families experience much hardship for providing/ continuing their children's education as they are financially not sound.

The Scheme will be continued during 2018-19 as well.

5.1.10 Providing 50% Subsidy for Fishermen to Procure New Tuna Long liner-cum-Gill Netters

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, the Hon'ble Puratchi Thalaivi Amma announced a pioneering scheme of 'Providing 50% subsidy for fishermen to procure New Tuna Long Liner-cum-Gill Netter' boats for the first time in the Country in the year 2014-15. Under this scheme 50% of the estimated unit cost of Rs.60 lakh up to a maximum of Rs.30 lakh / unit is provided as subsidy for construction of new Tuna Long liner cum-Gill Netter boats.

Under this scheme, work orders have been issued for construction of 171 Tuna long liner boats. An amount of Rs.10.07 crore has been released as subsidy to 47 boats for different stages of construction.

II CENTRALLY SPONSORED SCHEMES

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

In accordance with the announcement made during the Budget Speech 2017-18, the Government issued orders for the enhancement of relief under National Savings-cum-Relief Scheme for marine fishermen from Rs.2,700/- to Rs.4,500/- by suitably increasing the State contribution under this scheme.

For the year 2017-18, the Government sanctioned an amount of Rs.62.43 crore for disbursement to 2,08,115 fishermen, out of which relief amount of Rs.62.26 crore was disbursed to 2,07,534 fishermen.

This scheme will be continued during the year 2018-19 also.

5.1.12 Group Accident Insurance Scheme for Fisherfolk

This is a Centrally Sponsored Scheme. The Government of India under Prathan Mantri

Suraksha Beema Yojana (PMSBY) is providing insurance coverage for accidental death, missing, permanent / partial disability of fishers and is being implemented through FISHCOFED. The premium amount of Rs.12 is equally shared between centre and state and no premium amount is collected from the fishers. Insurance premium is equally shared by both State and Central Governments. In the event of accidental death, missing and permanent disability, relief assistance of Rs.2,00,000/- will be given. In the event of partial disability, relief assistance of Rs.1,00,000/- with a cover of Rs.10,000/- towards hospitalisation expenses will be paid. During the year 2017-18, a total sum of Rs.2.50 crore has been disbursed as insurance relief for 136 claims.

A sum of Rs.33.45 lakh has been paid to FISHCOPFED (National Federation of Fishermen's Co-operatives Ltd), New Delhi as State share towards additional insurance premium

covering 5,57,483 active marine and inland fishers and fishers enrolled in Tamil Nadu Fishermen Welfare Board (TNFWB) as fishers in allied activity for the extended coverage period upto 31.05.2019.

This is an Ongoing scheme under CSS

5.1.13 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 under the Blue Revolution scheme.

This is an ongoing scheme under CSS.

5.1.14 Subsidy assistance for Diversification of Trawl fishing in Palk Bay districts to deep sea fishing

Fishing by bottom trawlers in the Palk Bay has been receiving high level of attention as

Tamil Nadu fishermen are often arrested while fishing in their traditional waters by Sri Lankan Navy. The prolonged incarceration of our fishermen and their fishing boats by the Sri Lankan Government is causing a sense of anxiety and insecurity among the fishermen community of Tamil Nadu as whole. To overcome this issue, it has been decided to extend 70% assistance to the fishermen for Diversification of trawl fishing boats from Palk Bay into Deep Sea fishing boats.

The unit cost of Rs.80 lakh per boat is proposed to be implemented with subsidy assistance of 50% from Government of India, 20% from Government of Tamil Nadu, 10% beneficiary contribution and the balance 20% shall be met out from Institutional financing.

The Government has accorded financial sanction for Rs.286 crore (Rs.200 crore by

Government of India and Rs.86 crore by State Government) for the diversification of 500 boats in the first phase. The Prime Minister of India has launched the scheme on 27.07.2017 at Rameswaram. 18 Boat building yards and 8 components suppliers have been empanelled for the construction of Deep Sea Fishing Boats under this scheme.

Work order have been issued to 360 fishermen and tripartite agreements were signed by 45 beneficiaries. Construction work for 16 boats has been taken up by the "M/s.Cochin Shipyard Ltd, Kochi", for 10 boats by "M/s.Uma Ship Builder and Repairs", Nagapattinam and for 7 boats by "M/s.Master Shipyard Private Ltd", Kochi and 12 boats by "M/s.Lockheed Engineering Works", Kanchipuram.

5.2 REGULATION AND ENFORCEMENT

5.2.1 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 5,893 mechanised fishing boats, 32,879 motorised and 5,900 non-motorised traditional crafts have been registered online (as on 20.05.2018).

5.2.2 Issuance of Biometric Identity Cards to 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 26.11.2008 Mumbai terrorist attack. A sum of Rs.1.16 crore was allocated for this purpose to Tamil Nadu.

Under this scheme, 1,86,512 Biometric ID cards have been distributed to the marine fishermen.

5.2.3 Issuance of Biometric Identity Cards to marine fisherwomen

The Government has accorded sanction to issue biometric identity cards to marine fisherwomen as well. Under this scheme, 1,62,262 cards have been distributed to the marine fisherwomen.

5.3 CONSERVATION AND MANAGEMENT OF FISHERY RESOURCES

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

5.3.1 Uniform Fishing Ban

In order to conserve the marine fishery resources, seasonal fishing ban is imposed every year since 2001. The fishing ban period has been increased from 45 days to 61 days from 2017 (i.e. from April 15th to June 14th in East Coast region and June 1st to July 31st in the West Coast region).

5.4 MARKETING OF FISH AND FISHERY PRODUCTS

5.4.1 Promotion of Domestic Fish Marketing

The Tamil Nadu Fisheries Development Corporation (TNFDC) and Tamil Nadu State Apex Fisheries Cooperative Federation Ltd. (TAFCOFED) are actively engaged in domestic marketing of quality fish at an affordable price to the consumers. Chain of fish retail outlets including mobile units are being operated by both TNFDC and TAFCOFED. A whole sale fish

market at Ukkadam, Coimbatore has been modernized and operated by the TNFDC to promote domestic fish marketing. TNFDC has launched online fish marketing in Chennai city on a pilot scale during 2017-18. Such initiatives will be continued during the current year.

5.4.2 Modernization of Fish Markets

Fish markets are being established /renovated in 19 places with the assistance from National Fisheries Development Board (NFDB) and State Government, with modern hygienic facilities for supplying hygienic good quality fish to the consumers and to ensure fair and remunerative price to the fishers for their produce.

The subsidy towards the 1st and 2nd installment released by the NFDB and the Government amounting to Rs.294.75 lakh and Rs.326.24 lakh respectively has been released to

the Civic Bodies / Municipal Corporations and the work is in progress.

5.5 RESCUE AND REHABILITATION MEASURES

5.5.1 OCKHI Cyclone - Government initiatives to mitigate the Impact

The severe cyclonic storm "OCKHI" which hit the Kanniyakumari coast on 30.11.2017 caused severe damages to the deep sea fishing boats that ventured for multiday fishing from Kanniyakumari district. In this cyclone many fishermen went missing along with their boats and could not be traced.

Due to the strenuous efforts taken by the Hon'ble Chief Minister of Tamil Nadu, 3506 fishermen, 24 Country crafts and 264 Mechanised fishing boats were rescued and guided to reach the shore safely. The Hon'ble Chief Minister of Tamil Nadu visited Kanniyakumari District on 12th December 2017

and consoled the grieving fishermen community and ordered to provide numerous relief assistance to the affected fishermen families. Considering the pathetic plight of the fishermen affected by the "OCKHI" cyclone and in accordance with the orders of the Hon'ble Chief Minister of Tamil Nadu, the Government of Tamil Nadu implemented various relief and rehabilitation measures. The Government has sanctioned an amount of Rs.68.12 crore towards relief assistance under various relief packages. A sum of Rs.5.40 crore was given to 27 families of fishermen who died in Ockhi cyclone.

