CIFNET

Results – Framework Document for Central Institute of Fisheries Nautical and Engineering Training, Kochi

[RFD - CIFNET]

[Summary of the targets CIFNET expects to achieve during the financial year and the action plan to meet them]

[2013-2014]

[Ministry of Agriculture, Dept. of Animal Husbandry, Dairying and Fisheries
FORESHORE ROAD, KOCHI – 682 016]

R F D

Results Framework Document

for

(Department of Animal Husbandry, Dairying & Fisheries)

Central Institute of Fisheries Nautical and Engineering Training (CIFNET), Kochi

(2013-2014)

Section 1:
Vision, Mission, Objectives and Functions

Vision

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To produce trained national manpower of International Standards to man deep sea fishing vessels for viable, eco-friendly, energy efficient, sustainable fisheries in Indian Exclusive Economic Zone and International waters, and to address any technical eventualities in fishing, Nautical and Marine Engineering fields.

Mission

To transform robust and adventurous aspirants into a erudite Ocean going versatile fishing work-force by meeting the training requirement of technical and certified personnel such as Skippers, Mates, Engineers, Engine Drivers of Fishing Vessels as stipulated in the Merchant Shipping Act(1987).with cascading effect in boosting Marine food Security , Employment, Replenish Nutritive health, and Economy through Sustainable development of the fisheries sector of the country.

Objectives

- To create technical manpower for the operation of Ocean going fishing vessels and to run infrastructural establishments
- To create trained manpower to manage fishery establishment.
- To impart training for technical teachers for manning the fishermen training centers attached to Maritime States and Union Territories
- Provide technical consultancy service in fisheries, Nautical and Marine Engineering with special reference to technical manpower.
- To conduct studies on fishing craft, fishing gears and equipments and provide extensive training to accelerate advancement in fishing technology for enhancing productivity of fishermen and increasing marine fish production.
- To popularize code of conduct for responsible fishing.
- To prioritize safety of life at sea
- To advocate energy efficient, hybrid fuel, renewable energy to propel fishing crafts.
- To help developing nations in the South-east Asian, Middle east and African regions to create technical manpower for development of Marine Fisheries requirements.

Functions

Training

Imparting training in two NCVT trade courses viz., Vessel Navigator Course and Marine Fitter Course affiliated to DGET at all the 3 centres of CIFNET ie, Kochi, Chennai and Visakhapatnam.
Offering four years BFSc (Nautical Science) course at CIFNET , Kochi
Tutoring Statutory and Refresher Courses for the candidates appearing for Mate and Skipper II examination with MMD.
Teaching Ancillary courses.
Conducting various short term courses on Fisheries, Navigation and Marine Engineering to sister organisations and College students.

Fishery Training Vessel Operation

The Institute is equipped with 3 fishery training vessels at its 3 centres and conducts regular sailing programmes for imparting on-board practical training in fisheries, navigation and marine engineering to Institutional and Post Institutional trainees and short term course students.

Workshops and laboratory

The Institute is well equipped state-of-the-art fishing gear division, micro biology and biochemical lab, fishprocessing laboratory, fishery technology laboratory, marine engineering workshop , engine room simulator, pnumatic and hydraulic laboratory, refrigeration laboratory, heat engine laboratory , navigation division, marine electronics division, and computer division for imparting practical training in the respective subjects to Institutional and Post Institutional trainees and short term course students.

Section 2:
Inter se Priorities among Key Objectives, Success indicators and Targets

