



GOVERNMENT OF ODISHA

ANNUAL ACTIVITY REPORT
2018-19

FISHERIES & ANIMAL RESOURCES DEVELOPMENT
DEPARTMENT

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FISHERIES SECTOR

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FISHERIES SECTOR

ANNUAL ACTIVITIES REPORT: 2018-19

1. Introduction:

Fish is recognized as a global super food. Fisheries and aquaculture is one of the fastest growing food sectors and has been playing a pertinent role in the economic development front on account of its contribution to food and nutritional security, national income, employment opportunities as well as generating livelihood options.

Odisha is one of the important maritime states of India having excellent scope for fisheries development. The state has 6.83 lakh ha. of freshwater resources, 4.18 lakh ha of Brackish water resources and 480 Kms. of coastline for fisheries development of the state. In order to ameliorate these ample resources, Government have taken up a mission for doubling of inland fish production and increasing the present export to Rs.20,000 Crores. The total provisional fish production of the State during 2018-19 is 7.59 lakh MTs. Accordingly, the Department proposes to take up horizontal expansion of culture areas as well as vertical expansion to reach average productivity to the level of 5.00 tonnes/ ha. The present provisional annual per capita fish consumption is 15.38 Kg. To achieve this ambitious goal, Government of Odisha have come up with 'Odisha Fisheries Policy, 2015' during September, 2015.

2. Fisheries Resources:

Freshwater Fisheries Sector:

Resources	Total Area (In lakh Ha.)
Tanks/Ponds	1.33
Reservoirs	2.00
Lakes/Swamps/Bheels	1.80
Rivers/Canals	1.71

Brackishwater Fisheries Sector:

Resources	Total Area (In lakh Ha.)
Area suitable for Culture	0.33
Back Water	0.08
Chilika Lake	0.79
Estuaries	2.98

MARINE SECTOR:

Coast Line	480 Kms.
Continental Shelf Area	24,000 Sq. Km. (approx4)
District-wise Coastal Length (in Kms.)	
Balasore	80
Bhadrak	50
Kendrapada	68
Jagatsinghpur	67
Puri	155
Ganjam	60
Total Coastal length	480
Continental shelf area in different depth Zone (in Sq. Km.)	
Depth Zone (in Mtr.)	Sq. Km.
0-20	6820
20-50	8650
50-100	4810
100-200	3550
TOTAL	23830

Maximum Sustainable Yield (MSY) up to 200 Mtr.	
SPECIES	MSY (in MT)
Prawn	9036
Pomfret	9602
Hilsa	9319
Polynemids	4749
Clupeids	7421
Sciaenides	34857
Catfishes	10276
Elasmobranches	12839
Others	62832
Total	160931

OTHER FISHERIES RESOURCES		
FISH SEED HATCHERY:	Unit	
Freshwater :	No.	Fry Capacity (in millions)
Government (R&D)	05	60.00
Government hatchery(OPDC)	18	
Government rearing farm	25	128.00
OPDC	05	155.00
Private	86	700.00
ICE PLANT AND COLD STORAGE	No.	Capacity (in MT)
Ice Plant	57	613.5
Cold Storage	12	67
MARINE FISH LANDING CENTRE		
1. Harbour	4	
2. Jetty	25	
3. Other Landing Centre	44	
Total	73	
5. Fish Drying Platform	10	3269
CRAFTS (Marine)(In Nos.)		
A. Mechanized	1741	
B. Motorized	10085	
C. Country Crafts (Non Motorized)	9263	
TOTAL	21089	
Total Marine Fishermen families	1,14,238	As per CMFRI Survey
Total Marine Fishermen Population	6,50,514	2010
Chilika Fisher men Population	1,50,000	
Total Inland Fishermen Population	7,09,000	



3. Development of Fisheries Sector in Odisha:

OBJECTIVES:

- Implementation of “Odisha Fisheries Policy, 2015” to double fish production of the State and to reach the export to Rs.20,000 crores.
- Maximum utilization of water bodies with stocking of quality seed.
- Generating employment & higher income in fisheries sector,
- Improving socio-economic conditions of traditional fisher folk & fish farmers and to double the income of fishers.
- To acquire self-sufficiency in Inland Sector,
- Conservation of aquatic resources & generic diversity.

MANDATE:

- Optimum utilization of Inland Water Resources for Pisciculture,
- Maximizing utilization of Brackish water Resources,
- Harnessing marine resources in greater proportion keeping in mind the environmental issues
- Adapting scientific technology for enhancing productivity with greater emphasis to private entrepreneurs
- Improving professionalism through training/counseling of major stakeholders involved in fisheries sector
- Forming cooperative's and S.H.G.s for community participation and expanding market potentials,
- Dissemination of new technologies through its extension machinery,
- Providing livelihood support to unemployed youths through Self Employment Programme (SEP).

ONGOING GOVERNMENT OF INDIA SCHEMES & PROGRAMMES:

The following Government of India schemes and programs are being operated in the State under Fisheries Department:

Centrally Sponsored Schemes Blue Revolution:

- Development of Inland Fisheries & Aquaculture
- Welfare Schemes for Fishermen
 - Saving-cum-relief
 - Prime Minister Surakhya Bima Yojana (PMSBY)
 - Training & Extension.
 - Development of Marine Fisheries, Infrastructures & Post-Harvest Operations
 - Motorization of Traditional Crafts
 - Assistance for Fish Transport infrastructure
 - Safety of fishermen at sea
 - Establishment of FH & FLCs

- Development of Brackish Water Aquaculture
- Promotion of Sea Bass Culture
- Development of Fishing Harbours, Fish Landing Centres & Jetties

State Sector Scheme:

- MPY- Matsya Pokhari Yojana
- MUY – Matsyjibi Unayana Yojana
- RIDF – Rural Infrastructure Development Fund
- Development of Inland Fisheries under Fisheries Policy
- Popularization of Fisheries Machineries/Equipment
- Organization of Skill Upgradation Training
- Livelihood Support to Marine Fisherman during Fishing Ban Period
- Reactivation of Fisheries Cooperative Societies

