सत्यमेव जयते

Mission Brackish Water/Saline Aquaculture-2022

(MBSA-2022)

Action Plan

Towards Blue Revolution

DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING & FISHERIES
MINISTRY OF AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA
2017

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DEPARTMENT OF ANIMAL HUSBANDRY, DAIRYING & FISHERIES
MINISTRY OF AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA
2017

राधा मोहन सिंह
RADHA MOHAN SINGH

D.O. No. 1713 /AM

सत्यमेव जयते

कृषि एवं किसान कल्याण मंत्री
भारत सरकार
MINISTER OF AGRICULTURE
& FARMERS WELFARE
GOVERNMENT OF INDIA

24th July, 2017

Message

Indian fisheries have played a vital role, not only in the food security of the country but also helped the marginalized sections of society to earn their livelihood. Over the decades, the sector is mainly dominated by traditional method of fishing and implementation of development programes and recalls for specific sector wise focussed attention.

I am happy to note that the Mission Brackish water/Saline Aquaculture (MBSA-2022) is designed to boost the fish production and to fulfil the gap by achieving additional fish production of 7.85 lakh metric tonnes by the end of 2022.

Mission Brackish water/saline Aquaculture (MBSA-2022) attempts to enhance this endeavour by giving higher priority and judicious effective utilization of brackish water/Saline aquaculture resource by adopting environmental friendly and cost effective brackish water aquaculture incorporating mainly Shrimp farming, Mud crab and Sea bass culture. The success of these efforts depends on the steps that states will have to take to encourage and implement the activities.

I compliment the Fishery Division in my Ministry in the Formulation of Mission Brackish water/Saline Aquaculture (MBSA-2022) Action Plan and hope that under the able guidance of Shri Devendra Chaudhry, Secretary, Animal Husbandry, Dairying and Fisheries, the concerned implementing agencies will work hard to achieve the specified goal in the timely manner.

Radha Mohan Singh

(Radha Mohan Singh)

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कृष्णा राज
KRISHNA RAJ

सत्यमेव जयते

कृषि एवं किसान कल्याण राज्य मंत्री
भारत सरकार
MINISTER OF STATE FOR
AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA

संदेश

मात्स्यिकी एक उभरता हुआ सेक्टर है जिसके विभिन्न संसाधन तथा क्षमताएं हैं। इसमें प्राथमिक स्तर पर 14.50 मिलियन व्यक्ति जुड़े हुए हैं तथा असंख्य और मूल्य श्रृंखला में हैं। मात्स्यिकी सेक्टर का पारंपरिक से वाणिज्यिक पैमाने में अंतरण से मछली उत्पादन में 1950-51 के 7.5 लाख टन से 2015-16 के दौरान 107.62 लाख टन की वृद्धि हुई है। जबकि इस सेक्टर से होने वाली निर्यात आय 2015-16 में 30,420.83 करोड़ रूपए (4.69 बिलियन अमरीकी डालर) पहुंच गई। इस सेक्टर ने राष्ट्रीय सकल मूल्य संवर्धन (जीवीए) में लगभग 0.9% का तथ कृषि जीवीपी में 5.43% (2015-16) का योगदान किया।

वर्तमान में भारत विश्व का दूसरा सबसे बड़ा मछली उत्पादक तथा दूसरा सबसे बड़ा जलकृषि राष्ट्र है। भारत जलकृषि के माध्यम से मछली उत्पादन करने वाला एक प्रमुख राष्ट्र है तथा विश्व में चीन के बाद इसका दूसरा स्थान है। 2015-16 के दौरान कुल मछली उत्पादन 10.76 मिलियन मीट्रिक टन (एमएमटी) था, जिसमें अंतर्देशीय सेक्टर का योगदान 7.16 एमएमटी तथा समुद्री सेक्टर का योगदान 3.60 एमएमटी था। 2016-17 के दौरान मछली उत्पादन में बढ़ता रूझान देखा गया है और यह 11.64 मिलियन मीट्रिक टन (अनंतिम) होने का अनुमान है।

मिशन खाराजल/लवणीय जलकृषि (MBSA – 22) को मुख्यत: श्रिम्प, मड क्रैब तथा सीबास की प्रजाति विविधिकरण के माध्यम से खाराजल/लवणीय जलकृषि की क्षमता का दोहन करने पर संकेंद्रित ध्यान देने के लिए तैयार किया गया। मेरा मानना है कि ऐसे संकेद्रित ध्यान वाली कार्य योजना के कार्यान्वयन से मात्स्यिकी में वांछित विकास दर प्राप्त करने में सहायता मिलेगी तथा रोजगार सृजन, उपभोक्ताओं का बाजार तक बेहतर पहुंच तथा निर्यात में महत्वपूर्ण सुधार के रूप में बहुप्रतीक्षित परिणाम प्राप्त होंगे।

मेरा विश्वास है कि इस योजना के क्रियान्वयन में लगे हुए सभी लोग पूरी शक्ति से कार्य करेंगे, जिससे देश में मात्स्यिकी सेक्टर के विकास में वृद्धि होगी।

(कृष्णा राज)

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देवेन्द्र चौधरी
Devendra Chaudhry, IAS
सचिव
SECRETARY

सत्यमेव जयते

भारत सरकार
कृषि एवं किसान कल्याण मंत्रालय
पशुपालन, डेयरी एवं मत्स्यपालन विभाग
कृषि भवन, नई दिल्ली–110001
Government of India
Ministry of Agriculture & Farmers Welfare
Department of Animal Husbandry, Dairying & Fisheries
Krishi Bhawan, New Delhi-110001

Message

The diverse challenges and constraints as growing population, increasing food, feed and fodder needs, natural resource degradation, climate change, new parasites, slow growth in farm income and new global trade regulations demand a paradigm shift in formulating and implementing the specific action plan for the various sector of fisheries viz Marine capture fisheries, Mariculture, Brackish water/Saline aquaculture, Inland capture fisheries, Freshwater aquaculture, Cage culture etc. In this endeavor, this Department has formulated Mission Brackish water/Saline Aquaculture – 2022 (MBSA-2022) documents highlighting the issues and strategies relevant for the next 5 years.

