



HANDBOOK ON FISHERIES STATISTICS

2020

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Department of Fisheries
Ministry of Fisheries, Animal Husbandry & Dairying
Government of India, New Delhi



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MESSAGE

Fisheries sector plays an important role in the Indian economy. It contributes to the national income, exports, food and nutritional security and in employment generation. The Fisheries sector provides livelihood to more than 2.8 Crores Fishers and Fish farmers at the primary level and several more along the Fisheries value chain. This sector is also a principal source of livelihood for a large section of economically underprivileged population of the country, especially in the coastal areas. Considering the pivotal importance of the sector, the government has recently rolled out the ambitious scheme Pradhan Mantri Matsya Sampada Yojana (PMMSY). The scheme focuses on the doubling of fisher's income through the variety of interventions and addresses the challenges beset in the sector.

The fisheries sector in the country continues to be among the most important and fastest growing agriculture allied sector in this country. It has been observed that the sector is gradually diversifying towards high value enterprises including ambitious targets. It is evident to mention the contribution of fisheries sector to the GDP. This is due to a sustained annual growth rate for the last five decades and recorded highest as compared to the agricultural sector. The growing production of fish and employment generation, suggests that fisheries sector is booming and contributing to the economic growth of the nation.

Department has compiled the handbook on Fisheries with the latest data related to various domain of Fisheries sector mainly, Fish Production and Productivity, Disposition of Fish, Consumption of Fish, Fisheries Economy, Expenditure on Fisheries sector, Export, Fishermen Population, Fisheries Resources, Fisheries Welfare, Fisheries Institutes, International Scenario, Post-harvest Infrastructure and Fisheries Development. I am delighted to release the Handbook on Fisheries Statistics, 2020 which would be valuable resource for different stake holders of the Sector for planning and policy making.

My compliments to Department of Fisheries of my Ministry to Compile the Handbook on Fisheries Statistics-2020 in a short period of 8 months under the guidance of Secretary (Fisheries) and wish the sector would grow higher by referring this book from time to time.


(GIRIRAJ SINGH)



सत्यमेव जयते



एक कदम स्वच्छता की ओर

MESSAGE

राज्य मंत्री
सूक्ष्म, लघु और मध्यम उद्यम और
मत्स्य पालन, पशुपालन एवं डेयरी
भारत सरकार
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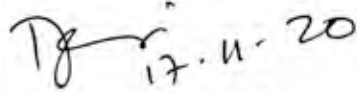
MINISTER OF STATE FOR
MICRO, SMALL & MEDIUM ENTERPRISES AND
FISHERIES, ANIMAL HUSBANDRY & DAIRYING
GOVERNMENT OF INDIA
NEW DELHI-110011

India as a maritime country has wide water resources laying both in inland and marine sector which are being utilized for capture and culture fisheries. The fisheries development activities primarily aims at increased fish production to meet the nutritious food requirement along with the improvement in the socio-economic conditions of millions of fishers/ fish farmers and to mobilize the export market for accelerating the economy of the country.

Fisheries is a promising sector playing an important role for development of economic ambience in the country. The sector has exhibited strong growth of about 8% per year on the average with aquaculture growing at an annual average of more than 10%. The sector has been showing a steady growth in the total Gross Value-Added accounts for about 7.28% share of Agriculture GDP. The export of Marine products stood at 12.9 lakh metric tons and valued at Rs. 46,662.85 crores (6.68 billion USD) during 2019-20.

About 17% of agriculture exports of our country are fish and fish products. The Country has a long coastline of about 8,118 km and 2.02 million sq. km. of EEZ. The vast resources both marine and inland are indicative of the immersive growth and potential of the sector.

In this regard, the Handbook on Fisheries statistics 2020 will play a major role to get all the information related to fisheries at one place. I find that the Handbook is comprehensive and has a data on various domain of Fisheries sector of the country. I am confident that this booklet will be of immense value to the millions of Fishers and other stake holders in the sector. I would also like to extend my thanks to Dr. Rajeev Ranjan, Secretary (Fisheries) for this great work did by his team.


(Pratap Chandra Sarangi)

डॉ राजीव रंजन, आईएएस
सचिव

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FOREWORD

The fourteenth edition of the 'Handbook on Fisheries Statistics, 2020' contains the latest information on various domains of Fisheries sector namely, fish production and productivity, disposition of fish catch, consumption of fish, fisheries economy, expenditure on fisheries sector, exports, fishers population, fisheries resources, fishers welfare, fisheries institutes, international scenario, post-harvest infrastructure and fisheries development.

We all are aware about the importance of the fisheries sector in the socio-economic development and as a source of livelihood for around 2.8 crore number of fishers, fish farmers, fish workers and fish vendors at the primary level and several crores along the value chain. The sector also contributed Rs.46,663 crores through exports during 2019-20. The vast resources, both marine and inland are indicative of the immense potential of the sector. The country is well on its way to harness the potential of fisheries as can be seen from the fact that fish production increased from the level of 0.75 MMT (million metric tonnes) in 1950-51 to 14.2 MMT in 2019-20.

Sound data is a key pre-requisite for sound policy formulation and evidence-based decision making. With the fisheries sector growing manifold in the last 4-5 decades, mechanisms for data collection and its collation has lagged behind. While data on marine fish landings is collected regularly following internationally accepted methodologies and protocols, the same is not happening in other sectors like inland fisheries. Except for the five-yearly census carried out for the marine fisheries sector, similar information is not available for inland fisheries, including aquaculture. Bearing this in mind and acknowledging the fact that the availability of validated data continues to be one of the major challenges in the development framework, policy initiatives focusing on creating mechanisms for data collection that ensures adequate coverage of the various facets of the sector, timely and reliable data collection, smooth and unhindered access to data etc. are being taken by the Department of Fisheries.

Over the years, there has been a gradual but definitive shift in the fish production from the marine fisheries sector to inland fisheries sector primarily due to the rapid growth of inland aquaculture. It is imperative that the data base pertaining to inland fisheries and aquaculture resources and their fish production is strengthened. Accordingly, the Government of India is working on 'Strengthening of Database and Information Network for the Fisheries Sector' with the objectives to (i) improve the database on inland and marine fisheries resources and fish production using sound statistical and scientific methodology; (ii) improve the use of Geographical Information System (GIS) in the States/UTs and by other concerned implementing agencies; and (iii) register all fishing vessels in the country. The salient features are to improve the efficiency and quality of data as well as reduction in time lag in preparation and submission of survey reports; estimates of fish production from both inland and marine resources of the country; and create comprehensive database on the fishery sector so as to facilitate proper planning both at Centre as well as State/UT level.

Similarly, the statistics on marine fish landings has been collected by the Department of Fisheries of the respective coastal State Governments as well as the CMFRI, Kochi and its centre located in different coastal states of the country. The Department of Fisheries of the respective coastal State Governments need to give more attention on data gathering, improving data quality and address delay in providing the requisite information. The Fishery Survey of India (FSI) and the Central Marine Fisheries Research Institute (CMFRI) with funding assistance from the Department of Fisheries have been undertaking marine fisheries census for the main land and two Island territories.

Publication of Handbook on Fisheries Statistics is in the process of improvement with addition of fisheries related information year after year incorporating appropriate details. While this has been a useful exercise, the same needs to be further streamlined with inclusion of additional parameters, especially on the socio-economic attributes of marine fishing communities to make it comprehensive.

The use of GIS for mapping existing coastal aquaculture sites including potential areas for aquaculture as well as mariculture is another essential activity to be carried out involving States/UTs and relevant agencies in country.

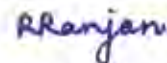
It is desirable to have a uniform system for registration of all types of fishing vessels irrespective of their size and tonnage, in lieu of different registration regimes adopted by coastal States/UTs under the ReALCraft Schemes. The ReALCraft database being implemented in nine coastal States and four UTs

needs to be further upgraded and strengthened. There is need for establishing requisite infrastructure facilities for creation of a centralized database in the Department of Fisheries.

The Department of Fisheries, Government of India has recently launched a new flagship scheme the Pradhan Mantri Matsya Sampada Yojana (PMMSY) at an estimated investment of Rs.20,050 crores with an array of diverse interventions along the fisheries value chain from production to consumption. PMMSY is by far the largest scheme in the history of fisheries sector of our country, and envisages an investment of Rs.12,340 crore for taking up Beneficiary oriented activities and Rs.7,710 crores towards infrastructure and regulatory framework.

Fisheries documentation, survey and strengthening of fisheries data base both marine and inland are some of the key activities envisaged under PMMSY. A sub-component called 'Fish data collection, fisher's survey and strengthening of fisheries data base' is included under the Central sector component of PMMSY with a dedicated outlay of Rs.100 crores over five years (2020-21 to 2024-25). Under this funding support would be extended for survey and census of inland and marine fishers, resource / fish stock assessment (including seaweeds), documentation etc. In addition, specific studies aimed at validation of marine fisheries stocks for their conservation, management and productive utilization and documentation of impact of fishing activities on other marine animals are also envisaged.

I would like to thank the Fisheries Departments of all the States / UTs, CSO, NSSO, DoAC&FW, MPEDA, Fisheries institutes of DoF, ICAR and NFDB for their support and contribution extended for preparation of this Handbook. I would also wish to place on record my appreciation and efforts made by all the officers and staff of the Department of Fisheries, especially the Fisheries Statistics Unit for bringing out this publication. I hope this publication would be useful to Planners, Policy makers, Researchers, Stakeholders and other related users.



(Rajeev Ranjan)

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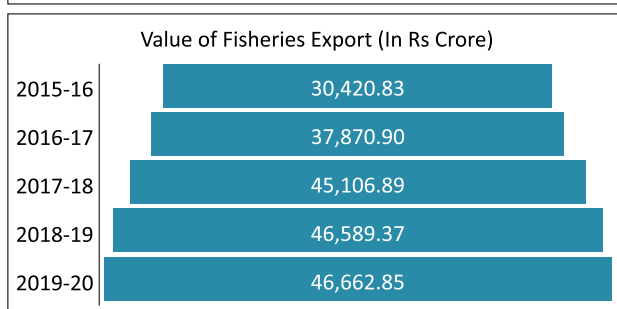
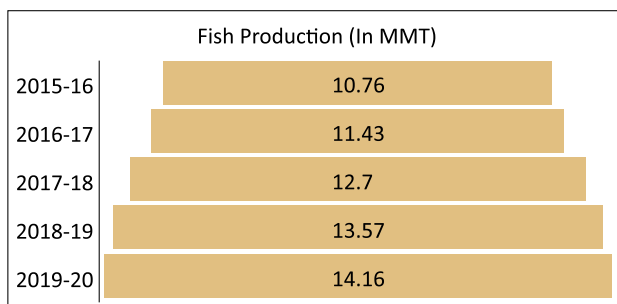
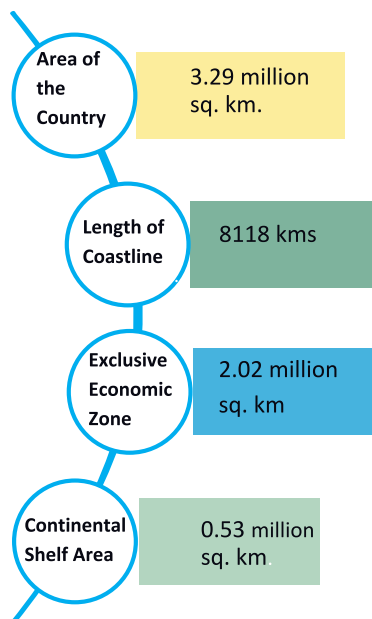
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SUMMARY AT A GLANCE



| | | |
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| Marine Fish Production:2019-20 3.72 MMT. | Inland Fish Production: 2019-20 10.43 MMT. | Total Expenditure for development of Fisheries Sector: 2019-20 ₹ 64025.86 Lakh |
| Contribution of Fisheries sector in Indian Economy (GVA): 2018-19 ₹ 2,12,915 Crore | Percentage Contribution of Fisheries sector in India Economy: 2018-19 1.24% | Percentage Contribution of Economy Fisheries sector in India Agriculture Sector: 2018-19 7.28% |
| Total value of Fisheries Export:2019-20 ₹ 46,662.85 Crore | Total Quantity of Fisheries Export:2019-20 12,89,651 Tons | Total Quantity of world Fish Production 178.5 MMT |
| Consumption of Fish: 2019-20 (Top Five States) Tripura Kerala Manipur Odisha Assam | Post-Harvest Infrastructure :2019-20 Total Fish landing centres - 1548 Major Fishing Harbours commissioned-7 Minor Fishing Harbours commissioned- 62 | Fisheries Welfare: 2019-20 Number of houses sanctioned to Fishermen – 4504 Number of Fishermen Insured - 3,586,721 Relief provided to Fishermen under SCR – 765,194 |

CHAPTER 1

FISH PRODUCTION IN INDIA



Table 1.1: Fish Production in India for the period 1980-81 to 2019-20

| Year | Fish production (In Lakh Tonnes) | | | Annual Average Growth Rate (Percent) | | |
|---------|----------------------------------|--------|--------|--------------------------------------|--------|-----------|
| | Marine | Inland | Total | Marine | Inland | All India |
| 1980-81 | 15.55 | 8.87 | 24.42 | 4.22 | 4.6 | 4.36 |
| 1981-82 | 14.45 | 9.99 | 24.44 | -7.07 | 12.63 | 0.08 |
| 1982-83 | 14.27 | 9.4 | 23.67 | -1.25 | -5.91 | -3.15 |
| 1983-84 | 15.19 | 9.87 | 25.06 | 6.45 | 5 | 5.87 |
| 1984-85 | 16.98 | 11.03 | 28.01 | 11.78 | 11.75 | 11.77 |
| 1985-86 | 17.16 | 11.6 | 28.76 | 1.06 | 5.17 | 2.68 |
| 1986-87 | 17.13 | 12.29 | 29.42 | -0.17 | 5.95 | 2.29 |
| 1987-88 | 16.58 | 13.01 | 29.59 | -3.21 | 5.86 | 0.58 |
| 1988-89 | 18.17 | 13.35 | 31.52 | 9.59 | 2.61 | 6.52 |
| 1989-90 | 22.75 | 14.02 | 36.77 | 25.21 | 5.02 | 16.66 |
| 1990-91 | 23 | 15.36 | 38.36 | 1.1 | 9.56 | 4.32 |
| 1991-92 | 24.47 | 17.1 | 41.57 | 6.39 | 11.33 | 8.37 |
| 1992-93 | 25.76 | 17.89 | 43.65 | 5.27 | 4.62 | 5 |
| 1993-94 | 26.49 | 19.95 | 46.44 | 2.83 | 11.51 | 6.39 |
| 1994-95 | 26.92 | 20.97 | 47.89 | 1.62 | 5.11 | 3.12 |
| 1995-96 | 27.07 | 22.42 | 49.49 | 0.56 | 6.91 | 3.34 |
| 1996-97 | 29.67 | 23.81 | 53.48 | 9.6 | 6.2 | 8.06 |
| 1997-98 | 29.5 | 24.38 | 53.88 | -0.57 | 2.39 | 0.75 |
| 1998-99 | 26.96 | 26.02 | 52.98 | -8.61 | 6.73 | -1.67 |
| 1999-00 | 28.52 | 28.23 | 56.75 | 5.79 | 8.49 | 7.12 |
| 2000-01 | 28.11 | 28.45 | 56.56 | -1.44 | 0.78 | -0.33 |
| 2001-02 | 28.3 | 31.26 | 59.56 | 0.68 | 9.88 | 5.3 |
| 2002-03 | 29.9 | 32.1 | 62 | 5.65 | 2.69 | 4.1 |
| 2003-04 | 29.41 | 34.58 | 63.99 | -1.64 | 7.73 | 3.21 |
| 2004-05 | 27.79 | 35.26 | 63.05 | -5.51 | 1.97 | -1.47 |
| 2005-06 | 28.16 | 37.56 | 65.72 | 1.33 | 6.52 | 4.23 |
| 2006-07 | 30.24 | 38.45 | 68.69 | 7.39 | 2.37 | 4.52 |
| 2007-08 | 29.2 | 42.07 | 71.27 | -3.44 | 9.41 | 3.76 |
| 2008-09 | 29.78 | 46.38 | 76.16 | 1.99 | 10.24 | 6.86 |
| 2009-10 | 31.04 | 48.94 | 79.98 | 4.23 | 5.52 | 5.02 |
| 2010-11 | 32.5 | 49.81 | 82.31 | 4.7 | 1.78 | 2.91 |
| 2011-12 | 33.72 | 52.94 | 86.66 | 3.75 | 6.28 | 5.28 |
| 2012-13 | 33.21 | 57.19 | 90.4 | -1.51 | 8.03 | 4.32 |
| 2013-14 | 34.43 | 61.36 | 95.79 | 3.67 | 7.29 | 5.96 |
| 2014-15 | 35.69 | 66.91 | 102.6 | 3.66 | 9.04 | 7.11 |
| 2015-16 | 36 | 71.62 | 107.62 | 0.87 | 7.04 | 4.89 |
| 2016-17 | 36.25 | 78.06 | 114.31 | 1.14 | 8.63 | 6.12 |
| 2017-18 | 37.56 | 89.48 | 127.04 | 3.61 | 14.62 | 11.13 |
| 2018-19 | 38.53 | 97.2 | 135.73 | 2.58 | 8.62 | 6.84 |
| 2019-20 | 37.27 | 104.37 | 141.64 | -3.2 | 7.37 | 4.35 |

Source: Department of Fisheries, States Government / UTs Administration

Fig 1: Marine Fish Production: 2019-20 (In Lakh Tonnes)

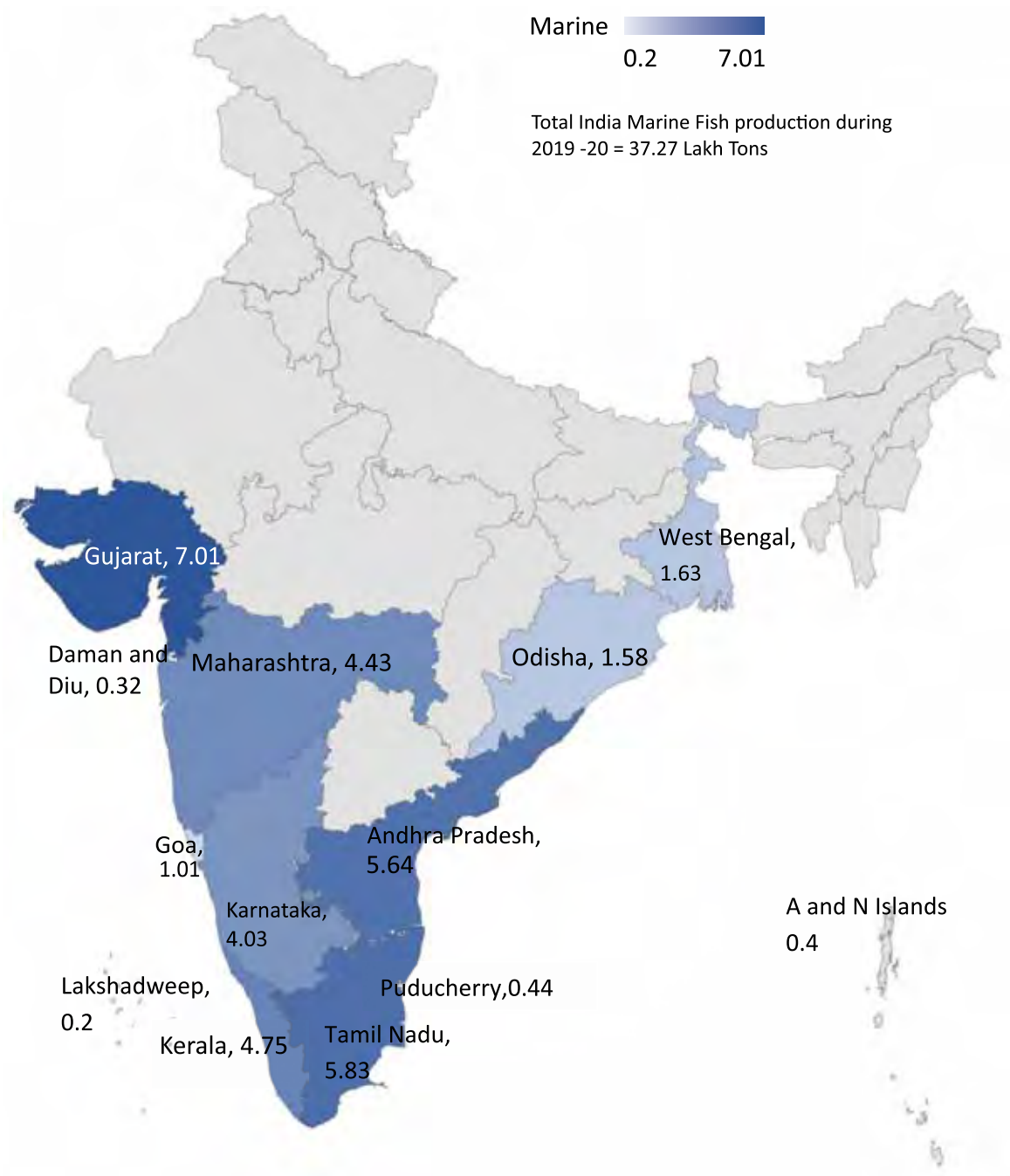
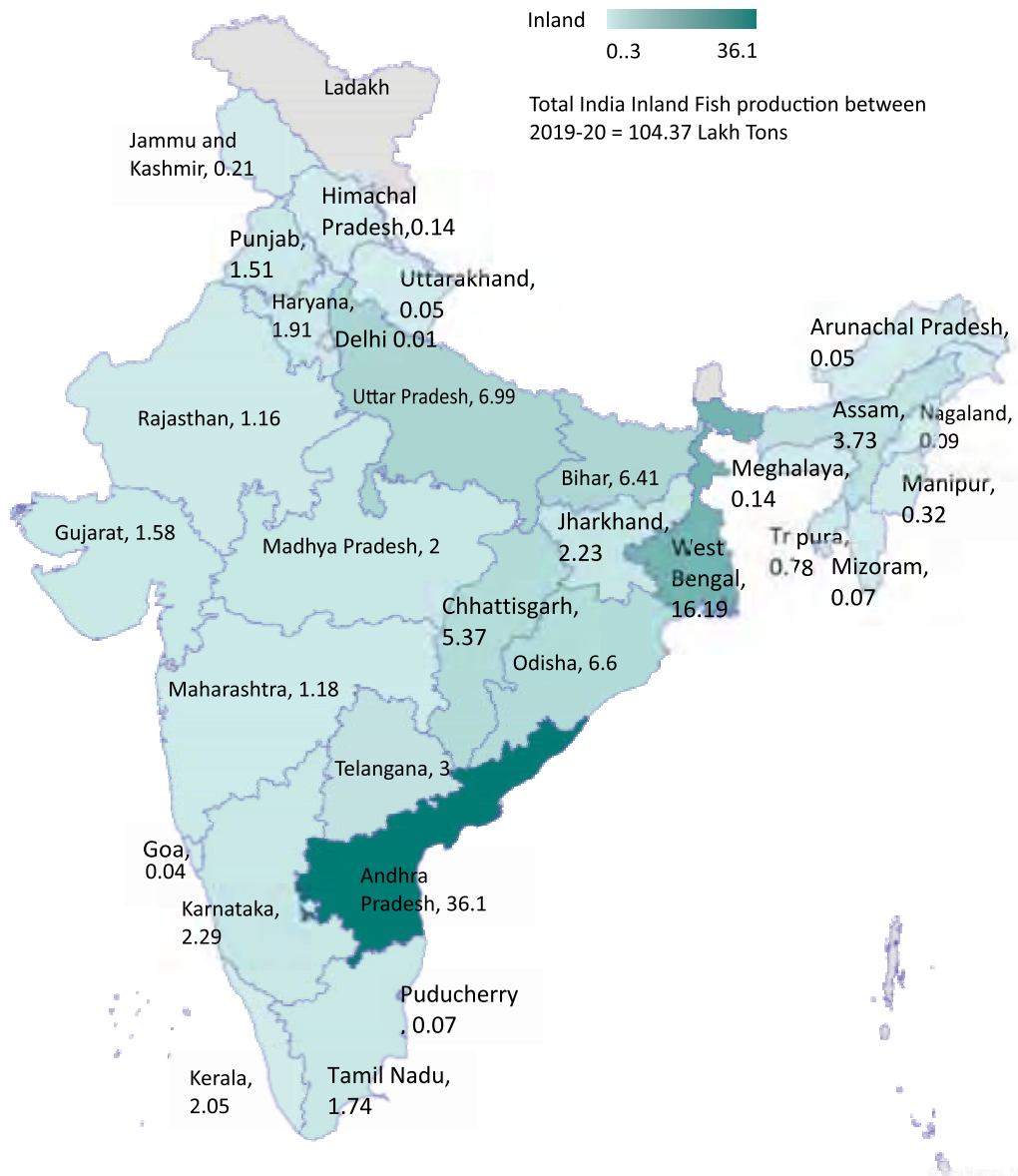


Fig 2: Inland Fish Production: 2019-20 (In Lakh Tonnes)



| Table 1.2: State-wise Fish Production, India (In Lakh Tonnes) | | | | | | | | | | |
|---|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| State/UT's | 2015-16 | | 2016-17 | | 2017-18 | | 2018-19 | | 2019-20 | |
| | Inland | Marine | Inland | Marine | Inland | Marine | Inland | Marine | Inland | Marine |
| Andhra Pradesh | 18.32 | 5.2 | 21.86 | 5.8 | 28.45 | 6.05 | 33.91 | 6 | 36.1 | 5.64 |
| Arunachal Pradesh | 0.04 | 0 | 0.04 | 0 | 0.04 | 0 | 0.05 | 0 | 0.05 | 0 |
| Assam | 2.94 | 0 | 3.07 | 0 | 3.27 | 0 | 3.31 | 0 | 3.73 | 0 |
| Bihar | 5.07 | 0 | 5.09 | 0 | 5.88 | 0 | 6.02 | 0 | 6.41 | 0 |
| Chhattisgarh | 3.42 | 0 | 3.77 | 0 | 4.57 | 0 | 4.89 | 0 | 5.72 | 0 |
| Goa | 0.05 | 1.07 | 0.04 | 1.14 | 0.06 | 1.18 | 0.05 | 1.15 | 0.04 | 1.01 |
| Gujarat | 1.12 | 6.97 | 1.17 | 6.99 | 1.38 | 7.01 | 1.42 | 6.99 | 1.58 | 7.01 |
| Haryana | 1.21 | 0 | 1.44 | 0 | 1.9 | 0 | 1.8 | 0 | 1.91 | 0 |
| Himachal Pradesh | 0.12 | 0 | 0.13 | 0 | 0.13 | 0 | 0.13 | 0 | 0.14 | 0 |
| Jharkhand | 1.16 | 0 | 1.45 | 0 | 1.9 | 0 | 2.08 | 0 | 2.23 | 0 |
| Karnataka | 1.69 | 4.12 | 1.59 | 3.99 | 1.88 | 4.14 | 1.98 | 3.9 | 2.29 | 4.03 |
| Kerala | 2.11 | 5.17 | 1.61 | 4.31 | 1.89 | 4.84 | 1.92 | 6.09 | 2.05 | 4.75 |
| Madhya Pradesh | 1.15 | 0 | 1.39 | 0 | 1.43 | 0 | 1.73 | 0 | 2 | 0 |
| Maharashtra | 1.46 | 4.34 | 2 | 4.63 | 1.31 | 4.75 | 1 | 4.68 | 1.18 | 4.43 |
| Manipur | 0.32 | 0 | 0.32 | 0 | 0.33 | 0 | 0.32 | 0 | 0.32 | 0 |
| Meghalaya | 0.11 | 0 | 0.12 | 0 | 0.12 | 0 | 0.13 | 0 | 0.14 | 0 |
| Mizoram | 0.07 | 0 | 0.08 | 0 | 0.08 | 0 | 0.07 | 0 | 0.07 | 0 |
| Nagaland | 0.08 | 0 | 0.09 | 0 | 0.09 | 0 | 0.09 | 0 | 0.09 | 0 |
| Odisha | 3.77 | 1.45 | 4.55 | 1.53 | 5.34 | 1.51 | 6 | 1.59 | 6.6 | 1.58 |
| Punjab | 1.2 | 0 | 1.33 | 0 | 1.37 | 0 | 1.35 | 0 | 1.51 | 0 |
| Rajasthan | 0.42 | 0 | 0.5 | 0 | 0.54 | 0 | 0.55 | 0 | 1.16 | 0 |
| Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | 2.43 | 4.67 | 1.97 | 4.72 | 1.85 | 4.97 | 1.7 | 5.2 | 1.74 | 5.83 |
| Telangana | 2.37 | 0 | 1.99 | 0 | 2.7 | 0 | 2.84 | 0 | 3 | 0 |
| Tripura | 0.69 | 0 | 0.72 | 0 | 0.77 | 0 | 0.7 | 0 | 0.78 | 0 |
| Uttar Pradesh | 5.05 | 0 | 6.18 | 0 | 6.29 | 0 | 6.62 | 0 | 6.99 | 0 |
| Uttarakhand | 0.04 | 0 | 0.04 | 0 | 0.05 | 0 | 0.05 | 0 | 0.05 | 0 |
| West Bengal | 14.93 | 1.78 | 15.25 | 1.77 | 15.57 | 1.85 | 16.19 | 1.63 | 16.19 | 1.63 |
| A and N Islands | 0 | 0.37 | 0 | 0.39 | 0 | 0.39 | 0 | 0.4 | 0 | 0.4 |
| Chandigarh | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0.01 | 0 |
| D & Nagar Haveli and Daman and Diu | 0 | 0.23 | 0.01 | 0.23 | 0 | 0.24 | 0 | 0.28 | 0 | 0.32 |
| Delhi | 0.01 | 0 | 0.01 | 0 | 0.01 | 0 | 0 | 0 | 0.01 | 0 |
| Jammu & Kashmir | 0.2 | 0 | 0.2 | 0 | 0.21 | 0 | 0.21 | 0 | 0.21 | 0 |
| Ladakh | - | - | - | - | - | - | - | - | 0 | 0 |
| Lakshadweep | 0 | 0.16 | 0 | 0.3 | 0 | 0.21 | 0 | 0.22 | 0 | 0.2 |
| Puducherry | 0.07 | 0.47 | 0.04 | 0.46 | 0.07 | 0.42 | 0.07 | 0.4 | 0.07 | 0.44 |
| India | 71.62 | 36 | 78.06 | 36.25 | 89.48 | 37.56 | 97.2 | 38.53 | 104.37 | 37.27 |
| Source: Department of Fisheries, States Government / UTs Administration | | | | | | | | | | |

Table 1.3: Species-wise Inland Fish landings by States and Union Territories: 2019-20 (In Lakh Tonnes)

| States/UT's | Major Carps (Catla, Rohu, Marigal) | Minor Carps | Exotic Carps | Murrels (Ophio- cephalus spp.) | Catfishes (Wallago attu, pangasius) | Other fresh water fishes | Total |
|--------------------------------|--|----------------|-----------------|-----------------------------------|---|--------------------------------|--------|
| Andhra Pradesh | 19.98 | 0 | 2.19 | 0.58 | 2.1 | 11.26 | 36.11 |
| Arunachal Pradesh | 0.01 | 0 | 0.02 | 0 | 0 | 0.02 | 0.05 |
| Assam | 1.44 | 0.48 | 0.27 | 0.25 | 0.4 | 0.89 | 3.73 |
| Bihar | 3.14 | 1.41 | 0.13 | 0.45 | 0.06 | 1.22 | 6.41 |
| Chhattisgarh | 4.32 | 0.05 | 0.52 | 0.01 | 0.43 | 0.39 | 5.72 |
| Goa | 0 | 0 | 0 | 0 | 0 | 0.04 | 0.04 |
| Gujarat | 0.41 | 0.01 | 0 | 0.02 | 0.06 | 1.08 | 1.58 |
| Haryana | 1.17 | 0.02 | 0.66 | 0 | 0.03 | 0.02 | 1.9 |
| Himachal Pradesh | 0.13 | 0 | 0 | 0 | 0 | 0.01 | 0.14 |
| Jharkhand | 1.83 | 0.02 | 0.2 | 0 | 0.18 | 0 | 2.23 |
| Karnataka | 1.04 | 0.17 | 0.78 | 0 | 0.02 | 0.28 | 2.29 |
| Kerala | 0.1 | 0 | 0.01 | 0 | 0.02 | 1.92 | 2.05 |
| Madhya Pradesh | 1.54 | 0.1 | 0.29 | 0 | 0.06 | 0.01 | 2 |
| Maharashtra | 0.78 | 0 | 0.12 | 0 | 0 | 0.28 | 1.18 |
| Manipur | 0.1 | 0.01 | 0.2 | 0 | 0 | 0.01 | 0.32 |
| Meghalaya | 0.06 | 0.02 | 0.05 | 0 | 0 | 0.01 | 0.14 |
| Mizoram | 0.03 | 0 | 0.04 | 0 | 0 | 0 | 0.07 |
| Nagaland | 0.05 | 0 | 0.04 | 0 | 0 | 0 | 0.09 |
| Odisha | 3.96 | 0.4 | 0.79 | 0.04 | 0.11 | 1.3 | 6.6 |
| Punjab | 0.85 | 0.02 | 0.61 | 0 | 0.02 | 0.01 | 1.51 |
| Rajasthan | 0.42 | 0.1 | 0.04 | 0 | 0.02 | 0.58 | 1.16 |
| Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | 0.54 | 0 | 0.21 | 0.03 | 0.05 | 0.91 | 1.74 |
| Telangana | 1.45 | 0.16 | 0.4 | 0.38 | 0.2 | 0.41 | 3 |
| Tripura | 0.51 | 0.08 | 0.17 | 0 | 0.01 | 0.01 | 0.78 |
| Uttar Pradesh* | 5.61 | 1.27 | - | 0 | 0.08 | 0.03 | 6.99 |
| Uttarakhand | 0.02 | 0 | 0.01 | 0 | 0.01 | 0.01 | 0.05 |
| West Bengal | 9.96 | 0.55 | 1.93 | 0.25 | 0.44 | 3.06 | 16.19 |
| A and N Islands | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chandigarh | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.01 |
| Daman and Diu, D & N haveli | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delhi | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Jammu & Kashmir | 0.01 | 0.01 | 0.12 | 0 | 0.01 | 0.06 | 0.21 |
| Ladakh | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lakshadweep | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Puducherry | 0.03 | 0.01 | 0.01 | 0 | 0.01 | 0.01 | 0.07 |
| Total | 59.5 | 4.89 | 9.81 | 2.01 | 4.32 | 23.84 | 104.37 |

Source: Department of Fisheries, States Government / UTs Administration

*Uttar Pradesh: 561000 (Including Exotic Carps)

**Table 1.4: Species-wise Marine fish Landings by Coastal States and Union Territories: 2019-20 (In Lakh Tonnes)
(East Coast)**

| Species | Andhra Pradesh | Odisha | Tamil Nadu | West Bengal | A and N Islands | Puducherry | Total |
|--|----------------|--------|------------|-------------|-----------------|------------|-------|
| Sharks (Selachimorpha) | 0.18 | 0.02 | 0 | 0 | 0 | 0 | 0.2 |
| Skates/Guitarfish (Rajidae) | 0.14 | 0.01 | 0.04 | 0.09 | 0.02 | 0 | 0.3 |
| Rays (Batoidea) | 0.09 | 0.01 | 0 | 0 | 0 | 0.01 | 0.11 |
| Eels (Anguilliformes) | 0.08 | 0.03 | 0.08 | 0 | 0 | 0 | 0.19 |
| Catfishes (Siluriformes) | 0.21 | 0.12 | 0.01 | 0.2 | 0 | 0.01 | 0.55 |
| Indian Oil sardine (<i>Sardinella longiceps</i>) | 0.3 | 0.07 | 0.06 | 0.05 | 0.04 | 0.05 | 0.57 |
| Other sardines (<i>Sardinella fimbriata</i> and others) | 0.17 | 0.04 | 0.3 | 0 | 0 | 0.03 | 0.54 |
| Hilsa shad (<i>Tenualosa ilisha</i>) | 0.08 | 0.04 | 0.44 | 0.2 | 0 | 0 | 0.76 |
| Other shads (Alosinae) | 0.03 | 0.04 | 0 | 0 | 0 | 0 | 0.07 |
| Coilia (Coilia spp) | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| Setipinna (Setipinna spp) | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| Stolephorus (Stolephorus spp) | 0.08 | 0 | 0 | 0 | 0 | 0 | 0.08 |
| Thryssa (Thryssa spp) | 0.05 | 0.03 | 0.23 | 0 | 0 | 0 | 0.31 |
| Wolf herring (Chirocentrus spp.) | 0.01 | 0.02 | 0.04 | 0 | 0 | 0 | 0.07 |
| Other clupeids | 0.45 | 0.1 | 0.26 | 0 | 0 | 0.01 | 0.82 |
| BOMBAY DUCK (<i>Harpodon nehereus</i>) | 0.04 | 0.02 | 0 | 0 | 0 | 0 | 0.06 |
| LIZARD FISHES (Synodontidae) | 0.03 | 0 | 0.06 | 0 | 0 | 0.01 | 0.1 |
| HALF BEAKS&FULL BEAKS (Hemiramphidae & Belonidae) | 0.01 | 0 | 0.06 | 0 | 0 | 0 | 0.07 |
| FLYING FISHES (Exocoetidae) | 0.01 | 0 | 0.11 | 0 | 0 | 0.01 | 0.13 |
| Rock cods (<i>Lotella rhacina</i>) | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| Snappers (Lutjanidae) | 0.01 | 0.01 | 0 | 0 | 0.05 | 0 | 0.07 |
| Pig-face bream (Lethrinidae) | 0.03 | 0 | 0.14 | 0 | 0 | 0 | 0.17 |
| Threadfin bream (Nemipteridae) | 0.09 | 0.02 | 0.09 | 0 | 0 | 0.01 | 0.21 |
| Grouper (Epinephelinae) | 0.09 | 0 | 0 | 0 | 0 | 0 | 0.09 |
| Cobia (<i>Rachycentron canadum</i>) | 0 | 0 | 0.01 | 0 | 0 | 0 | 0.01 |
| Seabass (<i>Lates calcarifer</i>) | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.01 |
| Other perches & perch like | 0.07 | 0.02 | 0.26 | 0.09 | 0 | 0.01 | 0.45 |
| GOATFISHES (Mullidae) | 0.09 | 0 | 0.15 | 0 | 0 | 0 | 0.24 |
| THREADFINS (Polynemidae) | 0.08 | 0.03 | 0.05 | 0 | 0 | 0.01 | 0.17 |
| CROAKERS (Sciaenidae) | 0.08 | 0.05 | 0.15 | 0.12 | 0.01 | 0 | 0.41 |
| RIBBON FISHES (Trachipteridae) | 0.12 | 0.05 | 0.09 | 0 | 0 | 0.01 | 0.27 |
| Horse Mackerel (Caranx & Trichiurus) | 0.01 | 0.01 | 0.25 | 0.2 | 0 | 0.01 | 0.48 |
| Scads (Decapterus spp.) | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Leather-jackets (<i>Oligoplites saurus</i>) | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Pompano (Trachynotus spp.) | 0 | 0.01 | 0.02 | 0 | 0 | 0 | 0.03 |

**Table 1.4: Species-wise Marine fish Landings by Coastal States and Union Territories: 2019-20 (In Lakh Tonnes)
(East Coast)**

| Species | Andhra Pradesh | Odisha | Tamil Nadu | West Bengal | A and N Islands | Puducherry | Total |
|---|----------------|--------|------------|-------------|-----------------|------------|-------|
| Other carangids | 0 | 0 | 0 | 0.1 | 0.03 | 0 | 0.13 |
| SILVERBELLIES (Gerridae) | 0.01 | 0.01 | 0.3 | 0 | 0.03 | 0.02 | 0.37 |
| BIG-JAWED JUMPER (<i>Lactarius lactarius</i>) | 0 | 0 | 0.07 | 0 | 0 | 0 | 0.07 |
| Black pomfret (<i>Parastromatius niger</i>) | 0.28 | 0.04 | 0.01 | 0 | 0 | 0.01 | 0.34 |
| Silver pomfret (<i>Pampus argenteus</i>) | 0.15 | 0.03 | 0.01 | 0 | 0 | 0 | 0.19 |
| Indian mackerel (<i>Rastrelliger kanagurta</i>) | 0.19 | 0.06 | 0.24 | 0.08 | 0 | 0.02 | 0.59 |
| Other mackerels | 0.13 | 0.01 | 0 | 0 | 0.03 | 0 | 0.17 |
| Scomberomorus spp. | 0 | 0.04 | 0.1 | 0 | 0.01 | 0.01 | 0.16 |
| Acanthocybium solandri | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kawa kawa (<i>Euthynnus affinis</i>) | 0 | 0.01 | 0.26 | 0 | 0.02 | 0 | 0.29 |
| Frigate tuna (<i>Auxis</i> spp) | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Skipjack tuna (<i>Katsuwonus pelamis</i>) | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| Longtail tuna (<i>Thunnus tonggol</i>) | 0.01 | 0 | 0 | 0 | 0 | 0.01 | 0.02 |
| Yellowfin tuna (<i>Thunnus albacares</i>) | 0.12 | 0 | 0 | 0 | 0 | 0 | 0.12 |
| Other tunnies | 0.11 | 0 | 0 | 0 | 0 | 0 | 0.11 |
| BILL FISHES (Xiphiidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BARRACUDAS (Sphyræna spp) | - | 0 | 0.08 | 0 | 0.01 | 0.01 | 0.1 |
| MULLET (Mugilidae) | 0.12 | 0.06 | 0.03 | 0.1 | 0.01 | 0.04 | 0.36 |
| UNICORN COD (<i>Bregmaceros maclellandii</i>) | - | 0 | 0 | 0 | 0 | 0 | 0 |
| Halibut (<i>Hippoglossus</i> spp) | 0.04 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| Flounders (Pleuronectoidei) | - | 0 | 0 | 0 | 0 | 0 | 0 |
| Soles (Soleidae) | - | 0.02 | 0.07 | 0 | 0 | 0.01 | 0.1 |
| Penaeid prawns (Penaeidae) | 1.08 | 0.4 | 0.02 | 0.07 | 0 | 0.03 | 1.6 |
| Non-penaeid prawns (Sergestidae) | 0.18 | 0.04 | 0.38 | 0.03 | 0 | 0 | 0.63 |
| Lobsters (Nephropidae) | 0.01 | 0 | 0.03 | 0 | 0 | 0 | 0.04 |
| Crabs (Brachyura) | 0.05 | 0.05 | 0.01 | 0 | 0.01 | 0.01 | 0.13 |
| Stomatopods (Stomatopoda) | 0 | 0.02 | 0.17 | 0 | 0 | 0 | 0.19 |
| Bivalves (Bivalvia) | 0 | 0 | 0.08 | 0 | 0 | 0 | 0.08 |
| Gastropods (Gastropoda) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Squids (Decapodiformes) | 0.01 | 0.04 | 0 | 0 | 0 | 0.01 | 0.06 |
| Cuttlefish (Sepida) | 0.01 | 0 | 0.11 | 0 | 0 | 0 | 0.12 |
| Octopus (Octopoda) | 0 | 0 | 0.11 | 0 | 0 | 0 | 0.11 |
| MISCELLANEOUS | 0.36 | 0 | 0.85 | 0.3 | 0.13 | 0.07 | 1.71 |
| Overall Total | 5.64 | 1.58 | 5.83 | 1.63 | 0.4 | 0.44 | 15.52 |
| Source: Department of Fisheries, States Government / UTs Administration | | | | | | | |

**Table 1.4: Species-wise Marine fish Landings by Coastal States and Union Territories: 2019-20 (In Lakh Tonnes)
(West Coast)**

| Species | Goa | Gujarat | Karnataka | Kerala | Maharashtra | D&Diu, D&N Haveli | Lakshadweep | Total |
|--|------|---------|-----------|--------|-------------|----------------------|-------------|-------|
| Sharks (Selachimorpha) | 0.01 | 0.09 | 0.01 | 0.01 | 0.08 | 0 | 0 | 0.2 |
| Skates/Guitarfish (Rajidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rays (Batoidea) | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0.01 |
| Eels (Anguilliformes) | 0 | 0.03 | 0.01 | 0.01 | 0.02 | 0 | 0 | 0.07 |
| Catfishes (Siluriformes) | 0.01 | 0.27 | 0.03 | 0 | 0.09 | 0.01 | 0 | 0.41 |
| Indian Oil sardine (<i>Sardinella longiceps</i>) | 0.05 | 0 | 0.16 | 0.45 | 0.11 | 0 | 0 | 0.77 |
| Other sardines (<i>Sardinella fimbriata</i> and others) | 0.04 | 0 | 0.1 | 0.33 | 0 | 0 | 0 | 0.47 |
| Hilsa shad (<i>Tenualosa ilisha</i>) | 0 | 0.02 | 0.01 | 0 | 0.03 | 0 | 0 | 0.06 |
| Other shads (Alosinae) | 0 | 0 | 0.02 | 0 | 0.27 | 0 | 0 | 0.29 |
| Coilia (<i>Coilia</i> spp) | 0 | 0.22 | 0.03 | 0 | 0 | 0.02 | 0 | 0.27 |
| Setipinna (<i>Setipinna</i> spp) | 0 | 0 | 0.05 | 0 | 0 | 0 | 0 | 0.05 |
| Stolephorus (<i>Stolephorus</i> spp) | 0 | 0 | 0 | 0.58 | 0 | 0 | 0 | 0.58 |
| Thryssa (<i>Thryssa</i> spp) | 0 | 0 | 0.02 | 0.07 | 0.05 | 0 | 0 | 0.14 |
| Wolf herring (<i>Chirocentrus</i> spp.) | 0 | 0 | 0.02 | 0 | 0.04 | 0 | 0 | 0.06 |
| Other clupeids | 0 | 0.12 | 0.17 | 0.06 | 0.01 | 0 | 0 | 0.36 |
| BOMBAY DUCK (<i>Harpadon nehereus</i>) | 0 | 0.89 | 0 | 0 | 0.32 | 0 | 0 | 1.21 |
| LIZARD FISHES (Synodontidae) | 0 | 0 | 0.12 | 0.17 | 0.04 | 0 | 0 | 0.33 |
| HALF BEAKS&FULL BEAKS (Hemiramphidae & Belonidae) | 0 | 0 | 0.01 | 0.01 | 0 | 0 | 0 | 0.02 |
| FLYING FISHES (Exocoetidae) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rock cods (<i>Lotella rhacina</i>) | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0.03 |
| Snappers (Lutjanidae) | 0 | 0 | 0.07 | 0.01 | 0 | 0 | 0 | 0.08 |
| Pig-face bream (Lethrinidae) | 0 | 0 | 0.05 | 0 | 0.03 | 0 | 0 | 0.08 |
| Threadfin bream (Nemipteri- dae) | 0 | 0 | 0.32 | 0.28 | 0 | 0 | 0 | 0.6 |
| Grouper (Epinephelinae) | 0.01 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0.02 |
| Cobia (<i>Rachycentron canadum</i>) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seabass (<i>Lates calcarifer</i>) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other perches & perch | 0 | 0.11 | 0.28 | 0.08 | 0 | 0 | 0 | 0.47 |
| GOATFISHES (Mullidae) | 0 | 0 | 0 | 0 | 0.11 | 0 | 0 | 0.11 |
| THREADFINS (Polynemidae) | 0.01 | 0.04 | 0 | 0 | 0.03 | 0 | 0 | 0.08 |
| CROAKERS (Sciaenidae) | 0.02 | 1.33 | 0.08 | 0.05 | 0.05 | 0.02 | 0 | 1.55 |
| RIBBON FISHE (Trachipteridae) | 0.01 | 0.5 | 0.18 | 0.05 | 0.27 | 0.18 | 0 | 1.19 |
| Horse Mackerel (<i>Caranx</i> & <i>Trichiurus</i>) | 0.01 | 0 | 0.07 | 0.02 | 0.11 | 0 | 0 | 0.21 |
| Scads (<i>Decapterus</i> spp.) | 0 | 0 | 0.2 | 0.16 | 0 | 0 | 0 | 0.36 |
| Leather-jackets (<i>Oligoplites saurus</i>) | 0.01 | 0.07 | 0.01 | 0 | 0 | 0.02 | 0 | 0.11 |
| Pompano (<i>Trachynotus</i> spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Table 1.4: Species-wise Marine fish Landings by Coastal States and Union Territories: 2019-20 (In Lakh Tonnes)
(West Coast)**

| Species | Goa | Gujarat | Karnataka | Kerala | Maharashtra | D&Diu, D&N Haveli | Lakshadweep | Total |
|---|------|---------|-----------|--------|-------------|----------------------|-------------|-------|
| Other carangids () | 0.02 | 0.13 | 0.08 | 0.23 | 0 | 0 | 0 | 0.46 |
| SILVERBELLIES (Gerridae) | 0.04 | 0.09 | 0.07 | 0.03 | 0 | 0 | 0 | 0.23 |
| BIG-JAWED JUMPER <i>Lactarius lactarius</i>) | 0.01 | 0 | 0.06 | 0.01 | 0.04 | 0 | 0 | 0.12 |
| Black pomfret (<i>Parastromatius niger</i>) | 0 | 0.04 | 0.04 | 0.01 | 0.02 | 0.01 | 0 | 0.12 |
| Silver pomfret (<i>Pampus argenteus</i>) | 0.01 | 0.11 | 0.03 | 0.01 | 0.18 | 0.01 | 0 | 0.35 |
| Indian mackerel (<i>Rastrelliger kanagurta</i>) | 0.26 | 0 | 0.5 | 0.36 | 0.22 | 0 | 0 | 1.34 |
| Other mackerels | 0 | 0 | 0.07 | 0 | 0 | 0 | 0 | 0.07 |
| <i>Scomberomorus</i> spp. | 0.02 | 0.12 | 0.04 | 0.04 | 0.11 | 0 | 0 | 0.33 |
| <i>Acanthocybium solandri</i> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kawa kawa (<i>Euthynnus affinis</i>) | 0 | 0 | 0.11 | 0.05 | 0.14 | 0 | 0.01 | 0.31 |
| Frigate tuna (<i>Auxis</i> spp) | 0.08 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.09 |
| Skipjack tuna (<i>Katsuwonus pelamis</i>) | 0 | 0 | 0 | 0.04 | 0 | 0 | 0.08 | 0.12 |
| Longtail tuna (<i>Thunnus tonggol</i>) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yellowfin tuna (<i>Thunnus albacares</i>) | 0 | 0.07 | 0 | 0.07 | 0 | 0 | 0.05 | 0.19 |
| Other tunnies | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.01 |
| BILL FISHES (<i>Xiphiidae</i>) | 0 | 0 | 0.01 | 0.04 | 0 | 0 | 0 | 0.05 |
| BARRACUDAS (<i>Sphyrna</i> spp) | 0 | 0 | 0.05 | 0.03 | 0.05 | 0 | 0 | 0.13 |
| MULLET (<i>Mugilidae</i>) | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | 0.06 |
| UNICORN COD (<i>Bregmaceros maclellandii</i>) | 0 | 0 | 0.13 | 0 | 0 | 0 | 0 | 0.13 |
| Halibut (<i>Hippoglossus</i> spp) | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0.03 |
| Flounders (<i>Pleuronectoidei</i>) | 0 | 0 | 0.02 | 0 | 0 | 0 | 0 | 0.02 |
| Soles (<i>Soleidae</i>) | 0.01 | 0.11 | 0.05 | 0.14 | 0.09 | 0 | 0 | 0.4 |
| Penaeid prawns (<i>Penaeidae</i>) | 0.05 | 0.12 | 0.22 | 0.4 | 0.43 | 0 | 0 | 1.22 |
| Non-penaeid prawns (<i>Sergestidae</i>) | 0 | 0.41 | 0 | 0.03 | 0.49 | 0 | 0 | 0.93 |
| Lobsters (<i>Nephropidae</i>) | 0 | 0.02 | 0 | 0 | 0.01 | 0 | 0 | 0.03 |
| Crabs (<i>Brachyura</i>) | 0.01 | 0.06 | 0.03 | 0.05 | 0.04 | 0 | 0 | 0.19 |
| Stomatopods (<i>Stomatopoda</i>) | 0 | 0 | 0.19 | 0 | 0 | 0 | 0 | 0.19 |
| Bivalves (<i>Bivalvia</i>) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gastropods (<i>Gastropoda</i>) | 0 | 0 | 0 | 0.02 | 0 | 0 | 0 | 0.02 |
| Squids (<i>Decapodiformes</i>) | 0.02 | 0 | 0.17 | 0.18 | 0 | 0.03 | 0 | 0.4 |
| Cuttlefish (<i>Sepida</i>) | 0 | 0.36 | 0.07 | 0.12 | 0.32 | 0.01 | 0 | 0.88 |
| Octopus (<i>Octopoda</i>) | 0 | 0 | 0.02 | 0.05 | 0 | 0 | 0 | 0.07 |
| MISCELLANEOUS | 0.3 | 1.62 | 0.02 | 0.46 | 0.62 | 0.01 | 0.04 | 3.07 |
| Overall Total | 1.01 | 7.01 | 4.03 | 4.75 | 4.43 | 0.32 | 0.2 | 21.75 |

Source: Department of Fisheries, State Govt./ UT's Administration

| Table 1.5: Preserved and Processed Commodities by states/Union Territories: 2019-20 (In Lakh Tonnes) | | | | | | | | | | |
|--|-------------|--------------------|-----------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------|---------------------|----------------------------|--------------------|
| States/UT's | Tuna Frozen | Marine Fish Frozen | Fish Dried, Un-salted | Fish Dried & Salted or smoked | Shark fins, Dried, Salted etc | Frozen Whole cooked Lobster | Shrimp & Prawn Frozen | Dried Prawn/ Shrimp | Frozen Cut-tlefish fillets | Fish meals soluble |
| Andhra Pradesh | 0.01 | 0.05 | 0 | 0 | 0 | 0 | 3.35 | 0 | 0.01 | 0 |
| Arunachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assam | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bihar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chhattisgarh | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gujarat | 0 | 1.32 | 2.2 | 1.36 | 0 | 0 | 0.06 | 0 | 0 | 0 |
| Haryana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Himachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | 0.03 | 0.32 | 0.08 | 0.19 | 0 | 0 | 0.04 | 0 | 0 | 0.06 |
| Kerala | 0 | 0.6 | 0.13 | 0.52 | 0 | 0 | 0.64 | 0.01 | 0 | 0 |
| Madhya Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maharashtra | 0 | 1.04 | 0.10 | 0.04 | 0 | 0.21 | 0 | 0.04 | 0.06 | 0 |
| Manipur | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Meghalaya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mizoram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nagaland | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| Odisha | 0 | 0.01 | 0 | 0 | 0 | 0 | 0.65 | 0 | 0 | 0 |
| Punjab | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | 0.11 | 0.47 | 0 | 0 | 0 | 0 | 0.8 | 0 | 0.04 | 0 |
| Telangana | 0 | 0 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tripura | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttar Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttarakhand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| West Bengal | 0 | 0.05 | 0.04 | 0 | 0.07 | 0 | 0.77 | 0 | 0.05 | 0 |
| A and N Islands | 0 | 0.02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chandigarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daman and Diu, D & Nagar Haveli | 0 | 0.22 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 |
| Delhi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jammu & Kashmir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ladakh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lakshadweep | 0.01 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| Puducherry | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0.16 | 4.11 | 2.64 | 2.14 | 0.07 | 0.21 | 6.32 | 0.05 | 0.16 | 0.06 |