Others:

RKVY- Rastriya Krishi Vikas Yojana



4. BUDGET

(Rs. In lakh)

Establishment, Operation & Maintenance (EOM) Expenditure		
YEAR	PROVISION	EXPENDITURE
2010-11	4162.00	3931.00
2011-12	3819.00	3703.00
2012-13	4675.00	4341.00
2013-14	4402.00	4226.00
2014-15	4823.38	4616.49
2015-16	5345.53	5234.80
2016-17	6361.46	5750.49
2017-18	7722.07	6426.10
2018-19	7398.35	6570.86

(Rs. In lakh)

PLAN BUDGET (2018-19 Programme Expenditure)									
PROVISION, SANCTION AND EXPENDITURE									
Year	STATE PLAN			CENTRAL PLAN			CENTRAL SPONSORED PLAN		
	Prov.	Sanc.	Expr.	Prov.	Sanc.	Expr.	Prov.	Sanc.	Expr.
2011-12	2958.00	1474.56	1469.83	602.92	0.00	-	2926.91	1165.20	1165.20
2012-13	3367.44	1043.27	1043.27	120.28	0.00	-	4221.89	668.34	668.34
2013-14	5711.92	5683.45	5673.99	200.05	0.00	-	3223.18	1865.61	1865.61
2014-15	5682.31	5612.29	5612.29	85.29	0.00	-	3800.04	1819.61	1819.61
2015-16	7350.00	7043.42	7043.42	73.40	20.00	20.00	3319.89	1124.22	1124.22
2016-17	8776.66	7332.65	7332.65	73.40	0.00	0.00	3171.14	2232.36	2232.36
2017-18	10340.01	8939.95	8939.95	0.00	0.00	0.00	2243.00	1801.43	1801.43
2018-19	10543.48	10227.34	10227.34	0.00	0.00	0.00	5067.54	3345.48	3345.48

5. Odisha Fisheries Policy, 2015:

Government of Odisha has come up with the 'Odisha Fisheries Policy, 2015; vide Gazette notification No. 1282, Dt. 2nd September, 2015. The Policy intends to be a pioneer in aquaculture Development and fisheries extension for ensuring food security, livelihood, welfare of fishers and employment generation.

The Policy aims to address sustainable utilization, protection/ promotion of nutritional security, livelihood security of fisher community, gaps in the legal and regulatory framework and their enforcement, gaps in the administrative structure and processes, financing mechanisms including subsidies, technology and extension support etc. as well as social and environmental implications. The highlight of the said Policy is as under:

- REALISTIC RESOURCE ASSESSMENT: For sustainable management of capture and culture fisheries, a detailed survey using Remote Sensing and Geographic Information System (GIS) for monitoring of plan & programs in fishery sector shall be undertaken.
- CAPTURE FISHERIES: Appropriate measures for developing, propagating, conserving and protecting riverine and other open water fisheries.
- CULTURE BASED FISHERIES IN LAKES/ RESERVOIRS: Regular stock enhancement in reservoirs with basic infrastructure facilities of captive hatcheries, nurseries, fry/ advance fingerling raising centers, fish landing and handling sheds ice plants/ Cage/ Pen culture programs shall be taken up for enhancing the reservoir fish productivity and production. 25% of reservoirs under the control of fisheries Department could be considered for leasing to private entrepreneurs for commercial pisciculture.

- AQUACULTURE IN TANKS & PONDS: Best practices being followed in the neighboring states of West Bengal, Andhra etc. shall be adopted for increasing the fish production. Government shall provide long term lease of the waterlogged areas/dead rivers to farmers/ entrepreneurs for aquaculture with incentives.
- FISH SEED PRODUCTION: The Government will augment the existing capacity of the fish seed hatcheries in private sector to meet the widening gap between the demand and supply of fish fingerlings/ yearlings.
- ORNAMENTAL FISH CULTURE: Freshwater ornamental fish breeding and rearing in backyard hatcheries will be popularized as a cottage industry, among the rural community and SHGs.
- SUSTAINABLE COASTAL AQUACULTURE: Development of coastal aquaculture clusters with basic infrastructure such as inlet and outlet channels, road connectivity, electricity, ice plants, cold storages, etc., in PPP mode will be encouraged and promoted, where the private entrepreneurs and small-scale Aquaculturists can co-exist.
- MARINE FISHERIES: The guidelines and provisions of the Comprehensive Marine Fisheries Policy (2004) of the Government of India, which advocates protection and conservation of the resources, encouragement to subsistence level fishermen and technology transfer to small-scale sector, infrastructure support to industrial sector, ecosystem based fisheries management, etc., shall be adopted in letter and spirit.
- DEEP SEA FISHING: Deep sea fishing shall be promoted with incentives to marine fishermen and entrepreneurs, wherever necessary.
- POST-HARVEST INFRASTRUCTURE SUPPORT & MARKETING: Development of Post-harvest Infrastructure Support & Marketing shall be encouraged, both in inland and marine fisheries sector through suitable scheme/ projects.
- FISHING HARBOURS & FISH LANDING CENTERS: Efforts shall be made towards modernization of all fishing harbours/ Jetties/ fish landing centers along the Odisha coast with ongoing / new scheme through PPP mode.
- FISH MARKETING & TRADE: Odisha Pisciculture Development Corporation (OPDC)/ FISHFED will be strengthened to cater to the needs for fish preservation, transportation, distribution & marketing.
- SAFETY OF FISHERMEN AT SEA AND WELFARE OF FISHERMEN: Efforts will be made to provide safety & welfare to the fisher community through various ongoing & new schemes.