Brackish water aquaculture sector has overcome several challenges in the way of its development during last three decades. The sector has amicably blended itself with the immediate social milieu, has judiciously managed viral fish diseases and has been fast in making its own amendments in response to the rapid global market changes that happened in the last decade, like imposition of tariff and non-tariff barriers and unpredictable changes in the price. Under the present context, the importance and necessity of Brackish water/Saline Aquaculture Action Plan is felt very much critical for long-term survival and sustainability of brackish water sector in the country.

It is expected that the analytical approach and forward looking concepts presented in the 'MBSA-2022' document will be useful for the researchers, policymakers and stakeholders to address the future challenges for growth and development of the Brackish water fishery sector and ensure food and income security with a human touch.

I hope Mission Brackish water/Saline Aquaculture-2022 (MBSA-2022) Action Plan will be implemented with full zest to achieve 'Blue Revolution' in the country.

.(Devendra Chaudhry)

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सत्यमेव जयते

संयुक्त सचिव
भारत सरकार
कृषि मंत्रालय
पशुपालन, डेयरी और मत्स्य पालन विभाग
कृषि भवन, नई दिल्ली-110 001

Joint Secretary
Government of India
Ministry of Agriculture
Department of Animal Husbandry, Dairying & Fisheries
Krishi Bhawan, New Delhi-110001

Message

India has a significant coastal area, parts of which can be suitably developed into brackishwater aquaculture farms. This sector of fisheries is in its infancy in spite of its demonstrated scope in the mainland. Out of the total potential brackishwater area of 12 lakh ha available in the country, about 1.55 lakh ha have been developed for brackish water aquaculture. Until recently brackishwater aquaculture was synonymous with shrimp aquaculture, however currently there is considerable interest being evinced in alternative brackishwater species, especially in light of disease outbreaks and market uncertainties for cultured shrimps.

One of the main reasons for the setback witnessed in the brackishwater aquaculture was the un-planned and un-regulated development of farms in a particular area leading to over crowding and subsequent serious environmental problems. The absence of a sound aquaculture policy and also planning and governance has lead to such a situation, which needs to be addressed at the earliest.

In this regard, this Department has formulated an Action Plan for Brackish water/Saline Aquaculture-2022 for its implementation in the 14 identified States namely Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Odisha, Pondicherry, Tamil Nadu, West Bengal, Haryana, Punjab, and Rajasthan. During the year 2016-17, the Department under the Central Plan Scheme has released an amount of Rs 861 lakh to various State Governments/UTs for development of brackish water aquaculture while Rs.370.80 for saline aquaculture.

I congratulate the committee team members who have worked tirelessly to compile this Action Plan on Brackishwater/Saline aquaculture-2022 in a Mission mode for the benefit of the farmers. It is my sincere hope that this Action Plan will go a long way in the promotion of hitherto neglected sector of fisheries in our country and pave the way for enhancing the livelihood alternatives for the fishers and farmers of the India as well as increase fish production.

Aditya Kumar Joshi

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Mission Brackish Water/Saline Aquaculture-2022

Action Plan

1. Background

India is the second most populous country in the world. Agriculture including fisheries dominates the Indian economy. It plays a vital role in Government plans to achieve poverty reduction and protection of natural resources. Seeing the increasing health consciousness in the world, the fish and the fish products may be considered as the safest food of animal origin. In India, fisheries is a well- established sector as far as marine fishery is concerned, Marine fish production has almost reached saturation due to over fishing and increase in the operational cost. On the other, that consumption of fishery products has been increasing rapidly with exponential growth of population. This leaves a large gap between production and demand which suggest exploring alternative sources of fish production. Aquaculture has emerged out as one of the alternative sources to augment fish/ shrimp production in India. Among the aquaculture industries, brackish water aquaculture has gained a great momentum in India.

2. Opportunities of Brackish Water Aquaculture

2.1 Brackish water of fisheries resources of India include estuaries, coastline, Backwater, Mangroves & Lagoons. There are about 3.9 million ha of estuaries and 0.5 million ha coastal mangrove areas available in the Country. In addition, there is availability of a potential brackish water area estimated at about 1.20 million hectare. However, only 12.96% of the potential area i.e. 155,598 hectare has been used for brackish water aquaculture. Even in this about 50,000 ha (i.e. 32%)is still adopting traditional practice where the yield of only 0.5 tonnes/ha is obtained as against possibility of 8 tonnes/ ha with more potential culture. This shows that, there is vast opportunity for the development of brackish water fish/ shell fish farming in India. Thus against the total 96 Lakh tonnes possible potential of from 1.2 Million ha at the rate of 8 tonnes/ha and additional 0.06 tonnes/ha from estuaries and Mangroves, thereby a total of 96.264 Lakh tonnes from a cumulative total of 5.6 million ha, only 1.55 Lakh ha (12.96% of pond) and only 3.93 lakh tonnes (4.08% of tonnes) is being tapped.

2.2 Value wise the present potential tapped and possible potential area as follows:

Table - I

(A)	Brackish water Area				
Sl. No.	State	Area(ha)	Cultured area(ha)	% of Area Cultured	Production(MT) (2014-15)
1.	Andhra Pradesh	150000	52147	34.76	246075
2.	Goa	18500	137	0.74	0
3.	Gujarat	370000	4500	1.21	30156

4.	Karnataka	8000	813	10.16	910
5.	Kerala	80000	14929	18.66	3007
6.	Maharashtra	80000	1400	1.75	4841
7.	Odisha	31600	16400	51.89	22550
8.	Puducherry	800	22	2.75	0
9.	Tamil Nadu	56000	6250	11.16	32794
10.	West Bengal	405000	59000	14.56	52787
	Sub Total (A)	**1,199,900**	**155598**	**12.96**	**393120**
(B).	**Saline water Area**				
11.	Haryana	20000	40	0.2	160
12.	Punjab	7000	0	0	0
13.	Rajasthan	180000	0	0	0
	Sub Total (B)	**207000**	**40**	**0.01**	**160**
Total (A+B)		**1406900**	**155638**	**12.97**	**393280**

2.3 Amongst state West Bengal and Gujarat have the maximum potential area under brackish water aquaculture (Table:1 above). Andhra Pradesh has utilized the maximum of the available potential area under brackish water aquaculture i.e. around 35%. The production for the year 2014-15 was around 3.93 lakh MT. The major contributor was Andhra Pradesh with a production of around 2.46 lakh MT followed by West Bengal with a production of around 0.53 lakh MT.