Column 1	Column 2	Column 3	Column 4		Column 5	Column 6				
Objective	Weight	Action	Success Indicator	Unit	Weight	Target / Criteria Value				
						Excellent	VeryGood	Good	Fair	Poor
						100%	90%	80%	70%	60%
1 Training Programmes	**50**	Degree Course-BFSc(NS)	No. of candidates undergoing training	Nos	15	84	76	67	59	50
		NCVT Courses	No. of candidates undergoing training	Nos	15	192	173	154	134	115
		Short term & Extension Courses	No. of candidates undergoing training	Nos	10	600	540	480	420	360
		Statutory & Refresher Course	No. of candidates undergoing training	Nos	7	30	27	24	21	18
		Ancillary Courses	No. of candidates undergoing training	Nos	3	15	14	12	11	9
2 Training Vessel Operation Conducting sailing of vessel; for imparting practical training	**50**	Institutional Trainee Days	No. of candidates sailing onboard	Nos.	15	3000	2700	2400	2100	1800
		Days Out at sea	Sailing days	Nos.	10	500	450	400	350	300
		Fishing Days	Fishing days	Nos	10	400	360	320	280	240
		Post institutional Trainee days	No. of candidates sailing onboard	Nos	9	4200	3780	3360	2940	2520
		Fishing Effort(Hrs)	Fishing hours	Hrs	2	1500	1350	1200	1050	900
		Fishing Effort(Hooks)*	No. of hooks	Nos	2	0	0	0	0	0
		Catch(Tonnes)	Quantity of fish caught	tonnes	2	35	32	28	25	21

* This Target will be fixed after the procurement of new hooks / Long Line system.

Section 3:
Trend Values of the Success Indicators

Objective	Action	Success Indicator	Unit	Actual Value for FY 11/12	Actual Value for 12/13	Target Value for FY 13/14	Projected Value for FY 14/15	Projected Value for FY 15/16
1 Training Programmes	Degree Course-BFSc(NS)	No. of candidates undergoing training	Nos.	73	77	84	84	84
	NCVT Courses	No. of candidates undergoing training	Nos.	171	160	192	192	192
	Short term & Extension Courses	No. of candidates undergoing training	Nos.	361	450	600	600	600
	Statutory & Refresher Course	No. of candidates undergoing training	Nos.	9	8	30	30	30
	Ancillary Courses	No. of candidates undergoing training	Nos.	12	0	15	15	15
2 Training in Vessel Operation Conducting sailing of vessel; for imparting practical training	Institutional Trainee Days	No. of candidates sailing onboard	Nos.	3353	3286	3000	2500*	3000
	Days Out at sea	Sailing days	Nos.	327	413	500	350*	460
	Fishing Days	Fishing days	Nos	264	333.25	400	280*	380
	Post institutional Trainee days	No. of candidates sailing onboard	Nos	3516	3509	4200	3000*	4200
	Fishing Effort (Hrs)	Fishing hours	Hrs	797.25	1476.45	1500	1000*	1480
	Fishing Effort (Hooks)*	No. of hooks	Nos	0	0	500	500*	500
	Catch(Tones)	Quantity of fish caught	tones	13.809	21.264	35	20*	25

* Out of three training vessels, two training vessels are due for dry-docking for a minimum of six-month period each.

Section 4:

Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl.	Success Indicator	Definition	Description	Measurement	General Comments
1.	No. of candidates undergoing NCVT Courses 1.Vessel Navigator Course (VNC) 2.Marine Fitter Course (MFC)	It is one of the key performance indicator in meeting the training requirement of technical and certified personnel to man deep sea Fishing vessels	It is one of the key performance indicator in meeting the training requirement of technical and certified personnel such as Skippers, Mates, Engineers, Engine Drivers of Fishing Vessels as stipulated in the Merchant Shipping Act(1987). Trainees are granted stipend during the training **Common subjects for VNC & MFC** 1. General English, 2. Applied Mathematics 3. Employability skills. **Disciplines of VNC**, 1. Fishing Gear Materials, Accessories and Design 2 Seamanship, Safety and Watch Keeping. 3. Elementary Marine Engineering 4. Naval Architecture & Ship Construction 5. Fishing Technique 6. Marine fisheries, Fish Processing & Fish Finding Equipments. 7. Practical Navigation 8. Marine Meteorology and Basic principles of Oceanography 9. Chart work -**Practical** 10. Fishing gear –**Practical** 11. Seamanship and Navigation –**Viva Voce** 12. Fishing Gear Technology -**Viva Voce** 13. Navigational aspects and Fisheries **ON-BOARD TRAINING** 14. Navigational aspects and Fisheries –On-board Training-**Report** **Disciplines of MFC** 1. Marine Engines. 2. Workshop Technology 3. Engineering Drawing. 4. Marine Electrical Technology. 5. Basic electronics & Instrumentation. 6. General Engineering Knowledge 7. Naval Architecture and Ship Construction 8. Machine Drawing 9. Hydraulics and deck Machineries 10 Fishing Technology 11. Seamanship and Navigation 12. Heat Engines and Refrigeration 13 Workshop -**Practical - I** 14. Workshop -**Practical and viva Voce-II** 15. All Engineering system Operation & Maintenance **ON-BOARD PRACTICAL TRAINING** 16. Operation, trouble shooting & Maintenance of Marine Engines, auxiliaries and other machineries & Equipments **Report** With the above mention, spectrum of need based assorted subjects, synchronized with practicals and on-board practicals on fishing vessels for two years, trainees are metamorphosed and made to attain pinnacles of professionalism and are moulded to face challenges of deep-sea environment in their fishing endeavors.	No.	VNC trainees requires 270 days sea service for appearing certificate of competency Mate of fishing vessel Examination and MFC trainee require 270 Engine propulsion days with 180 days apprentice fitter training for appearing certificate of competency Engine Driver of fishing vessel Examination conducted by Mercantile Marine Department MFC trainees eligible to apply to other organization like Indian oil company

