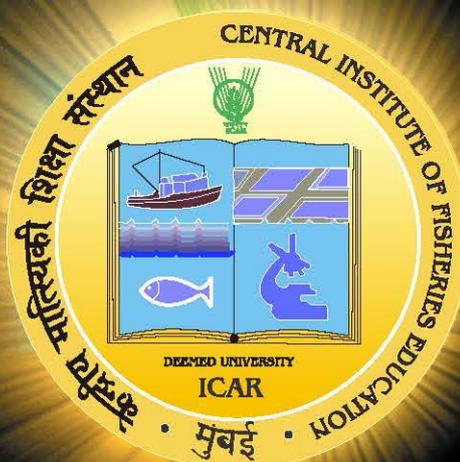


ISSN 0975-3184



CIFE

वार्षिक प्रतिवेदन
annual report 2009-10



Central Institute of Fisheries Education
(University under Sec.3 of UGC Act)
Off Yari Road, Panch Marg, Andheri (W), Mumbai 400061
www.cife.edu.in

CIFE

वार्षिक प्रतिवेदन

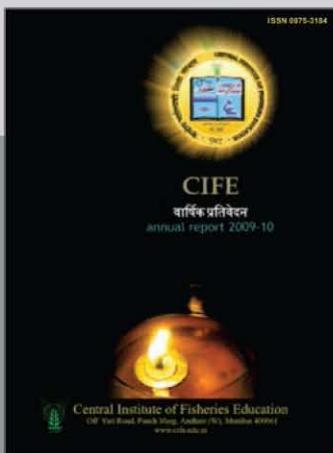
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Publication Team

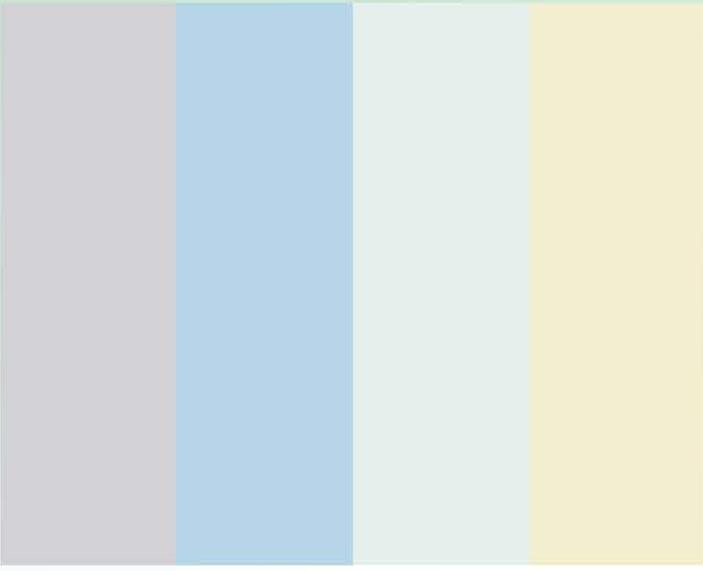
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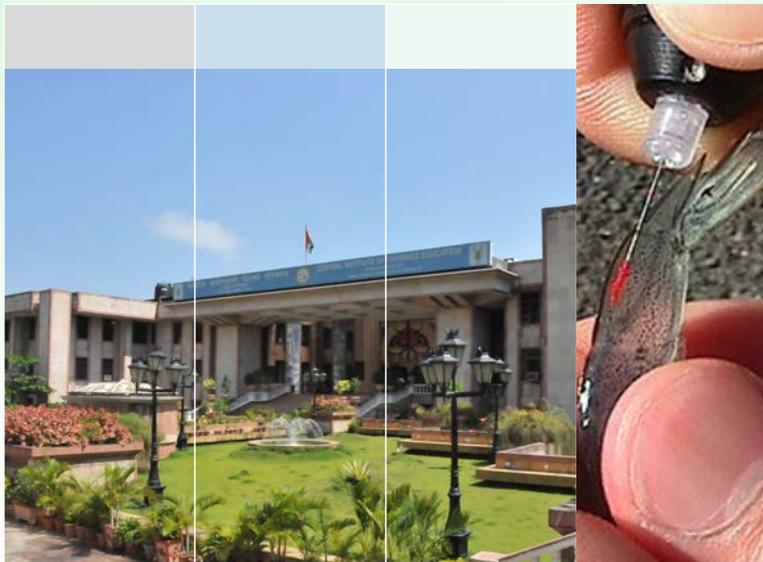
Publisher:
Director
Central Institute of Fisheries Education, Mumbai
2010 by CIFE, Mumbai

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1. Preface

When we are at the doorstep of celebrating 50 years of our dedicated service to the nation in the area of development of HRD in fisheries, the year 2009-10 saw a great leap forward taken by the Institute by featuring into the list of 20 “Bright spots”. The Tandon Committee, constituted by the HRD Ministry to review the functioning of Deemed Universities of the country, identified these top 20 universities. CIFE was placed at 12th place. The beginning of the year was marked by the gracious presence of the great visionary of India, Dr A.P. J. Abdul Kalam, former President of India who blessed the students during the annual convocation held on 15th April, 2009. It was an exceptional convocation, with Dr. Kalam inspiring the graduating students to take oath to devote themselves to work for the cause of fishing and fish farming communities.

The Institute witnessed the students attain greater achievements. In 2009-10, of the total 26 posts of Agricultural Research Service (ARS),



23 were bagged by CIFE students. The students also brought laurels to the Institute by their excellent performance in the ICAR Inter University Sports Meet 2010 at NDRI, Karnal, Haryana, 14-16 January, 2010.

The Institute focused its attention on utilization of large tracts of wasted inland / challenged resources of Karad, Taluka in Satara district of Maharashtra by successfully demonstrating the possibility of carp culture in salt affected fallow lands which was once a sugar cane growing area. Under the Niche Area project also, more encouraging result could be seen from tiger shrimp farming trials in inland saline water zone. The experiments showed significant results by achieving a production of 1617 kg/ha and 1680 kg/ha from two ponds of 0.25 ha. area in Rohtak

Centre with a survival of 82% and 72% from each pond respectively.

The Institute has taken initiatives in the upcoming research areas of nanotechnology, radio-ecology, pheromonal physiology, etc., which are expected to pay rich dividends in near future. The Institute received very active support from various agencies ranging from NAIP (ICAR), NFDB, and Department of Biotechnology (DBT) to BRNS (DAE) and a host of other organizations. The Institute welcomed additional resources with a significant rise in number of externally funded projects.

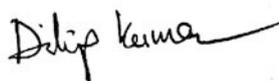
Sustainable development requires sound governance and enabling policy. The Institute worked hard to incorporate the feedback from state DoF & all stakeholders to come out with draft policy principles that can serve as overarching guidelines for the development of fisheries and aquaculture policy at state as well as the centre. Documentation of indigenous traditional knowledge in fisheries and aquaculture is a part of the Institute's program to reconcile with new technologies. The project team has already documented around 81 ITKs from the North East and around 75 ITKs from the East coast of India and 173 ITKs from West Coast in the field of conservation of biodiversity, protection of habitats, aquaculture, processing, therapeutics,, etc.

The Institute also gave balanced effort on pursuit of generating knowledge as well as the applications of the technological advances for the social benefits. For dissemination of knowledge-based aquaculture technologies through Trickle Down

System (TDS) of aquaculture extension, the Institute spent considerable time in supporting extension activities in states like Assam, Andhra Pradesh, Bihar, Maharashtra, Mizoram, Manipur, Nagaland and Uttar Pradesh. Similarly efforts have also been made for the development and demonstration of community participated management and development of fisheries in public and privately owned resources through action research projects. .

I feel highly obliged and my sincere thanks to the Director General (ICAR), Deputy Director General (Fisheries), Deputy Director General (Education) for their continued support and guidance. I am grateful to the Members of Board of Management, Chairman and Members of Research Advisory Committee, Members of Academic Council, Extension Council, Head of Divisions, Board of Examiners and other institute level committees for their cooperation and support. I thank the Directors and scientists of all the Fisheries Institutes, Guest Faculty & External Examiners for their consistent and timely support. I acknowledge with thanks all the scientists, technical and administrative staff and students of CIFE for their sincere efforts and valuable contributions. My appreciations to the publication team for bringing out this annual report.

I am delighted to present the annual report 2009-10 of the institute which is the product of tireless efforts of the faculty, staff and students.


(Dilip Kumar)





2. Executive Summary

The year saw innovative efforts to strengthen the academic, research, extension education and management standards. The institute faculty huddled together in the sleepy town of Daman to bring out issues underlining problems and concerns confronting our academic programmes, explore the options to thrash out the inadequacies to harness the opportunities to bring academic excellence. The students were exposed to field based hands on training for 45 days and their dissertation topics were selected based on the challenges being faced by various stakeholders of the sector as well as upcoming opportunities. Recently the Tandon Committee constituted by the Ministry of Human Resources, Government of India to review the function and quality of education being provided by Deemed Universities numbering well over hundred, classified CIFE as one of the “Bright Spots” in the country along with TIFR (TATA Institute of

Fundamental Research), TISS (TATA Institute of Social Sciences) and IISc (Indian Institute of Sciences).

The Institute conducted its Ninth Convocation on 15th April, 2009 with Dr. A.P.J. Abdul Kalam, Former Hon'ble President of India as Chief Guest. D.Sc. (Honoris causa) was conferred upon Shri. Ratan N. Tata and Prof. Hiralal Chaudhuri recognising their immense contribution for furthering and promotion of fisheries science.

During the year 13 PhD and 40 MFSc degrees were awarded while 42 PhD and 69 MFSc students were enrolled for the 2009-12 batch and 2009-11 batch respectively. Carrying on the good work as in the previous years, students of CIFE bagged 23 posts of Agricultural Research Scientist out of a total of 26 by clearing the ICAR ARS examination during 2009-10. The student also showed their excellence in the field of sports and games

during ICAR Inter University Sports Meet 2010 at NDRI, Karnal, Haryana, 14-16 January, 2010 by bagging 13 gold, 7 silver and 5 bronze medals including the Best athlete women and Player of the Tournament and Fair Play Award.

Research programmes played a major role in global arena through development, refinement and up-scaling of technologies and tools for sustainable utilization of resources. Significant research achievements were made in 26 institutional research projects, 22 externally funded projects, 2 international projects, 7 NAIP projects and 1 contract research project. These research projects were conducted through inter-disciplinary and inter-divisional approach. While externally funded projects are usually in line with the priority areas of the funding agencies, institute based projects are taken up under the broad framework of prioritized thematic areas, usually recommended by the Research Advisory Committee constituted by ICAR by drawing professionals of national repute. Unlike many research organizations, Institute research projects are inter-disciplinary and not division based.

Repeated trials of Tiger shrimp *Penaeus monodon* in inland saline water at Rohtak Centre in Haryana showed significant results than last year. The grow out culture trials of tiger shrimp were taken up with an objective to successfully demonstrate 2 crops in a year and by the end of the reporting period the first crop had been successfully completed in a span of 90 days. The experiments were conducted in two identical ponds of size 0.25 ha. A

total of 404 kg shrimps (1617 kg/ha) were harvested from the first pond with a survival of 82% and 420 kg (1680 kg/ha) with a net survival of 72% from the second pond.

The Institute focused its attention on utilization of large tracts of wasted inland areas such as salt-affected, flood prone, swampy, etc. The Institute has been able to create a visible impact in salt affected areas of Karad Taluka in Satara district of Maharashtra through an NAIP subproject on “A Value Chain on Fish Production in Fragile Agricultural Lands and Unutilized Aquatic Resources in Maharashtra”. Two carp culture and two carp seed rearing demonstration units had been established on common property of 50 farmers at Shere and Gondi villages. Indian major carps have been successfully reared and the potential was realized by achieving growth of 600 to 1200 g in 8-9 months in these culture ponds which were constructed at fallow salt affected land. In an effort to find solutions to the disease problem of shrimps, PCR amplification of WSSV, IHNV, HPV and MBV were carried out. Cloning and sequencing of WSSV had been completed. The institute is tirelessly documenting the Indigenous Technical Knowledge in Fisheries sector by conducting writeshops across the length and breadth of the country. One of the significant outcomes of the project was on developing appropriate policy framework for the development of fisheries and aquaculture. The draft policy framework awaits its orientation at the final national level workshop. Once it is ready it is to catalyze sustainable fisheries development in the country.





A number of field based action research projects are in operation to develop and refine fisheries and aquaculture extension strategies and approaches. Vigorous extension activities were carried out in the states of Assam, Bihar, Mizoram, Manipur, and Uttar Pradesh through Trickle Down System (TDS) of aquaculture extension for dissemination of knowledge-based aquaculture technologies with active participation of farmers. Carrying on the momentum created in previous years, around 150 units of co-management had been established in the periphery of Loktak Lake in Manipur without any financial assistance from any agency. Co-management practices were also introduced in beels of Assam and Maun and Chaur in Muzzaffarpur district of Bihar with great success. Fresh water prawn seed production and farming operations were supported in Nagaland, Mizoram and Assam.

The institute created good field level impacts through organizing various Extension Education/Transfer of Technology related programs and activities. 53 need based Short Term Training Programmes (STPs) were organized at Headquarters and its four centers in which 1013 numbers of participants were imparted skills in various aspects of aquaculture. The Institute also participated in 34 exhibitions held at various places across the country, showcasing the services being provided by the Institute towards the fisher and farming community. During the year, the Institute was visited by around 2250 students, farmers, academicians, policy makers and

other stake holders during the year to acquaint themselves the activities of the Institute. An International Training programme on Code of Conduct for Responsible Fisheries (CCRF) in collaboration with BOBP-IGO, Chennai was also organized which underline the commitment of the Institute towards sustainable development of fisheries.

A total of 46 research papers were published in refereed journals with high impact factors highlighting the progress made in terms of research carried out at the institute.

5 faculty members underwent 2 NAIP and 1 DBT sponsored Foreign Training programmes during the year. The faculty also participated in 53 workshops/seminars/conferences/symposia/congress held at different places. Faculty attended 7 training programmes/winter schools, 8 brainstorming session; 26 meetings and 21 invited lectures at different places.

The period under report was also coincided with QRT. The team headed by Dr. S.L. Mehta, Former VC-MPUAT supported by highly acclaimed members proposed a curriculum review of the institute and gave a clear guideline for further course development. The committee was highly satisfied with the institute especially for its pursuits of bringing innovation in teaching, research, extension education and management.

Institute organized 29 meetings on different programmes, workshops/writeshops conclave, and 1 CAFT programme. The Institute successfully organised 20th All India

Congress of Zoology and National seminar on Bio-resource and its management for food, livelihood and environment security during 29-31 December, 2009 at Mumbai which was attended by around 750 participants. The meetings of SRC, RAC, Board of Management, Academic Council and Extension Council were held as per schedule.

The year also saw the fulfilment of long awaited pending issues of creating new building infrastructures when Dr. Mangala Rai, Director General, ICAR and Secretary, DARE laid the foundation stones for the hostels, Scientists Home, Indoor sports complex, staff quarters and Director's residence.





3. Introduction



CIFE was born out of human resource development related demands and need for rational utilization of the fisheries sector and steering its further course of development. The institute which was created way back in 1961 under the Ministry of Agriculture, Govt. of India was subsequently transferred to ICAR (Indian Council of Agricultural Research) in 1979 and accordingly the scope and mandate of the institute were widened to include higher fisheries education, research as well as extension education under its functional fold. Recognizing the

pivotal role played by the Institute in Human Resources Development in fisheries, the Institute was accorded the status of Deemed-to-be- University in March, 1989. Since its very inception, the institution has been deeply engaged in orienting, grooming and preparing the raw talents which came not only from India but also from the Afro-Asian countries into highly professionals to work as researchers, development managers, entrepreneurs, thinkers and leaders in fisheries and aquaculture sector.

Vision

To become a global player in specialized human resource development in fisheries, and be counted among the best for academic excellence

Mandate

The mandate of the institute was revised time to time to keep pace with the changing needs of the country and its assigned responsibilities. The current mandate of the institute is:

- To conduct post graduate academic programs in core and emerging disciplines of fisheries science
- To conduct basic and strategic research in frontier areas of fisheries
- To conduct demand-driven training and educational programs for different stake holders in fisheries sector
- To provide technical support, inputs for policy development, and consultancy services

The core focus of the Institute lies in providing globally competitive, locally relevant, socially responsible and professionally capable human resources to ensuring national food and nutritional security and promotion of rural livelihoods.

Ongoing programmes

The institute while presenting itself as role model in the country takes lead role in developing course curriculum, setting standards in teaching, and undertaking capacity building of various fisheries colleges under Central as well as State Agricultural and Animal Sciences Universities through its Centre for Advanced Faculty Training (CAFT) programme.

Academic Programme

While the full time post graduate degree courses remain the flagship, other need-based demand driven courses are continuously being offered. These courses impart more intensive knowledge and skill oriented training on different aspects of fisheries and aquaculture to produce updated and competent fisheries professionals as well as self-propelled and confident entrepreneurs.

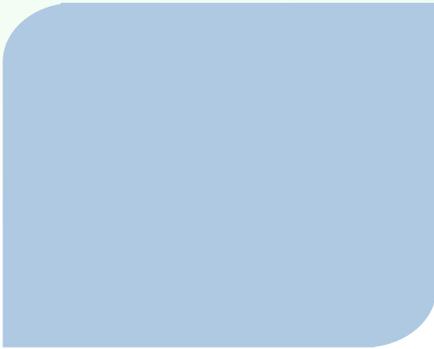
Infrastructure

The Institute has two campuses one at Yari road and another at Seven Bungalows, Mumbai. The new Yari road campus houses scientific divisions, chambers of the Director and Joint Director, Academic and Accounts sections, Conference hall, Community hall, Aquarium, Examination and Academic cells, Library building, Staff quarters and Ladies hostel etc. Wet labs, ponds and hatcheries are also developed within the Yari road campus. These two campuses are a kilometer apart from each other at Versova, Mumbai.

The Institute with its headquarters at Mumbai has four regional centres with adequate field / farm facilities.

- Kolkata (West Bengal);
- Kakinada (Andhra Pradesh);
- Powarkheda (Madhya Pradesh); and
- Rohtak (Haryana).





The Institute's field facilities include 20 ha freshwater fish farm at Powerkheda (Madhya Pradesh); 9.0 ha freshwater fish farm at Balabhadrapuram (Andhra Pradesh); 7.5 ha brackishwater fish farm at Kakinada (Andhra Pradesh); 4 ha freshwater fish farm and 10 ha ground saline water farm at Rohtak. These centres with farm, laboratory, hostel and class room facilities are being used for training and research in various aspects of aquaculture.

The Institute has two training-cum-research vessels viz.: M.F.V. Saraswati (36 m OAL) and M.F.V. Narmada (11 m OAL) for training and research in marine fisheries. The total sanctioned strength of the Institute is 356 comprising of 2 Research Management, 104 Scientific / teaching, 113 Technical, 57 Administrative, 1 Auxiliary and 79 Supporting staff.

This centre of excellence in fisheries science has state of art laboratories, a well endowed national library and class rooms equipped with IT enabled knowledge access and delivery tools. This institution has hostels with modern amenities for comfortable living. Besides there are facilities for sports and games and other recreation.

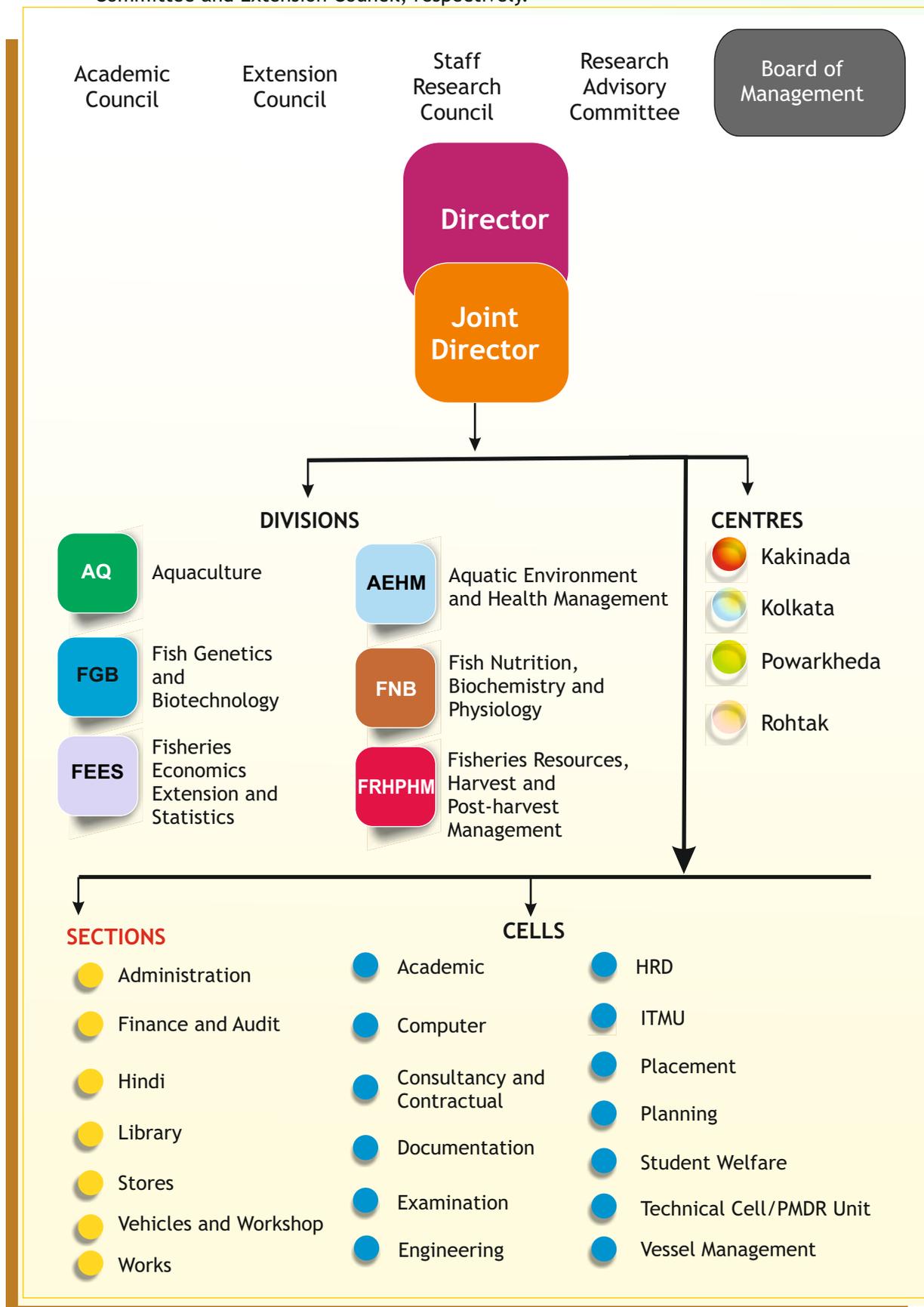
Following are the six major functional divisions at CIFE equipped with state of the art laboratories, Divisional libraries, stores and other facilities.

- Aquaculture
- Fisheries Resources, Harvest & Post Harvest Management
- Fish Nutrition, Biochemistry and Physiology
- Fish Genetics and Biotechnology
- Aquatic Environment & Health Management
- Fisheries Extension, Economics & Statistics

With a team of highly qualified and capable faculty members and staff; state of art laboratories; Regional centres with lab, field and farms facilities; outreach action research centres; and close working relationship with state Fisheries Departments, industry, farmers and fishers the institute has been trying to create local level impacts with global perspective and building its reputation to be counted as one of the global centre of innovative fisheries education.

Organization and Management

At the helm of affairs of overall Institutional Management, CIFE has a Board of Management which also functions as the highest decision making body at the Institute level. The decisions and recommendations pertaining to academic, research and extension activities of the Institute are made by Academic Council, Research Advisory Committee and Extension Council, respectively.



Budget 2009-10

Sl. No.	Head	Sanctioned	Received	Expenditure Incurred
1.	Plan	1015.00	1015.00	1014.99
2.	Non-plan	2557.45	2447.35	2554.11
3.	CAFT	7.81	7.81	6.05
4.	SDU	100.00	100.00	98.33

Sl.No.	Head	Balance C/f	Receipt in this year	Total
1.	AP Cess	12.30	-	12.30
2.	Externally Funded Projects	146.60	217.68	364.28

Revenue Generated (Rs. In Lakhs)

Target	Achieved
98.19	95.71





4. Academic Achievements



In the year 2009-10, 13 Ph.D. and 40 M.F.Sc. students completed their respective programmes successfully.

S. No.	Name of the programme	No. of successful students
1	Ph.D.	13
	Fisheries Resource Management	2
	Aquaculture	3
	Indian Aquaculture	2
	Mariculture	1
	Post Harvest Technology	2
	Fish Biotechnology	2
	Fish Genetics	1
2.	M.F.Sc.	40
	Aquaculture	8
	Fisheries Resources Management	5
	Post-Harvest Technology	5
	Fish Genetics & Biotechnology	3
	Fish Pathology & Microbiology	5
	Fish Nutrition & Biochemistry	4
	Fish Business Management	3
	Fisheries Extension	4
	Aquatic Environment Management	3
	Total	53

The following are the Ph.D. thesis and M.F.Sc. dissertations.

S.No.	Name of the student		
1	Mrs.M.G.I.S.Parakrama Ph.D.-239 (2005-08)	Dr. Kiran Dube	Effect of feeding vitamins, astaxanthin and HUFA enriched live and artificial feed on growth, survival, fatty and profile and stress resistance of <i>M.rosenbergii</i> (De Man).
2	Mr. Ashutosh Mishra Ph.D.138 (2001-04)	Dr. S.K.Chakraborty	Study of biodiversity of selected reservoirs of Uttaranchal.
3	Ms. Simi Rose A. Ph.D.-185 (2003-06)	Dr. N.P.Sahu	Immunophysiological responses of <i>L.rohita</i> fingerlings to dietary nutraceuticals.
4	Mr. Gireesh Babu Pathakota Ph.D.-245 (2005-08)	Dr. A. Chaudhari	Characterisation of zebrafish gadd45 α promoter for use in transgenic zebrafish genotoxicity biosensors
5	Ms. Divya P.R. Ph.D.-173 (2002-05)	Dr. P.C. Thomas	Genetic characterisation and progein profiling of green mussel <i>perna viridis</i> (Linnaeus, 1758) and brown mussel <i>perna indica</i> (Kuriakose and Nair, 1976)
6	Mr. Arun Kumar Mallick Ph.D.-198 (2003-06)	Dr. T.K. Srinivasa Gopal	Retort Pouch Processing of Indian White Shrimp (<i>Fenneropenaeus indicus</i>) Using Flexible Packaging Materials.
7	Mr. Yassar Saker Ph.D.-232 (2005-2008)	Dr.S.K.Chakraborty	Studies on biology and stock assessment of <i>Priacanthus hamrur</i> (FORSSKAL, 1775) from Mumbai waters
8	Mr. Narayan Moger Ph.D.-214 (2004-2007)	Dr. S.C.Mukherjee	Production of single chain fragment variable (scFv) Ab's for detection of WSSV of shrimp (<i>P.monodon</i>)
9	Mr. K. Dhanpal Ph.D.271 (2006-2009)	Dr.S. Basu	Development of ready to eat fish products from low cost fish Tilapia (<i>Oreochromis mossambicus</i>) using Retort Pouch Technology.
10	Mr. Nagesh Ram Ph.D.269 (2006-2009)	Dr.M.P.Singh Kohli	Biology of freshwater prawn, Macrobrachium Lar (Fabricius, 1798) from Andaman and Nicobar Islands
11	Mr. Sagar Chandra Mandal Ph.D.294 (2007-2010)	Dr.M.P.Singh Kohli	Evaluation of broodstock diets on reproductive performance of Siamese fighting fish, <i>Betta splendens</i> (Regan)
12	Mr. Mrinal Kanti Datta Ph.D.-268 (2006-09)	Dr. Chandra Prakash	Standardization of aquaculture practices in acidic soils of Tripura
13	Mr. Sunil Kumar Nayak Ph.D.-220 (2004-07)	Dr. S.D. Singh	Development of molecular strategy for transfer of gene construct of fish growth hormone and constitutive promoter in gold fish (<i>Carassius auratus</i>) egg

M.F.Sc. dissertations

S.No.	Name of the student	Major Guide	Title
FRM			
1	Mr. K. Lohith Kumar FRM-205	Dr. R.S. Biradar	A study of tempero-spatial changes in inland water bodies of Thane district using Remote Sensing and GIS
2	Mr. Khaimesh Sehgal FRM-206	Dr.S.K. Chakraborty	A Study on zooplankton production and diversity in selected reservoir.
3	Mr. Manas H.M. FRM-207	Dr. A.K. Jaiswar	A study on phytoplankton diversity and primary productivity of selected reservoir.
4	Mr. Ramkumar S. FRM-208	Dr. K. Venkateshvaran	Bioactive compounds from <i>Paracondylactic indicus</i> (carrot sea anemone) from Mumbai coast.
5	Ms. Sangeeta Mandal FRM-209	Dr. G. Deshmukhe	Biodiversity of the mangrove associated flora and fauna along Dahanu coast, Thane district.
AQ			
6	Mr. Abul Hasnat AQ-216	Dr. M.P.Singh Kohli	Evaluation of the effect of dietary zinc supplementation in <i>Carrassius auratus</i> .
7	Mr. Arbinda Das AQ-217	Dr. Chandra Prakash	Effect of dietary iron supplement on growth and haematological parameters of <i>Carassius aurarus</i> .
8	Mr. Barun Kumar Bharti AQ-218	Dr. Neelam Saharan	Evaluation of Beta-Carotene on growth, survivability and coloration of angel fish, <i>Pterophyllum scalare</i>
9	Ms. Bindhi S. Kumar AQ-219	Dr. N.K. Chadha	The survival and growth of Asian Seabass, <i>Lates calcarifer</i> (Bloch) on different diet fomulations
10	Mr. Janglenmang Baite AQ-220	Dr. A.K. Verma	Studies on effect of light intensity on growth, survival and skin colour of Goldfish.
11	Mr. Kanchan Kumar Roy AQ-221	Dr. V.K. Tiwari	Effect on growth and survival of daphnia by using iron and zinc.
12	Mr. Partha P. Mondal AQ-223	Dr. A.K. Verma	Design and study of bbiofilter for intensive rearing of Tilapia.
13	Ms. Thongam I. Chanu AQ-224	Dr. Kiran Dubey Rawat	Effect of water hardness on maturity, spawning, egg hatchability and survival of larvae in zebra fish (<i>Danio rerio</i>)

FGB

14	Mr. Cheruku Dinesh FGB -31	Dr. S. Jahageerdar	Genetic evaluation of three stocks of <i>Macrobrachium rosenbergii</i> for economic traits.
15	Ms. K. Syamala, FGB-33	Dr. A. Chaudhari	Characterization of 5' and 3' ends of <i>P. monodon</i> genes involved in salt homeostasis.
16	Ms. Rekha Das FGB-35	Dr. Gopal Krishna	Control of WSSV infection in <i>P. monodon</i> using a combination of DNA constructs expressing ihRNA

FNB

17	Mr. J.Biju Sam Kamalam FNB-31	Dr. S.D. Singh	Molecular characterization of leptin (<i>obese</i>) gene from rohu, <i>Labeo rohita</i> (Ham.)
18	Mr. Md. Aklakur FNB-33	Dr. S. Jadhao	Evaluation of a soy lecithin-based combinatorial fish feed supplement for promoting growth and overcoming stress.
19	Mr. Mukesh Kumar Meena FNB-34	Dr. S. Gupta	Dietary effect of zinc on muscle growth and meat quality of <i>Labeo rohita</i> .
20	Mr. Siddaiah G.M. FNB-35	Dr. S. Munilkumar	Utilization of sugar factory by-products in the diet of <i>Labeo rohita</i> .

