



**STANDING COMMITTEE ON AGRICULTURE
(2017-2018)**

SIXTEENTH LOK SABHA

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING AND FISHERIES)**

FIFTY THIRD REPORT

**"SCHEME ON DEVELOPMENT OF INLAND FISHERIES AND
AQUACULTURE - AN ANALYSIS"**



**LOK SABHA SECRETARIAT
NEW DELHI**

July, 2018/Shravana, 1940 (Saka)

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"SCHEME ON DEVELOPMENT OF INLAND FISHERIES AND
AQUACULTURE - AN ANALYSIS"

Presented to Lok Sabha on	25.07.2018
Laid on the Table of Rajya Sabha on	25.07.2018



LOK SABHA SECRETARIAT
NEW DELHI

July, 2018/Shravana, 1940 (Saka)

COA No. **375**

Price : Rs.

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Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Fourteenth Edition) and Printed by

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COMPOSITION OF THE STANDING COMMITTEE ON AGRICULTURE (2016-17)
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20. Shri Jai Prakash Narayan Yadav
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RAJYA SABHA

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29. Shri R. Vaithilingam
30. Shri Shankarbhai N. Vegad
31. Shri Darshan Singh Yadav

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Shri Hukmdev Narayan Yadav - Chairperson

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18. Shri Virendra Singh
19. Shri Dharmendra Yadav
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- #21. VACANT

RAJYA SABHA

22. Sardar Sukhdev Singh Dhindsa
- ^23. Shri Rajmani Patel
- &24. Shri Narayan Rane
- *25. Shri Kailash Soni
26. Shri Mohd. Ali Khan
27. Shri K.K. Ragesh
28. Shri Ram Nath Thakur
29. Shri R. Vaithilingam
- \$30. Shri Harnath Singh Yadav
31. Dr. Chandrapal Singh Yadav

@ Shri Praveen Kumar Nishad, MP Lok Sabha has appointed as the Member of the Standing Committee on Agriculture w.e.f. 27.04.2018 vide CB-I note dated 27.04.2018

Vacant due to resignation of Shri B.S. Yeddyurappa from the Membership of Lok Sabha w.e.f. 18.05.2018 vide Bulletin Part-II Table Office (B) No. 6885 dated 19.05.2018

^ Shri Rajmani Patel, MP Rajya Sabha has appointed as the Member of the Standing Committee on Agriculture w.e.f. 02.06.2018 vide CB-I note dated 07.06.2018

& Shri Narayan Rane, MP Rajya Sabha has appointed as the Member of the Standing Committee on Agriculture w.e.f. 02.06.2018 vide CB-I note dated 07.06.2018

* Shri Kailash Soni, MP Rajya Sabha has appointed as the Member of the Standing Committee on Agriculture w.e.f. 02.06.2018 vide CB-I note dated 07.06.2018

\$ Shri Harnath Singh Yadav, MP Rajya Sabha has appointed as the Member of the Standing Committee on Agriculture w.e.f. 02.06.2018 vide CB-I note dated 07.06.2018

SECRETARIAT

1. Shri D.S. Malha - Joint Secretary
2. Shri Arun K. Kaushik - Director
3. Smt. Juby Amar - Additional Director
4. Ms. Divya Rai - Executive Assistant

INTRODUCTION

I, the Chairperson, Standing Committee on Agriculture (2017-2018) having been authorized by the Committee to submit the Report on their behalf, present this Fifty Third Report (Sixteenth Lok Sabha) on the subject "Scheme on Development of Inland Fisheries and Aquaculture - An Analysis" pertaining to the Ministry of Agriculture and Farmers Welfare (Department of Animal Husbandry, Dairying and Fisheries).

2. The Committee took evidence of the representatives of Ministry of Agriculture and Farmers Welfare (Department of Animal Husbandry, Dairying and Fisheries) on the subject at their Sittings held on 09.01.2017 and on 30.06.2017.

3. The Report was considered and adopted by the Committee at their Sitting held on 19.07.2018.

4. For facility of reference, the observations/recommendations of the Committee have been printed in bold at Part-II of the Report.

5. The Committee wish to express their thanks to representatives of the Ministry of Agriculture and Farmers Welfare (Department of Animal Husbandry, Dairying and Fisheries) for furnishing requisite information to the Committee in connection with examination of the subject.

6. The Committee would also like to place on record their deep sense of appreciation for the invaluable assistance rendered to them by the officials of Lok Sabha Secretariat attached to the Committee.

NEW DELHI;
24 July, 2018
02 Shravana, 1940 (Saka)

HUKMDEV NARAYAN YADAV
Chairperson,
Standing Committee on Agriculture

PART - I

CHAPTER - I

INTRODUCTION

INTRODUCTORY :

1.1 The Fisheries sector has been recognized as a powerful income and employment generator. It also stimulates growth of a number of subsidiary industries. At the same time, it is an occupation which provides livelihood for a large section of economically backward population of the country. More than 1.4 crore people in the country depend on fisheries and aquaculture for their livelihood. Indian fisheries are an important component of global fisheries, it being the second largest producer of fish in the world and second in inland fish production, next only to China. Fisheries sector occupies an important place in socio-economic development of the country.

1.2 Fisheries and Aquaculture are included in the State list, however, the Union Government supplements the efforts of the States / Union Territories (UTs) for development of the sector. Inland sector is by and large, fully in the domain of the State Governments while marine fisheries is a shared responsibility between the Central and coastal State Governments.

1.3 Fish production in India increased from 7.5 lakh metric tonnes in 1950-51 to 107.95 lakh metric tonnes in 2015-16. There has been a steady growth in inland fisheries sector at the rate of about seven percent per annum in the period 2012-13 to 2015-16. The inland fisheries resource potential in the country includes reservoirs 35 lakh ha, ponds and tanks 23.6 lakh ha, brackish water 12.4 lakh ha rivers and canals 19 lakh km.

1.4 The historical scenario of Indian fisheries reveals a paradigm shift from marine dominated fisheries to a scenario where inland fisheries has emerged as a major contributor to the overall fish production in the country. Within inland fisheries, there is a

shift from capture fisheries to aquaculture during the last two and a half decades. Freshwater aquaculture with a share of 34 percent in inland fisheries in mid-1980s has increased to about 80 percent in recent years. It has emerged as a major fish producing system in India as a result of initiatives taken by the Government. Fish Farmers Development Agencies (FFDA) were set up in various districts for delivering a package of technologies, practices, training and extension and for providing financial assistance to the beneficiaries. So far, about 0.65 million ha of water area has been brought under fish farming covering 1.1 million beneficiaries. Currently the average annual yield is around 3.0 tonnes/ha. At the same time training has been imparted to about 0.8 million fishers.

1.5 Although, inland fisheries have grown in absolute terms, the rate of growth in terms of its potential is not yet achieved. The vast inland resources include a network of rivers, canals, estuaries, floodplain lakes and the ponds and tanks located in different geographical regions. It comprises 0.19 million ha of rivers and canals, 1.2 million ha floodplain lakes, 2.36 million ha of ponds and tanks and 3.15 million ha of reservoirs.

1.6 The manmade *reservoir* resources cover more than 3.0 million ha water spread area and are mostly distributed in varied climatic environment congenial for fish growth. The average fish production potential was estimated at 250 kg/ha of reservoirs and about 350 kg/ha for wetlands. While reservoirs and freshwater aquaculture would be the two main pillars of growth, other resources such as upland water bodies, floodplain lakes and wetlands, irrigation canals, saline and waterlogged areas also need to be gradually mainstreamed to start contributing to the production. Another major activity in aquaculture sector is the cage/ pen culture in open waters, which has picked up very well in recent years. It offers vast potential for inland aquaculture in the country. The production potential from sustainable cage culture for table fish production is about 50 kg/m³ with enormous possibility for further expansion and intensification.

1.7 The freshwater fish farming is lacking in quality inputs in terms of seed, feed, health management and marketing support. Programs aimed at production and distribution of quality seed and feed for aquaculture and also culture-based-capture fisheries; husbandry of farmed species and availability of quality water are essential to optimize production and productivity from inland fisheries and aquaculture in the country.

1.8 The cold water resources are distributed mainly in the form of upland streams, rivers, lakes and reservoirs that are located at medium to high altitudes of Himalayan corridor such as Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal and all North-Eastern States. The Himalayan region has around 8,243 km long streams and rivers, 20, 500 ha natural lakes, 50,000 ha of reservoirs and 2500 ha brackish water lakes. These water bodies inhabit diverse kind of fish fauna of 258 cold water fish species. At present, the total fish production from upland areas constitute about 3 % of inland fish production of India which is a very small share to the overall production. Commercial farming of high value cold water species like exotic rainbow trout has been taken up successfully and estimable progress has been made. Jammu & Kashmir, Himachal Pradesh and Sikkim are the leading states in trout farming.

1.9 Brackish water estuaries or river mouth is another set of water bodies having the peculiarity of fluctuating salinity due to tidal effects which have huge potential for both fish and shell fish culture. Valuable fish like sea bass, pearl spot and shrimp could be cultured in large quantities. India has 1.24 million ha of brackish water area spread over all maritime States / Union Territories (UTs), but hardly 15 % of brackish water areas are developed for commercial farming. Shrimps, oysters, mussels, crabs, lobsters, sea bass, groupers, mullets, milk fish, cobia, silver pompano, pearl spot, ornamental fishes and sea weeds are being farmed to some extent. The Coastal Aquaculture Authority (CAA) is regulating these activities in saline and brackish water systems within 2 kms from the High Tide Line for sustainable development of coastal aquaculture sector.

1.10 In case of shrimp (*L. vannamei*) quality seed resources are an essential element of production. Hatchery and seed production techniques have so far been standardized for few commercial shrimps, crabs and fin fishes. Demonstration of feasibility of inland saline aquaculture in the state of Haryana and Punjab has opened up scope for bringing these resources under economic use which hitherto remained unfit for any other agricultural activity.

1.11 Ornamental fish farming, although a non-food activity also has a promising future and is likely to contribute to the overall growth of fisheries sector in the coming years in terms of foreign exchange earnings and additional livelihood opportunities both in the urban and rural areas.

(i) Thrust Areas:

1.12 It has been observed that inland fishery today is dominated mainly by the freshwater fishery. In order to enhance production, there is a need for diversification of fish production in other areas like integrated fish farming, cold water fisheries, riverine fisheries, capture fisheries, brackish water fisheries etc. The recent measures therefore have targeted Intensive Aquaculture in ponds and tanks through integrated fish farming, carp poly-culture, freshwater prawn culture, running water fish culture and development of riverine fisheries.

1.13 As informed by the Department of Animal Husbandry, Dairying and Fisheries, expansion of area under aquaculture has to become an important option to boost fish production. In this context, derelict water bodies could be immensely useful and could be an important resource to boost fish production for meeting the future fish demands of the country. Coastal Orissa for instance, is endowed with large areas of unutilized water

bodies like derelict canals and drains. Similarly, Brahmaputra basin of Assam has enormous beels lying idle. There are about 1.3 million hectares of beels and other derelict water bodies in the country. Bringing these water bodies into the ambit of fisheries will boost fish production tremendously and hence expansion of fisheries in these water bodies is one of the focus areas of the Department for increasing fish production.

1.14 Reservoirs, which are largely untapped in India, have great potential for development of fisheries. Reservoir Fisheries Development is therefore a thrust area of the Department. By promoting technologies like cage culture, the productivity of the reservoirs can be enhanced manifold. Due to large initial investment, this technology has so far not been successfully implemented in India.

1.15 The Government recognizes the need for availability of quality seed and feed for sustained growth in inland fish production in the long run. As per an estimate, the total fish seed required for optimal stocking in the existing ponds, new ponds and reservoirs is about 60,000 million fry. As against this, the seed production in 2015-16 was about 40,540 million fry. Thus there is a gap of about 19,460 million fry. Setting up of brood banks and hatcheries across the country, is therefore a priority area for the Department.

1.16 Responsible aquaculture and prevention and management of aquatic diseases, organic farming and induced breeding are some of the other challenges to be addressed in this sector for improving productivity.

1.17 The scheme on Development of Inland Fisheries and Aquaculture was started during 1973-74 as a Centrally Sponsored Scheme with the following objectives:

- Enhancement of inland fish production and fish productivity.
- Popularization of modern fish farming
- Creation of employment opportunities through fisheries.

- Diversifying aquaculture practices.
- Providing assistance to fish farmers engaged in aquaculture.
- Provide training to fish farmers of Fish Farmers' Development Agencies (FFDAs) and Brackish water Fish Farmers Development Agency (BFDA).

1.18 The structure and components of the scheme were as under:

- (i) Development of Freshwater Aquaculture
- (ii) Development of Brackish-water Aquaculture
- (iii) Coldwater Fisheries and Aquaculture
- (iv) Development of Waterlogged Areas
- (v) Productive Utilization of Inland Saline/Alkaline soils for Aquaculture.
- (vi) Integrated Development of Inland Capture Resources(reservoirs/rivers etc); &
- (vii) Innovative Projects.

1.19 Financial assistance in form of subsidy on developmental activities was shared on 75:25 basis by the Government of India and the State Government. The eligible subsidy was 20% for general category and 25% for SC/ST category including NE states.

1.20 Now, the Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying & Fisheries has 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, marine fisheries including deep sea fishing, mariculture and all activities undertaken by the National Fisheries Development Board (NFDB). The restructured Centrally Planned Scheme with Central Sector components on **Blue Revolution: Integrated Development and Management of Fisheries**, formulated at a total Central outlay of ₹3000 crore for five years, has the following components:

- (a) National Fisheries Development Board (NFDB) and its activities,
- (b) Development of Inland Fisheries and Aquaculture,
- (c) Development of Marine Fisheries, Infrastructure and Post-Harvest Operations,
- (d) Strengthening of Database & Geographical Information System of the Fisheries Sector,
- (e) Institutional Arrangement for Fisheries Sector and
- (f) Monitoring, Control and Surveillance (MCS) and other need-based Interventions.
- (g) National Scheme of Welfare of Fishers.

1.21 The main objectives of the Blue Revolution include:-

- (i) To increase the overall fish production in a sustainable manner for economic prosperity from the available water resources;
- (ii) To introduce new technologies in the sector for responsible and sustainable utilization of resources in an eco-friendly manner;
- (iii) To ensure food and nutritional security;
- (iv) To generate employment and export earnings; &
- (v) To ensure inclusive development and empower fishers and aquaculture farmers.

1.22 Focus areas for strategy implementation under inland fisheries and aquaculture as part of the Blue Revolution are as follows :

- freshwater aquaculture
- brackish water aquaculture
- cold water fisheries aquaculture
- saline / alkaline soils aquaculture
- wetlands aquaculture
- inland capture resources (reservoirs / rivers etc.)