<table>
<tr><th>Sl.</th><th>Success Indicator</th><th>Definition</th><th>Description</th><th>Measurement</th><th>General Comments</th></tr>
<tr><td>2</td><td>No. of candidates undergoing training in Degree Course- B.F.Sc(NS)</td><td>It is one of the key performance indicator in meeting the training requirement of Mate of fishing vessel</td><td>It is one of the key performance indicators. This Degree course is of four years duration and is affiliated to Cochin University of Science & Technology. Semester wise subjects are
<table>
<tr><td><u>SEMESTER I</u>
1.1 General English
1.2 General Mathematics
1.3 Classification of Fishing Gear
1.4 Naval Architecture I (Fishing Craft Technology)
1.5 Marine Fishery Resources
1.6 Nautical Science- I (Chart work Practicals - I)</td><td><u>SEMESTER II</u>
2.1 Communicative English
2.2 Fishery Biology
2.3 Fishing Gear Accessories
2.4 Nautical Science – II (Practical Navigation)
2.5 Fishing Gear Practicals –I
2.6 On-Boar Training- Practical</td></tr>
<tr><td><u>SEMESTER III</u>
3.1 Physical Oceanography
3.2 Fishing Gear Materials
3.3 Nautical Science-III (Safety, seamanship &Watch keeping)
3.4 Fishing techniques-1
3.5 Marine Ecology
3.6 On-Board Training -Practical</td><td><u>SEMESTER IV</u>
4.1 Fishing Gear design-I
4.2 Marine Meteorology
4.3 Basic of fishery Microbiology
4.4 Nautical Science-IV
4.5 Fishing Gear Practicals –II
4.6 On-Board Training-Practical</td></tr>
<tr><td><u>SEMESTER V</u>
5.1 Fish Preservation Techniques
5.2 Fishing Gear design - II
5.3 Fishing Techniques – II
5.4 Nautical Science –V (Construction & Stability)
5.5 Fish Processing Technology Practical
5.6 On-Board Training- Practical</td><td><u>SEMESTER VI</u>
6.1 Fishery Products Technology
6.2 Marine engineering –I
6.3 Nautical Science – VI (Navigational Aids)
6.4 Naval Architecture-II (Boat Building)
6.5 Fishing Gear Practicals – III
6.6 On-Board Training-Practical</td></tr>
<tr><td><u>SEMESTER VII</u>
7.1 Introduction to Fisheries Extension
7.2 Nautical Science – VII
7.3 Marine Engineering – II
7.4 Ship Operation Technology
7.5 Elective paper
7.6 On-Board Training- Practical</td><td><u>SEMESTER VIII</u>
8.1 Culture Fishery
8.2 Fleet Management
8.3 Introduction to Coastal Zone Management
8.4 Introduction to Fisheries Economics
8.5 Marine Fisheries Management
8.6 Project Work</td></tr>
<tr><td colspan="2">With the above mention, gamut of need based in-depth assorted and multidisciplinary subjects, synchronized with practicals and on-board practicals on fishing vessels for four years, students are reinforced with nuance of knowledge and made to garner pinnacles of professionalism in fisheries to make them primed to face challenges of deep-sea environment in their fishing endeavors and in manning the fishing industry of States, Union Territories and private.</td></tr>
</table></td><td>No.</td><td>With <u>6</u> months sea service they need to appear only viva voice exam of Certificate of competency Mate of fishing vessel with basic modular course under STCW 95, students are eligible to get Indian CDC With this degree they can adore various posts in state and union territory fishery Departments. It is a Spring board for higher education and research and to chose pedagogue and scientific professions</td></tr>
<tr><td>3.</td><td>No. of candidates undergoing training in Short term course & Extension Courses</td><td>It is one of the key performance indicator in disseminating nuance knowledge in Marine Engineering, Fisheries and Nautical Science in a nut shell</td><td>It is one of the key performance indicator in disseminating nuance knowledge in Marine Engineering, Fisheries and Nautical Science in a nut shell to graduates, post graduates, B tech and M tech Engineering students through following course modules
<u>For graduate and post graduate students of fishery colleges</u>
1. Fisheries Technology 2. Refrigeration & Equipment Engineering
3. Fishery Biology 4. Fishing vessel Engineering
5. Seamanship & Navigation 6. Oceanography & Meteorology
<u>For B. tech and M. Tech Engineering Students</u>
1. Marine Diesel Engine and associated systems
2 Marine Engineering
3 Marine Refrigeration
4 Marine Electro Technology
5 Power Generation and distribution on-board ships
6 Marine Electronic equipments and power supplies
7. Food preservation</td><td>No.</td><td>It kindles them to assimilate their unexplored new frontiers of marine knowledge</td></tr>
</table>