FPM

21	Mr. Jayanta Debnath FPM-32	Dr. M. Makesh	Development of primary cell culture from <i>M. rosenbergii</i> .
22	Ms. Kumari Pushpa FPM-33	Dr. G. Tripathi	Development of primary cell culture from <i>L. rohita</i> for cytotoxicity studies.
23	Mr. N. Ranjit Kumar FPM-34	Dr. R.P. Raman	Evaluation of <i>Bacillus licheniformis</i> as probiotic for giant freshwater prawn, <i>M. rosenbergii</i> (de Man).
24	Ms. T. Muthulakshmi FPM-35	Dr. K.V. Rajendran	Studies on tissue distribution and expression of ferritin in <i>P. monodon</i> .
25	Ms. Vidya R. FPM-36	Dr. K. Pani Prasad	Expression of ubiquitin in normal and infected shrimp - <i>P. monodon</i> .

FBM

26	Mr. Mugaonkar P. H. FBM-26	Dr. Ananthan, P.S.	A study on organised fish retail outlets and consumers
27	Mr. Satendra Kumar Singh, FBM-27	Dr. Swadesh Prakash	An economic analysis of marine fish marketing in Ratnagiri district of Maharashtra
28	Mr. Viswanatha B.S. FBM-29	Dr. R.S. Biradar	Supply chain management for freshwater fishes in selected markets of Bangalore city.

PHT

29 Ms. Anupama T.K.
PHT-47 Dr. B.B.Nayak Development of appropriate model to determine the freshness of fresh water fish *Labeo rohita*.

30 Mr. Ramavath Prasad Naik
PHT-48 Dr. B.B. Nayak Development of appropriate model to determine the freshness of *P. monodon*.

31 Ms. Sofji S. Bhadran
PHT-49 Dr. S. Basu Development of shrimp analogue fortified with PUFA from low cost fish.

32 Ms. Suma D.
PHT-50 Dr.G.Venkateshwarlu Evaluation & utilization of *Ulva* species as source of ω -3 fatty acid and natural antioxidants.

33 Ms. V. Renuka
PHT-51 Dr. G.Venkateshwarlu Studies on nanoencapsulation and emulsification of omega-3 fatty acids and their stability.

FEX

34 Ms. B.N. Devi
FEX-01 Dr. S.K. Mishra Indigenous technical knowledge in fisheries and aquaculture of Manipur.

35 Ms. C. Jeevitha
FEX-02 Dr. Ananthan P.S. Developing a professional extension service delivery model for fisheries and aquaculture.

36 Ms. Nisha Elizabeth J.
FEX-03 Dr. A. Sharma Tsunami relief measures and its impact on the socio-economic condition of fishers in selected districts of Kerala and Tamil Nadu.

37 Mr. Suresha Adiga M.
FEX-04 Dr. S.N. Ojha Fishers' perception on responsible fisheries with special emphasis on closed season and mesh size regulation.

AEM

38 Ms. Aruna S.
AEM-01 Dr. A. Vennila Phosphorus dynamics in a tropical mangrove ecosystem

39 Ms. Lakshmi M.S.
AEM-02 Dr. P.K. Pandey Effect of biofilms on water quality and production of common carp.

40 Mr. L. Ranjith
AEM-03 Dr. S.P. Shukla A Study on biosorption of arsenic and copper on physically entrapped biomass of *Spirulina platensis*.

The enrollment details are given below:

S.No.	Discipline	On roll
1.	Fisheries Resource Management	11
2.	Aquaculture	11
3.	Post Harvest Technology	4
4.	Fish Biotechnology	4
5.	Fish Genetics	1
6.	Fish Pathology & Microbiology	4
7.	Fish Nutrition and Biochemistry	3
8.	Fisheries Extension	2
9.	Aquatic Environment Management	2

M.F.Sc. (2009-2011 batch)

S.No.	Discipline	On roll
1.	Aquaculture	11
2.	Fisheries Resource Management	8
3.	Post Harvest Technology	8
4.	Fish Genetics & Biotechnology	8
5.	Fish Nutrition & Biochemistry	8
6.	Fish Pathology & Microbiology	8
7.	Fish Business Management	6
8.	Fisheries Extension	6
9.	Aquatic Environment Management	6

Sl.No	Regn.No.	Name
Fisheries Resource Management		
1	Ph.D.-336	Mr. Suresha Adiga M.
2	Ph.D.-337	Mr. Pravin Ramdas Patil
3	Ph.D.-338	Mr. Manas H.M.
4	Ph.D.-339	Ms. Jeevitha C.
	Ph.D.-340	Ms. Sukham Monalisha Devi
6	Ph.D.-341	Mr. Satendra Kumar Singh
7	Ph.D.-342	Mr. Tasaduq Hussain
8	Ph.D.-343	Mr. Rahul Kishanrao Sadawarte
9	Ph.D.-344	Mr. Krishna Kanta Adak
10	Ph.D.-345	Ms. Indira Divipala
11	Ph.D.-346	Mr. Shabir Ahmad Dar
Aquaculture		
12	Ph.D.-347	Mr. Arabinda Das
13	Ph.D.-348	Ms. Viji C.S.
14	Ph.D.-349	Ms. Thongam Ibemcha Chanu
15	Ph.D.-350	Mr. Arun Sharma
16	Ph.D.-351	Mr. Barun Kumar Bharti
17	Ph.D.-352	Mr. Santosh Kumar
18	Ph.D.-353	Ms. Bindhi S. Kumar
19	Ph.D.-354	Mr. Chaudhari Ajit Keshav
	Ph.D.-355	Mr. Kamble Suhas Prakash
21	Ph.D.-356	Ms. Paramita Banerjee Sawant
22	Ph.D.-377	Mr. Gashaw Tilahun Desta
Post Harvest Technology		
23	Ph.D.-357	Mr. Prasad Naik Ramarath
24	Ph.D.-358	Ms. Suma D.
	Ph.D.-359	Ms. Sofji S. Bhadran
26	Ph.D.-360	Ms. Anupama T.K.

Fish Biotechnology

- 27 Ph.D.-361 Ms. Rekha Das
- 28 Ph.D.-362 Ms. Kathireddy Syamala
- 29 Ph.D.-363 Mr. A. Karthivel Pandian
- 30 Ph.D.-364 Mr. T. Obulesu

Fish Genetics

- 31 Ph.D.-365 Mr. Cheruku Dinesh

Fish Pathology & Microbiology

- 32 Ph.D.-366 Mr. Jayanta Debnath
- 33 Ph.D.-367 Ms. Vidya R.
- 34 Ph.D.-368 Ms. Kumari Pushpa
- 35 Ph.D.-369 Mr. Ranjit Kumar

Fish Nutrition and Biochemistry

- 36 Ph.D.-370 Mr. Siddaiah G.M.

- 37 Ph.D.-371 Md. Aklakur

- 38 Ph.D.-372 Mr. J. Biju Sam Kamalam

Fisheries Extension

- 39 Ph.D.-373 Ms. Beishamyum Nightingale Devi
- 40 Ph.D.-374 Ms. Nisha Elizabeth Joshua

Aquatic Environment Management

- 41 Ph.D.-375 Ms. Lakshmi M.S.
- 42 Ph.D.-376 Mr. Ranjith L.



Ninth Convocation

Bharat Ratna Dr. A.P.J. Abdul Kalam, the former President of India, gave a clarion call for creating a separate Ministry of Fishing and Fish Products in the Union Cabinet during his convocation address delivered on the occasion of 9th Convocation of CIFE Deemed University, Mumbai on 15th April, 2009. The 9th Convocation was celebrated with great fervor and festivity. On this occasion, a total of 79 students were awarded with Master Degrees and 13 with Ph. D. Degrees. Bharat Ratna Dr. A.P.J. Abdul Kalam, was the Chief Guest of the function. He delivered the convocation address on the topic entitled “Education Capacity Building Mission”. Dr. Kalam expressed his happiness for participating in the convocation of CIFE and congratulated the Vice-Chancellor of the Deemed University and Faculty Members for shaping the youth and students of this University by bringing out excellent educational performance. While highlighting the importance of fisheries sector in Indian economy and constraints hindering the development of the sector, he suggested that CIFE should carry out studies to increase fish production in the country up to 10 million tonnes by the year 2012. He opined that a separate Ministry of Fishing and Fish products in the country should be created to give a boost for the development of fisheries sector. He presented a case study of fisheries development in Andaman and Nicobar island of India vis-à-vis Iceland. He was of the view that

large mechanized trawlers and state of the art fish processing Industry and marketing has played a great role in the development of fisheries in Iceland that can be emulated in the case of Andaman and Nicobar Island which have more marine resources than Iceland for the fisheries development. Highlighting the role of capacity building in the development of society, he emphasized that inquiry, creativity, technology, entrepreneurial and moral leadership are the five capacities that are required to be built through the education process among our students. This will produce “Autonomous Learners” that can transform the fisheries into a vibrant industry in future. He also suggested that some of pass out students of this Institute should work for the creation of coastal PURA (Providing Urban Amenities in Rural Areas). This requires creation of physical, electronic and knowledge connectivity of the rural areas. These three connectivity's will motivate and enable the local population to create economic centers such as cold storage, fish processing and packaging facilities and marketing amenities for realizing the value added price to fishers in the areas. This will also provide alternate employment oriented schemes during non-fishing days for the fishers. At the end of his address he emphasized the role of creative leadership that he has learnt while working on three very important programmes of country namely Space programme of ISRO

(Indian Space Research Organization), AGNI programme of DRDO (Defence Research & Development Organization) and PURA (Providing Urban Amenities in Rural Areas) those became the National Missions in due course of time.

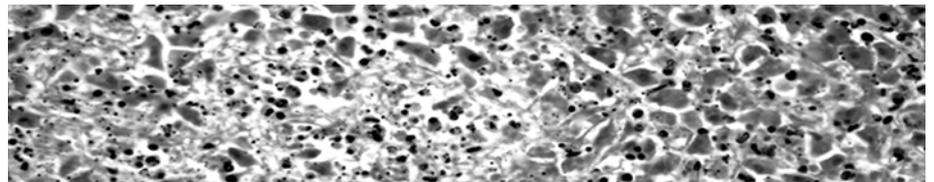
Dr. Dilip Kumar Director and Vice Chancellor of the Deemed University presented the welcome address and report of Institution. He stated that since its inception CIFE has been playing stellar role in Fisheries Education in the country. So far, CIFE has produced 5000 Post Graduates in different branches of Fisheries and Aquaculture which includes 130 foreign alumni from 17 Afro-Asian countries.







5. Research Achievements



5.1 Institutional Project

Thrust area 1: Utilisation of Salt-Affected Inland Areas through Aquaculture

Project Title:

Nutrient Management in Aquaculture through Bacterial Biofilm

Personnel :

P.K. Pandey, C.S Purushothaman, S.P. Shukla

Achievements:

An experiment was conducted to study the growth increment in koi carp with biofilm using sugarcane bagasse as substrate in FRP tanks. From the experiment with varying quantities of sugarcane bagasse like 100 g (T1), 200 g (T2), 300 g (T3) as different treatments, it was found that in the presence of sugarcane bagasse as a substrate for biofilm development, there was significant increase in the growth of koi carp. There is a significant weight gain in treatments T1 (71.72%), T2 (61.61%), T3 (54.96%) compared to the control (38.51%). It also shows that the quantity of sugarcane bagasse also should be optimum for the growth and survival of fish. These findings support the

possibility of developing a low cost technology for promotion of fish growth through bacterial biofilm based production using substrates like sugarcane bagasse.

Thrust Area 2: Genotype-environment Interaction Studies for Economically Important Traits

Project Title:

A Comparison Of Genetic Parameters For Economic Traits In *Macrobrachium Rosenbergii* Reared In Different Production Environments

Personnel :

S. Jahageerdar and Gopal Krishna

Achievements:

The facility for breeding 40-60 full-sib families simultaneously had been developed at Kakinada and Powarkheda. 17 males and 44 females at ratio of 1:2 or 1:3 were kept for mating at Powarkheda, during October, 2009, however, sever mortality occurred in the stock and the brooders were lost and full-sib family production could not be taken up. The animals did not spawn and sever mortality was observed in the broodstock. Twenty full-sib families of Gujarat stock produced at CIFE, Mumbai had been shifted to Powarkheda for larviculture and the rearing and periodic sampling is in progress. Andhra Pradesh Stock had been collected and was kept for the broodstock development.

Project Title:

Genetic Evaluation And Genetic Characterization Of Two New Candidate Species For Aquaculture *Macrobrachium Villosimanus* & *Osteobrama Belangeri* (pengba)

Personnel :

A. K. Reddy, R. Sharma, Gopal Krishna, A. Chaudhari, G. Tripathi, Pavan Kumar, Gireesh Babu, S.S.H. Razvi

Achievements:

M. villosimanus and *Osteobrama belangeri* tissue samples were collected and DNA was extracted using standard protocols. To genetically characterize and barcode the species, the mitochondrial COI partial gene and 16s rRNA genes have been amplified using the universal primers. The amplified fragments from 10 different specimens are being purified and sent for sequencing for further analysis and submission to CBOL database. Standardization of technique for development of Cytogenetic markers for *M. villosimanus* and Pengba, *Osteobrama belangeri* is in progress.





Project title:

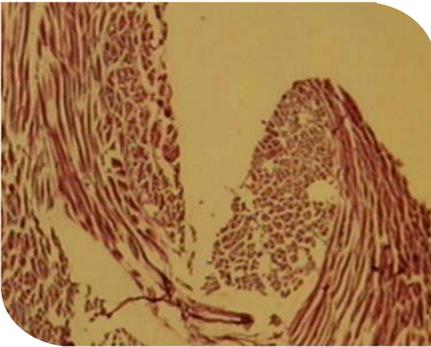
Performance Evaluation and Mass selection for Important Economic traits in Penaeus Species

Personnel :

Gopal Krishna, S. Jahageerdar Venu Gopal, A.K. Reddy, P. Gireesh Babu, S Dasguta, AK Pal

Achievements:

In the first phase, *P. monodon*, stock ranging between 80 - 110 g was kept for maturation in the captivity in the cement tanks under controlled conditions at Kakinada centre. After the signs of the maturation in the stock, the animals were transferred to the private hatchery for further maturation and spawning. But the animals did not mature and spawned. Finally, there were no signs of maturation. To take up the activities again, the *P. monodon* farmers were identified in the vicinity of west coast and the ponds were stocked with the post larvae of different families in the same pond. Regular sampling was performed to see the growth of the animals at different time intervals. At the end of one and half months and two and half months the sample netting has shown the growth of the animals approx 12 gms and 23 respectively.



Project Title:

Genetic Evaluation of Stock of Indian catfish *Clarias batrachus*

Personnel:

S.S.H. Razvi, Gopal Krishna, G. Venugopal

Achievement:

Four stocks of fishes were procured from Andhra, Orissa, Haryana and Madhya Pradesh. Fingerlings were raised up to maturation. Success achieved in Induced breeding of the A.P. stock only. 27 families of hatchlings were produced in September and were reared up to fry and transferred to 27 hapas fixed in pond and produced fingerlings. Due to delay in non availability of PIT tags the tagging of the fingerlings could not be taken up. Further programme is planned for the next breeding season.

Thrust Area 3: Non-Food Organisms in Aquaculture

Project Title:

Breeding of Selected Indigenous Ornamental Fishes from North-East India

Personnel :

Chandra Prakash, M.P.Singh Kohli, K. Dube, Babitha Rani

Achievements:

Breeding trials on *Danio aequipinnatus* were conducted and it was bred

successfully. Five thousand numbers of *Danio aequipinnatus* seed is stocked in rearing tank. Breeding trials were conducted on *Badis burmanicus*, *Botia dario* and *Puntius ticto*, *Puntius ticto* was bred successfully

Project title:

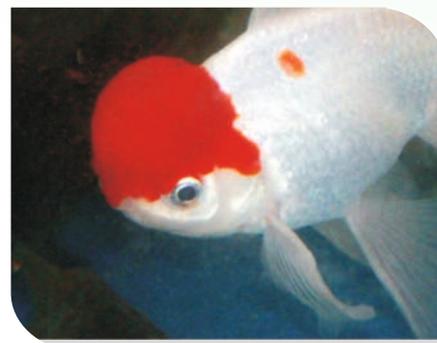
Parasitic Diseases of Ornamental Fishes: Devising Effective Therapeutics for Commonly Occurring Aquarium Fish Diseases in India

Personnel :

R.P. Raman, Chandra Prakash

Achievements:

Data related to parasites of ornamental fish in India and abroad were collected. Survey of ornamental fish culture and trade facilities in Mumbai such as CIFE campus and Kurla Ornamental Fish Market was undertaken. *Argulus* and *Lernaea.spp* were identified and isolated from Goldfish. Water quality parameters of the affected ponds and aquaria were also monitored.



Project Title:

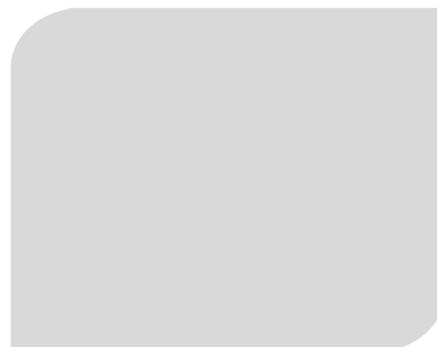
Formulation And Preparation Of Carotenoid Rich Granular Feed For Ornamental Fish

Personnel :

G.H. Pailan, A. Sinha, P. Sardar

Achievements:

Different feed ingredients i.e. fish meal, soyabean meal, groundnut oil cake, mustard oil cake, coconut cake, rice bran, wheat bran, rice polish, maize grain and wheat flour required for formulation and preparation of ornamental fish feed were analyzed for proximate composition. The proximate composition of natural carotenoid sources like marigold flower meal and rose petals meal was similar. However, carotenoid content was almost double in rose petal meal (8195 mg/kg) in comparison to marigold flower meal (4257 mg/kg). The red marigold flower meal had β -carotene, canthaxanthin and xanthophylls in the concentration of 134.2, 19.6 and 0.15 ppm, respectively. Yellow marigold flower meal had only β -carotene and canthaxanthin in concentration of 7.9 and 4.2 ppm, respectively. Rose petal meal had carotenoids like β -carotene, 0.13 ppm and canthaxanthin, 4.2 ppm. β -carotene and canthaxanthin content in Carrot powder meal were 3.98 ppm and 3.11 ppm respectively. It was concluded that among the four natural carotenoids sources studied, red marigold flower meal is the richest source of β -carotene, canthaxanthin and xanthophylls which may be incorporated in the ornamental fish feed.





Thrust area 4: Sustainable Fisheries Development through Co-management

Project Title:

Developing Strategies for Enhancement of Low Productive Reservoir through Technological Interventions and Community Participation

Personnel :

M.P. Singh Kohli, N. Saharan, K. Dube, L. Shenoy, V. K. Tiwari, Chandra Prakash, S. Ananthan

Achievements:

For capacity building, fisherwomen were trained for breeding and culture of ornamental fish in cages. Fishers were trained for guiding the fishers for operation of major boat, eco sounder & GPS etc. equipments for better fishing output. Another group was trained for packing and transportation of fingerling. The major challenges were to organize the highly disorganized illiterate tribal community; to enhance income and livelihood security of resource poor fishers; and to enhance the productivity of the barren reservoir. The interventions included, social and technical i.e. a series of PRA's were conducted and fishers (stakeholders) were mobilized and organized. Stocking of the reservoir (based on productivity) with major carps fingerlings (more than 100 mm size), *in situ* rearing of fingerlings (100-150 mm) of Indian major carps through cage and pen culture, village ponds and a quarry in the vicinity (made by community) of the reservoir. Plantation of green manure *Dhaincha* at the periphery of the reservoir for enhancing the productivity of reservoir and mesh size suggestions at different time of the year worked successfully.

Soil organic carbon increased from 0.45% to 0.70% and it also showed some improvement in nutrients quality. Net primary productivity of the reservoir increased from 225 mg / C / cubic meter / day to 265 mg C / m³ / day. Fish catch data of three years indicated that earlier the catch was mainly composed of minor varieties or *Chela* sps. Later years showed a steady increase in Catla and other carps catch. During the year catla and rohu, caught were 750g to 1kg, whereas 2-3kg, even 4-5kg catla and other carps are also being reported in the catch. In the year 2006-07 the Catla catch was 3670 kg in 2007-08 it was 10240kg and 2008-09 it was 16259kg, showing a prominent increase in production of catla. The gross sales of the fish increased from 5.10 lakh Rs to 7.03 lakh in the year 2010 as compared to 2006-2007.

Project Title:

Impact Of Juvenile Fishery On Fish Production Along The West Coast Of India

Personnel :

S. K Chakraborty, L. Shenoy, G. Deshmukhe, A. K. Jaiswar, Z. J. Abidi, A.T. Landge

Achievements:

Secondary data on length at first maturity, fecundity, spawning periodicity for a larger number of fishes have been collected. Data on the size group of and quantum of juveniles landed along with their price (also that of adult) has been collected from Gujarat (Porbandar, Mangarole, Veraval), Diu, Mumbai (Versova, New Ferry wharf, Sassoon docks), Ratnagiri, Goa, Karwar, and Cochin. Further collection of data, tabulation and processing as per our requirement is under progress. Data on the quantum of juveniles landed at different landing centres have been collected. The species whose length frequency has been collected included *Rastrelliger kanagurta*, *Lepturacanthus savala*, *Lactarias lactarias*, *Chirocentrus dorab*, *Epinephelus diacanthus*, *Sphyraena jello*, *Scomberoides tol*, *Parastromatus niger*, *Megalaspis cordyla*, *Nemipterus japonicus* at Mirkarwada, Ratnagiri, *Muraenosox telabonoides*, *E. diacanthus*, *Protonibea diacanthus*, *N. japonicus*, *Otolithoides biauritus*, *Harpadon nehereus*, *P. niger*, *P. indicus*, *Saurida tumbil*, *P. argenteus*, *Sardinella longiceps* from New Ferry Wharf. *E. diacanthus*, *D. russelli*, *S. undosquamis*, *S. tumbil*, *N. japonicas*, *S. jello*, *P. diacanthus*, *Lactarias lactarias*, *O. biauritus*, *P. hamrur* from Veraval, *R. kanagurta* from Karwar etc. Other data is being collected to estimate the loss to the fishery as a result of Juvenile catch.



Thrust area 5: Policy Framework for Indian Fisheries and Aquaculture

Project Title:

Performance Appraisal of Non-Governmental Organisations in Fisheries Development

Personnel :

S. K. Mishra, S.N. Ojha, A. Sharma, A. Sinha, Swadesh Prakash, Sheela Immanuel.

Achievements:

During this year, data from ten NGOs from Tamil Nadu, Kerala, Gujarat, West Bengal, Bihar and Uttar Pradesh were collected, thus the making total number of studied NGOs to twelve. The average findings from these twelve NGOs revealed that NGO service was found to be the major occupation for more than 70 per cent of the NGO field functionaries. 76 per cent field functionaries perceived inadequate trainings provided to them as their major constraint in effective implementation on different activities followed by 67 per cent opined inadequate infrastructure facilities of the NGOs as their constraint. They wanted to enrich their knowledge and skills in fish processing technologies (88%), sea safety measures (83%), and scientific fish culture & fish health management (74%). For effective performance of the NGOs, 95 per cent suggested that their salary should be made at par or nearer to the state officials, followed by performance-based incentives by 83 per cent field



functionaries. 60 per cent of the NGO beneficiary fishers and fish farmers expressed their full satisfaction over the performance of the NGOs, while 26 per cent were partially satisfied and 14 per cent were not at all satisfied. Similarly, 53 per cent other stake holder expressed their full satisfaction over the performance of the NGOs, while 32 per cent were partially satisfied and 15 per cent were not at all satisfied.

Project Title:

Development Of Marketing Plan For Fish And Fish-products For Coastal Areas

Personnel :

Swadesh Prakash, N. R. Kumar, S. K. Mishra, S.S.H. Razvi

Achievements:

Primary data from various marketing functionaries (producer, whole seller, commission agent, retailer and consumers) of district Surat (Gujarat), Ganjam (Orissa) and Chennai (Tamilnadu) have been collected with the help of pre-tested interview Schedule. Secondary information has also been collected from various published source of DoF, State Government and other related sources. The composition of retail fish sellers in the selected districts of urban and rural markets were dry fish seller (16.98%), preserved fish seller (13.21%), live fish seller (7.15%) and fresh fish seller (62.26%). Composition of food consumption (kg/capita/annum) of sample survey data is cereals (152.3), pulses (7.2), Milk (19.8), eggs (28.4), meat (4.2) and fish (17.4). The percentage share of expenditure of food and non food items in total expenditure is 31.7 and 68.3 respectively.

Project Title:

An Appraisal of Public Sector Extension Delivery System in Fisheries

Personnel :

Sheela Immanuel, S. K. Mishra, N. R. Kumar, P.K.Roy, Somduitt, Hari Krishna

Achievements:

Collection of background information about the present delivery system through review of literature was conducted. Data collection from Ernakulam District of Kerala and tabulation of data collected from Andhra Pradesh was also completed

Project Title:

Impact Analysis of Food Safety Measures on Export of Fish and Fish Products from India.

Personnel:

N. R. Kumar, Sheela Immanuel, Swadesh Prakash

Achievements:

Secondary data related to export of fish and fish products from India as well as major exporting and importing countries has been collected and tabulated. List of exporters /processors from the state of Maharashtra has been prepared for conducting survey. Food safety requirement of major export markets of India has also been compiled. Latest trend, pattern and direction of export of Indian fish and fish products have been estimated. The schedule for conducting survey has also been prepared.

Project Title:**Documentation of ITK's in Fisheries Sector****Personnel :**

A. Sharma, R. Sharma, S.P. Shukla, R.S. Biradar, P. B. Sawant, Suresh Babu, G. Venugopal

Achievements:

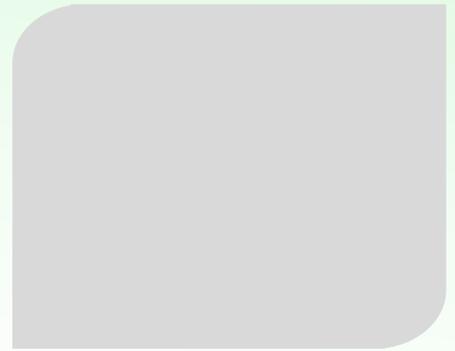
An Inception Workshop on ITKs in Fisheries sector at Assam was conducted to have preliminary interactions of CIFE and resource persons from other organizations for expectation setting, setting of work plan and time lines for organizing "Write shop on ITKs in fisheries sector in India". After completion of this inception workshop, documentation of ITKs in Fisheries was done through participatory writeshops. Writeshops have been conducted at different regions where resource persons are invited for contributing the documentation of ITKs. The ownership of the ITK remains with the communities practicing the ITK. The project team has already documented around 81 ITKs from the North East (Writeshop conducted at Shillong) and around 75 ITKs from the East cost (Writeshop conducted at Kakinada) of India and 173 ITKs from West Coast (Writeshop conducted at Mumbai). A number of ITKs had been documented in the field of fish harvesting, aquaculture, processing, therapeutics, water quality and biodiversity. In addition, Seminar and a Writeshop on '*Pracheen Sahitya Mein Matsya Evam Matsyiki Sampada*' at CIFE, Mumbai and Gurukul Kangdi University, Haridwar has resulted in a book on Fish and fisheries in ancient literature in Hindi where it could be established that fish and fisheries in India exists from Ved period.

Project Title:**Developing Appropriate Policy Framework For The Development Of Fisheries And Aquaculture****Personnel:**

Dilip Kumar, R.S. Biradar, Ananthan P.S., S.N. Ojha, A. Sharma, L. Shenoy, R.P. Raman, A. Vennila, B.B. Nayak

Achievements:

Consultation based policy review has brought out gaps and limitations in





policy, regulations and development planning. Five Zonal Workshops covering all 34 States & UTs has created a platform and sensitised all stakeholders about essentiality of policy interventions. It provided guidelines that would assist the Centre and States in developing holistic fisheries policies. A significant spill over effect has been that the States like Bihar, Assam, Rajasthan, Madhya Pradesh, Orissa and Tamil Nadu have already shown interest in developing their own Fisheries Policies and CIFE has started actively supporting them in the endeavour. Capacity building programs on Fisheries Policy and Development Planning for senior DoF staff have been organized as a follow up of this project. Policy Framework and Policy Guidelines have been drafted and widely circulated to all State DoFs and the Centre for follow up. Some of the core guiding principles are: resource owners (Central and State Government) and resource users (fishers and fish farmers) shall work together as partners for sustainable development, management and conservation of fisheries resources and associated ecosystems taking into account economic, social and ecological considerations; objectives of fisheries and aquaculture development shall be clearly defined and prioritized with respect to livelihood development, food and nutritional security, revenue generation and conservation of aquatic biodiversity; policy shall address not only resource specific issues *but also* more importantly the components of processing and value addition, marketing and trade, extension and service delivery system, HRD, institutional reforms, and fishers livelihoods and welfare; it shall address unattended cross-sectoral issues like right of minimal water for fisheries, control and management of pollution, adverse impact of infrastructural development on fisheries resources, fisheries management in inter-State rivers, reconciling Forest Act and Wildlife Act with sustainable fisheries development, etc; the policy shall endeavour to mainstream / internalize the guidelines contained in FAO's Code of Conduct for Responsible Fisheries (CCRF).