2.4 Brackish water aquaculture in the country has expanded steadily from a traditional activity to reach the present commercial scale. The growth of shrimp aquaculture sector was phenomenal during the 90's and this has resulted in the all-round development in shrimp hatcheries, feed mills, ancillary industries like ice plants, processing plants, drugs and chemical land other aquaculture related engineering products. The sector has generated more than three lakh jobs. The brackish water sector encompasses the cultivation of giant tiger shrimp (Penaeus monodon) and exotic white leg shrimp (Litopenaeus vannamei). Tiger shrimp (P. monodon) has been the major contributor in the shrimp production, but for the past few years downward trend in production has been observed in giant tiger shrimp production due to frequent disease outbreaks. With the introduction of non-native white legged shrimp (*L. vannamei*) in the period 2005-09, the brackish water aquaculture has got a major thrust. From a production of 90,000 MT in the year 2010, it rose to 3,53,413 MT in 2014-15. It had also increased the export earnings by leaps and bounds. Production of *L.Vannamei* increased by 41% to 3,53,413 MT. The export of Vannamei (2014-15) has shown positive growth of 2,22,176 MT from 1,75,071 MT and U$D 2372.80 Million (14236.80 crores) from 1,994.27 Million (11965.62 crores), compared to 2013-14. The superior traits of the species such as higher tolerance capacity, lower feed requirements, higher survival rate, fast growth rate and others contributed to the growth in the brackish water aquaculture production.

2.5 Vast area of Indian coastline (around 8118 km) is dotted with areas which are lying unproductive as they are considered as either fallow land or neglected salt marsh/brackishwater wet lands, etc. These water bodies can be brought under the aegis of brackish water aquaculture. Brackishwater by virtue of its definition is subjected to wide fluctuation to different hydrographical parameters such as salinity, pH, dissolved oxygen content and alkalinity. The fin and shellfishes which have adapted to this environment encompass a large number of species. Brackishwater fish culture in paddy fields is traditionally being carried out at Bheries of West Bengal and Pokkali fields of Kerala. On similar model the brackish water fish culture can be carried out in the paddy fields of various coastal states of our country.

2.6 The culture technologies with respect to shrimp have been standardized and it is contributing handsomely to the GDP of the country. Shrimp culture is backed up with a fairly stable shrimp seed production network (in terms of shrimp hatchery), quality feed as per the requirement of culture and is supported by shrimp export industry, as well as Marine Product Export Development Authority (M.P.E.D.A).

2.7 Regarding sea bass culture, the seed production technology has been standardized by the tireless efforts of Central Institute of Brackish water Aquaculture, Chennai. The same is now being propagated by Rajiv Gandhi Center for Aquaculture, a unit of M.P.E.D.A., Cochin. But, chain of hatcheries is yet to be set up in order to cater the demand for seed by the farmers and entrepreneurs. The culture of sea bass in brackish water pond is fairly standardized. Since sea bass is a predatory fish it can be cultured with tilapia which will reduce the feed cost and subsequently cost of production. In case of mullets, milkfish although culture technology has been perfected, the seed production technology has not been developed. Hence the aqua culturists are still dependent upon wilds seed collection.

2.8 The scope of culture of mud crab is enormous throughout the coastline of India. However the Seed production technology is still in a very nebulous stage. The culture technology of mud Crab, Scylla serrata has been standardized in the tide-fed brackish water ponds. The scope of mud crab fattening is also substantial. Entrepreneurs are earning a good return by fattening the big size soft crabs in pen type culture. Once the shell is hardened, it is fetching a good price at market.

2.9 The State like Haryana, where ground water has become saline, with slight modification of technique tiger shrimp has been cultured as demonstrated by CIFE Center at Haryana. This shows an enormous possibility of brackish water aquaculture in inland areas. In conclusion, it can be said that once the seed production technology of commercially important brackish water fishes are standardized, brackish water aquaculture is all set to spread all over the country.

3. Challenges in Brackish Water

A. Climate Change

Climate change is expected to further aggravate the already reduced freshwater flow leading to high salinity regimes. The understanding on the water quality particularly, ionic composition and their ratios in different source waters viz., seawater, brackish water, low-salinity water, freshwater and underground saline water,

and the subsequent changes in the quality of these waters in ponds is important for correcting ionic imbalances.

B. Environmental Impact

i. Unplanned expansion and intensification of the culture systems would put pressure on the aquatic environments leading to the degradation of environment, with negative outcomes such as pollution, poor water quality and emergence of diseases.

ii. In general, aquaculture practice can generate environmental impact as a function of: applied technique, size of production, capacity of the receiving environment and site location. These include impact on soil and water quality, benthic layer, farming inputs, genetic pool and impact of non native species.

iii. Development of suitable technologies for environmentally balanced aquaculture will be the key challenge.

iv. Mitigation of environmental pollution through novel approaches such as microbial and nanotechnologies, practicing holistic methods like multitrophic and organic aquaculture would be of greater help to the industry.

C. Diseases

i. Disease is the most significant challenge in the growth of brackishwater aquaculture sector.

ii. In 1994, Indian shrimp farming witnessed the first outbreak of white spot disease in India, and since then the growth and sustainability of shrimp aquaculture has been severely impacted, due to the crop losses.

iii. In the absence of any proven therapeutics and prophylactic measures worldwide against the viral pathogen, control of WSSV still remains to be a challenge.

iv. The emerging and devastating new shrimp diseases, such as early mortality syndrome or acute hepato pancreatic necrosis syndorme (AHPNS) reported in the neighboring countries, is again a great concern to Indian shrimp farming, as it is well acknowledged that shrimp diseases eventually spread across the world in a brief period of time.

v. Use of newer technologies for improving diagnostics and developing therapeutics, strengthening the quarantine and surveillance, improving BMPs on biosecurity and adoption of new farming practices such as crop rotation with alternate species would address this challenge.

vi. Development of specific pathogen free (SPF)/specific pathogen tolerant (SPT) seed is one of the effective tools in controlling infectious diseases that has been devastating the brackish water aquaculture.

vii. Although SPF seeds are available for *L. vannamei*, there is no similar program to develop such seeds for native species of shrimp, *Penaeus indicus*.

D. Food Safety and Tractability

i. Antimicrobial resistance is a matter of great concern across all the aquaculture nations, and the antibiotic residue in exported fish/shrimp is attributed to unregulated use of antibiotics in aquaculture rearing systems.

ii. There is no approved system for licensing aquaculture medicines (drugs, chemicals & biologicals) and prescribing them for use in aquaculture.

