

# **NATIONAL FISHERIES DEVELOPMENT BOARD**

## **COMMITTED TO BLUE REVOLUTION**

### **Introduction**

Fisheries and Aquaculture comprise an important sector of food production in India, contributing sizably to the food basket. It not only ensures nutritional security among the population but also significantly contributes to the agricultural exports and provides gainful employment and livelihood support to more than fourteen million people engaged in different fisheries activities. India is the second largest fish producing country in the world with a production of about 11.41 million tonnes in 2016-17. Fish and fish products have presently emerged as one of the largest groups in agricultural exports of India, with 9.45 lakh tonnes in terms of quantity and 30,420.83 crore in value during 2015-16.

In order to utilise the large untapped potential in fisheries and aquaculture in the country, and in pursuance of the decision of the Government of India, National Fisheries Development Board (NFDB) was set up as a Registered Society at Hyderabad, under the administrative control of the Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India, on 10th July 2006. The main objective of establishment of NFDB is to enhance fish production and productivity and to strengthen infrastructure facilities for overall development of fisheries sector.

### **NFDB Vision**

To develop fisheries and aquaculture in a big way by adopting new and innovative production technologies, management and utilisation of unutilised and underutilised water resources, establishment of adequate infrastructure for post harvest operations and proper market tie-ups.

### **NFDB Mission**

Holistic development of the fisheries sector through enhancement of fish production and productivity; to supplement nutritious protein for the growing population; to accelerate the overall economy of the country, besides improving health, economy, exports, employment and tourism in the country.

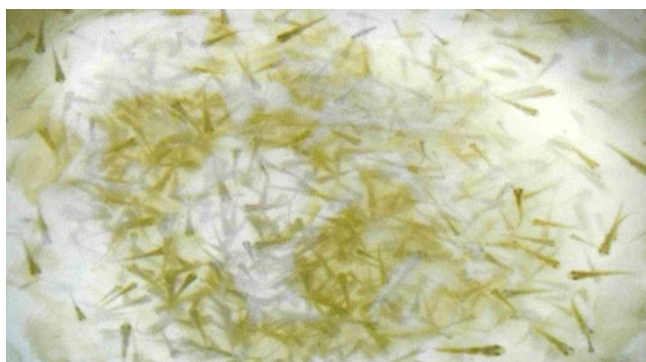
- Bring major activities relating to fisheries and aquaculture for focused attention and professional management
- Coordinate activities pertaining to fisheries undertaken by different Ministries/ Departments in the Central Government and also coordinate with the State/ Union Territory Governments
- Improve production, processing, storage, transport and marketing of the products of capture and culture fisheries
- Achieve sustainable management and conservation of natural aquatic resources including the fish stocks.
- Apply modern tools of research and development including biotechnology for optimising production and productivity from fisheries
- Provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilisation
- Generate substantial employment
- Train and empower women in the fisheries sector
- Enhance contribution of fish towards food and nutritional security.

To achieve the above objectives, NFDB has been working in an integrated way with all the State Governments and Union Territories (UTs), Fisheries Research Institutes under Indian Council of Agricultural Research (ICAR) and organisations of Government of India, such as Marine Products Export Development Authority (MPEDA), National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT), State Agricultural Universities (SAUs), Krishi Vigyan Kendras (KVKs), and reputed NGOs.

**NFDB has given assistance of about 861.25 crore since inception. Some of the major interventions are as follows:**

### **1. National Freshwater Fish Brood Bank**

NFDB established "National Freshwater Fish Brood Bank" (NFFBB), at a total estimated cost of 18 crore at Kausalyaganga, Bhubaneswar, Odisha State, to meet the increasing demand for genetically improved quality fish seed of commercially important fish species, viz., Jayanti Rohu (*Labeo rohita*), Minor Carps (*Labeo fimbriatus*, *L. genus*, *Puntius sarrana*) and Amur Common Carp (*Cyprinus carpio*). To date (2017-18 season), NFFBB supplied 50,710 quality fish seed to 11 States in the country. It is targeted to produce 100 crore quality fish seed, and thereby achieve an anticipated 30 per cent additional fish production in the country.



### **2. National Surveillance Programme for Aquatic Animal Diseases**

NFDB funded a project on "National Surveillance Programme for Aquatic Animal Diseases", at a cost of 562 lakhs for five years. National Bureau of Fish Genetic Resources (NBFGR), Lucknow, is the Nodal Agency. Twenty four National Organisations in 14 States of the country are involved in undertaking this active surveillance. The initiative would cover freshwater, brackish water, and coastal aquaculture farms, besides selected natural ecosystems. States under this scheme would have to report occurrence of any known diseases as well as emergence of any new/exotic disease.