Project Title:

Development of a Participatory Extension Model for Aquaculture

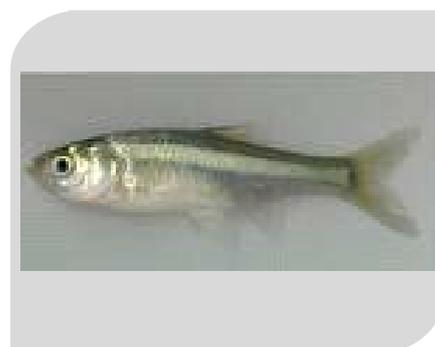
Project personnel:

Ananthan, P.S., (P.K. Ghosh till May 2008),A. K. Reddy, V.K. Tiwari, S. N. Ojha, S.S.H. Razvi, Somdutt, P. K. Roy

Achievements

Public extension system which is a rather inappropriate and ineffective form of T&V system,was very poor in all project States except Tripura. Its hamstrung by highly depleted staff strength, conventional program / scheme centric 'development' work with more focus on subsidies and targets, and less focus on technical support and mobilisation of seed, feed, credit and market linkages. SHG based support system in Tripura, concept of *matsysa mitra* in

Assam were some field level innovations. Field tested farmer-led extension model (TDS-AE) has succeeded in greater degree of technology adoption (>90% of RDFs) as well as technology refinement/modification ('phumdi' based cage culture in Loktak lake, Manipur) and lateral spread (average of 6 FFs / RDF / year in NES) resulting in increased productivity (80-220% yield increase), income (65-400% increase) and profit (80-265%). Active involvement of and facilitation by DoF, technical knowledge *as well as* extension skill of trainer demonstrator / DoF staff, availability of ponds in relative proximity, involvement of farmers in selection of RDFs, their homogeneous profile and level of organisation, availability of support under other development programs (multiplier effect), provision of initial input support were found to be major are the major factors influencing extent of farmer to farmer spread. However, the perceived and real economic gains besides appropriateness of technology were two determining factors from farmers' perspective. There is a huge unmet demand, from both farmers and DoF staff, for simple and illustrated extension literature and films on various technologies and success stories in local languages.



Thrust area 6: Quality Enhancement in Fish

Project Title:

Integration Of High Value Indigenous Fish With Conventional Carp Culture

Personnel :

A. Sinha, B.K.Mahapatra, G.H. Pailan, N.R. Kumar, N.J.Moitra (RAKVK), P. Chatterjee (RAKVK)

Achievements:

Four ponds (each of size 0.1 ha) were renovated at RAKVVK Instructional Farm, Nimpith, South 24-Parganas, W.B. Pond was prepared by clearing the weeds, manuring, liming and netting out the existing fish stock. Carp seed (rohu, catla, mrigal, silver carp, grass carp, common carp, *Labeo bata* and *Puntius javanicus*) were stocked @10,000 nos per ha. Small indigenous species viz. *Amblypharyngodon mola*, *Puntius sophore* and *Salmostoma bacaila* were reared separately and introduced in the carp culture ponds @ 20,000nos per ha. One pond where only conventional carp species were being reared had been kept as control pond.

Project Title:

Mass Scale Breeding and Enhancement of Survivability of Larvae of Magur, *Clarias batrachus* (Linn.)

Personnel :

B.K. Mahapatra, P.K. Roy, P. Sardar, S. Datta, Somdutt, V.K. Tiwari



Achievements:

The diversified congenial habitat for harbouring as well as mass scale natural breeding of magur (*Clarias batrachus*) had been recorded. A pair of Magur was also successfully bred under controlled condition and studied larval rearing of Magur at CIFE Kolkata Centre for enhancing the survivability. A 30 day experiment was conducted under controlled conditions to rear fry to fingerling stage. Results showed that superior FCR, increased PER, SGR and percent survival were found in fish fed minced tubifex worms followed by fish fed the mixed diet containing artificial feed (D1-42.44% CP) and minced tubifex worms. Though the fish fed zooplankton alone or mixture of zooplankton and artificial diet showed poorer performance than the fish of dietary groups mentioned above, showed better result that the fish fed any kind of artificial diet alone in this experiment.

Project Title:

Nutritional Strategies To Mitigate Physio-pathological Effects Of Endosulphan In Fish

Personnel:

S. Jadhao, S. Gupta, S. Munilkumar, S Dasgupta

Achievement:

A sixty five days experiment was conducted to assess the effects of methyl donor supplementation (0.1% Choline, 0.5% betaine and 2% lecithin) in L rohiya exposed to endosulfan (1/10th of endosulfan) alone or concurrently to endosulfan and temperature (34 deg). Compared to control (T₁), percent fish weight gain was significantly ($p < 0.01$) lowered by endosulfan exposure (T₂), but concurrent exposure to high temperature along with endosulfan (T₃) has not exacerbated the effect. This effect in concurrently exposed fish was overcome by methyl donor supplementations including choline (T₄), but % weight gain in presence of betaine (T₅) and lecithin (T₆) in particular was even higher than control. The HSI and GSI were not affected ($p > 0.05$) by the concurrent exposure to endosulfan and high temperature. The methyl donor supplementations in endosulfan and high temperature exposed fish led to normalization of activities of most of the above enzymes. Post challenge survivability data indicated that the fish exposed to endosulfan (T₂) alone and concurrently exposed to temperature (T₃) had 27.7 and 22 % less survival than control (T₁). Choline supplementation improved the survival that was either at par with control (T₁) or 44.45% higher than T₃. The survival in endosulfan and high temperature exposed fish fed betaine (T₅) and lecithin (T₆) was 52.78 and 55.56% higher than concurrent endosulfan and high temperature exposed fish (T₃) and 13.89 and 16.67% higher than control (T₁), respectively. In other experiment of 37 days, whereas choline significantly reduced muscle endosulfan residue, no residue was found in betaine and lecithin supplemented group. Assays for testosterone, 11-ketotestosterone, estradiol and vitellogenin have been standardized.

Project Title:

Studies On Safe And Effective Chemical Control Measures For Floating And Submerged Aquatic Weeds Affecting Aquaculture

Personnel :

S. Datta, B.K. Mahapatra, P. Sardar

Achievements:

Fluridone was tested at higher dosages at 30, 60, 90 ppb against four submerged weeds e.g. three rooted - Najas, Hydrilla, Vallisneria and one non-rooted - Ceratophyllum. Herbicidal symptoms of fluridone appeared within seven to ten days and appeared as white (chlorotic) growing points in Najas, Hydrilla, Vallisneria or pink growing points in Ceratophyllum. Under optimum conditions, 30 to 90 days were required for the desired level of aquatic weed management was achieved with fluridone. In higher dosages, Najas, Hydrilla and Ceratophyllum were affected fully where as Vallisneria was partially affected. Susceptibility to Fluridone varied depending on time of year, and water movement and stage of growth. Best result was obtained when fluridone was applied prior to initiation of weed growth and when weeds begin active growth. Late spring to summer was ideal time for controlling the weeds as during this time weeds starts growing actively, sunlight and photosynthesis rate is higher. It was observed that when some weed plants were covered with algae (chara, nitella, and filamentous species) the algae and the weed plant were not controlled by fluridone. Amongst the floating weeds - Common duckweed (*Lemna minor*) was fully controlled, *Salvinia (Salvinia spp.)* - was partially controlled, pistia and water hyacinth were not controlled by fluridone at any dose.



Project Title:

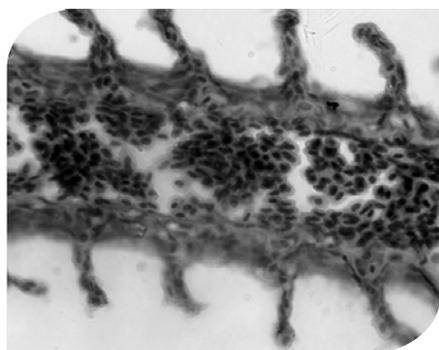
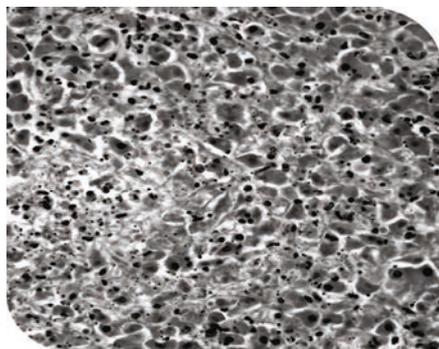
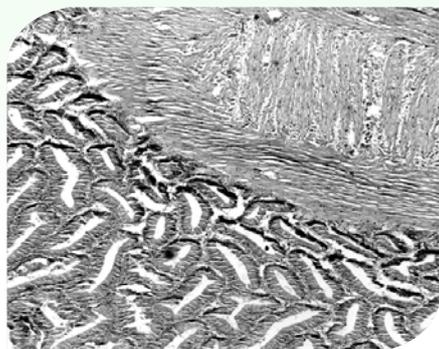
Immuno-physiological and Reproductive Responses to Chronic Arsenicosis in Rohu, *Labeo rohita* (H.) and Magur, *Clarias batrachus* (L.) and its Remedial Measures Through Dietary Intervention

Personnel :

P. Sardar, A. Sinha, G.H. Pailan

Achievements:

The acute toxicity of an inorganic arsenic compound sodium arsenite (NaAsO_2) was examined in rohu (*Labeo rohita* H.). The fishes were subjected to static bioassays trial in the laboratory for 96 hours to determine the median lethal concentrations (LC_{50}) of NaAsO_2 . Preliminary trials or range finding tests were conducted to figure out the suitable ranges to be used in the final trials of lethality test. In final trials, mortality of fish was recorded at 6, 12, 24, 48, 72 and 96 hours of exposure. The LC_{50} values and their 95% confidence limits for different exposure time were calculated by using computer software 'Trimmed Sperman-Karber'. After 96 hours of exposure the LC_{50} value of NaAsO_2 was 8.55 ppm (95% confidence limit, 5.17 to 14.30) for rohu. NaAsO_2 exposed



fish showed hyperactivity with rapid swimming and striking their head at the side of the treated tank after 48 hours exposure of arsenic. Gradually there was a drastic reduction in the activity and slower swimming of the fishes followed by mortality of fishes at 96 hour exposure. At the end of 96 h exposure of NaAsO_2 in rohu Hb (g/dl), TEC ($\times 10^6/\text{mm}^3$), MCH (pg), liver ALT (μM pyruvate/30 min/mg protein), AST (μM pyruvate/30 min/mg protein), ACP (μM pyruvate/30 min/mg protein), ALP (μM pyruvate/30 min/mg protein), liver and muscle glycogen (mg/g), total lipid (mg/g), total protein (mg/g), blood lysozyme ($\mu\text{g}/\text{ml}$) and phagocytic activity (NBT) (OD at 540 nm) were significantly decreased whereas plasma ALT (IU/l), AST (IU/l), ACP (IU/l), ALP (IU/l), glucose (mg/dl), total lipid (mg/dl) and total protein (g/dl) were significantly increased in comparison to fish of unexposed control. Muscle enzymes did not vary significantly. Trial for finding out the effects of chronic arsenic toxicity on the physiological and immunological profiles in rohu is under progress

Project Title:

Environmental Impact Of Fipronil : Presence In Water And Soil, Effect Of Fipronil And Its Metabolites On Common Edible Fish *Labeo Rohita* (rohu) And Bioremediation Studies

Personnel :

N. Saharan, Prem Dureja (IARI, New Delhi), P.K.Pandey, G. Tripathi

Achievements:

Soil and water samples were collected from six experimental sites near agricultural fields where rice and vegetable crops are grown and fipronil is used as a pesticide. The soil and water samples contained 0.15 - 0.93 ppm residual fipronil and water samples contained 0.21 - 0.97 ppm fipronil. Acute toxicity test on *Labeo rohita* fingerlings showed that LC_{50} value was 0.138 ppm/ litre for Fipronil 0.123ppm/ litre for Fipronil Sulfone and 0.109 ppm/ litre for Fipronil Sulfide after 96 hours experiment. All the exposed animals showed almost similar clinical signs of varying degree depending upon the concentration of fipronil in the acute toxicity test. The signs of hyper activity and restlessness were marked during exposure.

Long-term sub lethal toxicity test was conducted for a period of 60 days exposing the animals to 1/10th of LC_{50} dose of fipronil (0.138ppm/litre) and its metabolites (0.123ppm/litre) for Fipronil Sulfone and 0.109 ppm/ litre for Fipronil Sulfide. Healthy *Labeo rohita* were fed with artificial purified diets incorporated with different doses of fipronil twice a day. There was 4.9 % growth in body weight in control samples but only 3.2, 3.0 and 2.8 % in samples treated with Fipronil, Fipronil Sulfone and Fipronil Sulphide respectively. These results reveal that metabolites of Fipronil are more toxic than Fipronil. Gill tissues showed marked distal and basal hyperplasia. Fusion of secondary lamellae and hemorrhages were found at some places. Liver tissue exhibited constriction of sinusoids, swelling of cells with pyknotic nuclei and infiltration

of inflammatory cells were commonly observed. In the kidney, tubular epithelium showed severe necrotic changes. Multiple granulomatois changes with extensive infiltration of mononuclear cells were discernible in the parenchyma. Moderate necrosis was observed in the myocardium. No abnormality could be detected in the skin and muscle tissue. Marked changes specially in the gill tissue where hyperplasia and fusion of secondary lamellae was observed in almost all the sacrificed animals. Liver tissue showed degenerative and necrotic changes.

Bio-remediation of soil: Total 10 isolates were selected based on their morphological characteristics and were further purified for testing their bioremediating capacity. These ten isolates were exposed to different concentrations of fipronil through culture media. The concentration varied 1.0, 3.0 and 5.0 ppm. Three isolates could survive up to 5.0 ppm.

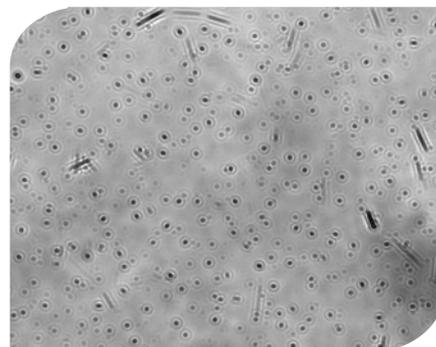
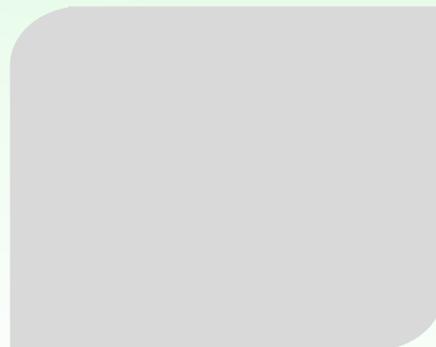
Project Title:
Characterization And Nanoencapsulation Of Fish Pheromones For Using In Fish Reproduction

Personnel:
R. Sharma, S. Munilkumar, S. Gupta, S.D. Singh

Achievements:
The water sample where fishes were kept was collected during the breeding season and analyzed through HPLC and LCMS to screen the presence of pheromone. Initial studies showed the presence of 17 α -20B dihydroxy-4-pregnen-3-one (17, 20 B-P) and Prostaglandin F 2 α . During the post breeding season, no pheromones were found in the water sample. The testes, ovary and seminal vesicles were collected at different stages of development and various changes were recorded. It was hypothesized that inter tubular septum might be one reason for the fish which prevented magur to ooze out the sperm in captivity. But it was found that inter tubular septum in the testes of Rohu was also thick as that of magur, nullifying the hypothesis. After that gold and chitosan based gold nanoparticles had been developed and were encapsulated with the purified synthetic steroidal pheromones and hormonal pheromone. The particle size was analyzed with Beckman and Coulter particle size analyzer and the particle size were ranged between 65 nm to 215 nm.

Project Title:
Studies On Oxidative Stability Of Polyunsaturated Fatty Acids During Extrusion Cooking

Personnel:
G.Venkateshwarlu, S.Basu, B.B.Nayak



**Achievements:**

In order to understand the extent of amylose-lipid complexation, the lipid was extracted from rice flour and also from rice extrudates after extrusion cooking. The lipid recovered from extrudates was found to be 5.20 ± 0.58 mg/g against the lipid extracted from the rice flour i.e. 10.98 ± 1.20 mg/g. The lipid that became unavailable after extrusion was considered to interact with either the protein, the carbohydrate, or both fractions. Further, the extrudates were digested with α -amylase to release the bound form of lipid which yielded 2.24 ± 0.16 mg/g. This lipid that became available after digestion was considered to interact with the amylose fraction.

**Project Title:**

Development Of Improved Quality Ready To Eat Fish Products And Study Of Their Storage Characteristics In Retortable Pouches

Personnel:

S.Basu, G. Venkateshwarlu, B.B.Nayak

**Achievements:**

A standard recipe was finalized to prepare Tilapia fish curry in south Indian style. To standardize the heat process schedule (F_0 value), the tilapia steaks of 20 mm uniform pieces was soaked in 10% salt solution for 1h and added to curry. The fish curry was subjected to different heat process having F_0 value of 6, 7, 8 and 9 for two different temperatures of 116.1°C and 121.1°C . The 8 samples thus obtained were subjected to organoleptic evaluation and commercial sterility test. It was found that heat process schedule of $F_0=6.7$ at 116.1°C yielding a better acceptable product and microbially safe. Tilapia fish curry thus prepared and standardized was fortified with EPA and DHA using cod liver oil at 1% level with a control for comparison. Then the fish curry was subjected to heat process at 116.1°C for $F_0=6.7$. Tilapia fish curry fortified with EPA and DHA with control was analysed for organoleptic, biochemical characteristics, fatty acid profile before and after heat processing in Retort pouch. The products have been in excellent condition for one year. The sandwich paste heat processed at 121.10°C at $F_0 4$ was analysed for fatty acid profile and other biochemical indices. It was noticed that there was no change in fatty acid content during heat processing. During storage up to one year, there was no significant change in the concentration of EPA and DHA and there was no significant oxidation of the unsaturated fatty acids. The prawn curry fortified with EPA and DHA by adding cod liver oil at 2% level and packed in retortable pouches and heat processed at F_0 value of 6, 7, and 8 at 110°C , 116°C and 121.1°C . F_0 of 7 at 116°C was found to be organoleptically acceptable. It was observed that upto 1 year the product was acceptable and no significant oxidation of the unsaturated fatty acids occurred.

Project Title:

Molecular Analysis Of Growth Promoting Peptide Hormone From Food Fish (mullet/seabass)

Personnel:

S. D. Singh, R.S. Rana, S. Gupta

Achievements:

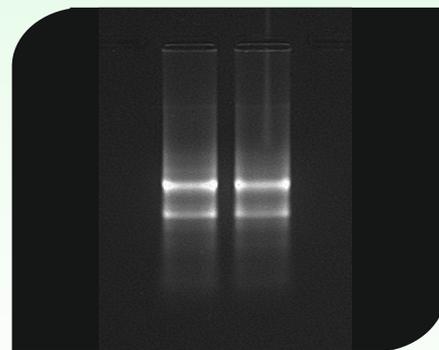
Oligonucleotide primers as given in previous report were utilized for the synthesis of IGF I and Leptin (Obese) gene. Quality and purity of total RNA isolated from Asian Seabass, *Lates calcarifer* and rohu (as prototype) (about 500g live weight) liver as per standard protocol were good and used to synthesize cDNA gene of about 350 base pair for IGF I of Asian seabass and about 450/600 bp leptin obese gene for Rohu/seabass respectively by RT - PCR. These peptide hormones genes were cloned in plasmid vector pTZ57R/T and *Escherichia coli* DH5 α strain by T/A cloning and characterized by restriction enzyme analysis and colony PCR. These specific white recombinant clones specific for leptin hormone i.e. Obese gene and IGF I gene are cryopreserved in glycerol and are also used for nucleotide sequencing to compare their DNA sequences with USA NCBI gene bank database. Presence of Start and stop codons in both of them are to be ascertained before using for further molecular studies. Rohu partial leptin gene after automatic sequencing revealed the maximum homology (97%) with *Cyprinus carpio ob 2* gene, followed by *Carassius auratus* (89%), *Ctenopharyngodon idella* (85%) and *Danio rerio* (72%) on BLAST search in the NCBI GenBank database.

Project Title:**Studies On Viability Of *Litopenaeus vannamei* Culture In India****Personnel:**

G. Venugopal, S.S.H. Razvi, Suresh Babu, V. K. Sharma, V. Hari Krishna, K. V. Rajendran, M. Makesh, P.S. Ananthan

Achievement:

As per the guidelines Coastal Aquaculture Authority of India the farm was registered. CAAI committee has inspected the Effluent treatment systems and biosecurity measures installed at farm and granted permission to take up culture for 5 years. Water samples from fish ponds have been analyzed for *Vibrio sp* and TPC load and enumerated the colonies pre & post treatment. On 12-03-2010 *L. vannamei* PL (8-10 mm) were procured and transported from licensed CP Aquaculture hatchery, Gudur(AP) and after proper acclimatization released in the culture ponds. As per the technical programme of the project for the first year the following stocking densities were adopted viz 10 /m² in two 0.2 ha ponds, 20 / m² in two ponds of 0.2 ha each, 30/ m² in one pond of 0.4 ha. Live seed samples were screened for various viral and bacterial pathogens at CIFE Mumbai. Simultaneously, samples of seed were also screened at CIFE Kakinada centre's Molecular Bio Lab and found WSSV and MBV free as well as free from ecto-parasites. Pre-stocking and post stocking - *Vibrio* loads and Total Plate Count of Seed, water





and soil were analyzed and has been continued subsequently at fortnight intervals. Soil and plankton samples are analyzed at fortnightly intervals. In all the ponds aeration was given using pond aerators. Commercial grade CP feed is being applied 4 times a day. During 20 days of grow out period the growth of *L. vannahmei* was recorded to be in the range of 2.8 to 3.5 grams and survival was estimated to be in the range of 80- 95 % at different stocking densities.

5.2. Externally Funded Projects

Project Title:

Development And Use Of Fluorescent Transgenic Zebrafish Biosensors For Monitoring Genotoxic Pollutants

Funding Agency:

DBT, New Delhi

Personnel:

A. Chaudhari, S. Sivasubbu, (IGIB, New Delhi), S.G.S. Zaidi

Achievements:

The project aims at engineering four transgenic zebrafish bioreporters, using gene promoters responsive to genotoxicity and heavy metals. The biosensor constructs prepared using Zebrafish *gadd45a*, Mouse *MT4* and Mussel *MT1a1* promoters linked to RFP reporter genes have been microinjected into one/two cell stage zebrafish embryos. The microinjected fishes were grown to adulthood. To identify the germline integration of the transgene, the fishes were mated with its wild counterparts and the embryos were screened for the presence of transgene. Also, to see whether the transgene is integrated in euchromatin region, expression studies are being carried out by exposing the embryos to the sublethal levels of its corresponding chemical analyte. RFP expression is being screened using a fluorescence microscope equipped with an RFP filter set. A transgenic zebrafish facility is being established at CIFE, Mumbai.

Project Title:

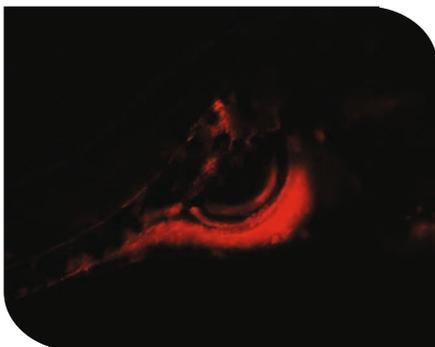
Potential Drugs From Selected Marine Invertebrates And Plants From Indian Waters

Funding Agency:

Ministry of Earth Sciences, New Delhi

Personnel:

S. Gupta, G. Deshmukhe, S. G. S. Zaidi



Achievements:

The project involves extraction and characterization of bioactive compounds from selected marine invertebrates and plants. Marine flora and fauna were collected in and around Maharashtra coast (Ratnagiri, Mumbai, Colaba, Khardanda, Bandra, Alibag and Vasai) and Tamil Nadu coast (Gulf of Mannar, Kanyakumari and Vembar). Specimens were collected from the intertidal or near shore zone or by scuba diving. The collection includes marine grasses and weeds, sea anemones and marine sponges. A total of 32 methanolic extracts of the samples have been prepared and sent to CDRI for bioactivity analysis. One of the same showed Anti-dyslipidaemic activity. Further re-extraction and purification of the bioactive compound using various techniques is being carried out at CIFE. Additionally the extraction of bioactive compounds and, preliminary bioassay for toxicity and antimicrobial activity is initiated for few extracted samples.

**Project Title:**

Genetic Improvement Of *P. monodon* Through Selective Breeding For Growth And White Spot Disease Resistance

Funding Agency:

NORAD (INPIC Norway Inter- Institutional Project)

Personnel:

Gopal Krishna, S. Jahageerda

Achievements:

The post larvae from 75 families of tiger shrimp belonging to Chennai, Andhra Pradesh and Andamans were collected over a period of 3 years and reared in tanks/hapas in ponds. Thereafter, they were tagged with visible implant elastomer tags and stocked in ponds for monitoring growth. Simultaneously, representatives from all families were subjected to a challenge test of the White Spot Syndrome virus, in an effort to study the resistance to this disease. The tagged shrimps stocked in ponds were harvested after 4 months and the wet weights recorded for detailed genetic analyses. For the first time in our country, information on genetic parameters of production traits in tiger shrimps has been obtained. From the data analyses, it could be inferred that tiger shrimp would respond to selection and there could be considerable genetic gain. In addition, broodstock were developed to obtain families. The project has generated extremely useful information required for starting a long-term genetics programme. Additive genetic variability was demonstrated for survival recorded in challenge test (time to death). Additive genetic variability was demonstrated for growth and pond survival. Sexual dimorphism was demonstrated for growth and there was high correlation between individual families' growth in two different geographic locations,



indicating low GXE effect.

Project Title:

Ornamental Fish Breeding And Culture-an Innovative Scheme For The Development Of Rural Women

Funding Agency:

Department of Biotechnology, New Delhi

Personnel:

A. Sinha, P.K.Roy, S.K.Sharma

Achievements:

Women group standardized the technology to prepare on-farm feed for ornamental fish with non conventional ingredients as per the given training.



Project Title:

Community Based Reservoir Fisheries Management

Funding Agency:

NFDB, Hyderabad

Personnel:

K.Dube, N. Saharan , V. K. Tiwari, Chandra Prakash

Achievements:

Research fellows have been recruited and the launching workshop has been conducted on 27th January 2010. Dhaincha seed had been procured and procurement of 32 cages was under process.



Project Title:

Ornamental Fish Culture In Cages For Livelihood Of Fisherwomen

Funding Agency:

NFDB, Hyderabad

Personnel:

K.Dube, N. Saharan , V. K. Tiwari, Chandra Prakash, Babitha Rani

Achievements:

Twenty women have been identified for doing ornamental fish culture in cages. They are learning cleaning and maintenances of cages in the existing cages. A two days training of these women in planned for 11th and 12th March. Procurement of equipment and raw material is under progress. A two days duration short term training programme from 11th -12th March, 2010 was conducted at Dimbhe Reservoir, Distt-Pune, Maharashtra for the fisherwomen

of the Dimbhe reservoir peripheral area villages on the subject “Ornamental Fish Culture in Cages”. They were imparted training on the topics related to identification of live bearers and egg layers, Supplementary feed formulation, Live feed culture, Water quality monitoring, Packing and transportation of live fish, bifouling control practices.

Project Title:

Mega Seed Project - Seed Production In Agricultural Crops And Fisheries

Funding Agency:

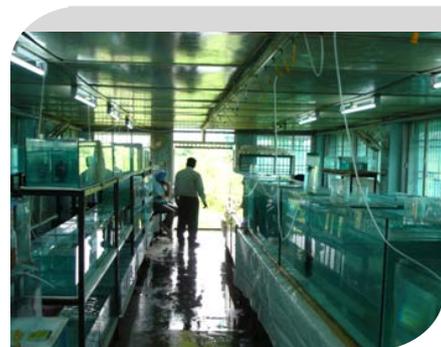
ICAR, New Delhi

Personnel:

M.P.S. Kohli, K.Dube, N. Saharan, V. K. Tiwari, Chandra Prakash

Achievements:

The brooders were procured from Kolkata, Chennai and Mumbai. About 20 fish variety of different species of egg layers (Gold fish, Angel fish, Fighter fish, Paradise fish Tetras, Barbs etc.) and 15 variety of live bearers (Guppy, molly, Platy etc.) were bred, reared continuously maintained. Bio-filters are being used in aquarium tanks and cement cisterns for rearing the spawn/fry for their better survival and growth, the encouraging results are achieved. Live feed cultures in the different systems have been done and different species are being fed in addition to artificial feeds. During the year, 80,000 no. of quality seed were produced. Rearing of fry was done in cages in open waters and natural ponds to get developed natural coloration and pigmentation. Experiment trials on artificial feeds are going in progress for different species for growth and early maturity. Ornamental fish breeding, culture, aquarium fabrication and regular maintenance and other aspects were demonstrated to visitors & school children to develop the habit of aquarium keeping in general public.



Project Title:

Developing Aquaculture In Degraded Inland Areas In India And Australia

Funding Agency:

ACIAR-ICAR (Bilateral research project)

Personnel:

N.K.Chadha

Achievements:

33,500 PL were produced in hatchery out of which 82,500 PL were supplied to different agencies generating a revenue of Rs.46,500/-. After 150 days culture period, a production of fish /prawn 975.86 Kg /110.74 Kg (survival 85% / 31%) and 1965 Kg / 232.70 Kg (survival 96% / 88%) was achieved in ponds fed with 2-



3 ppt water whereas 1657.90 Kg/155.35 Kg (survival 92% / 68%) and 1725 Kg/149.10 Kg (survival 98% / 75%) was achieved in ponds fed with 5-6 ppt water.

Project Title:

Development Of Appropriate Strategies For Marine Algal Cultivation And Processing For Livelihood Generation In Coastal Areas Along Thane And Sindhudurg Districts Along The Maharashtra Coast

Funding Agency:

Department of Science and Technology, New Delhi

Personnel:

G. Deshmukhe, A. Dwivedi

Achievements:

The project was commencing and awareness training held at Srivardhan for utilization of *Porphyra*.



Project Title:

Validation Of Potential Fishing Zone Advisories Along The Mumbai Coast, Maharashtra

Funding Agency:

Indian National Centre for Ocean Information Services (INCOIS), Hyderabad

Personnel:

L. Shenoy, S.K Chakraborty, G.Deshmukhe, A.K.Jaiswar

Achievements:

Recruitment of SRF for the project was completed. Base line Gear-wise catch data was collected from Versova and Mahim. In addition, details with regard to principal dimensions of fishing boats in operation at Mahim were collected. Two Awareness Campaigns on Marine fishery resources information services for fishermen of Mumbai coast (Potential Fishing Zone Advisories) were conducted on 25th September 2009 and 10th March 2010 at Versova and Mahim Koliwada respectively.