E. Feed

i. Formulated feed is the integral and vital input of aquaculture industry.

ii. For many farmed species, growth, survival and production largely depend on the quality and quantity of dietary nutrient inputs.

iii. Since 1995, aqua feed production has grown globally at an average rate of about 10.7%/year.

iv. Feed constitutes the highest operating cost during the production, and its characteristics and management distinctly affect the product, water quality and effluent.

v. Any fluctuation in the cost of feed ingredients will significantly impact the cost of feed and ultimately on the cost of aquatic animal production.

F. Certification

i. As the consumer awareness is increasing, demand for quality certification of the products will be greater than ever before.

ii. As with other food sectors, primary production (farming) and the energy consumption associated with activities such as acquiring raw materials, mode of transport, refrigeration, packaging and distribution etc. in the aquaculture supply chain will contribute to the sector's carbon footprint.

iii. Additionally, HACCP and traceability of the aquaculture products will be mandatory and implementing these standards throughout the production system will be of great challenge.

G. Mechanization

i. Like agriculture, labor shortage has started plaguing aquaculture.

ii. Precision farming in aquaculture aims to optimize field-level requirement and management with regard to farming practices, input requirement, environmental protection, saving labour and energy to derive maximum outputs.

iii. In view of the limited use of mechanization in aquaculture, labour saving interventions that are being developed like feed dispensers and mechanization for harvesting would need to be further scaled up.

4. Strategy

4.1 Policy/Scheme level interventions/innovations to fill the demand – supply gaps.

4.2 Integrated approach to feed the targeted water bodies.

4.3 Increase in, hatchery units, nursery, cages for diversified species proposed for introduction.

4.4 Diversification of Cultured Species.

4.5 Area specific/need based approach for productivity enhancement. There shall be no diversion other than targeted water source for Brackish water Aquaculture.

4.6 Promotion of Culture based Fisheries in all identified water bodies.

5. Action Plan

In order to tap the opportunities & address the challenges, following Action Plan is proposed as per strategy stated above. The Mission Brackish Water/Saline Aquaculture (MBSA-2022) shall be taken up in Mission Mode for timely achievements and benefits to farmers as well as to avoid cost escalations.

5.1 Duration: Five (5) Years [2017-2018, 2018-2019, 2019-20,2020-21 & 2021-22]

5.2 Year wise production targets are given in Table-II.

5.3 Time Frame for Implementation (Tentative): The schedule of activities for the first year (2017-18) of the Action Plan shall be as mentioned below.

S. No.	Activity	Period
1	Review of Previous releases	As decided by Department
2	Identification of Beneficiaries	15th May, 2017
3	Submission of DPR	31stMay 2017
4	Establishment of hatchery, dugging out of nursery, grow out ponds, installation of cages etc.	31st May, 2017ownwards

5.4 Works for 2018-19, 2019-20, 2020-21 & 2021-22 shall be planned /started well in advance to ensure timely establishment of hatchery & farming units as proposed in Action Plan.

5.5 The proposed action plan will cover the 13 potential States namely Andhra Pradesh, Goa, Gujarat, Karnataka, Kerala, Maharashtra, Odisha, Pondicherry, Tamil Nadu, West Bengal, Haryana, Punjab and Rajasthan for establishment of 185 hatcheries, construction of 5300 ha nursery area, 100315 ha of grow out pond, 5915 grow out cages and 131830 grow out backyard cages in phased manner during 2017-18, 2018-19 , 2019-20, 2020-21 & 2021-22.

5.6 Further, the proposed action plan for five years will lead to additional fish production of 7.85 lakh metric tonnes from the existing production of 3.93 lakh metric tonnes thereby resulting in total production of 11.78 lakh metric tonnes. This would also fulfil the gap to achieve the additional production of

5 million tonnes of Government by the end of 2020. Further establishment of 185 hatcheries (135 Shrimp, 25 Sea Bass & Mud Crab each) would lead to additional production of 13500 million shrimp seed, 75 million sea bass seed and 25 million mud crab seed totalling to 13600 million. The existing hatchery seed production and additional seed production from the additional proposed hatchery are at Table-III.

5.7 Also, to address the challenges of disease, 2 disease diagnostic lab in each identified States has been proposed to be setup and 100% assistance @ of Rs.1.5 crore would be provided under the Fisheries and Aquaculture Development Fund (FIDF).

5.8 Similarly, Feed constitutes the highest operating cost during the production, and its characteristics and management distinctly affect the product, water quality and effluent. Hence, 9 fish feed plants (minimum 10 tonnes/day capacity) have been proposed for establishment in the States namely Andhra Pradesh, Goa, Gujarat, Karnataka, Kerala, Maharashtra, Odisha, Tamil Nadu and west Bengal(one in each State) with the total cost of Rs.63 crore involving central share of Rs.9.00 crore under the Fisheries and Aquaculture Development Fund (FIDF).

6 Mechanism of Implementation

6.1 The Action Plan will be commenced in identified States immediately.

6.2 A Task Force will be established to ensure time bound progress, having members from Ministry, NFDB, Central Institute of Brackish Water Aquaculture, Chennai and CMFRI, Cochin. A three tier Task Force structure will be established as follows:

- ***At National Level:***
    1. Secretary, DADF, GoI
    2. CE, NFDB (Convenor)
    3. JS (Fy)
    4. DDG (Fy)- ICAR
    5. Representative from CIBA, Chennai
    6. Representative from CMFRI, Cochin
- ***Technical Committee at National Level***
    1. JS (Fy)
    2. DDG (Fy)- ICAR
    3. Executive Director, NFDB (Convenor)
    4. FDC
    5. Representative from MPEDA, Cochin
    6. Representative from CIBA, Chennai

Table - II

Year Wise Target & Central Liability

Sea Bass

Year	Hatchery (no)	Total cost	Nursery (ha)	Total cost	Grow out pond (ha)	Battery cages (no.)
2017-18	10	500	163	978	667	1183
2018-19	8	400	163	978	667	1183
2019-20	7	350	163	978	667	1183
2020-21			163	978	667	1183
2021-22			163	978	667	1183
Total	**25**	**1250**	**815**	**4890**	**3335**	**5915**