- CAPACITY BUILDING AND OTHER SUPPORT FOR IMPLEMENTING THE POLICY: Capacity building of fisher/ extension personnel will be taken up through adequate training and exposure visit to successful sites within & outside the country. Consultants for different activities will be engaged for providing expertise, technology, capacity building and preparation of DPRs etc.
- SUPPLEMENTARY NUTRITION: A farmer-friendly policy under the broad name 'social fishery' will be initiated where farmers will grow these species of small fish along with other traditional carps without substantial investment for their economic as well as nutritional benefits.
- INFORMATION, EDUCATION & CAPACITY BUILDING (IEC) & AWARENESS: Comprehensive training, exposure visits, refresher courses, extension services, advisory and awareness programs will be promoted and implemented so as to build human resource capacity and to increase levels of knowledge, skill and expertise amongst the State fisheries officials, rural masses, fishers and in the public and private sectors, at district and village levels.
- ENTREPRENEURSHIP DEVELOPMENT & SELF EMPLOYMENT: Government will play a catalytic role in self-employment through developing private entrepreneurship in fisheries through various ongoing & new schemes
- FISCAL INCENTIVES: Declaration of aquaculture at par with agriculture for enabling easy credit flow/institutional finance, lower power tariffs, tax, excise/customs duty concessions/ waiver/ exemptions and water supply, will be considered in consultation with the authorities concerned. Necessary incentives and tax holidays will be provided to large-scale fish farmers who produce 10 tons/ha or more of fish.
- PLANNING & GOVERNANCE: There will be coherence between the policies within and outside the fisheries sector to ensure that all policies and schemes are in harmony with fisheries management objectives.
- FISHERY CO-OPERATIVES: Steps will be taken to strengthen the human resource base and improve the financial base of the existing Fisheries Co-operative Societies from Primary to apex level and to revive/ revitalize the ailing Marine PFCS/ PMFCS & Fisheries Federation (FISHFED). The activities of the apex cooperative federation will be re-oriented and re-structured.
- ORGANIZATIONAL ASPECTS: Fisheries Department will be strengthened with requisite technical and engineering personnel for smooth and successful implementation of fisheries programs and activities. Statistical wing in fisheries will be strengthened by developing proper data collection.

- LEGAL FRAMEWORK: The provisions of OMFRA shall be strictly enforced and a stringent fishery management system put in place. Odisha Inland Fisheries Act & Fish seed & hatchery certification will be framed on the lines of the Model Inland Fisheries & Aquaculture Act of the Ministry of Agriculture and that of other relevant States and notified, and the Rules there-under framed and implemented.
- FUNDING: Odisha Government will make extensive efforts to provide adequate funding to the fisheries sector through State and Central Plan schemes, as well as from external sources.



Releasing of fish seed in Pen Nursery at Salia Reservoir, Ganjam

6. FRESHWATER AQUACULTURE

Water Area Development:

Fish Farmers Development Agency (FFDA) was established in all the thirty districts of Odisha. Beneficiaries, irrespective of their economic status are being given technical and logistic support for promotion of pisciculture in inland areas, after closure of FFDA, "BLUE REVOLUTION" scheme was introduced by the Government of India where all the Fisheries sector relevant schemes were merged under one umbrella.

A new State Plan Scheme has been introduced during 2017-18 namely "Maccha Chasa Pain Nua Pokhari Kholo Yojana" popularly known as "Matsya Pokhari Yojana" (MPY). During the year 2018-19, the pond development under different schemes are given below.

PROGRESS ON POND DEVELOPMENT DURING THE YEAR 2018-19							
Sl. No	District	Target (Ha.)			Achievement (Ha.)		
		MPY	BLUE REV	Total	MPY	BLUE REV	Total
1	2	3	4	5	6	7	8
1	Cuttack	52.00	14.00	66.00	46.62	14.09	60.71
2	Jajpur	24.00	7.50	31.50	13.35	7.28	20.63
3	Jagatsinghpur	54.00	14.00	68.00	34.22	8.70	42.92
4	Kendrapara	54.00	14.00	68.00	20.34	18.52	38.86
5	Puri	70.00	20.00	90.00	41.81	7.71	49.52
6	Khurdha	40.00	10.00	50.00	34.09	12.68	46.77
7	Nayagarh	30.00	7.50	37.50	13.90	3.79	17.69
8	Balasore	107.58	23.00	130.58	87.11	17.89	105.00
9	Bhadrak	56.00	14.00	70.00	31.20	23.21	54.41
10	Mayurbhanj	70.00	15.00	85.00	26.46	6.44	32.09
11	Ganjam	56.00	14.00	70.00	16.41	7.96	24.37
12	Gajapati	20.00	6.50	26.50	19.54	5.80	25.34
13	Kandhamal	10.00	5.19	15.19	1.00	2.00	3.00
14	Boudh	15.00	5.50	20.50	8.60	2.00	10.60
15	Kalahandi	50.00	10.00	60.00	12.10	6.26	18.36
16	Nuapada	20.00	7.50	27.50	8.60	11.80	20.40
17	Koraput	20.00	5.50	25.50	19.60	8.01	27.61
18	Nawarangapur	30.00	7.50	37.50	18.00	4.72	22.72
19	Malkangiri	30.00	7.50	37.50	39.40	8.90	48.30
20	Rayagada	50.00	19.00	69.00	13.73	5.90	19.63
21	Sambalpur	20.00	6.50	26.50	0.70	15.19	15.89
22	Jharsuguda	20.00	7.50	27.50	1.70	6.10	7.80
23	Deogarh	20.00	6.50	26.50	16.70	6.90	23.60
24	Bargarh	20.00	9.50	29.50	20.24	15.60	35.84
25	Sundargarh	24.00	6.50	30.50	11.90	5.68	17.58
26	Bolangir	22.00	12.00	34.00	87.11	4.72	91.83
27	Sonepur	20.00	5.50	25.50	13.90	6.70	20.60
28	Keonjhar	20.00	10.29	30.29	19.70	14.09	33.79
29	Dhenkanal	20.00	7.50	27.50	15.48	4.02	19.50
30	Angul	26.00	9.50	35.50	16.58	3.40	19.98
	Total	1070.58	298.48	1369.06	710.09	266.06	976.15

CENTRAL SECTOR ASSISTANCE SCHEMES

The Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying & Fisheries has accordingly restructured the scheme by merging all the ongoing schemes under an umbrella of Blue Revolution. The restructured scheme provides focused development and management of fisheries, covering inland fisheries, aquaculture, and marine fisheries including deep sea fishing, Mariculture and all activities undertaken by the National Fisheries Development Board (NFDB).