Table 1.5: Preserved and Processed Commodities by states/Union Territories: 2019-20 (In Lakh Tonnes)

| States/UT's | Frozen Squids | Dried Squids | Yellow-fin tuna, frozen | Mackerels, frozen | Fish, salted & dried | Lobsters, Whole, frozen | Jellyfish, dried, salted or in brine | Miscellaneous | Overall Total |
|---------------------------------|---------------|--------------|-------------------------|-------------------|----------------------|-------------------------|--------------------------------------|---------------|---------------|
| Andhra Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.07 | 3.49 |
| Arunachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Assam | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bihar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chhattisgarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Goa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gujarat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.56 | 5.5 |
| Haryana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Himachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jharkhand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Karnataka | 0.08 | 0 | 0 | 0.18 | 0.01 | 0 | 0 | 0 | 0.99 |
| Kerala | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.9 |
| Madhya Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maharashtra | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.65 |
| Manipur | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Meghalaya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mizoram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nagaland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Odisha | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.66 |
| Punjab | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rajasthan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sikkim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tamil Nadu | 0.05 | 0 | 0 | 0 | 0.36 | 0 | 0 | 0.12 | 1.95 |
| Telangana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.09 |
| Tripura | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttar Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttarakhand | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| West Bengal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.14 | 1.12 |
| A and N Islands | 0 | 0 | 0 | 0 | 0.07 | 0 | 0 | 0 | 0.09 |
| Chandigarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daman and Diu, D & Nagar Haveli | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.26 |
| Jammu & Kashmir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delhi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ladakh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lakshadweep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 |
| Puducherry | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0.02 |
| Total | 0.32 | 0 | 0 | 0.18 | 0.45 | 0 | 0 | 0.89 | 17.76 |

Source: Department of Fisheries, States Government / UTs Administration

| Table 1.6 : Year-wise Fish Seed Production in India | | |
|---|---------|------------------------|
| S.N. | Year | Production (Lakhs fry) |
| 1 | 1985-86 | 63,220 |
| 2 | 1986-87 | 76,010 |
| 3 | 1987-88 | 86,080 |
| 4 | 1988-89 | 93,250 |
| 5 | 1989-90 | 96,910 |
| 6 | 1990-91 | 1,03,320 |
| 7 | 1991-92 | 1,22,030 |
| 8 | 1992-93 | 1,25,000 |
| 9 | 1993-94 | 1,42,390 |
| 10 | 1994-95 | 1,45,440 |
| 11 | 1995-96 | 1,50,070 |
| 12 | 1996-97 | 1,58,520 |
| 13 | 1997-98 | 1,59,040 |
| 14 | 1998-99 | 1,51,560 |
| 15 | 1999-00 | 1,65,890 |
| 16 | 2000-01 | 1,56,080 |
| 17 | 2001-02 | 1,57,580 |
| 18 | 2002-03 | 1,63,330 |
| 19 | 2003-04 | 1,92,310 |
| 20 | 2004-05 | 2,07,910 |
| 21 | 2005-06 | 2,19,880 |
| 22 | 2006-07 | 2,36,480 |
| 23 | 2007-08 | 2,41,440 |
| 24 | 2008-09 | 3,21,770 |
| 25 | 2009-10 | 2,93,130 |
| 26 | 2010-11 | 3,41,095 |
| 27 | 2011-12 | 3,65,651 |
| 28 | 2012-13 | 3,49,202 |
| 29 | 2013-14 | 4,14,484 |
| 30 | 2014-15 | 3,93,487 |
| 31 | 2015-16 | 3,54,350 |
| 32 | 2016-17 | 3,57,439 |
| 33 | 2017-18 | 4,44,207 |
| 34 | 2018-19 | 4,81,974 |
| 35 | 2019-20 | 5,21,706 |

Source: Director of Fisheries, State Govt. / UT's Administration

Fig 3: Total Fish Seed Production, India (Lakhs Fry)

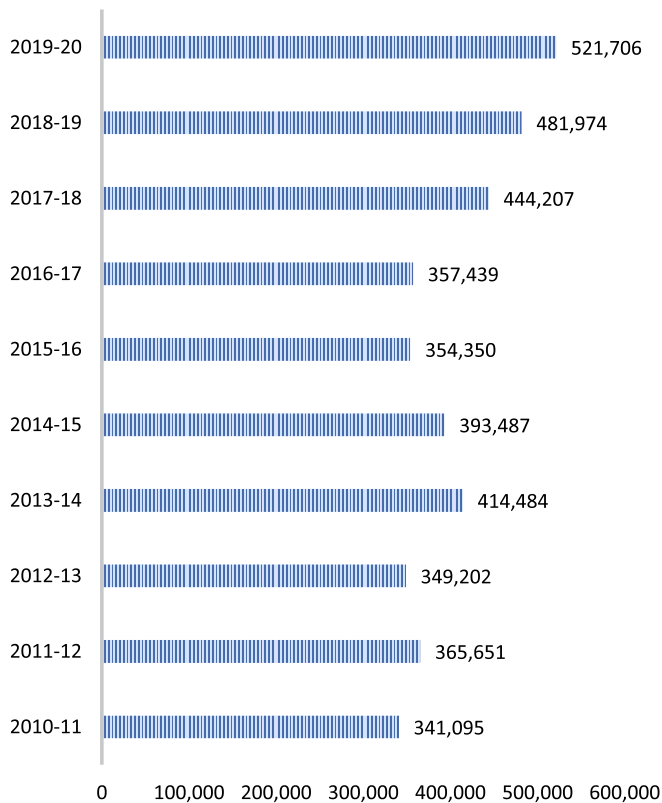


Table 1.7 : State-wise Fish Seed Production in India (lakhs Fry)

| State/Union Territory | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|---|----------|----------|----------|----------|----------|-----------|
| Andhra Pradesh | 7097 | 7923 | 8845 | 8842 | 5358 | 38065 |
| Arunachal Pradesh | 55 | 65 | 70 | 0 | 0 | 190 |
| Assam | 56780 | 67580 | 80000 | 98930 | 95190 | 398480 |
| Bihar | 5241 | 7932.2 | 9206 | 9286.5 | 13727.18 | 45392.88 |
| Chhattisgarh | 14917.2 | 19750.4 | 22186 | 25131.8 | 27386.8 | 109372.2 |
| Goa | 8 | 6 | 7 | 6 | 3 | 30 |
| Gujarat | 2845.2 | 5529.3 | 1852.3 | 6340.5 | 26083.7 | 42651 |
| Haryana | 6140.2 | 7046 | 4776.8 | 4229.6 | 4538.06 | 27630.66 |
| Himachal Pradesh | 599.2 | 625 | 47 | 18.3 | 6.8 | 1296.3 |
| Jharkhand | 17023.9 | 41501 | 103349.1 | 103629 | 105692.4 | 371195.4 |
| Karnataka | 5915.2 | 4998.8 | 2481.1 | 6298 | 5816.5 | 25509.6 |
| Kerala | 1668.8 | 1770.9 | 1730.4 | 944.42 | 1282 | 7396.52 |
| Madhya Pradesh | 9520.5 | 11113 | 11172.3 | 13729.83 | 14592.09 | 60127.72 |
| Maharashtra | 989.6 | 1895.5 | 6250 | 2810.87 | 13662.7 | 25608.67 |
| Manipur | 2190 | 2150 | 2500 | 4060.8 | 2494.8 | 13395.6 |
| Meghalaya | 110.7 | 75.6 | 97 | 0 | 3 | 286.3 |
| Mizoram | 300 | 310 | 426 | 406.6 | 400 | 1842.6 |
| Nagaland | 478 | 480 | 481 | 760 | 795 | 2994 |
| Odisha | 8985.3 | 7782.8 | 8077.4 | 8962.4 | 9471.6 | 43279.5 |
| Punjab | 2347.5 | 2375 | 2779.8 | 2977.4 | 2642.35 | 13122.05 |
| Rajasthan | 8718.4 | 10988.6 | 10653 | 10329.3 | 12264.1 | 52953.4 |
| Sikkim | 20.2 | 23.2 | 6.5 | 16.25 | 16.25 | 82.4 |
| Tamil Nadu | 4156.6 | 5732 | 5572.8 | 13008.7 | 19426.88 | 47896.98 |
| Telangana | 381.9 | 1876 | 4179 | 6500 | 5500 | 18436.9 |
| Tripura | 2987.6 | 3137 | 4350 | 0 | 0 | 10474.6 |
| Uttarakhand | 629 | 746.5 | 678.8 | 655.6 | 289.6 | 2999.5 |
| Uttar Pradesh | 18299.3 | 27535.6 | 27128.7 | 29342.1 | 30287.8 | 132593.5 |
| West Bengal | 175210 | 115700 | 124550 | 124550 | 124550 | 664560 |
| A & N Islands | 107.4 | 12.8 | 14.7 | 0 | 0 | 134.9 |
| Chandigarh | 8 | 8 | 8 | 0.8 | 0.8 | 25.6 |
| Daman and Diu and Dadra & Nagar Haveli | 0 | 0 | 0 | 0 | 0 | 0 |
| Delhi | 0 | 0 | 20 | 2 | 15 | 37 |
| Jammu & Kashmir | 620 | 770 | 712 | 205.6 | 209.7 | 2517.3 |
| Ladakh | 0 | 0 | 0 | 0 | 0 | 0 |
| Lakshadweep | 0 | 0 | 0 | 0 | 0 | 0 |
| Puducherry | 0 | 0 | 0 | 0 | 0 | 0 |
| INDIA | 354350.7 | 357439.2 | 444207.7 | 481974.4 | 521706.1 | 2159678.1 |

Source: Director of Fisheries, States Government / UTs Administration

CHAPTER 2

DISPOSITION OF FISH



Fig 4. Total of Disposition of Fish Catch, 2019-20 (In Lakh Tonnes): Top ten

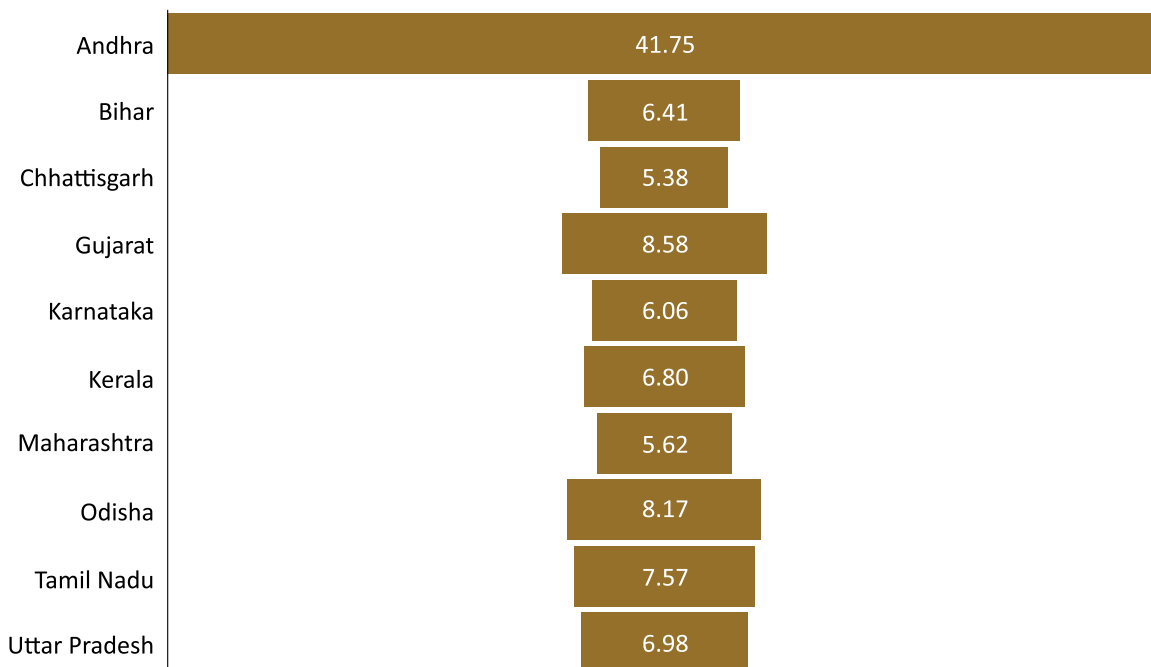


Fig 5. Year-wise Disposition of Fish Catch (In Lakh Tonnes)

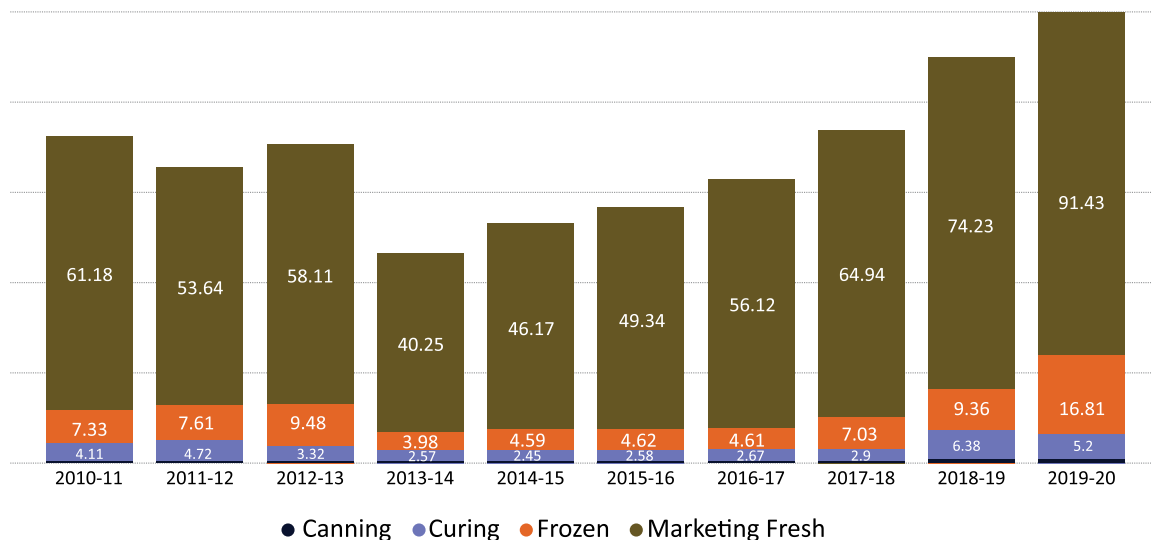


Table 2.1: Year-wise Disposition of Fish Catch (In Lakh Tonnes)

| Year | Marketing Fresh | Fro-zen | Curing | Can-ning | Reduc-tion | Miscella-neous | Offal for Reduction | Unspeci-fied | Others | Total |
|---------|-----------------|---------|--------|----------|------------|----------------|---------------------|--------------|--------|--------|
| 1991-92 | 27.06 | 2.65 | 6.13 | 0.3 | 3.33 | 0.47 | 0.47 | 0 | 0 | 40.41 |
| 1992-93 | 27.98 | 2.84 | 5.9 | 0.25 | 3.55 | 0.7 | 0.47 | 0 | 0 | 41.69 |
| 1993-94 | 31.05 | 3.09 | 6.44 | 0.09 | 3.72 | 0.16 | 0.87 | 0 | 0 | 45.42 |
| 1994-95 | 32.5 | 3.1 | 6.51 | 0.12 | 3.97 | 0.39 | 0.74 | 0 | 0 | 47.33 |
| 1995-96 | 34.27 | 3.2 | 6.32 | 0.13 | 3.58 | 0.38 | 0.4 | 0 | 0 | 48.28 |
| 1996-97 | 37.84 | 3.92 | 6.39 | 0.11 | 3.13 | 0.22 | 0.39 | 0 | 0 | 52 |
| 1997-98 | 38.74 | 4.21 | 6.02 | 0.14 | 3.45 | 0.18 | 1.02 | 0 | 0 | 53.76 |
| 1998-99 | 38.66 | 3.9 | 5.68 | 0.12 | 3.03 | 0.19 | 0.83 | 0 | 0 | 52.41 |
| 1999-00 | 42.06 | 2.84 | 4.21 | 0.17 | 2.96 | 0.53 | 0.09 | 0.7 | 0.29 | 53.85 |
| 2000-01 | 42.87 | 2.76 | 3.39 | 0.5 | 3.17 | 0.01 | 0.34 | 0.69 | 2.36 | 56.09 |
| 2001-02 | 47.77 | 2.64 | 3.46 | 0.53 | 3.08 | 0.16 | 0.43 | 0.72 | 0.47 | 59.26 |
| 2002-03 | 47.89 | 3.32 | 3.88 | 0.23 | 2.65 | 0.42 | 0.01 | 0.16 | 0.16 | 58.72 |
| 2003-02 | 48.28 | 3.07 | 3.63 | 0.36 | 2.77 | 0.4 | 0.01 | 0.12 | 0.16 | 58.8 |
| 2004-05 | 52.83 | 3.85 | 3.3 | 0.45 | 2.69 | 0.01 | 0.4 | 0.16 | 0.17 | 63.86 |
| 2005-04 | 54.68 | 3.9 | 3.3 | 0.24 | 2.84 | 0.34 | 0.01 | 0.17 | 0.26 | 65.74 |
| 2006-07 | 55.59 | 3.96 | 3.44 | 0.24 | 2.95 | 0.36 | 0.01 | 0.14 | 0.15 | 66.84 |
| 2007-08 | 60.37 | 4.24 | 3.67 | 0.25 | 3.34 | 0.14 | 0.01 | 0.16 | 0.15 | 72.33 |
| 2008-09 | 58.04 | 3.78 | 3.35 | 0.31 | 3.13 | 0.45 | 0.01 | 0.17 | 0.15 | 69.39 |
| 2009-10 | 59.55 | 4.35 | 3.47 | 0.33 | 2.91 | 0.61 | 0 | 0.19 | 0.47 | 71.88 |
| 2010-11 | 61.18 | 7.33 | 4.11 | 0.47 | 2.83 | 0.74 | 0.01 | 1.37 | 1.83 | 79.87 |
| 2011-12 | 53.64 | 7.61 | 4.72 | 0.39 | 2.98 | 0 | 73 | 0.63 | 1.71 | 144.68 |
| 2012-13 | 58.11 | 9.48 | 3.32 | 0.42 | 3.01 | 0 | 1.51 | 0.71 | 1.68 | 78.24 |
| 2013-14 | 40.25 | 3.98 | 2.52 | 0.44 | 3.24 | 0 | 0.76 | 0.2 | 2 | 53.39 |
| 2014-15 | 46.17 | 4.59 | 2.45 | 0.43 | 3.33 | 0 | 0.9 | 0.21 | 2.18 | 60.26 |
| 2015-16 | 49.34 | 4.62 | 2.58 | 0.52 | 3.21 | 0 | 1.06 | 0.22 | 0.2 | 61.75 |
| 2016-17 | 56.12 | 4.61 | 2.67 | 0.5 | 3.25 | 0 | 1.2 | 0.29 | 2.4 | 71.04 |
| 2017-18 | 64.94 | 7.03 | 2.9 | 0.36 | 3.33 | 0 | 1.89 | 0.38 | 2.39 | 83.22 |
| 2018-19 | 74.23 | 9.36 | 6.38 | 1.02 | 3.28 | 2.28 | 0 | 0.05 | 1.43 | 98.03 |
| 2019-20 | 91.43 | 16.81 | 5.2 | 0.36 | 3.38 | 3.04 | 0.08 | 0.05 | 1.44 | 121.79 |

Source: Department of Fisheries, States Government / UTs Administration

Table 2.2: Disposition of Fish Catch, 2019-20 (Quantity in Lakh Tonnes)

| States/UT's | Marketing Fresh | Frozen | Curing | Canning | Reduction | Miscellaneous | Offal for Reduction | Unspecified | Others | Total |
|--------------------------------------|-----------------|--------|--------|---------|-----------|---------------|---------------------|-------------|--------|--------|
| Andhra Pradesh | 28.22 | 10.34 | 0.88 | 0.13 | 0.22 | 1.86 | 0.08 | 0 | 0 | 41.73 |
| Arunachal Pradesh | 0.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| Assam | 3.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 3.45 |
| Bihar | 5.17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.24 | 6.41 |
| Chhattisgarh | 5.38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5.38 |
| Goa | 0.77 | 0 | 0.04 | 0.03 | 0 | 0.02 | 0 | 0 | 0 | 0.86 |
| Gujarat | 2.67 | 1.72 | 1.71 | 0 | 2.48 | 0 | 0 | 0 | 0 | 8.58 |
| Haryana | 1.73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.73 |
| Himachal Pradesh | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.14 |
| Jharkhand | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.23 |
| Karnataka | 4.72 | 0.69 | 0.41 | 0.15 | 0.03 | 0.03 | 0 | 0 | 0.03 | 6.06 |
| Kerala | 4.98 | 1.27 | 0 | 0 | 0 | 0.55 | 0 | 0 | 0 | 6.8 |
| Madhya Pradesh | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.01 |
| Maharashtra | 4.91 | 0 | 0.62 | 0.05 | 0.04 | 0 | 0 | 0 | 0 | 5.62 |
| Manipur | 0.21 | 0.01 | 0.04 | 0 | 0 | 0.02 | 0 | 0.01 | 0.01 | 0.3 |
| Meghalaya | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.14 |
| Mizoram | 0.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.07 |
| Nagaland | 0.08 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0.09 |
| Odisha | 6.78 | 0.87 | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 8.17 |
| Punjab | 1.06 | 0.45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.51 |
| Rajasthan | 0.55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 | 0.58 |
| Sikkim | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Tamil Nadu | 4.88 | 1.42 | 0.92 | 0 | 0.08 | 0.23 | 0 | 0.04 | 0 | 7.57 |
| Telangana | 2.65 | 0 | 0 | 0 | 0 | 0.32 | 0 | 0 | 0.11 | 3.08 |
| Tripura | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.77 |
| Uttar Pradesh | 6.98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.98 |
| Uttarakhand | 0.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| West Bengal | 16.19 | 0.37 | 0 | 0 | 0.53 | 0.06 | 0 | 0 | 0 | 17.15 |
| A and N Islands | 0.33 | 0.01 | 0.06 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 |
| Chandigarh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Daman and Diu, Dardar & Nagar Haveli | 0.29 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.32 |
| Delhi | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| Jammu & Kashmir | 0.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.21 |
| Ladakh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lakshadweep | 0.16 | 0.01 | 0.02 | 0 | 0 | 0 | 0 | 0 | 0 | 0.19 |
| Puducherry | 0.29 | 0.05 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.36 |
| Total | 91.43 | 16.81 | 5.2 | 0.36 | 3.38 | 3.04 | 0.08 | 0.05 | 1.44 | 121.79 |

Source: Department of Fisheries, States Government / UTs Administration
 NA: In Punjab all catch is market Fresh

CHAPTER 3

CONSUMPTION OF FISH

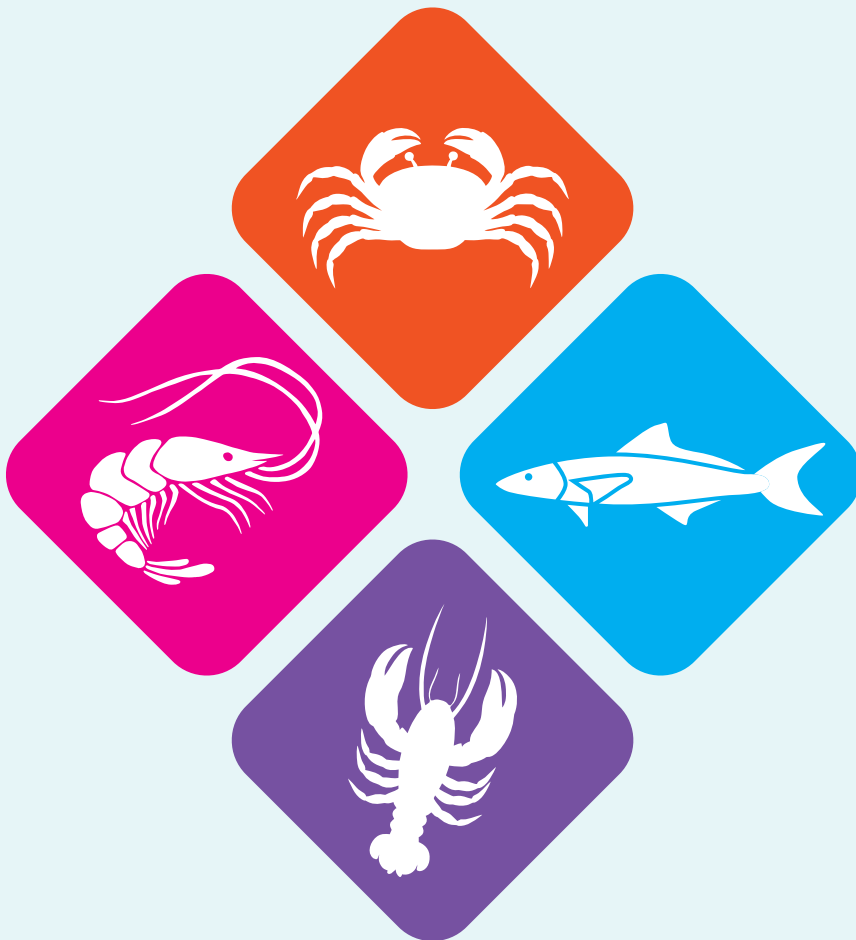


Fig 6. Top Fish Consumption States : 2019-20

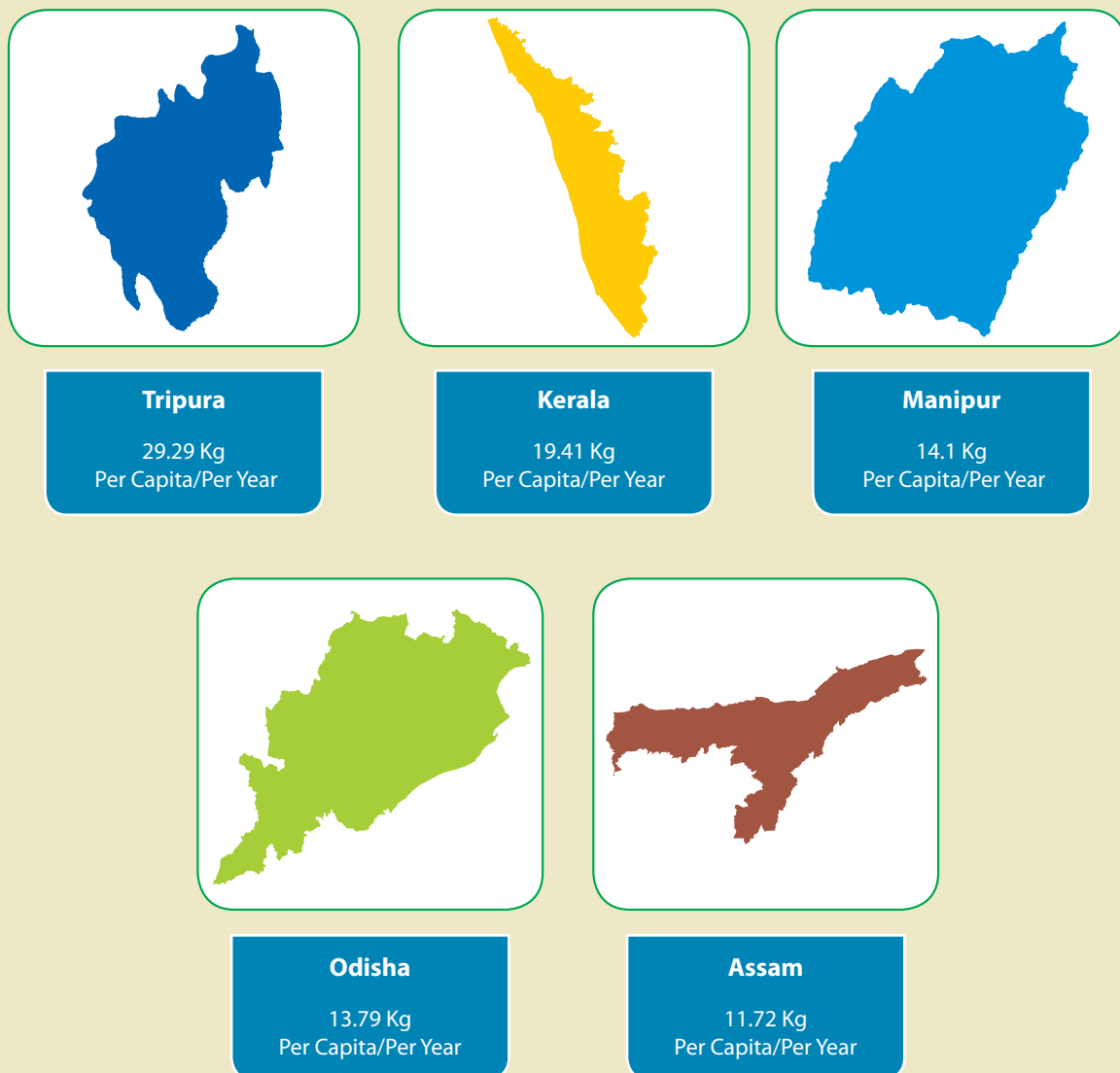


Table 3.1 State-wise Fish Consumption Data (Per Capita/Year/Kg): 2019-20

| S. N. | States/UT's | Yearly Fish Consumption (Per Capita/Kg.)2019-20 |
|-------|---------------------------------|---|
| 1 | Andhra Pradesh | 8.07 |
| 2 | Arunachal Pradesh | 3.52 |
| 3 | Assam | 11.72 |
| 4 | Bihar | 8.82 |
| 5 | Chhattisgarh | 4.66 |
| 6 | Goa | NA |
| 7 | Gujarat | 9.55 |
| 8 | Haryana* | NA |
| 9 | Himachal Pradesh | 2.16 |
| 10 | Jharkhand | 10.32 |
| 11 | Karnataka | 7.56 |
| 12 | Kerala | 19.41 |
| 13 | Madhya Pradesh | 2.76 |
| 14 | Maharashtra | 3.02 |
| 15 | Manipur | 14.1 |
| 16 | Meghalaya | 10.98 |
| 17 | Mizoram | 5.54 |
| 18 | Nagaland | 6.68 |
| 19 | Odisha | 13.79 |
| 20 | Punjab | 0.4 |
| 21 | Rajasthan | 0.01 |
| 22 | Sikkim | 1.16 |
| 23 | Tamil Nadu | 9.6 |
| 24 | Telangana | 8.87 |
| 25 | Tripura | 29.29 |
| 26 | Uttarakhand | 0.49 |
| 27 | Uttar Pradesh | 10.89 |
| 28 | West Bengal | NA |
| 29 | A and N Islands | 59.47 |
| 30 | Chandigarh | NA |
| 31 | Daman and Diu, D & Nagar Haveli | NA |
| 32 | Delhi | NA |
| 33 | Jammu & Kashmir | 3 |
| 34 | Ladakh | NA |
| 35 | Lakshadweep | NA |
| 36 | Puducherry | 30 |

Source: Department of Fisheries, States Government / UTs Administration

Table 3.2: Monthly Per Capita Consumption of Fish & Prawn (Quantity) by State/Uts (2011-12)

| S.N. | States/Uts | Consumption | Per Capita Consumption (Both Quantity & Value) | | Number of households reported Consumption per 1000 households | |
|------|-------------------|--------------|--|--------|---|-------|
| | | | Rural | Urban | Rural | Urban |
| 1 | Andhra Pradesh | Quantity(KG) | 0.153 | 0.108 | 174 | 112 |
| | | Value (Rs.) | 12.29 | 8.8 | | |
| 2 | Arunachal Pradesh | Quantity(KG) | 0.58 | 0.647 | 525 | 578 |
| | | Value (Rs.) | 77.44 | 86.91 | | |
| 3 | Assam | Quantity(KG) | 0.665 | 0.767 | 804 | 750 |
| | | Value (Rs.) | 75.28 | 103.05 | | |
| 4 | Bihar | Quantity(KG) | 0.239 | 0.187 | 299 | 226 |
| | | Value (Rs.) | 22.08 | 18.68 | | |
| 5 | Chhattisgarh | Quantity(KG) | 0.157 | 0.103 | 199 | 121 |
| | | Value (Rs.) | 12.97 | 10.05 | | |
| 6 | Goa | Quantity(KG) | 1.537 | 1.7 | 838 | 809 |
| | | Value (Rs.) | 185.94 | 234.68 | | |
| 7 | Gujarat | Quantity(KG) | 0.052 | 0.052 | 54 | 84 |
| | | Value (Rs.) | 4.15 | 4.88 | | |
| 8 | Haryana | Quantity(KG) | 0.002 | 0.017 | 3 | 17 |
| | | Value (Rs.) | 0.2 | 2.47 | | |
| 9 | Himachal Pradesh | Quantity(KG) | 0.005 | 0.031 | 6 | 17 |
| | | Value (Rs.) | 0.73 | 3.31 | | |
| 10 | Jammu & Kashmir | Quantity(KG) | 0.012 | 0.027 | 9 | 23 |
| | | Value (Rs.) | 1.74 | 3.84 | | |
| 11 | Jharkhand | Quantity(KG) | 0.142 | 0.149 | 195 | 147 |
| | | Value (Rs.) | 13.28 | 15.88 | | |
| 12 | Karnataka | Quantity(KG) | 0.163 | 0.117 | 115 | 81 |
| | | Value (Rs.) | 10 | 10.12 | | |
| 13 | Kerala | Quantity(KG) | 2.262 | 2.103 | 868 | 794 |
| | | Value (Rs.) | 138.23 | 147.85 | | |
| 14 | Madhya Pradesh | Quantity(KG) | 0.048 | 0.043 | 71 | 58 |
| | | Value (Rs.) | 4.09 | 3.98 | | |
| 15 | Maharashtra | Quantity(KG) | 0.09 | 0.175 | 125 | 188 |
| | | Value (Rs.) | 8.68 | 23.63 | | |
| 16 | Manipur | Quantity(KG) | 0.462 | 0.57 | 663 | 813 |
| | | Value (Rs.) | 67.52 | 85.59 | | |
| 17 | Meghalaya | Quantity(KG) | 0.403 | 0.517 | 690 | 643 |
| | | Value (Rs.) | 56.75 | 73.45 | | |
| 18 | Mizoram | Quantity(KG) | 0.176 | 0.203 | 193 | 236 |
| | | Value (Rs.) | 24.72 | 29.27 | | |
| 19 | Nagaland | Quantity(KG) | 0.285 | 0.482 | 229 | 424 |
| | | Value (Rs.) | 31.78 | 53.54 | | |

| Table 3.2: Monthly Per Capita Consumption of Fish & Prawn (Quantity) by State/Uts (2011-12) | | | | | | |
|---|-----------------|--------------|--|--------|---|-------|
| S.N. | States/Uts | Consumption | Per Capita Consumption (Both Quantity & Value) | | Number of households reported Consumption per 1000 households | |
| | | | Rural | Urban | Rural | Urban |
| 20 | Odisha | Quantity(KG) | 0.438 | 0.474 | 576 | 492 |
| | | Value (Rs.) | 36.28 | 47.06 | | |
| 21 | Punjab | Quantity(KG) | 0.001 | 0.004 | 3 | 5 |
| | | Value (Rs.) | 0.18 | 0.55 | | |
| 22 | Rajasthan | Quantity(KG) | 0.011 | 0.004 | 10 | 4 |
| | | Value (Rs.) | 1.03 | 0.58 | | |
| 23 | Sikkim | Quantity(KG) | 0.01 | 0.061 | 12 | 76 |
| | | Value (Rs.) | 1.2 | 7.29 | | |
| 24 | Tamil Nadu | Quantity(KG) | 0.257 | 0.292 | 218 | 265 |
| | | Value (Rs.) | 23.41 | 29.05 | | |
| 25 | Telengana | Quantity(KG) | - | - | - | - |
| | | Value (Rs.) | - | - | | |
| 26 | Tripura | Quantity(KG) | 1.069 | 1.478 | 963 | 933 |
| | | Value (Rs.) | 132.17 | 202.09 | | |
| 27 | Uttarakhand | Quantity(KG) | 0.053 | 0.076 | 36 | 62 |
| | | Value (Rs.) | 4.81 | 7.34 | | |
| 28 | Uttar Pradesh | Quantity(KG) | 0.072 | 0.035 | 103 | 49 |
| | | Value (Rs.) | 5.87 | 3.28 | | |
| 29 | West Bengal | Quantity(KG) | 0.805 | 1.032 | 831 | 792 |
| | | Value (Rs.) | 77.67 | 130.46 | | |
| 30 | A and N Islands | Quantity(KG) | 1.573 | 1.255 | 914 | 781 |
| | | Value (Rs.) | 122.08 | 94.31 | | |
| 31 | Chandigarh | Quantity(KG) | 0 | 0.005 | 0 | 6 |
| | | Value (Rs.) | 0 | 0.6 | | |
| 32 | D&Nagar Haveli | Quantity(KG) | 0.178 | 0.04 | 244 | 72 |
| | | Value (Rs.) | 15.06 | 3.78 | | |
| 33 | Daman and Diu | Quantity(KG) | 0.625 | 0.997 | 388 | 651 |
| | | Value (Rs.) | 46.56 | 6.29 | | |
| 34 | Delhi | Quantity(KG) | 0.026 | 0.037 | 58 | 51 |
| | | Value (Rs.) | 2.36 | 4013 | | |
| 35 | Lakshadweep | Quantity(KG) | 2.321 | 3.801 | 849 | 889 |
| | | Value (Rs.) | 294.63 | 400.92 | | |
| 36 | Puducherry | Quantity(KG) | 0.547 | 0.678 | 735 | 670 |
| | | Value (Rs.) | 62.64 | 76.81 | | |
| India Value (Rs.) | | Quantity(KG) | 0.266 | 0.252 | 265 | 210 |
| | | 22.77 | 26.73 | | | |
| Source: National Sample Survey Organisation (NSSO), 2011-12 | | | | | | |

Source: National Sample Survey Organisation (NSSO), 2011-12

CHAPTER 4

FISHERIES ECONOMY



Table 4.1 Gross Value Added (Rs. in crore) by Economic Activity during the year 2011-12 to 2018-19

| Current Basic Prices | | | | | | |
|---------------------------|-----------|----------------------|-----------|-----------|-----------------------------------|--------------|
| Years | Crops | Forestry and Logging | Fisheries | Livestock | Agriculture, forestry and fishing | National GVA |
| 2011-12 | 9,82,151 | 1,24,436 | 68,027 | 3,27,334 | 15,019,48 | 81,06,946 |
| 2012-13 | 10,88,814 | 1,37,558 | 79,911 | 3,68,823 | 16,75,106 | 92,02,692 |
| 2013-14 | 12,48,776 | 1,56,674 | 98,190 | 4,22,733 | 19,26,373 | 1,03,63,153 |
| 2014-15 | 12,92,874 | 1,73,760 | 1,16,567 | 5,10,411 | 20,93,612 | 11504279 |
| 2015-16 | 13,27,992 | 1,84,411 | 1,32,720 | 5,82,410 | 22,27,533 | 1,25,74,499 |
| 2016-17 | 14,86,044 | 2,05,364 | 1,54,643 | 6,72,611 | 25,18,662 | 1,39,65,200 |
| 2017-18 | 16,06,057 | 2,19,109 | 1,86,561 | 7,85,180 | 27,96,907 | 1,55,13,122 |
| 2018-19 | 16,14,938 | 2,23,109 | 2,12,915 | 8,71,884 | 29,22,846 | 1,71,39,962 |
| Constant Prices (2011-12) | | | | | | |
| Years | Crops | Forestry and Logging | Fisheries | Livestock | Agriculture, forestry and fishing | National GVA |
| 2011-12 | 9,82,151 | 1,24,436 | 68,027 | 3,27,334 | 15,01,948 | 81,06,946 |
| 2012-13 | 9,83,809 | 1,24,743 | 71,362 | 3,44,375 | 15,24,289 | 85,46,275 |
| 2013-14 | 10,37,060 | 1,32,093 | 76,487 | 3,63,558 | 16,09,198 | 90,63,649 |
| 2014-15 | 9,98,425 | 1,34,609 | 82,232 | 3,90,449 | 16,05,715 | 97,12,133 |
| 2015-16 | 9,69,344 | 1,36,960 | 90,205 | 4,19,637 | 16,16,146 | 1,04,91,870 |
| 2016-17 | 10,20,258 | 1,44,547 | 99,627 | 4,61,572 | 17,26,004 | 1,13,28,285 |
| 2017-18 | 10,64,796 | 1,53,451 | 1,14,248 | 4,95,834 | 18,28,329 | 1,20,74,413 |
| 2018-19 | 10,54,179 | 1,54,115 | 1,28,011 | 5,36,035 | 18,72,340 | 1,28,03,128 |

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation, Government of India

Contribution in Agriculture economy by the Agriculture and allied sector

Fig 7 :Trend of Percentage Contribution of GVA due to Crops sector over the total GVA due to Agriculture sector (Current Price): All India

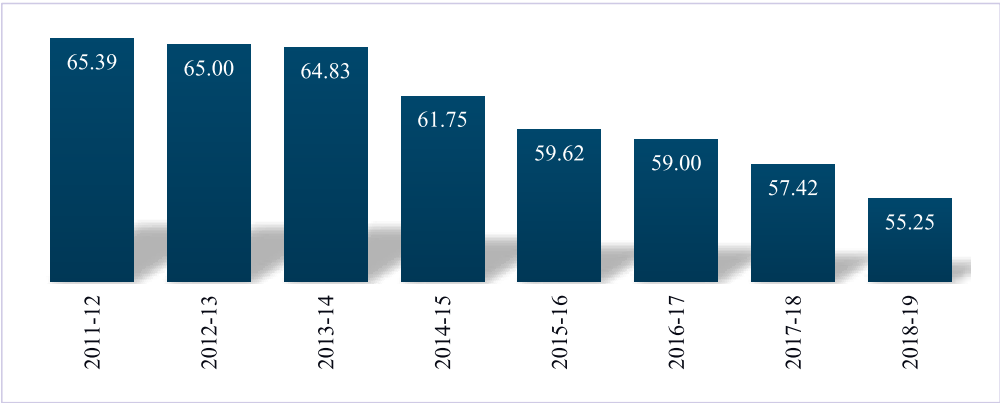


Fig 8 :Trend of Percentage Contribution of GVA due to Forestry and Logging sector over the total GVA due to Agriculture sector (Current Price): All India



Fig 9 :Trend of Percentage Contribution of GVA due to Livestock sector over the total GVA due to Agriculture sector (Current Price): All India

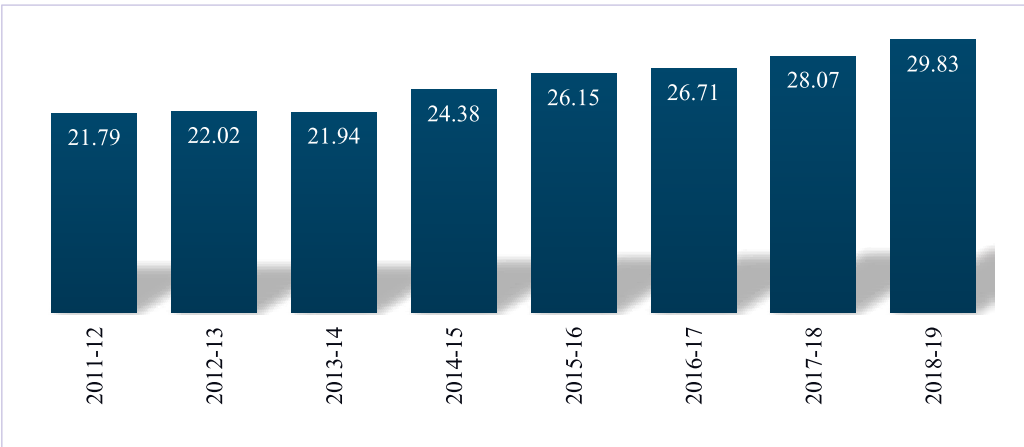


Fig 10 : Trend of Percentage Contribution of GVA due to Fisheries sector over the total GVA due to Agriculture sector (Current Price): All India

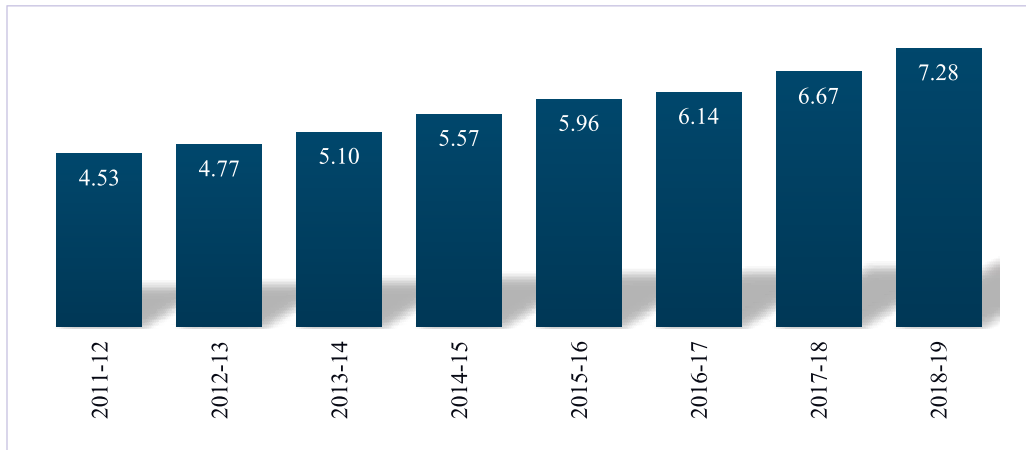


Fig 11 : Trend of Percentage Contribution of GVA due to Crops sector over the total GVA due to Agriculture sector (Constant price:2011-12): All India



Fig 12 : Trend of Percentage Contribution of GVA due to Forestry and Logging sector over the total GVA due to Agriculture sector (Constant price:2011-12): All India

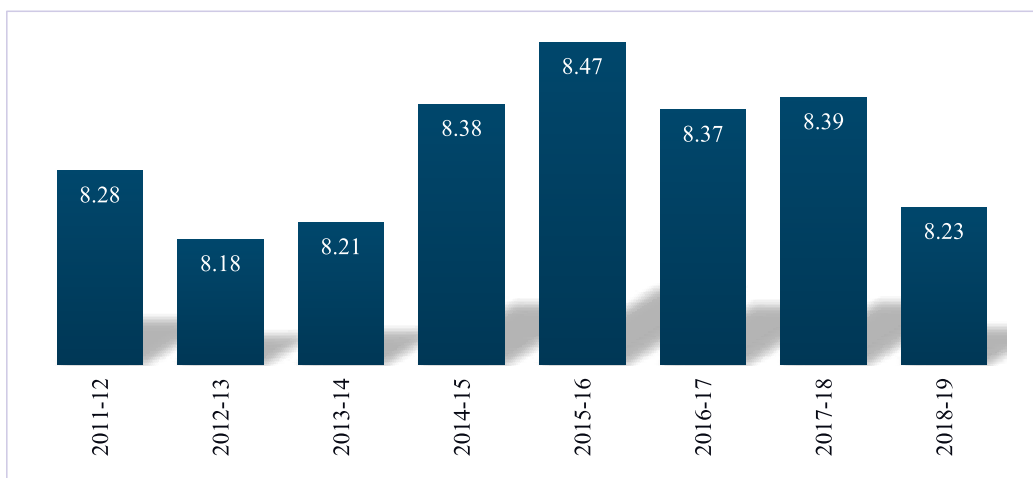


Fig 13 : Trend of Percentage Contribution of GVA due to Livestock sector over the total GVA due to Agriculture sector (Constant price:2011-12): All India

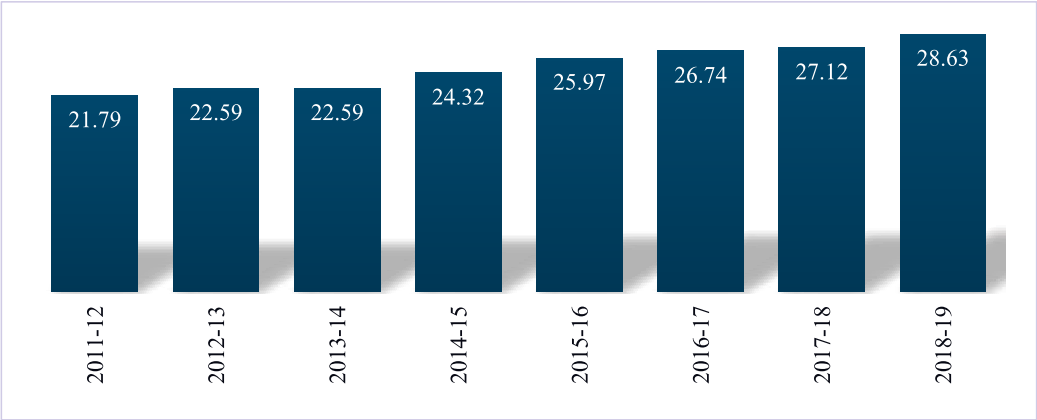
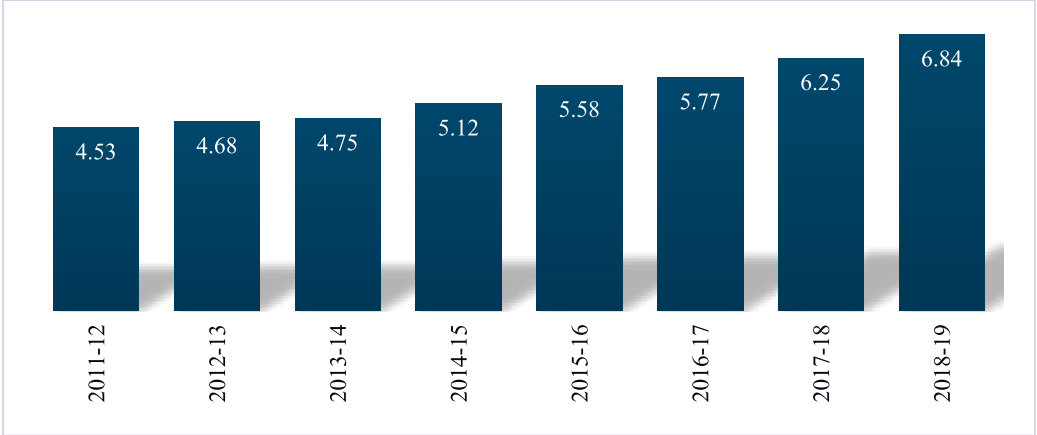


Fig 14 : Trend of Percentage Contribution of GVA due to Fisheries sector over the total GVA due to Agriculture sector (Constant price:2011-12): All India



Growth of economy of Agriculture and Allied sector

Fig 15 : Trend of Percentage Growth of GVA of Agriculture (Current Price): All India



Fig 16 : Trend of Percentage Growth of GVA of Crops (Current Price): All India

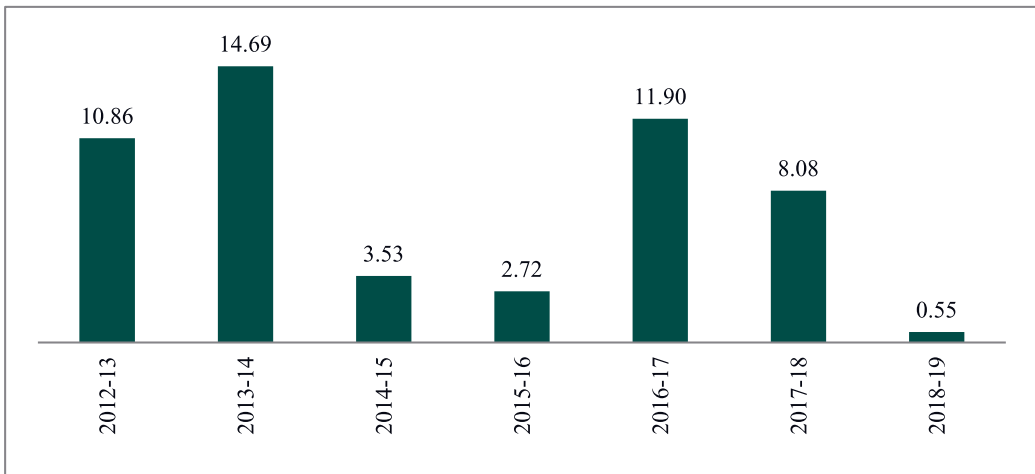


Fig 17 : Trend of Percentage Growth of GVA of Livestock (Current Price): All India

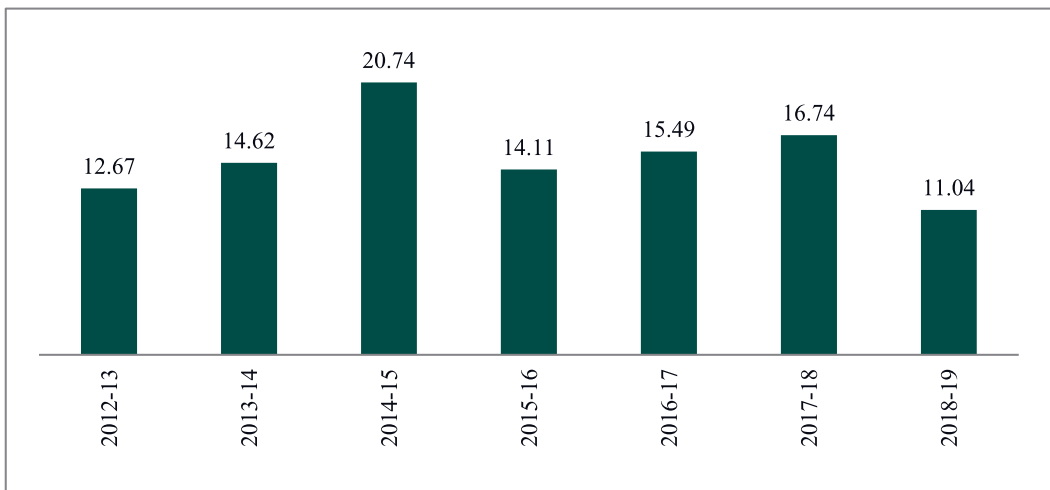


Fig 18 : Trend of Percentage Growth of GVA of Forestry and Logging (Current Price): All India

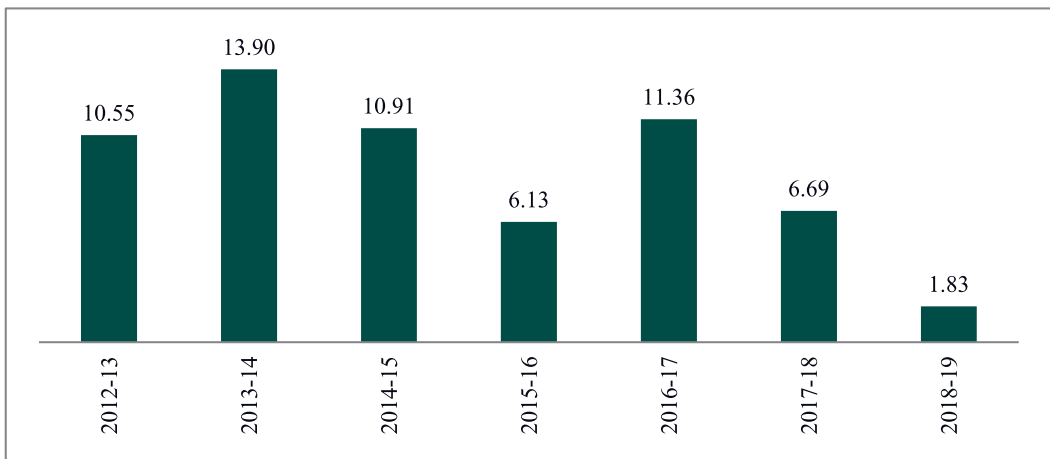


Fig 19 : Trend of Percentage Growth of GVA of Fisheries (Current Price): All India