- innovative projects

1.23 Interventions for optimal resource utilization and sustainable intensification of the overall fish production are as mentioned below:-

- Availability of quality fish seed for stocking in all types of water bodies and development of Brood-Stock Multiplication Centers for ensuring availability of quality brood stock for fish seed production in the existing and new hatcheries;
- Availability of quality formulated fish feed to promote feed based aquaculture;
- Adoption of better management practices in reservoirs, tanks and ponds through stocking of stunted and advanced fingerlings and post stocking production process;
- Utilizing beels/wetlands by stocking of fingerlings and supplementary feeding for increased fish production;
- Observance of ban period in reservoirs to allow auto stocking;
- Scaling up of farming of new fish varieties introduced for aquaculture diversification for production of high value table fish;
- Adoption of new technology in cage culture in reservoirs for sustainable intensified fish production;
- Adoption of pen culture for rearing fish seed to fingerling size in wetlands and reservoirs;
- Adoption of new technology of Re-circulatory Aquaculture System (RAS) for sustainable intensification of aquaculture;
- Skill development and capacity building in better management practices, seed certification, health management and disease surveillance;
- Training of fishermen and farmers in new technologies, sustainable intensification of fish productivity inland sectors; &

- Extending the reach of beneficiaries in welfare oriented schemes.

1.24 The Department of Animal Husbandry, Dairying and Fisheries has come up with a five point strategy for effective implementation under Blue Revolution. This strategy focuses on - productivity enhancement, infrastructure, modernization / new technologies, capacity building and welfare measures.

1.25 The Department has prepared a detailed Integrated National Fisheries Action Plan - 2016 (NFAP) for achieving 15.00 million tonnes over all fish production by 2019-20. It aims at enhancing fish production and productivity and to achieve the concept of Blue Revolution. The approach was initiated considering the various fisheries resources available in the country like ponds & tanks, wetlands, brackish water, cold water, lakes & reservoirs, rivers and canals and the marine sector. All States and UTs have been asked to prepare State Action Plan for 5 years in line with NFAP for achieving Blue Revolution in their States / UTs. The Blue Revolution aims at production and distribution of quality seed and feed for aquaculture and also for culture-based-capture fisheries; husbandry of farmed species and availability of quality water are essential to optimize production and productivity from inland fisheries and aquaculture in the country.

(ii) Funding Pattern under Blue Revolution :

1.26 Broad funding pattern for the new activities under the marine and inland fisheries development projects under the scheme are as below:

(a) 50% of the project/unit cost for General States, leaving the rest to State agencies/organizations, corporations, federations, boards, Fishers cooperatives, private entrepreneurs, individual beneficiaries, as the State may decide.

(b) 80% of the project/unit cost for North-Eastern/Hilly States (J&K, Uttarakhand and Himachal Pradesh), leaving the remaining 20% to State agencies/Organizations, Cooperatives, individual beneficiaries etc, as the State may decide.

(c) In the case of UTs, - the central funding is also limited to 50% share. The balance funding will be from the UT concerned or such percentage to be borne by the beneficiary as UT may decide. 100% funding will be done for projects directly implemented by the Government of India through its institutes/organizations and Union Territories.

(d) In the projects to be implemented by the UT Government directly as a governmental project (not to a private beneficiary project), the central funding will be full 100%. Similarly, in case of funding for central institutes and projects implemented by the centre directly, 100% funding will be done from the Centre.

1.27 On being asked about the State-wise and UT-wise details of projects receiving 100% funding and directly being implemented by the Government of India under Blue Revolution, the Department in its written reply submitted as under :

“The components/ sub-components receiving 100% funding by the Government of India under the Blue Revolution Scheme are:

- (i) National Fisheries Development Board (NFDB),
- (ii) Strengthening of Database & Geographical Information System of the Fisheries Sector,
- (iii) Assistance to Fisheries Institutes and
- (iv) Monitoring, Control and Surveillance (MCS) and other need-based Interventions.
- (v) Training, Skill Development and Capacity Building on fisheries activities.

Besides, 100% funding assistance is provided under Blue Revolution for the projects directly implemented by the Government of India through its institutes/ organizations and Union Territories.

Details of State-wise plan fund released with 100% funding during 2016-17 are as under:

(In lakhs)

Details of funds released to States / UTs, Institutes and other Agencies for Implementation of components under 100 % funding			
S.N.	States/ UTs/ Agencies	Components	Funds released
1.	Chhattisgarh	Database	20.14
2.	Maharashtra	Database	26.71
3.	Mizoram	Database	32.26
4.	CMFRI	Database	25.00
5.	NFDB	Blue Revolution, Training and Capacity Building	3239.03
6.	Fisheries Institutes	Assistance to Fisheries Institute	165.44
7.	Others	-do-	2.79
	Total		3511.37

*No funds released under MCS sub-component."

1.28 The Department in its written replies furnished the details of State/UT-wise beneficiaries under the component of Development of Inland Fisheries and Aquaculture. The details of beneficiaries under this component of Blue Revolution, during the years 2014-15, 2015-16 and 2016-17 are given in **Annexure - I.**

CHAPTER - II

INLAND FISHERIES SECTOR PRE AND POST BLUE REVOLUTION

A. FINANCIAL AND PHYSICAL TARGETS AND ACHIEVEMENTS OF THE FISHERIES SECTOR DURING THE LAST FOUR FISCAL YEARS OF THE TWELFTH PLAN (UP TO 2015-16) :

(i). Outlay and Expenditure of funds for the Fisheries Sector (before Blue Revolution) :

(Rs. in Crore)

Year	2012-13		2013-14		2014-15		2015-16		Total (w.r.t. Inland)
	Total	Inland	Total	Inland	Total	Inland	Total	Inland	
BE	340.70	40.00	371.50	40.00	480.96	50.00	476.95	36.65	Total Inland BE 166.65
RE	312.14	32.65	332.35	33.00	351.56	27.50	455.86	36.65	Total Inland RE 129.80
Actual Expenditure	298.33	31.41	318.13	31.04	353.36	26.32	362.04	34.30	Total Inland Expenditure 123.07

2.1 On being asked about the reasons behind the actual expenditure for the last four fiscals being only 94.81% of the RE for the same period, the Department in its written reply furnished that

“The main reason for less expenditure during the Financial Years 2012-13 to 2015-16 compared to RE was due to non-receipt of self-contained proposals from the State/ UT Governments on time and delay in submission of Utilization Certificates (UCs), physical and financial progress reports. Despite these delays, all efforts were made to utilize the allocated amount of funds and thus Division could attain an expenditure of 94.81% of the RE.”

2.2 When asked if such a reduction in expenditure had hampered implementation of this scheme in the Twelfth Plan period, the Department in its written reply furnished that

“No, it has not hampered the implementation of fishery development schemes of the Department in the Twelfth Plan Period as the fisheries development schemes were also implemented by the States / UTs availing assistance from other sources of funding in convergence with RKVY, NMPS etc in addition to the Central and State Plan allocations.”

(ii). Physical Targets and Achievements :

Year	2012-13	2013-14	2014-15	2015-16
Targeted area to be brought under aquaculture (Ha)	23,000	24,500	24,000	24,000
Area brought under aquaculture (Ha)	23,000	17,837	12,927	12,107
Number of beneficiaries	59,167	69,694	36,403	25,781

2.3 On being asked about the exact figure of the area covered under fresh water aquaculture, the Department submitted that since inception, the total area covered under freshwater aquaculture up to 2015-16 amounted to 8,97,097 ha.

2.4 State-wise details of the area brought under Freshwater Aquaculture is given in

Annexure - II.

2.5 On being asked about the reasons behind the failure of the Department to bring the targeted area under aquaculture during the years 2013-14, 2014-15 and 2015-16, the Department in its written reply stated that :

"The reason for bringing less area under aquaculture during the years 2013-14, 2014-15 and 2015-16 was mainly due to non-receipt of self-contained proposals from the State/ UT Governments on time. The budgetary cut at RE stage can also be attributed for lower achievement. Moreover, States / UTs started

diversifying the funds for establishment of fishery infrastructure facilities in order to handle the fish produced."

2.6 The Department in its written replies also apprised the Committee that during the financial year 2016-17, an area of 2336 ha has been brought under aquaculture against the target of 1980 ha.

2.7 On being asked about the reasons behind a constant decline in the number of beneficiaries in the fiscals 2014-15 and 2015-16 as compared to 2013-14, the Department informed that this was mainly due to non-receipt of proposals from the State/UT Governments and the budgetary cut to the Department at the RE stage.

B. FINANCIAL TARGETS AND ACHIEVEMENTS AND PHYSICAL TARGETS OF THE FISHERIES SECTOR UNDER BLUE REVOLUTION DURING 2016-17 :

(i). Financial allocation and Expenditure :

2.8 The restructured Centrally Planned Scheme with Central Sector components on **Blue Revolution: Integrated Development and Management of Fisheries** was formulated with a total Central outlay of ₹3000 crore for five years. The details of allocation and expenditure of this Central outlay is given in the following table :

(Rs. in Crores)

Blue Revolution (2015-20)	2015-17		Release 2015-17	% of Expenditure Finance Committee (EFC) Allocation	2017-18 BE
	Expenditure Finance Committee (EFC) Allocation	Actual Allocation			
3000	1014.95	880.11	860.72	86.71	400.73

2.9 On being asked to furnish details of BE, RE and Actual Expenditure figures for the last fiscal of the Twelfth Plan, the Department in its written reply submitted as under

"All the sub-schemes / components of the fisheries sector including the Development of Inland Fisheries & Aquaculture have now been subsumed under

the Umbrella Scheme of Blue Revolution from the Financial Year 2016-17. Therefore, there is no separate allocation for Inland Fisheries and Aquaculture component under the Blue Revolution Scheme. The total BE, RE and actual expenditure under Blue Revolution Scheme during the Financial Year 2016-17 are Rs. 450.00 crores, Rs. 424.25 crores and Rs. 424.11 crores respectively. Out of Rs. 424.11 crore released during the Financial Year 2016-17, Rs.324.00 crores have been released for the Inland Fisheries Sector.”

2.10 The Department in its written reply informed the Committee that under the Blue Revolution Scheme, out of the amount of Rs. 424.11 crores released to various States/UTs, an amount of Rs. 384.05 crore has been released to States/UTs for implementation of Blue Revolution Scheme of which, Rs. 94.06 crore was utilized by the States/UTs as on mid-June, 2017 and the balance amount of Rs. 40.06 crore was released to Institutes and other organizations.

2.11 The States/ UT-wise break-up of the funds released and utilization of the amount during the year 2016-17 under Blue Revolution scheme is given at **Annexure - III.**

2.12 When asked about the basis for allocation of funds to different components under the Blue Revolution and measures being adopted to increase allocation to inland fisheries and aquaculture sector which is in dire need of funds for development, the Department in its post evidence replies apprised the Committee as follows :

"Considering the various fisheries resources available in the Country like ponds & tanks, wetlands, brackish-water, cold water, lakes & reservoirs, rivers and canals and the marine sector, funds are being allocated for the development of these sectors.

The Department has prepared a detailed Integrated National Fisheries Action Plan-2016 (INFAP) for achieving 15.00 million metric tonne over all fish production

by 2019-20. The INFAP aims at enhancing fish production and productivity towards achieving the Blue Revolution.

The Blue Revolution aims at production and distribution of quality seed and feed for aquaculture and also culture-based-capture fisheries. Though inland fisheries sub-sector is posting a steady growth, many of the accessible resources are still untapped. Moreover, the present fish productivity (2.9 MT/ha) of freshwater aquaculture is far below the potential, which can be doubled with the right inputs, resulting in ample scope for vertical as well as horizontal enhancement. Accordingly, thrust has been given for the enhancement of productivity through application of technology, creation of Fish Fingerling Production Infrastructure, Establishment of Fish Feed Mills, Establishment of High Density Culture Enterprises and Post-Harvest Infrastructure for reduction of spoilage of harvested fish.

The fund released for different States/ UTs is demand based on first come, first served basis but before the release, proposals are scrutinized to ensure better utilisation of limited financial allocation. In the FY 2016-17, around 76% of total release under Blue Revolution have been released for the development of Inland Fisheries Sector alone."

2.13 When asked about the mechanism being adopted by the Department to ensure that the remaining 50% of funds in general category states and 20% funds in North eastern and Hilly States reach the intended beneficiaries on time and if there is any grievance redressal mechanism to address the problems faced by the beneficiaries due to delayed funding or non-funding by the State agencies or corporations etc., the Department in its written reply informed that :

"As per the approved guidelines of Blue Revolution, the remaining 50% funds in general category States and 20% of funds in North Eastern and Hilly States have

to be met by the respective State Governments through the State Plan allocation of the respective States or by the beneficiaries. The beneficiaries are identified by the respective State Governments and it is the responsibility of the States/ UTs to ensure the sanction and release of State's share (wherever applicable), which is being monitored periodically by the Department."

2.14 During the evidence the Committee noted that not sufficient proposals were received from beneficiaries for taking up schemes under the Blue Revolution. When queried about the ways in which Blue Revolution would be implemented when sufficient proposals are not received from beneficiaries and when the pond fish farmers are not taking interest in pisciculture, the Department in a written reply submitted as under :

"All the components and sub-components of Blue Revolution Scheme are being implemented through the Department of Fisheries of the respective State/ UT Governments. The beneficiaries are also identified by the State Government. Hence, the State/UT Governments have to take a pro-active role in identifying the beneficiary, submission of sufficient proposals to DADF based on the resources available for effective implementation of the Blue Revolution Scheme."

(ii). Physical Targets and their current status :

2.15 The Department, during the evidence, informed the Committee about various targets regarding Inland Fisheries. These include the following :

- development of **post-harvest fisheries infrastructure**;
- **increasing fish production** in inland and marine sector;
- **augmenting brood stock** for fish production and setting up of **Brood Stock Multiplication Centres (BMCs)**;

- adoption of new **technology in cage culture**; adoption of advanced technologies for fish production - example **Re-circulatory Aquaculture (RAS)**;
- **training of fishermen and promotion of skill development** and capacity building etc.

2.16 The Department in its written replies to questions asked by the Committee, apprised them of the present status of each of these physical targets as is discussed further in the chapter.

2.17 When asked about the steps being taken by the Department for development of **post harvest facilities** in coastal States and UTs, the Department in its written reply informed as under :

"The Department, under the component of Development of Infrastructure and Post Harvest Operations of the Blue Revolution Scheme provides assistance to the States/ UTs for establishment of fishing harbours and fish landing centres, new ice plants/ cold storages, renovation of existing ice plants/ cold storages, setting up of retail units / mobile fish markets, procurement of insulated/ refrigerated fish transport vehicles etc."

2.18 State-wise details of post-harvest fisheries infrastructure provided during 2016-17 are presented in **Annexure- IV**.

2.19 On being asked about the steps being taken by the Department to **augment production** from aquaculture and both inland and marine sources of fisheries, the Department in its reply informed that :

"For increase of inland aquaculture production, priority has been accorded for seed production through Mission Fingerling, establishment of fish hatcheries, Wetland development, cage culture in reservoirs, Re-circulatory Aquaculture System (RAS), Ornamental Fisheries, Brackish/ Saline water and Development of

cold water fisheries in mission mode. Integrated National Action Plan for fisheries has been developed. Based on the availability of resources, fisheries development activities were identified and States / UTs were requested for submission of Detailed Project Report (DPR) for consideration of funding assistance.

On the marine sector, Mariculture including open sea cage culture are the possible options through which production from marine sector may be enhanced, which has been conceptualized under Blue Revolution. Understanding the problems of coastal fishery resources, the Department has introduced a new sub-component of 'Assistance for Deep Sea Fishing Vessel' under the Blue Revolution Scheme in which 50% subsidy assistance to the extent of Rs. 40 lakh per deep sea fishing vessel is provided to the fishermen through the respective State Governments as a means of diversification of fishing."