Based on the recommendations of the high level committee constituted under the Chairmanship of Principal Secretary/ Commissioner of Revenue Administration, the respective District Collectors have notified 139 fishermen from Kanniyakumari District, 3 fishermen from Thoothukudi District,

15 fishermen from Nagapattinam District, 19 fishermen from Cuddalore District and 1 fisherman from Pudukottai District who went missing in the Ockhi Cyclone as construed to be dead to provide ex-gratia relief assistance of Rs.20 lakh each. In accordance with the recommendations of the District Collectors, the Government has sanctioned a sum of Rs.35.40 crore as ex-gratia relief assistance to the legal heirs of the 177 missing fishermen and distributed by the Hon'ble Chief Minister of Tamil Nadu on 14.03.2018.

The relief was provided in the form of cheque for Rs.10 lakh each and fixed deposit Rs.10 lakh each which can be en-cashed after a period of 6 months from the date of disbursement. The fishermen whose boats are damaged by the OCKHI cyclone are given away the relief assistance of Rs.8.44 crore.

5.5.2 Relief Assistance to Fishermen Affected due to Oil Spill in the Coastal Areas of Thiruvallur, Chennai and Kancheepuram Districts

Two Merchant ships met with a collision off Kamarajar Port, Ennore on 28.01.2017. Due to this accident, the oil spilled out from ships and spread along the coast of Thiruvallur, Chennai and Kancheepuram districts. The fishermen of these three districts were subjected to hardship due to loss of their livelihood. Further, the non-acceptance and reduction in the price of fishes caught by the fishermen affected the fishers and those engaged in the fishing allied sector.

The Hon'ble Chief Minister of Tamil Nadu met the Hon'ble Minister for Shipping in person at New Delhi on 28.02.2017 and requested to release the relief immediately to redress the plight of fishermen affected due to oil spill. Considering the plight of the affected fishermen

of Thiruvallur, Chennai and Kancheepuram districts, the Government has sanctioned an interim relief assistance of Rs.15 crore to 30,000 fishermen families at the rate of Rs. 5,000/- per family. The Hon'ble Chief Minister of Tamil Nadu distributed the interim relief assistance to the beneficiaries on 06.03.2017.

Further, the Government has sanctioned Rs.75 lakh for construction of 2 fish markets in Chennai and Thiruvallur districts from the Corporate Social Responsibility (CSR) fund of oil polluter companies.

The Government requested the Insurance companies to provide the relief amount for compensating the affected fishers. The sum of Rs.131 crore received from the shipping companies is being disbursed to the affected fishermen of Thiruvallur, Chennai and Kanchipuram districts.

5.6 MEASURES FOR SEA SAFETY OF FISHERMEN

Distress Alert Transmitters (DATs) were provided to 1,600 mechanised fishing boats in the 1st Phase under CSS Scheme and the remaining fishermen will be covered in due course.

The Government of India, through ISRO (Indian Space Research Organisation) have developed Transponders as a means of communication and tracking system for deep sea going fishermen. 26 mechanised fishing boats of Tamil Nadu from Kanniyakumari district and Chennai have been fitted with the prototype transponders for conducting trials. This is a satellite based system which will help monitoring of the fishing vessels and to render assistance at the time of distress in deep sea up to 200 Nautical Miles.

Under World Bank funded Coastal Disaster Risk Reduction Project (**CDRRP**), the Government has established a seamless networking communication system along the coast of Tamil Nadu for the safety of fishermen at sea at a cost of Rs.62.14 crore.

In order to disseminate information about weather warnings, distress calls, and potential fishing zones, Wireless communication equipment (VHF Sets) are being provided to the fishermen of 15004 motorised fishing boats and 2535 mechanised fishing boats. For effective communication to a long distance and to have a continuous networking coverage along the entire coast, new VHF towers at 7 places are being constructed and the existing 7 BSNL towers and one Police Department's tower are to be utilised. Control Rooms at 18 places is to be operated soon and a Central Control Room at

the Directorate of Fisheries have been established for round the clock monitoring.

5.7 PROTECTION OF TRADITIONAL FISHING RIGHTS OF TAMIL NADU FISHERMEN.

5.7.1 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 the 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 Hon’ble Puratchi Thalaivi Amma, 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 unanimously passed another resolution in the Tamil Nadu Legislative Assembly on 03.05.2013, urging the Government of India to retrieve Katchatheevu. The Government unanimously passed another resolution in the Tamil Nadu Legislative Assembly on 05.12.2014, urging the Government of India to retrieve Katchatheevu to restore the traditional fishing rights of the fishermen of Tamil Nadu.

5.7.2 Efforts taken by Government to Release of Tamil Nadu Fishermen and their fishing boats and to prevent Harassment by Sri Lankan Navy

The Government of Tamil Nadu have 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 fish in the traditional waters of Palk Bay are continuously infringed upon by Sri Lankan Navy's recurrent and 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 then Hon'ble Chief Minister of Tamil Nadu has written many letters to the Hon'ble Prime Minister of India bringing the above incidents to his notice for remedial action through diplomatic channels.

The Hon'ble Chief Minister of Tamil Nadu has constantly demanded 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.

All the fishermen of Tamil Nadu apprehended by Sri Lankan Navy during 2017-2018 were released and repatriated.

Efforts are also being taken to release 168 fishing boats detained by the Sri Lankan Government (up to 20.05.2018).

5.7.3 Fishermen level talks

It was agreed to in principle in the Inter-Ministerial Meetings and 4th Joint Working Group Meeting held in January 2012 that the discussions between the fishermen of India and Sri Lanka on solving the disputes in fishing in

the Palk Bay region should be encouraged and that the decisions arrived at there by mutual consensus should be placed before the JWG for further action. In view of the sentiments and desire of the fishermen community of Tamil Nadu to hold talks with the fishermen of Sri Lanka to sort out the day-to-day issues faced by them while fishing in the Palk Bay and in the interest of keeping a channel of communication open between the fishermen communities of both countries. The Government of Tamil Nadu so far facilitated four rounds of Fishermen level talks.

5.7.4 India-Sri Lanka Joint Working Group on Fisheries

So far 3 rounds of India and Sri Lanka Joint Working Group meeting have been conducted. During this meeting the issue of release and repatriation of Tamil Nadu fishermen and their fishing boats and fishing implements

apprehended by Sri Lankan Navy were reiterated.

5.8 DEVELOPMENT OF FISHERIES INFRASTRUCTURE

The Government has been taking earnest steps for establishing shore infrastructural facilities with funding support from various sources. Facilities for hygienic handling of fishes onshore to ensure the better quality fish to consumer. This will in turn result in enhanced export values and better realization for the fishermen. The details of the infrastructure facilities are given below.

5.8.1 Dredging of Fishing Harbours, Fish Landing Centres and Bar mouths

The Hon'ble Chief Minister under Rule 110, announced that the bar mouths at 6 places in Tamil Nadu will be dredged for smooth navigation of fishing vessels. In accordance with the announcement made, the Government

accorded administrative sanction for Rs.17.80 crore towards dredging of fishing harbour basins at Nagapattinam, Pazhayar, fish landing centre basins at Thirumullaivasal, Nagoor, bar mouth of Vettar river in Nagapattinam district, fishing harbour basin at Cuddalore and bar mouth of Vellar River in Cuddalore district. The dredging works are in progress.

5.8.2 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 for conducting the model studies for the permanent stability of bar mouth with training wall at Pulicat lake in Tiruvallur district. The Indian Institute of Technology (IIT), Madras has prepared the Detailed Project Report. The Environment

Impact Assessment (EIA) report is being prepared by the consultant appointed for this purpose.

5.8.3 Establishment of Aquarium-cum-Aquatic Virtual Reality Centre at Eco-Park, Chetpet, Chennai

The Sports Fishing-cum-Eco-Park at Chetpet lake, Chennai was inaugurated by the Hon'ble Chief Minister of Tamil Nadu on 27.2.2016. The facilities like boating jetty, angling spots, Multi Level Car Parking (MLCP), park, recreation centre, food court, walking and jogging tracks, children play area, sewage treatment plant, etc., have been created in this Eco-park at a total cost of Rs.42 crore.

