



**Results-Framework Document (RFD)**  
**for**  
**Central Marine Fisheries Research Institute**  
**(2013-2014)**

**Address**

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## **Section 1 Vision, Mission, Objectives and Functions**

### **Vision**

Sustainable marine fisheries through management interventions and enhanced coastal fish production through mariculture for improved coastal livelihood.

### **Mission**

To develop information based management system for changing over from open access to regulated regime in marine fisheries, augment coastal fish production through mariculture and sea ranching and restore critical marine habitats.

### **Objectives**

1. Marine fishery resources assessment
2. Productivity and production enhancement through mariculture
3. Transfer of technology, training and consultancy services

### **Functions**

1. To monitor the exploited and assess the under-exploited stock of the marine fisheries resources of the Exclusive Economic Zone (EEZ)
2. To understand the fluctuations in abundance of marine fisheries resources in relation to change in the environment
3. To develop suitable mariculture technologies for finfish, shellfish and other culturable organisms in open seas to supplement capture fishery production
4. To act as a repository of information on marine fishery resources with a systematic data base
5. To conduct transfer of technology, post-graduate and specialized training, education and extension-education programmes
6. To provide consultancy services

**Section 2 - Inter se Priorities among Key Objectives, Success indicators & Targets**

Sl. No.	Objectives	Weight	Actions	Success Indicators	Unit	Weight	Target / Criteria Value					
							Excellent	Very Good	Good	Fair	Poor	
							100%	90%	80%	70%	60%	
1	Marine Fishery Resources Assessment	62	Compilation of chlorophyll and other plankton abundance data using remote sensing and <i>in situ</i> observations for forecasting Indian marine fishery resources	Development of grid-wise time series data base on chlorophyll abundance, marine catch, effort and catch rate with geo reference tags	Number of grids	4.00	09	08	06	05	04	
				Estimation of spatio-dynamic model components for the study area	Number of components	3.00	05	04	03	02	01	
				Assessment of marine fishery resources of the country and strengthening of the National Marine Fisheries Information System	Estimation of Marine fish landings and data base updation	Date	14.00	27.03.14	28.03.14	29.03.14	30.03.14	31.03.14
				Formulation and dissemination of regional marine fisheries management plans	Rapid assessment of the status of exploited stocks, in maritime states	Number of stocks	10.00	28	26	24	22	20
				Establishment of a National Fisheries	Development of regional spatio-temporal	Number	7.00	20	18	16	14	12

			Grid-GIS Platform	resource mapping of distribution and abundance of fishes off Indian coast	of fish species						
			Bio-inventorying and biodiversity evaluation of marine ecosystem	Development of GIS based data base and valuation of marine organisms	Number of species	8.00	28	26	24	22	20
			Ecosystem monitoring	Environmental impact parameters in hydrographic and benthic ecosystems	Number of parameters	8.00	27	26	25	24	23
			Socio-economic evaluation of marine fisheries sector	Estimation of indicators of socio-economic development and marketing efficiency in marine fisheries	Number of indicators	8.00	15	12	10	8	6
2	Productivity and production enhancement through mariculture	12	Fish seed production through mariculture	Production of marine finfish seedlings	Numbers (in'000)	12.00	32	30	28	26	24
3	Transfer of technology, training & consultancy services	15	Technology transfer	Process and product commercialization	Number	1.00	2	1	0	0	0
				Consultancy services	Number of clients	3.00	8	5	4	3	2
				Analytical and advisory services	Number of	1.00	80	70	60	50	40

					clients						
			Training	Number of trainees	Number	10.00	700	650	600	550	475
	Efficient Functioning of the RFD System	03	Timely submission of Draft RFD (2013-14) for approval	On-time submission	Date	2.00	15/05/2013	16/05/2013	17/05/2013	20/05/2013	21/05/2013
			Timely submission of Results for RFD (2012-13)	On-time submission	Date	1.00	01/05/2013	02/05/2013	05/05/2013	06/05/2013	07/05/2013
	Administrative Reforms	04	Implement ISO 9001 as per the approved action plan	% Implementation	%	2.00	100	95	90	85	80
			Prepare an action plan for Innovation	On-time submission	Date	2.00	30/07/2013	10/08/2013	20/08/2013	30/08/2013	10/09/2013
	Improving internal efficiency / responsiveness / service delivery of Ministry / Department	04	Implementation of <i>Sevottam</i>	Independent Audit of Implementation of Citizen's Charter	%	2.00	100	95	90	85	80
				Independent Audit of implementation of public grievance redressal system	%	2.00	100	95	90	85	80