2.13 The Department has also informed that it is focusing on filling up the critical gaps between existing production as against the potential for ensuring increased fish production from pond aquaculture (from present level of 2.9 MT to 3.7 MT/ha), reservoirs (from present level of 93.7K to 245.2 kg/ha), wetlands/ beels fisheries (from present level of 50.165 kg to 307.93 kg/ha).

2.14 When asked to provide State-wise details of the location of **Brood Stock Multiplication Centres** and about ways through which the Department plan to ensure **availability of brood stock** for fish seed production to the hatcheries, the Department in its written reply, apprised the Committee as under :

"One Shrimp Brood Stock Multiplication Centre (BMC) for *Litopenaeus vannamei* is already established and two more BMCs are under establishment in Andhra Pradesh for production of adult brood stock for supply of Brood stock to shrimp hatcheries for promoting shrimp aquaculture sector. It is also proposed to

consider three more BMCs considering the number of shrimp hatcheries and their seed production capacity, area under coastal aquaculture , sources of qualified overseas suppliers of SPF seed etc.

As far as freshwater fisheries is concerned, a central facility of National Fresh Water Fish Brood Bank (NFFBB) is established at Odisha wherein genetically improved fish brooder seeds of about 3 varieties of fish species are produced and supplied to the State Fisheries Departments for further establishment of fish brood banks at State level and to ensure availability of brood stock and supply to all fish hatcheries for quality fish seed production."

2.15 The physical targets on technology in cage culture, Re-circulatory Aquaculture System (RAS) and training and skill development in fishermen have been discussed along with the status of the sub-components of 'Development of Inland Fisheries and Aquaculture', in the following chapter.

C. ISSUE OF PENDING UTILIZATION CERTIFICATES :

2.16 On being asked about ways in which the Department ensures timely utilization of UCs by States and UTs and if it withholds funds or assistance meant for States or UTs in case the previously pending UCs have not been utilized, the Department in its written reply, apprised the Committee as under :

"Submission of physical and financial progress reports including Utilization Certificates are mandatory for release of funds to the States. Further release of funds to the States/ UTs are considered only after utilization of funds released earlier and submission of utilization certificates and physical and financial progress reports."

2.17 When asked about the reasons behind pending UCs from the States / UTs amounting to Rs. 289.90 crore as on 31st March, 2017, the Department in its written reply informed that :

"Many States/UTs have submitted the proposals during the last quarter of the Financial Year 2016-17 and accordingly, funds have been released to them. This has led to delay in utilizing the released fund by the States/ UTs. However, through regular review meetings, video conferencing and follow up letters, States/ UTs have been requested to utilize the amount released for the purpose for which it was released and to submit the UC immediately."

2.18 When asked about the steps being taken by the Department to tackle the problem of pending utilization certificates with the States and UTs, the Department in its written reply stated as under :

"Regarding the pending utilization certificates with the States and UTs, the Department regularly conducts monthly review meetings at the level of Secretary(ADF); monthly Video Conferencing at the level of Joint Secretary, and follow up with the States through letters. Besides, Regional Review Meetings are also being conducted in different regions with the States/ UTs to ensure effective implementation of scheme and specifically for utilization of funds and timely submission of utilization certificates and physical and financial progress reports."

CHAPTER - III

SCHEMATIC ANALYSIS OF THE COMPONENT 'DEVELOPMENT OF INLAND FISHERIES AND AQUACULTURE' OF BLUE REVOLUTION

A. STATUS AND ANALYSIS:

3.1 The Committee have been informed that at 107.61 lakh tonnes (2015-16), India ranks 2nd globally in fish production with as many as 1.5 crore fishers / farmers and small entrepreneurs engaged in the profession of fishing. The total fish production has increased from 7.5 lakh tonnes in 1950-51 (29.1% of which comes from inland fishing) to 107.61 lakh tonnes in 2015-16, of which inland fisheries contributes to 66.5% of the fish production. Fish production also ensures food and nutritional security in the country by way of being a rich protein source.

3.2 The Twelfth Plan saw higher growth in fish production from inland fishing as compared to that of marine production, as shown in the table below :

Year	Inland Production (LT)	Marine Production (LT)	% Inland Production share	Inland Growth (%)	Total Growth (%)
1950-51	2.18	5.34	29.00	-	-
1980-81	8.87	15.55	36.20	-	-
2012-13	57.19	33.21	63.26	8.03	4.32
2013-14	61.36	34.43	64.05	7.29	5.96
2014-15	66.91	35.99	66.55	7.04	4.89
2015-16	71.62	35.99	66.55	7.04	4.89
2016-17 (P)	78.68	37.39	67.89	9.86	7.00
CAGR (Compound Annual Growth Rate)				8.00	5.65

3.3 The fish production target under Blue Revolution is kept at 150 lakh metric tonnes by the end of the year 2019-20.

B. ACTIVITIES COVERED UNDER THE COMPONENT 'DEVELOPMENT OF INLAND FISHERIES AND AQUACULTURE' OF THE SCHEME ON BLUE REVOLUTION :

3.4 The component on Development of Inland Fisheries and Aquaculture mainly focuses on increasing fish productivity from the existing aquaculture farms and water bodies besides aquaculture area expansion and species diversification.

3.5 The activities covered under this component are :

- i. Construction of new ponds
- ii. Renovation of existing ponds
 - a. Renovation of Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) ponds
 - b. Rejuvenation of urban/semi urban / rural lakes tanks for culture
- iii. Input cost for freshwater fish culture and brackish water fish/shrimp culture
- iv. Establishment of fish seed hatcheries
- v. Establishment of freshwater/brackish water prawn hatcheries
- vi. Solar power support system for aquaculture
- vii. Cold water fisheries and aquaculture
 - a. Construction of permanent farming units and raceways
 - b. Running cold water fish culture in earthen units
- viii. Development of water logged areas
 - a. Development of waterlogged areas
 - b. Input cost
- ix. Productive utilization of Inland Saline/Alkaline waters for aquaculture
 - a. Construction of new ponds
 - b. Input cost
- x. Inland capture fisheries (village ponds & tanks)

- a. Fish seed rearing units
- b. Input cost
- c. Craft and gears
- d. Construction of landing centers
- e. Riverine Fisheries Conservation
- xi. Integrated development of reservoirs
 - a. Need based activities from a broader perspective to make self-resilient unit
- xii. Establishment of feed mills.
- xiii. Installation of cages/pens in reservoirs and other open water bodies.
- xiv. Re-circulatory Aquaculture System (Low cost)
- xv. Stocking of fingerlings in Beels/Wetlands
- xvi. Creation of portal for advisory services to farmers on mobile and internet
- xvii. Training and skill development of fish farmers and other stakeholders

➤ **Construction / Renovation of ponds :**

3.6 Under this activity, smaller water bodies in the form of tanks and ponds with a water spread area of up to 5ha are aimed for semi-intensive to intensive freshwater aquaculture.

3.7 When asked whether any evaluation has been to assess the actual number of ponds where fish cultivation is possible, the Department in its written reply submitted as under :

" No evaluation has been made so far to assess the actual number of ponds where fish cultivation is possible. The States will be requested to undertake such an assessment."

3.8 In response to the Committee's suggestion that the Department focus on scientific digging of ponds under MNREGA, the Secretary responded as under :

"..The Department of Animal Husbandry, Dairying and Fisheries along with the Department of Rural Development has furnished directives to all the States on this issue. Parameters regarding number of ponds to be dug under MNREGA, scientific parameters for digging and scientific fish farming practices in those ponds have all been ascertained under those directives."

3.9 On being asked about the funding provided to fish farmers regarding digging up of ponds, the Secretary (DAHDF), in a briefing held on 9th January,2017 apprised the Committee as under :

"..the Department offers a subsidy of 50% under Blue Revolution, for the said purpose. The remaining 50% is either provided by the States or spent by the farmers themselves, as decided by the respective State government."

➤ **Establishment of Hatcheries and Fish feed Mills and their quality standards:**

3.10 On being asked about the State-wise details of hatcheries available to fish farmers throughout the country and about the ways in which the Department assists fishermen in establishing hatcheries for Indian major carps and prawns etc., the Department in its written reply stated as under :

"The Scheme of Blue Revolution comprises the following components for establishment of hatcheries of Indian major carps and prawns:

- Establishment of fish seed hatchery for Indian major carps and other specific cultivable finfish.
- Establishment of freshwater/ brackish-water prawn hatcheries.

In addition, a specific activity namely 'Mission Fingerling Programme' has been initiated under which 20 potential States have been identified for establishment fish/prawn hatchery and seed rearing up to fingerling Stage."

3.11 Details on the State-wise hatcheries available up to 2016-17 in the country are given in **Annexure - V.**

3.12 On being asked about the viability of establishing feed mills / plants for inland fisheries and aquaculture practices in non-fishing areas of the country and about the ways in which the Department is working towards establishing small scale and medium sized feed mills/plants in the fishing areas of different States and UTs, the Department in its written reply submitted as under :

"Fish feed is one of the critical inputs for sustainable aquaculture. Fish production and productivity of diversified and high value fish species can be enhanced through feed based aquaculture practices. Besides, cage culture and pen culture are also being practiced in large open water bodies like reservoirs and wetlands including beels and chauras which requires large quantities of feed. Considering the importance of fish feed in sustainable aquaculture, the Department provides financial assistance to the States/beneficiaries for the establishment of small feed mills with capacity of 1 to 5 quintals per day and large formulated pellet feed plant with a capacity of 6 to 10 per hour under the Blue Revolution Scheme. All the States / UTs are requested to submit proposals for establishment of feed mills based on the requirement of the feed mill units in the States/UTs and assistance are released to the States/UTs accordingly."

3.13 On being asked about the steps taken by the Department to maintain quality standards for fish seeds, fish feed and fish varieties and about the details of measures taken to implement certification initiatives on fish and fish products, the Department in its post evidence replies submitted to the Committee that :

"Each State / UT adopts the measure for maintenance of the seed and feed quality. DADF supports such provisions through providing help to States/ UTs

such as good quality seed, improvement in culturable strains of fish. This Department regulates the entry of exotics under certain rules and regulations applicable presently."

➤ **Re-circulatory Aquaculture System (RAS) and Running Water Fishing:**

3.14 On being asked about Re-circulatory Aquaculture System (RAS) and ways in which it will help intensify aquaculture sustainably, the Department in its written reply informed that :

"Re-circulatory Aquaculture System is an indoor tank-based technology driven culture base system in which fishes are grown at high density under controlled environmental conditions. Re-circulating system filter and clean the water for recycling back through fish culture tanks and a filtering (bio-filter) system is necessary to purify the water and to remove or detoxify harmful waste products.

Advantages of RAS are : (a) high output of fish from minimal area, (b) very low water requirements as compared to pond aquaculture system or raceways, (c) reduced land needs due to the high stocking density, (d) reduction in wastewater effluent volume and is environment friendly, (e) increased bio-security and ease in treating disease outbreaks if any and, (f) ability to closely monitor and control environmental conditions to maximize production efficiency."

3.15 On being asked about fish farming in running water, the Secretary, during the evidence meeting held on 30th June,2017 apprised the Committee as under :

"..fish production has been very low in running water bodies around towns and cities due to various developmental projects such as hydro-power projects, like in case of Himachal Pradesh. These have disrupted the habitats of fishes and hence the fish production in running water has gone down. Fish production taking place in running water bodies around towns is affected due to excessive pollution of

water bodies around those areas. The Department is, however, trying to make running water suitable for fishing in areas where there are vast stretches of the same."

3.16 When asked about the steps being taken by the Department to encourage traditional fishermen to take to practices such as pond aquaculture with scientific techniques and about the details of the share of catch obtained from aquaculture in the area of inland fisheries and aquaculture, the Department in its written reply submitted as under :

"Steps taken by the Department to encourage traditional fishermen to take up pond aquaculture with scientific techniques are:

- (i) Training and exposure on scientific culture techniques,
- (ii) Supply of high quality seed and fish feed,
- (iii) Assistance in improvements of ponds to enhance productivity,
- (iv) Assistance in rearing and culture of high value diversified fish species,
- (v) Productive utilization of wetland waterlogged areas and inland saline/alkaline waters for aquaculture through pen culture,
- (vi) Assistance for procurement of disease control kits,
- (vii) Encouragement of low cost Re-circulatory Aquaculture System,
- (viii) Renovation of MNREGA ponds for fish culture etc.

It is estimated that about 80% of the share of Inland fish catch is obtained from Aquaculture activities."

3.17 When asked about the State-wise details of steps taken by the Department to promote aquaculture practice with a special focus on the NE States, the Department in its written reply stated that :

"In order to promote aquaculture activities in North Eastern States, financial assistance to the extent of 80% of the project/unit cost is provided to all North

Eastern States. Considering the potentiality of North Eastern States assistance was provided for the implementation of various aquaculture activities like construction of new ponds and tanks, renovation of existing ponds and tanks, construction of feed mills, establishment of fish seed hatcheries and seed rearing units, construction of race-ways, development of waterlogged areas, installation of cages and pens, input cost for aquaculture, establishment of retail outlets and assistance for training and capacity building. State-wise funds released to North Eastern States during the year 2016-17 for various fisheries activities are given below:

(Rs. in lakh)

S.N.	State	Amount Sanctioned	Central Share	Amount Released
1	Assam	2051.81	1641.45	1641.45
2	Mizoram	1191.37	959.50	959.50
3	Meghalaya	1212.02	1003.17	1003.17
4	Tripura	1085.00	867.88	867.88
5	Sikkim	598.95	479.16	379.16
6	Nagaland	1025.00	820.00	600.60

➤ **Passing on technology through training :**

3.18 On being asked whether any special training programme for imparting training to traditional fishermen in new technologies, skill development and capacity building had been undertaken by the Department and to provide State-wise details thereof, the Department informed that a total of 13,973 farmers / fishers had been trained in Financial Year 2017-18. The Department in its written reply also stated that :

"The Department conducts training and skill development programmes on various fisheries developmental activities of fish culture, capture and post-harvest processing to traditional fishermen in association with NFDB. The beneficiaries

for the training were identified by the respective State Governments. The State-wise details of trainings conducted during 2016-17 and the number of beneficiaries of the training programmes are as under:

S.No	States/UTs	No. of Beneficiaries
1	Andhra Pradesh	3500
2	Assam	20
3	Goa	200
4	Gujarat	500
5	Haryana	200
6	Jammu & Kashmir	20
7	Jharkhand	2000
8	Karnataka	910
9	Kerala	440
10	Madhya Pradesh	530
11	Manipur	300
12	Meghalaya	2924
13	Punjab	100
14	Tamil Nadu	90
15	Telangana	1009
16	Uttarakhand	350
17	West Bengal	880
	Total	13973

In addition, the traditional marine fishers are being trained for operation of deep sea long lining and onboard post-harvest handling of tuna and allied species in order to diversify the fishing activities from the near shore to deep sea."

3.19 Regarding transfer of technology, the representative of the Department, during evidence, apprised the Committee as under:

"...providing training for transfer of technology has been especially emphasized in rural areas. The Department aims at having a working plan to put this idea to practice. Valuable feedback received from Hon'ble Members on this particular subject will be incorporated within the plan so that the fish farmers as well as the nation are benefitted with this."