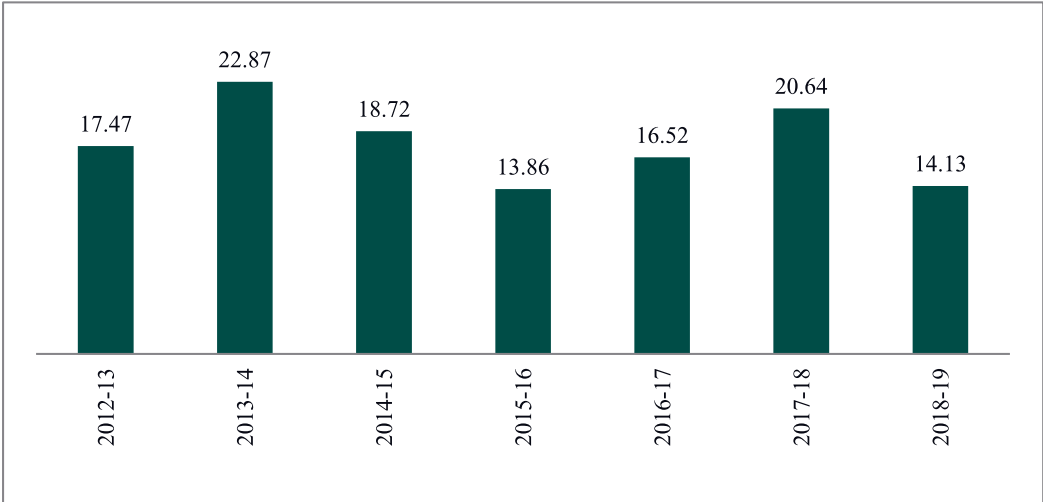


Fig 20 : Trend of Percentage Growth of GVA of Agriculture (Constant Price: 2011-12): All India

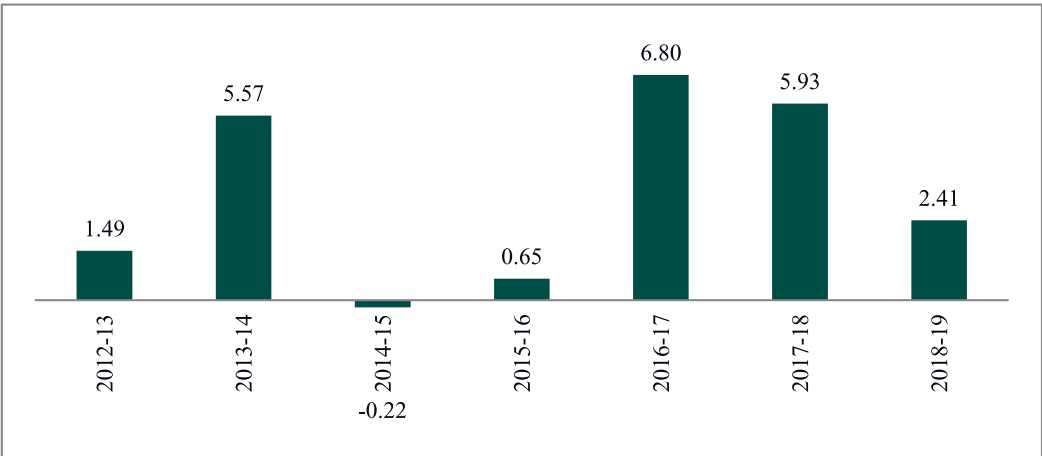


Fig 21 : Trend of Percentage Growth of GVA of Crops (Constant Price: 2011-12): All India



Fig 22 : Trend of Percentage Growth of GVA of Livestock (Constant Price: 2011-12): All India

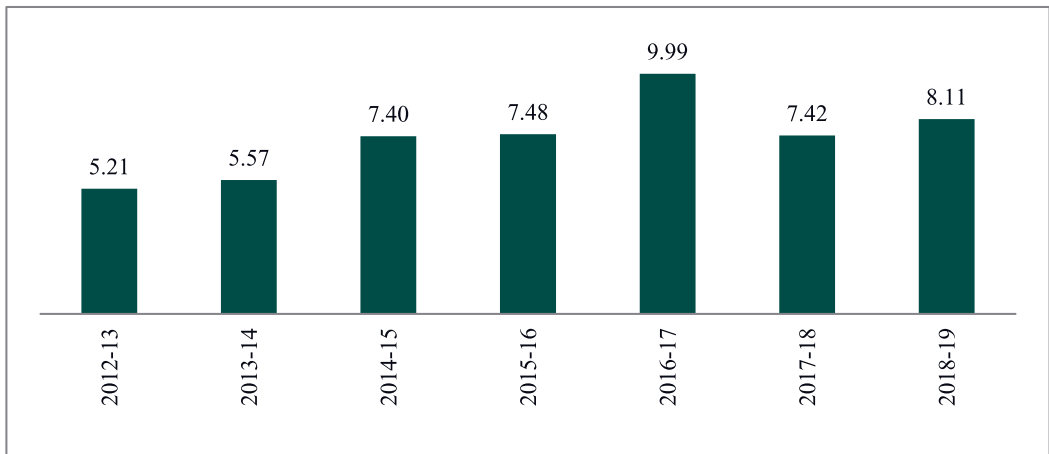


Fig 23 : Trend of Percentage Growth of GVA of Forestry and Logging (Constant Price: 2011-12): All India

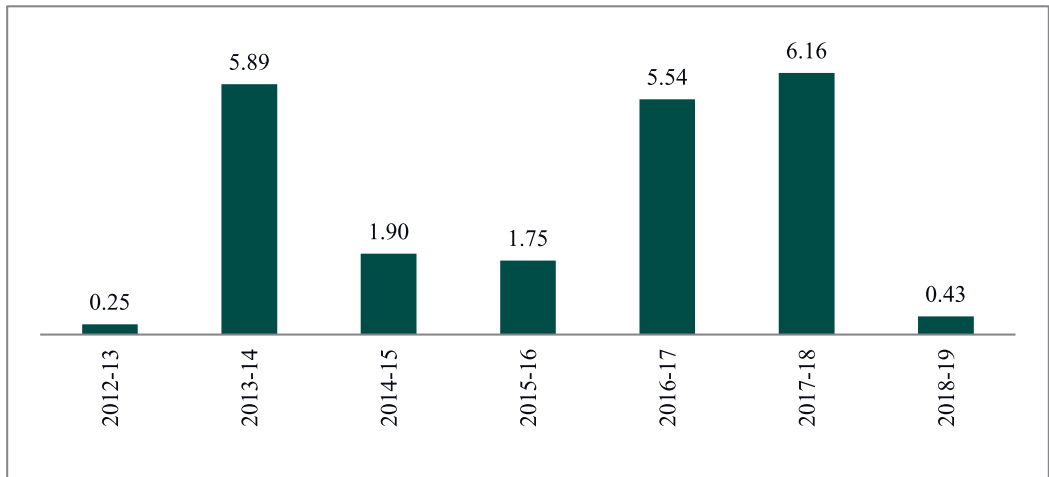
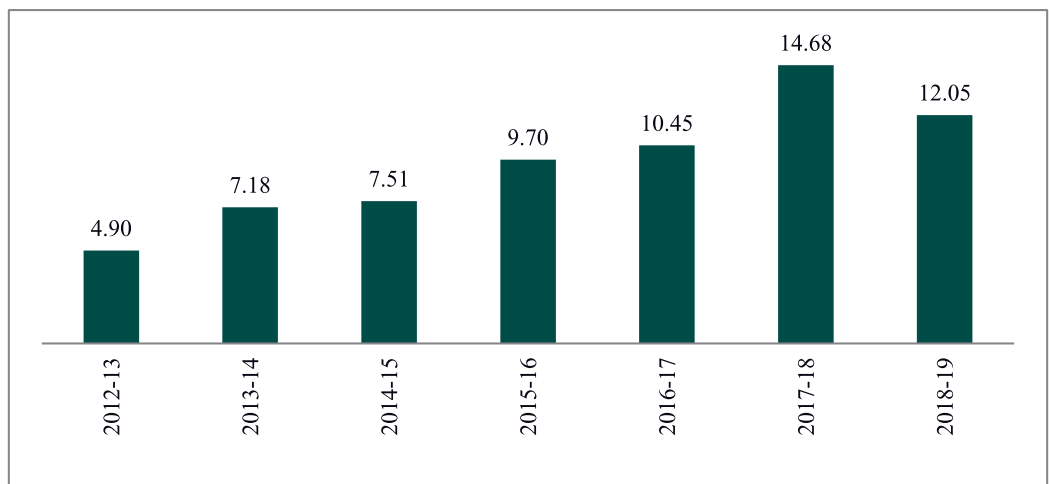


Fig 24 : Trend of Percentage Growth of GVA of Fisheries (Constant Price: 2011-12): All India



CHAPTER 5

FISHERIES EXPORT



Fig 25 :Trend of Export of Fish and Fish Products in US Dollar (\$: Million)

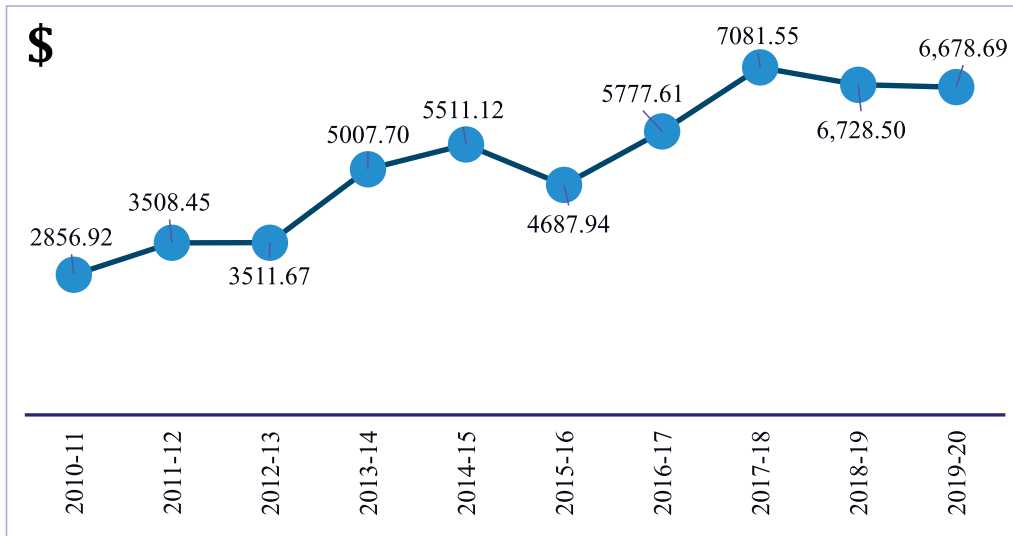


Fig 26: Trend of Export of Fish and Fish Products in Quantity (Lakh Tonnes)

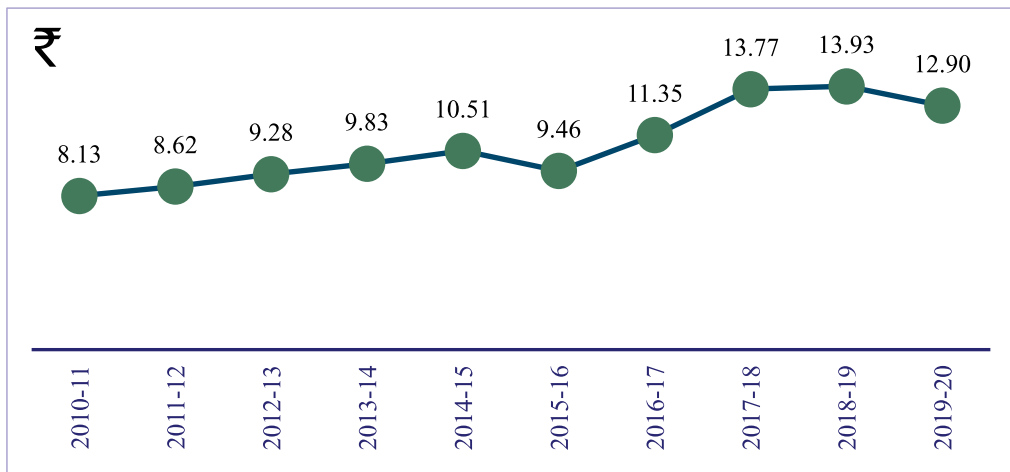


Fig 27: Trend of Export of Fish and Fish Products in Value (Rs. Crore)

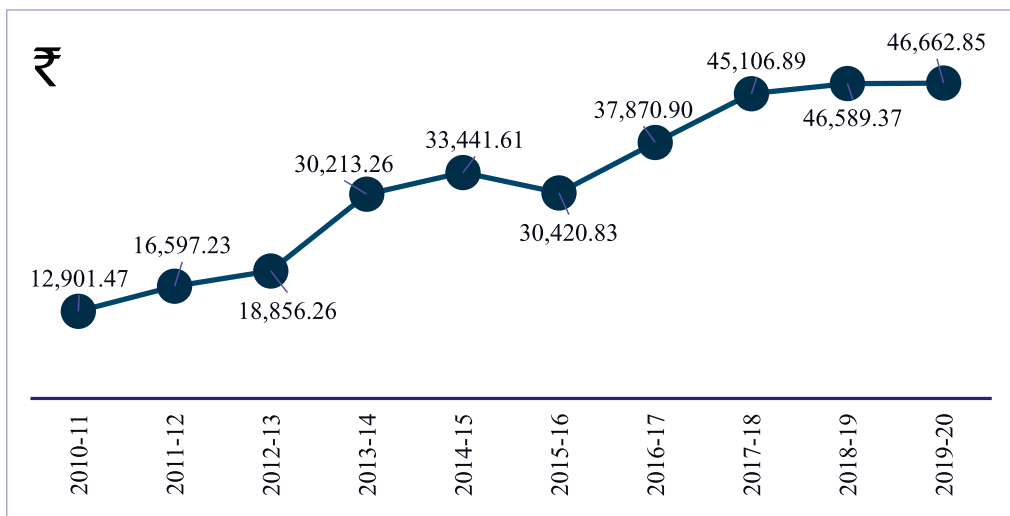


Fig 28: Market-wise export in value and quantity

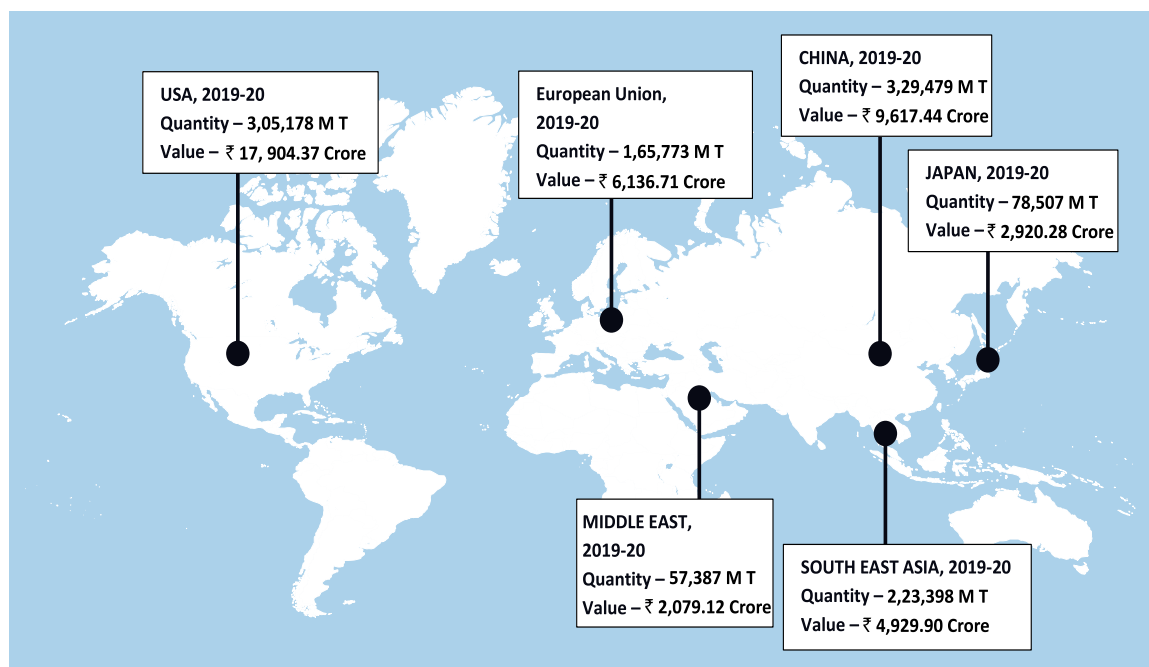


Table 5.1: Trend of Export of Fish and Fish Products:2019-20

| Year | Quantity (Tonnes) | Value (₹ Crore) | US Dollar (\$: Million) | Unit value (Rs. /Tonnes) | Unit value Index | Annual growth rate (%) | |
|---------|-------------------|-----------------|-------------------------|--------------------------|------------------|------------------------|-------|
| | | | | | | Quantity | Value |
| 2010-11 | 8,13,090.85 | 1,29,01.47 | 2,856.92 | 1,58,671.89 | 6,367.92 | 19.85 | 28.39 |
| 2011-12 | 8,62,021.41 | 1,65,97.23 | 3,508.45 | 1,92,538.46 | 7,727.08 | 6.02 | 28.65 |
| 2012-13 | 9,28,214.67 | 18,856.26 | 3,511.67 | 2,03,145.42 | 8,152.76 | 7.68 | 13.61 |
| 2013-14 | 9,83,755.56 | 30,213.26 | 5,007.70 | 3,07,121.60 | 12,325.60 | 5.98 | 60.23 |
| 2014-15 | 10,51,243.49 | 33,441.61 | 5,511.12 | 3,18,114.75 | 12,766.79 | 6.86 | 10.69 |
| 2015-16 | 9,45,891.90 | 30,420.83 | 4,687.94 | 3,21,609.99 | 12,907.06 | -10.02 | -9.03 |
| 2016-17 | 11,34,948.09 | 37,870.90 | 5,777.61 | 3,33,679.62 | 13,391.45 | 19.99 | 24.49 |
| 2017-18 | 13,77,243.70 | 45,106.89 | 7,081.55 | 3,27,515.69 | 13,144.07 | 21.35 | 19.11 |
| 2018-19 | 13,92,558.89 | 46,589.37 | 6,728.50 | 3,34,559.46 | 13,426.76 | 1.11 | 3.29 |
| 2019-20 | 12,89,650.90 | 46,662.85 | 6,678.69 | 3,61,825.42 | 14,521.01 | -7.39 | 0.16 |

Source: Marine Products Export Development Authority, Kochi

Fig 29: Percentage share of Item-wise Export of Fisheries Products (Value)

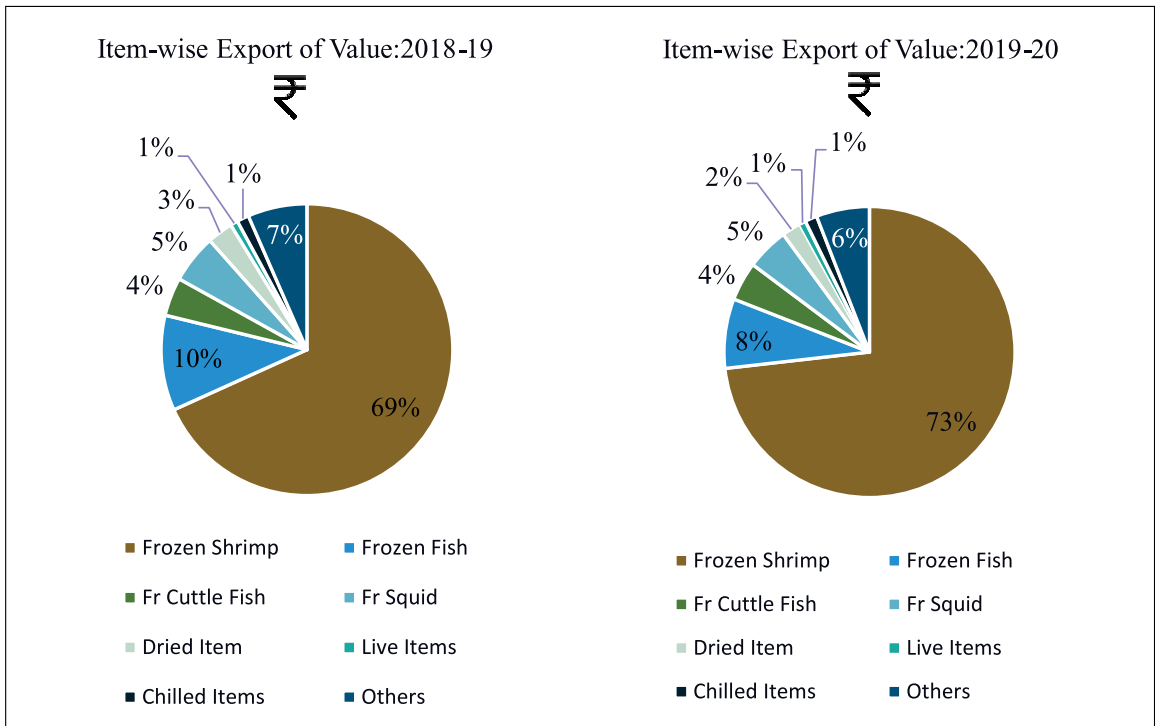


Fig 30: Percentage share of Item-wise Export of Fisheries Products (Quantity)

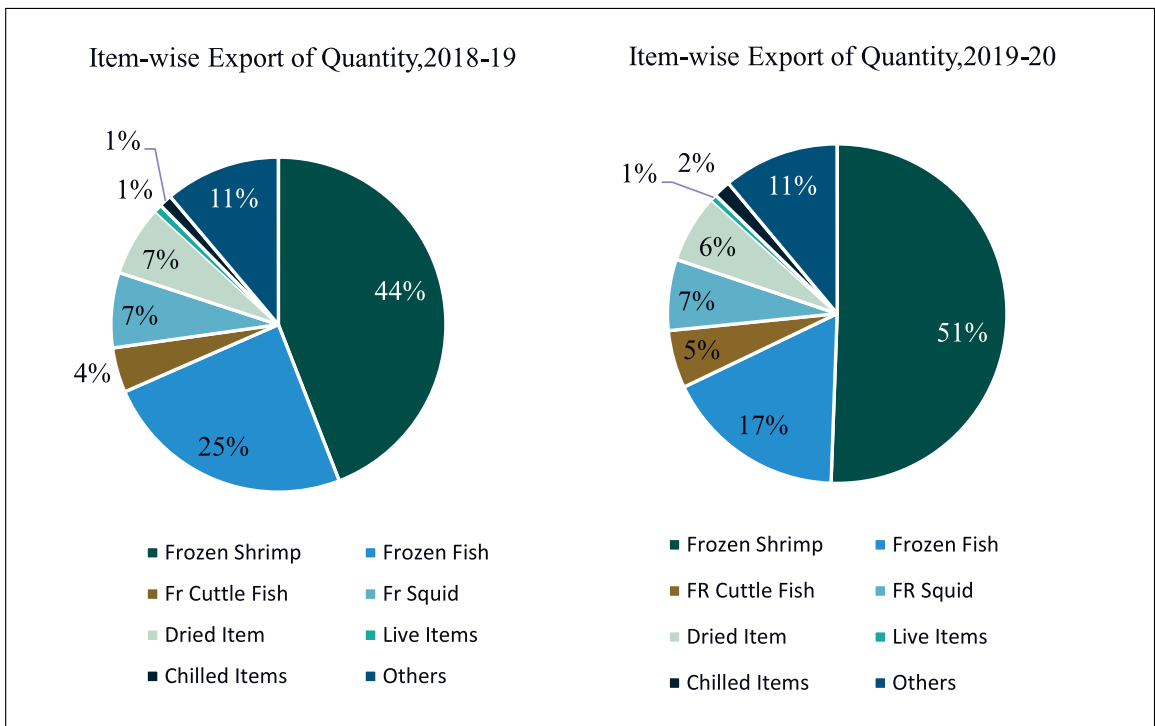


Table 5.2: Item-wise Export of Fisheries Products:2020

| Item | | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|----------------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Frozen Shrimp | Q: | 1,51,465 | 1,89,125 | 2,28,620 | 3,01,435 | 3,57,505 | 3,73,866 | 4,34,486 | 5,65,980 | 6,14,145 | 6,52,253 |
| | V: | 5,718.13 | 8,175.26 | 9,706.36 | 19,368.30 | 22,468.12 | 20,045.50 | 24,711.32 | 30,868.17 | 31,800.51 | 34,152.03 |
| | \$: | 1,261.81 | 1,741.20 | 1,803.26 | 3,210.94 | 3,709.76 | 3,096.68 | 3,726.38 | 4,848.19 | 4,610.59 | 4,889.12 |
| Frozen Fish | Q: | 3,12,358 | 3,47,118 | 3,43,876 | 3,24,359 | 3,09,434 | 2,28,749 | 2,96,762 | 3,53,192 | 3,38,933 | 2,23,318 |
| | V: | 2,623.89 | 3,284.15 | 3,296.86 | 4,294.81 | 3,778.50 | 3,462.25 | 4,460.90 | 4,674.03 | 4,916.82 | 3,610.01 |
| | \$: | 583.48 | 683.50 | 617.59 | 708.63 | 619.66 | 529.85 | 672.47 | 733.17 | 699.09 | 513.6 |
| Fr Cuttle fish | Q: | 59,159 | 54,671 | 63,296 | 68,577 | 82,353 | 65,596 | 63,320 | 69,183 | 60,210 | 70,906 |
| | V: | 1,104.57 | 1,346.72 | 1,354.28 | 1,386.98 | 1,833.21 | 1,636.11 | 1,944.50 | 2,356.46 | 1,975.97 | 2,009.79 |
| | \$: | 244.62 | 282.72 | 251.54 | 228.13 | 300.69 | 250.31 | 292.73 | 369.88 | 282.29 | 286.4 |
| Fr Squid | Q: | 87,579 | 77,373 | 75,387 | 87,437 | 69,569 | 81,769 | 99,348 | 1,00,845 | 1,01,101 | 87,631 |
| | V: | 1,010.57 | 1,228.19 | 1,378.08 | 1,731.97 | 1,275.25 | 1,615.21 | 2,575.29 | 2,451.87 | 2,506.99 | 2,196.59 |
| | \$: | 223.67 | 262.72 | 256.90 | 284.60 | 209.84 | 247.53 | 388.64 | 385.01 | 359.71 | 314.23 |
| Dried Item | Q: | 79,059 | 53,721 | 72,953 | 67,901 | 70,544 | 43,320 | 61,071 | 88,997 | 95,296 | 84,417 |
| | V: | 954.94 | 562.65 | 819.90 | 998.00 | 1010.16 | 725.58 | 871.74 | 1042.37 | 1323.45 | 981.5 |
| | \$: | 212.22 | 117.66 | 152.81 | 167.89 | 165.52 | 111.57 | 199.77 | 163.53 | 189.58 | 140.81 |
| Live Items | Q: | 5,208 | 4,199 | 4,373 | 5,080 | 5,488 | 5,493 | 6,703 | 7,034 | 10,179 | 7,287 |
| | V: | 142.15 | 154.61 | 197.89 | 281.85 | 301.51 | 308.81 | 403.75 | 286.11 | 388.88 | 324.26 |
| | \$: | 31.46 | 32.46 | 36.82 | 46.70 | 49.62 | 47.77 | 61.05 | 45.41 | 55.89 | 46.43 |
| Chilled Items | Q: | 21,118 | 21,278 | 26,868 | 19,755 | 31,404 | 33,150 | 31,815 | 19,501 | 17,207 | 21,202 |
| | V: | 257.54 | 357.42 | 537.11 | 527.84 | 635.93 | 809.50 | 769.81 | 647.41 | 616.22 | 631.84 |
| | \$: | 56.93 | 74.03 | 99.87 | 88.48 | 104.71 | 124.51 | 116.02 | 101.78 | 89.20 | 90.34 |
| Others | Q: | 97,145 | 1,14,538 | 1,12,841 | 1,09,212 | 1,24,947 | 1,13,949 | 1,41,442 | 1,72,512 | 1,55,487 | 1,42,638 |
| | V: | 1,089.67 | 1,488.24 | 1,565.78 | 1,623.50 | 2,138.94 | 1,817.87 | 2,133.59 | 2,780.48 | 3,060.53 | 2,756.84 |
| | \$: | 242.72 | 314.16 | 292.86 | 272.34 | 351.31 | 279.71 | 320.54 | 434.58 | 442.16 | 397.77 |
| Total | Q: | 8,13,091 | 8,62,021 | 9,28,215 | 9,83,756 | 10,51,243 | 9,45,892 | 11,34,948 | 13,77,244 | 13,92,559 | 12,89,652 |
| | V: | 12,901.47 | 16,597.23 | 18,856.26 | 30,213.26 | 33,441.61 | 30,420.83 | 37,870.90 | 45,106.89 | 46,589.37 | 46,662.86 |
| | \$: | 2,856.92 | 3,508.45 | 3,511.67 | 5,007.70 | 5,511.12 | 4,687.94 | 5,777.61 | 7,081.55 | 6,728.50 | 6,678.7 |

Q: Quantity in MT

V: Value in Rs. Crore

\$: US Dollar Million

Source: Marine Products Export Development Authority, Kochi

Fig. 31: Market-wise Percentage share of Export in Value (INR)

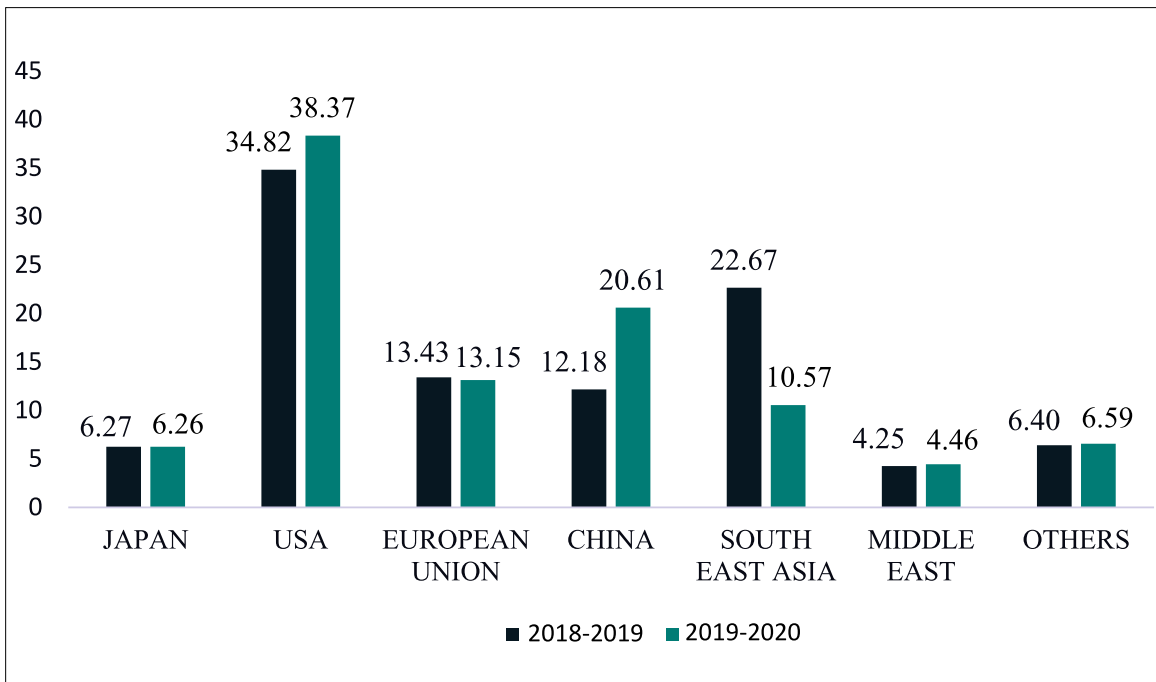


Fig. 32: Market-wise Percentage share of Export in Quantity

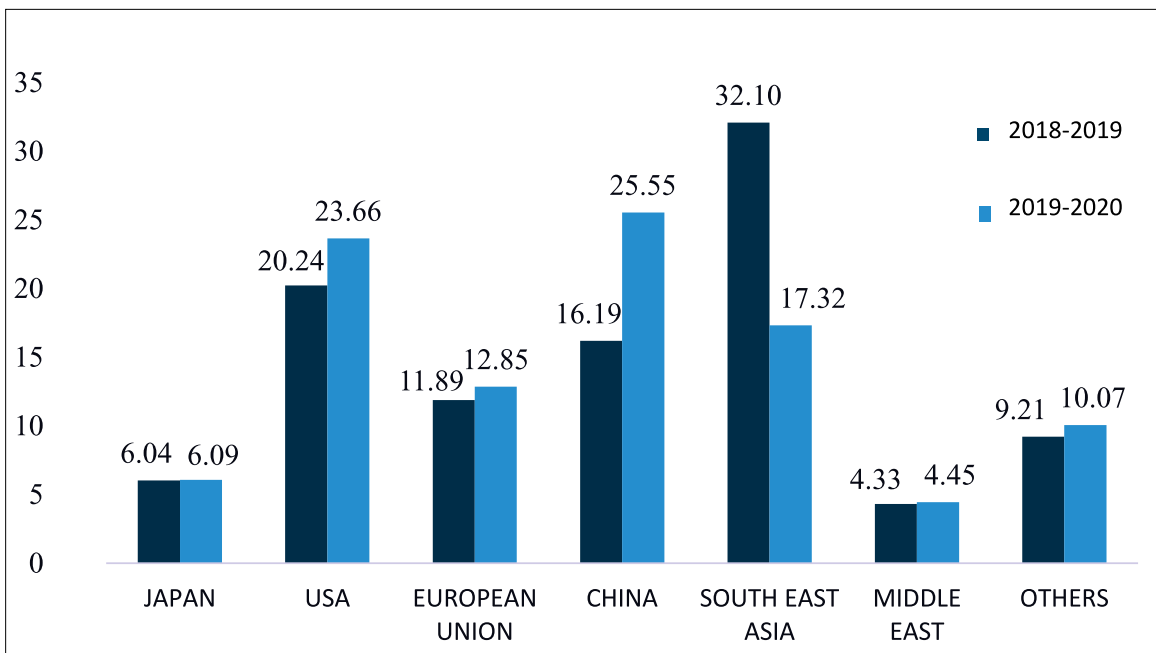


Table 5.3. Market wise Export of Fish and Fish Products: 2010-11 to 2014-15

| Markets (Coun- tries) | Quan- tity and Value | 2010-11 | | 2011-12 | | 2012-13 | | 2013-14 | | 2014-15 | |
|-----------------------------|----------------------------|----------------------------|------------|----------------------------|------------|----------------------------|------------|-----------------------|------------|----------------------------|------------|
| | | Quan- tity and Value | % Share | Quan- tity and Value | % Share | Quan- tity and Value | % Share | Quantity and Value | % Share | Quan- tity and Value | % Share |
| Japan | Q: | 70,714 | 8.70 | 85,800 | 9.95 | 76,648 | 8.26 | 71,484 | 7.27 | 78,772 | 7.49 |
| | V: | 1,683.39 | 13.05 | 2,140.67 | 12.90 | 1,999.59 | 10.60 | 2,463.83 | 8.15 | 3,040.26 | 9.09 |
| USA | Q: | 50,095 | 6.16 | 68,354 | 7.93 | 92,447 | 9.96 | 1,10,880 | 11.27 | 1,29,667 | 12.33 |
| | V: | 1,990.26 | 15.43 | 2,977.53 | 17.94 | 4,026.48 | 21.35 | 7,744.67 | 25.63 | 8,830.12 | 26.40 |
| European Union | Q: | 1,70,963 | 21.03 | 1,54,221 | 17.89 | 1,58,357 | 17.06 | 1,74,686 | 17.76 | 1,88,031 | 17.89 |
| | V: | 3,459.40 | 26.81 | 3,810.44 | 22.96 | 4,176.42 | 22.15 | 6,129.69 | 20.29 | 6,715.58 | 20.08 |
| China | Q: | 1,59,147 | 19.57 | 84,515 | 9.80 | 87,776 | 9.46 | 75,783 | 7.70 | 59,519 | 5.66 |
| | V: | 1,977.81 | 15.33 | 1,259.23 | 7.59 | 1,444.86 | 7.66 | 1,766.72 | 5.85 | 1,349.00 | 4.03 |
| South East Asia | Q: | 2,33,964 | 28.77 | 3,43,962 | 39.90 | 3,40,944 | 36.73 | 3,80,061 | 38.63 | 4,09,931 | 38.99 |
| | V: | 2,114.48 | 16.39 | 4,193.27 | 25.26 | 4,357.28 | 23.11 | 8,046.59 | 26.63 | 8,620.85 | 25.78 |
| Middle East | Q: | 43,983 | 5.41 | 38,155 | 4.43 | 41,419 | 4.46 | 58,040 | 5.90 | 64,608 | 6.15 |
| | V: | 670.35 | 5.20 | 894.38 | 5.39 | 1,113.34 | 5.90 | 1,599.37 | 5.29 | 2,020.86 | 6.04 |
| Others | Q: | 84,225 | 10.36 | 87,014 | 10.09 | 1,30,623 | 14.07 | 1,12,822 | 11.47 | 1,20,716 | 11.48 |
| | V: | 1005.77 | 7.80 | 1,321.72 | 7.96 | 1,738.29 | 9.22 | 2,462.40 | 8.15 | 2,864.93 | 8.57 |
| Total | Q: | 8,13,091 | 100.00 | 8,62,021 | 100.00 | 9,28,215 | 100.00 | 9,83,756 | 100.00 | 10,51,243 | 100.00 |
| | V: | 12,901.47 | 100.00 | 16,597.23 | 100.00 | 18,856.26 | 100.00 | 30,213.26 | 100.00 | 33,441.61 | 100.00 |

Q: Quantity in MT, V: Value in Rs. Crore

Source: Marine Products Export Development Authority, Kochi

Table 5.3. Market wise Export of Fish and Fish Products: 2015-16 to 2019-20

| Markets (Countries) | Quantity and Value | 2015-16 | | 2016-17 | | 2017-18 | | 2018-19 | | 2019-20 | |
|---------------------|--------------------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|---------|
| | | Quantity and Value | % Share | Quantity and Value | % Share | Quantity and Value | % Share | Quantity and Value | % Share | Quantity and Value | % Share |
| Japan | Q: | 75,393 | 7.97 | 69,039 | 6.08 | 85,651 | 6.22 | 84,080 | 6.04 | 78,507 | 6.09 |
| | V: | 2,610.74 | 8.58 | 2,621.37 | 6.92 | 2,846.30 | 6.31 | 2,919.75 | 6.27 | 2,920.28 | 6.26 |
| USA | Q: | 1,53,695 | 16.25 | 1,88,617 | 16.62 | 2,47,780 | 17.99 | 2,81,913 | 20.24 | 3,05,178 | 23.66 |
| | V: | 8,633.40 | 28.38 | 11,482.16 | 30.32 | 14,769.83 | 32.74 | 16,220.00 | 34.81 | 17,904.37 | 38.37 |
| European Union | Q: | 1,86,349 | 19.70 | 1,89,833 | 16.73 | 1,90,314 | 13.82 | 1,65,571 | 11.89 | 1,65,773 | 12.85 |
| | V: | 6,311.45 | 20.75 | 6,892.19 | 18.20 | 7,115.96 | 15.78 | 6,256.20 | 13.43 | 6,136.71 | 13.15 |
| China | Q: | 50,042 | 5.29 | 45,443 | 4.00 | 49,701 | 3.61 | 2,25,519 | 16.19 | 3,29,479 | 25.55 |
| | V: | 1,432.25 | 4.71 | 1,341.94 | 3.54 | 1,448.03 | 3.21 | 5,672.76 | 12.18 | 9,617.44 | 20.61 |
| South East Asia | Q: | 3,28,900 | 34.77 | 4,84,819 | 42.72 | 6,16,707 | 44.78 | 4,46,966 | 32.10 | 2,23,398 | 17.32 |
| | V: | 7,499.16 | 24.65 | 11,461.83 | 30.27 | 14,250.26 | 31.59 | 10,561.31 | 22.67 | 4,929.90 | 10.56 |
| Middle East | Q: | 53,905 | 5.70 | 52,973 | 4.67 | 62,220 | 4.52 | 60,232 | 4.33 | 57,387 | 4.45 |
| | V: | 1,793.67 | 5.90 | 1,830.58 | 4.83 | 1,849.10 | 4.10 | 1,979.34 | 4.25 | 2,079.12 | 4.46 |
| Others | Q: | 97,609 | 10.32 | 1,04,224 | 9.18 | 1,24,871 | 9.07 | 1,28,278 | 9.21 | 1,29,929 | 10.07 |
| | V: | 2,140.16 | 7.04 | 2,240.83 | 5.92 | 2,827.40 | 6.27 | 2,980.02 | 6.40 | 3,075.03 | 6.59 |
| Total | Q: | 9,45,892 | 100.00 | 11,34,948 | 100.00 | 13,77,244 | 100.00 | 13,92,559 | 100.00 | 12,89,651 | 100.00 |
| | V: | 30,420.9 | 100.00 | 37,870.90 | 100.00 | 45,106.89 | 100.00 | 46,589.38 | 100.00 | 46,662.85 | 100.00 |

Q: Quantity in MT, V: Value in Rs. Crore

Source: Marine Products Export Development Authority, Kochi

Table 5.4: Port-wise Export Details during April-March 20-19-2020

| Ports | | 2018 -19 | Percentage Share of 2018-19 | 2019 - 20 | Percentage Share of 2019-20 | Growth (%) |
|--------------------|-----|-----------|-----------------------------|-----------|-----------------------------|------------|
| VIZAG | Q: | 2,21,374 | 15.90 | 2,41,783 | 18.75 | 9.22 |
| | V: | 11,913.07 | 25.57 | 13,139.73 | 28.16 | 10.3 |
| | \$: | 1,726.32 | 25.66 | 1,880.49 | 28.16 | 8.93 |
| CALCUTTA | Q: | 1,16,167 | 8.34 | 1,28,150 | 9.94 | 10.32 |
| | V: | 5,227.73 | 11.22 | 5,308.02 | 11.38 | 1.54 |
| | \$: | 757.13 | 11.25 | 760.9 | 11.39 | 0.5 |
| KRISHNAPATNAM | Q: | 86,248 | 6.19 | 97,708 | 7.58 | 13.29 |
| | V: | 4,644.12 | 9.97 | 5,134.31 | 11 | 10.56 |
| | \$: | 672.48 | 9.99 | 735.44 | 11.01 | 9.36 |
| KOCHI | Q: | 1,80,457 | 12.96 | 1,46,038 | 11.32 | -19.07 |
| | V: | 5,861.55 | 12.58 | 4,904.49 | 10.51 | -16.33 |
| | \$: | 845.57 | 12.57 | 700.26 | 10.49 | -17.18 |
| PIPAVAV | Q: | 2,93,835 | 21.10 | 2,57,402 | 19.96 | -12.4 |
| | V: | 4,844.03 | 10.40 | 4,556.19 | 9.76 | -5.94 |
| | \$: | 693.2 | 10.30 | 650.01 | 9.73 | -6.23 |
| J N P | Q: | 1,58,213 | 11.36 | 1,34,766 | 10.45 | -14.82 |
| | V: | 4,811.12 | 10.33 | 4,359.71 | 9.34 | -9.38 |
| | \$: | 694.56 | 10.32 | 623.4 | 9.33 | -10.25 |
| TUTICORIN | Q: | 55,251 | 3.97 | 57,159 | 4.43 | 3.45 |
| | V: | 2,768.77 | 5.94 | 2,942.64 | 6.31 | 6.28 |
| | \$: | 401.22 | 5.96 | 421.04 | 6.3 | 4.94 |
| CHENNAI | Q: | 55,296 | 3.97 | 51,539 | 4 | -6.79 |
| | V: | 2,040.32 | 4.38 | 2,045.57 | 4.38 | 0.26 |
| | \$: | 295.4 | 4.39 | 292.97 | 4.39 | -0.82 |
| MANGALORE/ICD | Q: | 1,41,980 | 10.20 | 95,757 | 7.42 | -32.56 |
| | V: | 1,886.43 | 4.05 | 1,358.89 | 2.91 | -27.97 |
| | \$: | 269.26 | 4.00 | 197.74 | 2.96 | -26.56 |
| KATTUPALLI/ ENNORE | Q: | 18,205 | 1.31 | 26,174 | 2.03 | 43.78 |
| | V: | 778.84 | 1.67 | 1,220.50 | 2.62 | 56.71 |
| | \$: | 112.44 | 1.67 | 174.77 | 2.62 | 55.43 |
| OTHERS | Q: | 65,532 | 4.71 | 53176 | 4.12 | -18.85 |
| | V: | 1,813.39 | 3.89 | 1,692.80 | 3.63 | -6.65 |
| | \$: | 260.92 | 3.88 | 241.69 | 3.62 | -7.37 |
| Total | Q: | 13,92,559 | 100 | 12,89,651 | 100 | -7.39 |
| | V: | 46,589.37 | 100 | 46,662.85 | 100 | 0.16 |
| | \$: | 6,728.50 | 100 | 6,678.69 | 100 | -0.74 |

Q: Quantity in M T, V: Value in Rs. Crore

Source: Marine Products Export Development Authority, Kochi

Table 5.5: Value of Export of Marine Products:2010-11 to 2018-19

| S.N. | Article distribution | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------|---|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 | Live fish | 502.35 | 665.71 | 625.83 | 2023.25 | 931.75 | 750.00 | 1,349.87 | 1,305.59 | 1,070.29 |
| 2 | Fish Fresh or chilled including Hilsa | 16,391.61 | 24,931.60 | 40,448.7 | 58,585.16 | 54,992.82 | 57,401.20 | 50,902.60 | 31,206.04 | 43,006.16 |
| 3 | Frozen Fish | 2,77,313.81 | 3,40,250.43 | 3,47,373.55 | 4,70,331.01 | 4,07,639.6 | 3,61,378.18 | 4,55,186.75 | 4,72,764.75 | 4,83,764.02 |
| 4 | Fish Fillets & Other Fish Meat | 53,362.34 | 90,096.07 | 1,02,915.16 | 78,298.93 | 86,183.09 | 1,01,981.41 | 1,13,780.94 | 1,61,042.47 | 1,84,813.35 |
| 5 | Fish dried salted | 7,515.44 | 11,277.91 | 8,345.35 | 21,975.35 | 19,841.68 | 34,129.46 | 47,678.15 | 48,690.66 | 66,741.11 |
| 6 | Shrimp, Lobsters, Prawns | 51,3155.77 | 8,39,100.40 | 10,08,157.32 | 19,66,830.54 | 22,97,262.2 | 20,31,775.80 | 25,33,135.96 | 31,63,349.69 | 30,79,801.28 |
| 7 | Molluscas, Cuttle Fish, etc. | 1,86,652.54 | 2,77,367.45 | 2,99,261.64 | 3,41,956.21 | 3,39,917.57 | 3,49,776.63 | 4,87,267.45 | 5,38,617.54 | 5,22,404.05 |
| 8 | Fats & Oils & their Fractns | 6,487.22 | 11,815.64 | 18,854.62 | 19,752.52 | 25,686.82 | 16,659.15 | 13,506.18 | 20,688.11 | 5,170.21 |
| 9 | Extracts & Juices of Meat Fish Crustaceans Molluscas/ other aquatic invertebrates | 19,849.15 | 8,369.82 | 224.90 | 178.19 | 78.36 | 380.63 | 836.88 | 286.49 | 93.53 |
| 10 | Prepared or Preserved Fish; Caviar and Caviar substitute prepared from Fish Eggs | 31,321.90 | 26,446.25 | 16,971.79 | 20,040.22 | 19,582.94 | 22,362.66 | 25,674.41 | 27,205.98 | 29,597.61 |
| 11 | Crustaceans Molluscas& other Aquatic Invertebrates prepared or preserved | 72,802.47 | 22,219.70 | 33,181.49 | 51,729.27 | 74,167.15 | 1,15,665.00 | 1,85,774.98 | 2,43,779.54 | 2,71,993.08 |
| Sub-Total | | 72,802.47 | 22,219.70 | 33,181.49 | 51,729.27 | 74,167.15 | 1,15,665.00 | 1,85,774.98 | 2,43,779.54 | 2,71,993.08 |
| Total without 1605 | | 11,12,552.1 | 16,30,321.28 | 18,43,178.86 | 29,79,971.38 | 32,52,116.83 | 29,76,595.12 | 37,29,319.19 | 44,65,157.32 | 44,16,461.61 |
| Total with 1605 | | 11,85,354.6 | 16,52,540.98 | 18,76,360.35 | 30,31,700.65 | 33,26,283.98 | 30,92,260.12 | 39,15,094.17 | 47,08,936.86 | 46,88,454.69 |

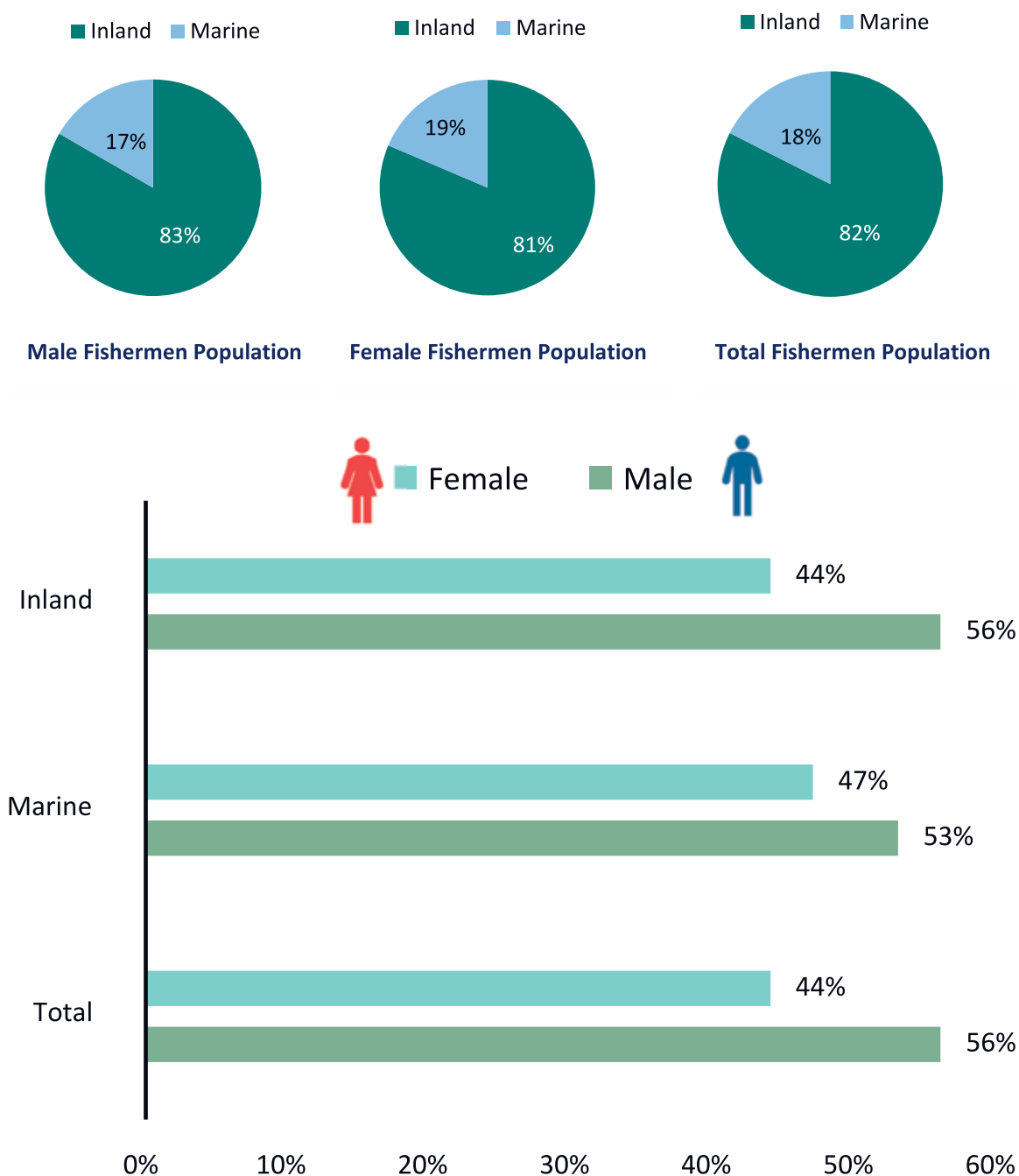
Source: Marine Products Export Development Authority, Kochi

CHAPTER 6

FISHERMEN POPULATION



Fig 33 : Gender-Wise Inland and Marine Fishermen Population in India : 2019-20



| | Male | Female | Total |
|-----------|--------------|-------------|-------------|
| Inland | 1,3,0,13,978 | 1,01,03,842 | 2,31,17,820 |
| Marine | 26,51,652 | 22,94,065 | 49,45,717 |
| All India | 1,56,65,630 | 1,23,97,907 | 2,80,63,537 |

Remarks: The Fishermen population includes Fish farmers, Fish worker, and fishers.