Mud Crab

Year	Hatchery (no)	Total cost	Nursery (ha)	Total cost	Grow out pond(ha)	Battery cages (no.)
2017-18	9	450	897	5382	363	_
2018-19	7	350	897	5382	363	_
2019-20	5	250	897	5382	363	_
2020-21	4	200	897	5382	363	_
2021-22			897	5382	363	_
Total	**25**	**1250**	**4485**	**26910**	**1815**	_

Shrimp

Year	Hatchery (nos)	Total cost	Nursery (ha)	Total cost	Grow out pond (ha)	Battery cages (no.)
2017-18	33	1650	_	_	19033	_
2018-19	29	1450	_	_	19033	_
2019-20	26	1300	_	_	19033	_
2020-21	25	1250	_	_	19033	_
2021-22	22	1100	_	_	19033	_
Total	**135**	**6750**	_	_	**95165**	_
Grand Total	**185**	**9250**	**5300**	**31800**	**100315**	**5915**

Unit cost for Hatchery @ 50 Lakh/hatchery, Nursery @ 6 Lakh/ha, Grow out pond @ 7 Lakh/ha,

for Brackishwater/Saline Aquaculture

Total cost	Backyard cages (no)	Total cost	Total project cost (Rs.in Lakh)	Fish production output (MT)
3549	13666	6149.7	11176.7	12928
3549	13666	6149.7	11076.7	12928
3549	13666	6149.7	11026.7	12928
3549	13666	6149.7	10676.7	12928
3549	13666	6149.7	10676.7	12928
17745	**68330**	**30748.5**	54633.5	**64640**

Total cost	Backyard cages (no)	Total cost	Total project cost (Rs. In lakh)	Fish production output (MT)
_	12700	5715	11547	1270.25
_	12700	5715	11447	1270.25
_	12700	5715	11347	1270.25
_	12700	5715	11297	1270.25
_	12700	5715	11097	1270.25
_	**63500**	**28575**	**56735**	**6351.25**

Total cost	Backyard cages (no)	Total cost	Total project cost (Rs. In Lakh)	Fish production output (MT)
_	_	_	1650	142747.5
_	_	_	1450	142747.5
_	_	_	1300	142747.5
_	_	_	1250	142747.5
_	_	_	1100	142747.5
_	_	_	**6750**	**713737.5**
17745	**131830**	**59323.5**	**118118.5**	**784728.75**

Cage @ 3 Lakh/Cage, Backyard Cage@ 0.45 Lakh/Cage

Table-III

Existing Hatchery Seed Production and

S. N.	States	Sea Bass				Shrimp			
		Existing Hatchery	Existing seed production (in million)	Additional Hatchery	Additional Seed Production (in million)	Existing Hatchery	Existing seed production (in million)	Additional Hatchery	
1	2	3	4	5	6	7	8	9	
1	Andhra Pradesh	0	0	3	9	215	21500	20	
2	Goa	0	0	0	0	0	0	7	
3	Gujarat	0	0	3	9	2	200	17	
4	Haryana	0	0	0	0	0	0	0	
5	Karnataka	0	0	3	9	1	100	10	
6	Kerala	0	0	3	9	11	1100	0	
7	Maharashtra	0	0	3	9	0	0	22	
8	Odisha	0	0	3	9	3	300	19	
9	Pondicherry	0	0	0	0	0	0	0	
10	Punjab	0	0	1	3	0	0	0	
11	Rajasthan	0	0	1	3	0	0	0	
12	Tamil Nadu	2	6	2	6	51	5100	20	
13	West Bengal	0	0	3	9	0	0	20	
	Total	**2**	**6**	**25**	**75**	**283**	**28300**	**135**	

Note: *Production capacity of shrimp hatchery- 10 million per annum,*

Additional Seed Production

	Mud Crab				Existing & Target Seed Production			
Additional Seed Production (in million)	Existing Hatchery	Existing seed production (in million)	Additional Hatchery	Additional Seed Production (in million)	Total Existing Hatchery	Total existing Seed Production (in million)	Total Additional Hatchery	Total additional Seed Production (in million)
10	**11**	**12**	**13**	**14**	**16**	**17**	**18**	**19**
2000	0	0	5	5	215	21500	28	2014
700	0	0	0	0	0	0	7	700
1700	0	0	4	4	2	200	24	1713
0	0	0	0	0	0	0	0	0
1000	0	0	0	0	1	100	13	1009
0	0	0	0	0	11	1100	3	9
2200	0	0	0	0	0	0	25	2209
1900	0	0	6	6	3	300	28	1915
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	3
0	0	0	0	0	0	0	1	3
2000	1	1	4	4	54	5107	26	2010
2000	0	0	6	6	0	0	29	2015
13500	**1**	**1**	**25**	**25**	**286**	**28307**	**185**	**13600**

Sea bass- 3 million per annum & Mud crab 1 million per annum.

- ***At State Level:***

1. Agriculture Production Commissioner/Equivalent.
2. Principal/Secretary(Fisheries)
3. Principal / Secretary(Agriculture)
4. Commissioner/ Director Fisheries (Convenor)

6.3 Cluster based approach will be adopted for the implementation of projects in identified area in States/ Districts/Blocks/ Villages/Water bodies/Project area as advised in circular No.31035/04/2016FY3 Dated 14thOctober 2016.(Copy at Annexure-I)

6.4 NFDB will execute/supervise the civil work of the projects in collaboration with State Governments in selected States as specified in National Action Plan. However, if State Government insists, they may take up work vide BR Guidelines III-1.6 under NFDB supervision.

7. Funding Pattern

7.1 Central government will provide funds as admissible under the Blue Revolution scheme.

7.2 State Governments shall try to dovetail additional funds(other than state share required for Blue Revolution funded projects from State budget/RKVY etc. and other sources.

7.3 Financial allocations will be made as per above arrangements.

7.4 There will not be any funding for the Operational Costs.

7.5 The maximum expenditure on each activity/project will be as per unit cost fixed to Blue Revolution scheme.

7.6 Estimated project cost for each State along with target of 2017-18, 2018-19, 2019-20, 2020-21 & 2021-22 is summerized in Table -IV and detailed at Annexure-II, III, IV and V.