3.20 During the course of evidence, on being asked about the reasons behind non-inclusion of fishermen from the State of Mizoram in the training programmes undertaken by the Department to train people in fishing and other skills, the representative of the Department responded as under :

"The Mizoram State had not submitted any proposal for availing assistance for imparting training programme under the training/ capacity building component of Blue Revolution Scheme during the year 2016-17. However, as per the Annual Action Plan for Skill Development for 2017-18, programme for training 100 trainees have been proposed."

3.21 During the course of evidence, on being enquired about the details of training programmes being conducted to train fish farmers in the use of modern and scientific technology in fish cultivation, the representative of the Department informed :

"Training programmes are being imparted to all stakeholders including the farmers and fishers on use of modern and scientific technology in aquaculture activities involving the respective State Government, ICAR Fisheries Research Institutes, Krishi Vigyan Kendras (KVKs) etc."

3.22 When asked about the reasons for non-integration of indigenous / traditional technology of fish cultivation in the Blue Revolution Scheme, the Department in its written reply submitted as under :

"The principle and knowledge on the indigenous and traditional technology of fish cultivation was taken care of appropriately wherever feasible and applicable while formulating the Blue Revolution Scheme."

3.23 On being asked about the details and future plans of the Department regarding schemes or programmes to provide training to fishermen and farmers in new technologies and to promote skill development and capacity building in better management practices among them, the Department in its written reply stated as under:

"Yes. The Department of Animal Husbandry, Dairying and Fisheries has included a sub-component under the Blue Revolution scheme namely 'Training, Skill Development and Capacity Building to fish farmers and other stake-holders in all fisheries related activities both inland and marine fisheries' with 100% funding assistance. The beneficiaries for the training are identified by the respective State Government. In addition, this Department has prepared the Annual Action Plan for Skill Development in Fisheries Sector for the Financial Year 2017-18 for providing skill development/ training to about 25,000 stakeholders including hatchery owners, fingerling producers, farmers/ fishers, processing workers and retailers in the States and UTs. The Action Plan will be operationalized by the National Fisheries Development Board (NFDB) in partnership with the respective State/ UT Governments."

3.24 State/UT-wise & Category-wise tentative number of trainees proposed under Skill Development Plan for FY 2017-18 are given in **Annexure - VI**.

3.25 On being queried about providing training certificates to fisher folk after training them in modern and scientific fishing methods, the Secretary, during the evidence held on 30th June, 2017, informed the Committee as under :

"..the Department is working in this direction. Agriculture Skill Council of India, which has innovated a course of fish farming, comes under the Ministry of Skill Development. The Council also provides traditional knowledge regarding fishing, which is accounted for and for which trainees are provided certificates. The Department has collaborated with the Agriculture Skill Council of India and formulated a programme for training fishermen in modern and scientific methods of fish farming and also to disburse traditional knowledge of the same."

3.26 On being asked about capacity building training to fish farmers, the Secretary informed as under :

"..according to a figure, NFDB has, in the last 10 years helped around 2.15 lakh fish farmers raise their capacity and the Department is also focusing further on capacity building."

3.27 When asked about the details of measures adopted to improve extension services being provided to fisher communities, the Department in its post evidence replies apprised the Committee as follows :

"The Department of Animal Husbandry, Dairying and Fisheries has included a sub-component under the Blue Revolution scheme namely 'Training, Skill Development and Capacity Building to fish farmers and other stake-holders in all fisheries related activities both inland and marine fisheries' with 100% funding assistance. The beneficiaries for the training are identified by the respective State Government. In addition, this Department has prepared the Annual Action Plan for Skill Development in Fisheries Sector for the Financial Year 2017-18 for providing skill development/ training to about 25,000 stakeholders including hatchery owners, fingerling producers, farmers/ fishers, processing workers and retailers in the States and UTs. The Action Plan will be operationalized by the National Fisheries Development Board (NFDB) in partnership with the respective State/ UT Governments."

➤ **Assessment & harnessing of resource potential and sustainable practices in fishing :**

3.28 When asked about ways in which the Department plans to utilize the data obtained from mapping of water bodies to assess resource potential and its sustainable harnessing and about the steps being taken to cater to the rising need for practicing sustainable fish farming in the country, the Department in its written reply informed that :

"The Department has a scheme entitled "Strengthening of Database and Geographical Information System of the Fisheries Sector in which mapping of

water bodies of inland resources are captured. The Central Inland Fisheries Research Institute (CIFRI), Barrackpore is the nodal organization for collection of data base for inland fisheries resources and mapping of inland water bodies. Thrust areas like Mission Fingerling, establishment of fish hatcheries, Wetland development, cage culture in reservoirs, Re-circulatory Aquaculture System (RAS), Brackish/ Saline water and Development of cold water fisheries have been initiated in mission mode to enhance production and productivity through aquaculture from these mapped water bodies/fisheries resources during the ensuing years through the active participation of all the stakeholders and this would lead to sustainable fish farming in the existing water bodies."

3.29 When asked about the details of steps being taken by the Department to harness the potential of reservoirs in inland fisheries and aquaculture practices, the Department in its written reply stated that :

"Considering the scope of the reservoir fisheries resources, the Department has formulated a component of an Integrated development of reservoirs under the Blue Revolution Scheme. Under this, provisions are made for integration of various in-situ fisheries activities like establishment of hatcheries and seed rearing units in reservoirs, stocking of fish seeds, cage culture, setting up of feed mills, strengthening of bunds, de-silting, de-weeding, setting up of landing centers, cold storages, ice plants, fish transportation facilities etc."

3.30 When queried about the technologies being introduced or planned to be introduced by the Department for promoting responsible and sustainable utilization of resources in fisheries sector, the Department in its written reply submitted as under :

"Technologies introduced for promotion of responsible and sustainable utilization of resources in fisheries sector are scientific and intensified aquaculture practices, introduction of diversified high yielding varieties, modern

hatcheries, Re-circulatory aquaculture system (RAS), Integrated approach for reservoir fisheries development, In-situ rearing of fish seed for stocking in Inland water bodies, Cage Culture in reservoirs, Pen Culture in beels and wetlands, raising of cold water species in race-ways, ornamental fisheries, shrimp farming in coastal areas, mariculture including open sea cage culture etc."

3.31 The details of State/UT-wise potential resources identified under Blue Revolution for Financial Year 2017-18 are given in **Annexure - VII.**

3.32 When asked about the steps being taken to promote adoption of new technology in cage culture in reservoirs for sustainable and intensified fish production, the Department in its written reply submitted that :

"Cage aquaculture offers new opportunity for optimizing fish production from reservoirs and lakes through vertical expansion. To boost the production of fish through cage culture in reservoirs and large open water bodies in mission mode under Blue Revolution Scheme, 14 potential States have been identified namely Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand and Uttar Pradesh. A target for installation of cages in a phased manner has been earmarked for a period of four years, i.e. 2016-17 to 2019-20. This would further lead to additional fish production and fulfill the gap to achieve the additional fish production of 5 million tonnes by the end of 2020. It is proposed to take up cage culture activity on priority basis with the active participation of States."

3.33 On being asked about the details of steps being taken to ensure sustainable fishing practices in the country and if the Department plans to undertake awareness programmes to raise awareness and concerns in this regard among the fishermen, the Department in its written reply submitted as under :

"The Department organizes awareness programme, skill development programme, regional level workshops, open houses, exposure visits etc in order to ensure sustainable fishing practices through sub-ordinate offices and NFDB in coordination with State Governments. Other steps followed to ensure sustainable fishing practices are: Issue of order on uniform ban on fishing, guidelines on bio-security and environmental hazards, diversification of fishing practices, promotion of deep sea fishing etc."

3.34 During the course of evidence, on being queried about steps taken to prevent the use of formalin and other chemicals for preservation of fish catch, the Department submitted that :

"The States are being advised to take appropriate action for preventing the use of formalin and other harmful chemicals after fish catch. State/UT Governments are also advised to create awareness to prevent the use of formalin."

➤ **Development of Wetlands & Beels and utilizing river water :**

3.35 On being enquired about initiating steps in the direction of development of wetlands and water logged areas in the country and about the details of schemes, if any, formulated in this regard, the Department in its written reply informed that :

"The Department has initiated an Action Plan for Wetland Development in 7 identified States namely Assam, Arunachal Pradesh, Bihar, Uttar Pradesh, West Bengal, Manipur and Meghalaya based on their high potential areas for development of wet lands and water logged areas. All identified States have been advised to submit proposals under the Wetland Development Action Plan. During the Financial Year 2016-17, a waterlogged area of 245 ha has been developed with a central assistance of Rs. 427.95 lakhs and 2125 beels/wetlands were assisted for stocking of fish fingerlings with a central assistance of Rs. 63.5 lakhs."

3.36 During the course of evidence, on being asked about the initiatives being taken in West Bengal and Bihar for development of beels, the Department submitted that :

"The DADF has included a sub-component namely Development of Wetland and waterlogged areas under the component of Development of Inland Fisheries and Aquaculture in the Scheme of "Blue Revolution". Under this sub-component, financial assistance are extended for development of wet-lands like beels, chauras, mauns etc mainly for construction of pens and small cages for undertaking sustainable aquaculture. Financial assistance is also provided for procurement of critical inputs for finfish culture which includes cost of fish/prawn seed, feed, manure, disease prevention measures, transportation charges etc. For development of wetland in Bihar, Central Inland Fisheries Research Institute (CIFRI), ICAR, Barrackpore, West Bengal has been supported to develop four wetlands during the FY 2017-18 and West Bengal and Assam have been advised to take up wetland development projects as priority items."

3.37 When asked about the ways in which the Department ensures efficient utilization of funds being provided as assistance for development of wetlands and water logged areas, the Department in its written reply furnished that :

"The officers of the DADF and NFDB along with the officers of the Department of Fisheries of the respective States periodically visit the project sites to ascertain the status, progress and monitoring of implementation of approved projects both physically and financially for which funds were released and also to ensure efficient utilization of funds. In addition, regular review meetings and video conferencing are also arranged with the States/UTs to ascertain the progress of implementation of sanctioned projects under the scheme."

3.38 On being asked about the rehabilitation of wetlands, the Secretary, during the briefing meeting on 9th January, 2017, informed as under :

"...the Department has to work on various water logged areas such as beels in West Bengal etc. As stated earlier, the Department has laid special focus on the development of wetlands, which has never been done earlier."

3.39 When asked about the reasons for non-inclusion of wetlands / water logged areas under the scheme of 'Blue Revolution' despite such areas have a huge potential of serving as fishing grounds and being available in plenty in the coastal and other such areas of the country and also if the Department is taking any steps to include such areas under the scheme, so as to increase fishing avenues in the country, the Department in its written reply submitted as under :

"Sub-components like Development of Wetland and waterlogged areas have already been included under the component of Development of Inland Fisheries and Aquaculture in the Scheme of "Blue Revolution". Under this sub-component, financial assistances are extended for development of wet lands like beels, chauras, mauns etc. mainly for construction of pens and small cages for undertaking sustainable aquaculture. Financial assistance is also provided for input cost for finfish culture which includes cost of fish/prawn seed, feed, manure, disease prevention measures, transportation charges etc."

3.40 During the course of evidence, on being questioned about the kind of projects that can be implemented for utilizing river water coming from Gujarat to Rajasthan, the Department informed that :

"Fisheries activities like ranching of fish seed and culture of fish in small cages/ pens in suitable places wherever the water flow is ideal can be taken up in rivers."

➤ **Leasing out of water bodies and steps taken to promote aquaculture :**

3.41 On being enquired about guidelines for management of resources and leasing out of reservoirs in the States and about measures adopted to ensure fair practices while

leasing out reservoirs to fishing cooperatives etc., the Department in its post evidence replies informed as under :

"Inland Fisheries falls in the States/ UT List. Therefore, rules and regulations regarding Inland Fisheries are framed by respective State/ UT Governments which vary from State/ UT to State/ UT. However, the DAHDF issues advisories as and when needed for guidance and better management of Inland Fisheries Sector."

3.42 When asked about methods used by the Department to lease out water bodies to individual fishermen and fishing cooperatives; ways in which the Department carries out assessment of water spread areas and the grounds on which lease value is fixed, the Department in its post evidence replies submitted that:

"Each State/ UT follow their own mechanism of leasing of water bodies, and the lease value differs from State to State. This Department funds States/ UTs and other agencies to carry out assessment of existing water bodies which covers the collection and creation of database pertaining to various categories of water bodies including the water spread area."

3.43 On being asked about the measures adopted/ being adopted by the Department to ensure proper implementation of leasing policy concerning allocation of water bodies to different institutions for fishing and maintenance, the Department in its post evidence replies informed that :

"The subject is related to State/ UT Government and the onus for maintenance of water body lies with the owner of that entity. This Department however funds the construction/ renovation/ rehabilitation of water bodies to make them suitable for fish culture on approved unit costs under Blue Revolution."

3.44 When asked about the grounds on which Panchayats lease out smaller water bodies such as tanks and ponds and if there are mechanisms or policies which the

Panchayats must adhere to while leasing out smaller water bodies, the Department in its post evidence replies submitted that :

"The subject is related to State/ UT Government. Each State/ UT adopt their own policies in this regard."

3.45 On being enquired about the steps being taken to curb pilferage caused due to involvement of middlemen in the process of leasing out water bodies to the fishermen community, the Department in the post evidence replies apprised the Committee that :

"Leasing policy of water bodies is within the purview of States/UTs. States/UTs formulate their own rules and regulations in the light of interest of the fishermen community and other prevailing conditions."

3.46 On being asked about the challenges being faced by the Department in providing the fisher communities access to water bodies and the measures being adopted by the Department to overcome such challenges, the Department in its post evidence replies submitted as under :

"Each State/ UT follows their own policy regarding the leasing and utilization of water bodies. This Department advises the States/UTs to adopt better options which can be helpful in production enhancement and the benefits of the farmers."

3.47 When asked about the steps being taken by the Department to propel State Governments to promote fishery development in smaller water bodies that come under the direct control of Panchayats, the Department in its post evidence replies stated that :

"This Department has entered into a Memorandum of Understanding (MoU) with the Rural Development for convergence of MGNREGA ponds for optimum utilization of the water bodies for production enhancement. The States/ UTs have been advised to formulate Action Plan for these ponds created under MGNREGA for fish culture/ rearing of fingerlings."

3.48 When asked about the measures adopted/ being adopted by the Department to promote aquaculture practices in the smaller water bodies within the States, the Department in its post evidence reply informed as under :

"The smaller water bodies having sufficient water for fish culture are included for the development of fisheries in all States/UTs. The States/UTs are regularly advised to use these water bodies through adoption of aquaculture."