Project Title:

Validation Of Ocm li Geo-physical Products Over Western Coastal Region

Funding Agency:

Space Application Centre, Ahmedabad

Personnel:

L. Shenoy, G.Deshmukhe

Achievements:

Recruitment of JRF for the project was done. Eight stations with their Latitude-longitude were identified along the Mumbai coast for collection of water samples at different depths. Collection of water samples was completed as per the work plan and estimation of chlorophyll a and Total Suspended Matter was done. Consolidated data was sent to SAC, Ahmedabad for match-up analysis.

Project Title:

Capacity Building Of Coastal Fisher Women Through Post Harvest Technologies In Fisheries

Funding Agency:

NFDB, Hyderabad

Personnel:

B. B. Nayak, A. Sharma

Achievements:

The site selection was made, interactions with the Madh island fishermen has been done. Samples of dry fish have been analysed to create the baseline data. The orientation workshop to systematize methodology and investigators meet of Network project were done.

Project Title:

Assessment Of Status Of Riverine Fisheries And Linking With The Water Quality Restoration Programme - River Godavari In Maharashtra

Funding Agency:

Central Pollution Control Board, New Delhi

Personnel:

C.S. Purushothaman, S. P. Shukla, A. Vennila, A.K. Jaiswar, P.K. Pandey, Asha Landge

Achievements:

The sampling under the project has been completed and the data being analyzed for the preparation of the report.

Project Title:

Utilization of Inland Saline Areas for Aquaculture

Funding Agency:

ICAR, New Delhi (Niche Area of Excellence)

Personnel:

C.S. Purushothaman, V.K. Sharma, G. Venugopal, A.K. Verma, Hari Krishna, Muralidhar

Achievements:

A pond of 0.25 ha area and another of 0.18 ha have been stocked with *Penaeus monodon* at 15,000 and 10,000 post-larvae (pl - 15), respectively, at 6‰ salinity on 01 July 2009 for culture experiments and was harvested on 16 October 2009 resulting in the production of 1332 kg/ha in approximately 105 days. The actual harvest was 333 kg from 0.25 ha at a survival rate of 83.42% with a feed conversion ratio of 1.26. On 15 July, another 0.24-ha pond of same salinity was stocked with 15,000 post-larvae of the same species. The second pond of tiger shrimp (stocked on 28 July 2009 at 60,000/ha was harvested on 11 November 2009 resulting in the production of 1248 kg/ha in approximately 105 days. The actual harvest was 312 kg from 0.25 ha at a survival rate of 94.57% with a feed conversion ratio of 1.35. The produce was sold at the Delhi wholesale market at Rs 270/kg. Mullet seed was collected at Mandapam and air-lifted to Delhi from Madurai for stocking in the ponds of Rohtak Centre. Pond renovation had also been taken up as also lining of ponds and procurement of material for polyhouse construction.

Project Title:

Development of Bacterial Consortia for Bio-processing Agricultural Wastes and Bioremediation of Aquaculture Effluents

Funding Agency:

ICAR, New Delhi (Application of Micro organisms in Agriculture and Allied Sectors)

Personnel:

C.S. Purushothaman, a. Vennila, P.K. Pandey

Achievements:

Isolates (1, 2, 4, 5, 6 and 9) are being studied for betaine aldehyde production. DNA previously isolated was used to carry out PCR for betaine aldehyde dehydrogenase and the gene was successfully amplified. DGGE for the consortium made previously has been standardized. Thirteen bacterial isolates have been identified under the project through 16s rDNA sequencing. The passport data for these have been prepared for transmission to the National Bureau of Agriculturally Important Microorganisms along with the cultures. These are: *Bacillus cereus* (5 isolates), *B. pumilus* (3 isolates), *B. endophyticus*, *B. megaterium*, *B. subtilis* and *Alcaligenes faecalis* (2 isolates). Two pure isolates of ammonia-oxidizing bacteria were obtained on solid media. Six new isolates of cellulose-degrading bacteria were obtained from

water samples collected from Surat. One of the isolates (*Bacillus megaterium*) gave very high cellulase as well as xylanase activity, whereas another (*Bacillus subtilis*) gave high xylanase activity. Four crude consortia were designed using earlier as well as new isolates. Degradation ability as well as stability of one of the consortia was studied and it was found that it is capable of degrading cotton boll and was stable over a period of seven days.

Project Title:

Studies on the Likely Impact of the Proposed Kalpasar Project on the Ecology, Fishery and Socio-economic Aspects of the Coastal Community of the Gulf of Khambat

Funding Agency:

Ministry of Earth Sciences, New Delhi

Personnel:

C.S. Purushothaman, R.S. Biradar, S.K. Chakraborty, G. Desmukhe, A. Sharma

Achievements:

The environmental and other samples collected by Gujarat Ecology Society, Gujarat were identified at CIFE and the results submitted to Gujarat Ecology Society.

Project Title:

Development Of Quantitative Real-time PCR For Four DNA Viruses Infecting Indian Penaeid Shrimp

Funding Agency:

Department of Biotechnology, New Delhi

Personnel:

K.V. Rajendran, M.Makesh, A. Chaudhari

Achievements:

Samples were collected from various locations. PCR amplification of WSSV was carried out. PCR amplification of IHNV, HPV and MBV was done. Cloning and sequencing of WSSV was completed.

Project Title:

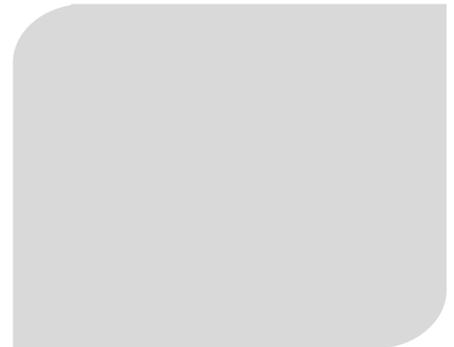
Development Of Monoclonal Antibody-based Rapid Diagnostic Test For The Detection Of *Macrobrachium rosenbergii* Nodavirus (mrnv) And Extra Small Virus (xsv) Of *Macrobrachium rosenbergii*

Funding Agency:

Department of Biotechnology, New Delhi

Personnel:

M.Makesh, K.V. Rajendran



**Achievements:**

Expression of Histidine-tagged MrNV and XSV coat protein gene in *E. coli* using a IPTG inducible promoter (in pRSET A plasmid); Purification of MrNV and XSV coat proteins by affinity chromatography using Ni-NTA Agarose resin; Immunization of mice with emulsified MrNV and XSV proteins; Setting up of Hybridoma cultures to raise monoclonal antibodies against MrNV and XSV coat proteins. Screening of the clones by ELISA for presence of antibodies and sub-culturing of positive clones after limiting dilution to obtain a single cell clone. Hybridoma clones secreting monoclonal antibodies against MrNV and XSV have been developed

**Project Title:**

Development Of Immunodiagnostic Kits For Viral Diseases Of Freshwater Prawn

Funding Agency:

Department of Biotechnology

Personnel:

Pani Prasad, S.C. Mukherjee

Achievements:

Rapid immunodiagnostic tests like ELISA and LAT were developed for detection of Noda virus in prawns using polyclonal antibodies.

**Project Title:**

Rural Livelihood Development Through Aquaculture In Ponds Constructed Under NREGA In Gumla District Of Jharkhand

Personnel:

N.R.Kumar, V.K. Tiwari, A.K.Verma

Funding agency:

UNDP

Achievements:

Five villages from each of Gumla and Ghaghra blocks of Gumla districts have been selected for the result demonstration After visiting the area and in consultation with the DFO, Gumla From each of the selected villages one result demonstration (RDF) farmer/ pond constructed under MGNAREGA have also been selected in consultation with villagers based on the quality of pond and farmer. A bench mark survey was conducted using predesigned schedule for the same. The selected farmers have been trained by conducting two training programmes of one day duration in each of the selected block. The trained RDFs are being monitored for adopting the package of practices in their NREGA constructed ponds for aquaculture.

Project Title:

Development Of Community Participated Model For Chaur (flood Plains) And Maun(ox-bow Lakes)

Funding agency:

NFDB, Hyderabad

Personnel:

V.K. Tiwari, N.R. Kumar, Dilip Kumar, R.S. Biradar, A.K. Reddy

Achievements:

Launching workshop was conducted on 5-6 December, 2009 to bring the awareness among the stakeholders and other farmers. More than 350 farmers participated in the workshop. The activity chart was prepared and allocation of budget to the project partners done. Selection of SRF (One) and one Social Mobilizer is done to work in the project. First and foremost important thing in the project is organizing the stakeholder to work together. Meetings were called and discussions were held and the stakeholders are convinced to work together. Site selection for construction of nursery ponds in the vicinity of the *maun* and *chaur* had been completed.

Project Title:

Appraisal Of NREGA Programme In Maharashtra Systems And Technology Model

Personnel:

R. S. Biradar, A. Sharma

Achievements:

Team members of the project visited Thane and Akola District Collector's Office on 15th June, 2009 and 18-19 June, 2009 respectively to discuss and get the feed back of the appraisal study report. Final project report preparation is in progress.

5.3. NAIP Research Projects

Project Title:

A Value Chain On Fish Production In Fragile Agricultural Lands And Unutilized Aquatic Resources In Maharashtra

Personnel:

A.K.Reddy, V.K. Tiwari, S. Munilkumar, A. Vennila, S.P. Shukla, A.K.Verma, Ananthan, P.S.



Achievements:

8 nursery ponds were stocked with carp (Catla and Rohu) spawn in the 3rd week of August, 2009 at Shere and Gondi villages. A total of 20 lakhs spawn was stocked in 8 Nos. of nursery ponds. 2.5 lakhs carp seed was distributed to the farmers and 2.5 lakhs of fry was stocked in two grow out ponds for rising of yearlings for stocking in grow out ponds at demonstration sites and supply to demonstration farmers. 3 grow out ponds at Shere village were stocked with carp yearlings of 25-40 g weight in the months of June/July, 2009. The yearlings were procured from a private party and transported for a distance of 350 km in open plastic containers of 1000 l capacity each by adding clove oil as sedative. The seed was successfully transported with 92-96 % survival. The carps have grown to 600 to 1200 g in 8-9 months. The fish which have grown to more than 1.0 kg had been segregated and stocked separately for maintenance of brood stock. Some fishes had been sold out in live condition at farm site. In order to check the growth and survival of fingerlings of same season, two grow out ponds at Gondi were stocked with carp fingerlings of 5-7 cm size in the month of October/November, 2009. The growth of fish ranged between 300 and 700 g. The partnering NGO Vatsalya Mandir, Lanja initiated rearing of Rohu and Catla spawn up to fingerling stage and stockings were done in three reservoirs. The other partner College of Fisheries had constructed 10 Nos. of rearing ponds in the vicinity of reservoirs for rising advanced fingerlings / yearlings.

The College of Fisheries, Ratnagiri formulated two fish products i.e. Fish Cutlet and Fish Shev prepared from freshwater fishes. Products were accepted fairly by the consumers. Further studies are under progress to commercialize the products. Three training programmes were organized by College of Fisheries and Vatslyya Mandir on 'Preparation of value added fish Products from fresh water fishes'. In order to know the consumer preference of the two products the Vatslyya Mandir participated in Food Festival organized by KVK at Lanja, where 625 consumers checked the taste of the products. Positive response was received from >90 % of the consumers. Another two products i.e. fish wafers and fish fingers were also prepared and women were trained in product preparation.

Project Title:

Livelihood And Nutritional Security Of Tribal Dominated Areas Through Integrated Farming Systems And Technology Model

Personnel:

R. S. Biradar, V.K. Tiwari, A. K. Reddy, M.L. Ojha (MPUAT, Udaipur)

Achievements:

Two brood stock ponds of 0.4 ha each were constructed. One reservoir pond of 0.1 ha constructed. Tube well with yield of 300 l/minute constructed. Loharia and Marella tanks of 5 ha each in Daiyana and Vajakaria villages respectively in

Sagwadia cluster have been taken on lease for demonstration of aquaculture technologies in project area. 20 lakh spawn of IMC were raised in project nursery ponds at KVK Banswara and about 5.4 lakh fry had been harvested and stocked in farmers ponds. Site for community pond has been identified in Nokla village. Construction of hatchery shed completed and construction of hatchery proper is in progress. Two short term training programmes on 'Fish Processing and Value addition' were conducted during 18-19 January and 20-21 January, 2010 for 11 and 19 participants respectively of NAIP adopted villages. As part of the training, fish pickle of about 30 kg was prepared and put into 300 packets of about 100 g each. These pickle packets were displayed and distributed during RPC meeting held at Udaipur for assessing the taste and popularization. About 4,000 fingerlings were stocked in recently constructed stocking pond at KVK, Banswara. Rearing of carp seed and also rearing and breeding of ornamental fishes was in progress at KVK, Banswara.



Project Title:

Bio-prospecting Of Genes And Allele Mining For Abiotic Stress Tolerance

Personnel:

A. Chaudhari, Gireesh Babu P, G. Tripathi

Achievements:

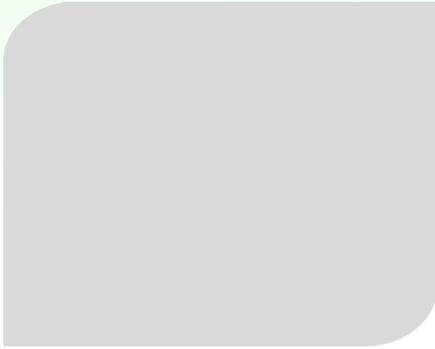
The major goal of the project is to characterize the four novel partial gene sequences found to be involved in salt homeostasis of *P. monodon*, marine tiger shrimp in an earlier study. Shrimp specimens (20g) were procured from Pancham Shrimp Farm, Saphale, Thane and acclimatized to various salinities (5, 10, 15, 25 and 35 ppt). The shrimp were maintained at final salinities for 20 days and then dissected to collect gill and muscle tissues, which were stored in RNA later and kept at -80°C until RNA extraction. Total RNA was extracted by the Triazol method and single strand cDNA prepared using standard protocol. Real time PCR primers were designed and procured for the four novel genes and other reference genes like Na⁺K⁺ ATPase, Carbonic anhydrase and Arginine kinase. The PCR conditions were standardized, amplicons were cloned and sequenced. Full length Na⁺K⁺ ATPase gene was amplified and cloned in pET28a His-Tag vector to overexpress in *E. coli*. A 108 kD protein was observed in SD-PAGE after 24h induction with IPTG. Western blotting with His-tag antibody was performed to confirm the protein. No significant morphological differences were observed in either tissue in relation to salinity.

Project Title:

Gene Silencing- A Strategy For Management Of White Spot Syndrome Virus (WSSV)

Personnel:

K.V. Rajendran, M. Makesh



Achievements:

The medium which supports the attachment and proliferation of cells derived from various organs of mud crab was optimized. Leibovitz L-15 media (1 X, 2 X and 3 X) and serum-free medium with antibiotics, penicillin (100units/ml), streptomycin (100 µg/ml) and amphotericin B (0.25 µg/ml) were used for culturing the cells. Growth medium was prepared by adding 5%, 10% and 20% fetal bovine serum along with 5% crab hemolymph serum. Osmolality was adjusted with 10% 2.5X crab saline or 1:1 1X crab saline to L-15. Osmolality of different media, supplements, crab saline and hemolymph was determined. Different tissues of crab such as heart, hepatopancreas, muscle, ovary, eggs, testis, hematopoietic tissue, nerve tissue and hemocytes were used for primary culture. Testis, ovary, hepatopancreas and heart tissues were trypsinised using 0.125 & 0.25% trypsin to get single cells.

Project Title:

Vision Policy and Gender

Personnel:

R. S. Biradar, Swadesh Prakash

Achievements:

The technologies which were identified for impact assessment are (a) Giant Freshwater prawn seed production using artificial seawater (b) Polyculture of carps with *Macrobrachium rosenbergii* (c) Carotenoid rich feed for ornamental fish culture and breeding. Interview Schedule for impact assessment of technologies had been finalized. Data analysis and report writing is in progress.

Project Title:

Strengthening Of Digital Library And Information Management (e-granth)

Personnel:

N.P. Sahu

Achievements:

List of in-house publications of CIFE was prepared. Classification of Books was undertaken. Cataloguing of books was done in connection and attempts were made to export data to www.psw.oclc.org for uploading of the prepared records.

5.4. Contractual Project

Project Title:

Preparing Development Plan and Road Map for Fisheries Development for Rajasthan

Funding agency:

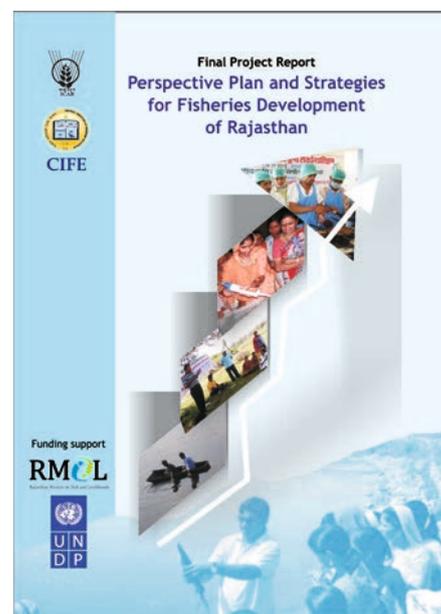
RMOL, Jaipur

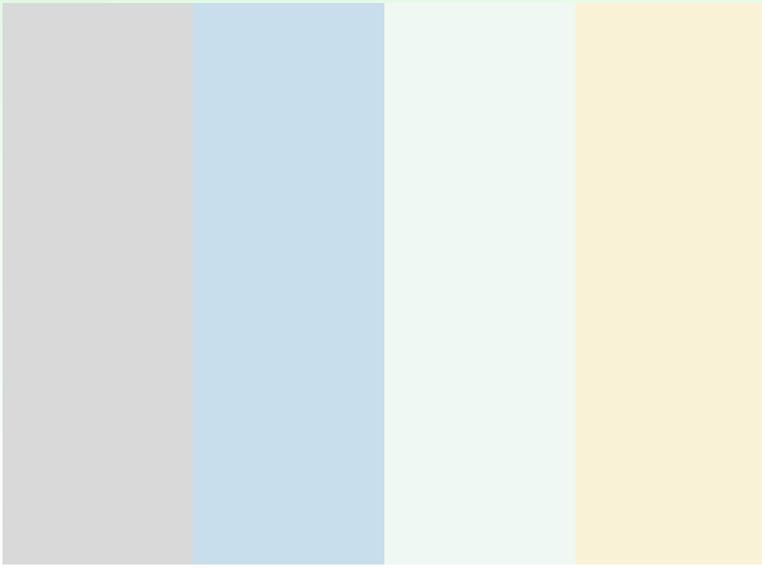
Personnel:

P. S. Ananthan, V.K. Tiwari, A.K. Reddy, S. Munilkumar, Suresh Babu

Achievements:

A more useful measure of Effective Water Spread Area (EWSA) was used for development planning after factoring in seasonality, suitability, extent of leased out area, etc which is 2,00,332 ha. Nine districts Banswara, Dungarpur, Chittorgarh, Bhilwara, Udaipur, Sirohi, Jhalawar, Kota and Ganganagar (60% total EWSA and 45% of total water-bodies) have good potential; present production estimates suggested 30,061 tons, 21% more than DOF's figures while EWSA based average productivity are 56 kg for large reservoirs, 176 kg for small and medium reservoirs, 286 kg for large tanks, 1125 kg for medium tanks and 1165 kg for small tanks and 2050 kg in waterlogged areas; 75% of present seed supply of 362 million fry is met by imports from other States with public sector hatcheries & farms supplying only 13%; only 5 out of 28 seed farms are functional; estimated target production potential is 88,277 tons by 2020, that can sustain 65,957 livelihoods as against 15090 now; field level technical staff required in DOF would be 406 (310 FAs, 72 FEOs and 21 FDOs and 3 DDFs) as against present sanctioned strength of 97, though cadre reorganization would mean only 10% additional posts; leasing policy shall be replaced with comprehensive fisheries development policy and be applicable to all the water-bodies; leasing and management rights shall be vested with DOF irrespective of their ownership; co-management for enhanced fisheries in large water-bodies shall become a major paradigm for both sustainable resources and livelihoods.





6. Extension Achievements

6.1 Short term Training Programmes/Special Training Programmes

Title	Venue	Period	No. of Trainees
Fish and prawn culture	Powarkheda	Mar 30-Apr 8, 2010	21
Freshwater aquaculture	Kolkata	Mar 30- Apr 8, 2010	21
Fish culture	Powarkheda	Mar 23-29, 2010	19
Centre of Advanced Faculty Training (CAFT) on Fisheries Resource Management	Mumbai	Mar 22 to Apr 11, 2010	19
Fish and prawn culture	Kakinada	Mar 11-21, 2010	40
Aquaculture	Kolkata	Mar 11-20, 2010	27
Ornamental fish culture in cages	Dimbhe Reservoir Pune	Mar 11-12, 2010	17
Sectoral planning	Mumbai	Mar 5-11, 2010	11
Fish and prawn culture	Powarkheda	Mar 5-4, 2010	20
Ornamental fish breeding and disease	Kolkata	Mar 4-13, 2010	20
Fish culture	Kakinada	Mar 4-10, 2010	25
Fish culture	Kakinada	Feb 25 - Mar 1, 2010	22
Fish and prawn culture	Kakinada	Feb 17-26, 2010	43
Oxbow fisheries	Kolkata	Feb 16-26, 2010	30
Fish seed production in the ponds of the command areas of reservoirs	Mumbai	Feb 13-18, 2010	13
Fish culture	Kakinada	Feb 10-16, 2010	22
Jalashay mein mastya beej sambardhan	Powarkheda	Feb 8-20, 2010	13
Fish and prawn culture	Kakinada	Jan 29 - Feb 7, 2010	32
Fisheries policy and management option	Mumbai	Jan 18-24, 2010	15
Fish culture	Kakinada	Jan 18-24, 2010	18
Fish and prawn culture	Kakinada	Jan 13-23, 2010	20
Fish and prawn culture	Powarkheda	Jan 13-23, 2010	20
Promoting Hindi in the office	Mumbai	Jan 11-16, 2010	28
One day hands on training- cum-demonstration on 'Carp Culture Techniques'	Kesala block of Hoshangabad, Powarkheda	Jan 8, 2010	20
Ornamental fish culture, breeding and marketing	Kolkata	Dec 21-26, 2009	14
Value added fisheries products	Kolkata	Dec 14-23, 2009	20
Techniques of fish farming	Powarkheda	Dec 14-20, 2009	20
Molecular Biology and Biotechnology Techniques	Mumbai	Dec 10-20, 09	19
Fish and prawn culture	Kakinada	Dec 2-11, 2009	36
Fish Processing and value addition	Banswara district, Rajasthan	Nov 19-20, 2009	15

Ornamental fish culture	Banswara district, Rajasthan	Nov 19-20, 2009	15
Ornamental fish culture	Banswara district, Rajasthan	Nov 17-18, 2009	17
Fish Processing and value addition	Banswara district, Rajasthan	Nov 17-18, 2009	15
Fish culture	Kakinada	Nov 4-10, 2009	26
Fish diseases	Kolkata	Nov 2-16, 2009	24
Freshwater fish farm and management	Powarkheda	Oct 26-Nov 7, 2009	20
Microbiology and fish diseases	Kolkata	Oct 5-14, 2009	9
Fish culture	Kakinada	Sep 14-20, 2009	23
Mass scale production and culture of magur	Kakinada	Sep 3-10, 2009	18
Fish culture	Kakinada	Aug 10-16, 2009	23
Breeding and culture of magur and carps	Kakinada	Aug 3-8, 2009	5
Ornamental fish breeding	Kolkata	Jul 27-Aug 1, 2009	4
Breeding and culture techniques of carps and ornamental fish including water quality	Kolkata	Jul 21 - Aug 7, 2009	15
Ornamental fish breeding and culture	Kolkata	Jul 19-Aug 28, 2009	6
Fish and prawn culture	Kakinada	Jul 18-27, 2009	40
Fin and shellfish hatchery	Kolkata	Jun 26-Jul 1, 2009	10
Fish and prawn culture	Kakinada	Jun 25 - Jul 4, 2009	35
Fish culture	Kakinada	Jun 20-26, 2009	17
Scampi hatchery management by using synthetic sea water	Powarkheda	May 21-30, 2009	6
Grow out practices of giant fresh water prawn using inland saline water	Rohtak	May 12-21, 2009	10
Ornamental fish breeding and culture	Mumbai	May 4-8, 2009	5

6.2 Participation in Exhibitions

Programme/Workshop	Venue	Period	Participating Centre/HQ
Bharat Nirman - Jan Suchana Abhiyan	Budhani, Dist. Sihore	Mar 9-13, 2010	Powarkheda
Pusa Krishi Vigyan mela	IARI Campus, Pusa, New- Delhi	Mar 4 - 6, 2010	Rohtak
17 th State Science & Technology Congress	WBUAF&Sc, Belgachia, Kolkata	Mar 4-5, 2010	Kolkata
Bharat Nirman - Jan Suchana Abhiyan.	Samajik Nyay Parisar, Ujjain	Feb 23-27, 2010	Powarkheda
Exhibition cum Demonstration	IINRG, Ranchi, Jharkhand	Feb 22-24, 2010	Kolkata
International Symposium on Remote Sensing	Kochi	Feb 15-17, 2010	Mumbai
Mehul Koliwada Sea Food Festival	Chembur, Mumbai	Feb 5-7, 2010	Mumbai
Vesave Koli Sea Food Festival	Versova, Mumbai	Jan 22-24, 2010	Mumbai
FISHFEST-2010 organized by the DoF, UP	Lucknow	Jan 29-31, 2010	Mumbai
National Farmers Fair (Rashtriya Kisan Mela) organized by Indian Institute of Vegetable Research (IIVR), Varanasi, UP	Varanasi	Jan 30-31, 2010	Rohtak
Assam Matsya Mahotsav-2010, organized by the DoF, Assam	Guwahat i	Jan 30 - Feb 1, 2010	Kolkata
4 th Matsya Mahotsav 2010	Guwahat i, Assam	Jan 30- Feb 1, 2010	Kolkata
Exhibition-cum-demonstration in the Annual Agricultural Exhibit ion and Sri Ramkrishna Ashram's Celebration, on the occasion of its 50 year of service in the Sunderbans	Ram Krishna ashram Krishi Vigyan Kendra, Nimpith.	Jan 20-25, 2010	Kolkata
National seminar on Integrated Management of Water Resources with Reference to Biodiversity and Livelihood	Bhopal	Jan 16-17, 2010	Powarkheda & Kakinada
Indaquaria 2010	MPEDA, YMCA- Vepari, Chennai	Jan 08-10, 2010	Kolkata
Matsya Mahotsawa/Kisan Mela-	Lucknow	Dec 29-31, 2009	Mumbai

South Indian Fisheries and Livestock Exposition	KVAFSU, Bidar	Dec 18-20, 2009	Mumbai & Kakinada
4 th Annual Science fair of Vigyan Mela	Jadavpur, Kolkata	Dec 17-20, 2009	Kolkata
27 th Foundation Day of NBFGR and Fish Farmers Fair & Meet	NBFGR, Lucknow	Dec 12, 2009	Rohtak
Silpa & Baniyya Mela	B.R. Ambedkar Park, Kankinara, North 24 Parganas, W.B.	Dec 01-07, 2009	Kolkata
National Seminar on Conservation and Sustainability of Coastal Living Resources of India	CIFT, Cochin	Dec 1-3, 2009	Mumbai & Kakinada
India International Trade Fair 2009	Pragati Maidan, New Delhi	Nov 14-27, 2009	Rohtak
National Symposium on Coldwater Fisheries Management: New Strategies & approaches	Eco-Camp, Nameri National Park, Tezpur, Assam	Oct 2-4, 2009	Kolkata
Krishi Expo	NRC on buffaloes, Hissar	Sep 16-18, 2009	Rohtak
National Expo-XIII	Kachhari Maidan, Barasat, Kolkata-700124	Sep 02-06, 2009	Kolkata
Indian Fish festival conducted by National Fisheries Development Board, Hyderabad	NFDB, Hyderabad	Jul 11-13, 2009	Kakinada
National Conference of State Fisheries Ministers, organized by CIFA, Bhubaneswar & ICAR, New Delhi	CIFA, Bhubaneswar	Jul 04-05, 2009	Kolkata
National Conference of “Technology-led Development of Horticulture for Rural Up-liftment”	Swadesh Prem Jagriti Sangosthi-2009, Mahamada, PUSA, Bihar	May 28-31, 2009	Kolkata

6.3 Media

Kolkata centre

- TV coverage of ETV Bangla on “Aquarium preparation and maintenance”. The first telecast was on 1st May, 2009 in “Annadata” at 6.30AM.
- TV coverage of ETV Bangla on “Scientific breeding and rearing techniques of live bearing ornamental fish” which was broadcasted on 16th May, 2009 in “Annadata” at 6.30AM
- TV coverage of ETV Bangla on “Nursery and rearing pond management for production of quality fish seeds” which was shown on 17th May, 2009 in “Annadata” at 6.30AM
- TV coverage of ETV Bangla on “Breeding and culture of indigenous ornamental fish” which was on 19th February, 2010 in “Annadata” at 6.30AM.
- ETV broadcasted the programme of D.Sc. award ceremony in the honor of Prof. Hiralal Chaudhuri held in CIFE, Kolkata Centre on 20th February, 2010.

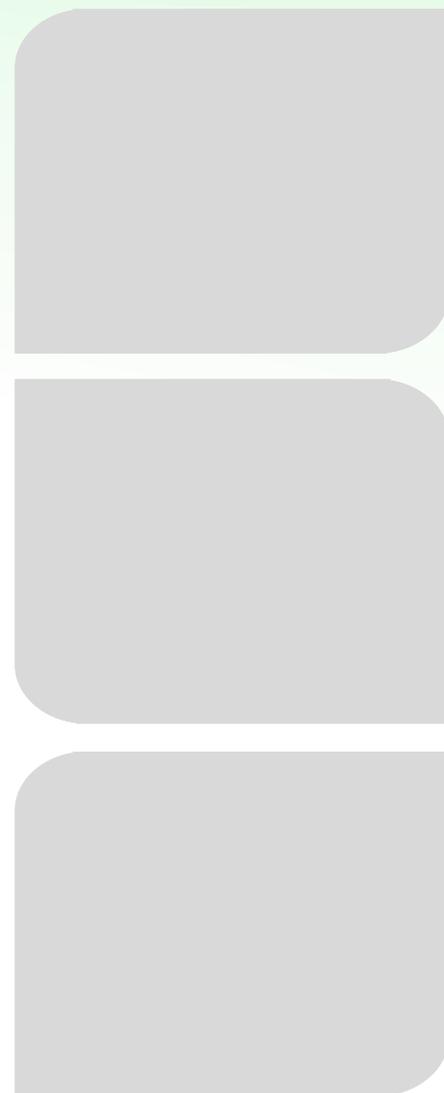
Rohtak centre

- Dr. V. K. Sharma, OIC of the Centre delivered a TV - talk on 12.2.10 to Doordarshan Krishi Darshan programming unit (CPC Doordarshan) on inland saline aquaculture practices.
- A Television talk was given by Dr. V.K. Sharma O.I.C. about activities of the centre and their benefits for farmers on the occasion of Krishi Mela at PUSA, IARI on 06.03.2010, through Doordarshan recording.
- Demonstration of Tiger Shrimp

cultivation using inland saline waters had been highly appreciated by the media. This news had been highlighted in several Indian newspapers like Hindustan times, Dainik Bhaskar, Hari Bhoomi, Amar Ujala, Dainik Jagaran etc and TV channels.