Table 6.1: Fishermen Population and their Percentage: 2019-20

| State/UT's | Number of Districts | Fishermen Population | Whole Population | Fishermen Population per District |
|-----------------------------|---------------------|----------------------|------------------|-----------------------------------|
| Andhra Pradesh | 13 | 14,96,688 | 5,39,03,393 | 1,15,129 |
| Arunachal Pradesh | 25 | 24,015 | 15,70,458 | 961 |
| Assam | 33 | 25,24,106 | 3,56,07,039 | 76,488 |
| Bihar | 38 | 60,27,375 | 12,47,99,926 | 1,58,615 |
| Chhattisgarh | 27 | 2,20,355 | 2,94,36,231 | 8,161 |
| Goa | 2 | 10,545 | 15,86,250 | 5,273 |
| Gujarat | 33 | 5,58,691 | 6,38,72,399 | 16,930 |
| Haryana | 22 | 1,18,455 | 2,82,04,692 | 5,384 |
| Himachal Pradesh | 12 | 11,806 | 74,51,955 | 984 |
| Jharkhand | 24 | 1,40,897 | 3,85,93,948 | 5,870 |
| Karnataka | 30 | 9,74,277 | 6,10,95,027 | 32,476 |
| Kerala | 14 | 10,44,361 | 3,56,99,443 | 74,597 |
| Madhya Pradesh | 52 | 22,32,822 | 8,53,58,964 | 42,939 |
| Maharashtra | 36 | 15,18,228 | 12,31,44,223 | 42,173 |
| Manipur | 16 | 47,711 | 30,91,545 | 2,982 |
| Meghalaya | 11 | 16,567 | 33,66,710 | 1,506 |
| Mizoram | 11 | 6,289 | 12,39,244 | 572 |
| Nagaland | 11 | 7,958 | 22,49,695 | 723 |
| Odisha | 30 | 15,17,574 | 4,63,56,334 | 50,586 |
| Punjab | 22 | 7,591 | 3,01,41,373 | 345 |
| Rajasthan | 33 | 57,260 | 8,10,32,689 | 1,735 |
| Sikkim | 4 | 581 | 6,90,251 | 145 |
| Tamil Nadu | 37 | 12,83,751 | 7,78,41,267 | 34,696 |
| Telangana | 33 | 8,62,221 | 3,93,62,732 | 26,128 |
| Tripura | 8 | 7,761 | 41,69,794 | 970 |
| Uttarakhand | 13 | 8,352 | 1,12,50,858 | 642 |
| Uttar Pradesh | 75 | 39,00,005 | 23,78,82,725 | 52,000 |
| West Bengal | 23 | 32,36,261 | 9,96,09,303 | 1,40,707 |
| A and N Islands | 3 | 25,941 | 4,17,036 | 8,647 |
| Chandigarh | 1 | 524 | 11,58,473 | 524 |
| D & N Haveli, Daman and Diu | 3 | 40,016 | 6,15,724 | 13,339 |
| Delhi | 11 | 3,346 | 1,87,10,922 | 304 |
| Jammu & Kashmir | 22 | 17,396 | 1,36,06,320 | 791 |
| Ladakh | 2 | 22 | 2,89,023 | 11 |
| Lakshadweep | 1 | 6,518 | 73,183 | 6,518 |
| Puducherry | 4 | 1,07,272 | 14,13,542 | 26,818 |
| All India | 735 | 2,80,63,538 | 1,36,48,92,691 | 9,56,669 |

Source: Department of Fisheries, States Government / UTs Administration

Table 6.2: Gender-wise Fishermen Population : 2019-20

| State/UT's | Inland Fishermen Population | | Marine Fishermen Population | |
|----------------------------------|-----------------------------|------------|-----------------------------|-----------|
| | Male | Female | Male | Female |
| Andhra Pradesh | 333,558 | 288,293 | 461,712 | 413,125 |
| Arunachal Pradesh | 15,147 | 8,868 | NA | NA |
| Assam | 1,624,059 | 900,047 | NA | NA |
| Bihar | 3,127,733 | 2,899,642 | NA | NA |
| Chhattisgarh | 146,971 | 73,384 | NA | NA |
| Goa | NA | NA | 5,273 | 5,272 |
| Gujarat | 120,900 | 110,085 | 167,858 | 159,848 |
| Haryana | 117,934 | 521 | NA | NA |
| Himachal Pradesh | 10,739 | 1,067 | NA | NA |
| Jharkhand | 94,497 | 46,400 | NA | NA |
| Karnataka | 465,352 | 180,924 | 196,970 | 131,031 |
| Kerala | 122,377 | 117,819 | 431,447 | 372,718 |
| Madhya Pradesh | 1,232,957 | 999,865 | NA | NA |
| Maharashtra | 602,536 | 529,433 | 197,760 | 188,499 |
| Manipur | 3,278 | 44,433 | NA | NA |
| Meghalaya | 11,745 | 4,822 | NA | NA |
| Mizoram | 5,328 | 961 | NA | NA |
| Nagaland | 5,896 | 2,062 | NA | NA |
| Odisha | 549,806 | 371,613 | 314,069 | 282,086 |
| Punjab | 7,018 | 573 | NA | NA |
| Rajasthan | 31,880 | 25,380 | NA | NA |
| Sikkim | 488 | 93 | NA | NA |
| Tamil Nadu | 125,694 | 110,220 | 535,337 | 512,500 |
| Telangana | 483,094 | 379,127 | NA | NA |
| Tripura | 7,718 | 43 | NA | NA |
| Uttarakhand | 7,260 | 1,092 | NA | NA |
| Uttar Pradesh | 2,101,383 | 1,798,622 | NA | NA |
| West Bengal | 1,629,481 | 1,204,093 | 246,225 | 156,462 |
| A and N Islands | 2,807 | 946 | 12,024 | 10,164 |
| Chandigarh | 524 | NA | NA | NA |
| D & Nagar Haveli and Daman & Diu | NA | NA | 20,529 | 19,487 |
| Delhi | 3,316 | 30 | NA | NA |
| Jammu & Kashmir | 17,396 | NA | NA | NA |
| Ladakh | 22 | NA | NA | NA |
| Lakshadweep | NA | NA | 5,138 | 1,380 |
| Puducherry | 5,084 | 3,384 | 57,310 | 41,494 |
| All India | 13,013,978 | 10,103,842 | 26,51,652 | 22,94,066 |

Source: Department of Fisheries, States Government / UTs Administration

Table 6.3: Number of Fishermen Population engaged in Marine Fisheries activities, 2019-20

| | Full Time | | Part Time | | Occasional | | Unspecified | | Deep Sea | |
|-----------------|-----------|---------|-----------|---------|------------|--------|-------------|---------|----------|--------|
| State/UT | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| A and N Islands | 13,369 | 112 | 1,058 | 300 | NA | NA | NA | NA | NA | NA |
| Gujarat | 71,777 | 36,840 | 19,348 | 12,362 | NA | NA | NA | NA | NA | NA |
| Karnataka | 56,871 | 43,030 | 55,599 | 39,662 | 5,973 | 3,684 | 57,139 | 44,655 | 21,388 | NA |
| Kerala | 295,787 | 255,502 | 27,178 | 23,477 | NA | NA | NA | NA | NA | NA |
| Maharashtra | 91,766 | 34,948 | 29,262 | 38,761 | 20,539 | 20,343 | 3,318 | 9,954 | 10,913 | NA |
| Tamil Nadu | 208,201 | NA | 24,253 | 201,286 | 12,815 | 17,645 | 65,170 | 248,663 | 25,000 | NA |
| Daman and Diu | 6,553 | NA | 82 | NA | 60 | NA | NA | NA | NA | NA |
| Lakshadweep | 2,348 | NA | 2,134 | NA | 562 | 1,380 | NA | NA | NA | NA |
| Puducherry | 24,534 | 11,915 | 6,234 | 4,310 | 1,000 | 800 | 2,814 | 10,056 | 15,084 | 25 |
| All India | 1,153,553 | | 485,306 | | 84,801 | | 441,769 | | 72,410 | |

Source: Department of Fisheries, State Govt./ UT's Administration

Table 6.4: Number of Fishermen Population engaged in Inland Fisheries activities, 2019-20

| | Full Time | | Part Time | | Occasional | | Unspecified | |
|-------------------|-----------|---------|-----------|---------|------------|--------|-------------|-----------|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Arunachal Pradesh | NA | NA | 15,147 | 8,868 | NA | NA | NA | NA |
| Assam | 65,693 | 60,628 | 281,107 | 259,530 | 15,357 | 13,979 | 574,178 | 529,849 |
| Bihar | 38,207 | 17,344 | 64,943 | 22,386 | 48,293 | 21,676 | 1,940,839 | 1,844,450 |
| Chhattisgarh | 158,506 | 25,295 | 11,897 | 5,806 | 7,028 | 2,911 | 5,960 | 2,952 |
| Gujarat | 35,118 | 15,413 | 22,569 | 4,843 | NA | NA | NA | NA |
| Haryana | 9,050 | 1,382 | 12,968 | 256 | 432 | 10 | NA | NA |
| Himachal Pradesh | 5,350 | NA | 6,399 | NA | NA | NA | NA | NA |
| Jharkhand | 10,500 | 1,500 | 31,547 | 11,350 | 33,255 | 15,750 | 19,195 | 17,800 |
| Karnataka | 107,580 | 38,081 | 200,455 | 82,405 | 141,673 | 59,074 | 15,644 | 1,364 |
| Kerala | 77,832 | 74,876 | 15,403 | 14,818 | NA | NA | NA | NA |
| Maharashtra | 135,723 | 37,885 | 52,830 | 14,561 | 25,576 | 5,212 | 18,453 | 1,356 |
| Meghalaya | 1,954 | 777 | 3,750 | 2,503 | 5,861 | 1,448 | 244 | 121 |
| Mizoram | 1,320 | 316 | 2,300 | 495 | 1,000 | 100 | 600 | 152 |
| Nagaland | 176 | 79 | 197 | 340 | 2,120 | 650 | 2,122 | 915 |
| Odisha | 142,912 | 47,242 | 107,088 | 40,156 | 113,653 | 40,364 | 181,867 | 93,651 |
| Rajasthan | 6,386 | NA | 11,830 | NA | 846 | NA | NA | NA |
| Sikkim | NA | NA | 2500 | 127 | NA | NA | NA | NA |
| Tamil Nadu | NA | NA | 62,802 | 7,923 | 3,752 | 5,554 | 7,409 | 24,084 |
| Telangana | 199,032 | 156,200 | 174,155 | 136,676 | 74,640 | 58,576 | 49,758 | 39,149 |
| Tripura | 19,072 | | 13,291 | | 1,583 | | NA | |
| Uttarakhand | 1,451 | 307 | 5,771 | 711 | 1,168 | 65 | 391 | 65 |
| Uttar Pradesh | 90,500 | 22,000 | 34,500 | NA | NA | NA | NA | NA |
| Chandigarh | 5 | 5 | NA | NA | NA | NA | NA | NA |
| Daman and Diu | 335 | 390 | 265 | 420 | 136 | 135 | NA | NA |
| Delhi | 270 | NA | 519 | NA | 32 | NA | NA | NA |
| Jammu & Kashmir | 17,396 | NA | 1,342 | NA | 1,187 | NA | 326 | NA |
| Puducherry | 1,500 | 500 | 500 | 200 | 250 | 100 | 100 | 50 |
| All India | 1,626,088 | | 1,750,449 | | 703,446 | | 5,373,044 | |

Source: Department of Fisheries, State Govt./ UT's Administration

CHAPTER 7

FISHERIES RESOURCES



Fig 34 : Marine Fisheries Resources - Coastal States and Union Territories of India

| | Coastal length (km) | Landing centres | Fishing villages |
|------------------------------------|---------------------|-----------------|------------------|
| Andaman & Nicobar | 1912 | 51 | 169 |
| Andhra Pradesh | 974 | 350 | 555 |
| D & Nagar Haveli and Daman and Diu | 27 | 8 | 12 |
| Goa | 104 | 32 | 60 |
| Gujarat | 1600 | 107 | 260 |
| Karnataka | 300 | 115 | 162 |
| Kerala | 590 | 174 | 220 |
| Lakshadweep | 132 | 20 | 10 |
| Maharashtra | 720 | 173 | 456 |
| Orissa | 480 | 55 | 739 |
| Pondicherry | 45 | 22 | 39 |
| Tamil Nadu | 1076 | 301 | 608 |
| West Bengal * | 158 | 49 | 171 |
| Total | 8,118 | 1,457 | 3,461 |

Note : The data given in table as per the States/Uts Government.

| Table 7.1: Inland Fisheries Resources by States and Union Territories of India: 2019-20 | | | | | | | | | |
|---|------------------------|------------------|-----------|--------------------------|-----------|----------------------|---------------------|---|---------------------------------------|
| States | Rivers and Canals (Km) | Small Reservoirs | | Medium & Large Reservoir | | Tanks and Ponds (Ha) | Brackish Water (Ha) | Beels/ Oxbow Lakes/ Derelict Water (Ha) | Any other than rivers and canals (Ha) |
| | | Number | Area(ha) | Number | Area (ha) | | | | |
| Andhra Pradesh | 11,514 | 90 | 34,693 | 26 | 1,30,898 | 3,33,634 | 53,830 | 0 | 0 |
| Arunachal Pradesh | 10,957 | 1 | 136 | 0 | 0 | 29,122 | 0 | 3,277 | 56,000 |
| Assam | 4,820 | 0 | 0 | 2 | 1,096 | 77,250 | 0 | 1,54,650 | 4,62,382 |
| Bihar | 3,200 | 0 | 0 | 37 | 26,304 | 93,218 | 0 | 9,000 | 0 |
| Chhattisgarh | 3,570 | 1,757 | 43,681.85 | 13 | 39,035.75 | 1,09,003.64 | 0 | 0 | 0 |
| Goa | 250 | 4 | 484 | 1 | 2,964 | 87.7 | 108.46 | | |
| Gujarat | 3,865 | 1,547 | 92,705 | 88 | 2,54,954 | 22,000 | 1,87,000 | 0 | 0 |
| Haryana | 7,197 | 0 | 0 | 0 | 0 | 17,244 | 0 | 0 | 0 |
| Himachal Pradesh* | 3,000 | 0 | 0 | 5 | 43,785 | 845.34 | 0 | 0 | 0 |
| Jharkhand* | 1,800 | 412 | 28,789.63 | 23 | 1,04,363 | 79,010 | 0 | 0 | 19,936 |
| Karnataka | 5,853 | 33 | 7,195 | 49 | 2,65,063 | 2,91,627 | 8,000 | 0 | 0 |
| Kerala | 3,220 | 37 | 12,039 | 10 | 21,707 | 27,625 | 65,213 | 0 | 0 |

Table 7.1: Inland Fisheries Resources by States and Union Territories of India: 2019-20

| States | Rivers and Canals (Km) | Small Reservoirs | | Medium & Large Reservoir | | Tanks and Ponds (Ha) | Brackish Water (Ha) | Beels/Oxbow Lakes/ Derelict Water (Ha) | Any other than rivers and canals (Ha) |
|------------------------------------|------------------------|------------------|-----------|--------------------------|-----------|----------------------|---------------------|--|---------------------------------------|
| | | Number | Area(ha) | Number | Area (ha) | | | | |
| Madhya Pradesh | 17,088 | 3,315 | 1,24,486 | 25 | 2,28,321 | 76,982 | 0 | 0 | 0 |
| Maharashtra | 29,530 | 5,273 | 12,27,089 | 411 | 3,02,830 | 66,50,013 | 2,699 | 41,288 | 450 |
| Manipur | 14,788 | 5 | 960 | 1 | 1,182 | 11,622.8 | 0 | 24,433 | 0 |
| Meghalaya* | 4,200.87 | 7 | 717.53 | 0 | 0 | 3,465.37 | 0 | 284.78 | 66.94 |
| Mizoram | 1,750 | 3 | 10 | 2 | 8,000 | 5,492.04 | 0 | 0 | 0 |
| Nagaland | 1,600 | 0 | 0 | 1 | 2,258 | 3,474.13 | 0 | 1,110 | 0 |
| Odisha* | 24,878.72 | 603 | 34,608 | 8 | 1,65,771 | 1,33,786 | 3,84,950 | 1,80,000 | 0 |
| Punjab | 868 | 12 | 686.73 | 1 | 3,525 | 16,730 | 0 | 0 | |
| Rajasthan | 5,290 | 346 | 82,396 | 48 | 2,54,475 | 93,909 | 0 | 0 | 0 |
| Sikkim | 1,600 | 3 | 850 | 0 | 0 | 1,466 | 0 | 0 | 0 |
| Tamil Nadu | 7,420 | 69 | 19,948 | 9 | 42,067 | 2,53,975 | 56,000 | 7,000 | 3,85,218.2 |
| Telangana | 4,818 | 56 | 23,146 | 26 | 1,91,763 | 3,95,828 | 0 | 0 | 0 |
| Tripura | 2,975.8 | 0 | 0 | 1 | 3,049.34 | 18,530.12 | 0 | 0 | 12,161.01 |
| Uttarakhand* | 2,686 | 0 | 0 | 7 | 20,587 | 862.32 | 0 | 297 | 50* |
| Uttar Pradesh | 39,542 | 53 | 12,899.59 | 29 | 1,32,655 | 1,72,859.33 | 0 | 12,034.15 | 0 |
| West Bengal | 2,526.00 | 52 | 28,050.00 | 0 | 0 | 2,63,372.00 | 2,10,000 | 42,082 | 26,925 |
| A and N Islands | 0 | 7 | 367 | 0 | 0 | 202.26 | 0 | 0 | 0 |
| Chandigarh | 0 | 0 | 0 | 3 | 300 | 2.06 | 0 | 0 | 0 |
| D & Nagar Haveli and Daman and Diu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delhi | 66 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 |
| Jammu & Kashmir* | 27,781 | 5 | 750 | 2 | 6,250 | 17,010 | 0 | 6,000 | 0 |
| Ladakh | 3,770 | 0 | 0 | 1 | 250 | 7.52 | 97,700 | 0 | 0 |
| Lakshadweep | 0 | 0 | 0 | 0 | 0 | 1.84 | 0 | 0 | 0 |
| Puducherry | 7.086 | 0 | 303.33 | 0 | 1,357.12 | 57.45 | 0 | 0 | 0 |
| All India | 2,52,431.48 | 13,690 | 17,76,991 | 829 | 22,54,810 | 92,00,327 | 10,65,500 | 4,81,455.93 | 9,63,189.20 |

Source: Department of Fisheries, States Government / UTs Administration

*Uttarakhand : 50 waterlogged , Raceways – 1.7 Ha

*Meghalaya : Beels = 220.83 Lakes = 63.95, swamps and low-lying areas = 66.94

*Jharkhand : 19,936 Ha (check dams , Ahar, coalpits and Mines)

*Himachal Pradesh : Raceways – 4.2068 Ha

*Odisha : Brackishwater area suitable for culture – 32587 Ha , Backwater – 8100 Ha , Brackishwater chilika lake – 79000 Ha, Estuaries – 297850 Ha

*Jammu and Kashmir : Raceways – 11.69 Ha

Marine Fisheries resource potential in India

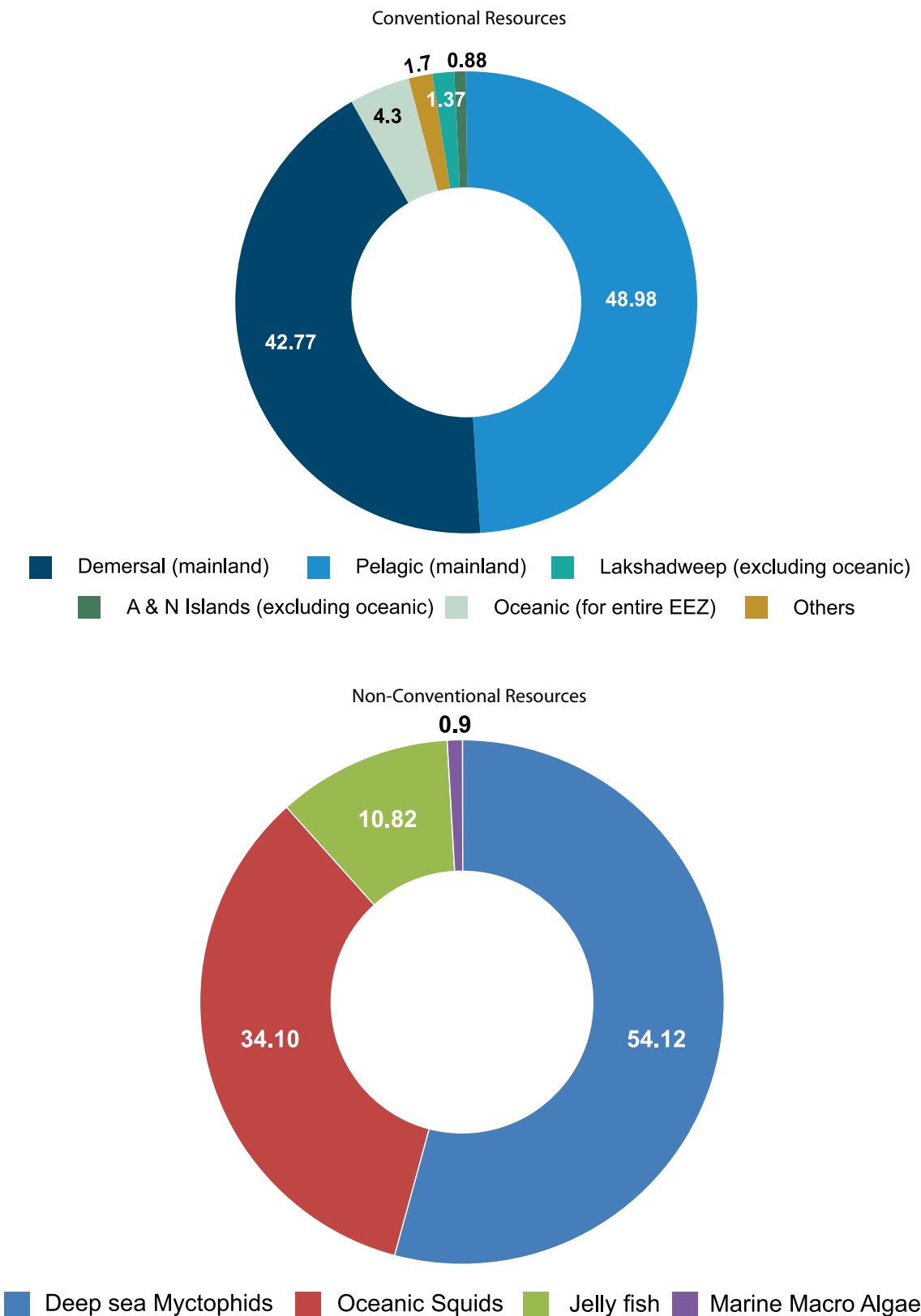
Resource-wise fisheries potential yield from the depth zone up to 500m depth was estimated by the committee constituted by Department of Fisheries (then DADF), Government of India for Revalidation of potential yield from the Indian EEZ. The estimate of potential yield of conventional resources along the mainland & Island ecosystems of India is 5.31 million tonnes and Non-conventional resources is 1.847 million Tonnes; thus totalling to 7.158 million Tonnes. (Ref. Document of DoF, 2018).

Summary of estimated potential of marine fisheries in different realms. (2018)

| Table 7.2: Potential of Fisheries Resources in the Indian Exclusive Economic Zone (EEZ) | |
|---|--------------------|
| A. Conventional resource | Quantity in Tonnes |
| Demersal resources (mainland) | 22,98,281 |
| Pelagic resources (main land) | 26,31,827 |
| Lakshadweep (excluding oceanic resources) | 14,490 |
| Andaman & Nicobar (excluding oceanic resources) | 43,794 |
| Oceanic (for entire EEZ) | 2,30,832 |
| Others | 91,369 |
| Sub Total | 53,10,593 |
| B. Non-Conventional resources: (Additional Potential) | |
| Deep sea Myctophids | 10,00,000 |
| Oceanic Squids | 6,30,000 |
| Jelly fish | 2,00,000 |
| Marine Macro Algae | 17,775 |
| Sub Total | 18,47,775 |
| Resources Grand Total: | 71,58,368 |
| Source: Fishery Survey of India (Report of the working group for revalidating the potential yield of Fishery Resources in the Indian EEZ), 2018 | |

The marine fish production estimated for the country in 2019-20 is about 3.72 million tonnes which consists mainly of the conventional resources harvested mainly from waters within 200m depths. Hence, there is scope for increasing the landings of conventional resources from oceanic waters as well as scope for harnessing additional Non-Conventional marine fishery resources of 1.84 Million Tonnes.

Fig 35 : Percentage Contribution of Potential of Fisheries Resources in the Indian Exclusive Economic Zone (EEZ): 2018



CHAPTER 8

EXPENDITURE ON FISHERY SECTOR



Fig 36 : Year-wise approved outlay and Expenditure for development of fisheries sector under Blue Revolution Scheme including NFDB & Fishery Institute 2015-16 to 2019-20 (Rs. In Lakh)

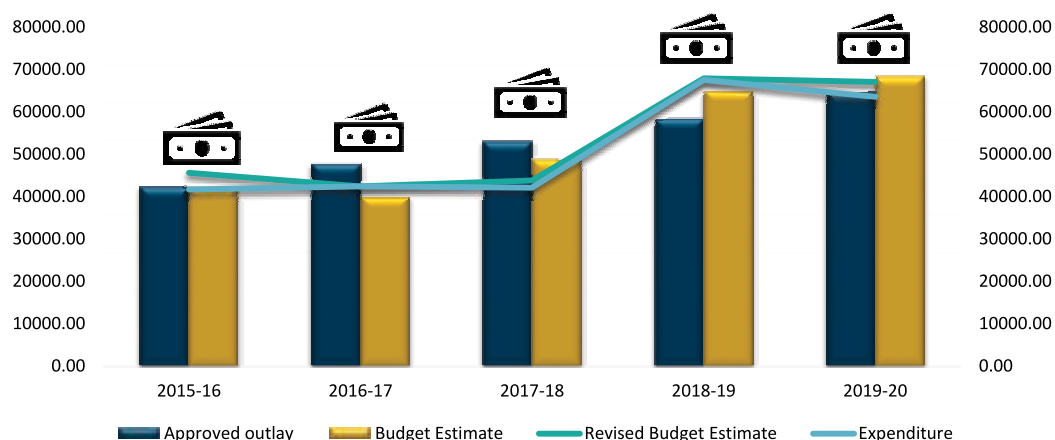


Table 8.1: Year-wise approved outlay and Expenditure for development of fisheries sector under Blue Revolution Scheme including NFDB & Fishery Institute 2015-16 to 2019-20 (Rs. In Lakh)

| Year | Approved outlay | Budget Estimate | Revised Budget Estimate | Expenditure |
|---------|-----------------|-----------------|-------------------------|-------------|
| 2015-16 | 47,695.00 | 47,695.00 | 45,586.00 | 41,680.94 |
| 2016-17 | 53,800.00 | 45,000.00 | 42,425.00 | 42,411.00 |
| 2017-18 | 59,800.00 | 54,913.00 | 43,799.19 | 42,077.95 |
| 2018-19 | 65,800.00 | 73,245.00 | 67,914.00 | 67,552.37 |
| 2019-20 | 72,905.00 | 77,025.00 | 67,025.00 | 63,575.86 |
| Total | 3,00,000.00 | 2,97,878.00 | 2,66,749.19 | 2,57,298.12 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 8.2: Scheme –wise Outlay and Expenditure 2016-17 to 2019-20, Fisheries Sector Schemes (Rs. In Crore)

| S.N | Scheme | 2016-17 | | | 2017-18 | | | 2018-19 | | | 2019-20 | | |
|-----|---|---------|--------|--------|---------|--------|--------|---------|--------|--------|---------|--------|--------|
| | | BE | RE | EXP | BE | RE | EXP | BE | RE | EXP | BE | RE | EXP |
| 1 | Blue Revolution: Integrated Development and Management of Fisheries | 242.89 | 388.44 | 384.01 | 400.73 | 301.73 | 323.55 | 632.61 | 484.85 | 484.46 | 550.00 | 450.00 | 429.78 |
| 2 | NFDB | 192.11 | 33.81 | 38.45 | 9.00 | 9.00 | 13.99 | 5.00 | 101.63 | 101.62 | 80.75 | 80.75 | 80.75 |
| 3 | FIDF | - | - | - | - | - | - | 10.00 | 1.00 | 1.00 | 10.00 | 5.25 | 0.00 |
| | Sub- Total | 435.00 | 422.25 | 422.46 | 409.73 | 310.73 | 337.54 | 647.61 | 587.48 | 587.08 | 640.75 | 536.00 | 510.53 |
| 4 | FSI | 80.01 | 61.33 | 54.60 | 75.27 | 53.18 | 51.05 | 57.62 | 55.19 | 56.27 | 91.65 | 90.82 | 84.32 |
| 5 | CIFNET | 35.61 | 18.83 | - | 44.72 | 20.29 | 19.57 | 19.43 | 19.11 | 19.05 | 25.80 | 28.71 | 27.13 |
| 6 | NIFPHATT | 13.91 | 10.21 | 0.00 | 13.25 | 10.15 | 9.07 | 11.60 | 11.60 | 9.86 | 14.06 | 12.18 | 9.23 |
| 7 | CICEF | 4.10 | 4.20 | 3.37 | 4.97 | 4.24 | 3.55 | 3.93 | 4.46 | 4.22 | 4.93 | 4.73 | 4.53 |
| | Sub- Total | 133.63 | 94.57 | 57.97 | 138.21 | 87.86 | 83.24 | 92.58 | 90.36 | 89.40 | 136.44 | 136.44 | 125.21 |

Table 8.2: Scheme –wise Outlay and Expenditure 2016-17 to 2019-20, Fisheries Sector Schemes (Rs. In Crore)

| S.N | Scheme | 2016-17 | | | 2017-18 | | | 2018-19 | | | 2019-20 | | |
|-----|---|---------|--------|--------|---------|--------|--------|---------|--------|--------|---------|--------|--------|
| | | BE | RE | EXP | BE | RE | EXP | BE | RE | EXP | BE | RE | EXP |
| 8 | DAAHQ | 1.00 | 0.02 | 0.00 | 1.18 | 13.81 | 0.00 | 2.27 | 1.75 | 3.53 | 3.04 | 3.03 | 0.00 |
| 9 | CAA | 3.80 | 3.80 | 2.40 | 4.00 | 3.50 | 2.00 | 4.00 | 4.00 | 4.00 | 4.50 | 4.50 | 4.50 |
| 10 | Package for replacement of Fishing vessels seized by Pakistan | - | - | - | 0.10 | 0.10 | 0.10 | 1.00 | 3.92 | 3.92 | — | — | — |
| 11 | Secretariate Economic Services | | | | | | | | | | 20.00 | 20.00 | 15.48 |
| | Grand Total** | 573.43 | 520.64 | 482.83 | 553.22 | 416.00 | 422.88 | 747.46 | 687.51 | 687.93 | 804.73 | 699.97 | 655.72 |

* All Schemes are merged into Blue Revolution: Integrated Development and Management of Fisheries after the FY 2015-16.

** Final requirement for the FY 2017-18 was 441.59 but CAA & PRFVS are not included in BR Scheme. Hence the final RE was 437.99.

Source: D/o Fisheries, M/o Fisheries, Animal Husbandry & Dairying.

BE: Budget Estimate

RE: Revised Estimate

EXP: Expenditure

Including Plan Component of Fishery Institutes during 2016-17

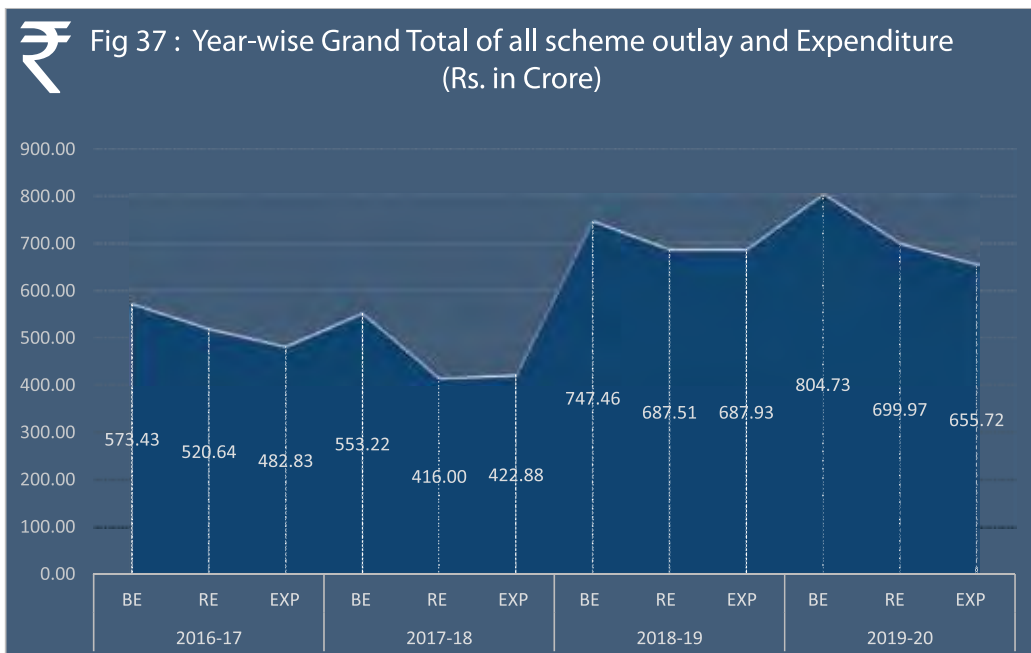


Table 8.3: State/UT – wise release in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Lakh)

| State/UT/Institutes | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|----------------------|-----------|-----------|-----------|-----------|-----------|-------------|
| Andhra Pradesh | 777.15 | 1,897.00 | 2,162.88 | 1,302.31 | 2,556.20 | 8,695.54 |
| Arunachal Pradesh | 81.30 | 0.00 | 222.90 | 374.68 | 24.77 | 703.65 |
| Assam | 971.14 | 1,641.45 | 799.66 | 524.14 | 280.01 | 4,216.40 |
| Bihar | 93.84 | 1,948.04 | 2.25 | 4,078.69 | 1,557.15 | 7,679.97 |
| Goa | 70.82 | 1000.00 | 265.24 | 63.82 | 0.00 | 1,399.88 |
| Gujarat | 491.43 | 386.50 | 1,527.43 | 1,420.80 | 1000.00 | 4,826.16 |
| Haryana | 194.95 | 1,122.05 | 779.36 | 605.90 | 696.47 | 3,398.73 |
| Himachal Pradesh | 181.57 | 1,082.32 | 572.26 | 1,046.13 | 629.14 | 3,511.42 |
| Jharkhand | 589.12 | 2,300.20 | 75.00 | 925.40 | 0.00 | 3,889.72 |
| Karnataka | 2,352.58 | 2,870.54 | 3,324.31 | 5,847.28 | 2,330.61 | 16,725.32 |
| Kerala | 6,713.78 | 1,298.10 | 812.34 | 5,093.01 | 9,357.15 | 23,274.38 |
| Madhya Pradesh | 346.09 | 1,400.00 | 672.02 | 711.39 | 1,859.47 | 4,988.97 |
| Maharashtra | 1,263.62 | 2,051.53 | 2,256.81 | 2,861.17 | 1000.00 | 9,433.13 |
| Manipur | 590.22 | 0.00 | 456.15 | 382.13 | 50.68 | 1,479.18 |
| Meghalaya | 36.10 | 1,003.17 | 139.60 | 2,598.95 | 2,387.45 | 6,165.27 |
| Mizoram | 1,016.49 | 1,376.77 | 261.39 | 403.75 | 735.99 | 3,794.39 |
| Nagaland | 867.92 | 965.84 | 219.40 | 194.67 | 2,396.17 | 4,644.00 |
| Odisha | 1,256.93 | 2,593.59 | 1,077.68 | 1,022.13 | 543.68 | 6,494.01 |
| Punjab | 42.59 | 999.00 | 465.36 | 581.34 | 2,063.76 | 4,152.05 |
| Rajasthan | 34.21 | 262.10 | 83.28 | 70.20 | 266.20 | 715.99 |
| Sikkim | 26.94 | 379.16 | 0.00 | 416.52 | 1,019.65 | 1,842.27 |
| Tamil Nadu | 5,700.73 | 2,492.50 | 11,342.80 | 7,155.91 | 1,801.00 | 28,492.94 |
| Telangana | 165.94 | 1,465.00 | 479.78 | 1,574.80 | 154.00 | 3,839.52 |
| Tripura | 361.96 | 867.88 | 341.92 | 2004.18 | 788.91 | 4,364.85 |
| Uttar Pradesh | 672.63 | 1,760.85 | 238.14 | 3,050.06 | 3,816.63 | 9,538.31 |
| Uttarakhand | 48.85 | 954.95 | 746.16 | 471.08 | 683.67 | 2,904.71 |
| West Bengal | 925.84 | 774.38 | 649.32 | 185.40 | 0.00 | 2534.94 |
| A & N Islands | 275.00 | 54.00 | 179.89 | 129.09 | 51.21 | 689.19 |
| Chhattisgarh | 446.51 | 1,346.69 | 1,091.92 | 1,045.69 | 3,292.90 | 7,223.71 |
| Daman & Diu | 21.77 | 0.00 | 226.69 | 0.00 | 0.00 | 248.46 |
| Delhi | 0.00 | 0.00 | 136.29 | 0.00 | 0.00 | 136.29 |
| Jammu & Kashmir | 213.23 | 1,111.18 | 404.69 | 439.54 | 788.63 | 2,957.27 |
| Lakshadweep | 42.25 | 0.00 | 53.57 | 39.90 | 29.30 | 165.02 |
| Pondicherry | 859.95 | 999.95 | 150.00 | 1,448.00 | 461.37 | 3,919.27 |
| NFDB | 5,339.99 | 3,239.03 | 1,399.00 | 10,162.00 | 8,075.00 | 28,215.02 |
| Fisheries Institutes | 5,439.75 | 165.44 | 8,324.14 | 8,944.39 | 12,522.17 | 35,395.89 |
| Others | 3,167.75 | 601.97 | 138.35 | 377.92 | 806.5 | 5,092.49 |
| Total | 41,680.94 | 42,411.18 | 42,077.97 | 67,552.37 | 64,025.84 | 2,57,748.29 |

Rs. 10000 lakh has been released on 31.03.2018 for deep sea fishing and construction of fish landing center at Kuntukal by M/o Finance

*Releases from NFDB has not included from the release figure mentioned from 2016-17

Source: D/o Fisheries, M/o Fisheries, Animal Husbandry & Dairying.

Table 8.4: State -wise Completed and ongoing projects approved under RKVY in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Crore)

| | State | Fin Year | Project Status | Cost |
|---|-------------------|----------|----------------|--------|
| 1 | ANDHRA PRADESH | 2015-16 | Completed | |
| | | | Ongoing | 28.09 |
| | | 2016-17 | Completed | |
| | | | Ongoing | 37.15 |
| | | 2017-18 | Ongoing | 47.28 |
| | | 2018-19 | Ongoing | 20.20 |
| | | 2019-20 | Ongoing | 26.26 |
| | | | Total | 158.98 |
| 2 | ARUNACHAL PRADESH | 2015-16 | Ongoing | |
| | | 2016-17 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Ongoing | |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 5.00 |
| | | | Total | 5.00 |
| 3 | ASSAM | 2015-16 | Ongoing | |
| | | 2016-17 | Ongoing | 33.00 |
| | | 2017-18 | Ongoing | |
| | | 2018-19 | Ongoing | 5.127 |
| | | 2019-20 | Ongoing | 18.97 |
| | | | Total | 57.10 |
| 4 | BIHAR | 2015-16 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Ongoing | |
| | | | Total | |
| 5 | CHHATTISHGARH | 2015-16 | Completed | |
| | | | Ongoing | |
| | | 2016-17 | Completed | 13.82 |
| | | | Ongoing | |
| | | 2017-18 | Completed | 0.525 |
| | | | Ongoing | 15.19 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 12.52 |
| | | | Total | 42.07 |
| 6 | GOA | 2015-16 | Ongoing | |
| | | 2016-17 | Ongoing | |
| | | 2017-18 | Ongoing | 3 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 0.64 |

Table 8.4: State -wise Completed and ongoing projects approved under RKVY in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Crore)

| | State | Fin Year | Project Status | Cost |
|----|------------------|----------|----------------|-------|
| | | | Total | 3.64 |
| 7 | GUJARAT | 2015-16 | Completed | |
| | | | Ongoing | 1.09 |
| | | 2016-17 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Completed | |
| | | | Ongoing | 68.41 |
| | | 2018-19 | Ongoing | 4 |
| | | 2019-20 | Ongoing | 5 |
| | | | Total | 78.5 |
| 8 | HARYANA | 2015-16 | Ongoing | 8.95 |
| | | 2016-17 | Ongoing | 5 |
| | | 2017-18 | Ongoing | 51.1 |
| | | 2018-19 | Ongoing | 9.98 |
| | | 2019-20 | Ongoing | 8 |
| | | | Total | 83.03 |
| 9 | HIMACHAL PRADESH | 2015-16 | Completed | 0.63 |
| | | | Ongoing | 0.63 |
| | | 2016-17 | Completed | 0.75 |
| | | | Ongoing | 0.75 |
| | | 2017-18 | Completed | |
| | | | Ongoing | 2.981 |
| | | 2018-19 | Ongoing | 1.006 |
| | | 2019-20 | Ongoing | |
| | | | Total | 6.747 |
| 10 | JHARKHAND | 2015-16 | Ongoing | |
| | | 2016-17 | | |
| | | 2017-18 | | |
| | | 2018-19 | | |
| | | 2019-20 | Ongoing | 14.29 |
| | | | Total | 14.29 |
| 11 | KARNATAKA | 2015-16 | Completed | |
| | | | Ongoing | 5.22 |
| | | 2016-17 | Completed | |
| | | | Ongoing | 5 |
| | | 2017-18 | Completed | |
| | | | Ongoing | 6.62 |
| | | 2018-19 | Ongoing | 2.61 |
| | | 2019-20 | Ongoing | 14.83 |

Table 8.4: State -wise Completed and ongoing projects approved under RKVY in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Crore)

| | State | Fin Year | Project Status | Cost |
|----|----------------|----------|----------------|--------|
| | | | Total | 34.28 |
| 12 | KERALA | 2015-16 | Completed | 16.5 |
| | | | Ongoing | 26.5 |
| | | 2016-17 | Completed | |
| | | | Ongoing | 28.87 |
| | | 2017-18 | Completed | |
| | | | Ongoing | 20.65 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 8.37 |
| | | | Total | 100.89 |
| 13 | MADHYA PRADESH | 2015-16 | Ongoing | 7.656 |
| | | 2016-17 | Ongoing | 7.2 |
| | | 2017-18 | Ongoing | |
| | | 2018-19 | Ongoing | 13.41 |
| | | 2019-20 | Ongoing | 9.79 |
| | | | Total | 38.0 |
| 14 | MAHARASHTRA | 2015-16 | Completed | |
| | | | Ongoing | |
| | | 2016-17 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Ongoing | 51.06 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 30.80 |
| | | | Total | 81.86 |
| 15 | MEGHALAYA | 2015-16 | Completed | |
| | | | Ongoing | |
| | | 2016-17 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Completed | |
| | | | Ongoing | 0.20 |
| | | 2018-19 | Ongoing | 3.98 |
| | | 2019-20 | Ongoing | 11.15 |
| | | | Total | 15.33 |
| 16 | MIZORAM | 2015-16 | Ongoing | 2.42 |
| | | 2016-17 | Ongoing | |
| | | 2017-18 | | |
| | | 2018-19 | | |
| | | 2019-20 | Ongoing | 118.05 |
| | | | Total | 120.47 |

Table 8.4: State -wise Completed and ongoing projects approved under RKVY in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Crore)

| | State | Fin Year | Project Status | Cost |
|----|-----------|----------|----------------|--------|
| 17 | MANIPUR | 2015-16 | Ongoing | |
| | | 2019-20 | Ongoing | 7.35 |
| | | | Total | 7.35 |
| 18 | NAGALAND | 2015-16 | Ongoing | 4.00 |
| | | 2016-17 | Ongoing | 4.00 |
| | | 2017-18 | Ongoing | 4.13 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 3.00 |
| | | | Total | 12.13 |
| 18 | ORISSA | 2015-16 | Completed | 25.20 |
| | | | Ongoing | 25.44 |
| | | 2016-17 | Completed | 18.5 |
| | | | Ongoing | 7.915 |
| | | 2017-18 | Completed | |
| | | | Ongoing | 60.86 |
| | | 2018-19 | Ongoing | 29.12 |
| | | 2019-20 | Ongoing | 22.95 |
| | | | Total | 189.99 |
| 19 | PUNJAB | 2019-20 | Ongoing | 4.04 |
| | | | Total | 4.04 |
| 20 | RAJASTHAN | 2015-16 | Ongoing | |
| | | 2016-17 | Ongoing | |
| | | 2017-18 | Ongoing | 0.89 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 2.71 |
| | | | Total | 3.6 |
| 22 | TAMILNADU | 2015-16 | Completed | 9.3 |
| | | | Ongoing | 5.914 |
| | | 2016-17 | Completed | 33.50 |
| | | | Ongoing | 12.47 |
| | | 2017-18 | Completed | 7.80 |
| | | | Ongoing | 8.15 |
| | | 2018-19 | Completed | 2 |
| | | | Ongoing | 18.27 |
| | | 2019-20 | Ongoing | 32.81 |
| | | | Total | 130.23 |

Table 8.4: State -wise Completed and ongoing projects approved under RKVY in Fisheries Sector during 2015-16 to 2019-20 (Rs. in Crore)

| | State | Fin Year | Project Status | Cost |
|----|---------------|----------|----------------|---------|
| 23 | TELANGANA | 2015-16 | Completed | |
| | | | Ongoing | 3.66 |
| | | 2016-17 | Ongoing | 2.62 |
| | | 2017-18 | Ongoing | 5.11 |
| | | 2018-19 | Ongoing | 4.29 |
| | | 2019-20 | Ongoing | 8.88 |
| | | | Total | 24.57 |
| 24 | TRIPURA | 2015-16 | Completed | 3.79 |
| | | 2016-17 | Completed | 1.73 |
| | | 2017-18 | Completed | 3.31 |
| | | | Ongoing | |
| | | 2018-19 | Completed | |
| | | | Ongoing | 5.3 |
| | | 2019-20 | Ongoing | 5.51 |
| | | | Total | 19.64 |
| 25 | UTTAR PRADESH | 2015-16 | Completed | |
| | | | Ongoing | 7.67 |
| | | 2016-17 | Completed | |
| | | | Ongoing | 21.18 |
| | | 2017-18 | Ongoing | 24.37 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 0.97 |
| | | | Total | 54.20 |
| 26 | UTTARAKHAND | 2015-16 | Ongoing | |
| | | 2016-17 | Completed | |
| | | | Ongoing | |
| | | 2017-18 | Completed | |
| | | | Ongoing | 3.24 |
| | | 2018-19 | Ongoing | |
| | | 2019-20 | Ongoing | 3.51 |
| | | | Total | 6.75 |
| 27 | WEST BENGAL | 2015-16 | Completed | 27.49 |
| | | | Ongoing | 24.75 |
| | | 2016-17 | Completed | 21.6 |
| | | | Ongoing | 41.61 |
| | | 2017-18 | Completed | 0.57 |
| | | | Ongoing | 43.51 |
| | | 2018-19 | Ongoing | 37.70 |
| | | 2019-20 | Ongoing | 23.85 |
| | | | Total | 221.12 |
| | All India | | Grand Total | 1513.94 |

Source: Rashtriya Krishi Vikas yojana - RKVY

Table 8.5: Details of fund released from NFDB during 2015-16 to 2019-20 for different development activities in states / UT's

| S.N | State | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|-----|-----------------------|-----------|----------|----------|----------|----------|
| 1 | Andhra Pradesh | 289.65 | 257.51 | 111.14 | 581.20 | 117.08 |
| 2 | Arunachal Pradesh | 0.00 | 0.00 | 1.95 | 3.66 | 44.81 |
| 3 | Assam | 927.76 | 121.21 | 258.78 | 119.93 | 197.53 |
| 4 | Bihar | 15.21 | 0.75 | 168.16 | 30.44 | 40.12 |
| 5 | Chhattisgarh | 98.06 | 24.37 | 13.70 | 76.35 | 50.44 |
| 6 | Goa | 25.00 | 3.10 | 1.95 | 0.00 | 0.00 |
| 8 | Gujarat | 0.35 | 1,212.36 | 12.68 | 145.29 | 3,912.35 |
| 9 | Haryana | 21.41 | 0.00 | 0.00 | 5.68 | 3.00 |
| 10 | Himachal Pradesh | 81.84 | 6.00 | 3.90 | 2.57 | 22.68 |
| 11 | Jharkhand | 214.12 | 1,313.45 | 14.63 | 106.61 | 0.00 |
| 12 | Karnataka | 479.13 | 87.30 | 70.51 | 240.21 | 47.60 |
| 13 | Kerala | 3,397.64 | 227.20 | 41.90 | 616.44 | 6.25 |
| 14 | Madhya Pradesh | 67.50 | 6.20 | 1.81 | 60.97 | 1,06.37 |
| 15 | Maharashtra | 726.40 | 344.29 | 52.72 | 766.80 | 12.75 |
| 17 | Manipur | 194.47 | 59.94 | 17.86 | 231.90 | 16.30 |
| 18 | Meghalaya | 37.10 | 38.99 | 45.34 | 9.69 | 10.80 |
| 19 | Mizoram | 148.88 | 25.28 | 1.95 | 26.69 | 26.18 |
| 20 | Nagaland | 53.97 | 52.48 | 0.00 | 5.28 | 15.60 |
| 21 | Odisha | 436.82 | 21.86 | 62.14 | 5.98 | 10.00 |
| 22 | Punjab | 48.59 | 2.76 | 10.93 | 6.60 | 0.00 |
| 23 | Rajasthan | 0.00 | 13.75 | 19.13 | 44.08 | 10.81 |
| 25 | Sikkim | 8.01 | 1.00 | 10.21 | 6.81 | 0.00 |
| 26 | Tamil Nadu | 1,071.45 | 107.09 | 641.53 | 444.70 | 178.18 |
| 27 | Telangana | 160.97 | 17.77 | 61.69 | 758.31 | 101.53 |
| 28 | Tripura | 166.42 | 179.61 | 91.02 | 63.55 | 25.71 |
| 29 | Uttar Pradesh | 559.09 | 43.70 | 48.18 | 31.48 | 6.25 |
| 30 | Uttarakhand | 13.81 | 0.10 | 1.95 | 0.00 | 0.67 |
| 31 | West Bengal | 73.11 | 384.59 | 80.09 | 517.50 | 222.13 |
| 32 | Andaman & Nicobar | 0.00 | 0.00 | 38.44 | 60.85 | 8.88 |
| 33 | Delhi | 0.00 | 0.00 | 22.62 | 43.25 | 0.00 |
| 34 | J&K | 118.53 | 11.14 | 46.89 | 14.00 | 37.49 |
| 35 | Lakshadweep | 42.25 | 0.00 | 0.00 | 4.53 | 2.50 |
| 36 | Puducherry | 27.66 | 0.80 | 0.00 | 0.65 | 0.00 |
| | National Organization | 0.00 | 611.87 | 1,955.74 | 3,108.73 | 2,344.08 |
| | Admin Expenses | 779.09 | 0.00 | 0.00 | 0.00 | 830.79 |
| | Total | 10,284.29 | 5,176.47 | 3,909.53 | 8,140.73 | 8,408.88 |

Source: NFDB

Fig 38 : Expenditure on Fisheries Development form NFDB(Rs. in Lakh)

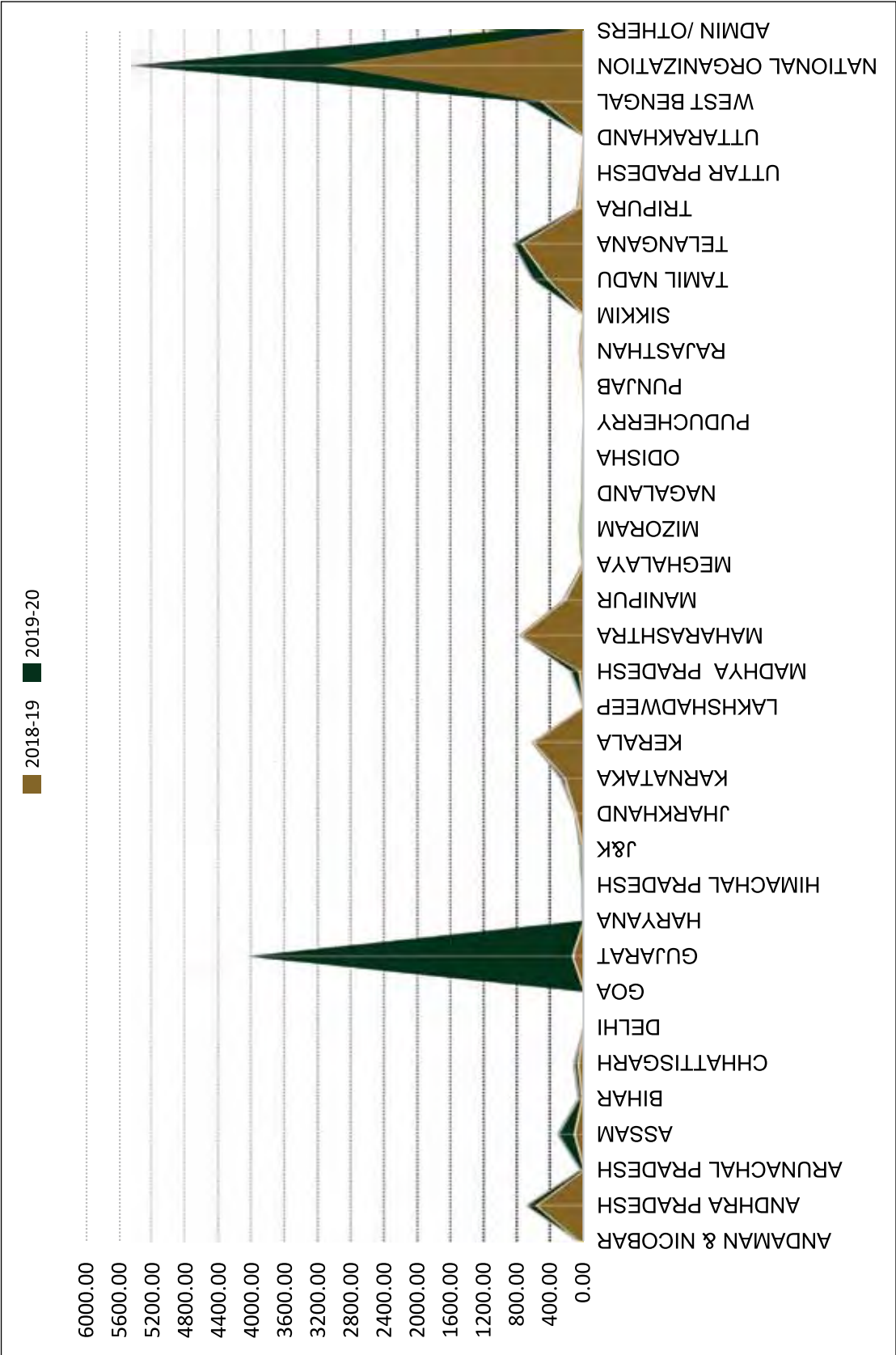


Table 8.6: Year-wise total Fund Released for Development of Fisheries Sector (Rs in Lakhs)

| State/UT's | 2015-16 | | | 2016-17 | | | 2017-18 | | |
|-----------------------------------|---------------------------|-----------------------------|--|---------------------------|-----------------------------|--|---------------------------|-----------------------------|--|
| | State Share Fund Released | Central Share Fund Released | Total fund release for development of Fisheries Sector | State Share Fund Released | Central Share Fund Released | Total fund release for development of Fisheries Sector | State Share Fund Released | Central Share Fund Released | Total fund release for development of Fisheries Sector |
| Andhra Pradesh | 487.5 | 487.5 | 975 | 283 | 1,742 | 2,025 | 3,284.43 | 2,162.82 | 5,447.25 |
| Arunachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Assam | 548.25 | 1,259.88 | 1808.13 | 1,900.92 | 888.01 | 2788.93 | 817.97 | 3,074.93 | 3,892.90 |
| Bihar | 0 | 90 | 90 | 0 | 1,948.04 | 1948.04 | 0 | 2.25 | 2.25 |
| Chhattisgarh | 2,908.18 | 333.45 | 3241.63 | 3,099.04 | 2,230.77 | 5329.81 | 4,262.98 | 2,121.28 | 6,384.26 |
| Goa | 5,009.65 | 70.82 | 5080.47 | 3,035.06 | 326.44 | 3361.5 | 4,550.32 | 251.49 | 4,801.81 |
| Gujarat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Haryana | 186.25 | 291.25 | 477.5 | 292 | 1,122.05 | 1414.05 | 357.14 | 2,862.50 | 3,219.64 |
| Himachal Pradesh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Jharkhand | 5,035.62 | 390.04 | 5425.66 | 10,451.47 | 2,304.72 | 12756.19 | 9,426.57 | 1,686.40 | 11,112.97 |
| Karnataka | 11,736.16 | 7,478.10 | 19214.26 | 25,372.06 | 5,348.99 | 30721.05 | 30,420.81 | 4,216 | 34,636.81 |
| Kerala | 32,695 | 8,200 | 40895 | 35,128 | 5,714 | 40842 | 41,578 | 2,188 | 43,766.00 |
| Madhya Pradesh | 2,689.53 | 329.13 | 3018.66 | 2,743.79 | 229.55 | 2973.34 | 1,752.26 | 2,114.51 | 3,866.77 |
| Maharashtra | 53.11 | 24.55 | 77.66 | 57.5 | 32.45 | 89.95 | 347.94 | 617.85 | 965.79 |
| Manipur | 0 | 20 | 20 | 0 | 44 | 44 | 65.14 | 456.14 | 521.28 |
| Meghalaya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Mizoram | 125 | 820.18 | 945.18 | 239.87 | 1,344.05 | 1583.92 | 0 | 164.39 | 164.39 |
| Nagaland | 0 | 0 | 0 | 102.5 | 410 | 512.5 | 102.5 | 410 | 512.50 |
| Odisha | 7,518.76 | 668.88 | 8187.64 | 8,092.27 | 1,472.74 | 9565.01 | 8,939.95 | 1,801.43 | 10,741.38 |
| Punjab | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Rajasthan | 0 | 0 | 0 | 0 | 262.1 | 262.1 | 137 | 83.28 | 220.28 |
| Sikkim | 0 | 0 | 0 | 2.3 | 379.16 | 381.46 | 0 | 0 | 0.00 |
| Tamil Nadu | 23,075.47 | 8,573.02 | 31648.49 | 21,464.17 | 7,120.47 | 28584.64 | 24,675.93 | 12,010.99 | 36,686.92 |
| Telangana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Tripura | 0 | 0 | 0 | 217 | 867.88 | 1084.88 | 37.99 | 341.92 | 379.91 |
| Uttar Pradesh | 334.46 | 400 | 734.46 | 250.4 | 1,760.85 | 2011.25 | 1,224.67 | 0 | 1,224.67 |
| Uttarakhand | 0 | 0 | 0 | 182.13 | 977.41 | 1,159.54 | 51.93 | 746.56 | 798.49 |
| West Bengal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| A and N Islands | 0 | 15 | 15 | 0 | 54 | 54 | 0 | 179.88 | 179.88 |
| Daman and Diu D & Nagar Haveli | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Delhi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Jammu & Kashmir | 8.28 | 2 | 10.28 | 107 | 1,163.50 | 1270.5 | 90.45 | 706.46 | 796.91 |
| Lakshadweep | 515 | 30 | 545 | 650 | 0 | 650 | 559 | 53.56 | 612.56 |
| Puducherry | 0 | 1,002.20 | 1002.2 | 0 | 29.75 | 29.75 | 0 | 0 | 0.00 |
| All India | 92,926.22 | 30,486.00 | 123,412.22 | 113,670.48 | 37,772.93 | 151,443.41 | 132,682.98 | 38,252.64 | 170,935.62 |