Tale - IV. Summary Sheet for Mission Brackish water/Saline Aquaculture -2022

Activities	Sea Bass	Mud Crab	Shrimp	Total Physical Outputs	Total Financial Investment (Rs. in Lakh)
Hatchery (No.)	25	25	135	185	9250
Nursery	815ha	4485ha	-	5300 ha	31800
Grow out Cages (No.)	5915	-	-	5915	17745
Backyard cages (No.)	68330	63500	-	131830	59323.50
Sub Total (A)					**118118.50**
Disease Diagnostic Lab (No.)				26	3900.00
Feed Mill Plants (No.)				10	6300.00
Sub Total (B)					**10200**
Total (A+B)					**128318.5**

Annexure-I

IMPORTANT

F. No. 31035/04/2016-Fy(3)
Government of India
Ministry of Agriculture and Farmers Welfare
(Department of Animal Husbandry, Dairying & Fisheries)

Krishi Bhavan, New Delhi
Dated the 14th October, 2016

To

The Commissioner/ Director of Fisheries
All States/UTs

Subject- Criteria for Selection of Beneficiaries under CSS on Blue Revolution: Integrated Development and Management of Fisheries -Reg.

Sir,

I have been directed to convey that the Department of Animal, Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare have sanctioned all the project proposals submitted under Blue Revolution Scheme for 2016-17 by various States/ UTs for various activities as proposed by them. The Department have also released 1st installment in these projects for their implementation.

2. In respect of identification of beneficiary, it is further advised that under Blue Revolution scheme for 2016-17 and successive years, the beneficiaries may be identified in such a way that they should be located in **(i) not more than 3-4 contiguous districts, (ii) within districts in least number of continuous and contiguous blocks and (iii) within blocks in contiguous villages so that maximum impact and demonstrative effect of the project is ensured.**

3. Also, while selecting beneficiaries the order of priority should be the BPL, SC/ST, Fishers and Small & Medium farmers, so that the socially and economically marginalized groups and weaker sections of the society get benefited.

4. Further, for marketing activities such as Allocation of Transport Facilities and Ice Boxes for selling fish etc. landless people should be given priority.

5. Kindly follow the above criteria and priorities strictly by adopting a transparent implementation procedure to ensure that the benefit reaches to the needy members of society.

6. All States/ UTs have to submit the progress made in this regard in the next monthly Review Meeting.

Yours faithfully

14/10/2016.

(P. R. Meshram)
Director (Fisheries Statistics)
Telefax: 011-2307 0279

Copy to: The Principal Secretary/ Secretary of Fisheries Department of all States/UTs

Statewise Target & Fund

Sl. No.	Name of the State	Year wise target (in Nos)																			
		2017-18				2018-19				2019-20				2020-21				2021-22			
		Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total
1	Andhra Pradesh	1	2	5	8	1	1	4	6	1	1	4	6	_	1	4	5	_	_	3	3
2	Goa	_	_	2	2	_	_	2	2	_	_	1	1	_	_	1	1	_	_	1	1
3	Gujarat	1	2	4	7	1	1	4	6	1	1	3	5	_	_	3	3	_	_	3	3
4	Haryana	_	_	_	0	_	_	_	0	_	_	_	0	_	_		0	_	_		0
5	Karnataka	1	_	2	3	1	_	2	3	1	_	2	3	_	_	2	2	_	_	2	2
6	Kerala	1	_	_	1	1	_	_	1	1	_	_	1	_	_		0	_	_		0
7	Maha-rashtra	1	_	5	6	1	_	5	6	1	_	4	5	_	_	4	4	_	_	4	4
8	Odisha	1	2	5	8	1	2	4	7	1	1	4	6	_	1	3	4	_	_	3	3
9	Pondi-cherry	_	_	_	0	_	_	_	0	_	_	_	0	_	_		0	_	_		0
10	Punjab	1	_	_	1	_	_	_	0	_	_	_	0	_	_		0	_	_		0
11	Rajasthan	1	_	_	1	_	_	_	0	_	_	_	0	_	_		0	_	_		0
12	Tamil Nadu	1	1	5	7	1	1	4	6	_	1	4	5	_	1	4	5	_	_	3	3
13	West Bengal	1	2	5	8	1	2	4	7	1	1	4	6	_	1	4	5	_	_	3	3
	Total	10	9	33	52	8	7	29	44	7	5	26	38	_	4	25	29	_	_	22	22

Annexure-II

Requirement for Hatchery

Year wise Fund Requirement (Rs.in Lakh)																				Total Estimate Cost (Rs.in lakh)	
2017-18				2018-19				2019-20				2020-21				2021-22					
Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Hatchery (No.)	Total Fund
50	100	250	**400**	50	50	200	**300**	50	50	200	**300**	_	50	200	**250**	_	_	150	**150**	28	1400
		100	**100**			100	**100**			50	**50**	_		50	**50**	_	_	50	**50**	7	350
50	100	200	**350**	50	50	200	**300**	50	50	150	**250**	_		150	**150**	_	_	150	**150**	24	1200
			0				**0**				**0**	_			**0**	_	_		**0**	0	0
50		100	**150**	50		100	**150**	50		100	**150**	_		100	**100**	_	_	100	**100**	13	650
50			**50**	50			**50**	50			**50**	_			**0**	_	_		**0**	3	150
50		250	**300**	50		250	**300**	50		200	**250**	_		200	**200**	_	_	200	**200**	25	1250
50	100	250	**400**	50	100	200	**350**	50	50	200	**300**	_	50	150	**200**	_	_	150	**150**	28	1400
			0				**0**				**0**	_			**0**	_	_		**0**	0	0
50			**50**				**0**				**0**	_			**0**	_	_		**0**	1	50
50			**50**				**0**				**0**	_			**0**	_	_		**0**	1	50
50	50	250	**350**	50	50	200	**300**		50	200	**250**	_	50	200	**250**	_	_	150	**150**	26	1300
50	100	250	**400**	50	100	200	**350**	50	50	200	**300**	_	50	200	**250**	_	_	150	**150**	29	1450
500	**450**	**1650**	**2600**	**400**	**350**	**1450**	**2200**	**350**	**250**	**1300**	**1900**	**_**	**200**	**1250**	**1450**	**0**	**0**	**1100**	**1100**	**185**	**9250**