### Section 3 – Trend Values of the Success Indicators

Sl. No.	Objectives	Actions	Success Indicators	Unit	Actual Value for FY 11/12	Actual Value for FY 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
1.	Marine Fishery Resources Assessment	Compilation of chlorophyll and other plankton abundance data using remote sensing and <i>in situ</i> observations for forecasting Indian marine fishery resources	Development of grid-wise time series data base on chlorophyll abundance, marine catch, effort and catch rate with geo reference tags	Number of grids	0 <sup>#</sup>	0 <sup>#</sup>	08	09	09
		Assessment of marine fishery resources of the country and strengthening of the National Marine Fisheries Information System	Estimation of spatio-dynamic model components for the study area	Number of components	0 <sup>#</sup>	0 <sup>#</sup>	04	05	05
		Formulation and dissemination of regional marine fisheries management plans	Estimation of Marine fish landings and data base updation	Date	25.3.12	27.3.13	28.3.14	28.3.15	28.3.16
		Establishment of a National Fisheries Grid-GIS Platform	Rapid assessment of the status of exploited stocks, in maritime states	Number of stocks	18	20	26	30	34
		Development of regional spatio-temporal resource mapping of distribution and abundance of fishes off Indian coast	Development of regional spatio-temporal resource mapping of distribution and abundance of fishes off Indian coast	Number of fish species	0 <sup>@</sup>	5 <sup>@</sup> centres	18 Species from 13-14	20	22

		Bio-inventorying and biodiversity evaluation of marine ecosystem	Development of GIS based data base and valuation of marine organisms	Number of species	20	25	26	28	30
		Ecosystem monitoring	Environmental impact parameters in hydrographic and benthic ecosystems	Number of parameters	15	25	26	28	30
		Socio-economic evaluation of marine fisheries sector	Estimation of indicators of socio-economic development and marketing efficiency in marine fisheries	Number of indicators	8	10	12	14	16
2.	Productivity and production enhancement through mariculture	Fish seed production through mariculture	Production of marine finfish seedlings	Numbers (in'000)	0*	22	30	40	45
3.	Transfer of Technology, Training & consultancy services	Technology transfer	Process and product commercialization	Number	1	1	1	1	1
			Consultancy services	Number of clients	05	2	5	6	8
			Analytical and advisory services	Number of clients	60	65	70	85	100
		Training	Number of trainees	Number	325	444	650	700	750
Efficient Functioning of the RFD System	Timely submission of Draft RFD (2013-14) for approval	On-time submission	Date			16/05/2013			
	Timely submission of Results for RFD (2012-13)	On-time submission	Date			02/05/2013			

	Administrative Reforms	Implement ISO 9001 as per the approved action plan	Implementation	%	--	--	95		
		Prepare an action plan for innovation	On-time submission	Date	--	--	10/08/2013		
	Improving internal efficiency/responsiveness/ service delivery of Ministry/ Department	Implementation of "Sevottam"	Independent Audit of Implementation of Citizen's Charter	%			95		
			Independent Audit of Implementation of public grievance redressal system	%			95		

Note: # This project commenced from 2013-14 only

@ This project commenced from 2012-13. Initially the unit was number of centres covered, later changed to number of species covered from 2013-14 onwards

\* The seedling production commenced from 2012-13 only



## Section 4: Acronyms

Sl.No.	Acronym	Description
01	EEZ	Exclusive Economic Zone
02	GIS	Geographical Information System
03	DAHD &F	Department of Animal Husbandry, Dairying and Fisheries
04	SAC	Space Application Centre

## Section 4: Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl. No.	Success Indicator	Description	Definition	Measurement	General Comments
1	Development of grid-wise time series data base on chlorophyll abundance, marine catch, effort and catch rate with geo reference tags	A time series data base on various components like chlorophyll abundance from identified grids will be collected	A time series data base will be identified for each grid	Number of grids for which time series data base could be developed	Compilation of these information using remote sensing will be used in forecasting Indian marine fishery resources
2	Estimation of spatio-dynamic model components for the study area	Components of the spatio-dynamic models will be estimated	The components like Large & small pelagic, Large & small demersals Benthic resources will be identified	Number of components	Compilation of these information using remote sensing will be used in forecasting Indian marine fishery resources
3	Estimation of Marine fish landings and data base updation	The marine fish landings in the country across the maritime states are assessed	The marine fish landings is estimated by collecting data on fish catch and effort from sample fishing units selected	Date of publication of the annual landing statistics	