Source: States Government / UTs Administration

| Table 8.6: Year-wise total Fund Released for Development of Fisheries Sector (In lakhs) | | | | | | |
|---|----------------------------|-----------------------------|--|----------------------------|-----------------------------|--|
| State/UT's | 2018-19 | | | 2019-20 | | |
| | State Share Fund Re-leased | Central Share Fund Released | Total fund release for development of Fisheries Sector | State Share Fund Re-leased | Central Share Fund Released | Total fund release for development of Fisheries Sector |
| Andhra Pradesh | 402.25 | 1,302.31 | 1,704.56 | 2,360 | 2,556 | 4,916.00 |
| Arunachal Pradesh | 81.18 | 374.68 | 455.86 | 0 | 24.77 | 24.77 |
| Assam | 157.6 | 524.14 | 681.74 | 0 | 280.01 | 280.01 |
| Bihar | 0 | 4,078.69 | 4,078.69 | 0 | 1,557.15 | 1,557.15 |
| Chhattisgarh | 1,431.60 | 1,045.69 | 2,477.29 | 905.58 | 3,292.90 | 4,198.48 |
| Goa | 0 | 63.82 | 63.82 | 0 | 0 | 0.00 |
| Gujarat | 689.18 | 1,420.80 | 2,109.98 | 3,680 | 1000 | 4,680.00 |
| Haryana | | 605.9 | 605.90 | 0 | 696.47 | 696.47 |
| Himachal Pradesh | 203.05 | 1,046.13 | 1,249.18 | 40.84 | 629.14 | 669.98 |
| Jharkhand | 200 | 925.4 | 1,125.40 | 1,062.39 | 0 | 1,062.39 |
| Karnataka | 1,035.86 | 5,847.28 | 6,883.14 | 450 | 2,330.61 | 2,780.61 |
| Kerala | 3,677.54 | 5,093.01 | 8,770.55 | 3,517.80 | 9,357.15 | 12,874.95 |
| Madhya Pradesh | 540 | 711.39 | 1,251.39 | 600 | 1,859.47 | 2,459.47 |
| Maharashtra | 1,641.81 | 2,861.17 | 4,502.98 | 997.102 | 1000 | 1,997.10 |
| Manipur | 83.74 | 382.13 | 465.87 | 0 | 50.68 | 50.68 |
| Meghalaya | 293 | 2,598.95 | 2,891.95 | 262.65 | 2,387.45 | 2,650.10 |
| Mizoram | 22.62 | 403.75 | 426.37 | 0 | 735.99 | 735.99 |
| Nagaland | 0 | 194.67 | 194.67 | 24.52 | 2,396.15 | 2,420.67 |
| Odisha | 1,725.19 | 1,022.13 | 2,747.32 | 471.68 | 543.68 | 1,015.36 |
| Punjab | 72.68 | 581.34 | 654.02 | 0 | 2,063.76 | 2,063.76 |
| Rajasthan | 0 | 70.2 | 70.20 | 176.17 | 266.2 | 442.37 |
| Sikkim | 0 | 416.52 | 416.52 | 0 | 1,019.65 | 1,019.65 |
| Tamil Nadu | 9,638.38 | 7,155.91 | 16,794.29 | 0 | 1,801 | 1,801.00 |
| Telangana | 0 | 1,574.80 | 1,574.80 | 0 | 154 | 154.00 |
| Tripura | 42.155 | 2,004.18 | 2,046.34 | 35.3 | 788.91 | 824.21 |
| Uttar Pradesh | 1,080.51 | 3,050.06 | 4,130.57 | 0 | 3,816.63 | 3,816.63 |
| Uttarakhand | 53.01 | 471.08 | 524.09 | 0 | 683.67 | 683.67 |
| West Bengal | | 185.4 | 185.40 | 0 | 0 | 0.00 |
| A and N Islands | 0 | 1,045.69 | 1,045.69 | 0 | 51.21 | 51.21 |
| Daman and Diu D&Nagar Haveli | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Delhi | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Jammu & Kashmir | 0 | 439.54 | 439.54 | 60 | 788.63 | 848.63 |
| Lakshadweep | 0 | 39.89 | 39.89 | 0 | 29.3 | 29.30 |
| Puducherry | | 1448 | 1,448.00 | 0 | 461.37 | 461.37 |
| All India | 23,071.35 | 48,984.65 | 72,056.00 | 14,644.03 | 42,621.95 | 57,265.98 |
| Source: States Government / UTs Administration | | | | | | |

CHAPTER 9

FISHERIES WELFARE



Fig 39 : Percentage of Houses approved for the states/UT's under the sub-component of Housing for Fishermen of the Blue Revolution Scheme

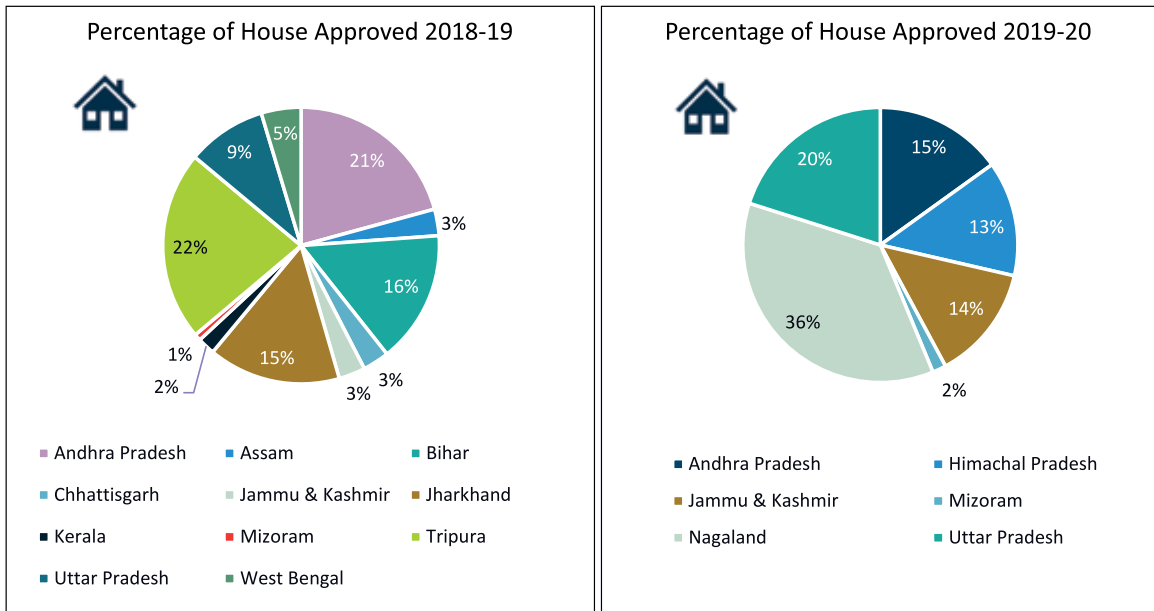


Fig 40 : States/UT's-wise amount released for the Construction of houses

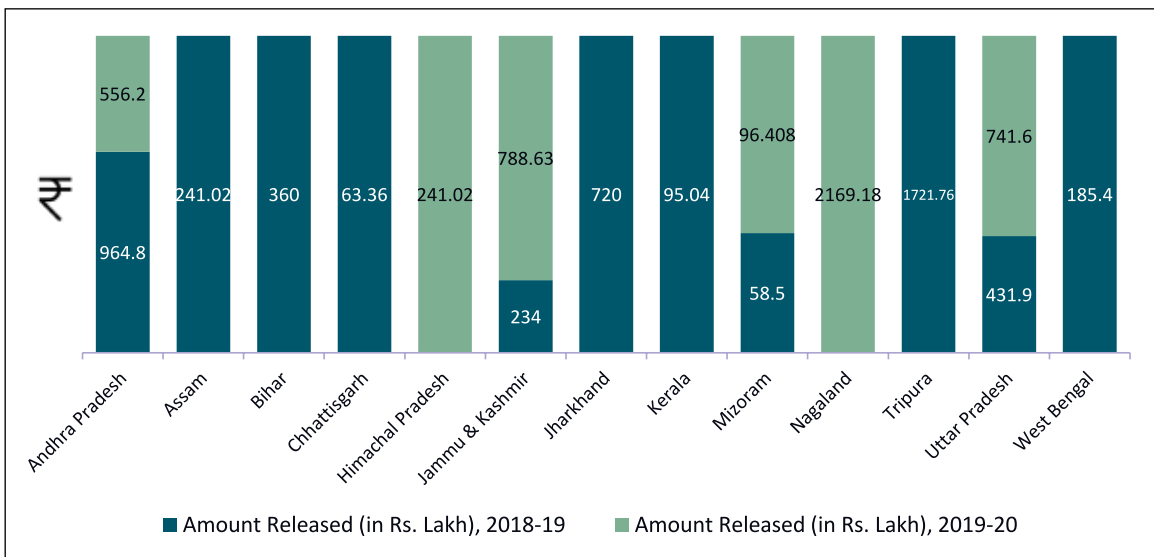


Table 9.1: State UT's-wise details of fishermen houses approved and amount (in Rs. Lakhs) releases under the sub-component of Housing for Fishermen of the Blue Revolution Scheme: 2015-16 to 2019-20

| Name of the State/ UT | 2015-16 | | 2016-17 | | 2017-18 | | 2018-19 | | 2019-20 | |
|-----------------------|--------------------------|-----------------|--------------------------|------------------|--------------------------|------------------|--------------------------|-----------------|--------------------------|-----------------|
| | Number of House Approved | Amount Released | Number of House Approved | Amount Re-leased | Number of House Approved | Amount Re-leased | Number of House Approved | Amount Released | Number of House Approved | Amount Released |
| Andhra Pradesh | 1300 | 487.5 | - | - | - | - | 1340 | 964.8 | 750 | 556.2 |
| Arunachal Pradesh | 92 | 52 | - | - | 48 | 50.544 | - | - | - | - |
| Assam | - | - | 75 | 81.2 | 50 | 52.65 | 200 | 241.02 | - | - |
| Bihar | - | - | - | - | - | - | 1000 | 360 | - | - |
| Chhattisgarh | 400 | 150 | - | - | - | - | 200 | 63.36 | - | - |
| Gujarat | 100 | 36.37 | 100 | 60 | - | - | - | - | - | - |
| Himachal Pradesh | 133 | 49.88 | - | - | - | - | - | - | 200 | 241.02 |
| Jharkhand | 1000 | 375 | 417 | 250.2 | - | - | 1000 | 720 | - | - |
| Kerala | - | - | 167 | 100.2 | - | - | 132 | 95.04 | - | - |
| Madhya Pradesh | 195 | 72.75 | 167 | 100 | - | - | - | - | - | - |
| Maharashtra | - | - | 65 | 39 | - | - | - | - | - | - |
| Manipur | - | - | - | - | 34 | 31.82 | - | - | - | - |
| Mizoram | 200 | 121 | 200 | 120.5 | 43 | 45.28 | 50 | 58.5 | 80 | 96.408 |
| Nagaland | 270 | 161 | - | - | - | - | - | - | 1800 | 2169.18 |
| Rajasthan | - | - | 20 | 24 | - | - | - | - | - | - |
| Telangana | - | - | - | - | - | - | - | - | - | - |
| Tripura | 250 | 139.54 | - | - | 140 | 117.6 | 1434 | 1721.76 | - | - |
| Uttar Pradesh | 327 | 122.63 | 666 | 399.6 | 313 | | 600 | 431.9 | 1000 | 741.6 |
| Uttarakhand | - | - | - | - | - | - | - | - | - | - |
| West Bengal | 309 | 115.69 | - | - | 122 | 79.056 | 300 | 185.4 | - | - |
| A & N Islands | 100 | 74 | - | - | - | - | - | - | - | - |
| Jammu & Kashmir | 133 | 49.88 | - | - | 200 | 210.6 | 200 | 234 | 674 | 788.63 |
| Total | 4809 | 2,007.24 | 1877 | 1,174.70 | 950 | 587.55 | 6456 | 5,075.78 | 4504 | 4593.04 |

Source: Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India

Fig 41 : State-wise details of fishermen insured under the sub-component of Group Accident Insurance of the Blue Revolution Scheme

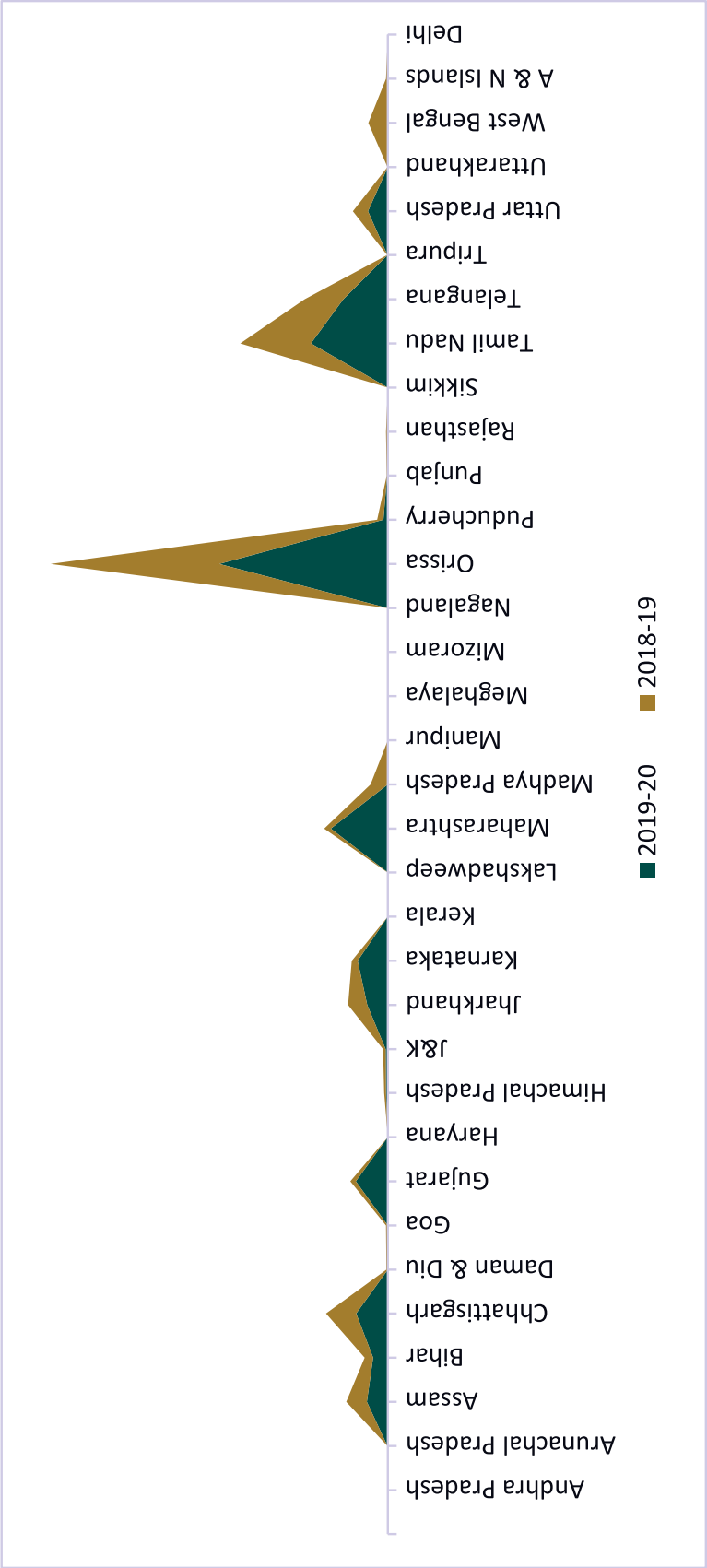


Table 9.2: State-wise details of fishermen insured under the sub-component of Group Accident Insurance of the Blue Revolution Scheme : 2015-16 to 2019-20

| State/UT | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|-------------------|-----------|-----------|-----------|-----------|-----------|
| Andhra Pradesh | 404,242 | 405,347 | 0 | 0 | 0 |
| Arunachal Pradesh | 10,000 | 7000 | 1,000 | 1,027 | 1,027 |
| Assam | 164,939 | 157,325 | 157,325 | 139,739 | 142,716 |
| Bihar | 300,000 | 300,000 | 300,000 | 58,277 | 100,000 |
| Chhattisgarh | 210,000 | 210,000 | 210,000 | 205,897 | 214,552 |
| Goa | 12,721 | 11,849 | 11,840 | 11,840 | |
| Gujarat | 218,270 | 218,270 | 218,270 | 37,856 | 218,270 |
| Haryana | 0 | 0 | 0 | 0 | 0 |
| Himachal Pradesh | 12,153 | 12,901 | 13,413 | 12,650 | 12,650 |
| Jharkhand | 114,500 | 126,000 | 126,000 | 131,451 | 140,000 |
| Karnataka | 204,689 | 204,689 | 204,689 | 40,641 | 204,689 |
| Kerala | 237,501 | 0 | 0 | 0 | 0 |
| Madhya Pradesh | 175,199 | 180,988 | 184,933 | 116,941 | |
| Maharashtra | 323,838 | 323,838 | 323,838 | 46,900 | 388,038 |
| Manipur | 12,000 | 12,000 | 1,000 | 0 | 0 |
| Meghalaya | 0 | 0 | 0 | 0 | 0 |
| Mizoram | 10,000 | 10,000 | 1,000 | 1,187 | 0 |
| Nagaland | 0 | 0 | 0 | 0 | 0 |
| Orissa | 1,111,111 | 1,150,000 | 1,150,000 | 1,150,000 | 1,150,000 |
| Punjab | 1500 | 5000 | 5,000 | 3,416 | 3,500 |
| Rajasthan | 10,833 | 11,027 | 11,220 | 11,220 | 2,122 |
| Sikkim | 7000 | 7000 | 1000 | 411 | |
| Tamil Nadu | 716,308 | 666,380 | 666,380 | 481,386 | 524,054 |
| Telangana | 276,799 | 326,154 | 326154 | 265236 | 303,000 |
| Tripura | 1000 | 1000 | 1,000 | 2,072 | 2,600 |
| Uttar Pradesh | 193,000 | 193,000 | 193,000 | 103,333 | 134,014 |
| Uttarakhand | 2000 | 2000 | 1,000 | 1,324 | 0 |
| West Bengal | 221,563 | 0 | 0 | 132,995 | 0 |
| A & N Islands | 14,839 | 14,839 | 14,839 | 13,296 | 0 |
| Daman & Diu | 9500 | 9,500 | 9,500 | 9,266 | 0 |
| Delhi | 0 | 0 | 400 | 103 | 200 |
| J&K | 15,000 | 15,000 | 15,000 | 15,961 | 15,402 |
| Lakshadweep | 12,052 | 12,052 | 12,052 | 1,204 | 0 |
| Puducherry | 54,367 | 54,367 | 54,367 | 43,745 | 29,887 |
| All India | 5,056,924 | 4,647,526 | 4,214,220 | 3,039,374 | 3,586,721 |

Source: Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India

Fig 42 : State-wise details of relief assistance provided to fishermen and financial releases made under the sub-component of Saving-cum-Relief (SCR) of the Blue Revolution Scheme during 2019-20 and 2018-19

| | Chhattisgarh | Himachal Pradesh | Madhya Pradesh | Mizoram | Puducherry | Karnataka | Kerala |
|-----------------------------------|--------------|------------------|----------------|----------|------------|-----------|----------|
| No. of Fishermen 2019-20 | 7,740 | 3,710 | 12,318 | 6,283 | 15,379 | 35,757 | 6,80,250 |
| Amount Released (in Lakh) 2019-20 | 116.09 | 59.36 | 184.77 | 150.79 | 461.37 | 536.36 | 8007.15 |
| | Chhattisgarh | Himachal Pradesh | Madhya Pradesh | Mizoram | Puducherry | Karnataka | |
| No. of Fishermen 2018-19 | 8,500 | 2,696 | 15,100 | 5,355 | 37,488 | 1,395 | |
| Amount Released (in Lakh) 2018-19 | 127.5 | 43.46 | 226.5 | 128.52 | 855.58 | 33.59 | |
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | | |
| Total No. of Fishermen | 4,43,493 | 44,351 | 65,590 | 70,534 | 7,65,194 | | |
| Total Amount Released In Lakhs | 3,126.59 | 727.33 | 1,120.99 | 1,415.15 | 9,566.77 | | |

Table 9.3: State-wise details of relief assistance provided to fishermen and financial releases made under the sub-component of Saving-cum-Relief (SCR) of the Blue Revolution Scheme during 2019-20

| State/UT | 2015-16 | | 2016-17 | | 2017-18 | | 2018-19 | | 2019-20 | |
|------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| | No. of Fishermen | Amount Released | No. of Fishermen | Amount Released | No. of Fishermen | Amount Released | No. of Fishermen | Amount Released | No. of Fishermen | Amount Released |
| | | (in Lakh) | | (in .Lakh) | | (in Lakh) | | (in lakh) | | (in lakh) |
| Bihar | 10,000 | 90 | - | - | - | - | - | - | - | - |
| Chhattisgarh | 8,000 | 72 | 6,665 | 100 | 6,666 | 100 | 8,500 | 127.5 | 7740 | 116.09 |
| Goa | 5,197 | 45.82 | 5,416 | 48.74 | - | - | - | - | - | - |
| Himachal Pradesh | 4,641 | 27.85 | 5,092 | 81.47 | 3,850 | 61.2 | 2,696 | 43.46 | 3710 | 59.36 |
| Karnataka | 39,048 | 390.45 | - | - | 34,239 | 462.23 | - | - | 35757 | 536.36 |
| Kerala | 1,97,058 | 1182.34 | - | - | - | - | - | - | 680250 | 8007.15 |
| Maharashtra | - | - | 2,000 | 30 | - | - | - | - | - | - |
| Madhya Pradesh | 16,143 | 122.6 | 6,667 | 100 | 10,000 | 135 | 15,100 | 226.5 | 12318 | 184.77 |
| Mizoram | - | - | - | - | - | - | 5,355 | 128.52 | 6283 | 150.79 |
| Nagaland | - | - | - | - | - | - | - | - | - | - |
| Odisha | 25,110 | 200.35 | - | - | 10,000 | 198.17 | - | - | 3757 | 50.883 |
| Puducherry | 27,691 | 332.29 | 17,833 | 361 | | 150 | 37,488 | 855.58 | 15379 | 461.37 |
| Rajasthan | 1,451 | 6.13 | 678 | 6.12 | - | - | - | - | - | - |
| Tamil Nadu | 1,08,031 | 647.07 | - | - | - | - | - | - | - | - |
| Telangana | 1,123 | 9.69 | - | - | - | - | - | - | - | - |
| Tripura | - | - | - | - | 835 | 14.39 | 1,395 | 33.59 | - | - |
| Total | 4,43,493 | 3,126.59 | 44,351 | 727.33 | 65,590 | 1120.99 | 70,534 | 1,415.15 | 765,194 | 9,566.77 |

Source: Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India

CHAPTER 10

HUMAN RESOURCE DEVELOPMENT



Table 10.1: Training Achievement of NFDB during FY 2019-20

| State | Yr of Re-leased | Organisation | Activity | Duration of training (no. of days) | No. of trainees | Amount Re-leased (Rs. In lakh) |
|-----------------------|-----------------|--------------------------------------|-------------|------------------------------------|-----------------|--------------------------------|
| Andhra Pradesh | 2019-20 | CoF, Andhra Pradesh | SDP | 3 | 1000 | 20.00 |
| Andhra Pradesh | 2019-20 | KVK, YSRHU | SDP | 3 | 150 | 4.00 |
| Andhra Pradesh | 2019-20 | FRS, Undi | SDP | 3 | 250 | 6.25 |
| Andhra Pradesh | 2019-20 | APSSDC | SDP | 3 | 660 | 12.50 |
| Arunachal Pradesh | 2019-20 | DoF, Arunachal Pradesh | SDP | 3 | 200 | 5.25 |
| Assam | 2019-20 | DoF, Assam | SDP | 3 | 350 | 8.00 |
| Assam | 2019-20 | Assam Agricultural University, Assam | SDP | 3 | 150 | 3.75 |
| Chattisgarh | 2019-20 | DoF, Chattisgarh | SDP | 3 | 400 | 5.00 |
| Chattisgarh | 2019-20 | KVK, Raipur | SDP | 3 | 100 | 1.95 |
| Haryana | 2019-20 | DoF, Haryana | SDP | 3 | 150 | 3.75 |
| Himachal Pradesh | 2019-20 | DoF, Himachal Pradesh | SDP | 3 | 250 | 6.25 |
| Jammu Kashmir | 2019-20 | DoF, Jammu Kashmir | SDP | 3 | 100 | 2.50 |
| Kerala | 2019-20 | DoF, Kerala | SDP | 3 | 250 | 6.25 |
| Lakshdweep | 2019-20 | DoF, Lakshdweep | SDP | 3 | 100 | 2.50 |
| Maharashtra | 2019-20 | DoF, Maharashtra | SDP | 3 | 400 | 7.50 |
| Maharashtra | 2019-20 | KVK, Baramathi | SDP | 3 | 250 | 3.00 |
| Maharashtra | 2019-20 | KVK, Baramathi | Workshop | 1 | 800 | 2.00 |
| Maharashtra | 2019-20 | VAMNICOM | Special SDP | 3 | 200 | 5.25 |
| Manipur | 2019-20 | DoF, Manipur | SDP | 3 | 200 | 5.00 |
| Manipur | 2019-20 | KVK, NEH Manipur | SDP | 3 | 300 | 7.50 |
| Mizoram | 2019-20 | ZOFISHFED, Mizoram | SDP | 3 | 400 | 10.00 |
| Mizoram | 2019-20 | Chakma DC, Mizoram | SDP | 3 | 237 | 7.18 |
| Nagaland | 2019-20 | DoF, Nagaland | SDP | 3 | 300 | 7.50 |
| National Organisation | 2019-20 | FISHCOPFED, New Delhi | Workshop | 1 | 1500 | 33.00 |
| National Organization | 2019-20 | ICAR-CIFA | SDP | 3 | 700 | 17.50 |
| National Organization | 2019-20 | ICAR-CIFRI | SDP | 3 | 600 | 15.00 |
| National Organization | 2019-20 | CSIR-CSMCRI, Gujarat | SDP | 3 | 300 | 11.09 |
| National Organization | 2019-20 | NBFGR, Lucknow | SDP | 3 | 140 | 3.53 |
| National Organization | 2019-20 | ICAR-CIFA | ToT | 5 | 175 | 14.00 |
| National Organization | 2019-20 | ICAR-CIFE | ToT | 5 | 50 | 4.00 |
| National Organization | 2019-20 | CIFNET, Kerala | ToT | 5 | 50 | 4.00 |
| National Organization | 2019-20 | ICAR-CIFRI | ToT | 5 | 175 | 14.00 |
| National Organization | 2019-20 | ICAR-CIFT | ToT | 5 | 50 | 4.00 |
| National Organization | 2019-20 | CSIR-CSMCRI | ToT | 5 | 125 | 8.15 |

Table 10.1: Training Achievement of NFDB during FY 2019-20

| State | Yr of Re-leased | Organisation | Activity | Duration of training (no. of days) | No. of trainees | Amount Re-leased (Rs. In lakh) |
|-----------------------|-----------------|----------------------------|-----------------|------------------------------------|-----------------|--------------------------------|
| National Organization | 2019-20 | ICAR-DCFR | ToT | 5 | 75 | 6.00 |
| National Organization | 2019-20 | NBFGR, Lucknow | ToT | 5 | 50 | 4.00 |
| National Organization | 2019-20 | CIFNET, Kerala | Special SDP | 12 | 118 | 15.58 |
| National Organization | 2019-20 | MPEDA-NETFISH | 1-day work-shop | 1 | 600 | 16.80 |
| National Organization | 2019-20 | MPEDA-NETFISH | 1-day work-shop | 1 | 600 | 2.60 |
| National Organization | 2019-20 | NFFBB, Bhubaneswar | 1-day work-shop | 1 | 260 | 1.00 |
| National Organization | 2019-20 | MANAGE, Hyderabad | AC & ADP | 30 | 478 | 100.00 |
| Odisha | 2019-20 | Kailash Fisheries Aquatics | SDP | 3 | 400 | 10.00 |
| Punjab | 2019-20 | DoF, Punjab | SDP | 3 | 250 | 6.25 |
| Rajasthan | 2019-20 | DoF, Rajasthan | SDP | 3 | 550 | 4.96 |
| Telangana | 2019-20 | KVK, Bellampally | SDP | 3 | 100 | 2.50 |
| Telangana | 2019-20 | KVK, Rudrur | SDP | 3 | 150 | 3.75 |
| Telangana | 2019-20 | KVK, Kampasagar | SDP | 3 | 300 | 6.25 |
| Telangana | 2019-20 | FRS, Palair | SDP | 3 | 250 | 10.00 |
| Telangana | 2019-20 | FRS, Palair | Special SDP | 28 | 25 | 6.00 |
| Tripura | 2019-20 | DoF, Tripura | SDP | 3 | 575 | 14.38 |
| Tripura | 2019-20 | Rudrasagar, Tripura | SDP | 3 | 150 | 2.75 |
| Uttar Pradesh | 2019-20 | DoF, Uttar Pradesh | SDP | 3 | 250 | 6.25 |
| West Bengal | 2019-20 | KVK, Shyasyasamala | SDP | 3 | 200 | 5.00 |
| West Bengal | 2019-20 | KVK, Dhanyaganga | SDP | 3 | 600 | 17.50 |
| West Bengal | 2019-20 | WBUAFS | SDP | 3 | 300 | 7.50 |
| West Bengal | 2019-20 | WAB Ramnagar | SDP | 3 | 100 | 2.50 |

Source : National Fisheries Development Board, Hyderabad (NFDB)

Table 10.2: Training courses conducted at CIFNET

| S. No. | Course | Duration |
|--------|---|-------------|
| 1 | BFSc (Nautical Science) (Affiliated to CUSAT) | 4 years |
| 2 | Vessel Navigator Course (NCVT) | 2 years |
| 3 | Marine Fitter Course (NCVT) | 2 years |
| 4 | Shore Mechanic Course | 1 year |
| 5 | Elementary Fishing Technology Course(Statutory course) | 2 months |
| 6 | Advanced Fishing technology Course (Statutory course) | 2 weeks |
| 7 | Fishing technology for Coast guard officers | 1 week |
| 8 | Teachers training course | 6 months |
| 9 | Advanced Diploma in Fishing Gear Technology Course | 1 year |
| 10 | Short term courses on Fishery Technology, Marine Engineering, Refrigeration & Electronics, Nautical Science for fishermen, students of College and Vocational Higher secondary. | Tailor made |
| 11 | Special training course for National & Overseas candidates | Tailor made |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)
 CUSAT – Cochin University of Science and Technology
 NCVT – National Council of Vocational Training

Table 10.3: Achievements on Training activities of CIFNET

| Parameters | 2018-19 | | | 2019-20 | | |
|--|---------|--------|---------------|---------|--------|---------------|
| | Target | Actual | % Achievement | Target | Actual | % Achievement |
| No. of students undergoing Degree Course-BFSc(NS) | 110 | 98 | 89 | 124 | 111 | 90 |
| No. of students undergoing Trade Courses-VNC/MFC | 192 | 180 | 94 | 216 | 226 | 105 |
| Ancillary Course (Shore Mechanics Course) | 10 | 0 | 0 | 10 | 8 | 80 |
| Statutory & Refresher Course (AFTC,EFTC) | 10 | 1 | 10 | 10 | 4 | 40 |
| Short term Courses (Fishermen training, Extension training, Training for officials and students) | 1300 | 1637 | 126 | 1300 | 1388 | 107 |
| TOTAL | 1622 | 1916 | 118 | 1660 | 1737 | 105 |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)
 VNC – Vessel Navigator Course
 MFC – Marine Fitter Course
 AFTC – Advanced Fishing Technology Course
 EFTC – Elementary Fishing Technology Course

Table 10.4: Achievements on Fishing vessel Performance by CIFNET

| Parameters | 2018-19 | | | 2019-20 | | |
|---------------------------------|---------|--------|---------------|---------|--------|---------------|
| | Target | Actual | % Achievement | Target | Actual | % Achievement |
| Days out at sea | 400 | 462 | 116 | 400 | 462 | 116 |
| Fishing Days | 300 | 349 | 116 | 300 | 345 | 115 |
| Fishing Effort (hrs) | 1100 | 1200 | 109 | 1100 | 1153 | 105 |
| Fishing Effort (Hooks) | 5000 | 4645 | 93 | 5000 | 5089 | 102 |
| Catch | 15 | 17.5 | 117 | 15 | 12.2 | 81 |
| Institutional trainee Days | 3000 | 3453 | 115 | 3000 | 2556 | 85 |
| Post institutional trainee days | 3500 | 3874 | 111 | 3500 | 3630 | 104 |

Source: Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.5: Year-wise CIFNET Action Plan Training Target

| S. No | Parameters | Target 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | Remarks |
|---|---|----------------------|----------------------|----------------------|-----------------|-------------------|---|
| I. Target for Institution Training Programmes | | | | | | | |
| 1 | No. of students in Core course – BFSc (NS) (4 years) | 142 (33+33+36+40) | 149 (33+36+40+40) | 156 (36+40+40+40) | 160 (4 x 40) | 160 (4 x 40) | Intake capacity from 22/year has been increased to 40/year. |
| 2 | No. of students in Trade courses – VNC/MFC (2 years) | 240 | 240 | 240 | 240 | 240 (2x2x3x20) | Intake capacity from 16/year has been increased to 20/year. |
| 3 | Ancillary Course (Shore Mechanics Course) | 10 | 10 | 10 | 15 | 15 | As per the actual demand |
| 4 | Statutory & Refresher Course | 10 | 10 | 10 | 10 | 10 | As per the actual demand |
| II. Target for Other Training Programmes | | | | | | | |
| 1 | Short Term training courses (STC) | 1000 | 1400 | 1400 | 1600 | 1800 | Higher target from 2023-24 is planned expecting the building of new Vessels |
| | a. Fishermen training (in house) under PMMSY | | | | | | |
| | b. Fishermen Extension training under PMMSY | | | | | | |
| | c. STC for professionals (Coast Guard, Fisheries officials) | | | | | | |
| | d. Professional students/VHSS | | | | | | |

Source: Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.6: CIFNET Action Plan – Vessel Operational Target

| S. No | Parameters | Target 2020-2021 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | REMARKS |
|--|-------------------------------------|------------------|---------|---------|---------|---------|---|
| III. Target for fishery training vessels | | | | | | | |
| 1 | Days out at sea | 350 | 350 | 350 | 600 | 600 | Higher target from 2023-24 is planned expecting the building of new Vessels |
| 2 | Fishing Days | 275 | 275 | 275 | 450 | 450 | |
| 3 | Fishing Effort(hrs) | 1000 | 1000 | 1000 | 1800 | 1800 | |
| 4 | Fishing Effort(Hooks) | 4000 | 4000 | 4000 | 20000 | 20000 | |
| 5 | Catch (T) | 12 | 12 | 12 | 20 | 20 | |
| 6 | Institutional trainee Days | 2500 | 2500 | 2500 | 4800 | 4800 | |
| 7 | Post Institutional trainee days | 2750 | 2750 | 2750 | 4200 | 4200 | |
| IV. Target for Finance | | | | | | | |
| | Revenue of the Institute (in lakhs) | 65 | 65 | 65 | 100 | 100 | |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.7: CIFNET Skill Development/ Awareness Training Programme for Fishermen

| S. No | Name of Course/Programme | Course Duration |
|-------|---|-----------------|
| 1 | Monofilament Long line and Tuna Handling onboard under capacity building training programme for fishermen | 9 days (4 + 5) |
| 2 | Basic of Seamanship, Navigation, Marine Electronic equipments & maintenance of engines | 5 days |
| 3 | Maintenance of boat engine & Fishing practice | 3 days |
| 4 | Safety Manning practices | 3 days |
| 5 | Basic of Seamanship, Navigation, Marine Electronic equipments | 3 days |
| 6 | Life Saving Appliances and Safety at Sea | 2 days |
| 7 | ROR and Collision Prevention for Fishing Vessel | 3 days |
| 8 | Fishing vessel Communication and Vessel Monitoring System | 2 days |
| 9 | Hygienic handling and preservation of catch on board Fishing Vessel | 2 days |
| 10 | Engine operation and maintenance of fishing vessel | 2 days |
| 11 | Navigation and Marine communication for coastal police | 2 days |
| 12 | Power Distribution and Electrical Safety onboard Fishing Vessels | 2 days |
| 13 | Evolution of Fishing Crafts and recent developments | 1 day |
| 14 | Handling of Tuna for Sashimi Grade for Lakshadweep Fishermen | 5 days |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.8: Training of Trainers Programme under PMMSY at CIFNET

| S. No | Name of ToT | Course Duration |
|-------|--|-----------------|
| 1 | Boat Building, Navigation and Communication Equipments | 10 days |
| 2 | Safety Seamanship & Navigation, Marine Electronic Equipments and Marine Engines onboard fishing vessel | 5 days |
| 3 | Fishing Technology Course | 5 days |
| 4 | Life Saving & Fire Fighting Appliances and Electronic Equipments onboard fishing vessel | 5 days |
| 5 | Safety Seamanship & Navigation, Handling of Electronic Equipments | 3 days |
| 6 | Marine Engine Operation and Maintenance | 3 days |
| 7 | Sea Safety, Survey and Certification of Fishing Vessels | 3 days |
| 8 | Ocean Climate and Weather Warning System | 3 days |
| 9 | Code of Conduct for Responsible Fishing (CCRF), Fishery Policy and Law | 3 days |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.9: Achievement of Central Institute of Fisheries Nautical and Engineering Training: 2019-20

| S. No. | Name of the Course | Candidates trained | Continuing |
|--------|---|--------------------|------------|
| 1 | BFSC (N.S.) | 223 | 111 |
| 2 | Vessel Navigator Course | 376 | 114 |
| 3 | Marine Fitter Course | 453 | 112 |
| 4 | Shore Mechanics Course (12 months) | 316 | 8 |
| 5 | Engineer (Fishing vessel) for D.M.E. (9 months) | 20 | |
| 6 | Gear Technicians Course (9 months) | 144 | |
| 7 | Short term Training Course (varying from 1 day to 8 weeks in different discipline) (Extension programmes, skill development, Coast Guards, State/central Govt., Fishermen, Boat operators, Coastal security marine police, BFSc, B.Sc/M.Sc students, B.Tech/M. Tech students) | 11097 | |
| 8 | Capacity Building on Tuna Long Lining for Fishermen sponsored by Tamil Nadu funded by NFDB | 335 | |
| 9 | Skill development programme for Fishermen & Fishery officials (ToT) sponsored by various state and funded by NFDB | 182 | |
| 10 | Short term training for Fishermen/Fishery Officials sponsored by various States (2014 onwards) | 1918 | |
| 11 | Overseas Candidates (including OJT for omani students) | 160 | |
| 12 | LOP crews on Deep sea fishing & Navigation | 14 | |
| 13 | Advanced Diploma in Fishing Gear Technology Course (12 months) | 26 | |
| 14 | Boat Building Foremen Course (15 months) (outdated) | 99 | |
| 15 | Radio Telephone Operators Course (9 months) up to 2003 (outdated) | 219 | |
| 16 | Teacher Training Course (6 months) | 32 | |
| 17 | Post-institutional training (Junior Deckhand, Engine Room Assistant, Apprentice Fitter) | 2013 | 21 |
| | Courses Restructured - Mate Fishing Vessel (18 months) up to 2005 | 2067 | |
| | Engine Driver Fishing vessel (18 months) up to 2005 | 2040 | |
| | TOTAL CANDIDATES TRAINED (REGULAR AND SHORT TERM COURSES) | 21734 | 366 |

Source: Central Institute of Fisheries, Nautical and Engineering Training, Kochi (CIFNET)

Table 10.10: Achievement of National Institute of Fisheries Post Harvest Technology and Training Project: 2018-19, 2019-20

| Parameters | 2018-2019 | | 2019-2020 | |
|--|-----------------|-------------|-----------------|-------------|
| | Physical Target | Achievement | Physical Target | Achievement |
| 1. Fish Processed (Tonnes) | 150.00 | 113.69 | 150.00 | 77.63 |
| 2. Product Developed (Tonnes) | 100.00 | 116.12 | 100.00 | 86.05 |
| 3. Products Marketed (Tonnes) | - | 40.58 | - | 37.35 |
| 4. Revenue realized from Marketing (Lakhs) | 50000 | 21117 | 50000 | 11144 |
| 5. No. of Cans produced | | | | |
| 6. No. of trainees trained | 100.00 | 109.49 | 100.00 | 100.97 |
| 7. No. of Trainee Days | 100.00 | 124.02 | 100.00 | 110.51 |
| 8. Revenue Released from Training (₹ in Lakh) | | | | |
| 9. Revenue Released from all Sources (₹ in Lakh) | 500.00 | 1424 | 500.00 | 1189 |
| 10. Expenditure -Plan (Rs. Core) | 8000.00 | 14221 | 8000.00 | 10925 |
| 11. Expenditure-Non plan (Rs. Core) | 4.00 | 8.56 | 4.00 | 6.35 |

Source : National Institute of Fisheries Post harvest Technology and Training (NIFPHATT)

Table 10.11: CICEF Marine Fisheries and Infrastructure Statistics

| State/UT | coastline in Kms | Continental Shelf in Sq Kms | Deep Sea Vessels | Mechanised fishing vessels (MFVs) | Total | Number of Fishing harbours | Infrastructure Facilities available for MFVs |
|--------------------------------------|------------------|-----------------------------|------------------|-----------------------------------|--------|----------------------------|--|
| West Bengal | 158 | 17,000 | 0 | 3,397 | 3,397 | 7 | 1,660 |
| Odisha | 480 | 26,000 | 0 | 1,876 | 1,876 | 6 | 2,450 |
| Andhra Pradesh | 974 | 33,227 | 0 | 1,867 | 1,867 | 8 | 3,155 |
| Tamil Nadu | 1,076 | 41,000 | 0 | 5,869 | 5,869 | 16 | 6,493 |
| Puducherry | 45 | 1,000 | 0 | 923 | 923 | 4 | 1,365 |
| Kerala | 590 | 40,000 | 51 | 6,034 | 6,085 | 21 | 5,014 |
| Karnataka | 300 | 27,000 | 0 | 4,614 | 4,614 | 9 | 4,866 |
| Goa | 104 | 10,000 | 0 | 2,564 | 2,564 | 4 | 895 |
| Maharashtra | 720 | 1,12,000 | 0 | 21,123 | 21,123 | 6 | 2,963 |
| Gujarat | 1,600 | 1,84,000 | 51 | 16,645 | 16,696 | 8 | 8,446 |
| Daman & Diu and Dadar & Nagar Haveli | 27 | - | 2 | 2,072 | 2,074 | - | 0 |
| A & N Islands | 1,912 | 35,000 | 0 | 117 | 117 | 1 | 47 |
| Lakshadweep | 132 | 4,000 | 0 | 49 | 49 | | 0 |
| Total | 8,118 | 5,30,227 | 104 | 67,150 | 67,254 | 90 | 37,354 |

Source: Central Institute of Coastal Engineering for Fishery, Bengaluru (CICEF)

CHAPTER 11

FISHERIES INSTITUTES



NATIONAL FISHERIES DEVELOPMENT BOARD(NFDB)

1. History of the Institution

The National Fisheries Development Board (NFDB) was established in 2006 as an autonomous organization under the administrative control of the then Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare (now Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying), Govt. of India. The Board was set up to realize the untapped potential of fisheries sector in inland and marine, fish culture, capture, processing & marketing of fish, and accelerate the overall growth of fisheries sector with the application of modern tools of research & development. Since inception, NFDB has taken up numerous developmental activities which have improved the fish production, productivity and post-harvest & marketing facilities in the sector. Foreseeing the high potential in fishery sector, the Centrally Sponsored Scheme named as “Blue Revolution: Integrated Development and Management of Fisheries” was launched in the year 2016 with a total central outlay of Rs.3000 crore by merging all the existing schemes. In the changed scenario, NFDB is entrusted the work of scrutinizing the proposals received from the States/UTs under Blue Revolution Scheme. Besides, NFDB has been implementing some key projects directly in emerging new technologies like Cage Culture, Quality Fish Seed production of improved varieties, value chain development in fisheries etc. which have good potential. The successful implementation of these projects has resulted in wider adoption of new technologies by farmers.

2. Mandate of the Institution

- a) To bring major activities relating to fisheries and aquaculture for focused attention and professional management
- b) To coordinate activities pertaining to fisheries undertaken by different Ministries/Departments in the Central Government and also coordinate with the State/Union Territory Governments
- c) To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries
- d) To achieve sustainable management and conservation of natural aquatic resources including the fish stocks
- e) To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries
- f) To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization
- g) To generate substantial employment
- h) To train and empower women in the fisheries sector
- i) To enhance contribution of fish towards food and nutritional security.

3. Major Functions of Institution

- To focus on tapping the full production potential and enhance productivity substantially from aquaculture and fisheries resources, both in inland and marine sectors. It is targeted to achieve

the growth rate of above 10% annually on a sustainable basis over a period of 5 years and to achieve the projected fish production set at 22 million metric tonnes by 2022.

- To make Blue Revolution more robust and where it is appropriate, create an inclusive business approach to build value for aqua-farmers, together with a suitable enabling environment.
- Policy and institutional orientation of private and public sectors towards aqua-farmers.
- To achieve economic prosperity of the country, the fishers and fish farmers as well as contribute towards food and nutritional security through full potential utilization of water resources for fisheries development in a sustainable manner, keeping in view the bio-security and environmental concerns.

4. Major Initiatives & Achievements during the last 5 years

NFDB has taken up various initiatives to popularize new and innovative technologies emerging in the field so as to improve fish production & productivity in the country. NFDB has collaborated with various ICAR-Fisheries Research Institutes, CSIR-CSMCRI, RGCA-MPEDA, Central Agricultural Universities, State Fisheries Universities in demonstration of new & innovative technologies, popularization of new and improved fish varieties, upscaling the technologies for commercial production, species diversification, quality management, disease surveillance. NFDB has implemented various schemes to promote cage culture in reservoirs, disseminated new and improved technologies for fish varieties, wetland development, seaweed cultivation, ornamental fisheries, setting up of quarantine facilities, establishment of Aquatic Animal Health Laboratories, provide extension services through setting up Aqua One Centres through reputed organisations. After the launch of Blue Revolution scheme, NFDB has been specifically entrusted to take up the Skill Development programmes. The achievements made under various activities are elucidated below:

(i) Cage Culture

For integrated development of cage culture in reservoirs, a total of 3820 cages in various reservoirs were sanctioned in the States of Maharashtra, Madhya Pradesh, Gujarat, Bihar and Manipur.

For Demonstration of Open sea cage culture, a total of 270 cages were sanctioned to ICAR-CMFRI, Mandapam and Tamil Nadu Jayalalitha Fisheries University, Nagappattinam. For demonstration of brackishwater cage culture in the States of Kerala, Karnataka, Maharashtra and Andhra Pradesh, a total of 1570 cages were sanctioned to ICAR-CMFRI.

(ii) Dissemination of Improved and New Fish Varieties

NFDB under Quality Seed Programme has disseminated improved and new fish varieties (Jayanti Rohu, Improved Catla and Amur Carp) in collaboration with 34 nos. of KVKs and 13 nos. of Aqua One Center (AOC) firms covering an area of 1016 ha in 18 States namely Andhra Pradesh, Assam, Arunachal Pradesh, Bihar, Gujarat, Maharashtra, Manipur, Punjab, Uttar Pradesh, West Bengal, Rajasthan, Telangana, Odisha, Kerala, Tripura, Jharkhand, Tamil Nadu and Karnataka. Besides inputs for fish seed rearing units was provided in 159.79 ha.

(iii) Indian Major Carp Milt Cryo-bank for improving Genetic Exchange Between Farms and producing Commercial Level Quality Fish Seed

Basic facility for cryo-storage of carp milt on large scale has been established at ICAR-NBFGR, Lucknow. This includes Liquid Nitrogen Vapour Storage System (capacity: 8000 numbers of 2.0ml cryovial), Dry shippers for air transportation of cryomilt, 1000L Liquid Nitrogen Storage Tank (1 no.), 11L transportation can (40 nos).

Ten in-house training programs (hatchery operators/ progressive farmers from 21 states) at NBFGR, Lucknow and 13 fields training at 4 states (Odisha, West Bengal, Bihar and Uttar Pradesh) were

completed. Total 353 hatchery operators/prospective farmers were trained. The farmer level, easy to understand manual in English and Hindi is prepared and distributed to the trainees, in-house and on farm demonstrations

During the year 2019, for 13 hatcheries located at 4 states (Uttar Pradesh, Bihar, West Bengal and Odisha), the cryopreserved Indian major carp milt was supplied from ICAR-NBFGR, Lucknow and fertility trials were conducted using eggs from the female IMC brooders of hatchery origin with milt from the Bureau. A total of 37.2 lakh spawn was produced using frozen sperm under this demo.

(iv) Wetland Fisheries Development

NFDB initiated Wetland Development Programs in 2017-18 on a pilot basis in collaboration with ICAR-Central Inland Fisheries Research Institute (CIFRI), Barrackpore for development of 4 beels in Bihar namely Majharia, Kararia, Sirsa and Rulhi having a total water spread area of 390 ha. Another 4 beels were added in 2018-19 for upscaling the programme comprising of Kothia beel of 60 ha area in Bihar through ICAR-CIFRI, Rupaibali beel of 92 ha in Assam through Assam Fisheries Development Corporation (AFDC) and Nalban & Goltala beels of 275 ha in West Bengal through State Fisheries Development Corporation (SFDC), and the work is continuing.

(v) Seaweed Cultivation

Seaweed cultivation is considered as one of the priority areas for fisheries development in India, for the benefit of coastal fisher folk, especially the fisherwomen.

NFDB has sanctioned a project to CSMCRI, Bhavnagar on Demonstration of large-scale cultivation of *Gracilaria dura* along Simar coast of Gujarat by 162 farmers in 400 tube nets/longlines of 25m length. Demonstration was done in five phases. A manual entitled 'Handbook on Farming of *Gracilaria dura*' was published in April, 2019.

In order to promote seaweed cultivation along the Ramanathapuram coast of Tamil Nadu, by using improved quality of seed material, NFDB has sanctioned a project to Department of Fisheries, Government of Tamil Nadu for sea weed cultivation of *G.edulis* and *Kappaphycus alvarezii* on 2400 rafts and 4400 rafts respectively by 170 SHG groups (510 fisherwomen). Two projects were sanctioned to CSMCRI, Mandapam for production and supply of seed material of *G.edulis* and *Kappaphycus alvarezii*, to the seaweed farmers of the above project.

(vi) Backyard RAS for Fish Culture: Innovative Project on High Density Fish Culture under RAS Mode

NFDB in collaboration of National Centre for Aquatic Animal Health, Cochin University of Science and Technology implemented a project on backyard Re-circulatory Aquaculture System. A total of 77 nos. of Backyard RAS units were set up by 51 beneficiaries, mostly women in Kerala. Further, 64 units were sanctioned to 34 beneficiaries in Telangana in the first phase. A demo unit of backyard RAS was set up at NFDB campus, Hyderabad.

(vii) Paddy cum Fish Culture

NFDB sanctioned Paddy-cum-Fish Culture projects as a livelihood project on pilot basis in Manipur and Arunachal Pradesh during 2018-19 under the technical guidance of the State Fisheries Departments. The project not only help in increasing the paddy yield, but also contribute greatly towards nutritional security and economic upliftment. The project act as a demonstration and encourage other farmers in the village and the neighbouring villages to take up similar activities.

(viii) National Surveillance Programme for Aquatic Animal Diseases (NSPAAD)

The objectives under this projects are to (i) improve the collection of information on the distribution and occurrence of aquatic animal diseases, (ii) Rapid Detection of new and emerging pathogens and

(iii) implementataion of national information management system for aquatic animal diseases of national concern.