In order to provide additional attraction to this unique facility, the Hon'ble Chief Minister announced under Rule 110 that an Aquarium-cum-Aquatic Virtual Reality Centre will be

established at this Eco-Park. This unique facility is to be created at an estimated cost of Rs.600 lakh by sharing 50:50 basis between Tamil Nadu Fisheries Development Corporation and the Government of Tamil Nadu. The Government has released a sum of Rs.300 lakh as state share during the year 2016-17. The construction work of Aquarium-cum-Aquatic Virtual Reality Centre is under progress and will be completed this year.

5.8.4 Fishing Harbour at Thengapattinam (Equally shared between Centre and State)

The construction of Fishing Harbour at Thengapattinam in Kanniyakumari district at a cost of Rs.97.40 crore under Centrally Sponsored Scheme (50:50) is nearing completion. Establishment of landside facilities to berth 750 mechanised fishing vessels,

300 FRP boats and 400 country crafts is under progress.

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 for protecting the shore of eastern coastal villages of Thengapattinam fishing harbour. The entire shore protection works have been completed.

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

A Fishing Harbour at Poompuhar in Nagapattinam district is being constructed at a cost of Rs.148.00 crore under Centrally Sponsored Scheme. The construction of Southern Main Breakwater up to 1100m and Northern Leeward Breakwater up to 390m and Diaphragm wall is in progress. The construction

of this harbour will be completed during this year.

5.8.6 Construction of Fishing Harbour at Mookaiyur, Ramanathapuram District (sharing on 50:50 basis between Centre and State)

As a sequel to the efforts of Hon'ble Chief Minister of Tamil Nadu, The Government of India accorded the administrative approval for the reconstruction of Fishing Harbour at Mookaiyur in Ramanathapuram District at an estimated cost of Rs.113.90 crore equally shared between Centre and State. The development of this harbour is aimed at decongesting the fishing boats in the Palk Bay.

This harbour will be established with the infrastructure facilities such as breakwater, wharf, fish auction hall, protection wall, drying platform and net mending centre and other infrastructure facilities. The construction work is

under progress and will be completed during this year.

5.8.7 CSS - Blue Revolution: Integrated Development and Management of Fisheries (2017-18)

Under CSS scheme on Blue Revolution an amount of Rs.125 lakh was sanctioned.

The Union Ministry has launched 'Mission Fingerling', a programme to enable holistic development and management of fisheries sector in India and accorded administrative sanction for an amount of Rs.125 lakh for the year 2017-18 for establishing Freshwater Fish Seed Hatchery for development of Inland Fisheries and Aquaculture in Tamil Nadu.

For the development of Brackishwater Aquaculture in Tamil Nadu, the Government of India accorded administrative approval to renovate 60 ha of existing shrimp/fish farms and

to provide input subsidy at a total project cost of Rs.390 lakh with the central share of Rs.93.60 lakh during 2017-18. Under this scheme eligible beneficiaries have been identified.

5.9. SPECIAL PROJECTS

5.9.1 Development of 11 Fish landing centres and Stabilisation of Groynes (NABARD)

As announced by the Hon'ble Minister for Fisheries on the floor of Legislative Assembly on 11.07.2017, the Government has accorded administrative sanction for the Construction of Fish Landing Centre at Kunthukal in Ramanathapuram District at a cost of Rs. 70 crore (NABARD assistance – Rs.45 crore & central assistance - Rs. 25 crore). Tender process has been initiated.

Consequent to the announcement of Hon'ble Minister for Fisheries, the Government

accorded administrative sanction of Rs.29.50 crore for the construction of Fish Landing Centres at Vembar in Thoothukudi District, Kodiakarai, Chinnangudi, Kameshawaram, Pushpavanam in Nagapattinam District, Thazhankuda in Cuddalore District, Sulerikattukuppam in Kancheepuram District, kattumavadi and Ponnagaram in Pudukottai District with financial assistance of NABARD under RIDF XXIII. Tenders finalised and work orders issued for the 9 Fish Landing Centres.

Further, the Government accorded Administrative Sanction for the construction of a Fish Landing Centre at Kurumbanai at a cost of Rs.11 crore and Rs.4 crore for Stabilisation of Groynes at Kadiyapattinam in Kanniyakumari District. Tender process has been initiated for all these works.

5.9.2 Pilot Project for geo-synthetic tubes for coastal protection (NABARD)

NIOT has developed a technique to protect the coast from sea erosion by establishing submerged dykes made up of sand filled geo-synthetic tubes. The technique successfully adopted by NIOT will be taken up at a cost of Rs.20 crore with NABARD funding assistance in critical locations affected by sea erosion.

5.9.3 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, the details of which are given in the Table 5.

Table:5
Details of Fund allocation under CDRRP Schemes

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

The ongoing ETRP infrastructure works have been completed. Under new works, FLC works at Punnakkayal have been completed and the work in Mallippattinam FH is in progress.

5.9.4 Construction of Fish Landing Centres under Tsunami Rehabilitation Programme

The Government has sanctioned a total sum 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. National Board for Wild Life has given clearance for both the projects of Annamalaichery and Periyamangodu. On receipt of the statutory clearances from the Forest Department the construction works will be started.

5.9.5 Construction of Fishing Harbour at Manakudy in Kanniyakumari District under Public – Private Partnership (PPP) mode

In principle, sanction has been accorded by this Government for construction of a fishing harbour at Manakudy in Kanniyakumari district

on Public Private Partnership (PPP) under Design, Build, Finance, Operate and Transfer (DBFOT) basis in coordination with the Tamil Nadu Infrastructure Development Board at an estimated cost of Rs.72.44 crore. On scrutiny of Request for Proposal (RFP) bid for the construction of Fishing Harbour, Letter of Award (LOA) has been issued to the qualified bidder and concessionaire agreement has been executed.

5.9.6 Fisheries Management for Sustainable Livelihood Project (FIMSUL-II)

Under the World Bank funded CDRRP - Fisheries Management for Sustainable Livelihood– II (FIMSUL-II) project, the following activities are being implemented for improving the socio-economic standards of fishers by way of

- Capacity building and Skill upgradation trainings, providing alternate livelihood

assistance for sea weed culture, marine cage culture and bivalve farming

- Providing VHF sets to the fishermen of traditional fishing crafts and mechanised fishing boats for communication during distress, ensuring their safety at sea while fishing.
- For better management of marine fisheries resources, Co-management Committees have been formed involving the fishers at Village level, District level and Regional level in all the 13 Coastal districts. The State Level Co-management Committee will be formed. Asset Management Committees have been formed in all important fishing harbour / fish landing centres involving local fishermen stakeholders who were provided training on hygienic maintenance of fishing harbour / fish landing centre premises. These committees are generating revenue for

better management of fishing harbour/fish landing centres and thereby promoting hygiene and ensuring the quality of fresh fish.

- A new library on green building concept has been established and an e-library is being developed.
- To support the livelihood of fisher widows in the coastal districts of Tamil Nadu, 12 modern fish kiosks were established in Kancheepuram, Villupuram, Cuddalore, Nagapattinam, Thanjavur, Pudukottai, Ramanathapuram, Thoothukudi, Tirunelveli and Kanniyakumari districts and operated by the fisher widows. They were imparted training in the preparation of value added fishery products.

5.9.7 Koodankulam Nuclear Power Project Neighbourhood Development Programme (CSR Fund)

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 such as Construction of Cold storage, Fish Landing Facilities and Modern Fish market at Uvari, Groynes at Koothankuzhi and Perumanal, net mending shed at Koottapanai for the benefit of fishermen. The work is in progress.

5.9.8 Construction of Fishing Harbour at Vellapallam in Nagapattinam District

To alleviate the difficulties being faced by the fishermen of Vellapallam Village of

Nagapattinam District, a fishing harbour with modern facilities will be established at an estimate cost of Rs.100 crore, based on the Techno Economic Feasibility and Detailed Project Report.

5.9.9 Construction of Fishing Harbour at Tharangampadi in Nagapattinam District

To fulfil the long felt need of fishermen, a fishing harbour at Tharangampadi in Nagapattinam District will be established at a cost of Rs.120 crore, based on the Techno Economic Feasibility and Detailed Project Report.

5.9.10 Construction of 3 Fish Landing Centres in Kanniyakumari District

Fish landing centres at three locations namely, Pozhikarai, Kesavaputhenthurai and Pallamthurai in kanniyakumari District at a total cost of Rs. 12 crore will be established to cater the needs of fishermen and improve their livelihood.