Kakinada centre

- Sh. R.R.S. Patnaik (T-2) delivered one Radio talk in All India Radio Prasar Bharati, Visakhapatnam on the topic “Neelakantha Royyala Pempakam lo adhunica paddhatulu”, which was broadcasted on 18-10-09 at 7:15 PM in Palleseemalu farmers programme.
- Sh. J. Krishna Prasad, Technical Officer (T-6) delivered one Radio talk in All India Radio Prasara Bharati, Visakhapatnam on the topic “Use of organic manures in aquaculture”, on 16-11-09 at 7:15 PM in Palleseemalu farmers programme.
- Mr. K. B. S. Murty (T-02) gave a radio talk in Telugu on the topic 'Manchineeti jalasayaniki prajatula empika' (Selection of species for freshwater aquaculture) on 8-1-2010.
- Dr. P. Srinivasa Rao (T-02) delivered a radio talk in telugu on “Vaayu kosa swasa chepalalo vyadhulu - nivarana padhatulu (Common diseases of air breathing fishes and their control measures) at All India Radio, Visakhapatnam on 21-1-10 and it was broadcasted on 24-1-10.



6.4 Fish Farmers' Day

Kolkata Centre

About 100 fish farmers including women attended the meeting. Mr. Shymal Bhattacharjee, IAS, Director of Fisheries, Govt. of West Bengal was the Chief Guest of the meet. Prof. Kuldip Singh, Former Principal of CIFE Kolkata Centre addressed the farmers as the Guest of Honour. The important speakers during the meet were Dr. S.N. Biswas, Dy. Director, Sunderban Fisheries Development Board, W.B., Mr. Subir Dey, Secretary, Paschimbanga Yuba Mancha, Mr. Dilip Sarkar, Chairman, Fishermen's Co-operative Society, Mr. Madan Mohan Das, Nalban Fisheries Project of SFDC, Mr. Krishna Kanta Mondal, Chairman, Chharcharia

Fishermen's Co-operative Society, Dr. Kalyan Poddar, Manager, EPIC Feed Mill Plant, Mr. Pradip Nagula, M/s. Insulation Company, Mr. SadhucharanPanda, General Manager, Godrej, Agrovvet Division, Dr. R.K. Samanta, Vice-Chancellor, BCKV, Mohanpur, Nadia, West Bengal, Dr. P. Das, Former Director, NBFGR, Lucknow and many others. In this occasion an exhibition programme was organized. Many commercial farms like EPIC Feed Manufacturing Unit, Kalyani, Godrej Agrovvet Ltd., Kolkata also demonstrated their products to the farmers. Two extension pamphlet entitled "Breeding of Angel Fish" and "Breeding and culture of Magur, *Clarias batrachus*" were released on this occasions. Farmers from different places participated in the programme.

6.5 Visit Co-ordination

Date/Period	Headquarter	Category/Type of Visitors	No. of Visitors
27 Mar, 10	D.R. National College, Bandra Mumbai	B.Sc. students	15
23 Mar, 10	S.N.D.T. University, Mumbai	B.H.Sc. students	13
22 Mar, 10	Department of Agriculture Haryana	Fish farmers	15
20 Mar, 10	Royal College of Arts ,Science and Commerce, Thane	S.Y.B.Sc. students	15
15 Mar, 10	ATMA Vikas Bhawan, Bihar	Fish farmers	19
11 Mar, 10	Sri V.V. University, Triupati	B.V.Sc. and A.H. students	31
10 Mar, 10	Annamalai University T.N.	M.Sc. Students	20
06 Mar, 10	Officers of the State Fisheries	State Govt. officers	08
05 Mar, 10	College of Fisheries CAU, Tripura	B.Sc. Final year students	18
02 Mar, 10	Department of Fisheries T.N. under NADP	Technical Officers	21
24 Feb, 10	Kerala Agricultural University, College of Fisheires, Panangad, Kochi	B.F.Sc. students	32
23 Feb, 10	College of Fisheries, Orissa, UAT, Berhampur, Orissa	B.F.Sc. students	32
20 Feb, 10	Govt. of Maharashtra, Ismail Yusuf College, Jogeshwari, Mumbai	B.Sc. F.Y./ S.Y./T.Y. students	70
16 Feb, 10	Sophia College for Women, Mumbai	B.Sc. (Zoology) students	24
1 Feb, 10	Narian College, Shikohabad, U.P.	M.Sc. (Zoology) students	20
30 Jan, 10	Sathaye College, Mumbai	B.Sc. (SY & TY) Zoology students	62
28 Jan, 10	Maharashtra College of Arts, Science and Commerce, Mumbai	B.Sc. (SY & TY) Zoology students	62
22 Jan, 10	EURO kids, Lokhandwala School, Mumbai	Nursery students	51
18 Jan, 10	Sher-e-Kashmir, University of Agricultural Sciences and Technology, Jammu	B.Sc. III yr. Zoology students	28
7 Jan, 10	Taraporevala Marine Biological Research Station, Mumbai	Trainees	27
2 Dec, 09	College of Fisheries, Dholi, RAU, Dholi, Muzaaffarpur (Bihar)	B.F.Sc. students	9
26 Dec, 09	Education Organization, Mumbai	Students	36
18 Dec, 09	Elphinstone College, Fort, Mumbai	B.Sc. students	32
5 Dec, 09	VIVA College of Arts, Commerce & Science, Virar	UG students	104
25 Nov, 09	Govt. College for Women, Guntur, Kakinada	Students	38
21 Nov, 09	Rizvi College of Arts, Science and Commerce, Bandra (east), Mumbai	B.Sc. students	52
20 Nov, 09	Tendor Tough Nursery and Play School, Andheri (west), Mumbai	Primary School Students	44
16-21 Nov, 09	College of Fisheries, G.B.Pant Univ. of Agricultural & Tech., Pant Nagar	B.F.Sc. students	21
24 Oct, 09	Govt. Middle School, Shukkarwada kala, Dist. Hoshangabad, Powarkheda	VII & VIII class students	15
3 Oct, 09	SIES College of Arts, Science and Commerce, Sion (West), Mumbai	P.G. Students	30
10 Aug, 09	College of Agriculture, Kerala Agricultural University, Kerala	B.Sc. (Ag.) Students	21
20-22 May, 09	ICAR	QRT Team Chaired by Dr. S.L. Mehta	4

CIFE Kolkata Centre

26-31 Mar, 10	Directorate of Fisheries, Govt. of Haryana	Farmers of Rohtak, Haryana	10
23rd 25th Feb, 10	Fisheries College and Research Institute, Tamil Nadu Veterinary and Animal Sciences University	IV Year B.F.Sc Students	26
18th to 22nd Jan, 10	College of Fisheries, CAU, Lembuchera	B.F.Sc Students	18
11 to 13th Nov, 09	College of Fisheries, Dholi, Bihar	B.F.Sc Students	9
1st Oct, 09	College of Fisheries, G.B.Pant University of Agriculture and Technology, Pantnagar, Uttarakhand	B.F.Sc students	20

CIFE Powarkheda Centre

27 Mar, 10	ATMA project, Sihore district	Farmers	15
12 Feb, 10	St. Pauls English Medium School, Hoshangabad	School students with two staff members	17
19 Feb, 10	Punjab National Bank farmer's training centre	Farmers with staff	23
04 Feb, 10	CIFE, Mumbai	Director, CIFE along with Joint Director, Sr. Admn. Officer and other members of BOM	15
02 Feb, 10	CIFE, Mumbai	Shri Deepak P. Gadre and Shri Damodar Tandel, H'ble members of Board of Management of CIFE	02
01 Feb, 10	Krashak Training centre, Powarkheda	Farmers along with one staff	21
28 Jan, 10	State Government	State Govt. Agriculture Development Officers	66
14 Dec, 09	Shri Ganesh Gramin Education Institute Gondia under NAIP project	Farmers	20
08 Dec, 09	Career college, Bhopal	B. Sc. students and 2 staff members	22
18 Nov, 09	12th std. (Ag.) from Govt. Agri. Hr. Sec. School Powarkheda.	Students and three staff members	12
24 Oct, 09	Govt. Middle School, Shukkarwada kala, Dist. Hoshangabad	Students of class 7th & 8th and three staff	18
30 Sept, 09	CIFE, Mumbai	Dr. Dilip Kumar, Director	12
10-11 Sept, 09	ICAR	Dr. S. L. Mehta, Chairman and Dr. R.S.Biradar, Member Secretary, QRT Team	02
08 Sept, 09	DST, Gol	Dr. Shilpa Choudhary, Women scientist, Dr. D. K. Balsare DST project, Govt. of India	01
02 Apr, 09	Netaji Subhash Chandra Bose College, Sarni ,Dist. Betul (M.P.)	Students	16

CIFE Kakinada Centre

3 Mar, 10	Tamilnadu	Fish Farmers	11
26 Feb, 10	Mahashtra state	Farmers	22
24 Feb, 10	Acharya Nagarjuna University	MSc. Zoology and Aquaculture students	27
18 Feb, 10	NFDB, Hyderabad	Farmers	24
10 Feb, 10	Tamilnadu State fisheries Training Institute	Farmers	16
10 Feb, 10	NFDB, Hyderabad	Farmers	20
9 Feb, 10	MPEDA	Farmers	18
3 Feb, 10	Tamilnadu State fisheries Training Institute	Farmers	35
8 Jan, 10	S.K.R College for women, Rajamundry	B.Sc. Fisheries students and staff	65
2-7 Dec, 10	Assam	Farmers	21
26 Nov, 09	A.P. State Government	Fisheries Development Officers	17
25 Nov, 09	Govt. College for Women, Guntur	Students	38
17 Nov, 09	Fisheries Staff Training Institute, Chennai	Fish farmers & Inspectors	16
10 Nov, 09	Fisheries Staff Training Institute, Chennai	Fish farmers & Inspectors	21
14 Oct, 09	Adikavi Nannaya University, Rajahmundry	M.Sc students	35
01 Sept, 09	Layola Academy, Secunderabad	Students	31
11 June, 09	CIFE, Mumbai	Board of Management of CIFE	14
10 June, 09	ICAR	QRT Team under the Chairmanship of Dr. S. L. Mehta	4

CIFE Rohtak Centre

9 Mar, 10	Muraina, Madhya Pradesh	Farmers	13
9 Feb, 10	National Horticulture Development Board	Farmers	50
9 Feb, 10	Bhagpath, U.P	Farmers	20
21 Jan, 10	J. V. M. G. R. R College, Charki Dadri, Haryana	B.Sc. III students	40
8 July, 09	CCSHAU, Hisar	Dr. H. D. Yadav, Director Extension Education	01

6.6 Transfer of Technology and demonstration

Several technologies like prawn and magur seed production, Fabrication of aquariums and live feed culture were demonstrated to different fisher folk as well as state fisheries departments. Scientist of Fish Nutrition and Biochemistry division have prepared the feed evaluation report for Fisheries Department, Gov. of Rajasthan.

6.6.1 Kolkata Centre

Various technologies on “Feed formulation and preparation for fish”, “Breeding and larval rearing of magur”, “Live feed culture techniques”, “Feeds and Feeding Management for Sustainable Aquaculture”, “Preparation of value added fish products”, “Fish processing and HACCP concept”, “Preventive measures of fish diseases during aquaculture” “Ornamental fish breeding and culture”, “Aquarium construction and decoration” were demonstrated to local fish farmers/students/visitors at the centre.

6.6.2 Powarkheda Centre

The transfer of technology on fish and prawn culture, carp seed production and rearing, hatchery management and farm management etc were done through training programs and also through demonstrations to the students/visitors who visited this centre during the reported period. Technical guidance on different aspects of aquaculture was rendered to fish farmers who visited this

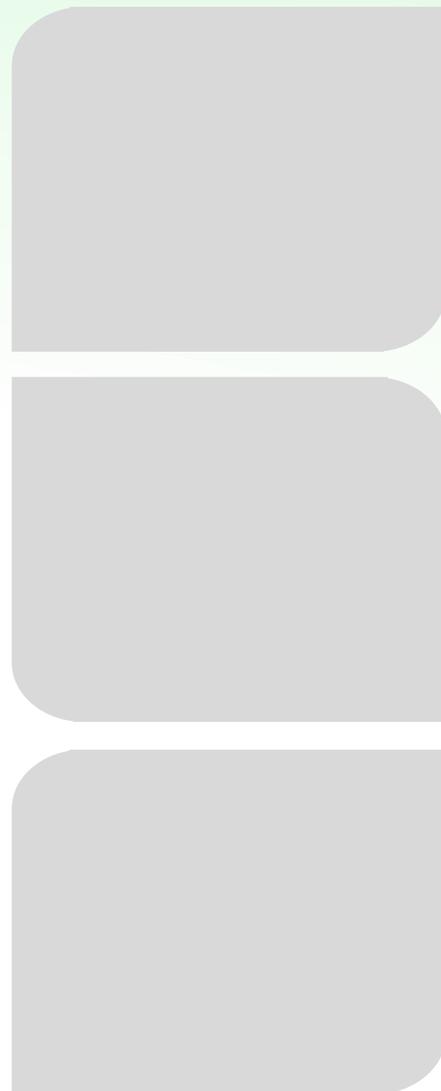
centre during reported period. Some of them are Mr. Sameer Raizada, Gram Pathakheda, Dist. Hoshangabad, Mr. M. Irshad Khan, Tah. Sohagpure Dist. Hoshangabad, Mr. Anil Saxena, village Chandpura Dist. Hoshangabad, Mr. Shankar Lal, and Machua Samuha, Gram Premtalab, Dist. Hoshangabad, who visited this centre during the reported period.

6.6.3 Rohtak Centre

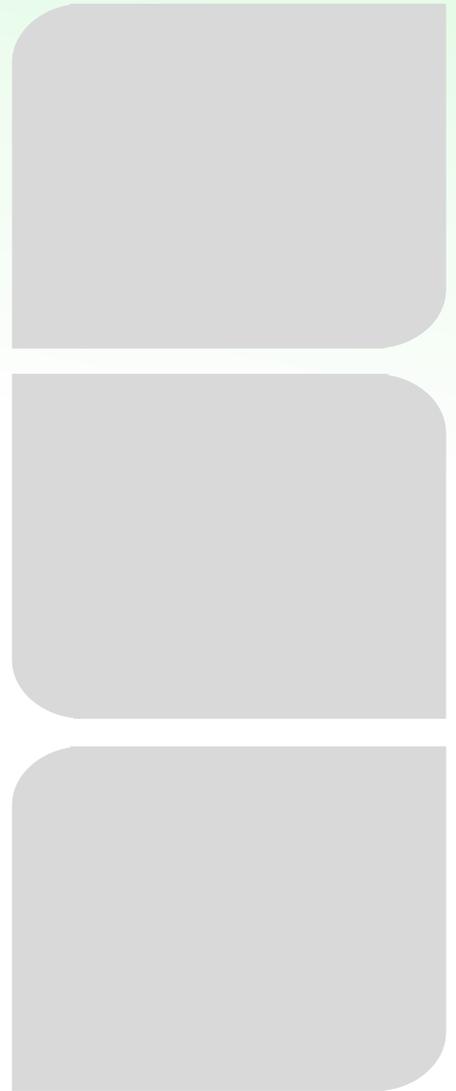
Live harvesting demonstrations of tiger shrimp had been organized for the popularization of “Tiger Shrimp Farming using Inland Saline Water” at the centre. Hon'ble Dr. Dilip Kumar, Director, CIFE, Mumbai was the Chief Guest of the function, Senior level officers of Fisheries Department, Haryana, farmers and persons from press and media were also present on the occasion. The demonstrations were accorded good response from the farmers and state government fisheries officials. Many farmers have shown keen interest for the adoption of tiger shrimp culture in the coming years.

6.6.4 Kakinada Centre

Technical Guidance was given to 3 farmers of Laxmi Ganapathi fish farm and Shri S. Rama Krishna Reddy of Balabhadrapuram village on rearing of *O. belengerii* (Pengba) spawn to fry. These farmers were identified for taking up rearing of new species that being developed by CIFE. Each farmer was given one lakh of spawn for conducting trials in their ponds and also for popularizing the species. About 6 farmers have been motivated to take up *O.*



belengerii culture in West Godavari and East Godavari districts of Andhra Pradesh. Technical guidance was extended to several farmers from samalkot area in treating the fish suffering from *Dactylogyrus* infection. Technical guidance was also given to farmers who are practising Crab culture.



7. Honours and Awards



Mr. Dasari Bhoomaiah, Technical Officer (T-6), CIFE, Mumbai was felicitated by Directorate of Coldwater Fisheries Research, Bhimtal for his meritorious contributions in graphic designing of new DCFR logo on June 5, 2009.



Mr. Dasari Bhoomaiah, Technical Officer, CIFE, Mumbai was honoured by Dr. Krishnaiah, CEO, NFDB for designing the logo for NFDB during Indian fish festival conducted by National Fisheries Development Board, Hyderabad from 11-13 July, 2009.

Dr. Venugopal, OIC, CIFE Kakinada Centre was honoured by Dr. Krishnaiah, CEO, NFDB for excellent display of live demonstration during Indian fish festival conducted by National Fisheries Development Board, Hyderabad during 11-13 July, 2009.



Dr. Paramita Banerjee Sawant, Scientist, won the “Special Mention Award” for presentation of the paper on “Sustainable aquaculture for development” in the National Workshop on Advances in Aquaculture and Fisheries : Perspectives, Prospects and Challenges at ILDEX India Expo 2009, Aquaculture, ITPO, Pragati Maidan, New Delhi, jointly organized by the Ministry of Agriculture, ICAR, ILDEX and STE, during July 3-4, 2009.



Dr. Arpita Sharma, Sr. Scientist was awarded Best Senior Scientist award and Gold Medal in 20th All India Zoological Congress held at CIFE, Mumbai during December 29-31, 2009.



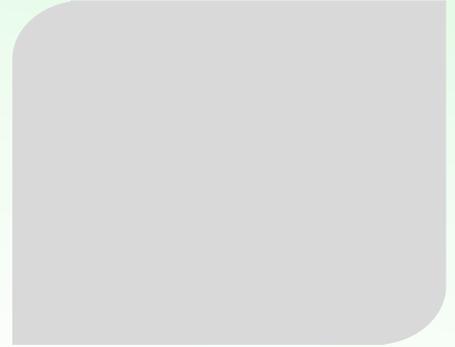
Dr. K. V. Rajendran, Principal Scientist received the Dr. V.R.P. Sinha Medal 2009 of the Zoological Society of India, Bodh Gaya during 20th All India Zoological Congress held at CIFE, Mumbai from 29-31 December, 2009.

Ms. Rekha Das (Ph.D.FBT-361 : 2009-2012 batch) of Fish Genetics and Biotechnology Division got the best poster presentation award during 20th All India Zoological Congress held during December 29-31, 2009 at CIFE, Mumbai.

Dr. R.P. Raman, Sr. Scientist of Aquatic Environment & Health Management Division, CIFE Mumbai was awarded Gold Medal and Honorary Fellowship of the Indian Academy of Environmental Sciences (IAES), Haridwar by the Chief Guest Shri Pradeep Tamta, Hon'ble Member of Parliament (Loksabha) and Dr. Swatantra Kumar, Vice Chancellor of Gurukula Kangri University, Haridwar on February 19, 2010.

CIFE, Powarkheda centre received the first prize for exhibition arranged in mela "Bharat Nirman - Jan Suchana Abhiyan" held at Ujjain organized by Press Information Beuro, Indore, from February 23-27, 2010.

Dr. G. Venkateswarlu was awarded the "Best Presentation" for a concept paper on 'Development of nano-delivery carriers for lipophilic bioactive molecules" in Brainstorming session on "Applications of Nanotechnology in Agricultural Sciences" organized by Indian Institute of Spices Research Calicut and CIFE, Mumbai during March 27-28, 2010.



CIFE Institutional Awards:

- | | |
|-------------------------------|--|
| 1. Best Division | : Fish Genetics & Biotechnology |
| 2. Best Centre | : CIFE Kakinada Centre |
| 3. Best Team | : Dr. A.K. Reddy, Sr. Scientist
Dr. V.K. Tiwari, Sr. Scientist |
| 4. Best Scientist | : Dr. K.V. Rajendran, Principal Scientist |
| 5. Best Young Scientist | : None |
| 6. Best Teacher | : Dr. K.V. Rajendran, Principal Scientist |
| 7. Best Extension Worker | : Dr. V.K. Tiwari, Sr. Scientist |
| 7. Best Technical Staff | : Mr. Ashok Kumar, Technical Officer |
| 8. Best Administrative Staff | : Mrs. Anagha Joshi, UDCi |
| 9. Best Work in Hindi | : Dr. K.K. Jain, Principal Scientist |
| 10. Best Supporting Staff | : Mr. Ganesh Zendekar |
| 7. Best School Children Award | : 1. Miss G. Neharika, (Std. - X)
2. Miss Neha Kiran (Std. - XII) |



Sports

This is the first sports meet for the four deemed universities of ICAR after the deemed university status conferred on these four universities. The ICAR INTER-DEEMED UNIVERSITY SPORTS TOURNAMENT 2010' was held at National Dairy Research Institute, Karnal, Haryana from 14th to 16th January. All the four deemed universities of ICAR, namely the National Dairy Research Institute, the Indian Agriculture Research Institute, the Central Institute of Fisheries Education and the Indian Veterinary Research Institute were the participants in this event. The smallest contingent of only 38 participants was from CIFE , Mumbai.

The sports meet started on 14th with opening event of 100m race. Ms. Sandhya and Mr. Raymond Jani gave CIFE a good start by bagging the gold in women and men 100m race respectively. The spell continued with Ms. Sandhya bagging the gold and Mr. Shabsibhushan taking silver in 400m race. Ms. Sajina got a bronze in javelin throw.

On 15th Mr. Raymond Jani got gold in high jump while Mr. Satyandra Kumar Singh and Ms. K. Syamala took away the gold in carroms. Ms. D. Indira got a silver in discus throw and in group events the girl's volleyball team took the silver.

On 16th the last day of sports meet as well as the much awaited one brought in a lot of delights. Ms. Sajana, Ms. Monalisha took the gold in badminton (doubles and singles). In table tennis Ms. Nightingale and Ms. Kavitha took gold. Ms. Sandhya took gold in high jump. Ms. Rashmi got gold and Ms. Jasmi got silver in chess. In long jump Mr. Raymond took the gold while the bronze went to Ms. Sandhya. The boys Kabaddi team took silver. In 200m race Ms. Sandhya took gold and Mr. Charan took the silver. In 800m Mr. Charan took bronze. In the relay race the girls took the silver. The boys took bronze in 800m race and relay race.



8. Linkages and Collaborations



The Institute maintains linkages and collaborations with various national and international institutions and agencies for educational, research and development.

8.1. Linkages

Government of India Organizations

- Integrated Fisheries Project, Kochi
- Central Institute for Coastal Engineering for Fishery, Bangalore
- Central Institute of Fisheries Nautical and Engineering Training, Kochi
- Fishery Survey of India, Mumbai
- Marine Products Export Development Authority, Kochi
- National Institute of Nutrition, Hyderabad
- Zoological Survey of India, Kolkata
- Indian Institute of Technology, Kharagpur
- Department of Earth Sciences, Government of India
- Department of Science and Technology, Government of India
- Department of Biotechnology, Government of India
- Indian National Center for Ocean Information Services (INCOIS), Hyderabad
- Satellite Application Centre, Ahmedabad in the utilization of *OCEANSAT II*
- Bhaba Atomic Research Centre, Mumbai
- Tata Cancer Research Center, Mumbai

ICAR Institutes

- Central Marine Fisheries Research Institute, Kochi
- Central Institute of Brackishwater Aquaculture, Chennai
- Central Institute of Freshwater Aquaculture, Bhubaneswar
- Central Inland Fisheries Research Institute, Barrackpore
- Central Institute of Fisheries Technology, Kochi
- National Bureau of Fish Genetic Resources, Lucknow
- Directorate of Coldwater Fisheries Research, Bhimtal
- ICAR Research Complex for Goa, Goa
- ICAR Research Complex for Eastern Region, Patna

CSIR Institutes

- Industrial Toxicology Research Centre, Lucknow
- Central Drug Research Institute, Lucknow
- Central Institute of Medicinal and Aromatic Plants, Lucknow
- Central Food Technological Research Institute, Mysore
- National Institute of Oceanography, Goa
- Centre for Cellular and Molecular Biology, Hyderabad
- National Botanical Research Institute, Lucknow
- Institute of Genomics and Integrative Biology, Delhi

Universities

- Cochin University of Science and Technology, Kochi
- Annamalai University, Chidambaram
- Adikavi Nannaya University, Rajahmundry
- University of Goa, Goa
- Acharya N.G. Ranga University, Guntur
- B.S. Konkan Krishi Vidyapeeth, Dapoli

- Maharana Pratap University of Agriculture and Technology, Udaipur
- Jawaharlal Nehru University, New Delhi
- Microtron Centre, Mangalore University, Mangalore
- Bhartiya University, Coimbatore
- West Bengal University of Animal & Fishery Sciences, Kolkata
- Mumbai University, Mumbai

State Governments

- Department of Fisheries of the following states:
 - Haryana
 - Uttar Pradesh
 - Bihar
 - Tamil Nadu
 - Andhra Pradesh
 - Tripura
 - Arunachal Pradesh
 - Meghalaya
 - Nagaland
 - Assam
 - Manipur
 - Mizoram
- State Institute of Fisheries Technology, Kakinada

Other Organizations

- Tata Power Company, Lonavala & Mumbai
- Action Aid International, Port Blair
- M. S. Swaminathan Research Foundation, Chennai

NGOs:

- Interactive Research School in Health Affairs, Pune
- SHASHWAT, Manchar, District Pune
- Yusuf Meherally Centre, Kutch, Gujarat
- United Artists' Association, Ganjam, Orissa

8.2. Collaborations

Institute of Aquaculture Research (AKVAFORSK), Norway:

For the project “Genetic improvement of *Penaeus monodon* through selective breeding for growth and white spot disease resistance” along with the Central Institute of Brackishwater Aquaculture (CIBA), Chennai.

Australian Centre for International Agricultural Research (ACIAR):

For the Indo-Australian bilateral research project on “Aquaculture in degraded inland areas in India and Australia”.

MoU with Ramkrishna Mission KVK, Nimpith, West Bengal and CIFE:

CIFE inked a pact with Ramkrishna Mission KVK, Nimpith, West Bengal on 22 July, 2008 on educational and research collaborations specially related to ornamental fish culture

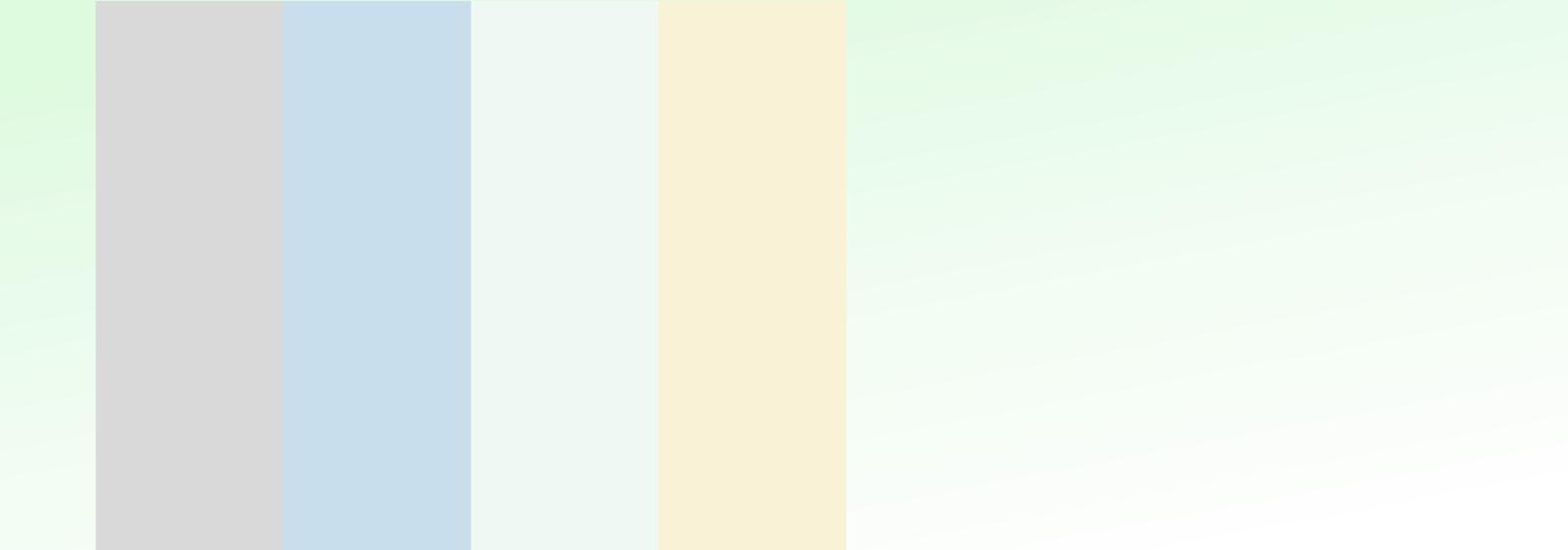
and other types of aquaculture practices.

Indian National Center for Ocean Information Services (INCOIS), Hyderabad for installation of electronic display board for dissemination of information on potential fishing zones (PFZ) and weather warnings to fishermen of Versova.

Indian Institute of Technology, (B), Mumbai through implementation of a course on “Entrepreneurial Opportunities in Fisheries” for students of IIT, Mumbai through a series of 15 lectures by CIFE faculty.