A National Aquatic Animal Diseases Diagnostic Manual has been published on behalf of DoF under NSPAAD. This contains information on all the prioritized diseases including 22 finfish, 13 crustaceans and 6 molluscan diseases. For strengthening the passive surveillance system in the country, a total of 518 awareness programmes have been organized involving about 26104 stakeholders. A total of 67 trainings involving 1591 officers /research scholars have been organized to strengthen their diagnostic capability. To observe the occurrence of endemic pathogens, a total of 1780 disease cases have been investigated by different collaborating centres. About 2000 farms located in 151 districts have been monitored twice per crop. Seven new/emerging diseases have been reported for the first time from the country. *These are (i) Goldfish haematopoietic necrosis disease, (ii) Koi sleepy disease, (iii) Infectious myonecrosis, (iv) Tilapia Lake Virus Disease (v) Infection with *Enterocytozoon hepatopenaei*, (vi) Epitheliocystis and (vii) Red sea bream Iridovirus disease. Besides, Infection with *Perkinsus olsenii* has been detected in a new host i.e. farmed *Perna viridis**

The programme has been successful in developing a strong network of aquatic animal health laboratories and scientific manpower with basic skills in surveillance and aquatic animal epidemiology tools. The programme has resulted in significant improvement in diagnostic capability for detection of OIE/NACA-listed and emerging aquatic animal pathogens. NSPAAD has assisted in better understanding of disease situation in aquatic animals in the country and has reached to the stage where it can identify diseases that are present in the country and those that are absent.

(ix) Human Resource Development (HRD)

NFDB has collaborated with various Central Fisheries Research Institutes, other Central Organisations, State Fisheries Universities and KVKs for imparting training to fishers, fish farmers, women, State Fisheries Departmental officials on various aspects of fisheries. Various types of training programmes such as 3-day skill development programmes, 5-day Training of Trainer (ToT) programmes, 25 day long duration programmes as per QPs prescribed by ASCI, Deep sea fishing programmes, workshops, RPL programmes, one day awareness programmes on avoiding usage of antibiotics in shrimp farmers etc were funded by NFDB. On an average, about 19800 fishers/ fish farmers including Departmental officials were trained on various aspects such as fish seed production, composite fish culture, RAS, brackishwater aquaculture, Deep sea fishing, ornamental fisheries, seaweed cultivation etc.

(x) Development of Integrated “Fish Market and Price Information System (FMPIS)” For Indian Fisheries Sector

Fish Market Price Information System (FMPIS) has been initiated by NFDB to promote trading of commercially important fish species across the country. FMPIS facilitates better marketability (fisher/ seller) and accessibility (consumer/buyer) of fish. The FMPIS Dashboard has been inaugurated by the Hon’ble Union Minister for Fisheries, Animal Husbandry & Dairying at NFDB, Hyderabad on 7th September, 2019. The Phase-I of the programme is covering 84 Fish Markets in seven States namely Telangana, Maharashtra, Andhra Pradesh, Kerala, Tamil Nadu and Puducherry.

(xi) Aquatic Quarantine Facility:

Aquatic Quarantine Facility at Chennai, the first of its kind in the country, is funded by NFDB and established by MPEDA-RGCA to ensure the SPF status of imported brood stock of shrimp *Litopenaeus vannamei*. Six additional cubicles are being constructed during the current year such that the cumulative capacity increases to accommodate 7,33,400 nos. of brood stock to support the growing demand of *L. vannamei* seed and ensure sustained development of shrimp aquaculture in the country.

(xii) Aquatic Animal Health Laboratories (AAHL):

NFDB has been setting up Aquatic Animal Health Laboratories (AAHLs) in strategic locations under both public and private sectors to provide effective disease diagnosis and pond health management support services to aqua farming community. NFDB has supported 12 Aquatic Animal Health Labs in 7 States namely Bihar, Andhra Pradesh, Tamil Nadu, Manipur, Assam, Tripura and Telangana; they will serve as focal centres for collecting and providing information on disease outbreaks to the National Surveillance Programme for Aquatic Animal Disease (NSPAAD) programme.

(xiii) Aquatic Animal Health & Quality Testing Laboratory (AAH&QTL):

As in other farming systems, diseases are a major threat causing severe economic losses. Often, fish farmers use banned antibiotics, pesticides and toxicants to control various types of diseases and also use some preservatives. These practices violate the 'Food Code' or 'Codex Alimentarius' and accumulation of their residues not only adversely impacts consumers' health but also results in rejection of export consignments.

To address this issue, NFDB established an in-house 'Aquatic Animal Health and Quality Testing Laboratory' (AAH&QTL) at Hyderabad to analyse and monitor the residues of aquaculture drugs, environment contaminants, etc. in shrimp, scampi, freshwater fish, hatchery seed and feed samples received from fish farmers, hatchery operators, processing industry, markets and other stakeholders and to provide molecular and microbiological diagnostic services to fish farmers following standards laboratory protocols.

(xiv) Indian Ocean Tuna Commission (IOTC) - 23rd Session

The 23rd Session of the Indian Ocean Tuna Commission (IOTC) was hosted by the Government of India, Ministry of Fisheries, Animal Husbandry & Dairying at Novotel Convention Centre Hotel, Hyderabad, India, from 17 to 21 June 2019. The 16th Session of the Compliance Committee, the 16th Session of the Standing Committee on Administration and Finance and the 3rd Session of the Technical Committee on Management Procedures were held in conjunction with the Commission Meeting from 9th to 16th June, 2019. The meetings were attended by delegates from 32 countries. The National Fisheries Development Board organised the above event.

(xv) Events/ Campaigns Organised by NFDB**a) National Fish Festival at Necklace Road, Hyderabad**

A 3-day National Fish Food Festival was organized by the NFDB at People's Plaza, Necklace Road, Hyderabad from 7th to 9th June, 2019. Different varieties of fish, shrimp, crab, squids and snail dishes were prepared and served to the visitors during the Fish Festival. Major restaurants, Govt. Organization, entrepreneurs, Women SHG's, individuals, etc., participated in the event by setting up stalls to popularize consumption of fish and fish products.

b) National Fish Festival at New Delhi

A 3-day National Fish Food Festival was organized at Rajpath Sitting Park, Opp. India Gate, New Delhi from 26th to 28th April 2018. The event was inaugurated by Ms. Rajni Sekhri Sibal, IAS, Secretary, Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Govt. of India in the presence of Ms. I. Rani Kumudini, IAS, Chief Executive, NFDB and Shri. Sagar Mehra, Joint Secretary (Fy), DoF, MoF&AD, Govt. of India. There were 15 stalls, with 8 participants from major restaurants, Govt. Organization, entrepreneurs to popularize consumption of fish and fish products. Different varieties of fish and shrimp dishes were prepared and served to the visitors. The fish food festival attracted huge crowd. This was the first Fish Festival organized after the formation of Department of Fisheries.

c) National Fish Food Festival, Coimbatore

A 3-day National Fish Food Festival was organized by the NFDB at Sashtri Ground, R.S. Puram, Coimbatore, Tamil Nadu from 26th to 28th July, 2019 to popularize consumption of fish and fish products. The event was inaugurated by Mr. Mohana Sundaram, Additional Director, Department of Fisheries, Govt. of Tamil Nadu. There were 14 participants represented in 16 stalls, with participation from 2 Govt. organizations, 4 restaurants, 6 Fishermen Cooperative Societies and 2 ornamental fish entrepreneurs. Different varieties of fish, prawn, crab & lobster dishes were prepared and served to the visitors. Apart from that fresh fish, dry fish and ornamental fishes & accessories were sold during the 3-day event. Around 3000 kg of fish and fish products were sold during the event. The fish food festival attracted huge crowd.

d) World Fisheries Day 2019

The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India celebrated the World Fisheries Day on 21st November 2019 at NASC Complex, Pusa, New Delhi. The Hon'ble Union Minister for Fisheries, Animal Husbandry and Dairying, Shri Giriraj Singh participated as the Chief Guest while Hon'ble Ministers of State for Fisheries, Animal Husbandry and Dairying, Dr Sanjeev Balyan and Shri Pratap Chandra Sarangi participated as the Guests of Honour.

During the event, the Government of India felicitated 19 nos. of outstanding fish farmers, aqua-preneurs & fisher folks in recognition to their accomplishments in the field and their contribution into the growth of the sector. During the event, some of the progressive farmers have also shared their experiences in fish farming. The Hon'ble Union Minister has released a booklet on 'Aquaculture Technologies Implemented by NFDB' and four posters on (i) Tilapia culture, (ii) Shrimp farming, (iii) Pangasius culture and (iv) Carp culture in ponds. Around 600 fishers, fish farmers, officials from Fisheries Departments across the nation participated in the event apart from officials, scientists, professionals, entrepreneurs and stakeholders.

(xvi) Details of International Assignments/Trainings/co-operation

a) International Training Programme on "Frontier Aquaculture Technologies" in Israel

The programme on "Frontier Aquaculture Technologies" a tailor-made study visit for senior professionals from India was attended by a 10 member team lead by Shri Sagar Mehra, Joint Secretary (Fisheries), GoI during 18-23 May, 2019 in Israel.

b) *Dan Fish* International Expo, 2019, Aalborg City, Denmark

National Fisheries Development Board participated in the expo at Aalborg Kongres & Kulture centre, Denmark. The stall was set up in a 16 sq.m area highlighting status of Indian fisheries sector in the world, which showed the possibility of the advances in fisheries sector in India made by reputed firms in the field of nets, trawl, ropes, wires, engines, marine Electronics, navigation and communication equipment, conveyors, life-saving equipment, and much, much more. Undertaken field visit of the Indian delegates from 9.10.2019 to 11.10.2019 at aquaculture farms, post-harvest processing industries and feed industry in the Aalborg and nearby areas for better undertaking of the new technologies and collaboration possibilities

CENTRAL INSTITUTE OF FISHERIES NAUTICAL & ENGINEERING TRAINING (CIFNET)

1 Introduction

The Government of India, in 1959 constituted a committee on “Fisheries Education”, for assessing the manpower requirement and to suggest measures for providing trained manpower for boosting the fishery developmental activities. CIFNET, the erstwhile Central Institute of Fisheries Operatives (CIFO), was thus established in 1963 at Kochi on the recommendation of above committee to meet the trained manpower needs of ocean going fishing vessels and that of fishing industry. Subsequently, a unit of CIFNET was established in Chennai in 1968 and another unit at Vizag in 1981 to cope up with the additional requirements due to expansion of fishing fleet/industry of the country. Since then, CIFNET is serving the nation by creating trained manpower needed for manning the fishing vessels.

2 Objective

- To create technical manpower for the operation of Ocean going /Deep sea fishing vessels.
- To create trained manpower to manage fishery establishments.
- To provide training for technical teachers for manning the fishermen training centers attached to Maritime States and Union Territories.
- The Institute has also expanded its mandate for training the fishermen of the coastal states and Union Territories through capacity building training programme under Blue Revolution/Pradhan Mantri Matsya Sampada Yojana(PMMSY).
- To conduct studies on fishing craft, fishing gears and equipments and provide extensive training to accelerate advancement in fishing technology for enhancing productivity of fishermen and increasing marine fish production.
- To help developing nations in the South-east Asian, Middle east and African regions to create technical manpower for development of Marine Fisheries.

3 CIFNET vision

To impart quality training in order to upgrade skills, prevent obsolescence, develop healthy constructive attitude with focus on competitiveness to meet the challenges of the fishing and the mercantile marine fields.

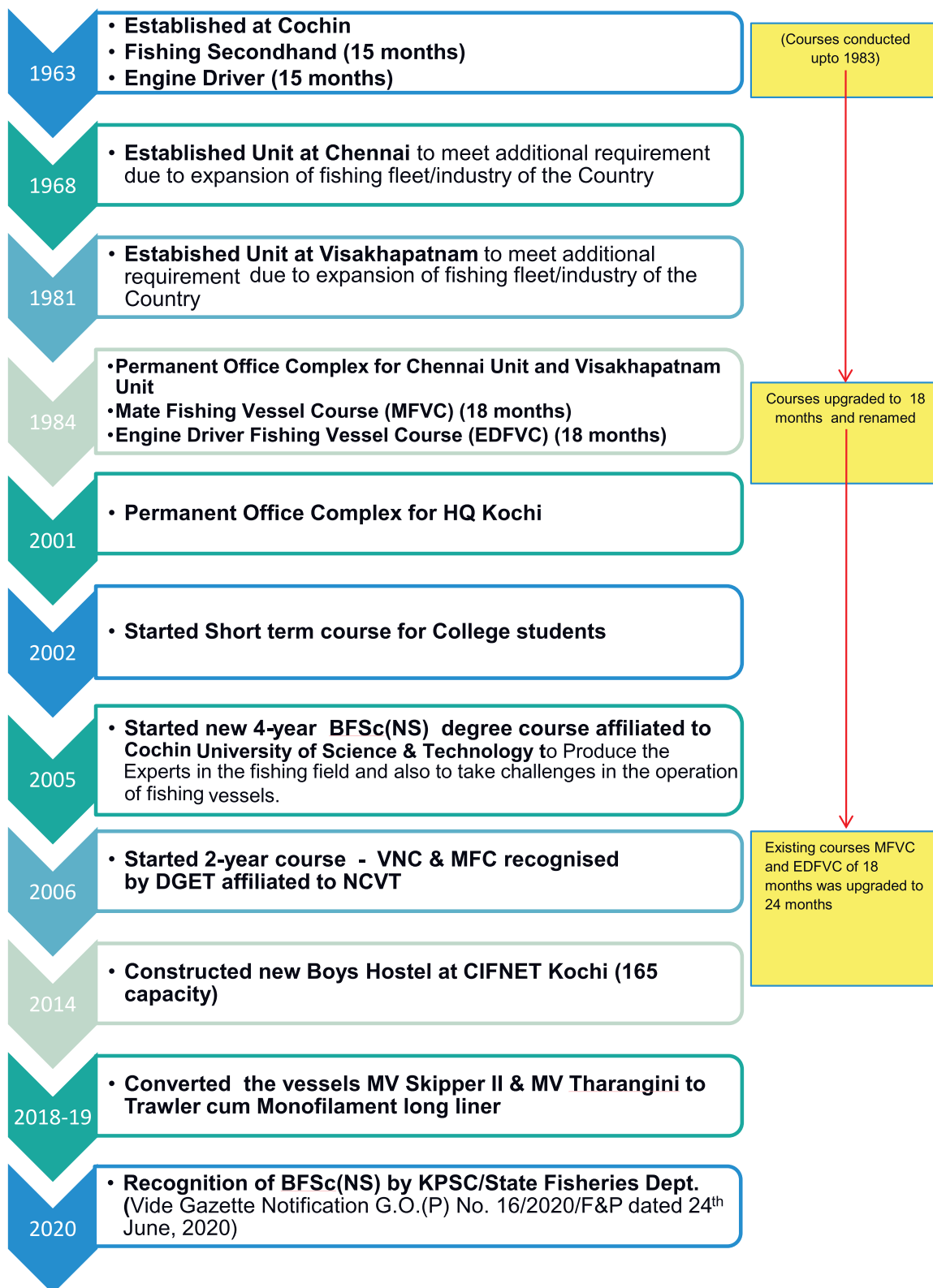
4 CIFNET Mission

“Develop skilled man power for deep sea fishing”
(Trained man power-nation’s power)

5 Significant Contributions made to Fisheries Sector since inception of CIFNET

- Development of Skilled Manpower for Deep sea fishing vessels
- Construction and Introduction of Ferro cement boats
- Energy conservation in fishing vessel by introducing Kort nozzle
- Location of Tuna grounds and training personnel on Tuna Long line Technique

Fig 43. Major Developments of CIFNET since inception



- Demonstration of Shrimp trawling using resource specific fishing gear
- Conducted experiments with Turtle Excluding Device (TED) on Trawl nets operated off Odisha (Puri) coast
- Study on the usage of LPG as fuel on Outboard Motor operated in traditional fishing sector
- Capacity building in Deep sea fishing on Mono filament long lining and onboard handling of tuna for Fishermen
- Training of Fishermen through outreach programme

6 Major Achievement - Overall Statistics Training as on March 2020

CIFNET has been conducting various regular and short term courses since inception. A total of 21,734 candidates have been trained. A capacity building training on Monofilament longline and Tuna Handling onboard have been conducted by CIFNET under Blue Revolution Scheme. A total of 335 fishermen have been trained. The details are furnished in the concerned table.

7 A brief about the training courses conducted at CIFNET

Organized training in the field of Fishing gear technology & fishing Technique, Seamanship & Navigation, Marine Engineering, Refrigeration, Electrical engineering & Electronics are being conducted at CIFNET since its inception at Cochin during 1963 and the subsequent Units at Chennai (1968) and Visakhapatnam (1981). The details are furnished in the concerned table.

7.1. REGULAR COURSES

7.1.1. Degree course -Bachelor of Fishery Science (Nautical Science) [BFSc(NS)]

The BFSc (NS) course, offered by CIFNET from the academic year 2005-06 is a 4-year (8 Semester) degree programme mainly concerned with study of fisheries, nautical science, operation of fishing vessels etc. This programme has an exhaustive curriculum designed to provide profound practical knowledge on various aspects of the fishing and nautical sciences. This Degree course is affiliated to Cochin University of Science and Technology (CUSAT), Kochi. The course is duly recognised by University Grants Commission (UGC) and DG Shipping Mumbai. The selection of the candidates for this course is through All India Common entrance examinations conducted by CIFNET.

The BFSc(NS) course aims to prepare candidates for the Competency Certificate Examination (COC), initially as Mate of Fishing Vessel and subsequently as Skipper of Fishing Vessel. The passed out students are eligible to apply for various posts under the Kerala Fisheries subordinate service like Assistant Fisheries Extension Officer, Fisheries Officer, Fisheries Assistant in Kerala State Fisheries Department as per the Kerala Gazette Notification G.O(P) No.16/2020/F&P dated 24.06.2020. They are eligible to apply for the post of Instructor (Seamanship & Navigation) in CIFNET. The passed out candidates are also employed with institutes like CMFRI, CIFT, CIBA, Customs etc.

7.1.2. NCVT courses- Vessel Navigator course (VNC) & Marine Fitter course (MFC)

Vessel Navigator Course(VNC) and Marine Fitter Course (MFC) framed under Craftsman Training Scheme (CTS) of National Council of Vocational Training (NCVT), recognised by DGT, MSDE, New Delhi with NSQF Level 5. The courses are designed by CIFNET and commenced from 2006 with intake capacity of 16/year per batch and subsequently increased to 20/year per batch now. The selection of the candidates for this course is through All India Common Entrance Examination conducted by CIFNET. On completion of these courses they are eligible to undergo post-institutional training like Junior Deckhand/Engine Room Assistants/Apprenticeship Fitter. Thereafter they are eligible for appearing Certificate of Competency (CoC) examinations of Mate of Fishing Vessel, Skipper Fishing Vessel, Engine Driver Fishing Vessel and Engineer Fishing Vessel conducted by Mercantile Marine

Department after acquiring required sea service.

The passed out VNC/MFC candidates are employed with CIFNET, FSI, CIFT, UT of Lakshadweep, IOC, Port Trust, Customs, ITBF, Naval Dockyards, L&T etc. in various categories.

7.2. Ancillary course- Shore Mechanics Course (SMC)

The course was started as per the demands from various Fisheries Departments for manning the Marine Workshops and shore establishments. The course is of one year duration with an intake capacity of minimum 10 candidates. The course is being continued as per the sponsorship of UT Lakshadweep Administration/ Pondicherry. The passed out candidates are employed with UT Lakshadweep Administration/ Pondicherry in various categories.

7.3 Statutory courses & refresher courses

These courses are conducted to meet the training requirements of Technical and certified personnel such as Skipper, Mate of Fishing Vessels as per M.S.(Amendment) Act 1987. The statutory courses namely Elementary Fishing Technology Course (EFTC) of 2 months duration and Advanced Fishing Technology Course (AFTC) of 2 weeks duration are conducted as per demand for the candidates appearing for CoC examination, D.G. Shipping as per M S Act. The Refresher courses of 1 month duration are also conducted as per the demand from candidates for appearing CoC examinations in order to gain theoretical and practical knowledge in Nautical and Engineering subjects.

7.4 SHORT TERM COURSES

7.4.1 Short term courses for fishermen (In-House)

The Institute arranges short term courses for the benefit of the Fishermen which are conducted at the institute according to the convenience of the fishermen during the off-season. The courses are conducted to the possible extent in vernacular language. The following are the main courses by which the fishermen are benefited.

- Basic of seamanship, Navigation, Marine Electronic Equipments, Operation & Maintenance of Engines on board fishing boats.
- Capacity Building in Deep sea fishing and onboard Handling of tuna
- Fishing technology and responsible fishing.

7.4.2 Short term extension courses for fishermen (Out reach)

CIFNET also render its service to the fishermen by organising a series of extension programmes at fishermen centres. These outreach programmes are mobilized during every year in collaboration with respective State Fisheries Departments. Some of the extension programmes are as follows:

- Fabrication of square mesh cod end
- Safety of life at sea
- Operation and maintenance of engines onboard

7.4.3 Short term Courses for professionals from sister Organisations

The Institute also conducts special short-term courses on specific request from other sister organisations like Coast Guard, MPEDA, CIFT, State Fisheries Dept.etc. in Fisheries, Nautical and Engineering disciplines. The course modules are specially designed to suit the requirement of such organisations. The following are some of such short term courses conducted:

- Fishery Technology Course for Indian Coast Guard
- Trainer's Training Course on Fishing Vessel Registration (for State Fisheries Department)

- Trainer's Training Course on "Navigation, Marine Electronic Equipments and Marine Engines (for State Fisheries Department)

7.4.4 Short term Training programmes for college students and VHSS

The Technical expertise, training and infrastructure facilities of CIFNET are being utilised to the optimum level by conducting various short term training programmes for the students fraternity during last few years. On job training skill development programme is being conducted for the VHSS students. The Graduates, Post Graduates students and students of the Engineering Colleges, ITI / ITC had the opportunity to attend these specially designed sandwich programmes and were able to absorb gainful practical knowledge.

8 Training Programmes proposed under PMMSY through short term courses

This programme is newly designed for skilling/training of the fishermen by reaching to the fishing villages/fishing harbours by the CIFNET. The training aids and accessories are taken to the respective places of outreach training programme which are planned in coordination with fishery associations/ officials, local bodies of the fishing villages/ gramma panchayat. The extension programme under PMMSY will be given maximum importance under 5 year Action Plan. The details are furnished in the concerned table

9 Outreach/Awareness Training Programme for Fishermen

10 Fishermen Training (In-house) under PMMSY

Skill Development/Awareness Training Programme for Fishermen

11 Training of Trainers (ToT) Programme under PMMSY



CIFNET Unit, Chennai



CIFNET Unit, Visakhapatnam



MV Prashikshani



M V Tharangini



M V Skipper II



Inflated life raft demonstration



Fishermen training on monofilament longlining



Students at Microbiology lab



Class in the Navigation simulator



Onboard navigation training



Chart work practicals

NATIONAL INSTITUTE OF FISHERIES POST HARVEST TECHNOLOGY AND TRAINING (NIFPHATT)

The history of National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT) dates back to October 17th 1952 when a tripartite agreement was signed by the Government of India, Government of Norway and the United Nations which resulted in the establishment of Indo-Norwegian Project (INP) for fisheries, area and fishermen community development at Neendakara in Quilon, Kerala. In 1963 the facilities developed at Neendakara, Kannur, Karwar and Mandapam were handed over to the respective State Fisheries Department and the Headquarters was shifted to Kochi. On the expiry of the agreement with Govt. of Norway in 1972, the administration of the project was completely taken over by the Govt. of India and the project was renamed as Integrated Fisheries Project (IFP) under the Ministry of Agriculture. As per the recommendations of cadre review committee, certain divisions of the Institute were transferred to sister organizations, mandates were modified and renamed IFP as National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT) during the year 2008.



A retrospective on INP and IFP

During the pre independence and independence era, the Indian scenario on agriculture production, fisheries and animal husbandry was very grim. All the developments happened during the past several decades in the above mentioned fields in India can very well be attributed to the initiatives such as Indo-Swiz, Indo-Norwegian projects etc., by the great visionaries of India during those days.

Fisheries infrastructure and technology were rudimentary at that time. The fish production in India during 1940's & 50's could in no way be comparable to that of the present day production levels. The artisanal level of fishing by the fishermen community was just sufficient to meet their daily subsistence. Excess catch if any could only be converted to manure or discarded. The introduction of mechanized fishing in India, initiated by the Indo-Norwegian Project and taken up by the industry, opened a new chapter in the marine fish production. Now marine products have risen to the level of earning the biggest share in foreign exchange (\$6.7 billion 2019-20) from agriculture sector.



Mechanization in fishing has brought in other concerns such as handling of fish landings in bulk. This has led to the introduction of modern preservation methods. Acceptance of several such non conventional fish varieties and fishery products or preservation techniques by the consumers was another achievement worth mentioning.

Popularization of fishery products, importance of fish handling & preservation and spreading the

message of fish as a safe and healthy food was another service carried out by this Institute. Now the present generation may wonder to know that there was a time, when iced fish was considered as second grade or even semi spoiled one. Consumer's mindset was attuned to accept nothing less than freshly caught fishes. The interior areas were forced to satisfy with dried /cured fish. For several decades, a similar reluctance for accepting frozen fishery products also existed. Even during eighties or early nineties, customers were much sceptical on trying them. Canned fishery product's case was also not different. Canned and frozen products have good acceptability among fish consumers now.

The customer attitudes have not changed overnight or naturally happened, but through intentional and well focused awareness programmes. NIFPHATT as a pioneer Institute in the field of fisheries in India can very well boast to have played a small but a very significant role in Indian fisheries development. The objectives of this Institute have been redefined, fine tuning to meet the requirements of the changed scenarios in the sector. Now more focus is given to product development and popularization, human resource development and gender development through tools like training programmes and consultancy services.

Certain initial milestones

- Fishermen community & Area development
- Introduced mechanization and motorization in marine fishing sector in India
- Survey & Mapping of resources along south- east & south-west coasts
- Introduced deep sea fishing techniques such as long lining, purse seining, deep sea trawling, gillnetting etc. as a part of exploratory and experimental fishing
- Established refrigeration plant and cold storage facilities
- Developed diversified value added marine products and processes
- Popularized the diversified fishery products in rural and urban markets in different parts of the country and created awareness among processors and consumers
- Established marine workshop and slipway/dry docking facilities for fishing trawlers
- Established fully equipped electronic and electrical sections
- Established life raft-servicing station and got it duly recognized by the Mercantile Marine Department
- Led the Antarctic expedition in the polar vessel Sagar Sampada for the exploration of the Krill resources
- Popularized and promoted fish as healthy food
- Created a cadre of fish processing experts through imparting hands-on training and exposure to the students of food technology particularly fisheries.
- Conducted training programmes on Post harvest technology, repairs and maintenance of fishing gears
- Implemented Coastal community empowerment programmes with special reference to Gender

Current Mission & Mandates

1. Post harvest technology up-gradation and its transfer to beneficiaries such as rural fishermen community, small scale industries, export processing houses and students through consultancy, job work and training
2. Value added product development by way of process and product diversification from all

varieties of fish including low value, unconventional and seasonally abundant fishes

3. Imparting training in the field of post harvest technology, refrigeration technology, Quality control and value added products
4. Providing consultancy services and training for rural development programmes/ women empowerment programmes in fish processing, supporting local fish farmers, self-help groups of fishermen community, fishermen's cooperative societies functioning under Panchayathi Raj Institutions
5. Popularization and test marketing of value added products from fish varieties including low value, unconventional species and seasonally abundant fishes
6. Extension of the activities through popularization and test marketing of value added products to new areas and develop markets in all states in a phased manner with added attention to rural areas and enthusing entrepreneurs to enter into sea food processing industry

CURRENT ACTIVITIES:

- ▶ Post harvest technology up-gradation and its dissemination

NIFPHATT has always strived to keep itself abreast with the technological developments in fisheries sector. Comprehending the importance of value addition in the sector, the Institute has developed various ready to cook and ready to eat products from fish and fishery resources. Consumer acceptance of the developed products is affirmed through test marketing channels. The know-how thus generated is transferred to the beneficiaries through training and consultancy services.

NIFPHATT is conducting adaptive research in the utilization of new and unconventional varieties of fish. Research activities of the Institute are primarily aimed at product development, improvement and fine tuning the technology to suit industrial requirements.

Some of the convenience based products developed are:

- Thermal processed fishery products in Tin Free Steel (TFS) Cans and retort pouches
- High-end products from farmed Cobia
- High-end products from farmed Tilapia
- High-end products from edible oyster
- High-end products from oceanic squids
- Fish wafer
- Fishture- Fish Based Protein Snack

Over the course of time, NIFPHATT has also associated with external funded projects like National Agriculture Technology Project (NATP) and National Agricultural Innovation Project (NAIP). NIFPHATT was consortium partner for the following programmes with CMFRI as the lead Institute.

- A value chain on high value shell fishes through mariculture system
- Utilization Strategy for Oceanic Squid in Arabian Sea: A Value Chain Approach
- ▶ Human Resource/ Community and gender development

The training programmes of NIFPHATT are sector specific and subject specific in different disciplines of the post harvest technology and refrigeration technology. The training programmes are designed in such a way that it provides intensive hands on experience to the students who are pursuing specialized education in fisheries science, biotechnology, food science, food microbiology, food engineering and professionals working in fisheries sector. To augment the development of

manpower in the fisheries and allied sectors, the Institute offers diversified training programmes in the various fields of fisheries post harvest technology, refrigeration technology, HACCP/GMP, quality control, seafood microbiology and value added products development.

Extensive rural and gender development programmes are provided to the self-help groups (SHGs) from fishermen community aiming at dissemination of rural appropriate technologies in sea food processing, for making them self-reliant. NIFPHATT has launched its extensive fisherwomen training programme since 2000 in the national level on various capacities across 9 maritime states and two union territories. A total of 15,756 fisherwomen got training from NIFPHATT till 2020 with the effective support of different user agencies, various state fisheries departments and the administrative Ministry. These programmes have equipped fisherwomen with skills not only in fish handling, hygiene, fish processing/ preservation techniques and ready-to-eat/cook products development but also in micro entrepreneurship, group development and marketing. Apart from providing training to them, NIFPHATT has been supporting fishermen co-operative societies, who play multifaceted role in the socio- economic, educational, health & mental development of fishermen communities. Manassery Fishermen Co-operative Society in Kochi is one among them. Fisherwomen from that society are directly involved in the product development activities of NIFPHATT. The dearth in hands for various activities in NIFPHATT is being supplemented by engaging fisherwomen from this society for the past several years. Fourteen years of inclusive innovative intervention of NIFPHATT in the empowerment activities of fisherwomen have given them an exact direction to their way ahead. This has motivated them to establish micro units in their own areas with locally available resources.

Processing plants of the institute also serve as venue for on the job training of students and practical classes for faculties, officials from various institutes, fisher folks and self-help groups throughout India. The institute has a well-equipped laboratory for quality assurance of products. These labs are also used for imparting practical classes for trainees.

► Entrepreneurial development

Dynamic nature of seafood trade poses significant risk, especially for a nascent entrepreneur. With a view to support new ventures in seafood trade and to shift the focus of the industry from frozen products to premium chilled products fetching foreign exchange many folds, NIFPHATT has two chilled fish processing facilities with the support of MPEDA. This is expected to act as groundswell for entrepreneurs to take up this line of business without facing the risks associated with high initial capital investments.

► Standard Fixing Exercises

NIFPHATT is actively participating and contributing to the standard fixing exercises for fish & fishery products at national and international level by serving as an expert member in Bureau of Indian Standards (BIS/ISO), Food Safety and Security Authority of India (FSSAI), Shadow Committee for CODEX and Technical Committee for Risk Assessment for Import of Fish & Fishery Products into India. NIFPHATT has played a major role in formulating the following traceability ISO standards:

- Traceability of Crustaceans products- Specification on the information to be recorded in farmed crustacean distribution chains.
 - Traceability of Crustaceans products- Specifications on the information to be recorded in captured crustacean distribution chains.
 - Traceability of Molluscan products- Specifications on the information to be recorded in farmed molluscan distribution chains.
 - Traceability of Molluscan products- Specification on the information to be recorded in captured Mollusca distribution chains.
- Consultancy Services for establishing fisheries infrastructures

Expertise of the Institute is expected to be disseminated to the industry and other stakeholders through consultancy services also for establishment of fisheries infrastructures such as chilled room, cold storages, ice plants, processing/common facility centres etc. Some of the notable achievements in this area are:

- Consultancy / technical assistance for design and layout of seafood processing facility and assessment of technical skill training needs of personnel of Women's Cooperatives, Dili under the approval of United Nations Industrial Development Organization (UNIDO), Centre for South-South Industrial Cooperation (UCSSIC), in Timor-Leste.
- Technical and capacity building support to East Godavari Riverine Estuarine Ecosystem (EGREE), Kakinada, Andhra Pradesh to establish processing and post-harvest centres
- Consultancy services for Harbor Engineering Department, Govt. of Kerala for establishing ice plants, ice store, chilled room in conformity with HACCP/EU norms at various coastal districts of Kerala
- Consultancy service to Matsyafed, Kerala for establishing block ice plant, ice store and chilled room at Shakthikulangara in Kollam district, Kerala
- Consultancy service to Coastal Development Agencies and Department of Fisheries, Kerala for Establishing modern fish processing plant at Sakthikulangara, Kollam district
 - ▶ Spreading the message of 'fish as a healthy food'

According to the Food and Agriculture Organization (The State of Food Security and Nutrition in the World, 2020 report) it is estimated that, 14% of India's population is undernourished. It is globally accepted that, fish and fishery resources can play a major role in mitigating malnutrition. Due to various reasons, majority of the population in India, except along the coastal belt are reluctant to include fish in their daily diet. Such taboos and customs can very well be overcome by awareness creation and popularization. This being one of the mandate, this Institute has played a significant role in popularizing the importance of fishery products and spreading the message of "fish as a healthy food" without any compromise on its food safety aspects. Institute's test marketing channels extend quality fish and fishery products to large number of consumers throughout the year. Institute also takes part in trade fairs and exhibition throughout India spreading this message.

Way forward.....

Efforts are being made to continue this pace of activities acquired through the past several decades into the future in fisheries sector. This can be achieved through establishing wider inter-institutional linkages with National and State establishments. The Institute is presently planning to intensify its focus on skill up-gradation of the fishermen/fisherwomen/fish farmers-the primary producers of the sector. At the same time, due emphasis will be given to the postharvest aspects by development of novel value added products/processes and popularising the same among the populace.

FISHERY SURVEY OF INDIA(FSI)

History of the Institute

The Fishery Survey of India was established in 1946 as a pilot project known as Deep Sea Fishing Station (DSFS) by the Government of India with the objective of augmenting food supply through development of deep-sea fishing. Later, Offshore Fishing Stations (OFS) were established in 1957 and 1958 under the control of DSFS. Thereafter, the institute was graduated to the status of a survey institute in the year 1974 under the name Exploratory Fisheries Project (EFP) with the Bases known as Offshore Fishing Stations in all the maritime states.

The objectives of the exploratory fishing were charting of fishing grounds, training of fishing operatives and testing commercial possibilities of deep sea fishing were assigned. With the changing developmental needs of the marine fishery sector and the growing data requirements in the context of EEZ declaration in 1976, the institute has undergone major structural and functional transformations. In 1983, it was re-organised and upgraded as a national institute, the Fishery Survey of India. It was re-organised as Science and Technology Institute in the year 1988. Consequent to the re-organisation, the institute was amplified, enlarged and upgraded the scope and contents of its functions and activities. The Institute has thus, emerged as the nodal Fishery Institute in India with the primary responsibility of marine fisheries resources survey, assessment and monitoring in the Indian Exclusive Economic Zone (EEZ) and adjoining seas for promoting sustainable exploitation and management of the fish stocks. With passing time, the FSI had passed through the administrative control of multiple ministries of Govt. of India viz., Ministry of Food and Agriculture, Ministry of Agriculture (Department of Agriculture and Cooperation), Ministry of Food Processing Industries, Ministry of Agriculture (Department of Animal Husbandry and Dairying), Ministry of Agriculture and Farmers' Welfare (Department of Animal Husbandry, Dairying and Fisheries).

Presently the institute is in the administrative control of Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying since 2019 with a survey fleet of 11 deep sea vessels operating from seven operational Bases viz., Mumbai, Mormugao, Cochin, Porbandar on the west coast and Chennai, Visakhapatnam and Port Blair on the east coast in order to accomplish the mandate of the Institute.

1. Mandate

The FSI is a sub-ordinate institute under the Department of Fisheries, Ministry of Fisheries Animal Husbandry and Dairying for carrying out the survey, assessment and monitoring of the marine fishery resources of the Indian EEZ within the framework of a well defined mandate. The mandate of the Institute is tuned from time to time to match the developmental activities of the fisheries sector as well as to meet the national and global requirements. The mandate of the institute was approved by the Evaluation committee of FSI during 2007 is given below:

- Exploratory surveys, charting of fishing grounds, assessment of fish stocks in the Indian EEZ and adjoining high seas and research thereof, besides the specific surveys on request from the States and the Union Territories.
- Data collection and periodic re-validation of potential of fishery resources to provide advice on fishery management issues enshrined in the national, regional and global conventions and agreements and other associated activities.
- Monitoring survey of fishery resources in the exploited areas including coral reefs, application of Monitoring, Control and Surveillance (MCS) for regulating fishing activities and promoting Code of Conduct for Responsible Fisheries (CCRF) in the Indian EEZ.

- Maintain Data Bank and disseminate information on fishery resources to the end - users and act as an interface between the State/UTs and the Ministry of Fisheries, Animal Husbandry and Dairying, Government of India for Marine and Inland fish production and related aspects.
- Assessment of suitability of fishing gear, accessories and equipment with special reference to the preservation of environment and ecology of marine habitat.
- Fish stock identification and biodiversity studies including application of genetic tools and techniques.
- Marine fisheries forecasting including application of Remote Sensing for the benefit of Artisanal, Mechanized and Industrial sectors.
- Human Resources Development through the practical training of fishing operatives, fishermen, fisheries officials and students.

2. Major Achievements & contributions

- Survey and stock assessment of marine fishery resources of Indian Exclusive Economic Zone (EEZ) covering all the maritime states and UTs.
- Biological studies of all the major resources have been carried out for fisheries management and conservation.
- Depth-wise, area-wise biomass estimates for important resources were made.
- Located perch resources all along Karnataka and Kerala coast between 70-150 m depth zone and also in Andaman waters.
- Located deep-sea prawn and lobster grounds off Kerala and Gulf of Mannar.
- Discovered new lobster grounds in Quilon bank and off Ponnani during the period 1999-2004.
- Introduced Perch traps for exploitation of perch resource dwelling in the rocky fishing grounds.
- Systematic survey of the fishery resources of Wadge bank and Gulf of Mannar started during 1990's were continued.
- Rich Shrimp grounds in the Sand heads off West Bengal and off Paradip, Odisha were located.
- Rich Indian mackerel grounds were located along the Odisha coast in 50-150 m depth.
- Mid water / pelagic trawling undertaken along the upper east coast of India showed encouraging results.
- Demersal resources survey of Andaman waters was conducted and located the availability of spear lobster (*Linuparus somniosus*) for the first time in Indian waters.
- Deep sea shrimps fishing grounds identified by FSI forms one of the major exporting fishery resources from the A&N Islands.
- Feasibility of hand line fishing for demersal resources in the shelf area of A&N Islands was established by FSI.
- Introduced resource-specific diversified techniques like trap fishing, long lining etc.
- Popularized demersal trawling technique in Indian waters.
- Bottom set vertical longline gear for perch resources were established by FSI.
- FSI developed Lobster traps and trained the fishers onboard to use of these traps.
- The computerization of the data collected by the exploratory survey vessels of the FSI was commenced in the eighties. At present FSI data bank holds about 82,000 records and about 100 records are added annually.

- Location of potential resources of tunas and bill fishes, sharks were identified and published as Atlas for the benefit of fishermen and stakeholders.
- Special drive Survey programmes such as preliminary surveys in the continental slope during 1997 – 2002, demersal fishery resources surveys of Andaman & Nicobar waters in 2008 & 2019, survey and assessment of oceanic and allied tuna resources around the Lakshadweep islands and Skipjack and Yellow-fin tuna by Pole & Line fishing in Lakshadweep and Andaman & Nicobar waters were implemented.
- Modified Deep Long Line (MDLL) gear for Big eye tuna resources was established in the Union Territory of A & N Islands.
- Drift long line gear using light sticks for Sword fish resources were established in A&N Islands.
- Preliminary survey of Skipjack and Yellow-fin tuna by Pole & Line fishing in A&N waters.
- Located of skip jack tuna grounds off Mangalore and Lakshadweep.
- Introduced and established feasibility of multifilament and monofilament tuna longline fishing by locating productive tuna grounds in Lakshadweep and the Indian EEZ.

3. Other Achievements

a. Technology introduced

- Purse seining in 1980 for pelagic resources survey.
- Squid jigging by deploying the vessel MFV *Matsya Sugundhi*.
- Pot fishing for harvesting Cephalopods targeting Octopus spp.
- Tuna tagging for Yellowfin and Skipjack tuna during 2005 – 2006 with the support of IOTC to understand the tuna migrations in Indian Ocean in order to locate the tuna stocks for sustainable exploitation.
- The scheme of Conversion of Shrimp Trawlers to Tuna Long Liner in 2005 was entrusted by the Govt. of India by providing subsidy. Fishery Survey of India was instrumental in the conversion of these shrimp trawlers to monofilament longliners and provided all the technical and scientific support.
- The Marine Engineering Division (MED) at Kochi is having facilities of dry-docking, slip way, life raft station, jetty and providing services to the fishing industry, Indian Coast Guard and Indian Navy at an affordable cost and revenue is being generated.

b. Publications

- Based on the survey findings the FSI has brought out Resource Information Series (Quarterly), Meena news (Quarterly), Bulletins, Occasional papers and Special publications, Cruise reports and Research papers.
- The FSI has been assigned with the Revalidation of marine fisheries stock potential in the Indian EEZ and accordingly in 1991, 2000, 2010 and 2018 Revalidation of marine fisheries stock potential in the Indian EEZ was carried out and reports has been published.
- Handbook on Fisheries Statistics is being published in association with the Ministry of Fisheries, AH&D.

c. Extension programmes

- Workshop, Open Houses, Marine Exhibition Street plays and Fishermen Rallies are being regularly for the benefit of the fishermen / fisherwomen, boat owners, NGOs working in fishery sector, students and policy makers.

- Dissemination of survey findings also being done through Doordarshan, All India Radio.
- Participation in Kisan Mela, Krishi Unnati mela, Agriculture and Fish Expo for disseminate the information collected through surveys by putting up an exhibition stalls.
- Awareness on CCRF is being provided among Fishers/Stakeholders for conducting responsible fishing practices, propagating and encouraging fishermen to diversify fishing effort to deep sea fishing.

d. Academic interest

- The FSI has been recognized as a research institute by various Universities for research leading to Ph.D., & Masters Degree in Science. Scientists of FSI were also recognized by these universities as the research guides for Ph.D., and M.Sc., degree courses.

e. Marine census

- As per the Ministry's assignment of carrying out marine census in Island groups, accordingly, during the years 2005, 2010 and 2015 FSI has successfully conducted Marine Census for the Lakshadweep and Andaman & Nicobar Islands in co-ordination with the Fisheries Departments of the UTs.

f. Training

- Onboard Training Programmes conducted on Monofilament / Multifilament Tuna Longlining sponsored by National Fisheries Development Board (NFDB), Hyderabad, Maritime States/ UTs and Puducherry under the FIMSUL – II Project funded by the WorldBank.
- Training to the Fishermen and Stakeholders of Maritime States/ UTs on fishing techniques, navigational, sea safety equipments etc.
- In-Vessel training to the CIFNET Trainees is being provided regularly enabling them to achieve required skill and sea service for the competency examination as certified officers by Mercantile Marine Department (MMD) both on Engine side and Deck side.

g. Collaborative research

- Remote Sensing and Fishery Forecasting in collaboration with SAC and ISRO has engaged in the development of resource specific fishery forecast models using Ocean Satellite derived data on ocean colour (*Chlorophyll*) and Sea Surface Temperature (SST).
- FSI had undertaken various International and institutional projects in collaboration with Indian National Centre for Ocean Information Services (INCOIS), GEF/UNDP/ IMP, Indian Ocean Tuna Commission (IOTC), ICAR, DOD, CMFRI, MoEF, SAC-ISRO, CMLRE, MoES etc.
- Implemented Centrally Sponsored Scheme (CSS) as per the directives of the Ministry, accordingly, the FSI had conducted various programmes in order to strengthen data collection and fish taxonomy.

h. Linkages with national and international agencies

- FSI is the designated Nodal agency of the Government of India to meet the research and data requirements of the Indian Ocean Tuna Commission (IOTC) as part of India's international obligation. The IOTC provides technical and scientific support and training to the member countries to expand their tuna fishing activity in the Indian Ocean.
- The FSI has been associated with Bay of Bengal Large Marine Ecosystem (BOBLME) since 2003.
- The FSI has been representing various committees for policy formulation and planning.
- FSI has vital linkages with several national and international agencies / institutions associated with ocean studies and fisheries development.

i. Other activities

- Assistance being rendered to Fishing Industries as and when required.
- Assistance also being rendered for Surveillance support regularly to the Indian Navy and Indian Coast Guard while out at sea.
- The FSI was entrusted with the responsibilities of acquiring the catch statistics of LoP vessels and analysis of raw data and subsequent submission to Ministry for the LoP vessels data base for future record. Accordingly, during the period 2003-2015, this task was accomplished.

OPERATIONAL BASES AND SURVEY VESSELS

The survey fleet of the Institute comprised of 11 vessels.



MFV Matsya Vrushti



MFV Yellowfin



MFV Matsya Varshini



MFV Matsya Drushti



MFV Matsya Shikari



MFV Matsya Nireekshani



MFV Sagarika



MFV Lavanika



MFV Samudrika



MFV Matsya Darshini



MFV Blue Marlin

Fishery Survey of India (HQs) and Base offices



FSI Head Quarters and Mumbai Base
Sassoon Dock, Colaba, Mumbai – 400 005



Mormugao Base
Opp. Microwave Towers, Mormugao – 403 803



Cochin Base
Kochangady, Kochi- 682005



Chennai Base
Fishing Harbour Complex, Chennai – 600 013



Visakhapatnam Base
Fishing Harbour, Visakhapatnam – 530 001



Port Blair Base
Post Box No.46, Port Blair – 744 101

CENTRAL INSTITUTE OF COASTAL ENGINEERING FOR FISHERY (CICEF)

1. ABOUT CICEF

The Central Institute of Coastal Engineering for Fishery (CICEF), formerly known as Pre-Investment Survey of Fishing Harbours (PISFH) is a premier institution of the Government of India established in January 1968 with its jurisdiction covering the entire Indian coastline for conducting engineering and economic investigations and preparing the Techno Economic Feasibility Reports (TEFRs) for the Fishing Harbour projects.

Being a subordinate office of the Government of India, Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying the Institute is playing a pivotal role in assisting the maritime States/UTs in extending the necessary technical support in conducting engineering and economic investigations and preparing the TEFRs of the FH projects. The costs of these projects are shared by the Department and the respective maritime State governments/ Union Territories (UTs) as per the norms of centrally sponsored scheme (CSS) which is in vogue since 1966-67.

Vision

To be a technology driven, scientifically and professionally managed consulting organization and to transform itself as a Centre of Excellence for the creation and development of fishing harbours (FHs) / fish landing centres (FLCs)

Mission

Create world class fishery engineering services and state-of the art technology for the development of fishery related infrastructure projects on demand from coastal State Governments, UTs, Port Trusts and other Public/ Private Sector undertakings.

Objectives

- ▶ Carry out reconnaissance surveys/ pre-feasibility studies to identify priority sites for development of fishery harbours, follow it up by detailed engineering and economic investigations and prepare TEFRs.
- ▶ Conduct post-construction evaluation of existing FHs/ FLCs.
- ▶ Provide technical advice on engineering and economic aspects wherever required for the development of fishery harbours and fish landing centres.
- ▶ Monitor the progress of construction of ongoing fishery harbours and fish landing centres sanctioned under the Centrally Sponsored Scheme in association with the Ministry of Fisheries, Animal Husbandry and Dairying.

2 ACHIEVEMENTS OF THE INSTITUTE

The achievements of the Institute are mainly in respect of development of FHs/FLCs, identifying new FH/FLC sites under Master Plan development, creation of coastal aquaculture farms, besides scrutiny of project proposals received from Coastal states/UT administration which are summarised below.

2.1 Development of FH/FLC projects

The core expertise and experience of the Institute lies in the subject matter of developing FHs/FLCs for which the organization was set up under the aegis of FAO-UN/SIDA technical assistance. The Institute till the end of June 2020 had carried out engineering and economic investigations for the development of FHs/FLCs at 104 sites and prepared TEFs for 120 sites, besides rendering technical assistance to maritime States/UT Administrations in the scrutiny and finalization of TEFs. On the basis of TEFs prepared and submitted by the Institute and technical assistance rendered to maritime States/UTs, the Government of India and Maritime State Governments/UTs under the various schemes have developed 7 major fishing harbours and 83 minor fishing harbours by the end of June, 2020. Out of these, construction of 7 major fishing harbours and 47 minor fishing harbours have been completed and the remaining are under various stages of construction. The Institute periodically monitors the progress of construction of FH projects in association with the Government of India.

2.2 Master Plan for development of FHs/FLCs

The Institute has taken up the task of identifying potential sites and preparation of Master Plan reports for development of FHs/FLCs in all the maritime States/UTs. It has so far identified 117 fishery harbour sites comprising of 14 major and 103 minor fishery harbours suitable for development, prepared detailed master plan reports and submitted to the respective maritime States/UTs and Government of India.

2.3 Coastal aquaculture farms and hatchery projects

The Institute has so far reconnoitered 66,218 ha of coastal aquaculture farm area and investigations were carried out in 15,584 ha, spread over the maritime States of Gujarat, Maharashtra, Goa, Kerala, Tamil Nadu, Andhra Pradesh, Orissa and West Bengal. During the period 1986 to 1991, this Institute developed 4 pilot coastal aquaculture farms and one shrimp seed hatchery under the FAO/UNDP assistance.

Nominated by the World Bank as a Nodal Agency for the development of coastal aquaculture farms under the World Bank assisted Shrimp and Fish Culture project, this Institute has carried out survey and sub-soil investigations at 13 sites covering a total area of 9,640 ha in the States of West Bengal, Orissa and Andhra Pradesh. TEFs were prepared in respect of 10 sites covering a total productive pond area of 3,826 ha. Out of the TEFs prepared in respect of 10 sites, construction of six shrimp farms totaling about 792 ha of water spread area were completed during 1992-99 and trial culture operations carried out. Of these 6 project sites, 4 are located in West Bengal, namely Canning, Dighirpar, Digha and Dadanpatra Bar, one project at Jagatjore/Banapada in Orissa and one project at Bhairavapalem in Andhra Pradesh.

3 FUTURE CHALLENGES

The main mandate of the Institute is to develop FHs/FLCs to enable the fishing boats operating in the country reckoned at 2,70,050 which includes 65,876 traditional craft, 1,36,920 motorised traditional craft and 67,254 mechanised boats including deep sea vessels. India has a long coastline of 8,118 km covering 9 maritime States and 4 UTs. The mechanized fishing boats including the motorized/ non-motorized traditional craft need major/minor FH and FLC facilities for fish landing, outfitting, idle-berthing and repair. And they need other waterside and landside harbour infrastructure facilities for operational convenience and post-harvest handling of fish and prawn catches under hygienic conditions.

However, the fact remains that the FH/FLC facilities developed so far in the country are capable to meet the requirements of only about 54.10 % of the total mechanised fishing boats operating in the country. As of now, nearly 46 % of the total mechanised boats i.e., about 30,867 are operating

without any harbour facilities. In order to provide FH facilities for these 30,867 boats, over 60 - 75 FHs need to be developed in all the maritime States/UTs. It is, therefore, obvious that enormous efforts are required to be made for the development of FHs which in turn requires this Institute to undertake survey, investigation and preparation of project feasibility reports.

Owing to overcrowding of fishing boats, poor management and maintenance of the FH infrastructure in the country, the fish hygienic conditions and sanitation standards have met with all-time ebb and being severely criticized by the fish importing countries. As such, for the implementation of HACCP/ EU norms for fish hygienic standards and to meet the requirement of export inspection agency of Government of India, this Institute is presently assisting the maritime State governments/UTs, and National Fisheries Development Board (NFDB) in the upgradation/renovation of existing FH facilities in the country and the country need to go a long way.

In addition to the above, this Institute is required to scrutinize the FH project feasibility reports prepared by various government/private consultancy organizations engaged by the State governments. On behalf of the Department, these reports are examined thoroughly in this Institute and detailed technical observations/comments are prepared on engineering and economic aspects of the report to enable the Department of Fisheries, Government of India in the decision-making process and sanctioning of projects for development and financial assistance. Further, the Institute has so far played a pivotal role in identifying potential sites, conducting necessary investigations and preparation of TEFRs for the development of FHs and there is need for the Institute to continue the unfinished tasks in the years ahead.

COASTAL AQUACULTURE AUTHORITY

THE COASTAL AQUACULTURE AUTHORITY (CAA)

GENESIS OF THE CAA

Coastal aquaculture, particularly shrimp farming, is the most vibrant food producing sector in India as it earns high foreign exchange to the exchequer. The supreme court in its verdict in Writ Petition No. 561 of 1994 (Jegannathan vs Union of India) raised concern on the environmental protection of coastal areas and directed the central Government to constitute an authority to protect the ecologically sensitive coastal aquaculture development in the country. It was, therefore, felt necessary that an enabling atmosphere with an appropriate policy, legal and institutional framework should be provided to facilitate this function.

Accordingly the AQUACULTURE AUTHORITY was constituted in exercise of the powers conferred under sub-section 3 of section 3 of the Environment (protection) act, 1986 by the Central Government to deal with the situation created by the shrimp culture industry in the coastal states and Union Territories by the notification dated 6.2.1997 of the Union Ministry of Environment and Forests, Government of India with the following members for the period of four years and six months.

The Aquaculture Authority was replaced by the coastal Aquaculture Authority Act, 2005.

COASTAL AQUACULTURE AUTHORITY

AIMS AND OBJECTIVES OF THE AUTHORITY:

The aims and objectives of the Authority are

- i. To regulate 'coastal aquaculture' activities in the areas notified by the Central Government as 'coastal areas' and for matters connected therewith.
- ii. The Authority is empowered to make regulations for the construction and operation of aquaculture farms in coastal areas, inspection of farms and hatcheries for *Penaeus vannamei* to ascertain their environmental impact.
- iii. Registration of aquaculture farms and hatcheries, removal or demolition of coastal aquaculture farms that cause environmental degradation, fixing standards for all coastal aquaculture inputs, viz., seed, feed, growth supplements, chemicals, etc., used in coastal aquaculture and for the overall monitoring of coastal aquaculture activities in the country.

Registration of Coastal aqua farms:

- Totally 1,179 shrimp farms with total farm area of 1,251.74 ha (Water Spread Area – 855.02 ha) were registered from June, 2019 to May, 2020. Altogether 39,705 shrimp farms with total farm area of 61,044.89 ha (Water Spread Area - 41,624.70 ha) received from State Level Committees/ District Level Committees of states were registered since inception to till May, 2020.

Renewal of Registration of Coastal aqua farms:

- During June, 2019 to May, 2020, 1248 farms with total farm area of 2,460.55 ha (WSA – 1,713.50 ha) were renewed. Total Renewal of registration of 7,973 farms with total farm area of 15,000.49 ha (WSA – 10,507.21 ha) were done from 2013 till May, 2020.

Letter of Permission for Culture of SPF *L. vannamei*:

A total of 2575 Letter of Permissions (LoPs) with total farm area of 12,460.52 ha (WSA – 8,388.13 ha) were registered since inception (August-2009) to May, 2020.

