



## **SECTION 1**

### **Vision**

To develop aquaculture and fisheries by adapting new and innovative production technologies, management and utilization of less utilized water resources in a sustainable manner and promote domestic marketing.

### **Mission**

To increase present level of fish production from 6.57 million tonnes to 10.57 Million tonnes, contributing to food, health, economy, exports and employment in the country.

### **Objective**

1. To bring activities relating to fisheries and aquaculture for focused attention and professional management.
2. To coordinate activities pertaining to fisheries undertaken by different Ministries/Departments in the Central Government and also coordinate with the State/Union Territory Governments.
3. To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries.
4. To achieve sustainable management and conservation of natural aquatic resources including the fish stocks.
5. To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries.
6. To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization.
7. To generate substantial employment.
8. To train and empower women in the fisheries sector.
9. To enhance contribute of fish towards food and nutritional security.

**Function**

There is a large untapped potential in fisheries and aquaculture, which can contribute considerably to improve the livelihoods as also women empowerment. The future development of aquaculture and fisheries depends on adoption of new and innovative production technologies, management and utilization of less utilized water resources and proper market tie-ups. With this background, the National Fisheries Development Board (NFDB) would seek to realize the full potentials of Indian fisheries through coordination of different agencies and public-private partnerships. The main function of NFDB is to promote, plan and organize programmes for the purpose of development of fisheries and aquaculture on an intensive and nation wide basis and to render assistance in the implementation of such programmes. The NFDB would also advice the states and Union territories in the formulation of policies and programmes for fisheries development.

**Section 2****Interse priorities among key objectives, success indicators and targets**

Sl. No	Objective	weight	Action	Success Indicator	Unit	Weight	Target/ criteria Value				
							Excellent	Very Good	Good	Fair	Poor
							100%	90%	80%	70%	60%
I	To bring activities relating to fisheries and aquaculture for focused attention and professional management.	4	1. Capacity building of fisheries officials from the states/ UTs	No of officials/ fishers trained and No of exposure visits conducted/ No of seminars etc conducted.	No	1	780	702	624	546	468
			2. Exposure visits for officials and fishers for enhancing the knowledge.			1	50	45	40	35	30
			3. Providing development assistance to States/ UT/ research, training institutes for training for fishermen/ fish farmers/ entrepreneurs/ stake holders			1	8400	7560	6720	5880	5040
			4. Conducting Seminars/ workshops/ symposiums/Awareness camps			1	37	33	30	27	24
II	To coordinate activities pertaining to fisheries	7	1. Preparation of action plan for the year 2011-12	Preparation of action plan document	No	1	15.05.12	25.05.12	31.05.12	10.06.12	15.06.12

	undertaken by different Ministries/ Departments in the Central Government and also coordinate with the State/Union Territory Governments.		2. Conducting expert committee/ consultative/ interface meeting with the scientists, state fisheries departments and private entrepreneurs	No of meetings		4	6	5	4	3	2
			3. Stake holder meetings	No of stake holder meetings		2	5	4	3	2	1
III	To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries.	32	1. Establishment/ renovation of fish seed hatcheries	No of hatcheries/ nursery ponds/ area of reservoir/ culture units	No	3	33	30	26	23	20
			2. Establishment of rearing/ nursery ponds		ha	3	220	198	176	154	132
			3. Construction of grow out ponds		ha	2	1200	1080	960	840	720
			4. Development of reservoirs		lakh ha	8	3.37	3.03	2.70	2.36	2.02
			5. Establishment of brackish water fin fish hatcheries			2	4	0	3	0	2
			6. Sea weed culture units		No	2	2500	2250	2000	1750	1500
			7. Mussel culture units		No	2	300	270	240	210	180
			8. Demonstration of open sea cage culture units of 6 cubic meter			4	50	45	40	35	30

			9. Establishment of trout hatcheries			2	3	3	2	2	2
			10. Establishment of raceways/ running water aquaculture systems			4	300	270	240	210	180
IV	To achieve management and conservation of natural aquatic resources including the fish stocks.	4	1. Establishment of brood banks for conservation of native fish species	No of brooders reared (Chitala)	No	1	10	9	8	7	6
			2. Awareness training on conservation	No of trainings		3	3	2	1	0	0
V	To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries.	8	1. Technology upgradation projects related to fisheries	No of projects	No	4	10	9	8	7	6
			2. Establishment of disease diagnostic labs	No of labs		4	10	9	8	7	6
VI	To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization.	38	1. Modernization of whole sale fish markets	No of whole sale fish markets	No	7	20	18	12	10	8