The restructured Plan Scheme on *Blue Revolution: Integrated Development and Management of Fisheries* has been approved at a total central outlay of Rs.3000 crore for implementation during a period of five years (2015-16 to 2019-20) with the following components:-

- (i) National Fisheries Development Board (NFDB) and its activities,
- (ii) Development of Inland Fisheries and Aquaculture,

- (iii) Development of Marine Fisheries, Infrastructure and Post-Harvest Operations,
- (iv) Strengthening of Database & Geographical Information System of the Fisheries Sector,
- (v) Institutional Arrangement for Fisheries Sector
- (vi) Monitoring, Control and Surveillance (MCS) and other need-based Interventions
- (vii) National Scheme of Welfare of Fishermen

Under Blue Revolution targets have been communicated to all districts to take up different activities. The subsidy pattern has been modified and 40% assistance is being given to General category beneficiaries and 60% subsidy to ST/SC and women entrepreneur , with further sharing subsidy at 60:40 basis (60% CS+40% SS).

Establishment of Fresh Water Fish seed hatchery:

During last two years, against the target of 20 fish seed hatcheries, 12 hatcheries have been completed with production capacity of 10 million fry each and another 8 hatcheries are on progress under Blue Revolution which is meant for integrated development of fisheries including post harvest operation and other infrastructure.

7. MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme):

Under MGNREGS financial support of Rs.1,62,500.00 to Rs.1,99,500.00 is being provided to beneficiaries for excavation of 0.50 acre of multipurpose ponds which provide 100 days employment to families with utilizing farm pond for multipurpose uses like water conservation, protective irrigation, horticulture plantation and Pisciculture etc. The ponds are constructed in the land of small and marginal farmers to enhance their livelihood. As on March, 2019, construction of 269 tanks is under progress and 81 completed.

8. CAPACITY BUILDING & EXPOSURE VISIT

Training to fish farmers

Training under different programme is imparted to the fish farmers for development of skill on scientific aquaculture, diversification of species etc. The training is imparted at Fishery Training Institute, Balugaon, Brackish Water Training Institute, Paradeep and FISCOFED training Centre at Kausalyaganga. During the year 2018-19, 1162 nos. of fish farmers were trained under SEP against the target of 1035 and 75 nos. beneficiaries have been imparted 3 days training on Ornamental Fish Culture under Blue Revolution programme at Kausalyagang against the target of 75 nos.

9. Reservoir Fisheries:

Reservoir fisheries in Odisha account for approximately 25% of total inland freshwater resources of the state and 8% of the total reservoir resources of our country. But the present production from reservoirs is only 23000 MT although the fish production from reservoir sector can be boosted up through adoption of various remedial measures.

Keeping this in view, Govt. of Odisha has formulated State Reservoir Fishery Policy in 2004 amended in 2012 with prime objective of strengthening the fishery societies and enhancing the productivity and production of resources in gradual manner.

The Odisha Fishery Policy formulated by State Govt. for fisheries Department in the State, the development of reservoir fisheries has been given desirable impetus for increasing the productivity and production so as to reach a level of 40000 MT by 2020. Fishing rights of 138 nos of reservoirs covering a total area of 1.41 lakh Ha has been vested with the Fisheries Dept. With successful implementation of State Reservoir Fisheries Policy and regular stocking of quality fingerlings, the production of reservoirs in the State has been increased significantly. Quality fingerlings are being stocked in selected reservoirs for enhancing their productivity.

Infrastructure for Cage Culture

During the year 2018-19, 110 CIFRI model GI Cages have been installed in 07 reservoirs by ICAR-CIFRI, Barrackpore. Cage Culture in these cages is being taken up by Primary Fishermen Cooperative Societies. The List of these reservoirs is given as below;

SL.NO	NAME OF THE RESERVOIR	DISTRICT	G.I.Cage 5x5x4 mtr	NAME OF THE PFCS
1	HIRAKUD	SAMBALPUR	20	MAHAMADPUR & MAHANADI PFCS
	HIRAKUD	JHARSUGUDA	20	CHOURASI & BUNARPAT PFCS
	HIRAKUD	BARGARH	10	TAMDEI PFCS
2	SALIA	GANJAM	10	SOCIETY
3	SATIGUDA	MALKANGIRI	10	SATIGUDA PFCS
4	BUDHABUDIANI	NAYAGARH	10	BUDHABUDIANI PFCS
5	KALO	MAYURBHANJ	10	MAA MANGALA PFCS
6	SUNEI	MAYURBHANJ	10	SWARNAREKHA PFCS
7	JAMBHIRA	MAYURBHANJ	10	JAMBHIRA PFCS
		TOTAL	110	

Apart from this, 2 nos. of Circular Cages have been installed in Hirakud Reservoir in Sambalpur District on pilot basis to take up IMC culture by two PFCSS under the technical guidance of Odisha WorldFish Project.



Circular Cage installed at Hirakud Reservoir, Sambalpur

10. Odisha-WorldFish Project:

WorldFish is an international organization and one of 15 CGIAR Research Centre with head quarters in Penang, Malaysia. The WorldFish mission is to strengthen livelihoods and enhance food and nutrition security by improving fisheries and aquaculture.