Satellite Application Centre, Ahmedabad in the utilization of OCEANSAT II.





9. Publications

9. Publications:

9.1 Research Publication in Refereed Journals

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9.4. Training manuals

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2. CIFE, 2009. Fish Disease and Fish Microbiology. Training manual, Central Institute of Fisheries Education, Kolkata Centre, Salt Lake, Kolkata, 52 pp

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9.5 Books / Technical bulletins/brochures

- Breeding and Culture of Magur, *Clarias batrachus*

- Breeding of Angel Fish

- Cage Aquaculture

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- CIFE CALM
- CIFE LOSTRESS
- Controlled Breeding and seed production of *Osteobrama belangeri* (Pengba) - an endangered fish
- Controlled fermentation of Lona ilish
- Cryopreservation of carp milt
- Culture and fattening technology of mud crabs
- FISH MUNCH
- Giant freshwater prawn seed production using artificial sea water
- *Machle Palan Kyo aur Kaise* (Hindi)
- Magur (*Clarias batrachus*) seed production technology
- Non-inbred seed production technology of carp
- Nutrient dense micro particulate diet
- Organic Aquaculture through Biofertilizers
- Raising of fish seed in Cages
- Scampi seed production using inland ground saline water
- Tiger shrimp farming in saline affected areas
- Water analysis and management for fish culture

9.6. Book Chapters

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Mahapatra, B.K., Vinod, K. and Mandal, B.K. (2009). Ornamental Fisheries in North-Eastern India and Strategies for Conservation. In: Fish Genetic Resources (eds.) W.S.Lakra, A.K.Singh and P.C.Mahanta. Narendra Publishing House, New Delhi p. 127-138

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10. Participation

in Workshops, Conferences, Meetings, Training. etc.

10.1: Workshops/Seminar/Conferences/Congresses

Programme	Period	Venue	Participants
Work shop on “Marine Bioresources of East coast” conducted by FSI at SIFT	10 March, 2010	Fishery survey of India, Visakhapatnam	Dr. G Venugopal
Seminar on ‘Fight Against Terrorism’ organized by Mumbai Police	10 March, 2010	Tata Theatre, NCPA, Nariman point, Mumbai	Dr. M. K. Chouksey
17 th West Bengal State Science & Technology Congress	4-5 March, 2010	WBUAFS, Belgachia, Kolkata	Dr. Parimal Sardar
Workshop on “Small indigenous freshwater fish species: Their role in poverty alleviation, food security and conservation of biodiversity”	23-25 February, 2010	CIFRI, Barrackpore	Dr. Archana Sinha
India International Seafood Show organized by MPEDA	19-20 February, 2010	Chennai	Dr.G.Venkateshwarlu
National seminar on Aquatic Toxicology and Biodiversity	18-20 February, 2010	Acharya Nagarjuna University, Guntur	Dr. P. P. Suresh Babu Dr. P. Srinivasa Rao, Sh. V.N. Acharyulu

Writeshop on “Indigenous Technical Knowledge in Fisheries Sector in India” (West Zone)	8-13 February, 2010	CIFE, Mumbai	All the faculty members of CIFE
Meeting with Dr. K. Kasturirangan, H’ble Member, Planning Commission (Science) as interface with ICAR institutes	21-23 January, 2010	Weed Research Institute (ICAR), Jabalpure	Dr. Somdudd
Hindi Workshop	22 nd January, 2010	National Research Institute of Ayurveda for Drug Development, Kolkata	Dr. Archana Sinha
Application of biosecurity measures to control Salmonella contamination in sustainable aquaculture	19 - 21 January, 2010	Hotel Taj Gateway, Mangalore	Dr. B. B. Nayak
Systematize methodology and investigators meet of Network project on “Capacity building of coastal fisher women through post harvest technologies in fisheries”	18 January, 2010	CIFT, Kochi	Dr. B. B. Nayak
National Seminar on “Integrated Management of Water Resources with reference to Biodiversity and Livelihood”	16-17 Jan’10	RMNH, Bhopal	Dr. Somdudd, Dr. S. Datta Dr. R. K. Upadhyay Dr. J. Krishna Prasad
International seminar in Indaquaria 2010	08 -10 January, 2010	MPEDA, YMCA-Vepari, Chennai, Tamil Nadu	Dr. G.H.Pailan Dr. Asok Biswas
Workshop on “Sustainable Macrobrachium aquaculture - A Genetic approach”	8-9 January, 2010	CIFE, Mumbai	All the faculty members of CIFE
‘20 th All India Congress of Zoology & Bioresources and its management for Food, Livelihood and Environment security	29 to 31 December, 2009	CIFE, Mumbai	All the faculty members of CIFE
Institutional Biosafety committee meeting	18 December, 2009	CIFE, Mumabai	Dr. B. B. Nayak
New perspectives in R & D in the processing sector	4 - 5 December, 2009	New Delhi	Dr. B. B. Nayak
Workshop on identification, evaluation, and management of intellectual property	4 - 5 December 09	CIFE, Mumbai	All the faculty members of CIFE
Conserve Fish 2009	1-3 December 2009	Central Institute of Fisheries Technology, Cochin	Dr. Suresh Babu, P. P.

National Seminar on “Fisheries based Livelihoods in India: Present Status, Problems and Prospects”	28-29 November, 2009	National Bureau of Soil & Survey & Land Use Planning, Kolkata Regional Centre, Salt Lake, Kolkata	Dr. Archana Sinha Dr. B.K. Mahapatra Dr. G.H.Pailan Dr. Parimal Sardar
CFC/FAO/MPEDA/DOF/INFOFISH National workshop on “Organic Aquaculture Production and Production Marketing”	25 November, 2009	Ernakulum, Cochin	Dr. Kiran Dube
Meeting with Director of Fisheries M.P. Director PICU PMWSRS project and Dr. Martin of World Bank Project	13 November, 2009	Directorate of Fisheries, Bhopal	Dr. Somdudd, Dr. R. K. Upadhyay
“Entrepreneurship development for coastal Aquaculture”	26-31 October, 2009	CIBA, Chennai	Sh. S.S.H. Razvi
State food processing Minister’s Conference	6 October, 2009	Vigyan Bhawan, New Delhi	Dr. S. Basu
National Symposium on “Coldwater Fisheries Management: New Strategies and Approaches	2-4 October, 2009	Eco-Camp, Nameri National Park, Tezpur, Assam	Dr. B.K. Mahapatra
Dimbhe reservoir Development through community participation in Bhartiya matsyiki vikas mein vibhinn rajyon kee bhoomika evam yogdan ka ek dashak 1999 se 2009.	12 - 13 September 2009	Raipur, Chattisgarh	Dr. Dilip Kumar, Dr. Kiran Dube and V.K. Tiwari
“Fisheries development during 1999-2009 in India organized by Chhattisgarh state fisheries department and CIFE, Mumbai	12 th and 13 th September 2009	CIFE, Powarkheda	Dr. J. Krishna Prasad
“Consultative workshop for strengthening the livelihoods of coastal fishermen in East Godavari District”	25-26 August, Kakinada	Sponsored by Reliance Industries Ltd.	Dr. G.Venugopal, OIC, Shri.S.S.H.Razvi, Dr.P.Rami Reddi and R.R.S.Patnaik
One day workshop organized by the society for Elimination of rural poverty under the Ministry of Rural development, Andhra Pradesh		Talarevu, East Godawari Dt, A. P.	Mr. R. R. S. Patnaik, Technical officer,
UGC-sponsored National Seminar on “Techniques in Biology” and delivered an invited talk on “Advances in diagnostic procedures in aquaculture”.	20 - 21 August, 2009	Mary Matha College, Mananthawadi, Wyanad, Kerala	Dr. K. V. Rajendran
National Conference of State Fisheries Ministers	04 - 05 July, 2009	Bhubaneswar	Dr. C.S. Purushothaman Dr. Parimal Sardar Dr. S. N. Ojha

National Conference of State Fisheries Ministers	04 - 05 July, 2009	Bhubaneswar	Dr. C.S. Purushothaman Dr. Parimal Sardar Dr. S. N. Ojha Dr. R. S. Biradar,
Convergence of NREGA with Fisheries'	29 July, 2009	New Delhi	Dr. R. S. Biradar, Dr. Nalini Ranjan,
Democratic Dialogue between Stakeholders on the Future of Indian Fisheries Sector	15 July, 2009	Mumbai organized by Dakshin Foundation and TISS.	Dr. R. S. Biradar, Dr. Nalini Ranjan,
Indian fish Festival Conducted by NFDB	11 - 13 July, 2009	Hyderabad	Dr. G. Venugopal, Mr. Murali Mohan Mr. Radha Krishna Reddy
National workshop on 'Advanced Aquaculture and Fisheries : Perspective, Prospects and Challenges	3 July, 2009	ILDEX India Aquaculture, 2009, Pragati Maidan, New Delhi	Dr. S. N. Ojha
National Conference on "Technology-led Development of Horticulture for Rural Upliftment"	29-30 May, 2009	Lt. Amit Singh Memorial Foundation at Mahamada, PUSA, Samastipur, Bihar	Dr. Archana Sinha Dr. Asok Biswas Sri. P.K.Patra
"Fisheries and aquaculture development through HRD and policy support"	19-20 May, 2009	CIFE, Mumbai	Dr. S. Basu
Hindi work shop conducted by Rajbhasha evam Prabhandhan vikas samsthan.	12-14 May, 2009	Gangtok, Sikkim	Mr. R. R. S. Patnaik, Technical officer,
National Hindi Seminar, Bharat Ke Prachin Granthon Mein Upalabdha Matsya Avam Matsyaki Sampada	16 April, 2009	CIFE, Mumbai	All faculty of CIFE

10.2: Training Programmes\Summer schools/Winter schools

Programme	Period	Organized by	Participants
CAFT (Centre for Advanced Faculty Training Programme) on “Fisheries Resource Management”	22 March to 11 April, 2010	CIFE, Mumbai	Paramita Banerjee Sawant
Training Programme and National Seminar on “Hindi ka vaishvikaran evam rajbhasha karyanvyayan”	11 - 16 January, 2010	CIFE, Mumbai	All faculty of CIFE
Training program on Resource use management techniques and interfaces in extension and information technology approaches	01-11 November, 2009	Central Institute of Brackish water aquaculture (ICAR) at Chennai	Dr. R. K. Upadhyay
Training programme on marine ornamental fish culture	12 - 21 October, 2009	CMFRI, Mandapam regional centre	Dr. Chandraprakash, Ms. Babitha Rani.A.M
“Technical and administrative support for consortia Based Research in Agriculture”	5 - 14 October 2009	National Institute of Agricultural Extension Management (MANAGE) Hyderabad.	Sh. R.R.S. Patnaik
Training programme on procurement related matters and financial management	23 - 24 September, 2009	ICAR	Dr. M. Makesh Dr. K.V. Rajendran
“Application of ML and REML methods by AsRepl in Fisheries Research Data Analysis”	17 - 18 August, 2009	CIFE, Mumbai	Ms. Babitha Rani.A.M
CAS Training Programme on Alternative Aquaculture Technologies in the present Aquaculture Scenario	17 March to 6 April, 2009	CIFE, Mumbai	Mr. B.K. Mishra

10.3: Brainstroming sessions/Awareness Camps/Farmers' meet

Programme	Period	Organized by	Participants
Brainstroming Workshop on Nanotechnology and its application in Agricultural Sciences	27-28 March, 2010	CIFE and Indian Institute of Spices Research, Calicut	All faculty members of CIFE
NFDB-FAO Consultative Meeting on Development of Fisheries Sector in India.	24-03-2010	National Fisheries development Board, Hyderabad	Representatives from fisheries research institutes, private industry, NFDB and FAO representatives
Brainstroming Session - Institutional strengthening to excel in academic programmes' at Daman	20 - 21 September, 2009	CIFE, MUmbai	All the faculty members of CIFE
Farmers' Day	22 August, 2009	CRIJAF, Barrackpore	Dr. Archana Sinha
Indian Fish Festival (INDFISH) 2009	11 - 12 July, 2009	National Fisheries Development Board at Hyderabad.	Dr. C.S. Purushathaman, Mr. D. Bhoomaiah
Brain storming session on Policy support and HRD for Fisheries and Aquaculture Development	4 - 5 June, 2009	CIFE, Mumbai	All faculty members of CIFE
Alternative livelihood options for fisher folk of Sunderban	24 April, 2009	ICAR, New Delhi at Dhamakhali, Sunderban, W.Bengal	Dr. Archana Sinha

10.4: Important meetings

Programme	Period	Organized by	Participants
Outreach Activity on “Nutrient profiling and evaluation of fish as a dietary component”.	5-6 March, 2010	Subject matter division (Fy)	Dr. G. Venkateshwarlu
Final report presentation of the DBT project ‘Development of Immunodiagnostic kits for viral diseases of freshwater prawn <i>Macrobrachium rosenbergii</i> ’ during the Task Force Meeting	16 February, 2010	Goa University, Goa	Dr. K. Pani Prasad
Meeting for discussions regarding Aquainvest 2010, which was Chaired by the Director General, ICAR, and Secretary, DARE, New Delhi	30 January, 2010	ICAR, New Delhi	Dr. K.V. Rajendran
Institute Management Committee Meeting of CIBA, Chennai	27 June, 2009 & 04 December, 2009	CIBA, Chennai	Dr. K.V. Rajendran
CIC Meeting (II) of the NAIP project (Gene silencing- A strategy for management of white spot syndrome virus (WSSV)-	02 December, 2009	Centre for Cellular and Molecular Biology (CCMB), Hyderabad	Dr. K.V. Rajendran
Mid Term Review Meeting of DARE/ICAR (Eastern & North Eastern Zone)	30 October, 2009	CIFRI, Barrackpore	Dr. Archana Sinha
Third Group Meeting of the Niche Area of Excellence Projects	28 -29 October, 2009	Birsa Agricultural University, Ranchi,	Dr. C.S. Purushothaman
Mid Term review meeting of planning commission	26 October, 2009	CIFE, Mumbai	All the faculty
Meeting on the review of deemed to be universities	19 September, 2009	Indian National Science Academy, New Delhi	Dr. C.S. Purushothaman
CAC Meeting (I) of the NAIP project on “Gene silencing- A strategy for management of white spot syndrome virus (WSSV)” Presented the progress of research work.	28 August, 2009	Centre for Cellular and Molecular Biology (CCMB), Hyderabad	Dr. K.V. Rajendran
Meeting of the Chairmen of Quinquennial Review Teams and Research Advisory Committees, and the Directors of ICAR Fisheries Research Institutions	20 - 21 August, 2009	Central Marine Fisheries Research Institute, Kochi,	Dr. C.S. Purushothaman
Meeting for MoU to organize Aqua Invest 2010	19 August, 2009	College of Fisheries, Mangalore	Dr. K.V. Rajendran
80 th ICAR Foundation Day function	16 July, 2009	ICAR	All the faculty of Aquaculture Division
Meeting with Dr. Rama Rao NAIP project on ‘Assessment of Future Human Capital Requirements	15 July, 2009	NAARM, Hyderabad	Dr. R. S. Biradar
NAIP project	14 July, 2009	CIFE	Dr. R. S. Biradar

Meeting with Dr. Rama Rao NAIP project on 'Assessment of Future Human Capital Requirements	15 July, 2009	NAARM, Hyderabad	Dr. R. S. Biradar
National Fish Farmers Day	10 July, 2009	CIFE, ICAR	All the faculty members of CIFE
CIC Meeting (II) of the NAIP project (Gene silencing- A strategy for management of white spot syndrome virus (WSSV)	08 July, 2009	Centre for Cellular and Molecular Biology (CCMB), Hyderabad	Dr. K.V. Rajendran
Meetings with the officials of the Maharashtra Pollution Control Board regional offices.	24 June, 2009	Nashik and Aurangabad	Dr. C.S. Purushothaman
Meeting on Powai Lake conservation action	18 June, 2009	Powai Lake	Dr. C.S. Purushothaman
Advisory Committee on the project on Development of Fisheries in Rajasthan	24 April, 2009	Rajasthan Gov.	Dr. C.S. Purushathaman

10.5: Important Invited Lectures

Programme	Period	Organized by	Participants
CAS on Fisheries Resource Management on the topic "Dimbhe Reservoir a Case study"	26 March, 2010	FRM Division CIFE, Mumbai	Dr. Kiran Dube
Traning Programme on Reservoir Development	22-23 March,2010	M.P State Fisheries Dept. Bhopal	Dr. Chandraprakash
Pond management under the world bank scheme on topic "Jalashayao me matsyotpadan - Samajik evam aarthik prishtabhumi main"	22 - 23 March, 2010	Fisheries Department, Bhopal	Dr. Kiran Dube
Aquaculture and livelihood	15 March, 2010	KVK, Nimpith, Sunderbans, W.B.	Dr. B.K. Mahapatra
Lecture on 'Advances on fish health management' to the Masters students of Marine Biology	13 March, 2010	Andhra University, Vishakapatnam	Dr. K. Pani Prasad
Integrated Duck cum Fish Farming	22 February, 2010	IVRI, Eastern Regional Station, Belgachia, Kolkata	Dr. B.K. Mahapatra
Invited lecture on 'Immunodiagnosics in fish health management' during the National Seminar 'Parasite Taxonomy, Biodiversity and Fish Health'	12 February, 2010	Andhra University, Visakhapatnam	Dr. K. Pani Prasad
Recent advances in Aquaculture	5 February, 2010	Sunderban Development Board, Govt. of W.B., Canning, Sunderbans, W.B.	Dr. B.K. Mahapatra
Opportunities and potential of ornamental fish for livelihood of women folk of Assam was delivered in the Technical Session-Women Empowerment.	31 January 2010	4 th Matsya Mahotsov, Guwahati, Assam	Dr. Archana Sinha
Winter school on "Application of molecular and serological tools in fish disease diagnosis" to deliver a guest lecture on 'The role of microscopy in diagnostic pathology'.	26 - 27 November, 2009	Central Institute of Freshwater Aquaculture, Bhubaneswar, Orissa. (Aquatic Division)	Dr. Gayatri Tripathi
Indian Ornamental Fishes - Resources, Identification & Export Potential	25 November, 2009	Dept. of Fisheries, Govt. of W.B. and Netaji Subhas Open University, Kolkata	Dr. B.K. Mahapatra
UGC-sponsored National Seminar 'Advances in Immunodiagnosics'	24 November, 09	Nagaram, Guntur dt, Andhra Pradesh (Aquatic Division)	Dr. K. Pani Prasad

Winter school on “Application of molecular and serological tools in fish disease diagnosis” to deliver a guest lecture on ‘The role of microscopy in diagnostic pathology’.	26 - 27 November, 2009	Central Institute of Freshwater Aquaculture, Bhubaneswar, Orissa. (Aquatic Division)	Dr. Gayatri Tripathi
Indian Ornamental Fishes - Resources, Identification & Export Potential	25 November, 2009	Dept. of Fisheries, Govt. of W.B. and Netaji Subhas Open University, Kolkata	Dr. B.K. Mahapatra
UGC-sponsored National Seminar Advances in Immunodiagnosics’	24 November, 09	Nagaram, Guntur dt, Andhra Pradesh (Aquatic Division)	Dr. K. Pani Prasad
“Cage and pen culture options for rearing fingerlings in reservoirs - a CIFE experience.” in summer school on “Cage and pen culture in inland open waters.	2 September, 2009	CIFRI, Barrackpore	Dr. Kiran Dube Rawat
UGC-sponsored National Seminar on “Techniques in Biology” and delivered an invited talk on “Advances in diagnostic procedures in aquaculture”.	20 - 21 August, 2009	Mary Matha College, Mananthawadi, Wyanad, Kerala	Dr. K.V. Rajendran
Overview of Breeding and Culture of freshwater prawn	21 May, 2009	CIFE, Powerkheda Centre	Dr. B.K. Mahapatra
Ornamental fish of India	April, 2009	Vivekananda College, Thakurpukur, Kolkata	Dr. Archana Sinha
Fish Nutrition and Feed Technology	11 - 18 April, 2009	College of Fisheries, Rajendra Agricultural University, Dholi, Muzaaffarpur, Bihar	Dr. Parimal Sardar
Trickle Down System (TDS) of Aquaculture Extension for M. Tech. (Technology & Development) students at CTARA,	2 April, 2009	IIT Bombay	V.K.Tiwari

11. Organization

of Meetings, Workshops, Seminars, Summer/Winter Schools, etc.



11.1 Meetings

S. No	Programme	Place	Period
1	UGC Expert Committee Meeting	CIFE, Mumbai	11-12 February, 2010
2	XXXXII Academic Council Meeting	CIFE, Mumbai	February 19, 2010
3	XXXIV Board of Management Meeting	CIAE, Bhopal	February 03, 2010
4	Research Advisory Committee Meeting	CIFE, Mumbai	November 9-10, 2009
5	Mid-term Review Meeting of the Planning Commission	CIFE, Mumbai	October 26, 2009
6	Quinquennial Review Team (QRT) (2004-2009) Meeting	CIFE, Mumbai	October 21-22, 2009
7	XXXXI Academic Council Meeting	CIFE, Mumbai	October 20, 2009
8	XVII Extension Council Meeting	CIFE, Mumbai	September 18, 2009
9	XXXIII Board of Management Meeting	CIFE, Mumbai	June 11, 2009
10	Annual Staff Research Council Meeting	CIFE, Mumbai	April 29 - May 2, 2009

11.2 Conferences/Symposia/Workshops/Seminars/ Brainstorming Sessions/Awareness Camps

S. No.	Programme	Venue	Period
1.	Brainstorming Workshop on “Nanotechnology and its application in Agricultural Sciences” jointly organized by Central Institute of Fisheries Education, Mumbai and Indian Institute of Spices Research, Calicut	CIFE, Mumbai.	March 27-28, 2010
2.	Training Programme on Sectoral Planning and Development Management in Fisheries sponsored by NFDB.	CIFE, Mumbai	5-11 March, 2010
3.	Awareness campaign on “Dissemination of Potential Fishing Zone Advisories for the benefit of fishing community”	Mahim Koliwada, Mumbai-16	March 10, 2010
4.	Writeshop on “Indeginous Technical Knowledge in Fisheries Sector in India” (West Zone)	CIFE, Mumbai	February 8-13, 2010
5.	Training programme on Fisheries Policy and Management Option	CIFE, Mumbai	January 18-24, 2010
6.	National Hindi Workshop on “Hindi ka Vaishweekaran evam Rajbhasha Karyanwayan”	CIFE, Mumbai	January 11-16, 2010
7.	Workshop on “Sustainable <i>Macrobrachium rosenbergii</i> Aquaculture - A genetic Approach”	CIFE, Mumbai	January 8-9, 2010
8.	20 th All India Congress of Zoology, National Seminar on Bioresource and its Management for Food, Livelihood And Environmental Security and National Helminthological Congress	CIFE, Mumbai	December 29 - 31 2009
9.	Workshop on ‘Molecular Biology and Biotechnology Techniques’	CIFE, Mumbai	December 10-20, 2009
10.	A launching workshop for the project on ‘Development of community participated enhanced fisheries management model for the <i>Chaur</i> (Flood plains) and <i>Maun</i> (Ox-bow lakes)’	NRC for Litchi, Muzaffarpur, Bihar.	December 5-6, 2009
11.	An awareness workshop on “Identification, Evaluation and Management of Intellectual Property”	CIFE, Mumbai	December 4-5, 2009.

1.	National Seminar on “Fisheries based Livelihoods in India: Present Status, Problems and Prospects” in collaboration with Livelihoods School	National Bureau of Soil & Survey & Land Use Planning, Kolkata and CIFE Centre, Kolkata	November 28-29, 2009
2.	National Integration Week	CIFE, Kolkata and Kakinada Centre	November 19-25, 2009
3.	Writershop on “Indigenous Technical Knowledge in Fisheries Sector in India” (East Zone)	CIFE Centre, Kakinada	October, 28-30, 2009
4.	Brainstorming session on “Inhouse exercise for self assessment and improvements in academic standards”	Daman	September 20-21, 2009
5.	Hindi Pakhwara (Headquarters, Mumbai) and Hindi Saptaha (Kolkata Centre)	CIFE, Mumbai and CIFE, Kolkata Centre	September 14-22, 2009 (Kolkata Centre)
6.	A workshop on 'Application of ML and REML Methods by Employing AsReml in Fisheries Research Data Analysis'	CIFE, Mumbai	17-18 August, 2009
7.	Workshop on ‘Pracheen Sahitya Mein Matsya and Matsyiki Sampada’	Haridwar	July 28-30, 2009
8.	Hindi Workshop on Fish & Fishery Science	CIFE, Kolkata Centre	July 10, 2009
9.	Second Regional Training Course on Code of Conduct for Responsible fisheries in collaboration with the BOBP-IGO, Chennai	CIFE, Mumbai	June 25-29, 2009



11.3. CAS Training Programmes



11.1. CAFT programme

Centre of Advanced Faculty Training (CAFT) programme on 'Fisheries Resource Management', was conducted by Dr. S.K.Chakraborty, Programme Director and Head, Fisheries Resource, Harvest and Post Harvest Management Division, sponsored by ICAR during 22 March to 11 April 2010 at the Institute and it was inaugurated by the Dr. Dilip Kumar, Director, CIFE, Mumbai. Nineteen participants were selected from different CAU, SAU and ICAR research institutes including faculty members and researchers.

The topics dealt were mainly on taxonomy of finfish and shellfish, aquatic biodiversity issues its conservation and management aspects, status of national and international fishery resources, reservoir fisheries management, integrated coastal zone management, CCRF, marine fishing regulation acts of coastal states, conventions and agreements related to biodiversity, status and

conservation of sea weed, coral reefs and mangrove resources, and stock assessment of fishery resources and aquatic biodiversity, truss morphometry for stock identification, ecopath modeling and ecosystem based management of resources.

Apart from class discussion and practicals, three field visits related to conservation and management of resources were also arranged at (i) Dimbhe reservoir, managed by technical guidance of scientists of CIFE with participation of stake holders' especially local community displaced due to dam construction. It is well managed reservoir. Trainees could interact with the local community, NGOs and scientists in order to learn about the management knowledge issues of reservoir; (ii) Fish landing centre, participants were taken to Sassoon Docks and New Ferry Wharf landing centres at Mumbai. Here they were acquainted on the fish landing facilities, identification of commercially important resources,



fish biodiversity. They could also visit Cafe's research cum training vessel M.F.V. Saraswati which was berthed at New Ferry Wharf and different fishing and boat related activities were explained and (iii) The participant also visited to Godrej Mangrove site at Vikroli Mumbai- a Ramsar site. Here the MD of the project explained various activities related to different aspects of mangrove, like mangrove associated biodiversity and its conservation.

On the valedictory function Dr. K. Vijaykumar, Director General of Fishery Survey of India was Chief Guest and distributed certificates to the participants. He also stressed the need of such type of training programmes and to have more training programmes in the field of population dynamics.

11.2. D.Sc. award in the honour of Shri Ratan Tata

D.Sc. (Honoris causa) was conferred upon Shri Ratan N. Tata, the Chairman of Tata Group of Companies by Central Institute of Fisheries Education (Deemed University - ICAR), Off Yari Road, Versova, Mumbai by Dr. A.P.J. Abdul Kalam, the Ex-President of India during the Ninth Convocation. The honorary degree was handed over to him by Dr. Dilip Kumar, the Vice-chancellor of this Deemed University in his office at Bombay House on 30th March, 2010 in presence of Dean Academics, Dean Students' Welfare, Controller of Examination, Registrar, Head of Divisions of CIFE and Shri S.N. Ogale, Ex-Asstt. General Manager, Tata Power Company.

After handing over of the degree, the Vice Chancellor appraised Shri Ratan

N. Tata on various activities of the Deemed University and its role in Human Resource Development, Fisheries and Biodiversity Conservation activities, product development in fresh water and marine environments. The Vice Chancellor also offered to provide technical assistance in the fisheries and aquaculture projects being undertaken by Tatas under Corporate Social Responsibility. The exhaustive contribution of Tatas in various livelihood development projects were also discussed where the possibility of fisheries as a major component could be incorporated. Shri Ratan N. Tata indicated that the development projects related to Fisheries and Biodiversity Conservation may be considered for financial support by the trust where rural livelihood is taken care of and Central Institute of Fisheries Education provides the technical inputs.

11.3. Brainstorming Workshops

Brainstorming Workshop on "Nanotechnology and its application in Agricultural Sciences" jointly organized by Central Institute of Fisheries Education, Mumbai and Indian Institute of Spices Research, Calicut during 27-28 March, 2010 at CIFE, Mumbai. The registration of delegates followed by the welcome address by Dr. Dilip Kumar, Director and Vice Chancellor, CIFE, Mumbai. The introduction of the program given by Dr. V.A. Parthasarathy, Director, IISR, Calicut, and remarks by Dr. M.M. Pandey, DDG (Agricultural Engineering). Dr. H.P. Singh, DDG (Horticulture), stressed on the importance of food security

and briefed on need to seize the opportunity of applying the upcoming field of nanotechnology in agriculture so as to utilize it for the immense potential it holds not only for science, but also for the farmer. He also emphasized the need of diagnostics for monitoring and detecting the plant pathogens in different target crops and providing easy to use, user friendly dipstick techniques having combination of nanotechnology and biotechnology. He Dr. H.P. Singh further elaborated to develop rapid and incremental efficiency of presently available technologies for making diagnosis of important target pathogens in crops like potato, banana, tuber crops, coconut, spices, bunt pathogens of wheat and fisheries and bunt pathogens of wheat. After the vote of thanks by Dr. R.S. Biradar, Joint Director, CIFE, the four technical sessions were held on (i) Applications of Nanotechnology in disease diagnosis; (ii) Nano-sequencing and biosensors; (iii) Nanotechnological intervention for biotic stress management and (iv) Nanodelivery of biomolecules respectively, where a total of 30 concept notes were presented.

11.4. Awareness Campaign on Marine Fishery Resources Information Services for Fishermen of Mumbai Coast (Potential Fishing Zone Advisories-PFZ)

As part of the INCOIS (PFZ) program, awareness campaign on the dissemination of Potential Fishing Zone Advisories for the benefit of fishing community at Mahim Koliwada, Mumbai-16 was conducted

on 10th March 2010. More than 40 fishermen from two fishermen cooperative societies viz; Mahim Nakwa Machimar Society and Mahim Maikawati Machimar Society participated in the awareness campaign on the usage of modern satellite applications to locate Potential Fishing Zone Advisories for the benefit of fishing community. The program was attended by Dr. Dilip Kumar, Director, CIFE and PI of the Project, Dr. R. S. Biradar, Joint Director, CIFE, Dr. P. Nammalwar, (PL-INCOIS PFZ Advisories, Chennai), Dr. Latha Shenoy, (PL-INCOIS PFZ Advisories at Mumbai), Dr. Geetanjali Deshmukhe, CIFE, Mr. K. Lohith Kumar, SRF in the PFZ Advisories project at Mumbai, Chairmen of the Societies, participants, Scientists and Students of CIFE. Dr. Latha Shenoy, Project Leader, welcomed the gathering in the local language (Marathi). In her welcome address, she explained the objectives and benefits of the PFZ Advisories. Benefits such as reduction in searching time to reach fishing grounds, savings in fuel cost, safer fishing operations, higher catch per unit effort etc, were explained to fisher folk. Dr. P. Nammalwar (PL-INCOIS PFZ Advisories), Institute for Ocean Management, Anna University, Chennai, narrated overall activities of the INCOIS particularly with regard to PFZ Advisories. He also explained and demonstrated the usage of GPS and Compass for locating the fishing grounds to the fishermen.