			2. Modernization of retail fish markets	No of retail fish markets		5	15	14	12	11	9
			3. Establishment of retail fish outlets	No of retail fish outlets		4	15	14	12	11	9
			4. Modernization of fishing harbours	No of harbours		7	8	7	6	6	5
			5. Modernization of fish landing centres	No of landing centres		6	8	7	6	6	5
			6. Setting up of solar drying units	No of units established		2	4	3	2	1	0
			7. Setting up of platforms for drying of fish	No of units established		1	100	90	80	70	60
			8. Integrated ornamental fishery units with hatcheries for ornamental fishes	No of units established		4	9	8	7	6	5
			10. Fish festivals and melas	No of fish festivals/ melas organized		2	8	7	6	5	4
VII	To train and empower women in the fisheries sector.	7	1. Establishment of backyard ornamental fish units	No of units established	No	3	302	272	242	212	182
		2. Seaweed culture by women	2		1000	900	800	700	600		
		3. Mussel culture by women	2		100	90	80	70	60		

### Section 3

#### Trend values of the success indicators

Sl. No	Objective	Action	Success Indicator	Unit	Actual value for FY 10/11	Actual value for FY 11/12	Target for FY 12/13	Target for FY 13/14	Target for FY 14/15
I	To bring activities relating to fisheries and aquaculture for focused attention and professional management.	1. Capacity building of fisheries officials from the states/ UTs	No of officials/ fishers trained and No of exposure visits conducted/ No of seminars etc conducted. Impact of training in day to day activities	No	469	578	780	800	820
		2. Exposure visits for officials and fishers for enhancing the knowledge.			60	52	50	52	54
		3. Providing development assistance to States/ UT/ research, training institutes for training for fishermen/ fish farmers/ entrepreneurs/ stake holders			21841	4525	8400	8500	8600
		4. Conducting Seminars/ workshops/ symposiums/Awareness camps			25	32	37	40	43
II	To coordinate activities pertaining to fisheries undertaken by different Ministries/ Departments in	1. Preparation of action plan for the year 2011-12	Preparation of action plan document	No	20.05.10	10.05.11	15.05.12	15.05.13	15.05.14



	the Central Government and also coordinate with the State/Union Territory Governments.	2. Conducting expert committee/ consultative/ interface meeting with the scientists, state fisheries departments and private entrepreneurs	No of meetings				6	7	8		
		3. Stake holder meetings	No of stake holder meetings				6	7	8		
							7	8	5		
									6		
									7		
III	To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries.	1. Establishment/ renovation of fish seed hatcheries	No of hatcheries/ nursery ponds/ area of reservoir/ culture units	No			16	17	33	36	39
		2. Establishment of rearing/ nursery ponds		ha			176.6	123	220	240	260
		3. Construction of grow out ponds		ha			658.33	592.28	1200	1320	1440
		4. Development of reservoirs		lakh ha			4.9	4.47	3.37	3.7	4.03
		5. Establishment of brackish water fin fish hatcheries					0	0	4	5	6
		6. Sea weed culture units		No			0	0	2500	2600	2700
		7. Mussel culture units		No			0	0	300	320	340
		8. Demonstration of open sea cage culture units of 6 cubic meter					0	0	50	55	60
		9. Establishment of trout hatcheries					2	8	3	4	5

		10. Establishment of raceways/ running water aquaculture systems			300	200	300	400	500
IV	To achieve mangement and conservation of natural aquatic resources including the fish stocks.	1. Establishment of brood banks for conservation of native fish species	No of brooders reared (Chitala)	No	0	0	10	10	10
		2. Awareness training on conservation	No of trainings		3	3	3	4	5
V	To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries.	1. Technology upgradation projects related to fisheries	No of projects	No	8	1	10	10	10
		2. Establishment of disease diagnostic labs	No of labs		0	0	10	12	14
VI	To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization.	1. Modernization of whole sale fish markets	No of whole sale fish markets	No	28	44	20	25	30
		2. Modernization of retail fish markets	No of retail fish markets		23	12	15	20	25
		3. Establishment of retail fish outlets	No of retail fish outlets		4	27	15	20	25
		4. Modernization of fishing harbours	No of harbours		8	6	8	10	12
		5. Modernization of fish landing centres	No of landing centres		0	9	8	10	12
		6. Setting up of solar drying units	No of units established		0	0	4	5	6

		7. Setting up of platforms for drying of fish	No of units established		0	0	100	110	120
		8. Integrated ornamental fishery units with hatcheries for ornamental fishes	No of units established		5	14	9	10	11
		10. Fish festivals and melas	No of fish festivals/ melas organised		15	4	8	10	12
VII	To train and empower women in the fisheries sector.	1. Establishment of backyard ornamental fish units	No of units established	No	334	1000	302	350	400
		2. Seaweed culture by women			0	0	1000	1100	1200
		3. Mussel culture by women			0	0	100	110	120