5.10. DEVELOPMENT OF INLAND FISHERIES

Aquaculture is one of the promising sectors to provide nutritional security to the ever growing population. The main objectives of Inland Fisheries and Aquaculture are to

- increase the inland fish production of the State,
- provide quality fish seed to fish farmers,
- generate rural self-employment opportunities, and
- provide protein rich food to the rural population.

The culture fisheries pertains to composite fish culture where freshwater fishes such as Indian Major Carps, Exotic Carps, Genetically Improved and Farmed Tilapia (GIFT) a strain of tilapia , Amur carp, Jayanthi rohu, Pangasius, etc., are being cultured in the pond system, which effectively utilises the various niches in

the water body. Monoculture of GIFT tilapia and Pangasius is taken up in pond systems and cage culture.

5.10.1 Strategies /Special initiatives in Inland fisheries

- Demonstration of cage farming in three reservoirs to increase fish production and fish seed rearing in floating cages.
- In order to increase the farming area, farmers were encouraged by providing subsidy for setting up of fish hatchery, fish culture in grow out ponds, renovation of existing fish ponds ,promoting fish culture in multipurpose farm ponds with short seasonal varieties of fishes.
- Propagation of hatchery production technology for fast growing fish species such as GIFT tilapia.
- Popularisation of scientific fish culture practices in irrigation systems by increasing

stocking density and judicious stock management so as to obtain increased production.

- Providing skill development training to fish farmers on different culture systems and technology and training to the officials of the Department on latest advancements in fish breeding, rearing and freshwater aquaculture.

Though Tamil Nadu has 3.83 lakh hectares of water spread area amenable for fisheries development, these water bodies mainly depend on the seasonal rains. Poor and erratic rain fall, reduced retention of water in the water bodies, mismatch between breeding season of fishes and water availability for quality fish seed production, non-availability of low cost and quality feed are the factors limiting the inland fish production in the State.

In order to overcome these limitations, the Fisheries Department has introduced a number of remedial measures outlined below:

- Promoting Eco-friendly and sustainable fish / shrimp aquaculture.
- Introduction of scientific modified extensive and semi-intensive fish culture in common utility water bodies adopting multiple stocking and multiple harvest methods, cage culture, etc.,
- Integrating fish culture in farm ponds / multipurpose farm ponds with agriculture to provide additional income to the farmers.
- Introduction of culture technology for fast growing fishes viz., Amur Carp, Jayanthi Rohu, Genetically Improved Farmed Tilapia (GIFT) and Pangasius, dissemination of knowledge for establishing hatcheries for these species and their propagation.

- Encouraging farmers by providing technical, financial and extension support for setting up, operation and management of infrastructure facilities for fish/prawn hatchery, fish culture in grow out ponds, feed mills and hygienic marketing.
- Creating job opportunities to rural women and youth by promoting fish seed rearing, culture of edible and ornamental fishes.

5.10.2 District Fish Farmers Development Agencies (DFFDAs)

In Tamil Nadu, the District Fish Farmers Development Agencies (DFFDA) created by merging Freshwater Fish Farmers Development Agency (FFDA) and Brackishwater Fish Farmers Development Agency (BFDA) have started functioning in 31 districts except Chennai, in order to popularise the fish culture activities and to generate employment opportunities in rural areas.

The main activities of DFFDA are providing technical guidance and encouraging farmers to take up fish culture by extending subsidy assistance, besides imparting technical training and providing extension support to fish farmers. These DFFDAs are functioning under the Chairmanship of the respective District Collectors.

In order to develop eco-friendly and sustainable brackishwater aquaculture, the DFFDAs functioning in the coastal districts of Tamil Nadu are developing and regulating brackishwater aquaculture by enforcing Coastal Aquaculture Authority (CAA) Act-2005 and following the best practices guidelines issued by the CAA. So far 1,859 shrimp farms have been registered with Coastal Aquaculture Authority (CAA).

5.10.3 Reservoir Fisheries

In Tamil Nadu there are 61 reservoirs comprising major, medium and small reservoirs in which the fisheries management is under the control of the Fisheries Department. 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) to augment the inland fishery wealth.

- The objective is to increase the fish production and revenue of the inland fishers who depend on these reservoirs for their livelihood and to increase the productivity by leasing out the fishery rights of all 53 reservoirs managed by the Fisheries Department.
- The Reservoirs under the control of Fisheries Department are leased out to public for

fisheries activities by tender- cum-auction method for 5 years. The Fishermen Co-operative Societies are exempted from submitting solvency certificate for participating in tender-cum- auction. These societies can also equally participate in the lease process. The lessees should employ the members of the fisheries co-operative societies for fishing.

- During 2017-18, 23 reservoirs were under lease and the lease revenue of Rs.3.81 crore was remitted into Government account. The remaining reservoirs will be leased out during 2018-19
- A major quantum of fish caught from the reservoirs is sold to the local public and retail vendors and the remaining fish is transported to the nearby fish markets for sales by the lessees.

- In order to optimise the fish production in 53 reservoirs that are directly managed by the Fisheries Department, leasing of fishery rights was introduced in all the reservoirs through 'Tender-cum-Auction method, as per G.O.Ms.No.165, Animal Husbandry, Dairying and Fisheries (FS3) Department, Dated 25.09.2012 from the year 2012.

5.10.4 Fish seed Production / Fish seed Rearing Centres

There are 10 Fish Seed Production Centres functioning under the control of Fisheries Department and one fish seed production centre under Tamil Nadu Fisheries Development Corporation Limited.

There are 37 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).

An additional area of 34.8 ha. both in Government and private sector have been developed / created with funding support from National Agriculture Development Programme (NADP), National Mission for Protein Supplement (NMPS), Irrigated Agriculture Modernisation and Water Bodies Restoration and Management (IAMWARM), National Bank for Agriculture and Rural Development (NABARD), etc.

5.11. SKILL DEVELOPMENT & CAPACITY BUILDING

5.11.1 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

student for undergoing 6 specific courses on Maritime Education notified by the Government.

This scheme will be continued during the year 2018-19 also.

5.11.2 Fisher Youth Certificate Course

In accordance with the announcement made by the Hon'ble Chief Minister of Tamil Nadu under rule 110, "Imparting special training to the fisher youth to assist them in joining Indian Navy and Indian Coast Guard as an Employment Opportunity", the Government has sanctioned an amount of Rs.1.04 crore.

The special coaching will be given for 300 fisher youths in 6 batches in one year in collaboration with Indian Coast Guard. Training has been imparted to 94 Fisher Youth from Cuddalore, Ramanathapuram and Kanniyakumari Region. Certificates for the trainees also have been issued.

5.11.3 All India Civil Service Special Coaching to Fisher Youth

The Government has issued orders to provide 6 months special coaching to 20 fisher youth every year to enable them to excel in competitive exams for joining in the Indian Civil Services. The training is being given by Anna Institute of Management (All India Civil Service Coaching Centre) which commenced on 18.12.2017. The training expenditure is met from the CSR fund of the TNFDC.

5.12 OUTREACH AND EXTENSION ACTIVITIES

The Fisheries Department is well equipped with an Extension & Training Wing to disseminate the welfare schemes of the Government effectively to the fishers, fish farmers and other stakeholders.

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

5.13 MANAGEMENT OF 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 7.17 lakh fishermen / fisherwomen have been enrolled as members of 1,431 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.