➤ **Innovation in inland fisheries, research collaboration and integration :**

3.49 When asked about the progress made by the Department in working on the components of coldwater fisheries and aquaculture, saline/alkaline soils for aquaculture, wetlands, integrated development of inland capture resources (reservoirs / rivers etc.) and other innovative projects, which are controlled by the Fish Farmers Development Agency (FFDAs & BFDAs) and about State-wise details of innovative projects undertaken or proposed to be undertaken in this regard, the Department in its written reply submitted as under :

"Under the component of Development of Inland fisheries and aquaculture of Blue Revolution scheme, the progress made by the Department on the components of cold water fisheries and aquaculture, saline/ alkaline soil aquaculture, wetland, Integrated development of Reservoir during 2016-17 are given below:

S. N.	Activity	Progress
1	Construction of Trout Raceways (No)	415
2	Construction of running water fish culture units (No)	155
3	Construction of Ponds in Saline/alkaline soil (Ha)	292
4	Development of waterlogged area (Ha)	245
5	Integrated Development of Reservoir (No)	28

The Department has provided assistance for undertaking two fisheries activities under the innovative projects. They are (i) establishment of one community hatchery unit for Rainbow Trout in Sikkim and (ii) procurement of 20 units of deboning machines in Punjab. Other innovative activities proposed for which assistance will be provided under the Blue Revolution Scheme are fisheries management & conservation, induction of new technology in fishing and allied activities including onboard handling of fish, diversification of species for aquaculture, new technologies in mariculture, fish culture, RAS, cage/pen culture including auto feed technology, energy efficient operation of post harvest infrastructure facilities such as FHS/FLCs etc, fisheries waste management, improvement in hygienic conditions of the post-harvest infrastructure facilities including deboning machine, post-harvest processing and value added products, promotional activities etc."

3.50 On being enquired about the lack of coordination between the Department and ICAR regarding research on fishing in various sources such as brackish water, freshwater etc., the representative of the Department, during evidence, apprised the Standing Committee as under :

"...the Department is striving towards this. The Department shall work with a sharper focus with the knowledge provided by the ICAR."

3.51 During the course of a briefing meeting on 9th January,2017, on being asked about incorporating traditional wisdom and techniques within modern and scientific methods of fishing, the representative of the Department submitted as under :

"..the Department will pay special attention to this and work on mechanizing traditional techniques. Secondly, as the Committee has stated, work will be done on having ICAR collate and use its research work with traditional techniques."

➤ **Measures to promote adoption of inland fisheries and aquaculture practices among fishermen:**

3.52 When asked to provide State-wise details of inland fisheries and aquaculture practices and the steps being taken by the Department to ensure that State Governments come up with promotional measures for helping adopt inland fisheries and aquaculture practices, the Department in its post evidence replies informed as under :

"This Department has formulated a National Integrated Fisheries Action Plan (NIFAP) with a view to double the fish production, wherein pond aquaculture, cage culture and reservoirs, wetland development and re-circulatory aquaculture system have been identified as major aquaculture practices. Accordingly, priority areas have been identified for each State/UT."

3.53 On being asked about the steps taken to promote organized fish farming at the grass root level, mechanism to ascertain proper post harvesting and processing facilities to the fishermen and also the steps being taken to provide deserving prices to fisher communities in lieu of their sale, the Department in its post evidence replies informed that :

"The Department (DADF) has prepared an Action Plan for the development of Inland Fisheries. The thrust areas have been identified and focused attention is paid to fill the critical gaps on priority basis. Department is promoting development of exclusive fish markets and fish transportation facilities to ensure optimum price of the harvested fisheries resources."

3.54 When asked about the details of steps being taken by the Department to ensure that the fishermen community are allowed an easy access to quality seed, technology and credit etc. and whether the Department has any mechanism to ascertain this, the Department in its post evidence replies submitted that :

"To ensure supply of quality fish seeds, National Freshwater Fish Brood Bank (NFFBB) has been established by National Fisheries Development Board (NFDB) at Bhubaneswar, Odisha. The latest technologies in aquaculture are transferred to the farmers by Central Institute of Freshwater Aquaculture (CIFA), Central Institute of Brackish water Aquaculture (CIBA) and other training Institutes under capacity building programmes. The State/UT Fisheries Department's promote development of fisheries through the beneficiary oriented schemes and facilitates credit, subsidies and Skill Development etc."

➤ **Role of Fish Cooperatives in inland fisheries:**

3.55 When asked for State-wise details of any assessment of fishing cooperatives made by the Government, the Department in its post evidence replies stated that :

"The database of the fisheries cooperatives in the country up to 2014 has been collected by the National Federation of Fishermen's Cooperatives Ltd. (FISHCOPFED). It is informed that there are a total of 18,550 fishers cooperatives functioning in the country."

3.56 State-wise details of fisheries cooperatives is given at **Annexure - VIII.**

3.57 When asked about the steps taken to involve fishing cooperatives in harnessing the potential of rainfed fisheries sector, the Department in its post evidence replies furnished as under :

"The rainfed water bodies are usually natural ponds, irrigation reservoirs and wetlands. All these 3 categories of water bodies are covered in the Blue Revolution Scheme to harness their potentials."

3.58 On being asked about the measures adopted to ensure that the fishing cooperatives perform their functions of leasing out water bodies, providing credit

facilities, inputs etc. properly; mechanisms to ensure that these cooperatives function optimally and to hold them accountable for the work allocated to them, the Department in its post evidence replies informed as follows:

"The Department is supporting the Fisheries Cooperatives under the Blue Revolution Scheme through the States/ UTs Governments to utilize their potential for development of fisheries. Fisheries Department of each State/ UT is responsible for registration, monitoring and support for functioning of the cooperatives. Besides, a national federation namely National Federation of Fishermen's Cooperatives Ltd. (FISHCOPFED) is also functioning for overall guidance of the State, District and primary level cooperatives to bring them in the main stream of fisheries development activities."

➤ **Fish production and productivity :**

3.59 On being asked about the projects being implemented for increasing fish productivity, the Department in its written replies submitted as under :

"The main objective of the implementation of the Central Plan Scheme on Blue Revolution is the enhancement of Fish Production and Productivity both in Inland and Marine Sector. The following sub-components/ activities are being implemented by the DADF for increasing the fish productivity:

- Construction/ renovation of ponds/ tanks for culture of finfish and shell fish,
- Providing input cost for aquaculture of finfish and shell fish,
- Establishment of fish seed hatcheries, nurseries and rearing units,
- Construction of raceways for trouts,
- Development of waterlogged areas including beels,
- Establishment of fish feed mills,

- Installation of cages and pens in reservoirs and open water bodies,
- Establishment of Re-circulatory Aquaculture System (RAS),
- Stocking of fish fingerlings in wetlands,
- Integrated development of reservoirs,
- Mariculture activities including open sea cage culture,
- Operation of Deep Sea Fishing Vessels,
- Imparting Training, Skill Development and Capacity Building to the Stakeholders on various fisheries activities."

3.60 When asked about ways in which fish production has gone up irrespective of low expenditure, the Department in a written reply informed the Committee as under :

"Fisheries is a State Subject. Hence, in addition to the Financial assistance released by the Centre, respective State/UT Governments also provide State Plan allocations for implementation of fisheries development activities depending upon the resources available in their States. Besides, funds received from RKVY are being used for development of fisheries sector. Large numbers of private entrepreneurs are also involved in large scale commercial production of fish in some States, which is also one of the major reasons for enhancement of fish production. The production level of fish has also increased due to adoption of advanced technologies like cage culture in reservoirs, pen culture in wetlands, RAS, culture of diversified fish species, use of quality fish seeds, better management practices etc."

3.61 On being asked about the measure being adopted by the Department to ensure that the gap between the potential and actual yields of rainfed water bodies is reduced and the present low productivity levels enhanced, the Department in its post evidence replies furnished as below:

"Productivity enhancement is one of the major thrust areas under Blue Revolution. Department is promoting feed based aquaculture for productivity enhancement in the existing water bodies through stocking of advanced fingerlings and creation of other necessary infrastructure."

➤ **Harnessing true potential of the Inland Fisheries Sector :**

3.62 When asked about measures being adopted by the Department to ensure that the fisheries sector, which contributes a great deal to the GDP and to the food basket, is developed in a way so as to contribute to its maximum capacity and steps taken to ascertain that the livelihood of millions of poor fishermen in the country is secured, the Department in its post evidence replies submitted as under :

"The Department has prepared a detailed National Fisheries Action Plan-2020(NFAP) for development of fisheries, for the next 5 years with an aim of enhancing fish production and productivity towards Blue Revolution in fisheries. The approach was initiated considering the various fisheries resources available in the Country like ponds & tanks, wetlands, brackish water, cold water, lakes & reservoirs, rivers and canals and the marine sector. All States and UTs have been advised to prepare their State Action Plan for 5 years in line with NFAP for achieving Blue Revolution in their States/UTs. The detailed National Action Plan include Mission Cage culture, Mission Brackish water/Saline Aquaculture, Mission fingerling, Mission Ornamental fisheries, Fisheries & Aquaculture development Fund(FIDF), Cold Chain & Infrastructure development, Fisheries entrepreneurship development programme etc."

3.63 On being enquired about the presence and details of any special policy on Inland Fisheries within the Government and if not, the reasons behind absence of the same, the Department in its post evidence replies submitted to the Committee that :

"At present there is no National Policy for the development of Inland Fisheries. However, the Department has realized the need for such a policy and taken initiative for formulating an Inland Fishery policy in the near future."

PART – II

OBSERVATIONS / RECOMMENDATIONS

DEVELOPMENT OF INLAND FISHERIES AND AQUACULTURE :

1. The Committee note that the scheme on Development of Inland Fisheries and Aquaculture was started with the objectives of enhancing inland fish production and productivity, popularizing modern fish farming, creating employment opportunities, diversifying aquaculture practices and training fish farmers through specialized agencies etc. However, most of these objectives are yet to be achieved, as a majority of our fishermen are still to learn the use of modern and scientific fish farming techniques. Despite being the second largest fish producing nation with a production of 107.61 lakh tonnes (2015-16) and as many 1.5 crore fishers/farmers and small entrepreneurs engaged in fishing, the actual potential of our inland fisheries sector has still not been realized. The historical scenario of Indian fisheries reveals a paradigm shift from marine dominated to inland fisheries, wherein the latter has emerged as a major contributor to the overall fish production in the country. Moreover, with the current lack of technology and technical know-how in the deep sea fishing sector, inland fisheries sector remains the only area which can contribute significantly to overall fish production, if exploited with a systematic and sustainable approach. Inland fisheries sector requires laser sharp focus and attention as its potential has still not been completely harnessed.

The Committee note that although inland fisheries have grown in absolute terms, the rate of growth in terms of its potential is yet to reach the desired level.

Furthermore, it has been observed that inland fishery is dominated mainly by freshwater fishery, thus necessitating the need for diversification of fish production with practices such as intensive aquaculture in different water bodies. The Committee feel that the Reservoir Fisheries Development as a thrust area of the Department needs to be taken further so as to enhance the productivity of reservoirs. There is a need to provide quality inputs in terms of seed, feed, health management and marketing support to areas of freshwater fish farming, cold water fishing, coastal aquaculture and brackish water fishing, as also on ornamental fish farming which holds immense potential in terms of providing foreign exchange earnings and additional livelihood opportunities. The Committee also observe that commercial shrimp farming in inland saline water bodies is another area that the Department needs to lay emphasis on. Therefore, the Department need to follow the approach of democratic decentralization and allow States the freedom to take up the scheme on Development of Inland Fisheries and Aquaculture at the basic level while also ensuring transparency and accountability of the States and UTs. The Committee, therefore, recommend that the Department make full fledged attempts in the aforesaid areas and come up with a mechanism to sustainably harness the actual potential of the inland fisheries sector. The Committee would like to be apprised of the steps taken by the Department in this direction.

MERGER OF THE CENTRALLY SPONSORED SCHEMES (CSS) UNDER BLUE REVOLUTION :

2. The Committee appreciate the vision of the Department in creating an enabling environment for integrated and holistic development of the fisheries sector with the merger of the earlier centrally sponsored schemes under the

umbrella of Blue Revolution. This holds a special relevance for the sector of inland fisheries and aquaculture, for its true potential still remains unexplored. Besides calling for optimal resource utilization and sustainable intensification of fish production, this also requires consistent efforts for filling critical gaps between the existing production and actual potential of the inland fisheries and aquaculture sector, while also ensuring that this merger provides for an equal participation and involvement of all stakeholders, right from the basic to the top-most level. The Committee, while sounding a word of caution, would like the Department to ensure that the ideas and plans laid out under this merger are well implemented and do not meet the same fate as the scheme on Development of Inland Fisheries and Aquaculture, which, since its inception in 1973-74 was mired with under achievement of targets due to tardy implementation. This resulted in our inland fisheries sector witnessing a stunted growth and development even after a lapse of four decades. Keeping in view the existent ground situation and the aims and ideals of the Blue Revolution, the Committee strongly recommend that the Department not just come up with a foolproof mechanism to ensure participation and involvement of individual States/UTs and stakeholders in harnessing the actual potential of inland fisheries and aquaculture, but also lay due emphasis on the aspect of implementation, so as to enhance fish production and productivity of the fisheries in general and of the inland fisheries and aquaculture in particular. The Committee would like to be apprised of the progress made by the Department in this regard.

FUNDING PATTERN OF THE SCHEME UNDER BLUE REVOLUTION :

3. The Committee note that the funding pattern of the scheme after its subsumption under Blue Revolution is divided between the Centre and States in the ratio 80:20 for North East & Hill states and 50:50 in the case of other States and UTs. While central funding is taken care of by the Centre, balance funding is done by the State/UT concerned or borne by the beneficiary, as may be the discretion of the respective State/UT. The Committee feel that the States need to come up with their matching share of funds allocated for the said schemes well in time, as this will allow timely release of central funds for the same. There needs to be a mechanism to ensure that the intended funds reach deserving beneficiaries on time and that beneficiaries identified under the scheme are able to reap benefits well within the intended timeframe and do not suffer for want of State funds. The Committee therefore, recommend that the Department impress upon the States/UTs to come up with their matching share of funds under this scheme, so as to allow the beneficiaries / State machinery an unhindered access to central funds for the growth and development of inland fisheries in their respective States.

4. Of the approved central outlay of Rs. 3000 crores allocated to the Centrally Sponsored Schemes (CSS) under Blue Revolution for 5 years, the approved outlay for the year 2017-18 was Rs. 598 crore. The Committee are, however, concerned to note that out of this approved outlay, only Rs. 400.73 crore has actually been allocated to the Centrally Sponsored Schemes under Blue Revolution for the year 2017-18. The Committee are of the considered opinion that this is too meagre an amount, given the fact that only a portion of this would be allocated to the component of Development of Inland Fisheries and Aquaculture, which itself has

numerous sub-components to be funded. Keeping in view the pivotal nature of this component, the Committee recommend that the Department take up the matter with the Ministry of Finance at the highest level since Blue Revolution, being a flagship scheme of the Department should not be starved of funds and allocations for the scheme should be made in accordance with the funds earmarked for it. The Committee would like to be apprised about the steps taken by the Department in this direction.

PHYSICAL TARGETS AND ACHIEVEMENTS :

5. While lauding the achievement of the Department in bringing an area of 2336 hectare under aquaculture, against a target of 1980 hectares, the Committee also note that during the period from 2013-14 to 2015-16 the Department failed to bring the targeted area under aquaculture, the reason for which has been attributed to non-receipt of timely proposals from States and UTs and budgetary cut at RE stage, along with diversification of funds by them for purposes other than that of aquaculture. Moreover, a constant decline in the number of beneficiaries in 2014-15 and 2015-16 as compared to 2013-14 has also been associated with non-receipt of proposals from States and UTs. Not being satisfied with this stereotypical reply of the Department, the Committee recommend that stringent measures be adopted to ensure that States and UTs furnish self-contained proposals to the Department in a timely manner and also that execution of schemes and achievements of set targets are not delayed due to such reasons in future. The Committee also recommend that the Department lay special emphasis on the implementation aspect of the schemes and programmes formulated under the Blue Revolution and strive to achieve the set physical targets.