### **3. Intensive Aquaculture in Ponds and Tanks**

Under this component, an area of 12,814.45 hectares was developed for fish farming, 203 fish/prawn hatcheries were established for seed production, and imparted training to 85,162 fish farmers.



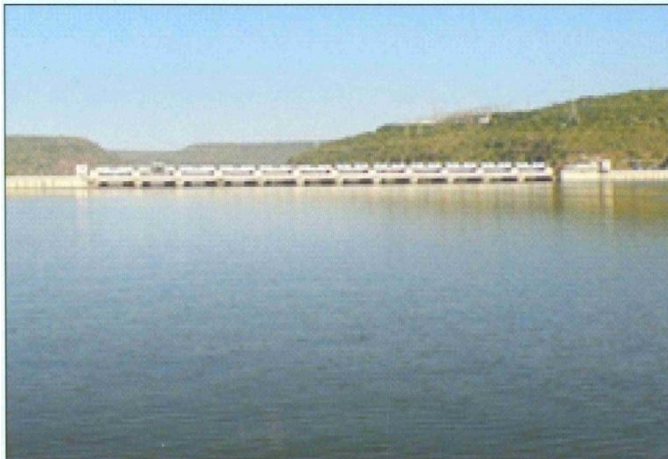
#### 4. Cold Water Fisheries

Several States in India have enormous potential for trout fish culture. Hatcheries have been assisted, raceways are constructed and feed mills are promoted in States like Sikkim, Himachal Pradesh, Uttarakhand and Jammu Kashmir. Provided assistance to 509 Trout Raceway units, 1265 running water fish culture units, renovation/ up-gradation of 2 Trout Farms, establishment of two Trout Feed Mills and 14 Trout Hatcheries and imparted training to 1,996 farmers.



#### 5. Reservoir Fisheries Development

To increase fish production and productivity in reservoirs, a massive fish seed stocking programme was taken up in 23.31 lakh hectares of water spread area in 25 States. A total of 52,616 fishermen thriving on these reservoirs were trained. The average productivity of reservoirs increased from 20 kgs/ha to 110 kg/ha. Setting up of 477 pens in 25 wetlands in 1139.08 ha in Bihar, Assam and Odisha. An amount of Rs. 17952.07 lakh was released for seed stocking, training and management of reservoirs fisheries.



#### 6. Cage and Pen Culture

As cage culture has immense potential assistance has been provided for taking up of cage culture (2755 cages ) in reservoirs, wetlands and beels in Tamil Nadu, Telangana, Assam, Maharashtra, Rajasthan, Jharkhand and Chhattisgarh; Setting up of 477 pens in 25 wetlands in 1139.08 ha in Bihar, Assam and Odisha was undertaken.

In addition as a special drive, fisheries in 110 wetlands/ beels in Assam are being developed through in situ pen-rearing of fish seed for stocking in those water bodies. In another example, about 1,000 fishermen and fisherwomen benefitted from pen culture in Mahanadi River in Cuttack district of Odisha. It is expected that, these successful models will encourage several entrepreneurs to undertake cage culture in reservoirs across the country.



## 7. Infrastructure and Post-Harvest Processing

To meet the quality standards stipulated by EU and other importing countries, assistance was extended for modernization of 21 fishing harbours and 33 fish landing centers. A fish net making factory in Kerala with the annual production capacity of 525 tons of net material and Individual Quick Freezing plant for production of value added products at Sasoon-dock Matsyaudyog Sahakari Sanstha Ltd., Mumbai were also established for supporting the fishing industry. Assistance was extended for constructing floating barge with dispensing units for supply of diesel to fishing boats in Maharashtra supporting the fishing industry. An amount of Rs. 144.13 crore was released to 8 States under this component.



## 8. Modern Fish Markets

NFDB is focusing on developing hygienic markets across the country. For promoting fish marketing and consumption, modernisation/construction of Fish Markets an amount of Rs. 292.52 crore was released to 33 States/UTs for construction of 156 Wholesale Fish Markets, 157 Retail Fish Markets/ Retail Fish Outlets. In addition, 6 fish processing units were modernised/ constructed. Fishermen and fisherwomen were assisted with 17,858 Mobile Fish Vending Vehicles so that they can earn more money by reaching the markets faster, fish also is delivered in better condition. Fish transport has been identified as one of the serious weak links in the supply chain, and this problem is being addressed aggressively. Imparted training to 19,420 fishers. NFDB Organised 107 Fish Festivals for campaigning and creating awareness among consumers and for showcasing the various value added fish products, etc.