A Memorandum of Agreement (MoA) for technical collaboration between the Fisheries and Animal Resources Development Department, Government of Odisha and WorldFish, Malaysia was signed on 28th June 2016. The project commenced on 1st July 2016 and will continue till 31st March 2022 (duration of 5 Years and 9 Months). The overall objective of the MoA is to technically support the F&ARD Department to implement the Odisha State Fisheries Policy-2015 and to achieve "Sustainable aquaculture in fisheries sector in Odisha State, India, creating employment, stimulating inward investment and contributing to State goals for reducing malnutrition among vulnerable and marginalized communities, particularly women and children". As per MoA the WorldFish is working on the following components:

1. Promotion of nutritionally sensitive Carp-Mola production system
2. Carp Intensification and hatchery seed quality improvement
3. Introduction of Genetically Improved Farmed Tilapia (GIFT)
4. Reservoir Fish Productivity and Production Enhancement
5. GIS & Spatial planning for inland fisheries resources management

The Odisha-WorldFish Project office has been set up in the Directorate of Fisheries campus, Cuttack. The Deputy Director of Fisheries (Reservoir) is the Nodal Officer for the project. The project is managed by a Project Manager and assisted by other staff members hired by the project. Fisheries and aquaculture experts of national

and international repute have been engaged to render guidance and technical support to the farmers. Priority is given for selection of community water bodies, GP tanks and MIPs to encourage women SHGs and Primary Fishermen Cooperative Societies to actively take part in the programme and get benefitted by increased fish production.

Input to Women Self Help Groups for pisciculture in Gram Panchayat tanks:

The objective of the scheme is to empower women by providing livelihood support through WSHGs. This is a convergence project involving Mission Shakti, Pachayati Raj and Drinking water Department, Fisheries and ARD Department. In the programme, Gram Panchayat tanks are given in long term lease (3-5 years) to the identified Women Self Help Groups (WSHG) for pisciculture. The technical support and trainings are imparted to the members of WSHGs by the Directorate of Fisheries and Odisha-WorldFish Project. Inputs are given to WSHGs for fish farming with project cost of Rs.1.50 lakhs per ha and a subsidy of 60% or Rs.90,000/- per Ha is provided under RKVY and State Plan schemes.

During the year 2018-19, 1703 nos. of WSHGs have been tagged with 1729 nos. of GP tanks on long term lease basis for practicing pisciculture in the water area of 1472.17 ha. 30 district level ToT have been conducted to impart training to 1259 officers as Master Trainers.

Introduction of Genetically Improved Farmed Tilapia (GIFT):

Genetically Improved Farmed Tilapia (GIFT), a fast growing, high yielding and affordable variety of fish has been introduced in Odisha as diversification strategy for fish farmers. Presently, it is the most widely farmed tilapia variety across the globe. GIFT can grow to market size (700-1000 g) within 6 months of crop duration and can yield 7.5 to 10 Metric Tons/Ha/crop. The seed of mono-sex (all-male) GIFT Tilapia procured from MPEDA-RGCA Tilapia Hatchery, Vijayawada, Andhra Pradesh have been provided to 130 farmers across 17 districts covering an area of 40 ha with farm-gate technical and marketing support. Establishment of a GIFT tilapia hatchery and multiplication centre is under progress in the Kausalyaganga Government Fish Farm.

Reservoir Fish Production Enhancement:

The present fish productivity from the Reservoirs of the state is around 150 kg/ha. The production is being enhanced by stocking of good quality advanced fingerling and building awareness among the members of Primary Fishermen Cooperative Society. In order to stock advanced fingerling (50-100 g) in the reservoirs captive pen nurseries are installed under the technical guidance of ICAR-CIFRI, Barrackpore. During the year 2018-19, 2 ha of pen nurseries have been installed in Balimela Reservoir in Malkangiri district. Two nos of Circular HDPE cages have been installed in Hirakud Reservoir having 16 mtr dia and 5mtr depth for culturing IMC.

GIS & spatial planning for inland fisheries resources management:

In order to harness the benefit of vast inland water resources GIS and spatial planning cell in the Directorate has been established with the technical guidance from the WorldFish to create Geo-tagged master list (GIS map) of all these fisheries resources in the state for proper planning and implementation of the various fisheries programs in the State.

11. FISH SEED PRODUCTION:

In order to achieve the goal for doubling the fish production of the State, much emphasis has given for production & supply of quality fish seeds to the fish farmers. During the year 2018-19, 38876.30 lakhs Spawn & 8962.42 lakhs of fry have been produced from Government, OPDC & Private farms and supplied to the farmers. The Department having 28 breeding farms & 25 rearing farms besides 86 fish seeds farms in private sector farm where above seeds were produced and supplied.

Sector wise Spawn & Fry production of the State is given below;

Spawn Production in Odisha (in lakhs)

Year	Government	OPDC	Private	Total
2018-19	4062.30	7818.00	26996.00	38876.30

Fry Production in Odisha (in lakhs)

Year	Government	OPDC	Private	Total
2018-19	824.90	1852.26	6285.26	8962.42

12. Matsyajibi Unnayana Yojana:

Under Matsyajibi Unnayana Yojana during the year, 2018-19, 4066 nos. of children of fisher community have been awarded post matric scholarship @ Rs.3000/-, Rs.5000/- and Rs.7500/- for securing 50%, 60% and 70% mark respectively after joining higher studies. Apart from this 1000 nos. of Fisher Women SHGs have been provided revolving fund @ Rs.5000/ SHG for promotion of fisheries activities

13. Co-operative Sector :

a) Under Centrally sponsored Plan Scheme 'Pradhan Mantri Surakhya Bima Yojana' (PMSBY), 11,50,000 Fishers of Odisha state have been provided insurance coverage during the insurance period of 2018-19 (1st June 18 to 31st May 19). Odisha state has been topping the lists of States and UTs in terms of extending coverage to highest nos. of fishermen under the scheme since 2008-09. The scheme covers victims affected by thunder, electric shock, any road accident, drowning and death caused by any animal bite. The premium amount of Rs.12.00 per fisherman is shared by Govt. of India and State Govt. on a ratio of 50:50. The scheme provides compensation of Rs.2 lakh in case of death /full permanent disability and Rs.1 lakh in case of partial permanent disability.