Empaneling of SPF Broodstock suppliers:

- CAA carried out the exercise of empaneling the suppliers of SPF *L. vannamei* & SPF *P. monodon* broodstock based on the genetic base and disease status in consultations with CIBA, NFDB and MPEDA. Based on the recommendations of Committee, 14 suppliers (12 suppliers for SPF *L. vannamei* and 2 suppliers for SPF *P. monodon*) were short-listed for supply of SPF broodstock to CAA permitted hatcheries.
- The Terms and Conditions for the supply of quality specific pathogen free (SPF) Broodstock and parent postlarvae of shrimp by overseas suppliers to hatcheries in India and the same was placed before the 18th Technical Committee meeting held on 10.1.2020. The Committee has approved the draft Terms and Conditions. The Ministry has been requested to notify the Terms and Conditions under the provisions of Livestock Importation Act, 2001 (Act 28 of 2001) as was done for the SOP of AQF.

Approval of SPF hatcheries and Nauplii Rearing Hatcheries (NRHs):

- A total of 315 SPF *L.vannamei* hatcheries and 123 Nauplii Rearing Hatcheries (NRH) spread all over the coastal states were approved from 2009 till May, 2020. A total of 7,57,800 nos. of *L. vananmei* broodstock were permitted to import and so far, during June, 2019 to May, 2020, 2,59,009 number of broodstock has been imported from the shortlisted suppliers.
- Two hatcheries were approved to import broodstock of SPF *P. monodon* and its seed production.

Screening of New Viruses Decapod iridescent virus 1 or DIV1:

- In addition to OIE listed pathogens, all the empaneled exporters from abroad and the Importers in India including hatchery operators are advised to screen SPF brood stock and other live stocks including artemia cysts connected with shrimp Aquaculture Industry in India for Decapod iridescent virus 1 or DIV1 and ensure that they are free from Decapod iridescent virus 1 or DIV1 for the safety of Shrimp Aquaculture Industry in India.

Certificate of Standards for coastal aquaculture inputs:

- CAA also issuing Certificate of Standards for coastal aquaculture inputs viz. feed, growth supplements and chemicals/ medicines for antibiotic free for the maintenance of the ecological and environmental balance of water bodies and the organisms reared therein and other aquatic life. Accordingly, CAA has issued Certificate of Standards to the 3,543 aqua inputs in eight categories. Further, a new advisory for submission of application has been issued to all the Manufacturer/Distributors of aqua inputs for ensuring antibiotic free aquaculture inputs.

Update of Database:

- Data base in CAA website www.caa.gov.in hosted by National Informatics Centre, Chennai updated with new and latest information periodically.

New Regulations:

- In accordance with the decision of the Authority in its 63rd meeting, new regulations for overseas broodstock supply has been prepared to inculcate responsibilities and accountability on the part of the suppliers and importers.

Effluent Treatment System:

- The design of Effluent Treatment System and model calculation was approved by the Authority in its 63rd meeting.



The models of ETS are given below:

Aquatic Animal Health and Quality Testing Laboratory:

- CAA has recognized the “Aquatic Animal Health and Quality Testing Laboratory” at NFDB as the National Referral Laboratory of CAA for Aquaculture under the category of Government of India laboratories to perform the following:
 - ▶ Seed Quality Analysis,
 - ▶ Disease Analysis,
 - ▶ Soil and Water Quality Analysis,
 - ▶ Quality Analysis of Aquaculture Inputs,
 - ▶ Antimicrobial Residual Analysis and
 - ▶ Microbiological Analysis related to aquaculture

Memorandum of Understanding (MOU) with NFDB:

- An MOU has been entered into between CAA and NFDB for the implementation of monitoring and compliance programme for the benefit of coastal aquaculture sector in the country. CAA and NFDB intend to work together in making AAHQ laboratory for ensuring compliances of the aquaculture establishments in India. CAA intends to utilize the services of the National Referral Laboratory for its monitoring of coastal aquaculture.

Pre border quarantine requirement:

- CAA had issued an order No. 57-6/2015 Tech Vol. II dated 12.12.2019 to implement the pre border quarantine requirement of testing done not earlier than 30 days before the actual shipment for the import of SPF *L. vannamei* into India and the same was sent to nodal ministry for necessary amendment in the Notification.

International Collaboration:

- CAA has established contact with University of Arizona, the referral laboratory of OIE with intent to collaborate in the field of aquaculture Pathology. University of Arizona has provided a draft MoU to be executed between CAA and University of Arizona to provide guidance and technical assistance in disease diagnostics, develop therapeutics and biosecurity measures to prevent shrimp diseases. The draft has been incorporated with inputs from CAA and the same has been confirmed by the University of Arizona.

Online File Management System:

- CAA has commenced online File Management System (FMS) in an attempt to make CAA paperless environmental friendly office.

Renewal of Registration of Coastal Aqua Hatcheries:

- The Inspection Committee of CAA constituted for this purpose had inspected 185 hatcheries located at Andhra Pradesh and Tamil Nadu for renewal of registration as provided under sub para (2) of para 1 of Guidelines for regulating hatcheries and farms for introduction of SPF *Litopenaeus vannamei* issued under Annexure II of CAA Rules, 2005. Among these, 170 hatcheries have been processed for renewal of Registration.

Extension of validity SIP and Registration of hatcheries:

- Considering the circumstances owing to the COVID-19 pandemic, the validity of the Registration, Annual Allocation Order and Sanitary Import Permit of the Hatcheries was extended up to 30th June, 2020 whose validity were expiring on 31.03.2020.

CHAPTER 12

INTERNATIONAL SCENARIO

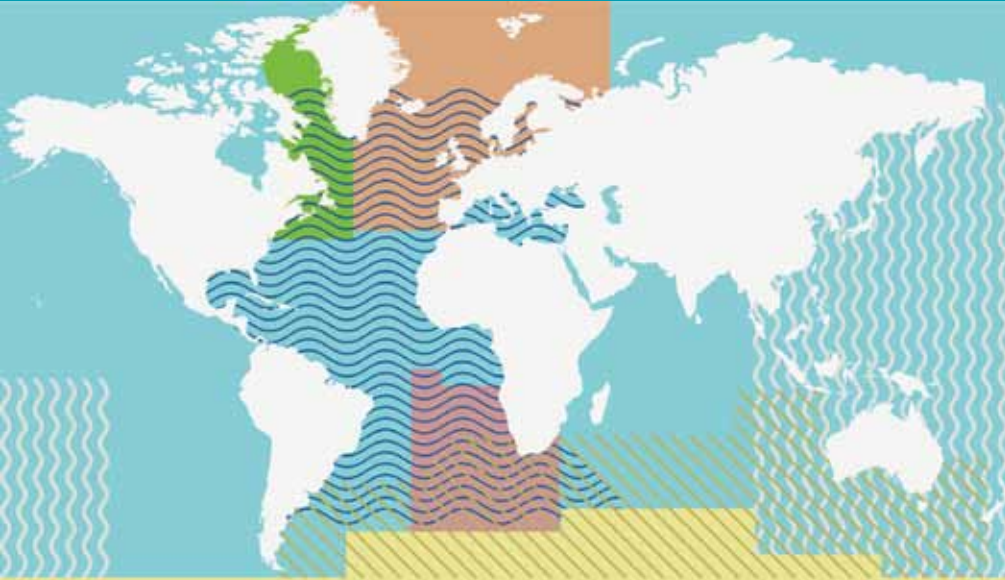
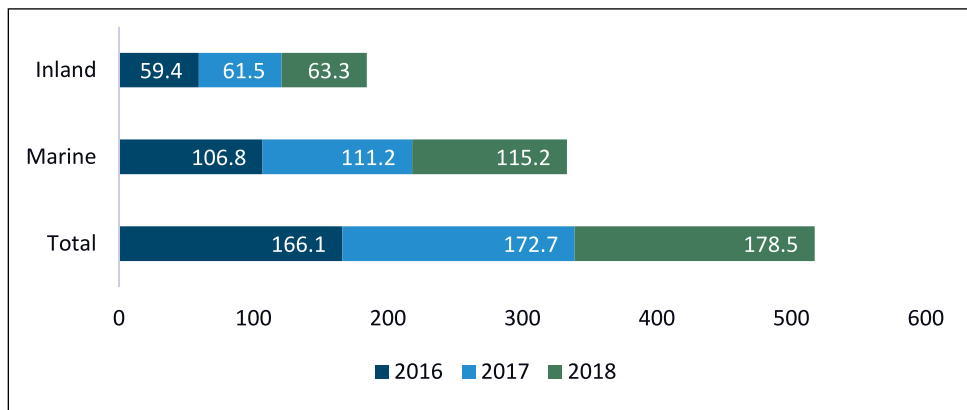
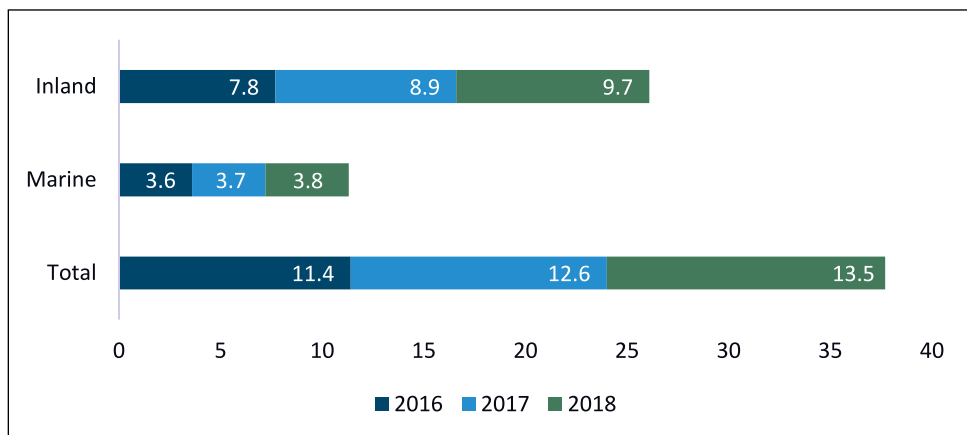


Table 12.1: Contribution of India to World Fish Production in selected years

| Year | World production (In MMT) | | | Contribution of India (In MMT) | | |
|------|---------------------------|--------|--------|--------------------------------|--------|--------|
| | Total | Marine | Inland | Total | Marine | Inland |
| 2016 | 166.1 | 106.8 | 59.4 | 11.4 | 3.6 | 7.8 |
| 2017 | 172.7 | 111.2 | 61.5 | 12.6 | 3.7 | 8.9 |
| 2018 | 178.5 | 115.2 | 63.3 | 13.5 | 3.8 | 9.7 |

Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world

Note: Fishery statistical data presented in the above table exclude the production for mammals, crocodiles, corals, sponges, pearls, mother – of – pearl and aquatic plants. Totals may not match due to rounding

Fig 44 : World Production(In MMT)**Fig 45 : Contribution of India (In MMT)**


| Table 12.2: Fish Production, 2018(live weight equivalent) | | |
|---|---------------|----------------------|
|  | Production | Of which aquaculture |
| | 2018 | 2018 |
| | (1000 tonnes) | (1000 tonnes) |
| Asia | 122 404 | 72820 |
| China | 62 207 | 47559 |
| India | 12 386 | 7066 |
| Indonesia | 12 642 | 5427 |
| japan | 3 774 | 643 |
| Philippines | 2876 | 826 |
| Republic of Korea | 1905 | 568 |
| Thailand | 2598 | 891 |
| Viet Nam | 7481 | 4134 |
| Africa | 12268 | 2196 |
| Egypt | 1935 | 1561 |
| Nigeria | 1169 | 291 |
| South Africa | 566 | 6 |
| Europe | 18102 | 3075 |
| European union | 5879 | 1167 |
| Norway | 3844 | 1355 |
| Russian Federation | 5308 | 200 |
| North America | 6536 | 660 |
| Canada | 1019 | 191 |
| United States of America | 5213 | 468 |
| Latin America and Caribbean | 17587 | 3140 |
| Argentina | 839 | 3 |
| Brazil | 1319 | 605 |
| Chile | 3388 | 1266 |
| Mexico | 1939 | 247 |
| Peru | 7273 | 104 |
| Oceania | 1617 | 205 |
| Australia | 281 | 97 |
| New Zealand | 511 | 105 |
| World | 178529 | 82095 |
| Developed countries | 29233 | 4603 |
| Developing countries | 135096 | 73330 |
| Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world | | |

Fig 46 : Size of bubble indicates the total fish production (in 1000 Tonnes) in 2018

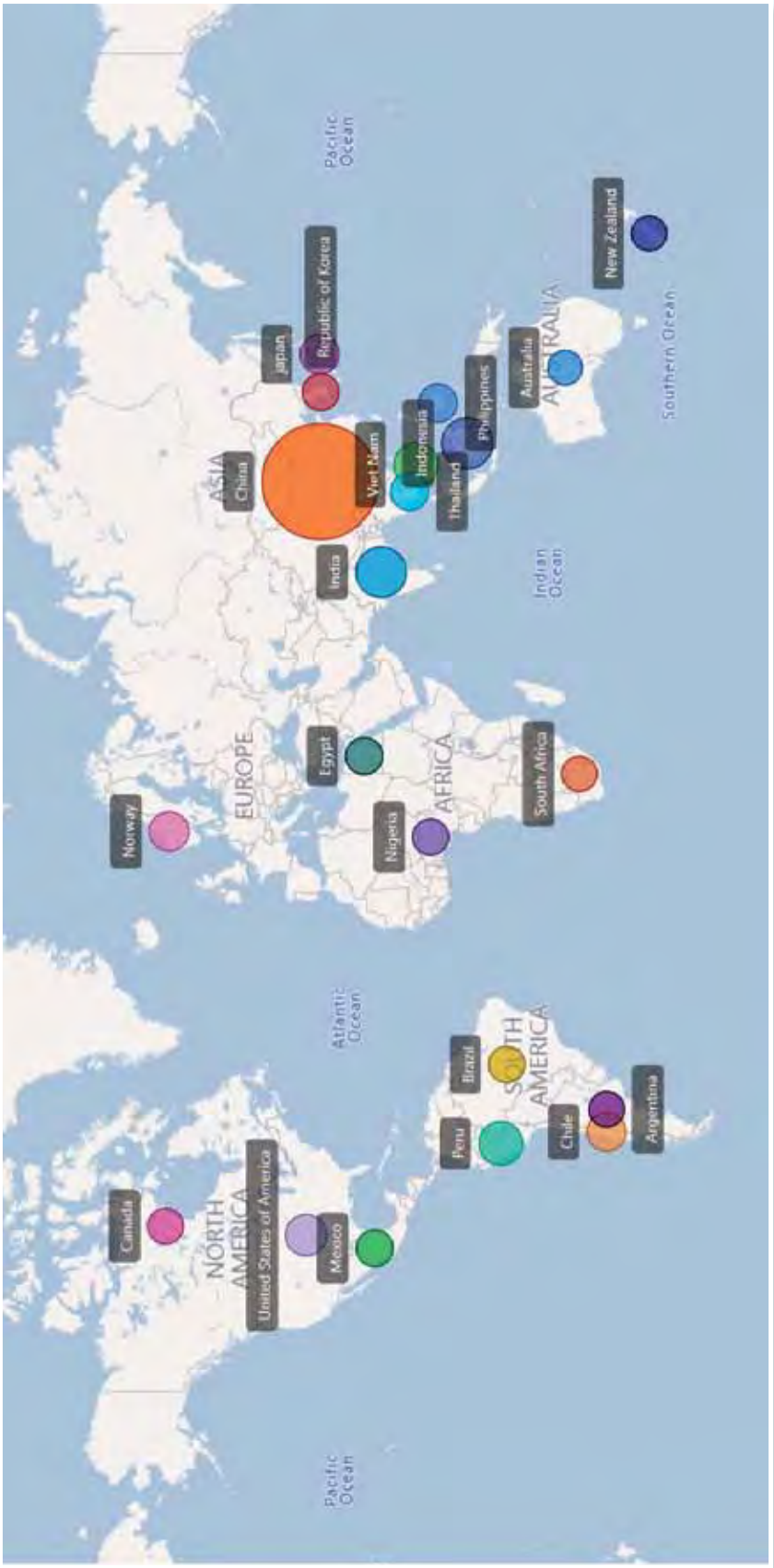


Fig 47: Major Exporter Countries, 2018

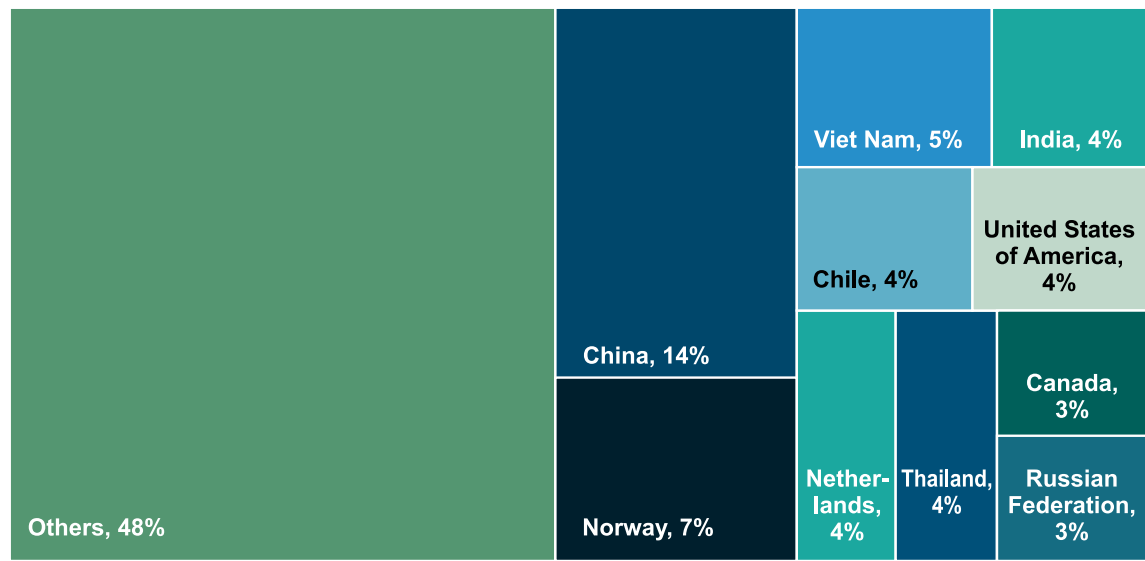


Fig 48: Major Importer Countries, 2018

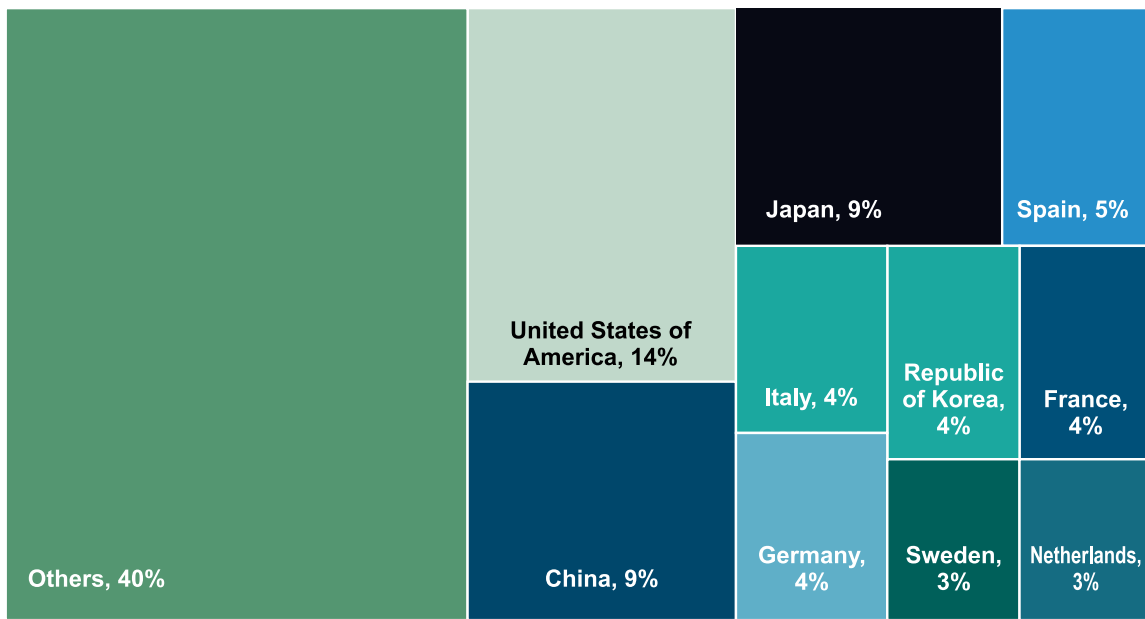


Table 12.3: World Fisheries and Aquaculture Production and Utilization (In Million Tonnes)

| | 1986-1995 | 1996-2005 | 2006-2015 | 2016 | 2017 | 2018 |
|--|------------------|-----------|-----------|--------|--------|--------|
| | Average per year | | | | | |
| Production | | | | | | |
| Capture | | | | | | |
| Inland | 6.4 | 8.3 | 10.6 | 11.4 | 11.9 | 12 |
| Marine | 80.5 | 83 | 79.3 | 78.3 | 81.2 | 84.4 |
| Total capture | 86.9 | 91.4 | 89.8 | 89.6 | 93.1 | 96.4 |
| Aquaculture | | | | | | |
| Inland | 8.6 | 19.8 | 36.8 | 48 | 49.6 | 51.3 |
| marine | 6.3 | 14.4 | 22.8 | 28.5 | 30 | 30.8 |
| Total Aquaculture | 14.9 | 34.2 | 59.7 | 76.5 | 79.5 | 82.1 |
| Total world fisheries and aquaculture | 101.8 | 125.6 | 149.5 | 166.1 | 172.7 | 178.5 |
| Utilization | | | | | | |
| Human Consumption | 71.8 | 98.5 | 129.2 | 148.2 | 152.9 | 156.4 |
| Non-food uses | 29.9 | 27.1 | 20.3 | 17.9 | 19.7 | 22.2 |
| Population | 5.4 | 6.2 | 7 | 7.5 | 7.5 | 7.6 |
| Per Capita apparent consumption(kg) | 13.4 | 15.9 | 18.4 | 19.9 | 20.3 | 20.5 |
| Trade | | | | | | |
| Fish exports -in quantity | 34.9 | 46.7 | 56.7 | 59.5 | 64.9 | 67.1 |
| Share of exports in total production | 34.30% | 37.20% | 37.90% | 35.80% | 37.60% | 37.60% |
| Fish exports – in value (USD billions) | 37 | 59.6 | 117.1 | 142.6 | 156 | 164.1 |

Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world

Note:

Excludes Aquatic mammals, crocodiles, alligators and caimans. Seaweeds and other aquatic plants. Total may not match due to rounding. Utilization data for 2014-2018 are provisional estimates.

Source: SOFIA,2020

Table 12.4: Total and Per Capita Apparent Fish Consumption by Region and Economic Grouping, 2017

| Region/Economic Grouping | Total Food Fish Consumption (Million Tonnes) | Per Capita Food Fish Consumption (Kg/Year) |
|-----------------------------------|--|--|
| World | 152.9 | 20.3 |
| World (Excluding China) | 97.7 | 16 |
| Africa | 12.4 | 9.9 |
| North America | 8.1 | 22.4 |
| Latin America and the Caribbean | 6.7 | 10.5 |
| Asia | 108.7 | 24.1 |
| Europe | 16.1 | 21.6 |
| Oceania | 1 | 24.2 |
| Developed Countries | 31 | 24.4 |
| Least Developed Countries | 12.4 | 12.6 |
| Other developing Countries | 109.5 | 20.7 |
| Low-Income food-deficit countries | 23.6 | 9.3 |

Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world

Table 12.5: Inland Waters Capture Production: Major Producing Countries

| Country | Production | | | | Percentage of total 2018 |
|---|-------------------------------|-------|-------|-------|--------------------------|
| | 2015 | 2016 | 2017 | 2018 | |
| | (million tonnes, live weight) | | | | |
| Bangladesh | 0.102 | 1.05 | 1.16 | 1.22 | 10 |
| Brazil | 0.23 | 0.22 | 0.22 | 0.22 | 1 |
| Cambodia | 0.49 | 0.51 | 0.53 | 0.54 | 4 |
| Chad | 0.1 | 0.11 | 0.11 | 0.11 | 1 |
| China | 1.99 | 2 | 2.18 | 1.96 | 16 |
| Democratic Republic of the Congo | 0.23 | 0.23 | 0.23 | 0.23 | 2 |
| Egypt | 0.24 | 0.23 | 0.26 | 0.27 | 2 |
| Ghana | 0.09 | 0.09 | 0.09 | 0.09 | 1 |
| India | 1.35 | 1.46 | 1.59 | 1.7 | 14 |
| Indonesia | 0.47 | 0.43 | 0.43 | 0.51 | 4 |
| Iran (Islamic Republic of) | 0.09 | 0.09 | 0.1 | 0.11 | 1 |
| Kenya | 0.16 | 0.13 | 0.1 | 0.1 | 1 |
| Malawi | 0.14 | 0.15 | 0.2 | 0.22 | 1 |
| Mali | 0.09 | 0.1 | 0.11 | 0.09 | 1 |
| Mexico | 0.15 | 0.2 | 0.17 | 0.22 | 1 |
| Mozambique | 0.09 | 0.1 | 0.1 | 0.1 | 1 |
| Myanmar | 0.86 | 0.89 | 0.89 | 0.89 | 7 |
| Nigeria | 0.34 | 0.38 | 0.42 | 0.39 | 3 |
| Pakistan | 0.13 | 0.14 | 0.14 | 0.14 | 1 |
| Philippines | 0.2 | 0.16 | 0.16 | 0.16 | 1 |
| Russian federation | 0.29 | 0.29 | 0.27 | 0.27 | 2 |
| Thailand | 0.18 | 0.19 | 0.19 | 0.2 | 1 |
| Uganda | 0.4 | 0.39 | 0.39 | 0.44 | 4 |
| United Republic of Tanzania | 0.31 | 0.31 | 0.33 | 0.31 | 3 |
| Viet Nam | 0.15 | 0.15 | 0.16 | 0.16 | 1 |
| Total 25 major producers | 9.79 | 10.01 | 10.53 | 10.64 | 89 |
| Total all other producers | 1.39 | 1.36 | 1.37 | 1.38 | 11 |
| All producers | 11.15 | 11.37 | 11.91 | 12.02 | 100 |
| INLAND WATER CAPTURES, BY REGION | | | | | |
| Asia | 7.3 | 7.44 | 7.9 | 7.95 | 66 |
| Africa | 2.84 | 2.87 | 3 | 3 | 25 |
| Americans | 0.57 | 0.6 | 0.58 | 0.63 | 5 |
| Europe | 0.43 | 0.44 | 0.41 | 0.14 | 3 |
| Oceania | 0.02 | 0.02 | 0.02 | 0.02 | 0 |
| Others | | | | | 0 |
| World total | 11.15 | 11.37 | 11.91 | 12.02 | 100 |
| Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world | | | | | |

Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world

Fig 49: Percentage of Inland Fish production of Major Countries, 2018

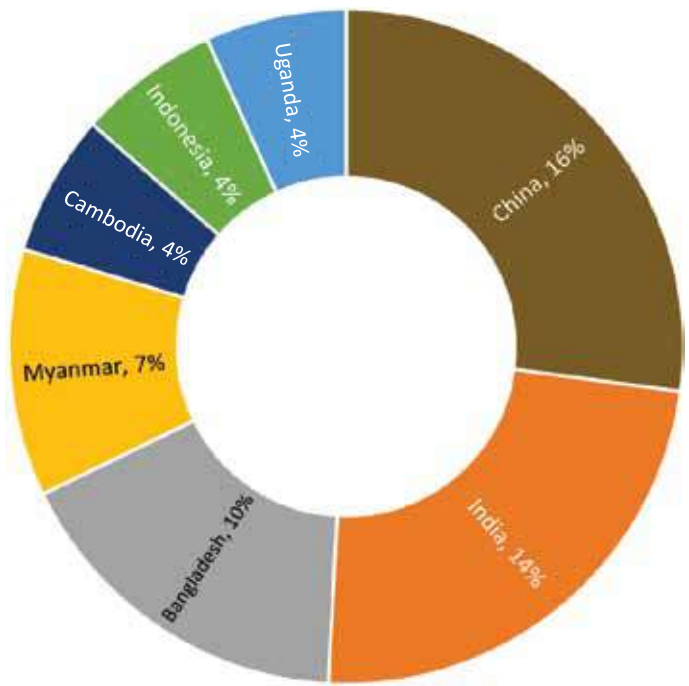


Fig 50: Percentage of Marine Fish production of Major Countries, 2018

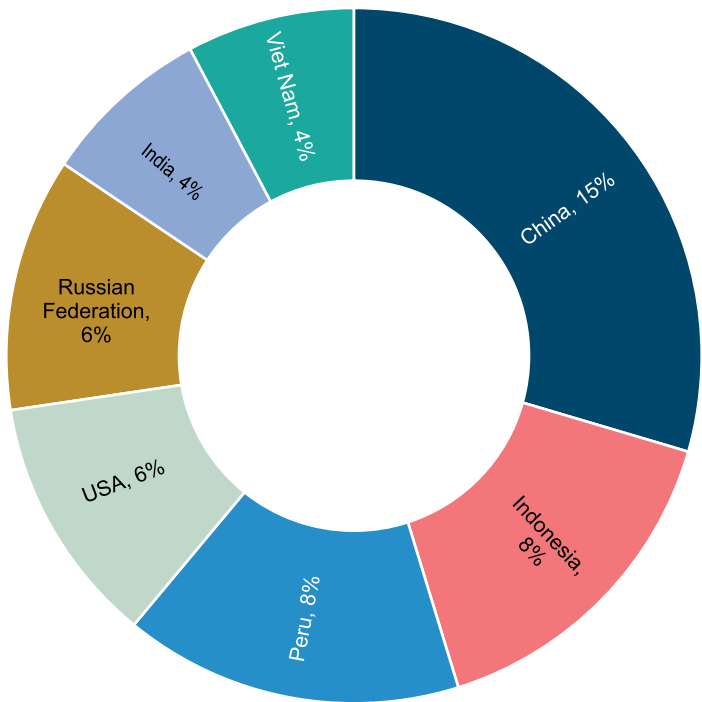


Table 12.6: Marine Capture Production: Major Producing Countries and Territories (million tonnes)

| Country or Territory | 2015 | 2016 | 2017 | 2018 | Percentage of Total 2018 |
|----------------------------|-------|-------|-------|-------|--------------------------|
| Argentina | 0.8 | 0.74 | 0.81 | 0.82 | 1 |
| Canada | 0.82 | 0.84 | 0.81 | 0.78 | 1 |
| Chile | 1.79 | 1.5 | 1.92 | 2.12 | 3 |
| China | 14.39 | 13.78 | 13.19 | 12.68 | 15 |
| Denmark | 0.87 | 0.67 | 0.9 | 0.79 | 1 |
| Iceland | 1.32 | 1.07 | 1.18 | 1.26 | 1 |
| India | 3.5 | 3.71 | 3.94 | 3.62 | 4 |
| Indonesia | 6.22 | 6.11 | 6.31 | 6.71 | 8 |
| Iran (Islamic Republic of) | 0.54 | 0.59 | 0.69 | 0.72 | 1 |
| Japan | 3.37 | 3.17 | 3.18 | 3.1 | 4 |
| Malaysia | 1.49 | 1.57 | 1.47 | 1.45 | 2 |
| Mauritania | 0.39 | 0.59 | 0.78 | 0.95 | 1 |
| Mexico | 1.32 | 1.31 | 1.46 | 1.47 | 2 |
| Morocco | 1.35 | 1.43 | 1.36 | 1.36 | 2 |
| Myanmar | 1.11 | 1.19 | 1.27 | 1.14 | 1 |
| Norway | 2.29 | 2.03 | 2.38 | 2.49 | 3 |
| Peru | 4.79 | 3.77 | 4.13 | 7.15 | 8 |
| Philippines | 1.95 | 1.87 | 1.72 | 1.89 | 2 |
| Republic of Korea | 1.64 | 1.35 | 1.35 | 1.33 | 2 |
| Russian Federation | 4.17 | 4.47 | 4.59 | 4.84 | 6 |
| Spain | 0.97 | 0.91 | 0.94 | 0.92 | 1 |
| Taiwan Province of China | 0.99 | 0.75 | 0.75 | 0.81 | 1 |
| Thailand | 1.32 | 1.34 | 1.31 | 1.51 | 2 |
| United States of America | 5.02 | 4.88 | 5.02 | 4.72 | 6 |
| Vietnam | 2.71 | 2.93 | 3.15 | 3.19 | 4 |
| Total 25 major producers | 65.11 | 62.58 | 64.6 | 67.83 | 80 |
| Total all other producers | 15.39 | 15.69 | 16.61 | 16.58 | 20 |
| World total | 80.51 | 78.27 | 81.21 | 84.41 | 100 |

Source: SOFIA 2020. – State of Fisheries and Aquaculture in the world

CHAPTER 13

POST-HARVEST INFRASTRUCTURE



Table 13.1: Major and Minor Fishing Harbours – Outlays and Expenditure, since inception of the scheme in 1964 (Rs in Lakhs)

| Plan period | Major Harbours | | Minor Harbours and fish landing centre | |
|---|------------------|------------------|--|---------------------|
| | Outlay | Expenditure | Outlay | Expenditure |
| Third Plan | 5 | 17 | 0 | 0 |
| Three Annual Plan (1966-67 to 1968-69) | 253 | 3 | 295 | 157 |
| Fourth Plan | 1350 | 158 | 600 | 485 |
| Fifth Plan | 1800 | 1210 | 1200 | 321 |
| Annual Plan | | | | |
| i) 1978-79 | 500 | 308 | 600 | 394 |
| ii) 1979-80 | 550 | 206 | 0 | 1 |
| Sixth Plan | 1700 | 1320 | 1900 | 1795 |
| Seventh Plan | 1700 | 1684 | 1900 | 2169 |
| Annual Plan | | | | |
| i) 1990-91 | 492 | 492 | 432 | 432 |
| ii) 1991-92 | 500 | 545 | 600 | 600 |
| Eighth Plan | 5213 | 4575 | 4675 | 4903 |
| Ninth Plan* | 0 | 0 | 11000 | 6144.96 |
| Tenth Plan* | 0 | 0 | 10000 | 7666.84 |
| Eleventh Plan (2007-08 to 2011-12)* | 0 | 0 | 21571.79 | 21571.79 |
| 12 th Plan (commenced from 2012-13 to 2016-17)* | | | 0 | |
| 2012-13 | 0 | 0 | 5375.86 | 5375.86 |
| 2013-14 | 0 | 0 | 5234.605 | 5234.605 |
| 2014-15 | 0 | 0 | 5393.78 | 5393.78 |
| Blue Revolution Scheme for new projects(2015-16 to 2019-20) | | | | |
| 2015-16 | 0 | 0 | 10076.85 | 10076.85 |
| 2016-17** | 0 | 0 | 9210.00 | 9210.00 |
| Total of ongoing 12 th Plan | 0 | 0 | 35291.095 | 35287.895 |
| 2017-18** | 0 | 0 | 14814.97 | 14814.97 |
| 2018-19 | 0 | 0 | 29356.17 | 29356.17 |
| 2019-20 | 0 | 0 | 8474.5 | 7099.00 |
| Total | 14,063.00 | 10,518.00 | 1,42,710.5 | 1,33,198.625 |

* Includes both Major and Minor Fishing harbours

** : Establishment of Fishing Harbours and Fish Landing Canter has been subsumed as a component under the CSS on Blue Revolution: Integrated Development and Management of Fisheries. The scheme is implemented w.e.f. 2016-17 in a convergence mode of implementation with sharing the central liability between the CSS of DoF and Sagarmala of Ministry of Shipping.

*: Includes funds of Rs. 5662.125 lakh released during 2016-17 and Rs. 7496.47 lakh in 2017-18 under Sagarmala of Ministry of Shipping

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 13.2: Major Fishing Harbours

| Port | Cost (Rs. Lakhs)* | Year of sanc- tion | Status | Designed Capacity | | | |
|------------------|-------------------|-----------------------|--------|---|----------|-----------|-------|
| | | | | DSV (No) | MFV (No) | Draft (m) | TL |
| 1. Visakhapatnam | | | | | | | |
| Stage I | 955.50 | 1975 | C | 90 | 300 | 4.5 | 1,938 |
| Stage II | 1,099.20 | 1978 | C | | | | |
| Stage III | 454.30 | 1998 | C | | | | |
| Stage IV | 354.00 | 2001 | C | | | | |
| 2. Chennai | | | | | | | |
| Stage I | 1,334.00 | 1973 | C | 50 | 500 | 3 | 1,220 |
| Stage II | 850.00 | 1994 | C | No change in capacity. Stage II for additional facilities | | | |
| 3. Cochin | | | | | | | |
| Stage I | 494.00 | 1971 | C | 57 | 450 | 6 | 560 |
| Stage II | 77.00 (100) | 1993 | C | No change in capacity. Stage II for additional facilities | | | |
| Modernisation | 980.20 | 2009 | | | | | |
| 4. Kolkata | | | | | | | |
| Roychowk | 370.00 | 1971 | C | 15 | -- | 6 | 120 |
| 5. Paradip | | | | | | | |
| Paradip | 2834.00 (3807) | 1990 | C | 50 | 500 | 6 | 2335 |
| 6. Mumbai | | | | | | | |
| (Sasson Dock) | 825 (1,099) | 1977 | C | -- | 700 | 3 | 1153 |
| 7. Petuaghat | 6,092.65 | 2008/2010 | C | 50 | 320 | 3 | 2871 |

* -Figures in brackets indicate the revised cost.

C - Completed/ Commissioned

UC -Under construction

DSV -Deep Sea Vessels

MFV -Mechanised Fishing Vessels

TL -Total length of landing + berthing + outfitting + repair quay/wharf (in meters)

Source: Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India

Table 13.3: Fishing Harbours and Fish Landing Centres, constructed / commissioned till, 2019-20

| Location | FH/FLC | Sanctioned cost (Rs. Lakhs) | Location | FH/FLC | Sanctioned cost(Rs. Lakhs) |
|-------------------------|--------|-----------------------------|------------------------|--------|----------------------------|
| ANDHRA PRADESH | | | ORISSA | | |
| Kakinada | FH | 973.17 | Gopalpur | FH | 805.30 |
| Nizamapatnam | FH | 157.66 | Dhamra | FH | 70.00 |
| Bhavanapadu | FH | 340.00 | Naugarh (Astrang) | FH | 507.00 |
| Machilipatnam | FH | 470.88 | Dhamara Stage-II | FH | 640.00 |
| Calingapatnam | FLC | 60.35 | Chandipur | FLC | 15.00 |
| Etimoga | FLC | 61.57 | Pathara | FLC | 2.50 |
| Baruva | FLC | 83.60 | Nairi Stage-I | FLC | 5.41 |
| Perupalem | FLC | 88.86 | Nairi-Stage-II | FLC | 6.00 |
| Navvalarevu | FLC | 79.35 | Jamboo | FLC | 73.03 |
| Chintapalli | FLC | 79.77 | Palaur | FLC | 17.00 |
| Pudimadakara | FLC | 78.00 | Kansabansa | FLC | 65.10 |
| Mukkam | FLC | 79.77 | Soran | FLC | 9.97 |
| Mynavanilanka | FLC | 59.74 | Sabelia | FLC | 2.42 |
| Vodarevu | FLC | 88.86 | Chudamani | FLC | 14.06 |
| Gondisamudram | FLC | 85.62 | Panchubisa | FLC | 32.68 |
| Isakapalli Pattapupalem | FLC | 84.86 | Talchua | FLC | 110.70 |
| Thatichetlapalem | FLC | 79.00 | Kharanasi | FLC | 99.90 |
| Bandaruvanipeta | FLC | 81.16 | Chandrabhaga | FLC | 8.32 |
| Mypadu | FLC | 92.84 | Rushikulya | FLC | 9.40 |
| Kothapatanam | FLC | 92.47 | Tantiapal | FLC | 99.06 |
| Anthervedi Pallepalem | FLC | 1698.00 | Sorala | FLC | 70.28 |
| GOA | | | Bandara | FLC | 160.50 |
| Cortalim | FLC | 0.51 | Khandiapatana | FLC | 105.83 |
| Malim | FLC | 89.25 | Bhusandpur Baliapatpur | FLC | 108.60 |
| Cutbona | FLC | 89.20 | Bahabalpur | FLC | 98.04 |
| Qortalim stage II | FLC | 89.31 | Kirtania | FLC | 172.00 |
| Chapora | FLC | | Talasari | FLC | 162.10 |
| GUJARAT | | | Gopalpur on Sea | FLC | 96.00 |
| Veraval | FH | 900.00 | Nairi Stage-III | FLC | 38.86 |
| Mangrol Stage-I | FH | 200.00 | TAMIL NADU | | |
| Porbandar | FH | 276.00 | Tuticorin | FH | 210.00 |
| Mangrol Stage-II | FH | 701.00 | Mallipatnam | FH | 10.60 |
| Jhakau | FH | 3031.00 | Kodiakarai | FH | 14.40 |
| Jafrabad | FLC | 25.00 | Vallinokkam | FH | 77.00 |
| Dholai | FH | 1477.70 | Tondi | FH | 56.56 |
| Jakhau-I | FLC | 5.00 | Pazhayar | FH | 67.32 |
| Vansi-Borsi | FLC | 16.00 | Chinnamuttom | FH | 684.00 |
| Kosamba | FLC | 13.00 | Muttom(BOT Project) | FH | 5392.00 |
| Mandvi | FLC | 16.00 | Chinnamuttom Stage-II | FH | 7352.00 |
| Salaya | FLC | 17.00 | Thengapattinam FH | FH | 9740.00 |

Table 13.3: Fishing Harbours and Fish Landing Centres, constructed / commissioned till, 2019-20

| Location | FH/FLC | Sanctioned cost (Rs. Lakhs) | Location | FH/FLC | Sanctioned cost(Rs. Lakhs) |
|---------------------|--------|-----------------------------|--------------------|--------|----------------------------|
| GUJARAT | | | TAMIL NADU | | |
| Umarsadi | FLC | 5.00 | Colachal | FH | 8775 |
| Jakhau | FLC | 5.00 | Mookaiyur | FH | 11390 |
| Sachana | FLC | 20.00 | Cuddalore | FLC | 12.00 |
| Madhavadi | FLC | 17.76 | Rameshwaram | FLC | 10.00 |
| Surajbari | FLC | 31.53 | Kottaipattinam | FLC | 22.00 |
| Magod Dungari | FLC | 38.74 | Muttom | FLC | 12.60 |
| Dholai | FLC | 54.66 | Vallapalam | FLC | 7.14 |
| Chorwad | FLC | 46.12 | Vallavillai | FLC | 7.50 |
| Port Onjal | FLC | 42.00 | Nagapattinam | FLC | 0.75 |
| Rajpara | FLC | 43.35 | Palk Bay | FLC | 1.00 |
| Umergaon | FLC | 1.00 | Erawadi | FLC | 26.00 |
| Kolak | FLC | 4.15 | Poompuhar | FLC | 7.87 |
| Hirakot | FLC | 0.71 | Kodimurai | FLC | 7.50 |
| Navapur | FLC | 0.61 | Punnakkayal | FLC | 132.32 |
| Dhamlej | FLC | 31.00 | Mudasalodi | FLC | 132.32 |
| | | | Pulicat | FLC | 132.32 |
| KARNATAKA | | | Sethubavachatram | FLC | 132.32 |
| Karwar Stage-I | FH | 30.00 | Jagathapathinam | FLC | 132.32 |
| Honnavar | FH | 75.00 | Arcocuttothurai | FLC | 132.32 |
| Tadri | FH | 4.59 | Soliakudi | FLC | 132.32 |
| Mangalore Stage-I | FH | 33.00 | Mondapam | FLC | 132.32 |
| Malpe Stage-I | FH | 426.00 | Nagapattinam | FLC | 122.00 |
| Malpe Stage-II | FH | 1146.70 | KERALA | | |
| Mangalore Stage -II | FH | 75.00 | Vizhinjam stage-I | FH | 208.00 |
| Karwar Stage-II | FH | 130.00 | Puthiappa | FH | 962.50 |
| Kundapur | FLC | 1.00 | Munambam | FH | 1167.20 |
| Kagal Heni | FLC | 0.60 | Vizhinjam stage-II | FH | 704.00 |
| Gangolli Stage-I | FH | 832 | Neendakara | FH | 672.00 |
| Gangolli | FLC | 3.70 | Chombal | FH | 556.00 |
| Belikeri | FLC | 0.99 | Mopla Bay | FH | 816.00 |
| Keni | FLC | 0.99 | Thangassery | FH | 1930.50 |
| Bhatkal | FLC | 6.00 | Muthalapozhy | FH | 1366.00 |
| Moolky | FLC | 0.10 | Kayamkulam | FH | 624.60 |
| Sadasivgad | FLC | 0.99 | Thottappally | FH | 1458.30 |
| Belambar | FLC | 0.99 | Ponnani | FH | 27.59 |
| Kodibengre | FLC | 55.00 | Kasaragode | FLC | 13.00 |
| Hejmadikudi | FLC | 95.00 | Cannanore | FLC | 1.46 |
| Alvekodi | FLC | 223.99 | Neeleswaram | FLC | 15.00 |
| Belikeri Stage-II | FLC | 67.40 | | | |

Table 13.3: Fishing Harbours and Fish Landing Centres, constructed / commissioned till, 2019-20

| Location | FH/FLC | Sanctioned cost | Location | FH/FLC | Sanctioned cost |
|--------------------|--------|-----------------|--------------------|--------|-----------------|
| KERALA | | | WEST BENGAL | | |
| Munakkadavu | FLC | 19.00 | Madanganj | FLC | 9.60 |
| Beypore | FLC | 2.10 | Brajabalapur | FLC | 9.65 |
| New Mahe | FLC | 24.59 | Maya Gaolini ghat | FLC | 345.23 |
| Vellayil Beach | FLC | 22.00 | MAHARASHTRA | | |
| Vallikunu | FLC | 17.90 | Ratnagiri | FH | 1840.50 |
| Chettuvai | FLC | 19.50 | Agro | FH | 414.00 |
| Arthungal | FLC | 32.22 | Karanja | FLC | 11.00 |
| Ponnani | FLC | 8.00 | Navalgaon | FLC | 0.03 |
| Beliapatnam | FLC | 13.00 | Borli Mandla | FLC | 0.52 |
| Thottappally | FLC | 30.00 | Nandgaon | FLC | 0.10 |
| Cheruvathur | FLC | 18.00 | Nurad | FLC | 0.03 |
| Dharmadon | FLC | 21.00 | Theorinda | FLC | 0.01 |
| South Paravoor | FLC | 24.94 | Ajanala | FLC | 0.00 |
| Vizhinjam South | FLC | 19.10 | Ade-Uttambar | FLC | 0.02 |
| Vizhinjam North | FLC | 19.10 | Borin | FLC | 0.03 |
| Chalil Gopalpettah | FLC | 25.00 | Burondi | FLC | 0.05 |
| Quilandy | FLC | 23.00 | Bagamandla | FLC | 1.00 |
| Punnapra | FLC | 36.80 | Datiware | FLC | 0.92 |
| Kattor Pollathai | FLC | 50.25 | Dahanu | FLC | 0.99 |
| Thikkodi | FLC | 49.25 | Dakti-Dahanu | FLC | 0.99 |
| Moylakikadappuram | FLC | 85.20 | Khardanda | FLC | 0.82 |
| Kadapra | FLC | | Ekdara | FLC | 0.01 |
| WEST BENGAL | | | Mandavi | FLC | 0.51 |
| Fraser Ganj | FH | 452.32 | Mulgaon | FLC | 1.86 |
| Digha Stage-I | FH | 139.00 | Navapur | FLC | 0.20 |
| Digha Stage-II | FH | 492.52 | Omni-Bhatti | FLC | 0.03 |
| Sultanpur | FH | 708.16 | Thurnvadi | FLC | 0.16 |
| (Diamond Harbour) | | | Thai | FLC | 0.55 |
| Harwood point | FH | 2462.00 | Uttob | FLC | 0.02 |
| Namkhana | FLC | 7.06 | Vashi | FLC | 0.31 |
| Jalda | FLC | 9.50 | Wadrai | FLC | 0.74 |
| New Jalda | FLC | 5.00 | Rajpuri | FLC | 0.54 |
| Kharpai | FLC | 6.30 | Jeevne Bundar | FLC | 0.54 |
| Kalinagar | FLC | 7.13 | Mahim Causeway | FLC | 23.07 |
| Bamanagar | FLC | 4.18 | Alibagh Koliwada | FLC | 32.53 |
| Ganeshpur | FLC | 5.31 | Tarkarli | FLC | 53.34 |
| Akhoynagar | FLC | 3.08 | Taramumbri | FLC | 97.02 |
| Junapat | FLC | 9.80 | Achara Peerwada | FLC | 55.16 |
| Soula | FLC | 13.27 | Rajpuri Koliwada | FLC | 73.96 |

| Table 13.3: Fishing Harbours and Fish Landing Centres, constructed / commissioned till, 2019-20 | | | | | |
|---|--------|-----------------|------------------------|--------|-----------------|
| Location | FH/FLC | Sanctioned cost | Location | FH/FLC | Sanctioned cost |
| MAHARASHTRA | | | PONDICHERRY | | |
| Ekdara Koliwada | FLC | 38.66 | Pondicherry | FH | 423.00 |
| Agrao | FLC | 0.55 | Karaikal | FH | 3406.50 |
| A & N ISLANDS | | | Yanam | FH | 1885.00 |
| Phoenix Bay | FH | 67.00 | Mahe | FLC | 0.04 |
| Dairy Farm (Junglighat) | FLC | 368.00 | DAMAN & DIU | | |
| LAKSHADWEEP | | | Ghoghla | FLC | 52.12 |
| Kavaratti | FLC | 11.00 | Vanakbara | FLC | 43.80 |
| Minicoy | FLC | 15.52 | | | |
| Agathi | FLC | 5.00 | | | |
| Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying | | | | | |

Table 13.4: Fishing Harbours and Fish Landing Centres under construction till 2019-20

| LOCATION | FH/ FLC | Sanctioned Cost (Rs. Lakhs) | LOCATION | FH/ FLC | Sanctioned Cost (Rs. Lakhs) |
|--|---------|-----------------------------|----------------------------------|---------|-----------------------------|
| ANDHRA PRADESH | | | MAHARASHTRA | | |
| 1. Juvvaladinne | FH | 28880.00 | 1. Arnala FH | FH | 6156.00 |
| 2. Biyyaputhippa | FLC | 1358.00 | 2. Mirkarwada (Ratnagiri) | FH | 7180.88 |
| GOA | | | 3. Modernization of Sassoon Dock | FH | 5217.00 |
| 1. Malim | FH | 1333.00 | 4. Karanja | FH | 14980.00 |
| 2. Cutbona | FH | 2874.00 | 5. Anandwadi | FH | 8844.00 |
| 3. Chapora | FH | 3705.00 | ODISHA | | |
| 4. Cortalim | FH | 506.00 | 1. Penthakata | FLC | 80.20 |
| GUJARAT | | | 2. Chandipur | FH | 4994.00 |
| 1. Mangrol modernization | FH | 614.52 | 3. Dhamra (Modernization) | FH | 1310.00 |
| 2. 3 rd Stage of Mangrol | FH | 15583.00 | TAMIL NADU | | |
| KARNATAKA | | | 1. Veerapandiapattinam | FLC | 132.32 |
| 1. Mangalore FH Stage-III | FH | 5760.00 | 2. Poompohar (FH) | FH | 14800.00 |
| 2. Malpe FH Stage-III | FH | 3715.00 | 3. Kunthukal | FLC | 7400.00 |
| 3. Honnavar Stage-II | FH | 4744.00 | PUDUCHERRY | | |
| 4. Amadalli FH (Moder) | FH | 1874.00 | 1. Mahe | FH | 7162.00 |
| 5. Gangoli FH Stage-II | FH | 10211.00 | 2. Puducherry FH (Up-gradation) | FH | 1563.00 |
| 6. Kulai | FH | 19651.00 | | | |
| 7. Hejamadikodi | FH | 13860.00 | | | |
| 8. Taining walls at Alvekodi and Tenginagundi FLCs | FLCs | 8608.00 | | | |
| KERALA | | | | | |
| 1. Koyilandi FH | FH | 6399.00 | | | |
| 2. Thalai FH | FH | 3479.50 | | | |
| 3. Cheruvathur FH | FH | 2906.00 | | | |
| 4. Chettuva FH | FH | 3024.00 | | | |
| 5. Thanur (FH) | FH | 4487.00 | | | |
| 6. Vellayil (FH) | FLC | 3930.20 | | | |
| 7. Arthungal (FH) | FH | 4939.00 | | | |
| 8. Munakkakkadavu (FLC) | FLC | 231.00 | | | |
| 9. Manjeshwaram (FH) | FH | 4880.00 | | | |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 13.5: State-wise details of fishing harbours and fish landing centres completed/commissioned and under construction with the central assistance under the CSS

| S. No. | Name of the State/Union Territory | Notified Landing Centres | Centres taken up for development under CSS | FISHING HARBOURS | | | FISH LANDING CENTRES | |
|--------|-----------------------------------|--------------------------|--|-----------------------------------|------------------------|--------------------|----------------------|--------------------|
| | | | | Major fishing harbours commission | Minor fishing harbours | | Commissioned | Under construction |
| | | | | | Commissioned | Under construction | | |
| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) |
| 1 | West Bengal | 66 | 20 | 2 | 5 | - | 13 | - |
| 2 | Odisha | 73 | 35 | 1 | 4 | 2 | 28 | - |
| 3 | Andhra Pradesh | 350 | 28 | 1 | 4 | 1 | 18 | 4 * |
| 4 | Tamil Nadu | 302 | 36 | 1 | 12 | 1 | 20 | 2 |
| 5 | Pondicherry | 41 | 5 | - | 3 | 1 | 1 | - |
| 6 | Kerala | 204 | 51 | 1 | 15 | 7 | 27 | 1 |
| 7 | Karnataka | 115 | 28 | - | 10 | 5 | 13 | - |
| 8 | Goa | 34 | 9 | - | - | 4 | 5 | - |
| 9 | Maharashtra | 173 | 43 | 1 | 2 | 4 | 35 | 1 |
| 10 | Gujarat | 107 | 28 | - | 6 | 1 | 21 | - |
| 11 | Daman & Diu | 12 | 2 | - | - | - | 2 | - |
| 12 | Andaman & Nicobar Islands | 51 | 19 | - | 1 | - | 1 | 17** |
| 13 | Lakshadweep | 20 | 3 | - | - | - | 3 | - |
| | Total | 1548 | 307 | 7 | 62 | 26 | 187 | 25 |

* 3 FLCs approved under Tsunami Rehabilitation Package (TRP) and under CSS

** 4 FLCs approved under the Tsunami Rehabilitation Package (TRP). Besides, 13 FLCs under the UT plan.

Creation of infrastructure facilities at a total of 307 fishing centres against 1547 existing fishing centres in the Country has been taken up,

which forms about 19.78% coverage.