## **Section 4**

### **Description and definition of success indicators and proposed measurement methodology**

- 1. Bringing more area under fish/ shrimp/ prawn culture-**  
Tremendous potential exists in India to augment fish production from freshwater/ brackish water aquaculture resources, which are spread across the length and breadth of the country. With concerted efforts to mobilize farmers to adopt fish/ shrimp farming, application of appropriate technologies for sustainable fish farming and fish seed production and availability of institutional finance, it would be possible to bring in substantial hikes in the annual fish production from the aquaculture sector. The success can be measured in terms of more number of ponds being constructed for this purpose in addition to renovation of existing ponds for aquaculture.
- 2. Establishment of seed hatcheries, rearing ponds and feed mills-**  
Availability of quality seed of cultivable fish/ shrimp species has always been a limiting factor for intensification of fish/ shrimp production and also for coverage of additional area proposed to be developed under aquaculture. Requirement of quality fingerlings of 80-100 mm size is a prerequisite for fisheries development in reservoirs and in culture ponds, since; realization would be more if large size fingerlings are stocked. Feeding is a must in farming of fish/ shrimp as they result in better growth. With increase in fish/ shrimp culture the number of seed hatcheries, rearing ponds and feed mills should increase.
- 3. Increase in trout culture-** The trout aquaculture in hills is of very recent origin. The Scientific and intensive aquaculture of trout has to be initiated for development of low volume culture systems in raceways. This would result in the utilization of the cold water resources of the country. The success can be measured in terms of more number of trout hatcheries, trout feed mills, raceways and running water fish culture units being established.

4. **Diversification of species and organisms that are cultured-** Seaweed cultivation, oyster culture, mussel culture, cobia , sea bass and milk fish culture as a diversification activity in coastal aquaculture and mariculture, has tremendous potential all along the Indian coast. The success can be measured in terms of more number of farmers taking up seaweed, oyster and mussel culture.
5. **Development of reservoirs for fisheries-** Reservoirs form an important source of fish production in India. Considering the fish production potentiality of the reservoirs in India, moderate investments can yield larger quantities of fish besides increasing the employment opportunities for the rural population. The success can be measured in terms of undertaking fish fingerling stocking in all the small, medium and large reservoirs of the country and training the fishermen in reservoir fisheries management.
6. **Development of ornamental fisheries-** There is a lot of scope in India for ornamental fish trade as it is endowed with a suitable climate, water resources and large manpower base. Their commercial breeding and rearing can be done at the back yards of households in addition to establishing medium and integrated ornamental fish culture units to meet fast growing domestic and international market of the ornamental fishes. The success can be measured in terms of more number of ornamental fish culture units and aquarium fabrication units being established.
7. **Modernization of fishing harbours and fish landing centers-** The fishing harbours and landing centers are the initial centers of fish handling. Due to poor sanitary and hygienic conditions as well as temperature prevailing at these centers, there is substantial reduction in quality of the fish landed. Provision of clean and sanitary building with ancillary facilities like potable water and ice, fly-proofing arrangements and chilled storage at fishing harbours is an essential requirement to maintain quality and safety requirements for the fish landed.
8. **Modernization and establishment of fish markets and value addition of fish-** The establishment of domestic markets plays a very crucial role in the development of fisheries sector in the country. Apart from minimizing post-harvest losses, it helps in increasing revenue, enhancing employment opportunities and offers high standards of hygiene and sanitation leading to food safety. Further to minimize post harvest losses fish dressing centers and value addition by means of drying of fish can also be undertaken.

9. **Training of farmers and fisheries personnel-** Skill up-gradation is an important component of any production-oriented activity. Therefore, to meet this important requirement of human resource development in the fisheries sector, the Board envisages mobilization of existing facilities available under public and private sectors to impart training to the fish farmers/ entrepreneurs and fisheries personnel in the country.
  
10. **Shrimp farming in coastal waters-** In India, commercial shrimp farming started gaining roots only during the mid eighties. On one hand these activities can wean extra pressure from the coastal waters, on the other hand they can add to the fish production to meet the growing requirements of the country. The potential brackish water are available in the coastal regions of the country for shrimp culture is estimated between 1.2 and 1.4 m ha. Presently, an area of about 1,84,115 ha is under farming with an average production of about 1,10,000 metric tonnes of shrimp per year. The average productivity has been estimated at about 1,000 kg per hectare per year.