During 2018-19, an amount of Rs.94.00 lakhs have been given to settle 47 nos. of death claims under the Scheme.

b) During 2018-19, under the State Plan Scheme 'Reactivation of Fisheries Cooperative Societies' an amount of Rs.400.00 lakh was provided for reactivation of 200 PFCS, out of which 186 PFCS has been covered. So far 308 Primary Fishermen Cooperative Societies have been given revolving fund assistance @ Rs2.00 lakhs per PFCS.

c) FISHFED, the Apex Society in Fishery Cooperative Sector has initiated actions to undertake activities like playing of Specially Designed Mobile vans with the facilities of freezer to store fish, cooking platform, water sink and a foldable service counter (Fish on Wheel)/Canteen Van) to serve hot, ready to fish recipes in Bhubaneswar, Cuttack and other tourist places of importance, installation of High speed Diesel outlet at 13 selected Fish landing Centers and LPG gas at Paradeep Fishing Harbor.

For providing quality fish in hygienic condition at reasonable price to the fish eaters of Bhubaneswar an MOU has been signed with M/S Falcon Exports Pvt. Ltd, Bhubaneswar for establishment of 26 Modern Hygienic Fish Kiosks under the same brand name "Chilika Fresh". Out of this, 12 no Kiosks have been commissioned in the Bhubaneswar Municipal Corporation Area. Similarly, another kiosks under the brand name "Hirakud Fresh" at Sambalpur has already been completed and functioning well.

14. BRACKISHWATER AQUACULTURE:

a) Brackish water area development: The total brackish water resources of the State is around 4.18 lakh hectares including the existing shrimp culture area, estuaries, Chilika and back waters. Out of this, 32587 Ha has been identified as suitable area for Brackishwater farming.

The Coastal Aquaculture is regulated and managed as per the norms of Coastal Aquaculture Authority Act, Rules & Guidelines. The registration of farms and renewal of licence is mandatory under the Act.

At present, the area development is taken up under Blue Revolution and RKVY with subsidy assistance of 40-60% of the project cost for different categories of beneficiaries. The prescribed unit cost is Rs. 10.00 lakh per Ha which includes excavation of new tanks and input assistance. A beneficiary is eligible for getting subsidy maximum for 2.00 Ha water area.

During 2018-19, 290.53 Ha have been developed for Brackishwater shrimp and fish farming.

b) Principles for Lease of Brackishwater Area in the State: The Govt. in Revenue & DM Deptt. Have issued notification for leasing of suitable Brackishwater area on long term basis for a period of 15 years for development of Brackishwater aquaculture through SHGs, co-operatives, educated un-employed and entrepreneurs.

Till date 2073 nos. of applications received from beneficiaries measuring an area of 1822.24 Ha. has been sent to respective Tahasildars for verification. 327 nos. 225.50 Ha. of cases have been approved by DLCs to give on Long Term Lease.

c) Export Promotion Cell:

Government of Odisha is targeting to increase Seafood Exports of the State to Rs 20,000 Cr from the present level of Rs. 3100 Cr. One Export Promotion Cell is functioning in the Directorate of Fisheries, Odisha, Cuttack. One Consultant NITTE University Mangalore has been assigned to prepare Road Map and Action Plan for enhancing the present level of Sea food Export from 3100 Cr to Rs. 20,000 Cr/Annum. ORSAC has been entrusted for GIS mapping of coastal areas for finding out the feasible Govt. and private land suitable for Brackish Water aquaculture as per Coastal Aquaculture Authority Act-2005.

15. MARINE SECTOR:

Having a coastline of 480 Kms., Odisha is one of the important maritime states of the country having seven coastal districts, where 114,238 fishermen families reside making their livelihood from the open sea.

Marine fisheries in Odisha are a small scale enterprise and activity and the catch is mostly from traditional crafts and gears. In Odisha, around 102 species of fish are caught out of which, important varieties include such as Hilsa, Pomfret, Seer fish, Cat fish, Sciaenids, Mackerel, Elasmobranches, etc. which are the dominant species. High value varieties of fishes and prawns are exported from Odisha. For the socio-economic development of fishermen and improvement of quality of life among fishers, living along the coast, welfare measures are introduced.

1. Saving-cum-Relief:

The scheme provides financial assistance to the BPL category of active fishermen with of Rs.3000/- on 50:50 basis shared by Central & State Govt. to inculcate the habit of savings among the fishers. The beneficiary contributes Rs.1500/ @ Rs.170/ per month and last installment of Rs.140/- in a period of nine months. The assistance of Rs. 4500/- including the Govt. and Beneficiary contribution is provided during the lean period i.e. from April to June.

During 2018-19, 5352 nos. of beneficiaries got the assistance.

2. Livelihood Support to Marine Fishermen During Fishing Ban Period:

This State Plan Scheme was launched in the year 2016-17. It envisages to provide livelihood support to the marine fishermen affected due to fishing ban for a period of seven months every year i.e. from 1st November to 31st May for Conservation & Protection of Sea turtle.

During 2018-19, 5000 nos. of marine fisher families of Kendrapara, Jagatsinghpur, Puri and Ganjam were assisted @ RS. 7500/- per family.

3. Motorization of Traditional crafts:

The State is having 21,089 nos. of registered fishing vessels under OMFRA which are engaged in marine fishing. This includes 1741 nos. of mechanised fishing trawlers, 9290 nos. of motorised and 8107 nos. of traditional non-motorised fishing vessels. The traditional non-motorised fishing vessels are being motorised in phased manner depending upon the assistance provided under Blue Revolution.

The scheme aims to enable traditional fishermen to access the potential fishing zones. The marine engines up to 10HP OBM/IBM are being provided to the non-motorised boat owners. The prescribed unit cost of the scheme is Rs. 1.20 Lakh which includes the cost of engine gear and propeller.

During 2018-19, 500 marine engines were provided to the fishermen.