## 9. Fish Dressing Centers and Solar Drying of Fish

NFDB established 5 fish dressing centers, 99 solar fish drying units, 33 solar deep freezers, 3 solar dehydration units, 84 platforms for sun drying of fish and trained 3080 fishers in various states with an outlay of Rs. 4.97 crore for the benefit of fishers and fisherwomen Self Help Group (SHG) to ensure that hygienic and better quality fish is made available to consumers. Imparted training to 300 fishers on hygienic handling of fish, solar fish drying and value addition.



## 10. Ornamental Fisheries

Considering the scope for development of ornamental fisheries in India by involving the rural beneficiaries especially women SHGs, NFDB implements three schemes. Assistance was extended for establishment of 2794 medium/backyard hatcheries, 36 integrated ornamental units and 137 aquarium fabrication units. An amount of Rs. 48.57 crore was released under the scheme to 29 States. A National programme on Surveillance on Aquatic Animal Disease launched with the project cost of Rs. 31.62 crore for five years.



## 11. Coastal Aquaculture

NFDB has assisted for establishment of Aquatic Quarantine Facility (AQF) at Neelankarai, Chennai for regulated import of *L. vannamei* broodstock and for production of SPF shrimp seeds. Schemes are also formulated for construction and renovation of shrimp / fish hatchery and farms in order to sustain the coastal aquaculture. Assistance was extended for providing additional infrastructure facilities in an area of 46.16 hectares for *L. vannamei* culture and one sea bass hatchery. Besides, farmers are being supported to adopt Good Management Practices (GMPs) through various programmes including introduction of new fish species like Sea bass (*Lates calcarifer*). An amount of Rs. 30.33 crore was released under this scheme.



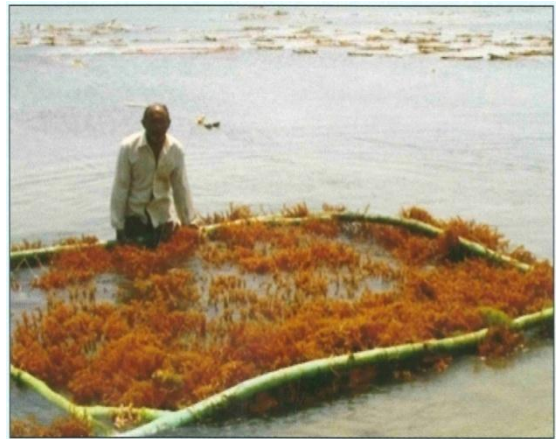
## 12. . Mariculture

In order to promote open sea cage farming among coastal fishermen, a pilot project was supported to Central Marine Fisheries Research Institute (CMFRI), Kochi for undertaking studies on open sea cage culture (14 cage units). Based on the outcome of pilot study, Maharashtra Fisheries Development Corporation was assisted for setting up of 24 units of cages for production of sea bass, lobsters, etc in Maharashtra coast and 10 open sea cages for Cobia culture by Cobia Aqua Culture Fisherman Welfare Association, Verkodu, Rameswaram with technical assistance of CMFRI. Assistance was provided for establishment of 2 marine ornamental fish Hatcheries and Brood stock bank for breeding of 25 different types of marine ornamental fishes. An outlay of Rs. 387.86 lakh was released under this component.



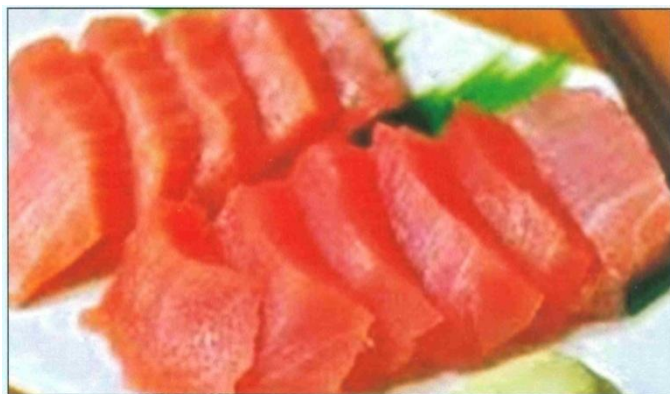
## 13. Seaweed Cultivation

NFDB established 45 seaweed cultivation units. This component contributes a lot for the livelihoods of rural youth especially women SHGs.



## 14. Deep Sea Fishing and Tuna Processing

NFDB has established a common facility centre at National Institute of Fish Post Harvest Technology and Training (NIFPHATT), Visakhapatnam at a cost of Rs.185 lakh for processing / export of sashimi grade Tuna and for construction of Two (2) 65 footer fishing boats to Lakhshadweep. For the benefit of fishers of Island waters an amount of Rs. 337.09 lakh was released for training on advanced deep sea fishing techniques and for construction of tuna fishing vessel.