Statewise Target & Fund

Sl. No.	Name of the State	Year wise target (ha)																			
		2017-18				2018-19				2019-20				2020-21				2021-22			
		Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total
1	Andhra Pradesh	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**
2	Goa	3.4	26.7	_	**30.1**	3.4	26.7	_	**30.1**	3.4	26.7	_	**30.1**	3.4	26.7	_	**30.1**	3.4	26.7	_	**30.1**
3	Gujarat	28	159.9	_	**187.9**	28	159.9	_	**187.9**	28	159.9	_	**187.9**	28	159.9	_	**187.9**	28	159.9	_	**187.9**
4	Haryana	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**
5	Karna-taka	11.6	16.7	_	**28.3**	11.6	16.7	_	**28.3**	12	16.7	_	**28.7**	12	16.7	_	**28.7**	11.6	16.7	_	**28.3**
6	Kerala	0.2		_	**0.2**	0.2		_	**0.2**	0.2		_	**0.2**	0.2		_	**0.2**	0.2		_	**0.2**
7	Maha-rashtra	16.6	133.3	_	**149.9**	16.6	133.3	_	**149.9**	17	133.3	_	**150.3**	17	133.3	_	**150.3**	16.6	133.3	_	**149.9**
8	Odisha	6.6	0.7	_	**7.3**	6.6	0.7	_	**7.3**	6.6	0.7	_	**7.3**	6.6	0.7	_	**7.3**	6.6	0.7	_	**7.3**
9	Pondi-cherry	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**
10	Punjab	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**
11	Rajas-than	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**	3.4		_	**3.4**
12	Tamil Nadu	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**	25	186.6	_	**211.6**
13	West Bengal	33	186.6	_	**219.6**	33	186.6	_	**219.6**	33	186.6	_	**219.6**	33	186.6	_	**219.6**	33	186.6	_	**219.6**
	Total	**163**	**897**	**0**	**1060**	**163**	**897**	**0**	**1060**	**163**	**897**	**0**	**1060**	**163**	**897**	_	**1060**	**163**	**897**	_	**1060**

Annexure-III

Requirement for Nursery

Year wise Fund Requirement (Rs.in Lakh)																				Total Estimate Cost (Rs.in lakh)	
2017-18				2018-19				2019-20				2020-21				2021-22					
Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Nurs-ery ha	Total Fund
150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1270**	1058	6348
20.4	160.2	_	**180.6**	20.4	160.2	_	**180.6**	20.4	160.2	_	**180.6**	20.4	160.2	_	**180.6**	20.4	160.2	_	**180.6**	150.5	903
168	959.4	_	**1127.4**	168	959.4	_	**1127.4**	168	959.4	_	**1127.4**	168	959.4	_	**1127.4**	168	959.4	_	**1127**	939.5	5637
20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	17	102
69.6	100.2	_	**169.8**	69.6	100.2	_	**169.8**	72	100.2	_	**172.2**	72	100.2	_	**172.2**	69.6	100.2	_	**169.8**	142.3	853.8
1.2		_	**1.2**	1.2		_	**1.2**	1.2		_	**1.2**	1.2		_	**1.2**	1.2		_	**1.2**	1	6
99.6	799.8	_	**899.4**	99.6	799.8	_	**899.4**	102	799.8	_	**901.8**	102	799.8	_	**901.8**	99.6	799.8	_	**899.4**	750.3	4501.8
39.6	4.2	_	**43.8**	39.6	4.2	_	**43.8**	39.6	4.2	_	**43.8**	39.6	4.2	_	**43.8**	39.6	4.2	_	**43.8**	36.5	219
20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	17	102
20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	17	102
20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	20.4		_	**20.4**	17	102
150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1269.6**	150	1119.6	_	**1270**	1058	6348
198	1119.6	_	**1317.6**	198	1119.6	_	**1317.6**	198	1119.6	_	**1317.6**	198	1119.6	_	**1317.6**	198	1119.6	_	**1318**	1098	6588
978	**5382.6**	_	**6360.6**	**978**	**5382.6**	_	**6360.6**	**982.8**	**5382.6**	_	**6365.4**	**982.8**	**5382.6**	_	**6365.4**	**978**	**5382.6**	_	**6361**	**5300**	**31800**

Statewise Target & Fund

Sl. No.	Name of the State	Year wise target (in Nos)																				
		2017-18				2018-19				2019-20				2020-21				2021-22				
		Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass
1	Andhra Pradesh	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	501
2	Goa	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	51
3	Gujarat	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	399
4	Haryana	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
5	Karna-taka	66	0	0	**66**	66	0	0	**66**	66	0	0	**66**	66	0	0	**66**	66	0	0	**66**	198
6	Kerala	333	0	0	**333**	333	0	0	**333**	333	0	0	**333**	333	0	0	**333**	333	0	0	**333**	999
7	Maha-rashtra	117	0	0	**117**	117	0	0	**117**	117	0	0	**117**	117	0	0	**117**	117	0	0	**117**	351
8	Odisha	33	0	0	**33**	33	0	0	**33**	33	0	0	**33**	33	0	0	**33**	33	0	0	**33**	99
9	Pondi-cherry	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	17	0	0	**17**	51
10	Punjab	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
11	Rajas-than	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0
12	Tamil Nadu	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	133	0	0	**133**	399
13	West Bengal	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	167	0	0	**167**	501
	Total	**1183**	**0**	**0**	**1183**	**1183**	**0**	**0**	**1183**	**1183**	**0**	**0**	**1183**	**1183**	**0**	**0**	**1183**	**1183**	**0**	**0**	**1183**	**3549**

Annexure-IV

Requirement for Grow out Cages

Year wise Fund Requirement (Rs.in Lakh)																				Total Estimate Cost (Rs.in lakh)	
2017-18				2018-19				2019-20				2020-21				2021-22					
	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Cages (No.)	Total Fund
	0	0	**501**	501	0	0	**501**	501	0	0	**501**	501	0	0	**501**	501	0	0	**501**	835	2505
	0	0	**51**	51	0	0	**51**	51	0	0	**51**	51	0	0	**51**	51	0	0	**51**	85	255
	0	0	**399**	399	0	0	**399**	399	0	0	**399**	399	0	0	**399**	399	0	0	**399**	665	1995
	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
	0	0	**198**	198	0	0	**198**	198	0	0	**198**	198	0	0	**198**	198	0	0	**198**	330	990
	0	0	**999**	999	0	0	**999**	999	0	0	**999**	999	0	0	**999**	999	0	0	**999**	1665	4995
	0	0	**351**	351	0	0	**351**	351	0	0	**351**	351	0	0	**351**	351	0	0	**351**	585	1755
	0	0	**99**	99	0	0	**99**	99	0	0	**99**	99	0	0	**99**	99	0	0	**99**	165	495
	0	0	**51**	51	0	0	**51**	51	0	0	**51**	51	0	0	**51**	51	0	0	**51**	85	255
	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
	0	0	**399**	399	0	0	**399**	399	0	0	**399**	399	0	0	**399**	399	0	0	**399**	665	1995
	0	0	**501**	501	0	0	**501**	501	0	0	**501**	501	0	0	**501**	501	0	0	**501**	835	2505
	0	**0**	**3549**	**3549**	**0**	**0**	**3549**	**3549**	**0**	**0**	**3549**	**3549**	**0**	**0**	**3549**	**3549**	**0**	**0**	**3549**	**5915**	**17745**