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Total : 12 FHs (TN :3FHs, AP : 4 FHs and Guj : 5 FHs)

| Table 13.6: Details of Fishing harbour projects approved under the Fisheries and Aquaculture Infrastructure Development Fund (FIDF) of Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying. | | |
|---|--|-----------------------------------|
| 1 Tamil Nadu | | |
| S. No. | Name of the Project | Total Project Cost (Rs. In crore) |
| 1 | Tharangampadi in Nagapatinam | 120.00 |
| 2 | Thiruvottriyur Kuppam in Tiruvallur District | 200.00 |
| 3 | Development of existing Fishing Harbour at Mudhunagar in Cuddalore | 100.00 |
| | Total | 420.00 |
| 2 Andhra Pradesh | | |
| S. No. | Name of the Project | Total Project Cost (Rs. In crore) |
| 1 | Uppada in East Godavari | 289.40 |
| 2 | Vodarevu in Prakasham | 409.22 |
| 3 | Machilipattinam in Krishna | 252.00 |
| 4 | Nizampattinam in Guntur | 340.78 |
| | Sub Total | 1291.40 |
| 3 Gujarat | | |
| S. No. | Name of the Project | Total cost (Rs. In crore) |
| 1 | Development of Fishery Harbour at Navabandar in Junagadh District | 295.85 |
| 2 | Development of Fishery harbour at Madhwa in Junagadh District | 175.07 |
| 3 | Development of Fishery Harbour at Veraval Phase-2 in Junagadh District | 260.00 |
| 4 | Development of Fishery Harbour Porbandar Phase-2 in Porbandar District | 392.00 |
| 5 | Development of Fishery Harbour at Sutrapada in Gir Somnath | 232.00 |
| | Total | 1354.92 |
| Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying | | |

Table 13.7: Fishing Projects taken up under Blue Revolution Scheme

| S. No. | Name of FH/FLC | Date of Approval | Approved project cost (Rs. In crore) |
|-----------------------|---|------------------|--------------------------------------|
| MAHARASHTRA | | | |
| 1 | Modernisation of Sassoon Dock FH | Aug-16 | 52.17 |
| 2 | Karanja FH | Mar-18 | 149.8 |
| 3 | Anandwadi (FH) | Mar-18 | 88.44 |
| | Total (MH) | | 290.41 |
| GUJARAT | | | |
| 4 | 3 rd Stage of Mangrol FH | Sep-17 | 155.83 |
| | Total (GU) | | 155.83 |
| KARNATAKA | | | |
| 5 | Kulai FH | Mar-18 | 196.51 |
| 6 | Hejmadi Kodi FH | Jul-18 | 138.6 |
| 7 | Taining walls at Alvekodi and Tenginagundi FLCs | Mar-20 | 86.08 |
| | Total (KA) | | 421.19 |
| TAMIL NADU | | | |
| 8 | Mookaiyur FH | Sep-16 | 113.90 |
| 9 | Kunthukal FLC | Jul-18 | 74.00 |
| | Total (TN) | | 187.90 |
| ODISHA | | | |
| 10 | Chandipur FH | Jul-18 | 49.94 |
| | Total (OR) | | 49.94 |
| PUDUCHERRY | | | |
| 11 | Up-gradation of Puducherry FH | Jan-19 | 15.63 |
| | Total (PU) | | 15.63 |
| ANDHRA PRADESH | | | |
| 12 | Biyyaputhippa FLC | Mar-19 | 13.58 |
| 13 | Juvvaladinne | Mar-20 | 288.8 |
| | Total (AP) | | 302.38 |
| | Grand Total | | 1423.28 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 13.8: Region-wise Cold Storages

| Centre | Region-wise Cold Storages with Capacity - as on 31/03/2019 | | Region-wise Cold Storages with Capacity - as on 31/03/2020 | |
|----------------|--|--------------------|--|--------------------|
| | No. | Capacity | No. | Capacity |
| RO Chennai | 46 | 41,113.00 | 48 | 41,760.00 |
| RO Kochi | 131 | 63,759.40 | 139 | 73,377.40 |
| RO Kolkata | 51 | 15,214.48 | 53 | 15,728.48 |
| RO Mumbai | 61 | 43,412.10 | 49 | 51,007.60 |
| RO Veraval | 93 | 45,485.00 | 102 | 52,503.00 |
| RO Vizag | 23 | 12,224.00 | 28 | 17,508.10 |
| SRO BBSR | 31 | 17,150.00 | 32 | 18,763.00 |
| SRO Bhimavaram | 45 | 21,541.00 | 52 | 34,447.50 |
| SRO Goa | 16 | 7,386.50 | 16 | 7,386.50 |
| SRO Guwahati | 0 | 0 | 0 | 0 |
| SRO Mangalore | 27 | 13,252.70 | 33 | 25,001.70 |
| SRO Porbandar | 24 | 14,033.80 | 24 | 14,123.80 |
| SRO Quilon | 26 | 8,795.50 | 26 | 8,795.50 |
| SRO Tuticorin | 38 | 18,100.20 | 40 | 18,657.20 |
| TPO New Delhi | 0 | 0 | 0 | 0 |
| Total | 612 | 3,21,467.68 | 642 | 3,79,059.78 |

Source: Marine Products Export Development Authority (MPEDA)

CHAPTER 14

FISHERIES DEVELOPMENT



Table 14.1: Statement of Physical achievements under the component of Motorization of Traditional Craft (MTC) under Blue Revolution Scheme in various States/UTs during last 5 years from 2014-15 to 2018-19

| S. N | Name of the States | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|------|--------------------|-------------|------------|-------------|-------------|-------------|--------------|
| 1 | A & N Islands | 76 | 50 | 100 | 100 | 100 | 426 |
| 2 | Andhra Pradesh | | | | 500 | 300 | 800 |
| | Daman & Diu | 25 | | | | | 25 |
| 3 | Goa | 133 | | 60 | 48 | 50.00 | 291 |
| 4 | Gujarat | 733 | | 100 | | | 833 |
| 5 | Karnataka | 304 | 386 | 300 | 219 | 300.00 | 1509 |
| 6 | Kerala | | 400 | | | | 400 |
| 7 | Lakshadweep | | | | 111 | 111 | 222 |
| 8 | Odisha | 1658 | | 437 | 900 | 1000 | 3995 |
| 9 | Puducherry | | | 167 | | 40 | 207 |
| 10 | Tamil Nadu | 634 | 0 | | | 2600 | 3234 |
| | Grand Total | 3563 | 836 | 1164 | 1878 | 4501 | 11942 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.2: Safety of fishermen at sea Physical under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|-------------|-------------|------------|-------------|-------------|--------------|
| 1 | A & N Islands | 1756 | | | | | 1756 |
| 2 | Andhra Pradesh | 1625 | | | | | 1625 |
| 3 | Goa | | 100 | | | | 100 |
| 4 | Karnataka | | | | 375 | | 375 |
| 5 | Kerala | | | 120 | 200 | | 320 |
| 6 | Maharashtra | 224 | 2735 | | | | 2959 |
| 7 | Lakshadweep | | | | | 35 | 35 |
| 8 | Odisha | 450 | 95 | | 500 | | 1045 |
| 9 | Puducherry | | | | 120 | | 120 |
| 10 | Tamil Nadu | 1667 | | | | 4997 | 6664 |
| | Grand Total | 5722 | 2930 | 120 | 1195 | 5032 | 14999 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.3: Assistance to Traditional/Artisanal fishermen for Procurement of FRP boats upto 10m OAL Physical units under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|------------|------------|------------|---------------|----------------|
| 1 | A & N Islands | | | 20 | 15 | | 35 |
| 2 | Andhra Pradesh | | | 50 | 100 | | 150 |
| 3 | Daman & Diu | | | | | | 0 |
| 4 | Goa | | 25 | 20 | 15 | | 60 |
| 5 | Karnataka | | 24 | | 30 | | 54 |
| 6 | Kerala | | | 120 | 200 | | 320 |
| 7 | Lakshadweep | | | | | 110.00 | 110 |
| 8 | Maharashtra | | 10 | | | | 10 |
| 9 | Odisha | | 100 | 75 | | | 175 |
| 10 | Tamil Nadu | | 100 | | 200 | | 300 |
| | Grand Total | 0 | 259 | 285 | 560 | 110.00 | 1214.00 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.4: Open Sea Cage Culture Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|------------|------------|------------|----------|------------|
| 1 | A & N Islands | | | 7 | | | 7 |
| 2 | Andhra Pradesh | | | 318 | | | 318 |
| 3 | Goa | | | 120 | | | 120 |
| 4 | Karnataka | | 60 | | | | 60 |
| 5 | Kerala | | 160 | | | | 160 |
| 6 | Maharashtra | | 5 | | 100 | | 105 |
| | Grand Total | 0 | 225 | 445 | 100 | 0 | 770 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.5: Seaweed Cultivation- Rafts sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|------------|--------------|---------------|---------|-----------------|
| 1 | A & N Islands | | | 10 | | | 10 |
| 2 | Andhra Pradesh | | | 10000 | | | 10000 |
| 3 | Gujarat | | 100 | | | | 100 |
| 4 | Karnataka | | | | 500 | | 500 |
| | Grand Total | 0 | 100 | 10010 | 500.00 | | 10610.00 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.6: Bivalve Culture (Rafts) Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|-----------|-------------|-------------|----------|-------------|
| 1 | Karnataka | | 50 | | 200 | | 250 |
| 2 | Kerala | | | 2000 | 1000 | | 3000 |
| 3 | Maharashtra | | 20 | | | | 20 |
| | Grand Total | 0 | 70 | 2000 | 1200 | 0 | 3270 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.7: Pearl Culture Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | Physical (Unit) | Physical (Unit) | Physical (Unit) | Physical (Unit) | Physical (Unit) | Physical (Unit) |
| 1 | A & N Islands | | | 1 | | | 1 |
| 2 | Gujarat | | 1 | | | | 1 |
| 3 | Rajasthan | | | 1 | 2 | | 3 |
| 4 | Maharashtra | | | | 1 | | 1 |
| | Grand Total | 0 | 1 | 2 | 3 | 0 | 6 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.8: Introduction of deep-sea fishing vessels (24m OAL and above) under PPP mode Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|----------|------------|------------|-------------|------------|
| 1 | A & N Islands | | | | 2 | | 2 |
| 2 | Andhra Pradesh | | | 12 | | | 12 |
| 3 | Daman & Diu | | | 5 | | | 5 |
| 4 | Gujarat | | | 10 | 135 | | 145 |
| 5 | Tamil Nadu | | | 663 | | | 663 |
| 6 | Karnataka | | 1 | | | | 1 |
| 7 | Odisha | | | | | 4 | 4 |
| | Grand Total | 0 | 1 | 690 | 137 | 4.00 | 832 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.9: Renovation of Ice Plant Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|------------|----------|----------|----------|------------|
| 1 | Daman & Diu | | | 1 | | | 1 |
| 2 | Karnataka | | 120 | | | 7.00 | 127 |
| | Grand Total | 0 | 120 | 1 | 0 | 7 | 128 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.10: Establishment of FH/FLC Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|---------------------|----------|----------|----------|----------|-----------|
| 1 | Andhra Pradesh | | | | | 2 | 2 |
| 2 | Goa | | 1 | | | | 1 |
| 3 | Gujarat | | | | | | 0 |
| 4 | Karnataka | Committed liability | | | 1 | 1 | 2 |
| 5 | Kerala | | | | | | 0 |
| 6 | Maharashtra | | 3 | | | | 3 |
| 7 | Odisha | | | | 1 | | 1 |
| 8 | Puducherry | | | | | | 0 |
| 9 | Tamil Nadu | | 1 | | | | 1 |
| 10 | West Bengal | | | | | | 0 |
| | Grand Total | 0 | 5 | 0 | 2 | 3 | 10 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.11: Ice Plants Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|-----------|-----------|------------|-----------|------------|
| 1 | Andhra Pradesh | | 60 | | 1 | | 61 |
| 2 | Chhattisgarh | | 3 | | | | 3 |
| 3 | Goa | | 3 | | | | 3 |
| 4 | Gujarat | | | 3 | | | 3 |
| 5 | Karnataka | | | 7.00 | | 4.00 | 11 |
| 6 | Madhya Pradesh | | 2 | 1 | | 30 | 33 |
| 7 | Maharashtra | | 1 | 4 | 70 | | 75 |
| 8 | Mizoram | | | 2 | | | 2 |
| 9 | Nagaland | | | | | | 0 |
| 10 | Tamil Nadu | | | | | | 0 |
| 11 | Telangana | | | | 30 | | 30 |
| | Grand Total | 0 | 69 | 17 | 101 | 34 | 221 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.12: Cold Storage Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|----------|----------|----------|----------|----------|
| 1 | Andhra Pradesh | | | | 1 | | 1 |
| 2 | Goa | | 3 | | | | 3 |
| 3 | Jharkhand | | 1 | | | | 1 |
| 4 | Karnataka | | | 1 | | | 1 |
| 5 | Maharashtra | | | 2 | | | 2 |
| | Grand Total | 0 | 4 | 3 | 1 | 0 | 8 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.13: Ice Plant cum Cold Storage Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|------|--------------------|----------|------------|----------|----------|------------|
| 1 | Jammu & Kashmir | | 25 | | | 25 |
| 2 | Karnataka | | 78 | | | 78 |
| 3 | Maharashtra | | | 1 | | 1 |
| | Grand Total | 0 | 103 | 1 | 0 | 104 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.14: Refrigerated/ Insulated Truck 10t capacity Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|-----------|-----------|------------|----------|------------|
| 1 | Andhra Pradesh | | | | 20 | | 20 |
| 2 | Andaman & N Is. | | | 1 | 3 | | 4 |
| 3 | Arunachal Pradesh | | | 1 | | | 1 |
| 4 | Assam | | | 1 | | | 1 |
| 5 | Bihar | | | | 100 | | 100 |
| 6 | Chhattisgarh | | | | 1 | 1 | 2 |
| 7 | Daman & Diu | | | 3 | | | 3 |
| 8 | Goa | | 13 | 4 | 3 | | 20 |
| 9 | Karnataka | | 5 | 1.00 | 15.00 | | 21 |
| 10 | Madhya Pradesh | | | 2 | | | 2 |
| 11 | Maharashtra | | | 6 | 9 | | 15 |
| 12 | Meghalaya | | | 4 | 2 | | 6 |
| 13 | Odisha | | | | 7 | | 7 |
| 14 | Rajasthan | | | | 2 | | 2 |
| 15 | West Bengal | | | 2 | | | 2 |
| | Grand Total | 0 | 18 | 25 | 162 | 1 | 206 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.15: Insulated Truck 6 t capacity Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------|-----------|-----------|-----------|----------|------------|
| 1 | Arunachal Pradesh | | | 1 | | | 1 |
| 2 | A & N Islands | 2 | | 1 | 1 | | 4 |
| 3 | Andhra Pradesh | | 10 | | | | 10 |
| 4 | Assam | 1 | | 1 | | | 2 |
| 5 | Goa | | 6 | | | | 6 |
| 6 | Karnataka | | 2 | 1 | 35 | | 38 |
| 7 | Madhya Pradesh | | | | | 1 | 1 |
| 8 | Maharashtra | | | 6 | 2 | | 8 |
| 9 | Meghalaya | | | 4 | | | 4 |
| 10 | Odisha | | | | 29 | | 29 |
| 11 | Telangana | 2 | | | | | 2 |
| 12 | Uttarakhand | 1 | 1 | | | | 2 |
| 13 | West Bengal | | 3 | 2 | | | 5 |
| | Grand Total | 6 | 22 | 16 | 67 | 1 | 112 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.16: Establishment of Retail Fish Outlet Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|------------|------------|-----------|------------|----------|------------|
| 1 | A & N Islands | 1 | | | | | 1 |
| 2 | Andhra Pradesh | | 1 | | | | 1 |
| 3 | Assam | | | 2 | | | 2 |
| 4 | Bihar | | | | 9 | | 9 |
| 5 | Chhattisgarh | | 20 | 2 | 40 | | 62 |
| 6 | Himachal Pradesh | | | | 3 | | 3 |
| 7 | Jammu & Kashmir | | | | | | 0 |
| 8 | Jharkhand | | | | 40 | | 40 |
| 9 | Karnataka | 172 | 3 | | | | 175 |
| 10 | Kerala | | 50 | | | | 50 |
| 11 | Madhya Pradesh | | 20 | | 10 | | 30 |
| 12 | Maharashtra | 25 | 4 | 1 | 1 | | 31 |
| 13 | Manipur | | | | | | 0 |
| 14 | Meghalaya | 40 | 5 | 20 | 52 | | 117 |
| 15 | Nagaland | | | | | | 0 |
| 16 | Odisha | 24 | | 1 | | | 25 |
| 17 | Puducherry | | | | | | 0 |
| 18 | Punjab | | 20 | | | | 20 |
| 19 | Rajasthan | | 1 | | | | 1 |
| 20 | Tamil Nadu | 319 | 2 | | | | 321 |
| 21 | Telangana | 1 | 2 | | 100 | | 103 |
| 22 | Tripura | | | | | | 0 |
| 23 | Uttar Pradesh | | 1 | | | 1 | 2 |
| | Grand Total | 582 | 129 | 26 | 255 | 1 | 993 |

Source: Department of Fisheries, State Govt./ UT's Administration

Table 14.17: Setting up mobile/retail fish outlet (Kiosk) Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|-----------|------------|----------|------------|
| 1 | Andhra Pradesh | | 50 | | | | 50 |
| 2 | Bihar | | | | 31 | | 31 |
| 3 | Chhattisgarh | | | | 5 | | 5 |
| 4 | Goa | | 5 | 4 | | | 9 |
| 5 | Karnataka | | 3 | 1 | 10 | | 14 |
| 6 | Madhya Pradesh | | | 2 | 26 | | 28 |
| 7 | Maharashtra | | | 4 | | | 4 |
| 8 | Odisha | 5 | | | | | 5 |
| 9 | Punjab | | 25 | | | | 25 |
| 10 | Telangana | | | | 50 | | 50 |
| 11 | Uttarakhand | | | | | 4 | 4 |
| | Grand Total | 5 | 83 | 11 | 122 | 4 | 225 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.18: Auto Rickshaw with Ice box units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|-----------|------------|------------|------------|-----------|------------|
| 1 | A & N Islands | 10 | | 10 | 10 | | 30 |
| 2 | Andhra Pradesh | 1 | | | 200 | | 201 |
| 3 | Assam | 43 | | | | | 43 |
| 4 | Chhattisgarh | | 38 | 10 | 10 | 10 | 68 |
| 5 | Goa | | 20 | | | | 20 |
| 6 | Haryana | | | 80 | | | 80 |
| 7 | Jammu & Kashmir | | 20 | 20 | | | 40 |
| 8 | Jharkhand | | | | 10 | | 10 |
| 9 | Karnataka | | | | 10.00 | | 10 |
| 10 | Madhya Pradesh | | | | | 54 | 54 |
| 11 | Maharashtra | | | 7 | 1 | | 8 |
| 12 | Odisha | | 50 | 80 | 50 | | 180 |
| 13 | Rajasthan | | | | 1 | | 1 |
| 14 | Tripura | | 51 | | | 20 | 71 |
| 15 | Uttar Pradesh | | 6 | | 10 | | 16 |
| | Grand Total | 54 | 185 | 207 | 302 | 84 | 832 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.19: Motor Cycle with Ice box Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|-------------|-------------|------------|-------------|------------|-------------|
| 1 | Assam | 128 | | 3 | | | 131 |
| 2 | Chhattisgarh | | 166 | 100 | 200 | 200 | 666 |
| 3 | Goa | | 20 | 20 | 10 | | 50 |
| 4 | Jammu & Kashmir | | 1016 | | | | 1016 |
| 5 | Karnataka | | 150 | | 100 | | 250 |
| 6 | Madhya Pradesh | | 14 | 65 | 50 | 682 | 811 |
| 7 | Maharashtra | | | 11 | 66 | | 77 |
| 8 | Odisha | | 500 | | 300 | | 800 |
| 9 | Rajasthan | | | | 1 | | 1 |
| 10 | Tamil Nadu | 887 | | | | | 887 |
| 11 | Uttar Pradesh | | 56 | | 700 | 11 | 767 |
| 11 | Uttarakhand | | | 8 | | | 8 |
| 12 | West Bengal | | 100 | 50 | | | 150 |
| | Grand Total | 1015 | 2022 | 257 | 1427 | 893 | 5614 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.20: Bicycle with Ice box Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|-------------|------------|-------------|----------|----------|-------------|
| 1 | Assam | 1277 | | | | | 1277 |
| 2 | Chhattisgarh | | 800 | | | | 800 |
| 3 | Jammu & Kashmir | | | 1200 | | | 1200 |
| 4 | Uttar Pradesh | | 84 | | | | 84 |
| | Grand Total | 1277 | 884 | 1200 | 0 | 0 | 3361 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.21: Solar power support system Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|-----------|-----------|-----------|------------|
| 1 | Andhra Pradesh | | 10 | | | | 10 |
| 2 | Arunachal Pradesh | | | 5 | | | 5 |
| 3 | Assam | | | 45 | | | 45 |
| 4 | Chhattisgarh | | | | 10 | | 10 |
| 5 | Himachal Pradesh | | 4 | 7 | 2 | | 13 |
| 6 | Jammu & Kashmir | | | 3 | | | 3 |
| 7 | Jharkhand | | | | 10 | | 10 |
| 8 | Karnataka | | | | 10 | | 10 |
| 9 | Madhya Pradesh | | | | | 3 | 3 |
| 10 | Nagaland | | | | 10 | | 10 |
| 11 | Punjab | | | | 15 | | 15 |
| 12 | Sikkim | | | | | 2 | 2 |
| 13 | Tamil Nadu | | 4 | | | | 4 |
| 14 | Tripura | | 3 | | 4 | 5 | 12 |
| 15 | Uttar Pradesh | | 9 | 13 | | 43 | 65 |
| 16 | Uttarakhand | | 1 | 15 | | | 16 |
| | Grand Total | 0 | 31 | 88 | 61 | 53 | 233 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.22: Innovative Activities Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|----------|-----------|----------|----------|-----------|
| 1 | Arunachal Pradesh | | | 23 | | | 23 |
| 2 | Assam | | | 1 | | | 1 |
| 3 | Himachal Pradesh | | | | 1 | | 1 |
| 4 | Punjab | | 1 | | | | 1 |
| 5 | Sikkim | | 1 | | | | 1 |
| 6 | Telangana | | | | 1 | | 1 |
| 7 | Uttar Pradesh | 1 | | | | | 1 |
| 8 | Uttarakhand | 1 | | | | | 1 |
| 9 | West Bengal | | | 1 | | | 1 |
| | Grand Total | 2 | 2 | 25 | 2 | 0 | 31 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.23: Saving cum Relief Assistance provided to fishers under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|---------------|--------------|--------------|--------------|---------------|----------------|
| 1 | Bihar | 10000 | | | | | 10000 |
| 2 | Chhattisgarh | 8000 | 6665 | 6666 | 8500 | 7740 | 37571 |
| 3 | Goa | 5197 | 5416 | | | | 10613 |
| 4 | Himachal Pradesh | 4641 | 5092 | | 2696 | 3717 | 16146 |
| 5 | Karnataka | 39048 | | 34239 | | 35757 | 109044 |
| 6 | Kerala | 197058 | | | | 680250 | 877308 |
| 7 | Madhya Pradesh | 16143 | 6667 | 10000 | 15100 | 12318 | 60228 |
| 8 | Maharashtra | | 2000 | | | | 2000 |
| 9 | Mizoram | | | | 5355 | 6283 | 11638 |
| 10 | Odisha | 25110 | | 10000 | | 5992.00 | 41102 |
| 11 | Puducherry | 27691 | 3333 | | 37488 | 15379 | 83891 |
| 12 | Rajasthan | 1451 | | | | | 1451 |
| 13 | Tamil Nadu | 108031 | | | | | 108031 |
| 14 | Telangana | 1123 | | | | | 1123 |
| 15 | Tripura | | | 835 | 1000 | | 1835 |
| | Grand Total | 443493 | 29173 | 61740 | 70139 | 767436 | 1371981 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.24: Number of Housing for fishers sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|-------------|-------------|------------|-------------|-------------|--------------|
| 1 | A & N Islands | 100 | | | | | 100 |
| 2 | Andhra Pradesh | 1300 | | | 1340 | 1500 | 4140 |
| 3 | Arunachal Pradesh | 92 | | 48 | 100 | | 240 |
| 4 | Assam | | 75 | 50 | 200 | | 325 |
| 5 | Bihar | | | | 1000 | | 1000 |
| 6 | Chhattisgarh | 400 | | | 200 | | 600 |
| 7 | Gujarat | 100 | 100 | | | | 200 |
| 8 | Himachal Pradesh | 133 | | | 200 | 200 | 533 |
| 9 | Jammu & Kashmir | 133 | | 200 | 200 | 657 | 1190 |
| 10 | Jharkhand | 1000 | 417 | | 1000 | | 2417 |
| 11 | Kerala | | 167 | | 132 | | 299 |
| 12 | Madhya Pradesh | 195 | 167 | | | | 362 |
| 13 | Maharashtra | | 65 | | | | 65 |
| 14 | Mizoram | 200 | | 43 | 50 | 80 | 373 |
| 15 | Manipur | | | 34 | | | 34 |
| 16 | Nagaland | 270 | | | | 1800 | 2070 |
| 17 | Rajasthan | | 20 | | | | 20 |
| 18 | Tripura | 250 | | 140 | 1493 | | 1883 |
| 19 | Uttar Pradesh | 327 | | 313 | | 1400 | 2040 |
| 20 | Uttarakhand | 309 | 666 | | 600 | | 1575 |
| 21 | West Bengal | | | 122 | 300 | | 422 |
| | Grand Total | 4809 | 1677 | 950 | 6815 | 5637 | 19888 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.25: Construction of community hall Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|----------|----------|----------|----------|----------|
| 1 | Assam | | 1 | | | | 1 |
| 2 | Himachal Pradesh | | | 1 | | | 1 |
| 3 | West Bengal | | | 1 | | | 1 |
| | Grand Total | 0 | 1 | 2 | 0 | 0 | 3 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.26: Insurance for Active fishers provided under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| | | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) |
| 1 | A & N Islands | 14839 | 14839 | 14839 | 13296 | - | 44517 |
| 2 | Andhra Pradesh | 404242 | 405347 | | 0 | - | 809589 |
| 3 | Arunachal Pradesh | 10000 | 7000 | 1000 | 1027 | 1027 | 18000 |
| 4 | Assam | 164939 | 157325 | 157325 | 139739 | 142716 | 479589 |
| 5 | Bihar | 300000 | 300000 | 300000 | 58277 | 100000 | 900000 |
| 6 | Chhattisgarh | 210000 | 210000 | 210000 | 205897 | 214552 | 630000 |
| 7 | Daman & Diu | 9500 | 9500 | 9500 | 9266 | - | 28500 |
| 8 | Delhi | | | 400 | 103 | 200 | 400 |
| 9 | Goa | 12721 | 11847 | 11840 | 11840 | - | 36408 |
| 10 | Gujarat | 218270 | 218270 | 218270 | 37856 | 218270 | 654810 |
| 11 | Himachal Pradesh | 12153 | 12901 | 13413 | 12650 | 12650 | 38467 |
| 12 | Jammu & Kashmir | 15000 | 15000 | 15000 | 15961 | 15402 | 45000 |
| 13 | Jharkhand | 114500 | 126000 | 126000 | 131451 | 140000 | 366500 |
| 14 | Karnataka | 204689 | 204689 | 204689 | 40641 | 204689 | 614067 |
| 15 | Kerala | 237501 | | | 0 | | 237501 |
| 16 | Lakshadweep | 12052 | 12052 | 12052 | 1204 | | 36156 |
| 17 | Madhya Pradesh | 175199 | 180988 | 184933 | 116941 | | 541120 |
| 18 | Maharashtra | 323838 | 323838 | 323838 | 0 | 388038 | 971514 |
| 19 | Manipur | 12000 | 12000 | 1000 | 0 | | 25000 |
| 20 | Mizoram | 10000 | 10000 | 1000 | 1187 | | 21000 |
| 21 | Odisha | 1111111 | 1150000 | 1150000 | 1150000 | 1150000 | 3411111 |
| 22 | Puducherry | 54367 | 54367 | 54367 | 43745 | 29887 | 163101 |
| 23 | Punjab | 1500 | 5000 | 5000 | 3416 | 3500 | 11500 |
| 24 | Rajasthan | 10833 | 11027 | 11220 | 11220 | 2122 | 33080 |
| 25 | Sikkim | 7000 | 7000 | 1000 | 411 | | 15000 |
| 26 | Tamil Nadu | 716308 | 666380 | 666380 | 481386 | 524054 | 2049068 |
| 27 | Telangana | 276799 | 326154 | 326154 | 265236 | 303000 | 929107 |
| 28 | Tripura | 1000 | 1000 | 1000 | 2072 | 2600 | 3000 |
| 29 | Uttar Pradesh | 193000 | 193000 | 193000 | 103333 | 134014 | 579000 |
| 30 | Uttarakhand | 2000 | 2000 | 1000 | 1324 | | 5000 |
| 31 | West Bengal | 221563 | | | 132995 | | 221563 |
| | Grand Total | 5056924 | 4647524 | 4214220 | 3039374 | 3586721 | 13918668 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.27: Training, Skill development Physical & Financial status under Fisheries Sector for FY 2015-19 (Rs in Lakhs)

| S.N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|------|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) | Physical (No.) |
| 1 | Andhra Pradesh | | 750 | 2250 | 525 | 8685 | 12210 |
| 2 | Arunachal Pradesh | | | 100 | | 350 | 450 |
| 3 | Assam | 60 | 290 | 600 | 500 | 800 | 2250 |
| 4 | Bihar | | | 450 | 400 | | 850 |
| 5 | Chhattisgarh | 270 | | 600 | 800 | 500 | 2170 |
| 6 | Goa | | 200 | 100 | | | 300 |
| 7 | Gujarat | 20 | | 650 | 250 | | 920 |
| 8 | Haryana | | | | | | 0 |
| 9 | Himachal Pradesh | 900 | | 200 | 100 | 250 | 1450 |
| 10 | Jammu & Kashmir | 20 | 520 | 200 | 225 | 100 | 1065 |
| 11 | Jharkhand | 160 | 728 | 700 | 750 | | 2338 |
| 12 | Karnataka | | 50 | 5525 | 300 | | 5875 |
| 13 | Kerala | | | 350 | 400 | 1800 | 2550 |
| 14 | Madhya Pradesh | | 150 | | 200 | | 350 |
| 15 | Maharashtra | 250 | | 800 | 505 | 1250 | 2805 |
| 16 | Manipur | 1110 | 300 | 200 | 225 | 1000 | 2835 |
| 17 | Meghalaya | 2000 | | | | | 2000 |
| 18 | Mizoram | 256 | 200 | 100 | 100 | 900 | 1556 |
| 19 | Nagaland | 440 | | | | 600 | 1040 |
| 20 | Odisha | 300 | | 1500 | | 860 | 2660 |
| 21 | Punjab | 500 | | 150 | 500 | 500 | 1650 |
| 22 | Rajasthan | | | 775 | 650 | 500 | 1925 |
| 23 | Sikkim | | | | 250 | | 250 |
| 24 | Tamil Nadu | 20 | | 2575 | 3850 | | 6445 |
| 25 | Telangana | 500 | 70 | 3675 | 625 | 2220 | 7090 |
| 26 | Tripura | 1450 | 250 | 200 | 200 | 1700 | 3800 |
| 27 | Uttar Pradesh | 1130 | | 3650 | | 250 | 5030 |
| 28 | Uttarakhand | | | 100 | | | 100 |
| 29 | West Bengal | 120 | 90 | 2200 | 2300 | 2000 | 6710 |
| | Grand Total | 9506 | 3598 | 27650 | 13655 | 24265 | 78674 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.28: Construction of new ponds/Tanks Areas (Ha) for 2014-15 to 2019-20

| S. N. | Name of the States | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------------|-----------------|----------------|---------------|----------------|----------------|-----------------|
| 1 | A & N Islands | | | 25 | 0.9 | 4.1 | | 30.0 |
| 2 | Andhra Pradesh | 57.19 | 54.61 | 0 | | | | 111.8 |
| 3 | Assam | 124.29 | 304.82 | 181.65 | | | | 610.8 |
| 4 | Arunachal Pradesh | | | | | 50 | | 50.0 |
| 5 | Bihar | 10 | 9.63 | 150.06 | | 500 | | 669.7 |
| 6 | Chhattisgarh | 669 | | 200 | 288.82 | 300 | 550 | 2007.8 |
| 7 | Goa | | | | 2 | | | 2.0 |
| 8 | Gujarat | | | 16 | 9.32 | | | 25.3 |
| 9 | Haryana | 1786 | 258.46 | 100 | 50 | 200 | | 2394.5 |
| 10 | Himachal Pradesh | | 22 | 15 | 0.57 | 20 | | 57.6 |
| 11 | Jammu & Kashmir | | | 10 | 10 | | | 20.0 |
| 12 | Karnataka | | | 68 | 150.03 | 105 | | 323.0 |
| 13 | Kerala | | 977 | 15 | | | | 992.0 |
| 14 | Madhya Pradesh | 1315 | 227 | 122 | 28 | 100 | 327.3 | 2119.3 |
| 15 | Maharashtra | | | 115 | | 19.21 | | 134.2 |
| 16 | Manipur | 843 | 450 | 0 | 77 | 100 | | 1470.0 |
| 17 | Meghalaya | | | 70.5 | | 1000 | | 1070.5 |
| 18 | Mizoram | 2700 | 1275 | 25 | | 30 | | 4030.0 |
| 19 | Nagaland | 304 | 488 | 50 | | | | 842.0 |
| 20 | Odisha | 1056 | 2447 | 340 | | 130 | | 3973.0 |
| 21 | Puducherry | | | 11 | | | | 11.0 |
| 22 | Punjab | | | 1.12 | | 1000 | | 1001.1 |
| 23 | Rajasthan | | | 8 | | | 10 | 18.0 |
| 24 | Tamil Nadu | 10.44 | | 100 | | | | 110.4 |
| 25 | Telangana | 13.48 | | 20 | 100 | 500 | | 633.5 |
| 26 | Tripura | | 543 | | 208.52 | 50 | 20 | 821.5 |
| 27 | Uttar Pradesh | 3739 | 3691 | 22 | 25 | 375 | 300 | 8152.0 |
| 28 | Uttarakhand | | 60 | 10 | | | 11.5 | 81.5 |
| 29 | West Bengal | 552 | 931 | 77 | | | | 1560.0 |
| | Grand Total | 13179.4 | 11738.52 | 1752.33 | 950.16 | 4483.31 | 1218.80 | 33322.52 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.29: Renovation of existing ponds/tanks (Ha) units sanctioned under Blue Revolution Scheme for 2015-16 to 2018-19

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2018-19 | Total |
|-------|--------------------|----------------|----------------|---------------|--------------|----------|----------------|
| 1 | A & N Islands | | | 30 | | | 30 |
| 2 | Andhra Pradesh | | | 145 | | | 145 |
| 3 | Assam | 226.58 | 32 | | | | 258.58 |
| 4 | Arunachal Pradesh | | | | 50 | | 50 |
| 5 | Bihar | | | | | | 0 |
| 6 | Chhattisgarh | 350 | 100 | | | | 450 |
| 7 | Goa | | 26.7 | 24 | | | 50.7 |
| 8 | Gujarat | | | 2 | | | 2 |
| 9 | Haryana | 196 | 210 | | | | 406 |
| 10 | Himachal Pradesh | | 10 | | | | 10 |
| 11 | Jammu & Kashmir | | 30 | | | | 30 |
| 12 | Karnataka | | 10 | | | | 10 |
| 13 | Kerala | | 80 | 150 | | | 230 |
| 14 | Madhya Pradesh | 947 | | 9.5 | | | 956.5 |
| 15 | Maharashtra | | 50 | | | | 50 |
| 16 | Manipur | | | | | | 0 |
| 17 | Meghalaya | 4 | 44 | | | | 48 |
| 18 | Mizoram | 1000 | 100 | | | | 1100 |
| 19 | Nagaland | | 120 | | | | 120 |
| 20 | Odisha | | 138 | 10 | | | 148 |
| 21 | Puducherry | | | | | | 0 |
| 22 | Punjab | | 10.16 | | | | 10.16 |
| 23 | Rajasthan | | | | | | 0 |
| 24 | Tamil Nadu | 3 | 70 | | | | 73 |
| 25 | Telangana | | | | | | 0 |
| 26 | Tripura | | 12.4 | 3.56 | | | 15.96 |
| 27 | Uttar Pradesh | | 325 | 325 | | | 650 |
| 28 | Uttarakhand | 40 | 5 | | 5.37 | | 50.37 |
| 29 | West Bengal | | 72.9 | 24.56 | | | 97.46 |
| | Grand Total | 2766.58 | 1446.16 | 723.62 | 55.37 | 0 | 4991.73 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.30: Renovation of MNERGA ponds & tanks with Input developed under Blue Revolution Scheme for 2015-16 to 2017-18

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2017-18 | Total |
|-------|--------------------|----------------|----------------|----------------|----------------|----------------|
| | | Physical (Ha.) | Physical (Ha.) | Physical (Ha.) | Physical (Ha.) | Physical (Ha.) |
| 1 | Bihar | | 260 | | | 260 |
| 2 | Karnataka | | | | 139 | 139 |
| 3 | Madhya Pradesh | | | | 200 | 200 |
| 4 | Maharashtra | | | | 66.8 | 66.8 |
| 5 | Meghalaya | | | | 50 | 50 |
| 6 | Mizoram | | | | | 0 |
| 7 | Tamil Nadu | | 30 | | | 30 |
| 8 | Tripura | | 280 | | 387.5 | 667.5 |
| 9 | Uttar Pradesh | | | | 500 | 500 |
| | Grand Total | 0 | 570 | 0 | 1343.3 | 1913.3 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.31: Establishment of BW Hatcheries Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2019-20 | Total |
|-------|--------------------|----------|----------|-----------|----------|-----------|
| 1 | Andhra Pradesh | | | 6 | | 6 |
| 2 | Gujarat | | 3 | | | 3 |
| 3 | Madhya Pradesh | | 1 | | | 1 |
| 4 | Odisha | | | 8 | | 8 |
| 5 | Rajasthan | | | 1 | | 1 |
| 6 | Karnataka | | | | 1 | 1 |
| | Grand Total | 0 | 4 | 15 | 1 | 20 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.32: Establishment of Fish Seed Hatcheries Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|---------|---------|---------|---------|---------|-------|
| 1 | Arunachal Pradesh | | | 1 | 2 | | 3 |
| 2 | Assam | | 10 | 22 | 20 | | 52 |
| 3 | Bihar | | 20 | | 4 | | 24 |
| 4 | Chhattisgarh | | 4 | 3 | 2 | | 9 |
| 5 | Gujarat | | 5 | | | | 5 |
| 6 | Haryana | | | 2 | | | 2 |
| 7 | Himachal Pradesh | | 4 | 16 | 12 | | 32 |
| 8 | Jammu & Kashmir | 0 | 2 | 2 | 3 | | 7 |
| 9 | Jharkhand | | 4 | 4 | | | 8 |
| 10 | Karnataka | | 1 | | 10 | | 11 |
| 11 | Madhya Pradesh | | 4 | 10 | 8 | | 22 |
| 12 | Maharashtra | 1 | 9 | | 7 | | 17 |

Table 14.32: Establishment of Fish Seed Hatcheries Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|---------|------------|------------|------------|-----------|------------|
| 13 | Manipur | 0 | | 6 | 6 | | 12 |
| 14 | Meghalaya | 2 | 3 | | | | 5 |
| 15 | Mizoram | 0 | 4 | 4 | 4 | 7 | 19 |
| 16 | Nagaland | 0 | 2 | | 4 | | 6 |
| 17 | Odisha | 0 | 10 | 12 | | | 22 |
| 18 | Punjab | | | 10 | | | 10 |
| 19 | Rajasthan | | 1 | | | 2 | 3 |
| 20 | Sikkim | | | | 3 | | 3 |
| 21 | Tamil Nadu | 0 | | 5 | | | 5 |
| 22 | Telangana | | 5 | 17 | 60 | | 82 |
| 23 | Tripura | | 3 | 10 | 2 | 2 | 17 |
| 24 | Uttar Pradesh | | 10 | 33 | 2 | 7 | 52 |
| 25 | Uttarakhand | | 1 | | | | 1 |
| 26 | West Bengal | | 2 | 4 | | | 6 |
| | Grand Total | | 104 | 161 | 149 | 18 | 435 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.33: Construction of Brackish water Nursery pond (Ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2018-19

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|-------|--------------------|----------|----------|-----------|-----------|------------|
| 1 | Andhra Pradesh | | | 70 | | 70.00 |
| 2 | Gujarat | | | 1 | | 1.00 |
| 3 | Odisha | | | | 48 | 48.00 |
| | Grand Total | 0 | 0 | 71 | 48 | 119 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.34: Construction of Brackish water Grow out pond (Ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2017-18

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | Total |
|-------|--------------------|----------|----------|------------|------------|
| 1 | Andhra Pradesh | | | 75 | 75 |
| 2 | Goa | | | 1 | 1 |
| 3 | Gujarat | | | 22 | 22 |
| 4 | Tamil Nadu | | | 60 | 60 |
| 5 | Odisha | | | 100 | 100 |
| | Grand Total | 0 | 0 | 258 | 258 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.35: Construction of Raceways Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|------------|------------|------------|------------|-------------|
| 1 | Arunachal Pradesh | | | 22 | 40 | | 62 |
| 2 | Himachal Pradesh | | 106 | 117 | 330 | | 553 |
| 3 | Jammu & Kashmir | | 114 | 59 | 80 | | 253 |
| 4 | Meghalaya | | | | 10 | | 10 |
| 5 | Mizoram | | 10 | | | | 10 |
| 6 | Sikkim | | 100 | | 250 | 310 | 660 |
| 7 | Uttarakhand | | 60 | 96 | 158 | 138 | 452 |
| 8 | West Bengal | | 25 | | | | 25 |
| | Grand Total | 0 | 415 | 294 | 868 | 448 | 2025 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.36: Development of Waterlogged Area (Ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2018-19

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2018-19 | Total |
|-------|--------------------|----------|------------|-----------|---------------|----------|---------------|
| 1 | Bihar | | | | 1123.6 | | 1123.6 |
| 2 | Haryana | | 20 | | 100 | | 120 |
| 3 | Kerala | | | 80 | 80 | | 160 |
| 4 | Mizoram | | 10 | | 20 | | 30 |
| 5 | Odisha | | 55 | | | | 55 |
| 6 | West Bengal | | 160 | | | | 160 |
| 7 | Uttar Pradesh | | | | | 7 | 7 |
| 8 | Uttarakhand | | | | 10 | 2 | 12 |
| | Grand Total | 0 | 245 | 80 | 1333.6 | 9 | 1667.6 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.37: Productive Utilization for Pond Construction in Alkaline Saline (Ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|-----------|------------|-----------|------------|
| 1 | Delhi | | | 10 | | | 10 |
| 2 | Haryana | | 15 | 21 | 150.00 | | 186 |
| 3 | Himachal Pradesh | | 25 | | | | 25 |
| 5 | Punjab | | | 50 | 100 | | 150 |
| 6 | Rajasthan | | | | | 10 | 10 |
| 7 | Uttar Pradesh | | | | | 10 | 10 |
| | Grand Total | 0 | 40 | 81 | 250 | 20 | 391 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.38: Fish Seed Rearing Area (ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|--------------|-------------|---------------|----------------|------------|----------------|
| 1 | Andhra Pradesh | | | 100 | | | 100 |
| 2 | Arunachal Pradesh | | | 4 | | | 4 |
| 3 | Assam | 20 | | 90 | | | 110 |
| 4 | Bihar | | | | 1151 | | 1151 |
| 5 | Chhattisgarh | | 13.5 | 142 | 150 | 250 | 555.5 |
| 6 | Haryana | | | 256 | | | 256 |
| 7 | Himachal Pradesh | | | 13 | | | 13 |
| 8 | Karnataka | | 10 | 2 | | | 12 |
| 9 | Madhya Pradesh | | | 25 | 52 | 48 | 125 |
| 10 | Maharashtra | | 10 | | 10 | | 20 |
| 11 | Manipur | | | 11.4 | 60 | | 71.4 |
| 12 | Mizoram | | 10 | 9.4 | 22 | 30 | 71.4 |
| 13 | Nagaland | 15 | | | 60 | | 75 |
| 14 | Rajasthan | | | 33 | 50 | | 83 |
| 15 | Telangana | | 10 | 76 | 500 | | 586 |
| 16 | Tripura | | | 21 | | | 21 |
| 17 | Uttar Pradesh | 41.91 | 20 | 265 | | 23 | 349.91 |
| 18 | Uttarakhand | | 14 | 30 | 26.15 | | 70.15 |
| 19 | West Bengal | | | 5 | | | 5 |
| | Grand Total | 76.91 | 87.5 | 1082.8 | 2081.15 | 351 | 3679.36 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.39: Brood Bank Facility Physical sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|----------|----------|----------|----------|-----------|
| 1 | Chhattisgarh | | | | 1 | | 1 |
| 2 | Jammu & Kashmir | | | 1 | | | 1 |
| 3 | Meghalaya | | | 1 | 1 | | 2 |
| 4 | Punjab | | 1 | 1 | | | 2 |
| 5 | Telangana | | | | 1 | | 1 |
| 6 | Uttar Pradesh | | | 1 | | | 1 |
| 7 | Uttarakhand | | | 1 | 1 | | 2 |
| | Grand Total | 0 | 1 | 5 | 4 | 0 | 10 |

*Punjab has been sanctioned 1 integrated Hatchery @cost of Rs 10.00 Crore
Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.40: Craft & Gear for Inland Capture Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|------------|-------------|-------------|------------|-------------|
| 1 | Andhra Pradesh | | 500 | 480 | | | 980 |
| 2 | Arunachal Pradesh | | | | 10 | | 10 |
| 3 | Assam | | | 592 | | | 592 |
| 4 | Goa | | 50 | 20 | 10 | | 80 |
| 5 | Haryana | | 37 | | | | 37 |
| 6 | Himachal Pradesh | | | | 250 | | 250 |
| 7 | Jammu & Kashmir | | 59 | | | | 59 |
| 8 | Karnataka | | | | 500 | | 500 |
| 9 | Maharashtra | | 25 | | 22 | | 47 |
| 10 | Mizoram | | 5 | | | | 5 |
| 11 | Odisha | | 300 | | 250 | | 550 |
| 12 | Uttar Pradesh | | | | 10 | | 10 |
| 13 | Tripura | | | | | 250 | 250 |
| | Grand Total | 0 | 976 | 1092 | 1052 | 250 | 3370 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.41: Construction of landing centers Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|----------|-----------|-----------|------------|
| 1 | Andhra Pradesh | | 50 | | | | 50 |
| 2 | Chhattisgarh | | | | 10 | 20 | 30 |
| 3 | Goa | | 3 | 2 | 1 | | 6 |
| 4 | Himachal Pradesh | | | | | | 0 |
| 5 | Jammu & Kashmir | | 5 | | | | 5 |
| 6 | Jharkhand | | | | 10 | | 10 |
| 7 | Mizoram | | 5 | 3 | | | 8 |
| 8 | Odisha | | 1 | | 30 | | 31 |
| 9 | Telangana | | 4 | | | | 4 |
| | Grand Total | 0 | 68 | 5 | 51 | 20 | 144 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.42: Number of Conservation and Awareness in Riverine Fisheries programme sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|----------|----------|----------|-----------|
| 1 | Arunachal Pradesh | | | | 1 | | 1 |
| 2 | Haryana | | 10 | | | | 10 |
| 3 | Jammu & Kashmir | | 1 | | | | 1 |
| 4 | Karnataka | | 1 | | | | 1 |
| 5 | Meghalaya | | 25 | | | | 25 |
| 6 | Sikkim | | 1 | | | | 1 |
| 7 | Tripura | | | | | 1 | 1 |
| 8 | West Bengal | | | | | | 0 |
| 9 | Uttara Khand | | | 1 | | | 1 |
| | Grand Total | 0 | 38 | 1 | 1 | 1 | 41 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.43: Integrated Development of Reservoirs Physical & Financial status under Fisheries Sector for FY 2015-16 to 2019-20 (Rs in Lakhs)

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|----------|----------|---------|-----------|
| 1 | Himachal Pradesh | | 11 | | | | 11 |
| 2 | Karnataka | | 1 | | 1 | | 2 |
| 3 | Madhya Pradesh | | 16 | | | | 16 |
| | Grand Total | 0 | 28 | 0 | 1 | | 29 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.44: Establishing fish feed mills (1-5q/d) Physical & Financial status under Fisheries Sector for FY 2015-16 to 2019-20 (Rs in Lakhs)

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|-----------|-----------|-----------|------------|
| 1 | Arunachal Pradesh | | | | 1 | | 1 |
| 2 | Andhra Pradesh | | 10 | | | | 10 |
| 3 | Assam | | 12 | | 2 | | 14 |
| 4 | Bihar | | 5 | | | | 5 |
| 5 | Chhattisgarh | | 5 | | | | 5 |
| 6 | Gujarat | | 5 | | | | 5 |
| 7 | Himachal Pradesh | | | | 15 | | 15 |
| 8 | Jharkhand | | 1 | | 1 | | 2 |
| 9 | Madhya Pradesh | | 5 | 5 | 10 | | 20 |
| 10 | Maharashtra | | 10 | | 32 | | 42 |
| 11 | Meghalaya | | | | 10 | | 10 |
| 12 | Mizoram | | 2 | | | 5 | 7 |
| 13 | Telangana | | 4 | | | | 4 |
| 14 | Uttar Pradesh | | 1 | 9 | 2 | 42 | 54 |
| 15 | Uttarakhand | | | | 2 | 1 | 3 |
| 16 | West Bengal | | 2 | | | | 2 |
| | Grand Total | 0 | 62 | 14 | 75 | 48 | 199 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.45: Establishing fish feed mills(6-10t/hr) Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|----------|-----------|----------|----------|----------|-----------|
| 1 | Andhra Pradesh | | 3 | | | | 3 |
| 2 | Bihar | | 1 | | | | 1 |
| 3 | Chhattisgarh | | 1 | | | 3 | 4 |
| 4 | Gujarat | | 1 | 1 | | | 2 |
| 5 | Jharkhand | | 2 | | | | 2 |
| 6 | Karnataka | | | | 4 | | 4 |
| 7 | Madhya Pradesh | | | | | 4 | 4 |
| 8 | Punjab | | 6 | | | | 6 |
| 9 | Telangana | | | | 2 | | 2 |
| 10 | Uttar Pradesh | | 1 | | | | 1 |
| 11 | Uttarakhand | | | 1 | | | 1 |
| | Grand Total | 0 | 15 | 2 | 6 | 7 | 30 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.46: Installation of cages/pens in reservoirs Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|---------|---------|---------|---------|---------|-------|
| 1 | Andhra Pradesh | 288 | 72 | 67 | | | 427 |
| 2 | Assam | | | | 8 | | 8 |
| 3 | Bihar | | 84 | | 550 | | 781 |
| 4 | Chhattisgarh | | | 117 | 48 | 960 | 1125 |
| 5 | Daman & Diu | | | 25 | | | 25 |
| 6 | Delhi | | | 48 | | | 48 |
| 7 | Goa | | | 12 | | | 12 |
| 8 | Haryana | | | | | | 0 |
| 9 | Himachal Pradesh | | | | 24 | | 24 |
| 10 | Jharkhand | | 2815 | | | | 2815 |
| 11 | Jammu & Kashmir | | | | 72 | | 72 |
| 12 | Karnataka | | 96 | | 24 | | 120 |
| 13 | Kerala | | 200 | | | | 200 |
| 14 | Madhya Pradesh | | 310 | 250 | 120 | 66 | 746 |
| 15 | Maharashtra | | 60 | | 5380 | | 5440 |
| 16 | Manipur | | | 24 | 48 | | 72 |
| 17 | Meghalaya | | | 20 | | | 20 |
| 18 | Mizoram | | 50 | 66 | | | 116 |
| 19 | Odisha | | | 24 | | | 24 |
| 20 | Rajasthan | | 170 | | | | 170 |
| 21 | Tamil Nadu | | | | | | 40 |
| 22 | Telangana | | 800 | | 300 | | 1116 |
| 23 | Tripura | | 40 | 64 | | 64 | 168 |

Table 14.46: Installation of cages/pens in reservoirs Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | Total |
|-------|--------------------|------------|-------------|-------------|-------------|-------------|--------------|
| 24 | Uttar Pradesh | | | 260 | | 260 | 520 |
| 25 | Uttarakhand | | 48 | 48 | | | 96 |
| | Grand Total | 288 | 4745 | 1025 | 6574 | 1350 | 13982 |

Source: Department of Fisheries, State Govt./ UT's Administration

Table 14.47: Re-circulatory Aquaculture Systems Physical units sanctioned under Blue Revolution Scheme for 2015-16 to 2018-19

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2018-19 | Total |
|-------|--------------------|----------|----------|------------|------------|------------|------------|
| 1 | Andhra Pradesh | | | 5 | | | 5 |
| 2 | Assam | | | 4 | 10 | | 14 |
| 3 | Bihar | | | 1 | | | 1 |
| 4 | Chhattisgarh | | | 7 | | 1 | 8 |
| 5 | Delhi | | | 2 | | | 2 |
| 6 | Haryana | | | 16 | 15 | | 31 |
| 7 | Himachal Pradesh | | | | 1 | | 1 |
| 8 | Jammu & Kashmir | | | 1 | | | 1 |
| 9 | Jharkhand | | | 8 | | | 8 |
| 10 | Karnataka | | | | | 1 | 1 |
| 11 | Kerala | | | 100 | 125 | | 225 |
| 12 | Madhya Pradesh | | | 10 | 10 | | 20 |
| 13 | Manipur | | | 1 | 2 | | 3 |
| 14 | Meghalaya | | | 1 | | | 1 |
| 15 | Mizoram | | | 1 | | 2 | 3 |
| 16 | Odisha | | | 4 | 2 | | 6 |
| 17 | Punjab | | | 6 | | | 6 |
| 18 | Rajasthan | | | | 1 | 2 | 3 |
| 19 | Sikkim | | | | 2 | 14 | 16 |
| 20 | Telangana | | 1 | 2 | 10 | | 13 |
| 21 | Uttar Pradesh | | | 27 | 18 | 107 | 152 |
| 22 | Uttarakhand | | | | 2 | | 2 |
| 23 | West Bengal | | | 2 | | | 2 |
| | Grand Total | 0 | 1 | 198 | 198 | 127 | 524 |

*During 2014-15& 2015-16 RAS has not been introduced.

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying

Table 14.48: Stocking of fish fingerlings in beels (ha) sanctioned under Blue Revolution Scheme for 2015-16 to 2019-20

| S. N. | Name of the States | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total |
|-------|--------------------|---------------|-------------|----------|------------|----------------|
| 1 | Arunachal Pradesh | | | | 100 | 100 |
| 2 | Bihar | | 1000 | | | 1000 |
| 3 | Chhattisgarh | 33.22 | | | | 33.22 |
| 4 | Jharkhand | 21.56 | | | | 21.56 |
| 5 | Karnataka | 66.5 | | | | 66.5 |
| 6 | Madhya Pradesh | 38.12 | | | | 38.12 |
| 7 | Odisha | 129.4 | | | | 129.4 |
| 8 | Telangana | 121.32 | | | | 121.32 |
| 9 | Tripura | | 1125 | | | 1125 |
| | Grand Total | 410.12 | 2125 | 0 | 100 | 2635.12 |

Source: Department of Fisheries, M/o Fisheries, Animal Husbandry & Dairying



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