Organizational Pyramid:

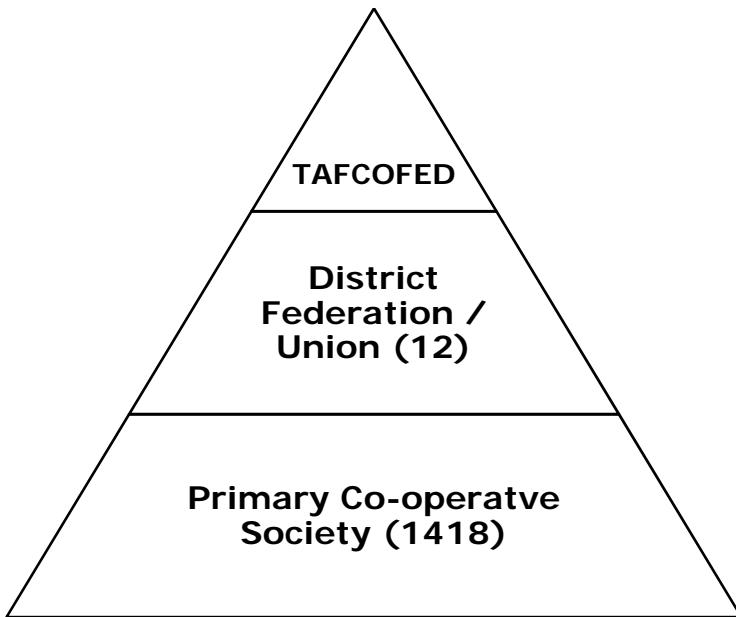


Table: 6
Members of Fisheries Co-operative Societies

Society	No. of Societies	Members enrolled
Primary Co-operative Societies		
Marine Fishermen Co-operative Societies	558	3,56,992
Marine Fisherwomen Co-operative Societies	461	2,60,732
Inland Fishermen Co-operative Societies	300	82,986
Inland Fisherwomen Co-operative Societies	72	7,883
Other types	27	6,791
Total Number of societies and members enrolled	1,418	7,15,384
District Fishermen Co-operative Federation	12	998
Tamil Nadu State Apex Fisheries Co-operative Federation	1	814
TOTAL	1,431	7,17,196

**6. 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, 483 Marine Fishermen Co-operative Societies, 151 Inland Fishermen Co-operative Societies, 171 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.91.725 lakh.

The Director of Fisheries is the Functional Registrar of the Apex Federation and it is administered by Managing Director in the cadre of Additional Director of Fisheries. TAFCOFED

has five Project Offices at Chennai, Nagapattinam, Ramanathapuram, Thoothukudi and Nagercoil.

The important schemes being implemented by Tamil Nadu State Apex Fisheries Co-operative Federation Ltd., (TAFCOFED) are as follows:

6.1 Supply of Subsidised Industrial Kerosene to Motorised Fishing Crafts

During 2017-18, TAFCOFED has supplied 4,728 KL of tax exempted subsidised Industrial Kerosene to the traditional motorised fishing crafts in Thoothukudi and Tirunelveli Districts through 13 primary Fishermen Co-operative societies and earned revenue of Rs.28.30 lakh.

6.2 Supply of Sales Tax exempted Diesel for Fishing Crafts

During 2017-18, TAFCOFED has supplied 22,775 KL of tax exempted diesel to Mechanised and Motorised fishing boats through 13 diesel

bunks established in coastal districts and earned a revenue of Rs.4.42 Crore.

6.3 Modern Fish Stalls

In order to supply good quality fish to general public at a reasonable price, TAFCOFED is operating Modern fish stall at Ramanathapuram, Paramakudi, Neyveli, Kanniyakumari and Madurai with financial assistance from National Fisheries Development Board (NFDB) and National Agriculture Development Programme (NADP) and construction of another two stalls is in progress at Chennai and Tirunelveli.

6.4 Supply of Fishing inputs for fishermen at 50% subsidy under Blue Revolution Scheme.

Tamil Nadu State Apex Fisheries Co-operative Federation is implementing Blue Revolution scheme at 50% subsidy assistance to Traditional / Artisanal fishermen for the

procurement of FRP boats as a replacement of traditional /wooden boats including OBM/IBM, nets and insulated ice boxes of 100 numbers at a total cost of Rs.4.25 crore under this scheme. So far 47 Nos of fishing inputs have been supplied to the fishermen.

6.5 Upgrading fishing efficiency of Inland fishermen by supplying 500 FRP Coracles at 50 % subsidy.

Tamil Nadu State Apex Fisheries Cooperative Federation is supplying 500 FRP Coracles with 50% subsidy at a total cost of Rs.62.50 lakh for upgrading fishing efficiency of Inland Fishermen of Tamil Nadu. So far 154 FRP Coracles have been supplied to the fishermen.

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

During the year 2017-18, TAFCOFED had supplied 105 Insulated Ice boxes to Motorised

boats at a cost of Rs.1.44 lakh with 25% subsidy assistance from Marine Products Export Development Authority (MPEDA).

6.7 Training and capacity building Programmes

TAFCOFED had trained 412 deep sea going fishermen of Tamil Nadu in “Basics of Seamanship and Navigation, Electronic equipments and Maintenance of Marine Engine” with technical assistance from Central Institute of Fisheries Nautical Engineering and Training (CIFNET) with financial assistance from NFDB.

TAFCOFED had trained 2,227 members of fisherwomen co-operative societies in coastal districts in “Value added fish products” training programme at a cost of Rs. 26 lakh with the financial assistance from National Fisheries Development Board (NFDB).

6.8 Establishment of Retail Outlet for selling of Diesel and Petrol at Old Mahabalipuram Road (OMR), Chennai

In order to improve the revenue and towards self sufficiency TAFCOFED had established and operating a Retail Outlet for selling Diesel and Petrol at Vaniyanchavadi, Old Mahabalipuram Road(OMR), Chennai at a cost of Rs.80 lakh.

6.9 Establishment of Modern Fish Food Restaurant

Tamil Nadu State Apex Fisheries Cooperative Federation is establishing a Modern Fish Food Restaurant at a cost of Rs.2.01 crore at Vaniyanchavadi in Kancheepuram District of which, NADP assistance will be Rs.89 lakh and the remaining amount of Rs. 1.12 crore will be met out from the Federation funds. The construction work is in progress.

6.10 Integrated Co Operative Development Project (ICDP)

In order to transport subsidized industrial kerosene to fishing villages one kerosene transport tanker lorry at a cost of Rs. 18 Lakh will be procured under Integrated Co Operative Development Project (ICDP), Kanyakumari District.

During the year 2017-18 Rs. 10.80 Lakhs have been sanctioned for construction of fish procurement shed and Margin money for purchase of diesel under Integrated Co Operative Development Project (ICDP) in Thiruvallur district.

TAFCOFED will do improvements to its diesel bunks, office buildings at keelakarai in Ramanathapuram district and Jagathapattinam in Pudukottai district, procurement of generators for diesel bunks for uninterrupted supply of diesel to fishermen and revolving fund assistance for procurement of diesel, kerosene

and Out Board Motors / In Board Motors will be taken up at a total estimated cost of Rs.102 lakh under ICDP.

6.11 Financial Performance

During the year 2017-18 TAFCOFED had earned a net profit of Rs.4.17 Crores profit through its commercial activities like sale of diesel, kerosene and from fish marketing.

7. TAMIL NADU FISHERMEN WELFARE BOARD (TNFWB)

Tamil Nadu Fishermen Welfare Board (TNFWB) was established in 2007 with a view to ensure social security and wellbeing of fishers and labourers engaged in fishing and its allied activities. TNFWB is headed by Hon'ble Minister for Fisheries as the Chairman and the Director of Fisheries as Member Secretary who will monitor the activities of the Welfare Board. The Board

shall consist of members nominated from time to time by Government of Tamil Nadu.

A total of 4.50 lakh fishermen / fisherwomen are enrolled as members in the Board.

The Welfare schemes being implemented by the TNFWB are as follows: -

Table:7

Welfare Schemes being implemented by the TNFWB

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

- During 2017-18, the TNFWB has settled 4,274 claims amounting to Rs.2.81 crore, besides 503 claims have been settled to the tune of Rs.0.22 crore upto May 2018 under various welfare schemes through NEFT.
- To pursue B.F.Sc / B.E.(Fisheries) degree from Tamil Nadu Fisheries University, 8 fishermen students who are the wards of the fishermen members of TNFWB have been provided with the Education fees for the first year at the rate of Rs.61,690/- per student. Towards this, a sum of Rs.4,93,520/- has been borne by the TNFWB.
- A sum of Rs.4.08 crore has been disbursed as death relief assistance to the families of 27 deceased fishermen and 177 fishermen who went missing due to 'Ockhi' cyclone.