6. Taking note of the efforts made by the Department in augmenting production from aquaculture through programs such as Mission Fingerling and development of cage culture and cold water fisheries, the Committee also observe that focus has been laid on mariculture and coastal fishery resources through various programs conceptualized under the Blue Revolution. Moreover, the setting up of a National Fresh Water Fish Brood Bank (NFFBB) to aid Brood Stock Multiplication and provide genetically improved seeds is also a welcome step in the direction of ensuring availability of quality seeds to fish farmers. The Committee desire that the Department ensures that steps taken to augment fish production actually see the light of the day and achieve desired results. They further urge the Department to ascertain that schemes to provide training to fish farmers, those aimed at promoting skill development and capacity building and other welfare oriented schemes reach the desired beneficiaries in a timely manner.

ISSUE OF PENDING UTILIZATION CERTIFICATES :

7. The Committee are unhappy to note that the Department has, time and again failed to effectively tackle the issue of pending utilization certificates with the States and UTs. The Committee express strong displeasure over the fact that utilization certificates amounting to Rs.289.90 crore have been pending as on 31st March, 2017. Needless to say, under-utilization of funds leads to the vicious cycle of lower allocations in subsequent years and concomitantly leads to downsizing of targets. The Committee, therefore, feel that the extant mechanism in place needs to be re-looked into and necessary corrective measures need to be undertaken for liquidation of outstanding UCs in a time bound manner ensuring unhindered release of Central funds for effective implementation of schemes, besides also ascertaining that the funds being provided to the States and UTs are

being utilized for the same purpose for which they are provided. The Committee, therefore, recommend that corrective measures may be undertaken to address this vexed issue at the earliest. The Committee would like to be apprised of the action initiated in this regard.

ESTABLISHMENT OF HATCHERIES AND FISH FEED MILLS AND THEIR QUALITY STANDARDS :

8. While observing the steps taken by the Department, such as 'Mission Fingerling Programme', for establishing hatcheries and feed mills throughout the country, the Committee also note with concern that when asked about the viability of such feed mills in non-fishing areas of the country, the Department has yet again provided a hackneyed reply stating that it has requested States / UTs to submit proposals for the same. The Department has failed to apprise the Committee about the viability of establishing feed mills in non-fishing areas and repercussions of the same. Deprecating such an attitude of the Department, the Committee recommend that the Department, while providing replies to questions raised by the Committee, furnish the desired information about the issues raised by them. The Committee further recommend that the Department undertake adequate measures to come up with and to effectively implement certification initiatives regarding fish and fish products, both under the import and export category. The Committee would like to be apprised of the steps taken by the Department in this regard.

RE-CIRCULATORY AQUACULTURE SYSTEM (RAS) AND RUNNING WATER

FISHING :

9. While taking note of the fact that about 80% of the share of inland fish catch is obtained from aquaculture activities, the Committee appreciate the schemes of the Department in encouraging traditional fish farmers to take up aquaculture activities with scientific techniques. Further, the assistance provided to fishers in establishing hatcheries and promoting aquaculture practices with a special focus on North East States, are welcome steps in the direction of creating an enabling environment for fish farmers to take up scientific fish farming in aquaculture. The Committee also welcome the efforts of the Department regarding the idea of Re-circulatory Aquaculture System (RAS) and feel that it is a scientific and sustainable method of fish farming and if implemented properly, has the potential to increase fish production exponentially. The Committee, therefore, recommend that the Department come up with a working mechanism to encourage fish farmers to take up RAS practices and also ensure easy availability of required funds and infrastructure to fish farmers taking up such practices. Besides, while taking note of the issues cropping up while practicing fish farming in running water around towns and cities, the Committee also recommend that the Department take adequate measures to make running water suitable for fishing in areas where there are vast stretches of the same.

TRAINING AND SKILL DEVELOPMENT :

10. The Committee have been informed that the National Fisheries Development Board (NFDB) conducts training and skill development programmes to train traditional fishermen in fisheries developmental act. such as fish culture, capture, post-harvest processing etc., beneficiaries for which are identified by respective

state Governments. The Annual Action Plan for skill development in fisheries sector as operationalized by the NFDB calls for skilling various stakeholders in numerous scientific fishing practices. While appreciating the efforts of the Department on this front, the Committee feel that the Department needs to bring about inclusiveness in implementing such programmes, laying special emphasis on the North Eastern States and other hilly areas as non-percolation of knowledge and skill development programmes renders these areas backward and under-developed. The Committee, therefore recommend that the Department pay special attention to include fishermen and other stakeholders in these areas while conducting skill development programmes and workshops, so as to bring them at par with fishermen of other areas. The Committee also recommend that the Department work towards imparting special training to progressive fishermen and enable them to act as Master Trainers who, in turn, will train fishers in order to have a better reception and retention of the skills and techniques provided to these fishers during training. The Committee may be apprised of the steps taken by the Department in this regard.

ASSESSMENT & HARNESSING OF RESOURCE POTENTIAL AND SUSTAINABLE PRACTICES IN FISHING :

11. While appreciating the efforts of the Department in mapping of water bodies through schemes such as 'Strengthening of Database and Geographical Information System (GIS) of the Fisheries Sector', the Committee also take note the idea of integrated development of reservoirs through integration of various in-situ fishing activities. The Committee have also been informed about practices such as cage culture being promoted to help fishers adopt new technology in inland fishing. The Committee recommend that the Department come up with

adequate measures to put these ideas to practice so as to increase the production from the inland fisheries sector. The Committee would like to be informed about the steps being taken in this direction.

12. The Committee are aggrieved over the issue of indiscriminate use of resources and unsustainable farming practices leading to environmental damage and loss of indigenous fish breeds. The Committee are also unhappy with the fact that despite the scheme on Development of Inland Fisheries and Aquaculture being in place for more than four decades, the Department has failed to undertake any evaluation to assess the actual number of ponds where fish cultivation is possible. The Committee, therefore, recommend that the Department undertake an assessment of the number of water bodies available for fish cultivation, besides ensuring that resources are utilized sustainably and the rehabilitation of wetlands is taken up with a mission mode approach.

DEVELOPMENT OF WETLANDS & BEELS AND UTILIZING RIVER WATER :

13. The Committee express concern over the fact that though the Department is providing financial assistance for the development of wetlands like beels, chauras etc. for undertaking sustainable aquaculture, yet it has not undertaken any evaluation to assess the actual number of ponds, wetlands, water logged areas and other water bodies in the country, where fish cultivation is possible. Being of the firm opinion that an assessment of the available water resources with the potential for fish harvesting is an absolute necessity as it not only helps formulate better and State/UT-specific policies regarding harnessing the potential of local water bodies, but will also help in deriving accurate estimates regarding future production. The Committee strongly urge the Department to undertake an evaluation to assess the actual number of water bodies with fishing potential

within each State and UT. Furthermore, the Department has provided information about an Action Plan for Wetland Development in 7 States of Assam, Arunachal Pradesh, Bihar, Uttar Pradesh, West Bengal, Manipur and Meghalaya based on their high potential areas for wetland development and water logged area development. The Committee, therefore, desire that such action plans be prepared for other States as well, so that water bodies can be utilised optimally and their potential explored fully. The Committee further recommend the Department that during exploration of the true potential of water bodies and wetlands for inland fisheries, the natural habitat of other species dwelling within the wetlands and water bodies should not be lost sight of.

LEASING OUT OF WATER BODIES AND STEPS TAKEN TO PROMOTE AQUACULTURE:

14. The Committee note that the Department has formulated a National Integrated Fisheries Action Plan (NIFAP) to double fish production and encouraging States and UTs to come up with promotional measures for helping adopt inland fisheries and aquaculture practices. However, while noting that the policies regarding leasing and utilization of water bodies fall under the States, the Committee are desirous to know about the State-specific challenges faced by individual States and UTs in leasing out water bodies. Besides, the Committee are dissatisfied with the fact that the Department provided no concrete reply to the Committee on being queried about the availability of credit facilities to fish farmers. The Committee recommend that the Department pursue the cause of fisheries being treated at par with the agriculture with the Government at the highest level so as to provide the fish farmers an easier access to institutional credit.

15. While appreciating the efforts of the Department regarding entering an MoU with the Rural Development for convergence of MGNREGA for pond utilization and production enhancement, the Committee also desire the Department to ensure that smaller water bodies are not neglected and that individual States take adequate measures to use these through adoption of aquaculture, besides also ensuring that fishers are paid deserving prices for their catch. They further recommend that the Department take up with the States individually, the issue of policy formulation by States regarding leasing out of water bodies by the Panchayats. The Committee would like to be apprised of the steps taken by the Department in this direction.

INNOVATION IN INLAND FISHERIES, RESEARCH COLLABORATION AND INTEGRATION :

16. While noting the initiatives undertaken by the Department for innovation in inland fisheries through initiatives such as farming of Rainbow Trout in Sikkim and procurement of de-boning machines in Punjab, the Committee also observe that ideas related to allied activities, fish management & conservation as well as diversification of species have also been proposed. The Committee while appreciating the efforts of the Department in encouraging innovation in the inland fisheries sector, are however, concerned to note that there still exists a gap in coordination between the Department and the Indian Council of Agricultural Research (ICAR) regarding research on fishing in various sources like brackish water, freshwater, cold water etc. Besides, the Committee also feel that much work needs to be done in the area regarding fusion of traditional knowledge and wisdom with the modern and scientific techniques of fishing. The Committee, therefore, recommend that the Department ensure involvement of all stakeholders

in the process of encouraging innovation in inland fisheries, besides also taking concrete action to integrate traditional ideas with present day methodology of modern and scientific fish farming along with motivating fish farmers to adopt innovation.

ROLE OF FISH COOPERATIVES IN INLAND FISHERIES :

17. The Committee note that as per the database maintained by the National Federation of Fishermen's Cooperatives Ltd. (FISHCOPFED) up to 2014 there are a total of 18,550 fish cooperatives functioning in the country. These fish cooperatives are guided and supported by the States/UTs which are responsible for their registration, monitoring and functioning support while the FISHCOPFED provides overall guidance to State, District and primary level cooperatives to utilize their potential for development of fisheries. The Committee, however, are disappointed to note that when specifically asked about the measures adopted by the Department to ensure that the fishing cooperatives perform their functions of leasing out water bodies, providing credit facilities, inputs etc. properly; the mechanisms put in place to ensure that these cooperatives function optimally and to hold them accountable for the work allocated to them, the Department failed to provide any concrete reply. Besides, the Department also failed to apprise the Committee of any mechanism to ensure that the States/UTs ascertain better management practices of inland fisheries within their territories as also following fair practices while leasing out water bodies and reservoirs to fishing cooperatives within the State. The Committee, therefore, recommend the Department to direct the States and UTs to come up with a mechanism to measure the performance of the fish cooperatives and to ensure their accountability. Despising the fact that no set procedure is followed while leasing out water bodies and reservoirs to

cooperatives, the Committee recommend that the Department direct the States and UTs to formulate proper guidelines for leasing out and maintenance of State resources to the fish cooperatives. The Committee would like to be apprised of the steps taken by the Department in this direction.

18. The Committee, while taking note of the fact that inland fisheries is a State subject, feel that the Department must, besides issuing advisories and guidelines to States regarding rules and regulations for inland fisheries, must also have in place a mechanism to ensure transparency in the process of leasing out water bodies by States to fishing cooperatives. The Committee, therefore, strongly recommend that the Department come up with clear cut measures to guard the interests of the fish cooperatives working towards developing inland fisheries and making it a profitable enterprise. The Committee also recommend that the Department encourage States and UTs to formulate policies to support and enhance the role of fishing cooperatives and to attract and involve youth and entrepreneurs in making inland fisheries a profitable enterprise. The Committee would like to be apprised of the steps taken by the Department in this direction.

FISH PRODUCTION AND PRODUCTIVITY :

19. The Committee are aware that various components under the umbrella of Blue Revolution are being implemented to augment fish production and productivity, however, advanced technologies like cage culture, culture of diversified fish species, Re-circulatory Aquaculture systems (RAS) better management practices etc. are yet to percolate down to the basic level. The Committee are of the opinion that these technologies, unless made affordable and accessible to the traditional fisherman may not yield desired results in term of increasing fish production. The ideal of having a National Fisheries Action Plan

(NFAP) and State/UT specific action plans has the potential of dramatically magnifying fish production and multiplying the productivity of the inland fisheries sector, provided this is implemented with the involvement of individual States, UTs and various other stakeholders. The Committee are also concerned to note that issues such as non-availability or restricted availability of quality fish seed and feed for aquaculture; non-proliferation of scientific techniques such as aquaculture, culture-based capture fisheries; sub-optimal resource utilization, as is the case with ponds, reservoirs, wetlands beels etc., non-observance of ban period in reservoirs to allow auto stocking; unsustainable intensification of fish production and poor management practices are some of the serious impediments that the Department needs to tackle before the inland fisheries sector can be made sustainably productive. These obstacles are preventing in tapping the true potential of the inland fisheries and thus need to be intercepted with utmost caution. The Committee, therefore, recommend that the Department take into consideration these issues while formulating plans and program for augmenting fish productivity and productivity of the inland fisheries & aquaculture sector. The Committee would like to be apprised of the steps taken by the Department in this direction.

HARNESSING TRUE POTENTIAL OF THE INLAND FISHERIES SECTOR :

20. While appreciating the effort of the Department in formulating a National Fisheries Action Plan - 2020 (NFAP) to harness the potential of various fisheries resources such as ponds & tanks, wetlands, brackish & fresh water, cold water, marine sector, lakes & reservoirs, rivers & canals etc., the Committee are concerned to note that the Department has remained mute on the prospect of ensuring State Action Plan, on the lines of NFAP, specific to each State and UT.

The Committee urge the Department to not just stop at issuing advisories to States and UTs, rather ensure that uniformity is maintained in such endeavors with each State and UT coming up with a need based model. Moreover, such action plans not only lead the way forward in terms of developing the particular sector but also provide scope for increasing entrepreneurial activities in the said sector. This is a way of ensuring that entrepreneurs willing to indulge in the inland fisheries and aquaculture sector are not deterred by policy paralysis or lack of infrastructure and opportunities, rather are encouraged to take up entrepreneurial ventures in this sector with the State providing a mechanism to facilitate the same. The Committee, therefore, while strongly advocating for the cause of State and UT specific development of inland fisheries and aquaculture sector, urge the Department to put in place a mechanism to ensure that individual States and UTs come up with State and UT specific Fisheries Action Plans for harnessing the true potential of the fisheries sector. The Committee also strongly recommend that the Department formulate a National Inland Fishery Policy for the development and upkeep of the Inland Fisheries Sector in the country.