			based on a multistage stratified random sampling method		
4	Rapid assessment of the status of exploited stocks, in maritime states	The status of exploited stocks in the year is assessed systematically	The biological data on length-weight relationship and the landings data are used to assess the stock	Number of stocks exploited	
5	Development of regional spatio-temporal resource mapping of distribution and abundance of fishes off Indian coast	The details of the distribution of fishery resources will be mapped	Resource maps comprising various components will be prepared	Number of fish species	
6	Development of GIS based data base and valuation of marine organisms	The data base on the marine flora and fauna will be developed and used for valuation of the ecosystem	The list of marine flora and fauna will be listed, identified and their use & non-use values will be estimated	Number of species	Valuation of the marine bio-diversity
7	Environmental impact parameters in hydrographic and benthic ecosystems	The status of coastal health will be assessed by estimating the indicators of pollution	The intensity of marine pollution, heavy metal concentration and extent of degradation of fragile habitats decides the coastal health	Number of parameters like pollution index, degradation index and related parameters	
8	Estimation of indicators of socio-economic development and marketing efficiency in marine fisheries	The economic indicators like net income, profit/loss, productivity, net present value and payback period indicates the efficiency of	The different fishing methods will be economically evaluated and the marketing efficiency will be estimated	Number of indicators	

		the production & marketing system	by developing suitable indicators.		
9	Production of marine finfish	Broodstock for marine fin fish are developed by adopting different induced breeding methods. Various species of marine finfish will be farmed in open sea cages.	The production of various species of marine fin fish will be assessed	Tonnes	
10	Process and product commercialization	Few products are developed as the output of some of the research activities. Such products after successful testing are taken for commercialization	The products or the process developed will be shared with the knowledge or working partner to expand the production on commercial scale	Number of products /processes commercialized	
11	Consultancy services	The expertise in different fields of marine fisheries management and mariculture are utilized to help those clients who seek our help for solving their research problems in the concerned field	The consultancy services are taken up based on the requirement from the clients and worked on a project mode	Number of clients	
12	Analytical and advisory services	Facilitating certain services like water testing, species identification	The services like water quality testing, disease & species identification are provided to farmers and students	Number of clients approached	
13	Number of trainees	Capacity building in fields of marine	Training is provided to fishers and fish	Number of trainees	

		fisheries and mariculture is done through training of the fishers and fish farmers at regular intervals	farmers on various aspects of marine fisheries and mariculture		
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**Section 5**  
**Specific Requirements from Other Departments**

Location type	State	Organization type	Organization name	Relevant success indicator	What is your requirement from this organization?	Justification for this requirement	Please quantify your requirement from this organization	What happens is your requirement is not met?
Central Government		Government Department	DAHD &F	Fish seed production through mariculture	Policy formulation and implementation support	This Department is the organization that promulgates policies after getting approval from the Government	Support to translate our research findings to policy measures	There will be a delay for the impact of the research of the institution in reaching the clients
Central Government		Government Department	Space Application Centre (SAC), Indian Space Research Organization	Development of grid-wise time series data base on chlorophyll abundance, marine catch, effort and catch rate with geo reference tags	Providing past years time-series data and current data on remote sensing and chlorophyll collected through their satellite	This is the only organization that collects data through remote sensing using the satellites sent in the orbit	Time series data for the last few decades and the current data on chlorophyll	The results will be delayed

## Section 6: Outcome /Impact of activities of organization Ministry

Sl .No.	Outcome/ Impact of organization	Jointly responsible for influencing this outcome/impact with the following organizations /departments / ministries	Success indicators	Unit	2011-2012	2012-2013*	2013-2014	2014-2015	2015-2016
1	Annual estimation of marine fish landings in India and socio economic indicators –State-wise		Number of organizations using our data base	Number*	80	90	102	105	110
2	Productivity and production enhancement through mariculture-Open sea cage farming: Seed production	Ministry of Agriculture, National Fisheries Development Board	Number of farmers/organizations purchasing our seeds	Number	40	52	75	85	100
3	Capacity building in stock assessment, taxonomy , open sea cage farming and hatchery technologies		Number of trainees	Number	588	375	650	725	800

Note: \*We are retaining our original unit since it is the way in which our research efforts are measured