8. TAMIL NADU FISHERIES DEVELOPMENT CORPORATION LIMITED (TNFDC)

The Tamil Nadu Fisheries Development Corporation Limited (TNFDC) was established in 1974 as a State Owned Public Sector Undertaking with an authorised 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.

The Corporation is headed by the Managing Director / Director of Fisheries followed by General Manager, Senior Managers, Managers, Deputy Managers & Assistant Managers. The field activities are carried out at unit level viz. Chennai, Coimbatore, Aliyar, Madurai & Thoothukkudi. At present 119 Employees belonging to different categories are working in the Corporation.

TNFDC is having a total fish seed rearing area of 3.83 hectares at Sathanur, Aliyar, Amaravathy, Thirumoorthy and Palar - Porandalar Reservoirs. Quality Fish seeds produced by the TNFDC are stocked in the reservoirs managed by the TNFDC besides supplying to the Fisheries Department and private fish farms.

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

TNFDC has established ornamental fish production centers at Aliyar and Thirumoorthy Nagar.

TNFDC is marketing fresh fish and sea food through its chain of retail fish stalls and mobile units in Chennai, Madurai, Coimbatore, Tirupur, Pollachi, Ooty, Thoothukkudi, Kanniyakumari and Thiruvannamalai.

The Corporation is operating 31 diesel outlets in the Fishing Harbours and Fish Landing Centres located all along the coastal area in the State to supply tax exempted high speed diesel to the Motorised traditional and Mechanised fishing crafts

8.1. Establishment of Petrol Outlets

TNFDC during the financial year 2017 – 18 established its first Petrol outlet at Threspuram in Tuticorin for undertaking Petrol sale to General Public. Till March 2018, 267 KL of Petrol has been supplied during the financial year 2017-18, earning a profit of Rs.4.90 lakh. During the financial year 2018-19, TNFDC has proposed to supply 300 KL of Petrol, through which the Corporation is likely to earn a profit of Rs.7.14 lakh.

8.2. Management of Chetpet Eco-Park

Fisheries Department has established a beautiful Eco-Park with Sport Fishing facilities at an estimated cost of Rs.42 crore at the Chetpet Lake which is located at the heart of Chennai city. The Eco-Park with the Boating, Angling, Multi-Level Car Parking (MLCP), Park, Recreation Centre, Food Court, Walking and Jogging Tracks, Children's Play Area, Multi-media, Amphitheatre, etc., is attracting a huge number of footfalls every day. An "Aquarium-cum-Aquatic Virtual Reality Centre" is being established at an estimated cost of Rs.6 crore in the Eco-Park.

8.3 Establishment of Modern Mobile Sea Food Restaurant by TNFDC Ltd.

The Corporation is running 2 Modern Mobile Sea Food Restaurants at Chennai (Marina and Besant Nagar Beach) to serve various sea food delicacies to the customers at an affordable price. These mobile units costing Rs.57.50 lakh

introduced under the NADP Scheme during the year 2016-17 are catering to the needs of fish eaters.

8.4 Establishment of Centralized Kitchen for Sea Food Products and Training Centre

In accordance with the announcement made by the Hon'ble Chief Minister of Tamil Nadu under Rule 110, the TNFDC Ltd., is in the process of establishing a Centralized Kitchen with training facilities for Women Self Help Group for Production & Marketing of Ready to Cook and Ready to Eat fishery products at Royapuram, Chennai at an estimated cost of Rs.304.44 lakh, with the aim of promoting sea food consumption among the public and providing self-employment opportunities under the NADP Scheme. The work for establishing the central kitchen is under progress and will be completed during this year. Modernising the TNFDC Sea Food Court at Teynampet, Chennai is

under consideration. A feasibility study to develop Government Shrimp Farm at Vaniyanchavadi into Eco-Park is under way.

8.5 Establishment of Online Fish Marketing facilities at Chennai

TNFDC is making sincere efforts to create awareness on the positive health aspects of sea food consumption. TNFDC has established an online fish marketing facility on trial basis for the convenience of customers in Chennai Marketing Unit of TNFDC at a cost of Rs.10 lakh. The facility/scheme was launched on 25.05.2017 by the Hon'ble Minister for Fisheries, Personnel and Administrative Reforms.

8.6 Financial Performance of TNFDC

The TNFDC by undertaking various commercial activities such as fresh fish marketing, sea food courts, diesel / kerosene

sale, reservoir management, etc., had earned a profit of Rs.10 crore for the financial year 2017-18. Rs.13 crore is the projected profit for the year 2018-19.

During the year 2016-17, the TNFDC paid a sum of Rs.240.80 lakh to the State Government as dividend. During the financial year 2017 -18, Rs.1 crore was paid as TNFDC's contribution to the Chief Minister's Public Relief Fund.

TNFDC paid a sum of Rs.96.60 lakh for the year 2017-18, as its contribution to Tamil Nadu Fishermen Welfare Board.

The TNFDC has also contributed a sum of Rs.24.96 lakh to some of the Fisheries projects and Fishermen Welfare Schemes from its Corporate Social Responsibility (CSR) Fund.

9. TAMIL NADU Dr. J JAYALALITHAA FISHERIES UNIVERSITY (TNJFU)

Tamil Nadu Dr. J Jayalalithaa Fisheries University (TNJFU), a professional Fisheries University funded by the State Government was established as per Tamil Nadu Fisheries University Act 2012, on 19.06.2012 at Nagapattinam, with an outlay of Rs.18.10 crore to impart professional fisheries education, conduct research and training for enhancing fish productivity and utilisation in the state, by following State Agricultural University pattern and syllabi. The University has been renamed as Tamil Nadu Dr. J Jayalalithaa Fisheries University as per G.O (Ms) No.21. Animal Husbandry, Dairying and Fisheries (FS-4) Dept., dated 16.02.2018.

The National Agricultural Education Accreditation Board-ICAR, has granted accreditation to the Tamil Nadu Dr. J. Jayalalithaa

Fisheries University, Nagapattinam in November, 2017 for a period upto March, 31, 2021.

The Tamil Nadu Dr. J Jayalalithaa Fisheries University occupies the coveted first position in the ranking list released by the Indian Council of Agricultural Research for the year 2016-17.

The Tamil Nadu Dr. J Jayalalithaa Fisheries University, Nagapatinam is also recognised under 12B by the University Grants Commission, New Delhi.

9.1. Vision of the University

"Harnessing the Science of Fisheries for Food, Nutrition and Livelihood".

9.2. Objectives

1. To impart skill based professional education in different branches of Fisheries Sciences as the University may determine.

2. Wide range of higher education opportunities to be made available for the fisheries professionals.
3. To conduct organised research in frontier areas with the objective of developing cutting edge technologies in Fisheries Sciences.
4. To provide effective extension services using conventional and advanced state-of-the-art dissemination tools.
5. To facilitate the rich incubation ecosystem in alliance with industry and academic partners to develop translational and transformational technologies
6. To offer Para-professional fisheries education to the needy fisherfolk, fish farmers, unemployed youth in the State to enhance entrepreneurial skills in fisheries sector.
7. Contribution to blue economy of the national to help double the income in fisheries sector through HRD and technology development.

The University Headquarters at Nagapattinam has the Offices of the Vice-Chancellor, Registrar, Director of Research, Director of Extension Education, Controller of Examinations, Dean (Academics), Dean (Students Welfare), Finance Officer and Estate Officer.

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 2014-15 for imparting the B.F.Sc., degree course and 63 students were admitted during the academic year 2017-18. In Nagapattinam, Institute of Fisheries Technology was upgraded to College of Fisheries Engineering for offering the B.E.,

(Fisheries Engineering) course for the first time in India. During the academic year (2017-18) 23 students were admitted. The Institute of Fisheries Biotechnology (IFB), Vaniyanchavadi is offering a four year B.Tech (Biotechnology) course in self-financing mode for which 22 students were admitted through counseling during the 2017-18 academic year.