Sl.	Success Indicator	Definition	Description	Measurement	General Comments
4.	No. of candidates undergoing training in Statutory course & Refresher Course	It is one of the key performance indicator in reinforcing knowledge in EFTC and AFTC and to recall of knowledge learned through refresher course	It is one of the key performance indicator bestowed with the responsibility to conduct two statutory courses in 1. The Elementary Fishing Technology course (EFTC) 2. Advanced Fishing Technology Course (AFTC), which are prerequisites for appearing Mate, Skipper-II Fishing vessel examination respectively with MMD refresher course forms platform to recall, reinforce and update aspirants knowledge to appear following examinations with resilience and self-confidence. 1. Mate Fishing Vessel Examination 2. Engine Driver Fishing Vessel Examination. 3. Skipper Grade-II Examination 4. Engineer Fishing Vessel Examination		Widens the horizon of knowledge to advance their professional career
5.	No. of candidates undergoing training in Ancillary Courses	It is one of the key performance indicator to man shore establishment	Candidates sponsored by State and Union Territory fisheries departments are trained in Shore Mechanical Course an ancillary course to man shore establishment of Fishery Organizations	No.	Trained manpower will be employed in State & UT Fisheries Private Depts.
6.	No. of days Institutional trainees sailed on-board	It is one of the key performance indicator for providing on-board training in Fisheries, Nautical and Engineering subject	It is one of the key performance indicator for the length of period the trainees of VNC, MFC from three centers and BFSc (NS) students from Kochi center are imparted training in diversified, eco-friendly sustainable fish catching methods and spectrum of hands-on experience in Navigational , Marine Engineering aspect on Mechanised Vessel Prashikshani, Mechanised Vessel Skipper II and Mechanised Vessel Tharangani of Kochi, Chennai and Vishakapatnam centers respectively	No.	Reinforces their theoretical knowledge with Hands-on experience on-board the fishing vessels
7.	No. of Sailing days of the vessels, out at sea	It is one of the key performance indicator it decisively depends on the strength and endurance of the vessel and its crew	It is one of the key performance indicator .It is achieved through coordinated and cooperated diligent venture by the composite team of the institute to keep the vessels in shipshape sailing condition. Its achievements is also linked with favorable oceanic weather conditions devoid of cyclones	No.	It is the basic component in order to achieve on-board training for institutional and post institutional trainees
8.	No. Fishing days of the vessels	It is one of the key performance indicator linked with period of fishing	It is one of the key performance indicators. It is the period of the fishing usually done from dawn to dusk, sometimes after twilight by Nocturnal fishing methods are deployed through fishing with light. It includes preparation for fishing with prerequisites of mending fishing nets, operation, maintenance and rectification of unforeseen glitch of Hydraulics & deck machinery. Operation, maintenance and rectification of out of the blue snag in marine diesel engines, ancillary engines. Collection of latest fish availability data from Indian national centre for ocean information services through potential fish zone maps and cruising the defined fishing ground with state-of-the-art navigation with paramount importance to safety of life at sea.	No.	It is usually dawn to dusk on-board fishing activity