4. Establishment of Fishing Harbour & FLCs:

The scheme aims for providing infrastructure facilities for safe landing, berthing and hygienic handling of fish catch at the landing centres. The modernization and up-gradation of existing fishing harbours and fish landing centres are also taken up under Blue Revolution, Sagarmala and State Plan schemes of the Govt. It also includes survey & investigation, pre-execution work like preparation of DPR, consultancy service of external agencies.

During the year 2018-19, Rs 49.94 Crores have been sanctioned under convergence of Blue Revolution and Sagarmala by GoI and matching 50% financial assistance of State Govt. Rs 19.97 Crores has been released on 50:50 basis against the administrative approval of Rs. 49.94 Crore. The pre-execution works have been completed and the work is going to be started shortly.

5. Implementation of Odisha Marine Fishing Regulation Act:

The Odisha Marine Fisheries Regulation Act, 1983 regulates the marine fishing resource conservation and management within the territorial limit of the State. The Registration, Licensing and Renewal of fishing vessels, enforcement, adjudication and fishing ban are also regulated under the Act & Rules.

6. Safety of Fishermen at Sea:

The scheme component under Blue Revolution and Welfare of fishermen under the State Plan scheme envisages providing safety equipments like DAT, life buoy, life jacket to the sea going fishers. 2960 Distress Alert Transmitters (DAT) has been distributed to the marine fishermen for sea safety.

7. Marine Fish export from Odisha:

The total export value and volume of fish and fisheries products exported during last seven years is as follows:

Year	Export of Fish and Fishery products to overseas countries			
	Qty. in MTs	Value (Rs. in Millions)	Value in million US\$	Value in million Euro
2011-12	21078.00	7,927.60	125.83	113.25
2012-13	23691.00	9,084.80	144.20	129.78
2013-14	30980.00	18,170.70	300.39	280.00
2014-15	34767.00	20,691.72	342.27	311.49
2015-16	35612.00	17,918.10	270.18	237.41
2016-17	41828.00	22,047.00	332.35	279.17
2017-18	53344.00	31,000.00	411.09	368.25

16 . Publicity in Fisheries :

Information on various developments and activities taken up in the Department. The main aim is to reach the people of the State to make effective delivery of fisheries schemes to the targeted beneficiaries.

Print media: Special issue of Odia Quarterly Fisheries News letter "Matsya Darpan" was released by Hon'ble Minister Fisheries & ARD, Odisha during Krushi Odisha-2019 which emphasized on different fisheries activities of the Department and the ongoing schemes. The newsletters were distributed among the public as well as other line Departments. The Department has also published Leaflets, etc. and regularly publishes advertisements on various developmental schemes as well as sending weekly technical guidelines to different quarters. The Wall writing of various schemes were made at important places of districts/ block head quarters.

All India Radio & Doordarsan Programmes: 109 Fisheries programmes have been broadcasted by the All India Radio and 105 Doordarsan programmes have been telecasted during 2018-19. The programmes were very popular. Besides, the Fisheries development programmes were also telecasted through some new important channels like; Kalinga TV, News-18 etc.

Production of Video Programme & Documentary Films: Many success stories have been produced and telecasted through Developmental news programmes. Special fisheries programmes and Phone-in programmes have been telecasted through "Krushi Darshan" programme of Doordarsan and AIR. Arrangements are being made for telecast of advertisement on schemes in Doordarshan.

Melas & Fairs: Various exhibitions, workshops, awareness programmes & training programmes were organized at Block/District level and State level to demonstrate and create awareness on different activities of Department. The Department has

participated in state level Exhibition like- Krushi Odisha-2019 at Biju Pattnaik Playground, Baramunda, Bhubaneswar from 15th to 19th January, 2019, Adibasi Mela at Bhubaneswar, and Historic Baliyatra at Cuttack. Awareness on empowering Fishermen through Mobile advisory Services and other new schemes was executed in all districts. 30 successful fish-farmers of 30 districts at the rate of one from each district were awarded cash prize of Rs. 10,000/- each and felicitated in Krushi Odisha-2019.

Celebration of National Fish Farmers Day: Fish farmers Day was celebrated on 10th July in all the 30 districts with farmers meet. The day was celebrated to remember first hypophysation of carps by eminent scientists like Dr. K.H. Alikunni and Dr Hiralal Choudhury on 10.7.1957 in the Narayan Sagar Government fish farm of Angul. The day is celebrated by all fish lovers every day. The State level celebration was made at the Conference hall of Directorate during 2018-19 with participation of leading fish farmers & eminent aqua Scientists.

World Fisheries Day: World Fisheries Day was celebrated on 21.11.2018 in all the districts. The DFOs have organized farmers meets on the occasion and interaction technical sessions were made.

17. Odisha State Fishermen's Cooperative Federation Ltd (FISHFED):

FISH ON WHEEL VEHICLES :

10 nos. of ready to eat Canteen Van are being operated in BMC areas in the last year in PPP mode with an objective to provide fresh, hygienic and nutritious fish & fishery products to the consumers of BMC area at their choice of places. Another 04 nos. of Fish on Wheel vehicles have been introduced at Puri and Cuttack urban area @2 nos. at each town. More 02 nos. are going to be launched at Berhampur town very soon. There is provision of similar type of vans for the cities like Cuttack, Rourkela, Sambalpur, Baragarh, Jharsuguda & Angul towns under RKVY programme for the year 2018-19.



Inauguration of " Fish on Wheel " at Puri by the Collector, Puri

MODERN FISH SELLING RETAIL OUTLETS :

FISHFED has its own four nos. of "Chilika Fresh Kiosks" at Siripur, CRP Square, Sahid Nagar in Bhubaneswar and at Sambalpur in the name of Hirakud Fresh. 12 nos. of Modern and Hygienic Chilika Fresh are being operated by M/S Falcon Marines Exports Ltd. in PPP mode inside BMC area. Construction of another 7 nos. of such Hygienic Fish Selling Outlets are on progress at Bhadrak, Subarnpur, Nayagarh, Bolangir, Kalahandi and Puri in PPP mode. Steps are being taken to establish more and more such Kiosks in other parts of the State.