9.3 Colleges/Institutions

9.3.1 Existing Colleges/ Institutions

- Fisheries College and Research Institute, Thoothukudi
- Tamil Nadu Dr.M.G.R. Fisheries College and Research Institute, Ponneri
- College of Fisheries Engineering, Nagapattinam

9.3.2 New Institutions/ Colleges created

- Dr. MGR Fisheries College & Research Institute (MGR FC&RI), Thalaignayiru

- Institute of Fisheries Post Graduate Studies (IFPGS), OMR Campus, Chennai
- Institute of Fisheries Biotechnology (IFB), Vaniyanchavdi OMR Campus, Chennai
- TNJFU Business School (Fisheries), Vaniyanchavdi OMR Campus, Chennai
- Institute of Para-professional Aquaculture Technology, Muttukadu, Chennai
- Para-professional Institute of Fisheries Technology, Mandapam
- Para-professional Institute of Fisheries Technology, Royapuram, Chennai

9.4 New courses introduced

- B.Tech (Biotechnology)
- M.F.Sc. (Fish Pharmacology & Toxicology)
- M.F.Sc. (Fish Genetics & Breeding)

9.5 New Krishi Vigyan Kendra (KVK) for TNJFU

KVK, Sikkal, Nagapattinam District (53 acres) from TNAU has been transferred to TNJFU with 10 technical staff and 6 non-technical staff.

9.6 Constituent units of TNJFU

The University has 40 constituent units spread across the State of Tamil Nadu for its effective functioning.

9.7 Activities of the University

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

The University is extending financial assistance in the form of State and Central Government scholarships and fellowships to the students for undergoing their under-graduate and post-graduate degree programmes. P.G and Ph.D., students who are all admitted through the University entrance examinations are given University merit scholarship of Rs.4,000/- and Rs.5,000/- per month, 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.

- Fish processing Techno-Park and Business Incubation Centre were established through TNJFU for the benefits of Self Help Groups and youth.
- A National Rainbow - Ornamental Technology Park at Madhavaram, Chennai has been established by TNJFU.
- 16 Nos of Assistant Professor posts were filled up during June 2017. Career advancement has been given to 3 Assistant Professors.

9.8 Key research achievements/ Technologies developed

To carryout advanced research an amount of Rs.20.06 crore has been received from other funding agencies. Following are some of the achievements made:

- By products from Sugar Industry to enhance shrimp aquaculture production
- Development of biofloc meal as a feed ingredient to replace the fishmeal in shrimp feed
- Raceway Technology for nursery rearing of vannamei shrimp
- Effect of Supplementation of KemZYME™Aqua on performance of *Labeo rohita* in HDPE lined ponds
- Development of Aquaponics fish culture model by integrating Catfish and GIFT Tilapia with vegetable crops
- Induced Breeding and seed production of Pearl spot (*Etroplus suratensis*) and its culture
- Cost efficient poultry byproduct meal based protein diet for GIFT Tilapia
- Multiplex Polymerase Chain Reaction (MPCR) assay for specific detection of

Enterocytozoon hepatopenaei (EHP) infecting shrimp

- MPCR assay kit for the simultaneous detection of bacterial pathogens from seafood
- PCR- RFLP markers for authentication of shrimp products

9.9. Memorandum of Understanding (MoU) with other Universities/ Institutes

During 2017-18, the Tamil Nadu Dr.J Jayalalithaa Fisheries University signed Memorandum of Understanding (MoU) with International Universities / Indian universities, National fisheries organizations, private aqua farms and feed industries.

9.10 Advocacy/Certification/ Consultancy services:

This University is involved in certification of the seafood products through the Fish Quality

Monitoring and Certification Centre at Thoothukudi.

The State Referral Laboratory for aquatic animal diseases surveillance at Madhavaram, Chennai, has generated considerable income for providing fish disease certification services during 2017-18. Other Regional Laboratories for aquatic animal diseases surveillance are also functioning at Thoothukudi and Nagapattinam.

'Aquaculture Quality Testing Labs' are functioning at all the colleges and major centres in the State. A mobile Aquaculture Quality Testing Lab is in operation from FC&RI, Ponneri. On nominal charges these labs are catering to the need of farmers.

9.11 Outreach and Extension activities

TNJFU is instrumental in bringing out developments in the fisheries sector in the State of Tamil Nadu through various extension

and training programmes covering all aspects, including farm advisory services, answer to farmers' queries, organising 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. Special purpose vehicle (SPV) mode project on "Aquatic Rainbow Technology Park" was implemented in the TNJFU – Madhavaram campus for ornamental fish culture involving about 80 fish producers and fish breeders. It is first of its kind in India.

The four Referral Labs and Aquaculture Quality Testing Labs operated in all the institutes and centres of the University and two "Mobile Aquaculture Quality Testing Labs" are extending the services to the aqua farmers.

During 2017-18, this University has organised 182 vocational and entrepreneurial training programmes, in which 6,262 beneficiaries were trained.

More than 75 pamphlets / folders / booklets on important fisheries technology were released for the benefit of the various stakeholders. This University publishes farm journal 'Meenvalasudar' in Tamil carrying information on fisheries technology, current developments in the fisheries sector, various schemes for the promotion of fisheries and success stories of farmers. This University also publishes the TNJFU News Letter in English to popularise the activities of the TNJFU among various agencies and stakeholders associated with fisheries development.

9.12 Future Programmes

- Establishment of “Recirculatory Seabass Aquaculture Technology Park” for Doubling the Income with Low Water Budgeting.
- Establishment of Integrated Multi-trophic Aquaculture (IMTA) based culture technology to augment fish production as an alternative livelihood for Fisherfolk at Tharuvaikulam, Tamil Nadu.
- Entrepreneur - Marketing Intelligence Services Cell (e-MISC) for Fisheries.
- Development of mobile app based fisheries information system for sustainable fisheries management and livelihood enhancement of fishers.
- Development of functional seafood fortified with nutraceuticals.

9.13 Newly Sanctioned Projects in the year 2017-18

- Establishment of Fisheries Training Institute at Mandapam, Ramanathapuram District – Rs.450 lakh.
- Demonstration and training for farmers capacity building at Regional outstations of CeSA in TNJFU – Rs. 100.534 lakh.
- Establishment of Fisheries Techno-Park-cum-fish Processing Technology Business Incubation Centre – Rs. 114.47 lakh.
- Establishment of 'National Aquatic Rainbow Mall' (NAQRAM) to promote incredible Indian ornamental fish trade through One-stop shopping at Madhavaram, Tamil Nadu – Rs.250 lakh.
- Bio-prospecting for anti-osteoporotic collagen peptides derived from fish bones – Rs. 36.071 lakh.

- Management and rehabilitation of coastal habitats and biodiversity for climate change adaption and sustainable livelihood in Gulf of Mannar, Tamil Nadu, India – Rs. 21 lakh.
- Livelihood improvement through technology backed backyard genetically improved farmed Tilapia – Rs. 30 lakh.
- Establishment of freshwater ornamental fish brood bank for sustainable aqua farming in Thiruchirapalli district of Tamil Nadu – Rs. 313.76 lakh.
- Institute of para-professional aquaculture technology at Muttukadu, Chennai- Rs. 689.98 lakh.

10. MAJOR ACHIEVEMENTS OF FISHERIES DEPARTMENT DURING THE YEAR 2017-18

10.1 Fishermen Welfare

- With the unrelenting and assiduous efforts of the Government of Tamil Nadu

469 fishermen from Sri Lanka Jails and 26 boats from Sri Lankan custody have been released and repatriated to Tamil Nadu.

- 45 Tamil Nadu fishermen have been released from the Jails of Iran (Other Countries) and repatriated to Tamil Nadu.
- For the year 2017-18 the ban period relief assistance of Rs.5000 per family totalling to a sum of Rs.79.75 crore has been disbursed to 1,59,506 fishermen families of 13 coastal districts.
- A sum of Rs.69.52 crore has been disbursed as special allowance during lean fishing season to 1,39,045 marine fishermen families for the year 2017-18.
- A sum of Rs.89 lakh was disbursed to the families of 61 fishermen who were missing /dead in various accidents at sea, from Chief Minister's Public Relief Fund.