## **Section 5:**

### **Specific Performance Requirements from other Departments**

#### **Specific performance requirements from other departments that are critical for delivering agreed results**

Specific Performance requirements from other Departments/Agencies:

1. **Planning Commission:** Planning Commission have to give time-bound approval of EFC Memorandum for incorporating any changes in the schemes, increasing outlays etc.
2. **Dept of Animal Husbandry, Dairying and Fisheries:** The DAHD&F has to give administrative approval for the modification to be introduced in the schemes based on the recommendations of the stakeholders/ research community and release the Grant in Aid for the Board on time.
3. **State Governments:** State Governments are implementing almost all the schemes. The State Governments should submit viable proposals without any time delay enclosing all the relevant documents for the speedy processing of the proposals and sanctioning of funds. They should monitor the progress of the work and ensure completion of the projects on time.
4. **All Fisheries Research Institutes:** They are involved in evaluating the projects are implemented by the State Governments and technology up-gradation.

## Section 6

### Outcomes/ impact of activities of NFDB

Sl. No	Objective	Jointly responsible for influencing this outcome impact with the following departments/ agency	Success Indicator	Unit	FY	FY	FY	FY	FY
					10/11	11/12	12/13	13/14	14/15
I	To bring activities relating to fisheries and aquaculture for focused attention and professional management.	State/UTs Fisheries Department	1. Capacity building of fisheries officials from the states/ UTs	No	469	578	780	800	820
			2. Exposure visits for officials and fishers for enhancing the knowledge.		60	52	50	52	54
			3. Providing development assistance to States/ UT/ research, training institutes for training for fishermen/ fish farmers/ entrepreneurs/ stake holders		21841	4525	8400	8500	8600
			4. Conducting Seminars/ workshops/ symposiums/Awareness camps		25	32	37	40	43
II	To coordinate activities pertaining to fisheries undertaken by	State fisheries departments, scientists, and	1. Preparation of action plan for the year 2011-12	No	20.05.10	10.05.11	15.05.12	15.05.13	15.05.14



	different Ministries/ Departments in the Central Government and also coordinate with the State/Union Territory Governments.	private entrepreneurs	2. Conducting expert committee/ consultative/ interface meeting with the scientists, state fisheries departments and private entrepreneurs				6	7	8		
			3. Stake holder meetings				7	8	5	6	7
III	To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries.	State/UTs Fisheries Department	1. Establishment/ renovation of fish seed hatcheries	No			16	17	33	36	39
			2. Establishment of rearing/ nursery ponds	ha			176.6	123	220	240	260
			3. Construction of grow out ponds	ha			658.33	592.28	1200	1320	1440
			4. Development of reservoirs	lakh ha			4.9	4.47	3.37	3.7	4.03
			5. Establishment of brackish water fin fish hatcheries				0	0	4	5	6
			6. Sea weed culture units	No			0	0	2500	2600	2700
			7. Mussel culture units	No			0	0	300	320	340
			8. Demonstration of open sea cage culture units of 6 cubic meter				0	0	50	55	60
			9. Establishment of trout hatcheries				2	8	3	4	5

			10. Establishment of raceways/ running water aquaculture systems		300	200	300	400	500
IV	To achieve management and conservation of natural aquatic resources including the fish stocks.	State/UTs Fisheries Department	1. Establishment of brood banks for conservation of native fish species	No	0	0	10	10	10
			2. Awareness training on conservation		3	3	3	4	5
V	To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries.	State fisheries departments, scientists, and private entrepreneurs	1. Technology upgradation projects related to fisheries	No	8	1	10	10	10
			2. Establishment of disease diagnostic labs		0	0	10	12	14
VI	To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization.	State fisheries departments, Municipal Corporation, Harbour Engineering Dept. and private entrepreneurs	1. Modernisation of whole sale fish markets	No	28	44	20	25	30
			2. Modernisation of retail fish markets		23	12	15	20	25
			3. Establishment of retail fish outlets		4	27	15	20	25
			4. Modernisation of fishing harbours		8	6	8	10	12
			5. Modernisation of fish landing centres		0	9	8	10	12

			6. Setting up of solar drying units		0	0	4	5	6
			7. Setting up of platforms for drying of fish		0	0	100	110	120
			8. Integrated ornamental fishery units with hatcheries for ornamental fishes		5	14	9	10	11
			10. Fish festivals and melas		15	4	8	10	12
VII	To train and empower women in the fisheries sector.	State fisheries departments, research institutes	1. Establishment of backyard ornamental fish units	No	334	1000	302	350	400
			2. Seaweed culture by women		0	0	1000	1100	1200
		and private entrepreneurs	3. Mussel culture by women		0	0	100	110	120