"Hirakud Fresh" at Sambalpur

"KANYA RATNA" scholarship to the meritorious girl child of PFCS Members :

Every year 30 nos. of girl children are awarded with scholarship @Rs10,000/- to the pass outs of +2 Science/Commerce/Arts examination who opt for higher education. This year 30 nos. of girl children for various PFCSs have been provided with scholarship for their higher studies in the main function of All India Co-operative Week Celebration held at Rabindra Mandap, Bhubaneswar on 20th November, 2018.



Award of "Kanyaratna" Scholarship

OBSERVATION OF 65th ALL INDIA CO-OPERATIVE WEEK :

FISHFED being the Apex Fisheries Co-operative Organisation in the State celebrated the 65th All India Co-operative Week from 14th to 20th November, 2018 like previous year. The main function was organised at Rabindra Mandap, Bhubaneswar with one exhibition-cum-workshop along with distribution of revolving fund, award of Kanya Ratna Scholarship, payment of insurance amount to the family of deceased fishermen and distribution of prizes to the best PFCs.



Celebration of " 65th All India Cooperative Week"

CONSTRUCTION OF FISHFED FISH TOWER :

It has been decided by Govt. to build one multi storied Office-cum-Commercial complex on and around the land of present Matsya Sadan building and for which the land has already been alienated by GA Department.

18 . Odisha Pisciculture Development Corporation (OPDC):

Odisha Pisciculture Development Corporation Ltd. incorporated in the year 1998 on 5th May and became functional w.e.f. 5th October by taking over the activities of erstwhile Odisha Fish Seed Development Corporation (OFSDC) Ltd. & Orissa Maritime Chilika Development Corporation (OMCAD) Ltd. is a unit under the administrative control of Department of Fisheries & ARD Department, Government. of Odisha with the mandate as follows:

- (1) Production and supply of best quality fish seed to fish farmers of Odisha as well as outside States.
- (2) Production and sale of high quality Nylon and HDPE Fish net webbings for fish farmers and fishermen of the state.

(3) Sale of quality fuel (HSD & MS) and Lubricant to the Fishermen Community operating trawlers, boats as well as surface transporters.

This corporation also has the scope to enter other business for the development of Fisheries Sector which will make the corporation stable and sustainable.

Target & achievements of OPDC during 2018-19

Sl. No.	Year	Target	Achievement
1	Spawn Production (nos. in Crore)	95.00	78.18
2	Fry Production (nos. in Crore)	22.67	18.52
3	Fish Net Webbing (Volume in MT)	50.00	25.20
4	HSD, MS & Lubricants (Volume in KL)	14230	13097

19 . FISHERIES STATISTICS

FISH PRODUCTION IN ODISHA (IN MT)					
Year	Freshwater	Brackishwater	Total Inland	Marine	Grand Total
2013-14	263862	30007	293869	120020	413889
2014-15	300964	35373	336337	133211	469548
2015-16	336216	40307	376523	144755	521278
2016-17	393730	61268	454998	153102	608100
2017-18	454189	79936	534124	150839	684963
2018-19 (P)	506608	94033	600641	158321	758962

YEAR-WISE RESOURCE-WISE FRESHWATER FISH PRODUCTION (IN MT)					
Year	Tanks/ponds	Reservoirs	Lakes/Swamps/Bheels	Rivers/Canals	Total
2013-14	230939	18940	2803	11180	263862
2014-15	261845	21831	2943	14345	300964
2015-16	289666	22761	4245	19544	336216
2016-17	331187	30068	4881	27594	393730
2017-18	393606	33990	4929	21664	454189
2018-19 (P)	442854	37388	5279	21087	506608

YEAR-WISE RESOURCE-WISE BRACKISHWATER FISH PRODUCTION (IN MT)				
Year	Culture shrimp	Estuaries	Chilika	Total
2013-14	12610	4461	12936	30007
2014-15	19254	4066	12054	35374
2015-16	23343	4729	12235	40307
2016-17	29409	5497	26362	61268
2017-18	58110	5468	16358	79936
2018-19 (P)	71615	5518	16900	94033

FISH PRODUCTION FROM CHILIKA LAKE (IN MT)				
YEAR	FISH	SHRIMP/PRAWN	CRAB	TOTAL
2013-14	7699.71	4927.66	308.97	12936.34
2014-15	7146.77	4572.32	334.58	12053.67
2015-16	7271.95	4564.54	398.77	12235.26
2016-17	12714.95	13295.39	351.37	26361.71
2017-18	11375.26	4706.71	276.37	16358.34
2018-19 (P)	11618.05	4951.37	331.90	16900.32

YEAR-WISE DISTRICT-WISE MARINE FISH PRODUCTION (IN MT)							
Year	Balasure	Bhadrak	Jagatsinghpur	Kendrapra	Puri	Ganjam	Total
2013-14	29819	11076	30395	7474	30938	10319	120020
2014-15	35201	11721	36632	7009	11659	30989	133211
2015-16	39327	12006	34503	9059	37979	11881	144754
2016-17	39490	12001	40284	9409	39598	12320	153102
2017-18	38017	12060	41319	8566	38906	11971	150839
2018-19 (P)	43133	13010	42469	9475	38033	12201	158321

IMPORT OF FRESHWATER FISH FROM NEIGHBOURING STATES	
Year	Qty. (in MT)
2013-14	26501
2014-15	38118
2015-16	46275
2016-17	35156
2017-18	40742
2018-19 (P)	49607

YEAR-WISE ANNUAL PER-CAPITA CONSUMPTION OF FISH	
Year	Annual Per-capita Consumption (in Kg/Annum)
2013-14	9.66
2014-15	11.06
2015-16	12.24
2016-17	13.49
2017-18	14.42
2018-19 (P)	15.38