21. The Committee are aggrieved to note that fish farming as an activity has no coverage under any insurance provided by the Government and neither is there any exclusive scheme or policy to provide relief to fish farmers during natural calamities. Moreover, despite contributing a great deal to the GDP and to the food basket, the fisheries sector is not treated at par with agriculture. The Committee strongly desire that the Department take up this issue at the highest level and put in place a mechanism, commensurate with the needs of the fisher community, to provide an insurance cover to fish farming as an activity and an insurance risk cover to fish farmers against natural calamities such as tsunamis, cyclones etc.,

to provide adequate opportunities for training and extension services to the fishermen as also to improve the condition of the facilities already being given out to the fishermen and their families. The Committee would like to be apprised of the steps taken by the Department in this direction.

New Delhi
24 July, 2018
02 Shravana, 1940 (Saka)

HUKMDEV NARAYAN YADAV
Chairperson
Standing Committee on Agriculture

State/UT-wise Details of the beneficiaries under the component of Development of Inland Fisheries and Aquaculture					
S. No.	Name of State/UT	2014-15	2015-16	2016-17	Total
1	Andhra Pradesh			637	637
2	Assam			416	416
3	Bihar			1260	1260
4	Chhattisgarh	7880	6563	224	14667
5	Goa			86	86
6	Gujarat			24	24
7	Haryana	2480		197	2677
8	Himachal Pradesh		44	157	201
9	J&K			192	192
10	Jharkhand			2822	2822
11	Karnataka			177	177
12	Kerala			216	216
13	Madhya Pradesh	1963	2142	457	4562
14	Maharashtra			286	286
15	Manipur	13964	2880		16844
16	Meghalaya			99	99
17	Mizoram	2605	1015	142	3762
18	Nagaland	185	557	52	794
19	Odisha		2982	707	3689
20	Puducherry			11	11
21	Punjab			13	13
22	Rajasthan			180	180
23	Sikkim			151	151
24	Tamil Nadu			177	177
25	Telangana			846	846
26	Tripura			1169	1169
27	Uttar Pradesh	6459	9598	57	16114
28	Uttarakhand			195	195
29	West Bengal	867		333	1200
30	A & N Islands			25	25
	Total	36403	25781	11308	73492

Area covered under freshwater aquaculture :

S. N	State/UT	Total area covered (ha) upto 2015-16
1	Andhra Pradesh	4405
2	Arunachal Pradesh	2418
3	Assam	5404
4	Bihar	25786
5	Chhattisgarh	20805
6	Goa	400
7	Gujarat	81971
8	Haryana	26603
9	Himachal Pradesh	1011
10	J&K	9223
11	Jharkhand	9548
12	Karnataka	62225
13	Kerala	35458
14	Madhya Pradesh	99400
15	Maharashtra	36602
16	Manipur	7306
17	Meghalaya	798
18	Mizoram	7613
19	Nagaland	9999
20	Odisha	46407
21	Puducherry	1043
22	Punjab	51303
23	Rajasthan	12313
24	Sikkim	300
25	Tamil Nadu	21816
26	Tripura	13311
27	Uttar Pradesh	170105
28	Uttarakhand	425
29	West Bengal	133099
	Total	897097

ANNEXURE - III

State/UT-wise details of funds released and utilized during the FY 2016-17 under Blue Revolution Scheme				
(Rs. in Crore)				
S.N.	States / UTs	Funds released	Funds utilized/ UCs received	UCs Pending
i	ii	iii	iv	v
1	Andaman & Nicobar	0.54	0.00	0.54
2	Andhra Pradesh	18.97	7.61	11.36
3	Arunachal Pradesh	0.00	0.00	0.00
4	Assam	16.41	0.00	16.41
5	Bihar	19.48	0.00	19.48
6	Chhattisgarh	13.47	11.57	1.90
7	Daman & Diu	0.00	0.00	0.00
8	Goa	10.00	0.00	10.00
9	Gujarat	3.87	0.00	3.87
10	Haryana	11.22	6.19	5.03
11	Himachal Pradesh	10.82	10.82	0.00
12	Jammu & Kashmir	11.11	4.06	7.05
13	Jharkhand	23.00	0.00	23.00
14	Karnataka	28.71	19.03	9.67
15	Kerala	12.98	0.00	12.98
16	Lakshadweep	0.00	0.00	0.00
17	Madhya Pradesh	14.00	10.40	3.61
18	Maharashtra	20.52	0.00	20.52
19	Manipur	0.00	0.00	0.00
20	Meghalaya	10.03	0.00	10.03
21	Mizoram	13.77	0.00	13.77
22	Nagaland	9.66	4.10	5.56
23	NCT Delhi	0.00	0.00	0.00
24	Odisha	25.94	3.05	22.89
25	Puducherry	10.00	2.61	7.39
26	Punjab	9.99	3.65	6.34
27	Rajasthan	2.62	0.00	2.62
28	Sikkim	3.79	0.03	3.76
29	Tamil Nadu	24.93	5.00	19.93
30	Telangana	14.65	0.00	14.65
31	Tripura	8.68	5.94	2.74
32	Uttar Pradesh	17.61	0.00	17.61
33	Uttarakhand	9.55	0.00	9.55
34	West Bengal	7.74	0.00	7.74
	Total BR	384.05	94.06	289.90

Details on State wise post-harvest fisheries infrastructure facilities provided during 2016-17 :

S.N.	State/Component	New fishing harbors/ fish landing centers	Modernization/Up-gradation of existing FH	Ice plants (New)	Cold storage	Ice plants cum cold storage	Renovation of existing ice plants	Refrigerated & insulated trucks	Auto rickshaws	Motor cycles with ice box	Bicycle with ice box	Establishment of retail/wholesale fish outlet	Setting up of mobile/retail fish outlet (Kiosk)
1	Andhra Pradesh			60				10				1	50
2	Chhattisgarh			3				0	38	166	800	20	
3	Goa	1		3	3			19	20	20			5
4	Jammu & Kashmir					25		0	20	1016			
5	Jharkhand				1			0					
6	Karnataka					78	120	9		150		3	3
7	Kerala	0						0				50	
8	Madhya Pradesh			2				0		14		20	
9	Maharashtra	2	1	1				0				4	
10	Meghalaya							0				5	
11	Odisha							0	50	500		0	
12	Punjab							0				20	25
13	Rajasthan							0				1	
14	Tamil Nadu	1						0				2	
15	Telangana							0				2	
16	Tripura							0	51			0	
17	Uttar Pradesh							0	6	56	84	1	
18	Uttarakhand							1					
19	West Bengal							3		100		0	
Total		4	1	69	4	103	120	42	185	2022	884	129	83

Details on the State-wise hatcheries available up to 2016-17 in the country :

S.N.	State	Existing Number of Hatcheries
1.	Andhra Pradesh	268
2.	Arunachal Pradesh	8
3.	Assam	407
4.	Bihar	152
5.	Chhattisgarh	73
6.	Goa	1
7.	Gujarat	24
8.	Haryana	15
9.	Himachal Pradesh	9
10.	Jammu & Kashmir	9
11.	Jharkhand	120
12.	Karnataka	28
13.	Kerala	15
14.	Madhya Pradesh	71
15.	Maharashtra	49
16.	Manipur	11
17.	Meghalaya	8
18.	Mizoram	12
19.	Nagaland	8
20.	Odisha	124
21.	Punjab	33
22.	Rajasthan	12
23.	Sikkim	6
24.	Telangana	19
25.	Tamil Nadu	82
26.	Tripura	34
27.	Uttar Pradesh	235
28.	Uttarakhand	7
29.	West Bengal	458
	Total	2298

Number of Trainees proposed under Skill Development Plan for FY 2017-18 :

S.N	States/UTs	Ponds	Wet Lands	Brackish /Saline Water	Reservoirs	Total
1	2	3	4	5	6	7
1	Andhra Pradesh	2600	0	500	1100	4200
2	Arunachal Pradesh	50	50	0	0	100
3	Assam	450	150	0	0	600
4	Bihar	500	100	0	50	650
5	Chhattisgarh	400	0	0	200	600
6	Goa	50	0	50	0	100
7	Gujarat	150	0	200	700	1050
8	Haryana	100	0	100	0	200
9	Himachal Pradesh	50	0	0	150	200
10	Jammu & Kashmir	100	0	0	0	100
11	Jharkhand	300	0	0	250	550
12	Karnataka	1500	0	50	1400	2950
13	Kerala	50	0	300	100	450
14	Madhya Pradesh	350	0	0	900	1250
15	Maharashtra	400	0	200	700	1300
16	Manipur	50	50	0	0	100
17	Meghalaya	50	50	0	50	150
18	Mizoram	50	0	0	50	100
19	Nagaland	50	0	0	0	50
20	Odisha	500	0	1000	500	2000
21	Punjab	100	0	50	0	150
22	Rajasthan	150	0	450	400	1000
23	Telangana	1150	0	0	1000	2150
24	Tamil Nadu	300	0	150	950	1400
25	Tripura	150	0	0	50	200
26	Uttarakhand	50	0	0	50	100
27	Uttar Pradesh	700	100	0	350	1150
28	West Bengal	1450	100	550	50	2150
	Total	11800	600	3600	9000	25000

ANNEXURE - VII

State/UT-wise Potential resources Identified under Blue Revolution for FY 2017-18									
S.N	State/UT	Inland Sector							Ornamental Fisheries
		Brackish/Saline water	Cage Culture	RAS	Mission Fingerling	Cold Water	Mariculture	Infrastructure	
i	ii	iii	iv	v	vi	vii	viii	xi	xii
1	Andaman & Nicobar				✓		✓	✓	
2	Andhra Pradesh	✓	✓		✓		✓	✓	
3	Goa	✓	✓		✓		✓	✓	
4	Gujarat	✓	✓		✓		✓	✓	✓
5	Karnataka	✓	✓		✓		✓	✓	✓
6	Kerala	✓	✓		✓		✓	✓	✓
7	Maharashtra	✓	✓	✓	✓		✓	✓	✓
8	Odisha	✓	✓	✓	✓		✓		✓
9	Puducherry	✓					✓	✓	
10	Tamil Nadu	✓		✓	✓		✓		✓
11	West Bengal	✓		✓	✓		✓		✓
12	Daman & Diu						✓		
13	Lakshadweep						✓	✓	
14	Assam			✓	✓				✓
15	Bihar		✓	✓	✓				✓
16	Chhattisgarh		✓	✓	✓				
17	Haryana	✓		✓	✓				
18	Himachal Pradesh				✓	✓			
19	Jharkhand			✓	✓				
20	Madhya Pradesh		✓	✓	✓				
21	Telangana		✓	✓	✓				
22	Uttar Pradesh		✓	✓	✓				
23	Delhi		✓	✓	✓				
24	Jammu & Kashmir				✓	✓			
25	Meghalaya		✓	✓	✓				
26	Mizoram			✓	✓				
27	Nagaland			✓	✓				
28	Punjab	✓	✓	✓	✓				
29	Rajasthan	✓	✓	✓	✓				
30	Sikkim				✓	✓			
31	Tripura			✓	✓				
32	Uttarakhand		✓		✓	✓			
33	Arunachal Pradesh				✓	✓			
34	Manipur		✓	✓	✓				

Database of Fisheries Cooperatives in India :

S.N	Name of State	No. of State Fedn.	NO. of Regional Fedn.	No. of DFCS	No. of PFCS	Inland	Marine	Total Membership
1.	Andhra Pradesh	1		13	2289	1858	431	2,58,411
2.	Telangana	1		10	3933	3933	0	2,52,202
3.	Assam	1			272	272		43,845
4.	Bihar	2			510	510		4,10,007
5	Chhatisgarh	1		3	765	765	0	26,154
6.	Gujarat	1		2	263	57	206	26,045
7.	Goa				20	8	12	1,503
8.	Himachal Pradesh				45	45	0	5,837
9.	Jammu & Kashmir				1	1		18
10.	Jharkhand	1			384	384	0	22,853
11.	Karnataka	1		2	418	319	99	2,04,689
12.	Kerala	1			386	156	230	3,48,466
13.	Maharashtra	1	2	36	3315	2961	354	3,32,636
14.	Madhya Pradesh	1		1	596	596	0	25,493
15.	Manipur	1		3	240	240	0	18,433
16	Meghalaya				18	18	0	611
17	Mizoram	1			47	47	0	1,656
18.	Nagaland				267	267	0	9,234
19.	Odisha	1	1	2	657	317	340	1,38,143
20.	Punjab			1	1	1	0	18
21.	Puducherry	1		1	64	12	52	58,525
22.	Rajasthan			1	34	34	0	4,130
24.	Sikkim				8	8	0	230
25.	Tamil Nadu	1		11	1353	360	993	6,01,620
26.	Tripura	1			142	142	0	22,967
27.	Uttar Pradesh	1		19	1011	1011	0	54,521
28.	Uttarkhand				13	13	0	634
29.	West Bengal	1		20	1433	1191	242	92,759
31.	Arunachal Pradesh				11	11	0	230
32.	Andaman & Nicobar Island	1			41	0	41	1,361
33.	Daman & Diu				7	0	7	3,176
34.	Lakshadweep	0	0	0	6	6	0	2910
34.	Haryana			1	0	0	0	11
	Total	21	3	126	18,550	15543	3007	29,69,328

**STANDING COMMITTEE ON AGRICULTURE
(2016-17)**

MINUTES OF THE 9TH SITTING OF THE COMMITTEE

The Committee sat on Monday, the 09th January, 2017 from 1100 hours to 1310 hours in Committee Room '139', Parliament House Annexe, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS

LOK SABHA

2. Prof. Ravindra Vishwanath Gaikwad
3. Smt. Raksha Nikhil Khadse
4. Md. Badaruddoza Khan
5. Dr. Tapas Mandal
6. Shri Janardan Mishra
7. Shri Devji Mansingram Patel
8. Shri Mukesh Rajput
9. Shri C.L. Ruala
10. Shri Satyapal Singh (Sambhal)
11. Shri Virendra Singh
12. Shri Jai Prakash Narayan Yadav

RAJYA SABHA

13. Shri Sambhaji Shahu Chhatrapati
14. Shri Janardan Dwivedi
15. Shri Vinay Katiyar
16. Shri Modh. Ali Khan
17. Shri Ram Nath Thakur

SECRETARIAT

1. Shri U.B.S. Negi - Joint Secretary
2. Shri C. Vanlalruata - Deputy Secretary

LIST OF WITNESSES

MINISTRY OF AGRICULTURE & FARMERS WELFARE (DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING AND FISHERIES)

<u>S.No.</u>	<u>NAME OF THE OFFICER</u>	<u>DESIGNATION</u>
1.	Shri Devendra Chaudhry	Secretary (ADF)
2.	Shri Aditya Kumar Joshi	JS (Fisheries)
3.	Shri P.R. Meshram	Director (Fy- Stats)
4.	Dr. Paul Pandian	Fisheries Development Commissioner
5.	Shri Shankar Laxman	Joint Commissioner (Fisheries)

NATIONAL FISHERIES DEVELOPMENT BOARD

1. Shri Utpal Kumar Sar - Executive Director

2. At the outset, the Chairperson welcomed the members to the Sitting of the Committee. The Committee, then, took up the subject 'Scheme on Development of Inland Fisheries and Aquaculture - An Analysis', with the representatives of the Department of Animal Husbandry, Dairying and Fisheries.