Sl.	Success Indicator	Definition	Description	Measurement	General Comments
9.	No. of days Post Institutional trainees sailed onboard	It is one of the key performance indicators for providing on-board training to Post Institutional trainees in order to acquire Qualifying Sea service requirements of MMD examinations.	It is one of the key performance indicators. The post institutional trainees of Engine Room Assistant and Junior Deck Hands are selected on Tenure basis on grant of stipend and are imparted training in diversified, eco-friendly sustainable fish catching methods and spectrum of hands-on experience in Navigational, Marine Engineering aspect in the M. V. Prashikshani, M.V Skipper II and M.V.Tharangani of Kochi, Chennai and Vishakapatnam centers respectively in order to acquire Qualifying Sea service to appear for Mate and engine Driver fishing vessel.	No.	To Augment and fine tune the professionalism through sustained exercise of on-board practicals to reach the higher helms of arduous and esteemed career
10.	No. of hours spent in fishing effort	It is one of the key performance indicator it estimates the actual duration of the fishing efforts	It is one of the key performance indicators. After completion of the all preparatory activity for fishing by the composite team of Deck and engine crew, the actual time spent in fishing efforts begins with deploying or shooting of any of the following fishing methods 1. long longing 2. trawling in trawling , fish finding equipments like Eco sounder, fish finder and Sonar are deployed. Activity of the fishing effort comes to an end with the hauling of deployed fish net with the fish caught.	Hours	This is the core activity on-board training
11.	Quantity of fish caught in tones	It is one of the key performance indicator for the fish caught	It is one of the key performance indicators. It provides in sights into type of fish caught and its quantity and quality and the area of its availability. It becomes a tool in evaluation of Fishery Survey India, surveyed Marine fishery resources information. And to the degree to which the Indian national centre for ocean information services(INCOIS)fish forecast data coincides.	Tonnes	Quantity of fish caught should be perceived from the point of view of epitome of “training is paramount”

Section: 5

Specific Performance Requirements from other Departments that are critical for delivering agreed results.

Location type	State	Organisation type	Organisation name	Relevant success Indictor	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this organisation	What happens if your requirement is not met
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Requires favorable oceanic weather conditions, adverse weather conditions will affect the performance of vessel operations								

Section 6:
Outcomes/Impact of activities of Department/Responsibility Centre (RC)

Sl. No.	Outcome/Impact of activities	Jointly responsible for influencing this outcome/impact with the following Departments /Ministries	Success Indicator	FY 2011-12-	FY 2012-13	FY 2013-2014	FY 2014-15	FY 2015-16
1	**Human resource development through training Programmes**	Department of Employment and Training Kochi, Chennai, Hyderabad.	No. of candidates undergoing training in NCVT Courses 1. Vessel Navigator Course 2 Marine Fitter Course	171	160	192	192	192

Abbreviations used

1. Qty - Quantity
2. Misc. - Miscellaneous
3. BFSC(NS) - Bachelor of Fisheries Science (Nautical Science)
4. AV - Actual Value
5. PV - Projected Value
6. TV - Target Value
7. No. - Number
8. FY - For the Year
9. HQ - Head Quarter
10. MMD - Mercantile Marine Department
11. CUSAT - Cochin University of Science & Technology
12. UGC - University Grants Commission
13. MPEDA - Marine Products Exports Development Authority
14. NCVT - National Council of Vocational Training
15. DGET Directorate General of Employment & Training
16. Hrs - Hours
17. STCW - Standards of Training, Certification and Watch keeping
18. CDC - Continuous Discharge Certificate
19. NFDB - National Fisheries Development Board