Statewise Target & Fund Requirement for

Sl. No.	Name of the State	Year wise target (ha)																				2017-18	
		2017-18				2018-19				2019-20				2020-21				2021-22					
		Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab
1	Andhra Pradesh	2333	3333	0	**5666**	2333	3333	0	**5666**	2333	3333	0	**5666**	2333	3333	0	**5666**	2333	3333	0	**5666**	1049.9	1499.9
2	Goa	67	168	0	**235**	67	168	0	**235**	67	168	0	**235**	67	168	0	**235**	67	168	0	**235**	30.15	30.15
3	Gujarat	2000	1667	0	**3667**	2000	1667	0	**3667**	2000	1667	0	**3667**	2000	1667	0	**3667**	2000	1667	0	**3667**	900	900
4	Haryana	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
5	Karnataka	666	33	0	**699**	666	33	0	**699**	666	33	0	**699**	666	33	0	**699**	666	33	0	**699**	299.7	299.7
6	Kerala	867	0	0	**867**	867	0	0	**867**	867	0	0	**867**	867	0	0	**867**	867	0	0	**867**	390.15	390.15
7	Maha-rashtra	1333	833	0	**2166**	1333	833	0	**2166**	1333	833	0	**2166**	1333	833	0	**2166**	1333	833	0	**2166**	599.85	599.85
8	Odisha	333	333	0	**666**	333	333	0	**666**	333	333	0	**666**	333	333	0	**666**	333	333	0	**666**	149.85	149.85
9	Pondi-cherry	67	0	0	**67**	67	0	0	**67**	67	0	0	**67**	67	0	0	**67**	67	0	0	**67**	30.15	30.15
10	Punjab	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
11	Rajasthan	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0
12	Tamil Nadu	2667	3000	0	**5667**	2667	3000	0	**5667**	2667	3000	0	**5667**	2667	3000	0	**5667**	2667	3000	0	**5667**	1200.2	1200.2
13	West Bengal	3333	3333	0	**6666**	3333	3333	0	**6666**	3333	3333	0	**6666**	3333	3333	0	**6666**	3333	3333	0	**6666**	1499.9	1499.9
	Total	**13666**	**12700**	**0**	**26366**	**13666**	**12700**	**0**	**26366**	**13666**	**12700**	**0**	**26366**	**13666**	**12700**	**0**	**26366**	**13666**	**12700**	**0**	**26366**	**6149.7**	**6149.7**

Annexure-V

Grow out Backyard Cages

Year wise Fund Requirement (Rs.in Lakh)																		Total Estimate Cost (Rs.in lakh)	
			2018-19				2019-20				2020-21				2021-22					
	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Sea bass	Mud Crab	Shrimp	Total	Backyard Cages no.	Total Fund
	0	**2549.70**	1049.9	1499.85	0	**2549.7**	1049.9	1499.85	0	**2549.7**	1049.85	1499.85	0	**2549.70**	1049.85	1499.9	0	**2549.70**	28330	12748.5
	0	**105.75**	30.15	75.6	0	**105.8**	30.15	75.60	0	**105.75**	30.15	75.60	0	**105.75**	30.15	75.6	0	**105.75**	1175	528.75
	0	**1650.15**	900	750.15	0	**1650.2**	900	750.15	0	**1650.15**	900.00	750.15	0	**1650.15**	900	750.15	0	**1650.15**	18335	8250.75
	0	**0.00**	0	0	0	**0.0**	0	0.00	0	**0**	0.00	0.00	0	**0.00**	0	0	0	**0.00**	0	0
	0	**314.55**	299.7	14.85	0	**314.6**	299.7	14.85	0	**314.55**	299.70	14.85	0	**314.55**	299.7	14.85	0	**314.55**	3495	1572.75
	0	**390.15**	390.15	0	0	**390.2**	390.15	0.00	0	**390.15**	390.15	0.00	0	**390.15**	390.15	0	0	**390.15**	4335	1950.75
	0	**974.70**	599.85	374.85	0	**974.7**	599.85	374.85	0	**974.7**	599.85	374.85	0	**974.70**	599.85	374.85	0	**974.70**	10830	4873.5
	0	**299.70**	149.85	149.85	0	**299.7**	149.85	149.85	0	**299.7**	149.85	149.85	0	**299.70**	149.85	149.85	0	**299.70**	3330	1498.5
	0	**30.15**	30.15	0	0	**30.2**	30.15	0.00	0	**30.15**	30.15	0.00	0	**30.15**	30.15	0	0	**30.15**	335	150.75
	0	**0.00**	0	0	0	**0.0**	0	0.00	0	**0**	0.00	0.00	0	**0.00**	0	0	0	**0.00**	0	0
	0	**0.00**	0	0	0	**0.0**	0	0.00	0	**0**	0.00	0.00	0	**0.00**	0	0	0	**0.00**	0	0
	0	**2550.15**	1200.2	1350	0	**2550.15**	1200.2	1350.00	0	**2550.15**	1200.15	1350.00	0	**2550.15**	1200.15	1350	0	**2550.15**	28335	12750.8
	0	**2999.70**	1499.9	1499.85	0	**2999.7**	1499.9	1499.85	0	**2999.7**	1499.85	1499.85	0	**2999.70**	1499.85	1499.9	0	**2999.70**	33330	14998.5
	0	**11864.70**	**6149.7**	**5715**	**0**	**11864.70**	**6149.7**	**5715.00**	**0**	**11864.70**	**6149.70**	**5715.00**	**0**	**11864.70**	**6149.7**	**5715**	**0**	**11864.70**	**131830**	**59323.5**

Notes

Notes

Notes

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