## 15. Human Resource Development

All the above said activities of NFDB are backed up with training and demonstration with an aim of providing Skill Development and Capacity Building to fishers and functionaries of Department of Fisheries. As such 2,11,837 fishers and officials were trained in the country on various aspects of fisheries with the assistance of NFDB.

The NFDB since its inception has contributed to the growth of the Fishery sector across the country. While the immediate investments had been made on the coastal states of the country, more and more investments are now taking place in the inland states to promote the fresh water fisheries. The impact of the NFDB is already being felt all across, despite the fact that the organization had been in existence only for 10 years. The NFDB will play a more proactive role in the years to come and contribute to the growth and welfare of the nation.



## 16. Technology Demonstration Projects

NFDB funded 31 Technology Demonstration Projects which were taken up with the technical support of ICAR, SAUs and KVKs, viz., (1) Scampi brood stock, (2) Brood stock development of common carp, (3) Development of community participated enhanced fishery management for the Chauras and Mauns in Bihar state, (4) Production of Mahaseer fish fingerlings and stocking the same in Indrayani River, (5) Project on Fisheries enhancement in Maharashtra through seed production and pen culture in rivers Vaitarna and Bhatsa for livelihoods and nutritional security among the tribal community, (6) Up-gradation of seed production technology for seed production and grow out culture of indigenous catfish Magur through training and demonstration under Technology Up-gradation river, (7) Quality seed production and stock up-gradation of carps through use of cryopreservation technology in selected hatcheries of India (8) Establishment of Hatchery and Seed production facilities of Pangasianodon hypophthalmus (Striped Catfish) in Andhra Pradesh at Penamaluru, near Vijayawada, (9) Development of BMP for P. hypophthalmus (10) Technology up-gradation Project on Stock improvement and quality seed production

of important freshwater carps, cat fish and Prawn: Prerequisite for NFFBB (11) Risk and benefit assessment of an illegally introduced fish species Pacu - *Piaractus brachypomus* in India (12) Setting up of Aquatic Animal Health and Environment Management Lab at Faculty (13) Community based reservoir fisheries management in Dimbhe reservoir under Technology up-gradation programme (14) Development and assistance for development of cage culture technology in reservoir for raising table fish (15) Setting up of Aquatic Animal Health and Environmental Management Laboratory (16) Zero water exchange shrimp culture with Bioremediation and Integral disease management (17) Demonstration of Sea bass farming in ponds culture systems (18) Monitoring culture and disease surveillance of *L. vannamei* (19) Up scaling of production technology and large scale demonstration indigenously developed immune-stimulant CIBASTIM for penaeid shrimps (20) Marketing and value chain improvement strategies of white leg shrimp (*L. vannamei*) farming in India (21) Standardization of aerator usage in shrimp farming through improving the efficiency and operational pattern of the aeration system in use, automation and use of alternate energy source (22) Appraisal of evolving *L. vannamei* culture system and associated production risks for development of BMPs (23) Technology refinement of nutrient dense nursery rearing and grow out of *L. vannamei* in periphyton and bio-floc based systems (24) TUP on up-gradation of breeding and culture technology of Indian white shrimp *F. indicus* through stock evaluation and culture demonstration (25) Setting up of demonstration hatchery and brood stock bank for the supply of marine ornamental fish and juveniles (26) Technology demonstrations on mariculture for improving the livelihood status of youth & women in Goa through demonstration of 4 units of mussel culture training program to 60 fishers (27) Germplasm Inventorization, Brood Stocking and Captive Breeding of Ornamental Fish Species of Upper Brahmaputra Basin (28) Ornamental fish culture in cages for livelihood of fisherwomen under Technology Up-gradation (29) Development of value added fish meat based products and designing of small scale fish processing equipments required (30) Technology Up-gradation project on Retort Pouch Packaging of Thermal Processed fishery products of Konkan region in Maharashtra (31) Research project proposal entitled Studies and refinement of live-fish carrier system for mass transportation of table fish, brooders, fingerlings and aquarium fishes.

## Way Forward

NFDB is committed to create infrastructure facilities to bring a significant improvement in handling, preservation and marketing of fish. The larger goal is to increase production and productivity, improve livelihoods of fishers, promote entrepreneurship opportunities in fisheries and increase consumption of fish through better availability.



### **NATIONAL FISHERIES DEVELOPMENT BOARD**

(Department of Animal Husbandry, Dairying and Fisheries,  
Ministry of Agriculture, Govt. of India)

Fish Building, Pillar No. 235, PVNR Expressway, Hyderabad - 500 052

Phone: 040-24000100; Fax: 040-24015568, 24015552

Website: [nfdb.gov.in](http://nfdb.gov.in), Email: [info.nfdb@nic.in](mailto:info.nfdb@nic.in)