Dr. R. S. Biradar, shared his views regarding necessity of usage of modern technology like satellite remote sensing and GPS in fisheries





sector. Dr. Dilip Kumar, Director, Central Institute of Fisheries Education delivered the presidential address. He informed the gathering that CIFE will extend all help to the fisher community in the usage of GPS and PFZ advisories by conducting regular training and awareness campaigns. Mr. Dinakar Tandel, Chairman, Mahim Nakwa Machimar Society and Mr. Chandrakant Kaini, Chairman, Mahim Maikawati Machimar Society thanked CIFE, Mumbai and INCOIS, Hyderabad for making them aware of the PFZ Advisories services. Further they said that the fishing community will definitely use the PFZ Advisories and hoped that the entire community would be benefited in several ways.

A short video of PFZ (Hindi version) prepared by INCOIS, was shown to the gathered people.

Fishermen actively participated in the awareness campaign and Dr. Latha Shenoy, Dr. Nammalwar and Mr. Lohith Kumar had extensive interactions with the participants on the use of PFZ Advisories. The campaign ended with the vote of thanks by Dr. Geetanjali Deshmukhe.

11.5. Academic Council

XXXXII Academic Council Meeting of CIFE was held on 19th February, 2010. Other than the internal members of the Academic Council, the meeting was attended by Dr. S N. Dwivedi, Dr Gopalji Trivedi, Dr B. N. Desai and Prof. Ramesh G. Dandge. The Chairman brought to the notice of the members that the Director General, ICAR lays more stress on two major issues viz. enhancing the quality of higher education and enhances the production.

Prof. Trivedi congratulated the Institute on the performance of students and faculty. He also appreciated the concept of National University as put forth by UGC team. He mentioned that newer areas such as discourses on thinking/action taking/decision making; personality development etc. will improve the out look of scientists from technocrat to a management expert.

Dr. S. N. Dwivedi suggested that the training component in fisheries management should include Resource Management, Fisheries Administration, Biodiversity, Pollution abatement etc. He further added Data collection/dissemination/Processing/Analysis should be a part of all the courses offered at CIFE. He also mentioned that the Institute should put up solar energy run pumps at one or two locations at CIFE Centres.

Various matters were discussed pertaining to academics. The members appreciated and complemented the faculty of CIFE on selection of 23 students of CIFE in ARS examination out of a total 26 posts advertised.

11.6. UGC Expert Committee Meeting

The University Grants Commission (UGC) Expert Committee visited the Institute during 11-12 February, 2010. The Review Committee was chaired by Prof. K. Ravindran, Former Director, CIFT, Kochi with Prof. K. Dhevendaran, Prof. (Mrs.) K. Sujatha & Prof. G. Ragothaman, Members and Dr. K. P. Singh, Member-Secretary. University Grants Commission (UGC) Expert

Committee had a meeting with Director and separate interactive sessions with the Faculty, Non-Teaching Staff and Students of the Institute. The Committee visited the various departments and common facilities like Administrative Building, Central Library, Guest House, Staff Quarters, Play Grounds, Hostels, Health Centre etc. Various documents were verified by the Committee. After the review, the Committee expressed its satisfaction with the overall functioning of the CIFE. However, the Committee expressed that CIFE being a unique university encompassing Fisheries Science, its activities should be expanded to cover a wide spectrum of teaching and research activities in fisheries science and technology. Prime consideration in its march towards expansion should cover Craft and Gear Technology, Industrial Processing Technology including Value Addition, Export Marketing Technology and Business Administration relating to these sectors.

11.7. Writeshop on 'ITKs in Fisheries (West Coast)

Writeshop on 'ITKs in Fisheries (West Coast)' was conducted during 8-13 February, 2010 at the Institute. The ITKs documented by the contributors were accordingly grouped and classified into five thematic areas - 123 ITKs on Fish Harvesting; 20 Fish Processing; 6 Therapeutics; 2 Water Quality Management and 10 Locally Developed Technologies. Total 173 ITKs were discussed in three technical sessions by the participants and necessary inputs were made by the English editors,

technical editors, graphic designer, artists and DTP staff throughout the programme. The certificates of participation were awarded on the valedictory function. The response and the feedback received from the participants were overwhelming. The final document is under preparation.

11.8. Board of Management

XXXIII Board of Management meeting of CIFE held at CIAE, Bhopal on 3rd Feb 2010. Chairperson Dr. Dilip Kumar, Director with 14 internal members and special invitees Dr. S.N. Dwivedi, Dr. D. K. Balsare and Dr. Pitam Chandra were attended the meeting. They discussed on various matters. They complimented that Director, CIFE for manifold progress made by the Institute.

11.9. Sustainable Macrobrachium rosenbergii Aquaculture: A Genetic Approach

A work shop on 'Sustainable Macrobrachium rosenbergii Aquaculture: A Genetic Approach' was organized during 8-9 January, 2010 was organized by Fish Genetics and Biotechnology Division at Central Institute of Fisheries Education, Mumbai. Dr. Dilip Kumar was the Chief Patron, Dr. Gopal Krishna, HOD, FGB Division was the convener, Dr. Shrinivas Jahageerdar, was Co-convener, Dr. Rupam Sharma and Dr. Gireesh Baby were the Organising Secretaries of the workshop. Dr. Lakra, W.S., Director, N B F G R , Lucknow, Dr. Mohanakumaran Nair, C., Dean (Faculty of Fisheries), College of Fisheries, Kochi, Shri. K. Sharatkumar Singh, Director Fisheries, Govt. of Manipur, Manipur,

Ms. Madhumita Mukherjee, Add. Director, Department of Fisheries, Government of West Bengal, Kolkata, Mr. M.T. Bhartiya, General Manager (Technical), NABARD, Mumbai were the dignitaries at the inaugural function. Researchers, academicians, state fisheries department officers, bankers and the farmers and hatchery personnel from nine states attended the workshop. A total of 18 research papers and status reports were presented and discussed. On 8th January 2010 after a brief inaugural function Dr. Mohanakumaran Nair, C, presented a paper on 'An Overview of Macrobrachium rosenbergii Culture in India' and after that various research papers and status reports were presented. There were elaborate discussions after every presentation. In the evening two documentary films were screened. On 9th January 2010 Dr. Dilip Kumar presented a paper on 'The Strategies for the Sustainable Aquaculture with an Emphasis on Prawn Culture' which formed the basis for the round table discussion. The round table discussion was attended by Dr. Dilip Kumar, Dr. W.S. Lakra, Dr. Mohanakumaran Nair, Shri. K. Sharatkumar Singh, Ms. Madhumita Mukherjee, Mr. M.T. Bhartiya, Dr. Gopal Krishna and others. The round table discussion was moderated by Dr. Arpita Sharma, Sr. Scientist and Dr. P.S. Anathan. Elaborate discussions were carried out on the technical specially with reference to seed quality genetic selection, sustainable, economical and social issues affecting the M. rosenbergii culture were discussed thread bear and recommendations were made. The detailed

recommendations are included in the final report.

11.10. National Seminars

20th All India Congress of Zoology and National Seminar

20th All India Congress of Zoology and National Seminar on Bio resource & its Management for Food, Livelihood & Environmental Security and National Helminthological Congress was organized during 29-31 December, 2009 at Central Institute of Fisheries Education, Mumbai in collaboration with the Indian Fisheries Association (IFA), Mumbai and Zoological Society of India, Bodh Gaya.

Shri L. Rynjah, Principal Adviser (Agriculture/SP-Maharashtra), Planning Commission, Govt. of India, inaugurated the function and Shri Nurjamal Sarkar, Hon'ble Minister for Fisheries & Irrigation, Govt. of Assam presided over the function. Dr. Priyadarshi Das, Special Chief Secretary, Govt. of Andhra Pradesh and Shri P. K. Borthakur, Commissioner and Secretary, Govt. of Assam were the Guests of Honour. Many luminaries, apart from more than 700 congress delegates and other invitees attended the programme.

Dr. P. N. Pandey, President and Dr. B.N. Pandey, Working President, Zoological Society of India (ZSI) presented the report and briefed about the activities and future plans of the Society.

At the function, Dr. S. Ayyappan, Deputy Director General (FY), ICAR, New Delhi; Dr. Vijay Khole, Former Vice-Chancellor, University of Mumbai and Dr. R. C. Sobti, Vice-Chancellor, Punjab University, were

given the Life-time Achievement Awards by Zoology Society of India, Bodh Gaya.

Dr. E. G. Silas, Former Vice-Chancellor, Kerala Agricultural University, was conferred upon with the Life-time Achievement Award of the Indian Fisheries Association, Mumbai for his exceptional contributions to Science, especially Fisheries and Aquaculture. Dr. S. C. Pathak, Ex.General Manager, NABARD, Mumbai; Dr. M. N. Kutty, Former. FAO Expert; Dr. M. R. Sinha, Advisor, Govt. of Tripura were awarded with the Fellowship of the Indian Fisheries Association, Mumbai. The Fisheries Department, Govt. of Andhra Pradesh and Govt. of Tripura were awarded Best Developmental Agencies in Fisheries and Aquaculture by Indian Fisheries Association.

Dr. Ravi Fotedar, Professor, Curtin University, Australia and Dr. Harish Mohanty, Director, Medical Administration, Nanavati hospital, Mumbai were conferred Fellowship from the Academy of Science, Engineering and Technology, Bhopal for their contribution in their field of specialization.

At the end of the Inaugural function, Dr. S. C. Mukherjee, Joint Director CIFE and the Chairman, Local Organizing Committee, proposed the vote of thanks.

A total of 469 papers were accepted for deliberation in the Congress and the Seminar. Researchers from various parts of the country attended the Congress. There were nine technical sessions including a special section on Helminthology and other eight on Applied Zoology;

Aquaculture; Bioresources Management; Wildlife and Taxonomy; Environment, Pollution and Toxicology; Freshwater and Marine Biology; Genetics, Molllecular Biology and Biotechnology & Physiology, Reproduction and Endocrinology. The sessions also included invited lectures from eminent scientists on various disciplines. The research papers were presented in oral and poster format and best presentations were given awards. The final recommendations of the Congress and the Seminar were presented in the plenary session and approved by the session. The Plenary Session was attended by Dr. Dilip Kumar, Director CIFE and Convenor of the Congress; Dr. Shamim J a i r a j p u r i , C h a i r m a n Helminthological Section; Dr. S. N. Dwivedi, Former director, CIFE; Dr. B. N. Pandey, President, ZSI; Dr. S. C. Mukherjee, Joint Director, CIFE, Mumbai. Dr. Dilip kumar, Director, CIFE was the Convenor of the Congress, Dr. S. Jahageerdar, Dr. K. V. Rajendran and Dr. K. Pani Prasad were the Organizing Secretaries of the programme. An exhibition from various scientific, chemical and book publishing and distribution companies was organized as a part of the congress. Recommendations were presented in the plenary sessions.

11.11. **N a t i o n a l Seminar on “Fisheries based Livelihoods in India: Present Status, Problems and prospects” CIFE, Kolkata Centre**

National Seminar on “Fisheries

based Livelihoods in India: Present Status, Problems and prospects” was conducted during 28-29th November, 2009 at National Bureau of Soil Survey and Land Use Planning, Kolkata Regional Centre, Salt Lake, Kolkata in collaboration with the Livelihood School, Eastern India Regional Centre, Kolkata. The Seminar was inaugurated by Shri Kiranmoyee Nanda ji, the Hon'ble Minister of Fisheries, Govt. of West Bengal, Kolkata.

11.12. Workshop on Molecular Biology and Biotechnology Techniques

A workshop on Molecular Biology and Biotechnology Techniques was organized at Division of Fish Genetics and Biotechnology, CIFE, Mumbai during 10 - 20 December 2009, for students and researchers of various institutions working in this area. The limit of 15 participants was exceeded to accommodate 20 in view of great interest evinced by the applicants. The workshop provided hands-on experience of molecular genetics & recombinant DNA techniques. All participants were highly satisfied with the lectures, practical exposure and training material provided as also with logistics. Four researchers working in plant molecular genetics stated during the valedictory program that though the workshop was held at a fisheries institute, care was taken to make it more meaningful for them by incorporating special practicals with sea weeds. The workshop was coordinated by Dr. Aparna Chaudhari while Dr. Gireesh Babu was the Associate Coordinator. Seeing the overwhelming response, it was

decided that a similar workshop be conducted during July 10 - 20, 2010.

11.13. Launching Workshop

A launching workshop for the project on 'Development of community participated enhanced fisheries management model for the Chaur (Flood plains) and Maun (Ox-bow lakes)' was organized during 5-6 December, 2009 at NRC for Litchi, Muzaffarpur, Bihar. The PI of the project is Dr. V. K. Tiwari, Sr. Scientist and funded by NFDB. The objective was to create awareness among stakeholders (fisher/farmer) and others about the project. Workshop was inaugurated by Sh. Ramnarayan Mandal Jee, Hon'ble Minister, Department of Animal Husbandry and Fisheries Resource, Govt. of Bihar. The minister welcomed the project and appreciated the objective of the project for the enhancement of water resource utilization to increase the fish production. He also expressed that success of this project would be guideline for the other districts. He promised to extend full support for the execution of the project. Dr. Dilip Kumar, Director, CIFE, Mumbai, described in detail about the objectives of the project and measures to achieve the goals of the project. He clarified the difference between ownership regime of maun and chaur and stressed that maun is a common property resource mainly under government control whereas the chours are multi ownership resources and therefore the management practices has to be different for maun and chours. In the management of these resources,

the first and foremost important thing is to organise people to work together, make them aware about the project benefits and build their capacity to practice the best management practices for which role of community is very important. Captain Jay Narayan Nishad, Hon'ble M.P., Muzaffarpur also addressed the gathering. He emphasized that in the development of the maun and chaur, tourism (boating, fish product stall etc.) should be incorporated to generate more employment and also as a source of aeration of the water body which will help in increasing fish production. Shri Amitabh Verma, Principal Secretary, Department of Animal Husbandry and Fisheries Resource, Govt. of Bihar appreciated the efforts made by the CIFE for fisheries development in Bihar and assured that all the possible help will be rendered for the successful completion of the project. During his speech, he stressed upon ensuring the availability of fish seed for the development of fisheries in the state. He also assured the stakeholders that the hurdles in settlement of the water bodies will be removed. Dr. Gopal Jee Trivedi, Guest of Honour in his address expressed his happiness over the project and wished luck for successful completion of the project. Dr. Gopinath Sai, Executive Director, NFDB, Hyderabad explained in detail about the project as well as different schemes of NFDB for financial assistance in the fisheries sector. Dr. S. C. Rai, Principal, Fisheries College, Dholi addressed the gathering and showed keen interest in completion of the project successfully. Shri. Nishat Ahmad, Director, Department. of

Fisheries, Govt. of Bihar gave a detailed account of fisheries in Bihar. Smt. Suman Singh, C.E., SAKHI, briefed the work done by NGO SAKHI in Madhubani. Dr. G. Venugopal, Dr. Nalini Ranjan Kumar, Dr. A.K. Reddy from CIFE, Mr. Shailendra Kumar, D.D.O.F., Muzaffarpur and his team, Director Fisheries Dept. and his team, Dr. K. K. Kumar, Director, NRC for Litchi attended and contributed whole heartedly for the success of the workshop.

11.14. IPR Awareness workshop

An awareness workshop on Identification, Evaluation and Management of Intellectual Property at CIFE was successfully organized at CIFE, Mumbai on 4-5, Dec, 2009. The objectives of the workshop were to sensitize the scientific and technical staff of CIFE towards the issues of IPR and to identify the prospective technologies at CIFE and to improve the management of IP at CIFE.

The expected outputs of the workshop were increased understanding of the basics of Intellectual Property Rights, interactions among team members and enhanced capacities of the participants, enhanced understanding of the subject and also the linkage between the technical and legal fields, identification of potential technologies at CIFE

The workshop was a fruitful occasion to present and discuss the forms of protecting the various technologies. The workshop was able to achieve its objectives resulting in increased understanding of the basics of IPRs

and enhanced understanding of the subject and also the linkage between the technical and legal fields. The presentations of expertise and approaches were considered to be very useful. The group discussion played an important role partly as input and inspiration for the institute in the future work. The prospective technologies at CIFE were identified through the exercise carried out for the participants.

Participants appreciated the overall programme, presentations and facilitation. They also expressed their desire for more such workshops and also suggested that there exists a need to conduct lectures on Copyrights and Industrial Designs. The workshop ended on a high note.

11.15. Celebration of Integration week at CIFE Kolkata and Kakinada centre, (19-25 November 2009):

National Integration Week as per the instructions and guidelines of Ministry of Home Affairs, Govt. of India was celebrated at CIFE Kolkata and Kakinada centre in which National Integration Day, Welfare of Minorities Day, Linguistic Harmony Day, Weaker Sections Day, Cultural Unity Day, Women's Day and Conservation Day was celebrated.

At Kolkata, the week long programme concluded with a cultural evening. Dr. Archana Sinha, Officer-in-Charge of CIFE Kolkata centre highlighted the significance of the programme and emphasized the importance of unity. Faculty and students presented their views on National Integrity.

At Kakinada, the programme had a

variety of events like Kavisammelan in which Dr. Sirisha, famous Telugu poet and other renowned Telugu poets were invited for the programme. Conservation day and Flag day was celebrated in the auspicious presence of Sh. R.V.L. Narasimha Rao, IRS, Assistant commissioner of Central Excise and Customs, Kakinada. Dr. G. Venugopal, Officer-in-Charge, Kakinada centre stressed upon the importance of National Integration.

11.16. Research Advisory Committee Meeting (RAC)

Dr. R. S. Biradar, Member-Secretary co-ordinated the second meeting of the Research Advisory Committee (RAC), which was held during 9-10 November, 2009 at the Institute. Dr. E. G. Silas, Chairperson RAC and Former Vice-Chancellor KAU, Kerala Agriculture University, Kochi and Dr. T. R. Rao, Retd. Director, Delhi University; Dr. Sher Ali, Sr. Staff Scientist, IIT, New Delhi and Dr. S. D. Pathak, Retd. CGM, NABARD, were present as members.

Dr. Silas in his opening remarks appreciated the work done by the Institute. He noted that most of the recommendations made in the last RAC meeting have been implemented. He stressed the importance of inter-disciplinary and inter-divisional approach in each of the six thematic areas of research, the institute is pursuing. Dr. Silas observed that very few technologies in the real sense result are adopted by the end users. He said that the Institute should address this issue of technology development, fine tuning and ultimate transfer to end

users systematically. Dr. Silas stressed the importance of inter-institutional linkages with other institutes particularly with regard to research, to avoid duplication of efforts. He exhorted the institute to develop schools of advance research involving considerable amount of basic research with creative and innovative ideas. Dr. Silas said that student research could be used to address fringe problems of the theme areas of research. He was very happy to note that CIFE had two days interaction meet at Daman to develop new ideas and evolve innovative programmes and advocated for more such meets in future. Dr. Silas mentioned that 'Visions are not permanent but are flexible and can be revised from time to time by revisiting'.

Dr. T. R. Rao in his opening remarks said that he is looking forward to listening to the progress of research work of the Institute and offer his remarks later.

Dr. Sher Ali in his opening remarks mentioned about his association with CIFE for more than a decade. He said that the CIFE has tremendous potential for research in cutting edge technologies. In the area of genetic characterization, he said lot more needs to be done by the institute. Dr. Ali observed that there is no dearth of resources at the institute but requires will and desire on the part of scientists to deliver the results. He said that unless the scientists keep in mind that they are participating in nation building activity, they cannot inspire students to excel.

Dr. S. C. Pathak in his opening remarks mentioned that his

association with the Institute dates back to four decades. He endorsed the observations of Chairperson and other members. Dr. Pathak observed that programmes have been launched by the institute with innovative ideas and concepts. He said the people and nation as a whole look forward to the institute for development of user friendly technologies in fisheries and aquaculture.

Members of the committee critically went through the projects and gave valuable suggestions and guidance. The meeting ended with vote of thanks to Chairperson and Members by Dr. S.C. Mukherjee, Joint Director, CIFE, Mumbai.

11.17. Mid - term Review Meeting of the Planning Commission: 26 October 2009

Mid-term Review Meeting of the Planning Commission was held at CIFE, Mumbai on 26.10.09. Dr Dilip Kumar, Director, CIFE, Mumbai expressed his happiness to be a part of the program and extended thanks to the Planning commission. Dr Kasturirangan, Chairman Planning Commission after briefing about the objectives of the mid term review meeting expressed his satisfaction on the works being carried out at CIFE. A number of participants from different institutes participated in the programme and elaborated on the works being carried out in their institute. The program has six theme-wise sessions namely Rain fed Agriculture, Technology Transfer, Horticulture, Medicinal and Aromatic plant, Agri Engineering, Agriculture Education.

11.18. Write shop on ITK in Fisheries sector East coast at Kakinada Centre

Under the project on Documentation of ITK in Fisheries a Write shop was conducted on 'ITK in Fisheries of East Coast' from 26-31 Oct 2009 at Kakinada, Andhra Pradesh. Staff of CIFE, Kakinada centre and zonal coordinator Dr. G.Venugopal and Dr Suresh Babu along with the project team participated whole heartedly in the program under the leadership of Dr. Dilip Kumar, Director, CIFE. The writeshop was inaugurated by M.L.A Mr. Chandra Shekar Reddy and Prof. K. Nirupa Rani, Vice-Chancellor of Adikavi Nannayya University who was the Guest of Honour. Write shop participants comprised of fish farmers, fishers, NGO, officials from fisheries department, scientists, technical officers, fisheries consultants, hatchery personnel, etc. A total of 84 ITKs were presented and deliberated upon during the course of six days writeshop under the themes Aquaculture, Harvesting, Processing and Therapeutics. Valedictory function was conducted on 31 Oct 2009 where Dr. Allam Appa Rao, Vice Chancellor of Jawaharlal Technological University, Kakinada was the Chief Guest. A draft document of the Write shop was released. This programme was widely covered by media.

11.19. Quinquennial Review Team (QRT) (2004-2009)

On 21st October, 2009, under the Chairmanship of Dr. S. L. Mehta, Former DDG (Edn), ICAR & VC (MPUAT); the QRT Team comprising

Dr. P. G. Chengappa, Vice-Chancellor, UAS, Bangalore; Dr. G. R. M. Rao, Ex-Director, CIBA; Prof. B. C. Mal, Professor, IIT, Kharagpur; Dr. Dilip Kumar, Director, CIFE; Dr. S. C. Mukherjee, Joint Director, CIFE and Dr. R. S. Biradar, Head, FEES Division & Member-Secretary, QRT (2004-2009) held discussions with different stake holders and external members of the Academic Council on the expectations and the role of CIFE in future. 28 stakeholders participated in the Meet.

QRT team had a meeting with Director and Head of Divisions of the CIFE during 21-24 October, 2009 and finalized the report of the QRT (2004-2009) during 5-6 November, 2009.

11.20. Academic Council

XXXXI Academic Council Meeting of CIFE was held on 20th October 2009. Other than the internal members of the Academic Council, the meeting was attended by Dr. S N. Dwivedi, Dr Gopalji Trivedi and Dr B. N. Desai. Various matters were discussed pertaining to academics. The members appreciated and complemented the faculty of CIFE on selection of 23 students of CIFE in ARS examination out of a total 26 posts advertised.

11.21. Brainstorming session on: In House Exercise for Self Assessment and Improvements in Academic Standards

The journey to excel...

CIFE, the only centre of excellence in fisheries science in India, is

constantly striving to strengthen its academic standards. As we all know that education is the most critical investment for

CIFE, the only centre of excellence in fisheries science in India, is constantly striving to strengthen its academic standards as education is the most critical investment for our future and the most effective strategy which will enable us to survive, thrive and lead in a changing world.

In view of the recommendations of the QRT, the feedback received from the students and our own preliminary self assessment, an in-house exercise for 'Self assessment and improvements in academic standards' was organized at Daman on 20-21 September, 2009 to self assess the strengths, weaknesses, sense of responsibility for improvements and initiatives to be taken.

Overall objective of the exercise was to excel in teaching & research and make CIFE a world class institution. The specific objectives were to underline problems and concerns confronting our academic programmes, Exploring opportunities and possibilities for upscaling/upstreaming, Actions / responses from students, faculty, and management to identify and address the issues and harness opportunities

Expected outputs of the exercise were problems / bottle necks / limitations identified, opportunities and scope for improvement explored, plan of action for addressing the issues and improving opportunities and constitution of

'Think Tank' group drawn from faculty.

Recommendations of this in house exercise are listed below:

Priority fixing for faculty in teaching and research

Advanced training in teaching technology and techniques

Safeguarding standards and discouraging substandard performance

Punctuality and sincerity of the faculty and inculcate the same values in the students

Rigid ineffectual hierarchies to be reduced / removed. Interdepartmental interactions and optimum use of infrastructural facilities

More industry academia interface / interactions

More autonomy to the Deemed University

To constitute a think tank group drawn from faculty

Towards the end it was agreed that motivation, regular self assessment, inclination to change, character development, openness, professionalism and maturity will lead to excellence.

11.22. XVII Extension Council Meeting

The XVII Extension Council was held on Sep 18, 2009 in CIFE, Mumbai. It was emphasized in the meeting that working in the field is difficult, as only those, having command in the subject and communication skills can perform better in the field

extension programme. Dr. Krishna Srinath, Director, Directorate of Women in Agriculture, Bhubaneswar, emphasized the importance of action research in Extension Education. Dr. H. Shivanand Murthy, Director, Extension Education, Karnataka Veterinary Animal and Fisheries Sciences University Bidar, mentioned that very few persons come forward to do extension work as they have to work with the farmers and data collection in extension is challenging. Dr. Murthy mentioned that regional centers of the institute may adopt villages for 3 years and come out with success stories and impact analysis. He further mentioned about the “National Workshop on Fisheries and Animal Husbandry” conducted by KAFSU, Bidar and suggested this workshop may be conducted in different parts of the country every year to pave the way for integrated extension education : strategy for fisheries and livestock. Action taken as per the recommendations of 16th Extension Council Meeting was presented. New initiatives were also recommended.

11.23. QRT Visits Powarkheda Centre, (Madhya Pradesh)

Under the Chairmanship of Dr. S. L. Mehta, Former DDG (Edn), ICAR & VC (MPUAT); the Quinquennial Review Team and Dr. R. S. Biradar, Head, FEES Division & Member-Secretary, QRT (2004-2009) visited Powarkheda Centre during 10-11 September, 2009. Dr. Somdutt, Principal Scientist and Officer-in Charge, Powarkheda Centre presented the work progress of the Centre pertaining to research, education

and extension activities during the period 2004-2009. The team also visited various facilities at the Centre and held discussions with staff members

11.24. Workshop on 'Application of ML and REML Methods by Employing AsReml in Fisheries Research Data Analysis'

A workshop on 'Application of ML and REML Methods by Employing AsReml in Fisheries Research Data Analysis' was organized on 17-18 August, 2009 at CIFE, Mumbai in collaboration with Indian Fisheries Association, Mumbai. A total of 20 participants attended this two day workshop. The participants included scientists, research scholars and students from CIBA, Chennai, NIO and CIFE, Mumbai. Dr. Arthur Gilmour, Ret. Professor NSW DPI, Australia, and one of the developers of the AsReml Software were the key resource person for this workshop. Dr. S. Jahageerdar, Senior Scientist was the Coordinator of the workshop.

The course was structured around 4 x 1.5 hour sessions per day, with 30 minutes of lectures and 1 hour of practical sessions. Every participant was provided with the trial version of the software and the computer facility of the department.

Data for the workshop were drawn from a variety of data sets including fish breeding programs of Fish Genetics and Biotechnology division of CIFE, student research work etc. Analysis of the participant's data were also carried out.

A course manual was brought out and was distributed to every participant.

AsReml is a statistical package that fits linear mixed models using residual Maximum Likelihood (REML). It is flexible statistical software for the analysis of many data sets generated in the fisheries research experiments. It has applications in (un) balanced longitudinal data, repeated measures data and most importantly in univariate and multivariate animal breeding and genetic data with a relationship matrix for correlated traits. Due to its versatile nature, this software is extensively used world wide in the analysis of the research data.

Opportunities for participant's data analysis were also provided.

The contents covered were Introduction to AsReml, ASReml Primer, ASReml Options, Univariate analysis, Multivariate analysis, Estimation of genetic parameters, Analysis of binary data, Analysis of trainees data.

The feedback received from the participants was very good.

11.25. Enhancing Efficiency and Quality in Research, Education and Training

In order to enhance efficiency and quality in research, education and training CIFE, Mumbai planned a programme for the senior management to visit some of the top R & D institutions in India to see for themselves the management style, systems, quality of research and its outputs and delivery of academic programmes.

A well focused program was planned and finalized in advance in

consultation with the directors of selected institutes of excellence. The institutes of excellence visited were BARC, Mumbai; CCMB, Hyderabad; ASCI, Hyderabad; IIIT, Hyderabad; IISc, Bangalore; ISRO, Bangalore; TISS, Mumbai; TIFR, Mumbai and NIN, Hyderabad.

Discussion between the visiting members of CIFE team, directors, scientists/ faculty members of host institutes focused on areas like management regime, procurement system, optimization in use of equipments and their maintenance, decentralization of decision making and potential areas of collaboration in academic and research programmes.

This was followed by a Focused Group Discussion held at Kodaikanal from 29th June to 1st July, 2009 under the leadership of Dr. Dilip Kumar, Director, CIFE, Mumbai.

Findings and lessons learnt from this visit programme, were presented individually by each member of visiting team and thoroughly discussed. At the end, the group came out with best practices to be adopted in CIFE. Highlights of some of the recommendations to be adopted are listed below:

1. F a c i l i t i e s l i k e chemicals/glasswares/equipments be used across divisions.
2. Inventory of chemicals to be prepared, maintained and available on intranet to be made available to all faculty members.
3. High cost equipments to be placed in Central Laboratory as a common facility.