- The Government has released a sum of Rs.19.13 crore as relief and restored the livelihood activities of fishermen of Tiruvallur, Chennai and Kancheepuram districts affected by the tropical cyclone 'Vardah'.
- A flagship scheme to diversify 2000 trawlers in Palk Bay region to deep sea fishing at an estimated cost of Rs.1,600 crore was inaugurated by the Hon'ble Prime Minister of India on 27.07.2017.
- Under this scheme, subsidy assistance subject to maximum of Rs.56 lakh (70%) and sanctioned a sum of Rs.286 crore (Government of India – Rs.200 crore and State Government – Rs.86 crore) for construction of 500 Tuna long liners-cum-gill netters for diversifying trawl fishing from Palk Bay into deep sea fishing during the year 2017-18.

- Tripartite agreements were signed to construct 45 deep sea fishing boats. Fabrication and building of 16 boats has been taken up by M/s.Cochin Shipyard Ltd, Kochi, 10 boats has been taken up by M/s.Uma Ship Builder and Repairs, Nagapattinam, 7 boats by M/s. Master Shipyard Private Ltd, Kochi and 12 boats by M/s. Lockheed Engineering Works, Kancheepuram.
- Under the scheme on 'Providing Seamless Communication System', totally 17,539 numbers of VHF sets consisting 15,004 nos. of 5 watt handheld VHF sets to motorised fishing crafts at 100% subsidy and 2,535 nos. of 25 watt VHF boat sets to the mechanised fishing crafts at 75% subsidy are being distributed to the fishermen for their safety at sea.
- The 18 apprehended fishing boats belonging to fishermen of Ramanathapuram district,

were damaged beyond salvage lack of maintenance under prolonged detention of Sri Lankan Navy in Sri Lankan waters. Considering the poor economic condition of the fishermen and the unsalvageable condition of their boats, the Hon'ble Chief Minister of Tamil Nadu has ordered the relief assistance of Rs.5 lakh each, totaling a sum of Rs.90 lakh from CMPRF and it was disbursed to the beneficiaries on 19.04.2017.

- The Insurers of the Ships that were involved in the oil spill caused due to the accident, have deposited an interim compensation of Rs.141 crore including restoration cost to the Government of Tamil Nadu. The same is being disbursed to the affected fishermen of Thiruvallur, Chennai and Kancheepuram Districts.
- This Government has taken up modernisation of various fish markets with an outlay of

Rs.14.25 crore in major cities/ towns of Tamil Nadu.

- In continuation of the announcement made by Hon'ble Chief Minister, the Government has sanctioned an amount of Rs.1.04 crore for "Imparting special training to the 12th passed fisher youth to assist them in joining Indian Navy and Indian Coast Guard as an alternative livelihood and employment opportunity.
- Collaborative Arrangement on Sustainable Fisheries Management has been made between the Department of Fisheries, Government of Tamil Nadu and Australian Trade and Investment Commission (AUSTRADE) on 13.03.2018.
- The Tamil Nadu Fisheries Development Corporation Limited has earned a Profit of Rs.10 crore for the year 2017-18.

10.2 Infrastructural facilities

- Development of 9 Fish Landing Centres with the assistance of NABARD under RIDF XXIII at a cost of Rs. 29.50 crore is in progress.
- The Hon'ble Chief Minister of Tamil Nadu laid foundation stone on 06.03.2017 for establishing fishing harbour at Mookaiyur in Ramanathapuram District at a cost of Rs.113.90 crore and the works are in progress.
- As announced by the Hon'ble Minister for Fisheries on the floor of Legislative Assembly on 11.07.2017, the Government has accorded administrative sanction for the Construction of Fish Landing Centre at Kunthukal in Ramanathapuram District at a cost of Rs.70 crore with the assistance of Rs.45 crore by NABARD under RIDF XXIII and central assistance of Rs.25 crore.

- As announced by the Hon'ble Minister for Fisheries on the floor of Legislative Assembly on 11.07.2017, the Government has accorded administrative sanction for the Construction of Landside facilities of Auction Hall and Net mending shed at Ariyanattutheru in Nagapattinam District at an outlay of Rs.162 lakh under NADP.
- The Government also accorded Administrative Sanction for Construction of Fish Landing Centre at Kurumbanai at a cost of Rs. 11 crore and Stabilisation of Groynes at Kadiyapattinam in Kanniyakumari District at a cost of Rs.4 crore with the financial assistance of NABARD under RIDF XXIII.

10.3 Efforts taken by the Government to mitigate the impact of Ockhi cyclone

- The Government has sanctioned a sum of Rs.2.20 crore for providing diesel to bring

back the 217 fishing boats and to meet out the ration expenses of 1,754 fishermen stranded in other states during "OCKHI" Cyclonic storm.

- An amount of Rs.15.38 crore being Special livelihood assistance of Rs.5,000/- each was disbursed to 30,756 fishermen families of Kanniyakumari district affected by OCKHI cyclone.
- An amount of Rs.9.40 lakh as Special Livelihood assistance of Rs.5000/- each was disbursed to 188 families of fishermen in Kanniyakumari district went missing due to 'OCKHI' cyclone.
- An ex-gratia relief assistance of Rs.20 lakh each totalling a sum of Rs.5.40 crore has been provided to the families of 27 fishermen who died due to Ockhi cyclone.
- An ex-gratia relief assistance of Rs.20 lakh each totalling a sum of Rs.35.40 crore has

been provided to the families of 177 fishermen who went missing due to Ockhi cyclone.

- The Government has sanctioned a sum of Rs. 20 crore from State Fund to carry out the restoration works in Fishing Harbours and Fish Landing Centres in Kanniyakumari District damaged due to Ockhi Cyclone.

11. BUDGET ALLOCATION FOR THE YEAR 2018-19

For the year 2018-19, a sum of Rs.1016.53 crore has been provided in the budget. Out of this, the projected revenue expenditure is Rs.733.01 crore and the capital expenditure is Rs.283.52 crore.

12. WAY FORWARD

Adequate steps will be initiated for providing advanced safety and communication systems to ensure the safety and security of our

fishermen, for Promotion of non-destructive and sustainable fishing practices to optimally utilize the untapped deep sea fishery resources, for Development of post-harvest shore facilities to ensure cold chain along the coast of Tamil Nadu for hygienic handling, quality assurance and better value realization for the catches and for the development of Integrated Fishing Harbours along the coast of Tamil Nadu.

Steps will be taken for the Implementation and effective enforcement of suitable fishery regulations to suit the changing scenario in the fisheries sector, for Community based management of Fishing Harbours and Fish Landing Centers, for the Development, for implementation of conservation measures to protect the fishery resources of the State and for promoting the Use of Eco-friendly and pollution free technologies for motorisation of traditional fishing crafts.

Action will be initiated for the development of social security schemes to secure the fishing assets of fishermen, for alternative livelihood activities for the fishers, for Developing Entrepreneurial skills and for capacity building and skill upgradation of fishers on post-harvest fisheries management.

Efforts will be taken for Increasing area under fish farming to enhance the fish production of the State in a phased manner through District Fish Farmers Development Agencies (DFFDA) by encouraging private farmers., for Popularising ornamental fish production and aquarium keeping among the public and enhancing the ornamental fish trade in the State.

Steps will be taken for the Establishment of institutional fisheries funding systems for providing institutional credit to fishing and

fisheries sector of the State, for Harnessing the opportunity of expanding export market for high-value products and for the development of Multi-sectoral plans for harnessing the opportunities and to effectively implement developmental activities of the Department.

13. CONCLUSION

The Government lays great emphasis for the overall development of fisheries sector of the state. The Government is giving utmost importance for protecting the traditional fishing rights of our fishermen and also for the well-being of the fishers through implementation of pioneering welfare schemes. The Government is also taking all measures to strengthen the fishery infrastructure, accelerating rural economic growth by integrating fish culture and allied activities and pursuing all inclusive development of the state. This Government will

continue to implement schemes with its policy of ecologically and environmentally sustainable fisheries development to bring prosperity in the life of the fishers, which in turn will assist the State to achieve its goal of inclusive growth. Under the guidance **Hon'ble Chief Minister of Tamil Nadu** following the vision and mission of **Hon'ble Puratchi Thalaivi Amma**, the Government will take all steps to grow the fisheries sector of the State by leap and bounds in the coming years.

D.JAYAKUMAR
Minister for Fisheries, Personnel
and Administrative Reforms.