3. After the introduction, the Chairperson initiated the discussion which was followed by a slide presentation by the representatives of the Department and the discussion was taken forward by them and the Members of the Standing Committee. The Committee raised several issues/points as briefly mentioned below and sought opinions and views on various issues :

- 1) While contribution of the Department of Animal Husbandry, Dairying and Fisheries (DAHDF) to the Agriculture sector is 30%, financial allocation to the Department is only about 10% of which a meagre 10% goes to Inland Fisheries and Aquaculture.
- 2) Sharing ratio between the Centre and the States be 60:40 for the funds provided to Inland Fisheries Scheme as is being followed for other Centrally Sponsored Schemes.
- 3) Details of funds allocated to Inland Fisheries in terms of Plan v/s Non-Plan be provided.
- 4) Fishing to be treated as an agricultural activity.
- 5) To ensure participation of fishermen in planning as well as implementation of schemes.
- 6) To study traditional methods of fish rearing and incorporate those in present day planning and practices.
- 7) To analyze and put in place a definite mechanism to ascertain proper utilization of funds obtained for Inland Fisheries and the participation and benefit of stakeholders.
- 8) To conduct a survey of farmers, their needs and expectations regarding schemes and to encourage their participation in the same.
- 9) Degeneration of local ponds due to excessive growth of wild plants and filling up with piling of sediments, hence rendering the ponds non-conducive for fishing and fish culture.
- 10) To perform physical verification of ponds, other water bodies etc. and to have a dedicated body for regular verification of the same.
- 11) Scientific and modern technologies be adopted with traditional practices in fishing and fish rearing.

- 12) Data and facts available with the Department in the sector of Inland Fisheries and Aquaculture be used in order to make planning more realistic, systematic and effective.
- 13) Storage facilities for fishes be augmented and storage infrastructure be improved.
- 14) To ensure that benefits of the welfare schemes of fisheries reach and percolate down to the grass-root level.
- 15) Traditional knowledge on fishing and allied activity be compiled and used in combination with modern technology to enhance benefits to the fisheries sector.
- 16) A 'Disease Diagnostic Center' be set up to take note of diseases in fishes and of diseases occurring due to fish consumption.
- 17) To keep vigilance on the pattern of expenditure of funds in Inland Fisheries and Aquaculture, the extent of implementation and coverage of its schemes and the benefits occurring out of the same.
- 18) Quality of traditional breeds of fish be improved.
- 19) To refrain from excessive import of fish as it destroys the prospects of native fishes.
- 20) To have in place a designated agency to keep a check on fish import which may lead to loss of local breeds of fish.
- 21) To obtain information on a regular basis, the details of funds allocated to individual States and whether it reaches the grass-root level.
- 22) To ascertain causes of non-utilization of funds at the State level and put in place plans to outline methods for fund expenditure.
- 23) Despite India having a vast coastline, there is meagre fish production and minimal export of only about 3% from fisheries sector.

- 24) To cater to the huge demand of fishes by optimally utilizing the true potential of inland fisheries and aquaculture by providing training and technical support to fish rearing farmers.
- 25) To provide the much needed boost to cage farming, paid farming and other such practices and to work towards developing these as sustainable and profitable practices, especially in places where it is currently practiced, such as Maharashtra etc.
- 26) To put in place plans to harness the untapped potential of wetlands, which on being infested with weeds, leave no scope for fishing and fish culture.
- 27) To provide training to traditional farmers practicing fish catching and rearing and to help them to adapt to modern fishing techniques and aquaculture practices.
- 28) To work towards capacity building of farmers in the field of fishing and aquaculture by putting in place adequate mechanism and policies for the same.
- 29) To develop fisheries on the lines of milk cooperatives and provide those indulged in fishing, cage farming, aquaculture etc. with the necessary training.
- 30) To keep in mind suitability and sustainability of fish farming while introducing this in ponds constructed under MGNREGA.
- 31) Issue of timely release of funds to States and UTs and details of fund allocation and utilization up to District level.
- 32) To address the issue of under utilization of Central funds by States and non-furnishing of Utilization Certificates (UCs).
- 33) To increase subsidy to small and marginal farmers in fishing sector and to introduce special measures to support the same.

- 34) To utilize traditional knowledge and practices in fishing, modernize these and to use them to the advantage of the fisheries sector.
- 35) To collaborate with fisheries institutes and help benefits of research reach farmers and fishermen by bringing research from lab to land.
- 36) To increase tie-ups with ICAR institutes working in fisheries sector so that latest developments of research can be passed on to the fishermen.
- 37) To focus on implementation of research findings of ICAR and other institutes.
- 38) To work towards building adequate cold storage facilities in the fisheries sector.
- 39) To focus on creation and building of capacity and optimum utilization of the existing capabilities in fisheries through providing training to fishermen and farmers.
- 40) Rejuvenation of existing potential in fisheries and to update and upgrade existing ponds, lakes etc., clear it of weeds, sedimentation and to enable fish production there.
- 41) People's Representatives should be aware of schemes, their beneficiaries as well as bottlenecks that exist in scheme implementation.
- 42) Increasing participation of all stakeholders in all agriculture schemes of Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) and Department of Animal Husbandry, Dairying and Fisheries (DAHDF).

The witnesses then withdrew.

4. Thereafter, the Committee, after a short deliberation decided to undertake study visits to Ooty, Mysuru, Coorg and Mangalore during April, 2017 and to Srinagar, Jammu and Amritsar in the month of May / June, 2017.
5. A copy of verbatim proceedings has been kept for record.

The Committee then adjourned.

**STANDING COMMITTEE ON AGRICULTURE
(2016-17)**

MINUTES OF THE 23RD SITTING OF THE COMMITTEE

The Committee sat on Friday, the 30th June, 2017 from 1500 hours to 1650 hours in Committee Room '139', Parliament House Annexe, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS

LOK SABHA

2. Prof. Ravindra Vishwanath Gaikwad
3. Shri Sanganna Amarappa Karadi
4. Shri Nalin Kumar Kateel
5. Md. Badaruddoza Khan
6. Dr. Tapas Mandal
7. Shri Janardan Mishra
8. Shri Devji Mansingram Patel
9. Shri Nityanand Rai
10. Shri Mukesh Rajput
11. Shri Konakalla Narayana Rao
12. Shri C.L. Ruala
13. Shri Satyapal Singh (Sambhal)
14. Shri Jai Prakash Narayan Yadav
15. Shri B.S. Yeddyurappa

RAJYA SABHA

16. Shri Janardan Dwivedi
17. Shri Meghraj Jain
18. Shri Vinay Katiyar
19. Shri Modh. Ali Khan
20. Shri Ram Nath Thakur
21. Shri Shankarbhai N. Vegad

SECRETARIAT

- | | | | |
|----|---------------------|---|------------------|
| 1. | Shri D.S. Malha | - | Joint Secretary |
| 2. | Shri C. Vanlalruata | - | Deputy Secretary |

LIST OF WITNESSES

MINISTRY OF AGRICULTURE & FARMERS WELFARE (DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING AND FISHERIES)

<u>S.No.</u>	<u>NAME OF THE OFFICER</u>	<u>DESIGNATION</u>
1.	Shri Devendra Chaudhry	Secretary (ADF)
2.	Shri Kumar Sanjay Krishna	AS & FA
3.	Shri Aditya Kumar Joshi	JS (Fisheries)
4.	Dr. Paul Pandian	Fisheries Development Commissioner
5.	Shri Shankar Laxman	Joint Commissioner (Fisheries)
6.	Dr. Salim Sultan	Senior Consultant (Fisheries)

NATIONAL FISHERIES DEVELOPMENT BOARD (NFDB)

- | | | |
|----|----------------------|--------------------|
| 1. | Shri Utpal Kumar Sar | Executive Director |
| 2. | Shri B.K. Chand | Executive Director |

CENTRAL INLAND FISHERIES RESEARCH INSTITUTE (CIFRI)

- | | | |
|----|-----------------|---------------------------------|
| 1. | Dr. B.K. Behera | Principal Scientist, ICAR-CIFRI |
|----|-----------------|---------------------------------|

CENTRAL INSTITUTE OF FRESHWATER AQUACULTURE (CIFA)

- | | | |
|----|-----------------------------|-------------------|
| 1. | Dr. Jitendra Kumar Sundaray | Director (Acting) |
|----|-----------------------------|-------------------|

2. At the outset, the Chairperson welcomed the members to the Sitting of the Committee. The Committee, then, took up the subject 'Scheme on Development of

Inland Fisheries and Aquaculture - An Analysis', with the representatives of the Department of Animal Husbandry, Dairying and Fisheries.

3. After the introduction, the Chairperson initiated the discussion which was followed by a slide presentation by the representatives of the Department and the discussion was taken forward by them and the Members of the Standing Committee. The Committee raised several issues/points as briefly mentioned below and sought opinions and views on various issues :

- 1) To discourage the usage of formalin and other such chemicals as preservatives in fisheries sector as these pose a huge hazard to human health.
- 2) To cater to the increasing consumption demand for tiger prawns and shrimps in the fisheries sector.
- 3) Reasons behind reduced expenditure during the fiscals 2012-13 to 2015-16.
- 4) To tackle effectively, the issue of non-submission of pending UCs by States and UTs.
- 5) To provide state-wise details of training programmes for fishermen undertaken by the DAHDF and reasons for no such training being conducted in the state of Mizoram.
- 6) To provide details of areas where Re-circulating Aquaculture System is being practiced and steps being taken to promote such practices in other parts of the country.

- 7) Steps being taken to increase the spread of Blue Revolution to all parts of the country, bottlenecks encountered in its effective implementation and steps taken to deal with the same.
- 8) Issues in areas such as West Bengal, where usage of inland water bodies such as Beels, etc. is not being promoted by the Government.
- 9) To establish fish cooperatives to promote fishing and cage farming in beels, rivers etc.
- 10) To resolve the issue of dumping waste into beels which affects fishing.
- 11) To work towards improving the techniques used for fish farming in reservoirs etc. in order to match the quality of catch obtained from running water.
- 12) Precautions being taken to prevent contamination of fishes and fish culture.
- 13) Budgetary Allocation on the basis of past expenses and status of implementation of schemes.
- 14) Keeping ground realities in mind while making budgetary allocations.
- 15) Targeted areas under aquaculture and actual area brought under aquaculture show mismatch wherein the latter has continuously declined and to know the reasons for the same.
- 16) The need to take up seriously the existing mismatch between funds demanded and funds released as well as the causes behind non-utilization of UCs by States and UTs.
- 17) To have consensus-based formulation and implementation of schemes between Centre and States.

- 18) Lack of visible results on the ground owing to lack of development and meagre expenditure on the fisheries sector.
- 19) To find out reasons behind increase in production of fisheries sector despite limited expenditure.
- 20) To ascertain causes of mismatch in figures regarding State-wise details of development of post harvest facilities in coastal States and UTs.
- 21) To maintain a record of personal ponds along with state-owned water bodies so as to obtain an accurate figure of actual fish production from both sources.
- 22) To formulate schemes and provide for funds for timely removal of weeds and cleaning of ponds, reservoirs and other water bodies so as to harness the true fishing potential of these water bodies.
- 23) Promoting traditional practices of integrated agriculture which involve farming along with animal husbandry, fishing, poultry rearing etc.
- 24) To work towards incorporating the idea of traditional farming practices and integrated agriculture practices while formulating schemes.
- 25) The need to segregate traditional fishermen from commercial fishing so as to help the schemes percolate down to the needy fishermen at the grass root level.
- 26) Taking cue from the idea of traditional ponds acting as reservoirs for flood waters which in turn prevent flooding of fields and villages and also provide water for irrigation during dry season.

- 27) To be mindful of traditional knowledge and wisdom while formulating schemes so as to delve more on the practical aspects while working on schemes, rather than having an armchair approach.
- 28) The issue of unscientific digging and non-maintenance of ponds being dug under MNREGA.
- 29) To work towards roping in Grameen Vikas bodies while planning ponds and other related schemes.
- 30) To specify the meaning of 'transfer of technology' and to cater to the idea of 'Revolution' which pertains to transformation, dedication etc. which is however, clearly invisible in the endeavours of the Department under Blue Revolution.
- 31) The need to pay attention towards helping traditional and small fishermen develop their fishing equipments such as fishing nets etc.
- 32) To develop and work on traditional technologies of fishing being used since time immemorial in India.
- 33) The need to lay emphasis on having modern equipments and techniques reach poor fishermen practicing traditional fish farming.
- 34) To set up training centers for fishermen and their families under PM Kaushal Vikas Yojana and to coordinate with the ICAR to train fishermen in remote areas.
- 35) To focus on need-based approach such as providing training in vernacular languages to fishermen, while planning training programmes.
- 36) The need to bring out innovative ideas to help the fruits of development reach poor fishermen and their families.

- 37) To have diversification in schemes with respect to areas involved in fishing activities such as water bodies (ponds, wetlands, reservoirs etc.), aquaculture, fishermen training, human resource potential of fisheries sector, fish farming, development and insurance of fishermen and their families, fish feed and hatcheries, harvesting agricultural wastage and excessive agricultural produce as fish feed and various other things.
 - 38) The necessity to develop a need-based approach with respect to fisheries sector, keeping in mind ground realities in order to have schemes which are suitable for Indian fishermen and typically suited to their traditional fishing techniques.
 - 39) To cater to the rising demand of fish produced in marshes which are not only of a huge variety but are also widely appreciated by fish eaters for their taste as well as nutritional value.
4. A copy of verbatim proceedings has been kept for record.

The Committee then adjourned.

STANDING COMMITTEE ON AGRICULTURE

(2017-18)

MINUTES OF THE TWENTY-SIXTH SITTING OF THE COMMITTEE

The Committee sat on Thursday, the 19th July, 2018 from 1000 hrs. to 1100 hrs. in the Chamber of the Hon'ble Chairperson, Room No. 138, Third Floor, Parliament House, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS

LOK SABHA

2. Shri Sanjay Dhotre
3. Shri Nalin Kumar Kateel
4. Shri Md. Badaruddoza Khan
5. Shri C. Mahendran
6. Shri Janardan Mishra
7. Shri Devji Patel
8. Shri Mukesh Rajput
9. Shri C.L. Ruala
10. Shri Virendra Singh
11. Shri Jai Prakash Narayan Yadav

RAJYA SABHA

12. Shri Kailash Soni
13. Shri Ram Nath Thakur
14. Shri Harnath Singh Yadav

SECRETARIAT

- | | | | |
|----|----------------------|---|-----------------|
| 1. | Shri D.S. Malha | – | Joint Secretary |
| 2. | Shri Arun K. Kaushik | – | Director |
| 3. | Shri Sumesh Kumar | – | Under Secretary |

2. At the outset, the Chairperson welcomed the Members to the Sitting of the Standing Committee. Then, the Committee took up the following draft Reports for consideration and adoption:

(i) Draft Report on the Subject "Scheme on Development of Inland Fisheries and Aquaculture - An Analysis" pertaining to the Ministry of Agriculture and Farmers Welfare (Department of Animal Husbandry, Dairying and Fisheries).

*(ii) xxx xxx xxx xxx xxx xxx

3. After some deliberations, the Committee adopted the draft Reports without any amendments and authorized the Chairperson to finalise the Reports and present the same to Parliament.

**Matter not related to this Report.*