4. Choose and pick system for procurement of quality chemicals/equipment as followed in CCMB, Hyderabad be adopted. Only criteria based on lowest quotation may not be followed in all cases.
5. Time bound procurement of chemicals (1 week) and equipments (3-4 months) be followed.
6. Mission mode and matrix management of the projects through monitoring based on results (outputs) and activities be followed.
7. Collaboration in potential identified areas with the institutes of excellence like BARC, CCMB, TIFR, IISC and TISS in research and academics was recommended.
8. Electronic display monitors at various points to display circulars, guest lectures, events, announcements and other important information be placed.
9. Support services, transport and security as well as facility of light snacks (on payment basis from canteen) be available round the clock to have conducive work environment.

Based on this, management has taken steps to incorporate various reforms at the institute level like participatory decision making to have 100% compliance of decisions taken, regulating purchase procedures by motivating concerned staff, delegation of power, decentralization of decision making, giving financial freedom at

HOD level and improvement in the logistics.

This innovative exercise gave the insight that there exists a need to introduce a process improvement. Although, the types of interventions depend on a variety of considerations we need to adopt best practices and monitor them continuously to maximize quality and adequacy of outputs.

11.26. Fish Farmer's Day

With a view of commemorating the achievements of inland culture fisheries sector, the Fisheries Division of the Union Department of Animal Husbandry and Dairying, decided to earmark 10th July as a special day for the fish farmers of the country, called Fish Farmers Day. The pioneering results achieved by Dr. Hiralal Chaudhuri and Prof. Alikunhi on induced breeding of major carps on 10th July, 1957 and its enormous application in the rural sector enabled the spread of scientific and sustainable fish farming in the country in last four decades. The culture fisheries sector has grown by leaps and bounds in last 20-25 years in the country to generate employment, achieve higher production and it has become an aggressive income generating industry.

CIFE fondly honours the veterans of Indian fisheries sector of the country every year on the "Fish Farmers' Day" who excel in their efforts in augmenting fish production and who have become examples in the fish farming sector for their leadership.

The Fish Farmer's Day 2009 was

organized by CIFE on 10th July, 2009 at New Campus, Off Yari Road, Versova. It was inaugurated by Dr.C.D. Mayee, Chairman, Agricultural Scientists Recruitment Board (ASRB), ICAR, New Delhi. Dr. Mayee was felicitated by the Institute. On this occasion, eight fish farmers from different states were felicitated and given Best Fish Farmers Award for their contributions to Aquaculture.

Dr. Sanjiva Nand Thakur from village Baluya Deorhi, Bihar was awarded Best Fish Farmers Award. His activities are on carp culture and seed production. He has also motivated other farmers to undertake these activities. He has received a Letter of Appreciation by the Department of Animal Husbandry and Fishery, Govt. of Bihar and awarded 'Kishanshree Award' by ATMA in 2007.

Shri Milon Sinha, Bijohnagar, Parganas was awarded Best Fish Farmers Award. He has worked on Seed Production & Culture of Magur and also Goldfish Breeding & Seed Production. He is recognized as an expert in fish breeding by State Govt. and University of Kolkata.

Shri M. Anjaneya Raju, Yemmiganuru village, was awarded Best Fish Farmers Award. He is involved in Culture of Indian Major Carp (IMC).

Shri P.T. Ananda Rao Mutyala Rao, Raichur was awarded Best Fish Farmers Award. He practices diversified fish culture in an area of 35 acres.

Shri Aiyappa Pattada Iyanna, Siddapur, Karnataka who practices Eco-Tourism (sport fishery) was awarded Best Fish Farmers Award.

He has received Flemish Inter University Council Scholarship from Univ. of Gent, Belgium in 2007.

Shri Surendra Belchandan, Village Tirga, Chhatisgarh was awarded Best Fish Farmers Award. His activities are on Seed Production and Culture of Indian Major Carp (IMC) and Magur in Farm area of 35 acres. He has also worked on Prawn Culture and Integrated Farming (Dairy-cum-Fish Culture). He has received Bilasa Baikewtin Award for Excellence in Fisheries in Chhatisgarh Govt. and Progressive Farmer Award by Dept. Agriculture, Chhatisgarh Govt.

Shri Ashok Chaudhary, Village Raisalpure, Hoshangabad was awarded Best Fish Farmers Award.

Shri Sanjay Lakra, Rohtak, Haryana was awarded Best Fish Farmers Award. His activities are on Seed Production and Culture of Indian Major Carp (IMC) and Exotic Carps. He has been a source of inspiration for the farmers of Hayana and adjoining states.

On this day, Mr. Praveen Rai, Mangalore Fisheries College, Mangalore was conferred with the Dr. Jalihal Endowment Award for Best M.F.Sc. dissertation. He worked on "Evaluation of PCR primers in detection of infectious Hypodermal and Hematopoietic Necrosis Virus (IHHNV) from India" under the guidance of Dr. Indrani Karunasagar. His research efforts have led to the identification of highly sensitive and specific primer for the detection of (IHHNV) from India and it was claimed by him that this is the first conclusive report on the presence of type A Virus-related sequences in P. monodon from India. He has also

generated nucleotide sequence of Indian strain of IHNV. All these useful nucleotide sequences have been deposited and given accession numbers by GenBank.

Mr. A. K. Panigrahi, Sr. Scientist was awarded Dr. Hiralal Chaudhary Best Young Scientist Award.

11.27. Annual Staff Research Council Meeting

The Annual Staff Research Council meeting of CIFE was held during 29 April and 1, 2 May 2009 in the Conference Hall of New Campus. The meeting started with a welcome address by Dr. Shrinivas Jahageerdar, Member Secretary, SRC. He welcomed the new Heads of the Divisions and scientists who joined the institute and introduced them to the house. He requested all the PIs to submit the proposals and progress reports in time. Dr. Dilip Kumar, Director and Chairman, SRC, in his address requested the scientists to follow the suggestions and the guidelines of SRC religiously. Reminding the scientists that the institute is mandated to develop the HRD for the sector, he asked the CIFE Faculty to orient the research towards the needs of the fisheries sector. Complimenting the scientists about their achievements in the research work, he called upon them to submit the reports properly and promptly.

He informed the house that the number of research projects proposed and carried out under six thematic areas are completing and requested the scientists to critically evaluate the thematic areas and the project accomplishments. Dr. S. C. Mukherjee, Joint Director

emphasized the importance of the SRC and requested the scientists to discuss the research projects thoroughly and to identify the strength and weakness of the projects so that the overall quality of the research output can be improved. Altogether 14 projects were discussed and approved by the house during the 3-day marathon presentations and discussion. Dr. Munil Kumar Sr. Scientist and Joint Secretary, SRC proposed the vote of thanks.

11.28. Writeshop on Indigenous Technical Knowledge in Fisheries Sector at Shillong

Central Institute of Fisheries Education, Mumbai organized a Writeshop on “Indigenous Technical Knowledge (ITKs) in Fisheries Sector” at Shillong during 21-25 April, 2009. The basic objective of the write-shop was to prepare an authentic document on ITKs in Fisheries of North East region through an interactive and participatory approach where each contributor was involved in the editing process during the write shop. The venue of the writeshop was Bethel Prayer Centre, UNIUH - KHWAN, P.O.UCC, Ri- Bhoi district, Meghalaya - 793122

The inaugural programme commenced with a welcome address by Dr. Arpita Sharma, Senior Scientist, CIFE, Mumbai who formally welcomed the chief guest and resource persons of the writeshop coming from various North Eastern states of India. This was followed by felicitation of the Chief Guest Prof. U.C. Goswami, Professor

& Head, Department of Zoology, Guahati University. Dr. Roopam Sharma, Senior Scientist, CIFE, Mumbai briefed the gathering about the objectives of the writeshop. Chief Guest Professor U.C. Goswami stressed on the importance and significance of traditional knowledge and emphasized that documentation the ITKs in the fisheries sector is of utmost importance. He further indicated that every ethnic group of North-eastern region has its own fishing tradition based on unique ITKs.

Following thematic areas were finalized for ITKs : Fish harvesting and transportation, Fish processing and transport, Aquaculture, Biodiversity, Therapeutics and Water quality Management. The ITKs documented by the contributors were accordingly grouped in these themes. The edited versions of the write-up of ITK's was displayed and modified subsequently, according to the suggestions of the participants. The cover page design and the lay out of the book were also decided. On day 5, the final version was displayed and corrections were incorporated as per suggestions of the participants giving the manuscript a final shape. Finally, Dr. S.P. Shukla, Senior Scientist presented a report on the proceedings of the Writeshop and proposed vote of thanks for all the participants.

11.29. Regional Training Course on Code of Conduct for Responsible Fisheries

CIFE organized a Regional Training Course on Code of Conduct for Responsible Fisheries (CCRF) from

25-29th June, 2009 at CIFE, Mumbai. The training course was organized in collaboration with BOBP-IGO, Chennai. The objectives of the training program were to impart better understanding of CCRF and its guidelines, identification of various approaches to meet the objectives of responsible fisheries and adaptation of the CCRF to meet the local requirements. There were 16 participants, 3 from Bangladesh, 5 from Sri Lanka, 4 from Maldives and 4 from India. The participants included Junior and middle-level Officers of the Ministries/Departments of fisheries and related agencies of the BOBP-IGO Member countries. Dr. Latha Shenoy, Senior Scientist was the Co-ordinator of the training program held at Mumbai.

The activities were spread between Chennai and Mumbai. The training at CIFE, Mumbai included classroom lectures on the CIFE, its mandate, programs and role in HRD in Fisheries, co-management of marine fisheries resources, cost-effective approaches for collection, compilation and dissemination of fisheries information, integration of fisheries into coastal area management and Gender and CCRF.

A field visit was organized at the Versova fishing village, co-operative society and landing centre for interaction with the stakeholders for understanding the constraints faced by the community in adaptation of CCRF to the local situation. The participants made presentations on case studies on problems of fisheries management relevant to their respective countries. Evaluation was made to assess the experience of the

participants and their understanding of the management issues and possible approaches to address them. The training program also included interactive sessions on issues such as fisheries information, Aquaculture, stake holder participation and fisheries management.

11.30. Infrastructure Development at New University Complex of CIFE

CIFE Deemed University has got the much needed infrastructure strengthening and approval for its proposed construction by the ICAR under XI plan EFC. The construction of main Academic Building (3rd and 4th floor), Hatcheries, vertical expansion of Girls Hostel (2nd to 4th floor), Boys Hostel (stilt + 4 floors), Faculty Hostel/ Scientist Home (stilt + 4 floors), state-of-the-art Indoor Sports Complex including Gymnasium, Swimming Pool and Paddling Pool, Housing Type-IV: 18 nos. (2nd to 4th floor), Housing Type-V: 12 Nos. (stilt + 4 floors) and Director's Residence have been approved at an estimated cost of Rs.38 crores. Further, the agreement for construction of the New University Complex was signed on 9th March 2009 between CIFE and IRCON by Dr. Dilip Kumar, Director, CIFE Mumbai in the august presence of Dr. S. Ayyappan, DDG (Fy.), ICAR, New Delhi.

11.31. Dr. Managala Rai Lays the Foundation of New Infrastructures of CIFE

Dr. Managala Rai, Director General, ICAR and Secretary, DARE laid the Foundation Stones of the new

Infrastructures being developed at the New University Complex at Yari Road, Versoa on 10th April 2009 in the august presence of Dr. S. Ayyappan, DDG (Fisheries), ICAR New Delhi, Dr. Dilip Kumar, Director & Vice Chancellor, CIFE Deemed University, Dr. S.C. Mukherjee, Jt. Director, Officials of IRKON, Dr. Penny J. Hopkins, Presidential Professor of Zoology, Oklahoma University, USA (a Fulbright Scholar at CIFE) amid thunderous applause of Scientists, Staff, Students and family members of 'CIFE Pariwar'. Foundations were laid for the following buildings: Boys Hostel, Faculty Hostel/ Scientist home, Indoor Sports Complex including Gymnasium and Swimming Pool, Housing Type-V: 12 nos., and Director's Residence.

11.32. D.Sc. award Ceremony in the honor of Prof. Hiralal Chaudhuri:

During the Ninth Convocation held on 15th April, 2009 at Central Institute of Fisheries Education, Mumbai, when His Excellency Bharat Ratna Dr. A.P.J. Abdul Kalam, Hon'ble President of India, was the name Chief Guest of the function, CIFE conferred the D.Sc. Degree on Dr. (Prof.) Hiralal Chaudhuri, for the services rendered by him in the aquaculture sector development. CIFE Kolkata Centre arranged a function to hand over the said degree in person to Dr. Hiralal Chaudhuri on 20th February, 2010. On this occasion the dignitaries on dias were Dr. P.C. Chaudhury, FAO consultant; Dr. R.M. Bhowmick, FAO Consultant; Dr. P. Das, Former Director, NBFGR, Lucknow; Dr. A.P. Sharma, Director, CIFRI,

Barrackpore; Dr. C.S. Chakraborty, Vice Chancellor, WBUAF&S, Kolkata and Dr. C. Saha, Former Director, CIFA, Bhubaneswar. The other invited guests who witnessed the grand function were Dr. A.K. Singh, Zonal Project Director, Zone-II, Kolkata; Dr. Anup Datta, Officer-in-Charge, CIFA Centre, Rahara; Dr. T.K. Ghoshal, Officer-in-Charge, CIBA Centre, Kakdwip; Dr. K.R. Naskar, Officer-in-Charge, CIFRI Centre, Kolkata; Prof. Kuldeep Singh, Former Officer-in-Charge, CIFE Kolkata Centre and Dr. K.C. Dora, Dean, WBUAF&S, Kolkata. Dr. Archana Sinha, Officer-in-Charge of CIFE, Kolkata Centre welcomed the dignitaries and guests. Dr. Dilip Kumar, Director & Vice Chancellor CIFE, Mumbai read the Citation and handed over the same to Prof. Hiralal Chaudhuri.

A group of 30 fish farmers from Bihar were present at the occasion. In addition a galaxy of Scientists, Teachers and Officers made the programme a grand success. The programme ended with the formal vote of thanks proposed by Dr. B.K. Mahapatra, Senior Scientist, CIFE, Kolkata Centre.

11.33. Fulbright Fellow Program at CIFE

Dr. Penny M Hopkins, Noble Foundation Presidential Professor of Zoology at Oklahoma University, USA visited CIFE during 4-17 April, 2009 under Fulbright Fellow Program. Professor Hopkins is a renowned expert of Crustacean Endocrinology particularly Endocrine control of molting and regeneration. Dr Hopkins did her Ph.D. in the year 1970, with Dr Fingerman in Tulane

University, New Orleans, on the crayfish biology and physiology. She did her Post Doctorate with Dr. Dorothy Bliss, from American Museum of Natural History, New York. She is Fellow of American Association of Advancement of Sciences (AAAS) since 2002, Editor of Comparative Biochemistry and Physiology since 1999, in the Editorial Board of American Zoologist and Journal of Endocrinology. She is member of the prestigious National Science Foundation since last 30 years. Her most studies are done on *Uca pugnator*, the fiddler crab.

Dr. Penny Hopkins visited CIFE as a Fulbright Senior Scientist for delivering a series of lectures on "Crustacean Endocrinology" for the M.F.Sc. and Ph.D. students of Aquaculture. The series comprised of lectures and practical sessions on "General considerations in endocrinology and in crustaceans" with special emphasis on dissection and analysis of research data published in reputed international journals.

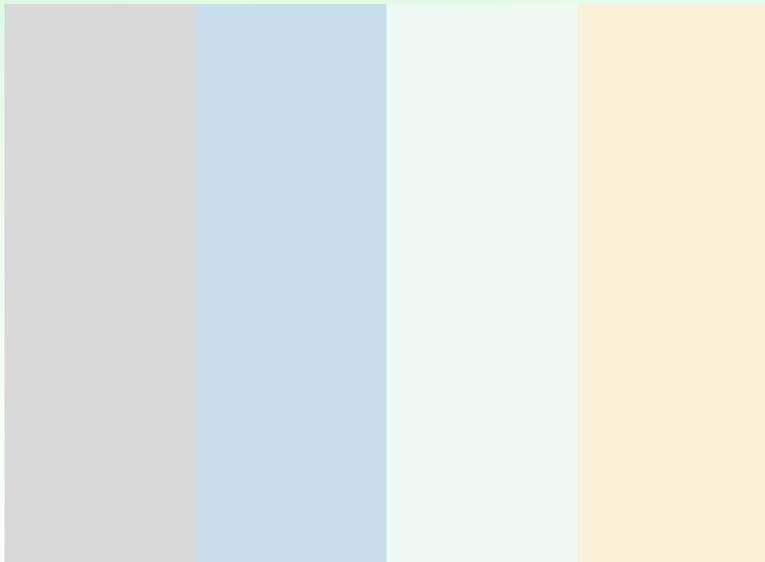
During the discussion she helped to uncover researchable questions, many of which were suggested by Dr. Hopkins as potential areas for research on crustacean endocrine control of reproduction. Hormones specific to crustaceans such as Molt Inhibiting Hormone, Methyl Farnesoate, Crustacean Cardioactive Peptide, Vitellogenin Inhibiting Hormone and their functions were discussed in great detail.

12. Distinguished Visitors

Visitor	Name Position/Address	Date of Visit
Mr. Taj Mohammad	President, The Seafood Export Association, East Region	19 March, 2010
Dr.(Prof.) H. Chaudhuri	Eminent Fisheries Scientist	20 February, 2010
Shri Deepak P. Gadre and Shri Damodar Tandel	H'ble members of Board of Management of CIFE (Powerkheda centre)	02 February, 2010
Mr. P.K. Pramanik	Technical Officer (QC), MPEDA, Kolkata	29 January, 2010
Mr. Subrata Roy	Jr. Technical Officer (EP), MPEDA, Kolkata	28 January, 2010
Dr. B.K. Chand	Farm Manager, Directorate of Research, WBUAF&Sc, Kolkata	27 January, 2010
Dr. Ravi Fotedar, Associate Professor	Curtin Univ. of Technology, Perth, Western Australia	21 - 22 January, 2010
Dr. Anil B. Amin	Associate professor at Department of Fisheries & Natural Sciences Bodø University College, Olav Trygvasons gt .9A, 8007 Bodø, Norway	6 January, 2010
Dr R. Paul Raj	Member-Secretary, Coastal Aquaculture Authority, Chennai	18 December, 2009

Mr. Kalyan Mullick	Tech. Officer, IFB Agro Industries	15 December, 2009
Dr. Afrin S. Alvi	Dy. Director, Deptt. of Fisheries, Govt. of West Bengal	25 November, 2009
Dr. T.J. Abraham	Professor, WBUAF&Sc., Kolkata	November, 2009
Dr. Parthasarathi	FAO expert on Fisheries (KKD Centre)	25 September, 2009
Dr. S. L. Mehta	Chairman, QRT team, CIFE	10 - 11 September, 2009
Dr. N.C. Datta	Rtd. Professor, Calcutta University	12 - 13 August, 2009
Dr. S. L. Mehta and Dr. B. C. Mal	QRT Team, ICAR	24 - 25 July, 2009
Dr. R.K. Samanta	Vice Chancellor, BCKV, Mohanpur	10 July, 2009
Dr. H. D. Yadav	Director Extension Education CCSHAU, Hisar (Rohtak Centre)	8 July, 2009
Dr. S.L. Mehta Dr. G.R.M. Rao Dr. R.S. Biradar	QRT Team, ICAR	22-24 June, 2009
The Board of Management of CIFE	Members of BoM, CIFE (KKD Centre)	11 June, 2009
Dr. S.L. Mehta,	Chairman, QRT Team, ICAR (KKD Centre)	10 June, 09
Dr. G.R.M. Rao	Former Director, CIBA (KKD Centre)	10 June, 2009
Dr. K. Devadasan	Former Director, CIFT (KKD Centre)	10 June, 2009
Prof. H.P.C. Shetty	Former Dean, College of Fisheries, Managalore	17 April, 2009
Dr. Penny M. Hopkins	Presidential Professor of Zoology, Department of zoology, University of Oklahoma, Under Full Bright Fellow Program (Aquaculture Division)	4 - 17 April, 2009
Dr.P.C. Chaudhury	FAO, Consultant	
Dr. R.M. Bhowmick	FAO, Consultant	
Dr. P. Das	Former Director, NBFGR	
Dr. A.P. Sharma	Director, CIFRI, Barrackpore	
Dr. C.S. Chakrabarty	Vice Chancellor, WBUAF&Sc., Kolkata Former Director, CIFA,	
Dr. C. Saha	Former Director, CIFA, Bhubaneshwar	
Dr. A.K. Singh	Zonal Project Director, Zone-II, Kolkata	
Dr. Anup Datta	Scienitst-in-Charge, CIFA, Rahara	

Dr. T.K. Ghoshal	Officer-in-Charge, CIBA, Kakdwip
Dr. K.R. Naskar	Officer-in-Charge, CIFRI Sub-Centre, Salt Lake
Prof. Kuldeep Singh	Former Officer-in-Charge, CIFE, Kolkata Centre Dean, WBUAF&Sc.,
Dr. K.C. Dora	Dean, WBUAF&Sc., Kolkata
Dr. Utpal Bhowmick	HOD, Riverine Division, CIFRI, Barrackpore
Dr. M.K. Ram Mohan	Deputy Director, MPEDA, Kolkata
Dr. A.S. Ghosh	Dy. Director, Deptt. of Fisheries, Govt. of W. Bengal
Mr. Prabhat Kumar	Digha Sea Food Export
Mr. Taj Mohammed	President, The Seafood Exporters Association of India, West Bengal Region
Dr. N. Chatterjee	Head, Division of Aquaculture, WBUAF&Sc., Kolkata
Dr. A. Parthasarathi	Consultant, Hyderabad, A.P.
Dr. K.C. Dora	Dean, WBUAF&Sc., Kolkata
Dr. Anup Datta	Scientist-in-Charge, CIFA, Rahara
Prof. Kuldeep Singh	Former Principal, CIFE, Kolkata Centre
Mr. S.K. Bhattacharjee	IAS, Director of Fisheries, Govt. of W. Bengal
Dr. S.N. Biswas	Dy. Director, Sunderban Fisheries Development Board, W.B.
Mr. P.R. Rao	Hindi Officer, CIFRI, Barrackpore
Dr. Sujit Kumar	Sr. Scientist, CIBA, Kakdwip
Dr. T.K. Ghoshal	Officer-in-Charge, CIBA, Kakdwip
Dr. R.K. Trivedi	Professor, WBUAF&Sc., Kolkata
Dr. S.S. Dana	Professor, WBUAF&Sc., Kolkata
Mr. Raheem Ahmed	CEO, Neezami Rekha Sea Foods Pvt. Ltd., Kolkata
Dr. P.Das	Former Director, NBFGR, Lucknow



13. Others

13.1 Quinquennial Review

Team

Chairperson

Dr. S. L. Mehta
Former DDG(Edn), ICAR & VC
(MPUAT), Udaipur

Members

Dr. G. R. M. Rao
Ex-Director, CIBA, Visakhapatnam

Dr. K. Devadasan
Ex-Director, CIFT, Kochi

Dr. M. Chandrasekaran
Professor, Department of
Biotechnology
Cochin Univ. of Biotechnology,
Cochin

Dr. B. C. Mal
Professor, Indian Institute of
Technology, Kharagpur

Dr. P. G. Chengappa
Vice-Chancellor,
UAS, Bangalore

Member-Secretary

Dr. R. S. Biradar
Principal Scientist, CIFE, Mumbai

13.2 Research Advisory Committee

Chairperson

Dr. E. G. Silas,
Former Vice Chancellor, KAU,
Kochi

Members

Dr. T. R. Rao

Director (Retd), School of Environmental Studies (Delhi Univ), Delhi

Dr. Sher Ali

Sr. Staff Scientist, National Institute of Immunology, New Delhi

Dr. Chandramohan

Scientist G (Retd.), NIO Chennai

Dr. Rintu Banerjee

Professor, Agricultural and Food Engineering Department, Indian Institute of Technology, Kharagpur

Dr. S. K. Pathak

Ex-CGM, NABARD, P-4, Vijay Gadh Society, Shivtirth Nagar, Paud Road, Pune - 411038

Member-Secretary

Dr. R.S. Biradar

Principal Scientist, CIFE, Mumbai

13.3 Board of Management

Chairperson

Dr. Dilip Kumar

Director, CIFE, Mumbai

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Dr. K. K. Vas

Director, Central Inland Capture Fisheries

Research Institute, Barrackpore, Kolkata

Dr. S. C. Mukherjee

Joint Director, CIFE, Mumbai

Dr. C. S. Purushothaman

Principal Scientist, CIFE, Mumbai

Dr. A. K. Pal

Principal Scientist, CIFE, Mumbai

Dr. Gopal Krishna

Principal Scientist, CIFE, Mumbai

Dr. S. N. Ojha

Principal Scientist, CIFE, Mumbai

Dr. (Mrs.) Latha Shenoy

Senior Scientist, CIFE, Mumbai

Dr. G. Venugopal

Principal Scientist and OIC, CIFE Kakinada Centre, Kakinada

Dr. Somduitt

Principal Scientist and OIC, CIFE Powerkheda Centre, Powerkheda

Dr. G. Venkateshwarlu

Principal Scientist, CIFE, Mumbai

Dr. M. P. Singh Kohli

Principal Scientist, CIFE, Mumbai

Dr. R.S. Biradar

Principal Scientist, CIFE, Mumbai

Dr. Vijay B. Mehta

Vice-Chancellor, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli

Dr. S. Ayyapan

Dy. Director General (Fisheries),
ICAR, New Delhi

Dr. W. S. Lakra
Director,
National Bureau of Fish Genetic
Resources,
Lucknow

Shri M. K. R. Nair
Fisheries Development
Commissioner, Government of
India, Ministry of Agriculture,
New Delhi

Dr. M. V. Gupta
World Food Prize Laureate,
Hyderabad

Dr. Nagendra Sharma
Vice Chancellor,
Sher-E-Kashmir University of
Agriculture, Jammu

Shri Deepak P. Gadre
President,
Ratnagiri Sindhudurg Fisheries
Development Association,
Ratnagiri

Shri Damodar Tandel,
Cuffe Parade, Mumbai

Financial Advisor
Department of Agricultural
Research & Education & Addl.
Secretary to the Govt. of India,
New Delhi
Member-Secretary

Shri Suresh Kumar
Sr. Administrative Officer,
CIFE, Mumbai

13.4 Academic Council

Chairperson

Dr. Dilip Kumar
Director, CIFE, Mumbai

Members

Dr. S. C. Mukherjee
Joint Director, CIFE, Mumbai

Dr. M. P. Singh Kohli
Principal Scientist, CIFE, Mumbai

Dr. R. S. Biradar
Principal Scientist, CIFE, Mumbai

Dr. S. N. Dwivedi
Ex. Director, CIFE
Bhopal

Dr. K. Gopakumar
Ex. DDG (Fisheries), Kochi

Prof. (Dr.) Gopaljee Trivedi
Ex. Vice-Chancellor,
At & PO- Matlupur Via- Piar,
Muzaffarpur, Bihar

Dr. B. N. Desai
Ex Director, NIO, Mumbai

Prof. Ramesh Dandge
Head, Department of Economics,
Shivaji University, Vidyanagar,
Kolhapur

Dr. S. P. Tiwari
DDG (Education), ICAR, New Delhi

Dr. S. Basu

Principal Scientist, CIFE, Mumbai

Dr. S. N. Ojha

Principal Scientist, CIFE, Mumbai

Dr. S.D. Singh

Principal Scientist, CIFE, Mumbai

Dr. Gopal Krishna

Principal Scientist, CIFE, Mumbai

Dr. C. S. Purushothaman

Principal Scientist, CIFE, Mumbai

Dr. Kiran Dube Rawat

Principal Scientist, CIFE, Mumbai

Dr. K. V. Rajendran

Principal Scientist, CIFE, Mumbai

President, PGSSU, CIFE, Mumbai

**Academic Council Representative
of PGSSU**

CIFE, Mumbai

Member-Secretary

Shri Suresh Kumar

Sr. Administrative Officer,
CIFE, Mumbai

13.5. Extension Council

Chairperson

Dr. Dilip Kumar

Director, CIFE, Mumbai

Members

Dr. S. C. Mukherjee

Joint Director, CIFE, Mumbai

Dr. P. Das

DDG (Extension Education), ICAR,
New Delhi

Dr. K. Om Prakash

Joint Commissioner of Fisheries,
Ministry of Agriculture, Department
of Animal Husbandry, Dairying &
Fisheries,
New Delhi

Dr. Krishna Srinath

Director, National Research Centre
for Women in Agriculture,
Bhubaneswar

Shri H. R. Pawar, IAS

OR his nominee,
Commissioner of Fisheries,
Government of Maharashtra,
Mumbai

Dr. C. Prasad

Ex DDG(Extension), New Delhi

Dr. C. S. Purushothaman

Principal Scientist, CIFE, Mumbai

Dr. R. S. Biradar

Principal Scientist, CIFE, Mumbai

Dr. M. P. Singh Kohli

Principal Scientist, CIFE, Mumbai

Dr. V. K. Sharma

Principal Scientist and OIC,
CIFE Centre, Rohtak

Dr. S. K. Chakraborty

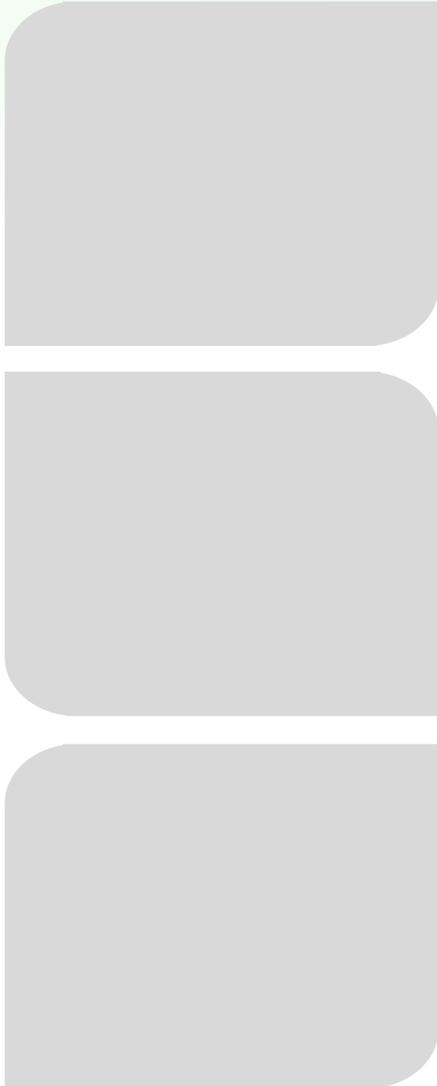
Principal Scientist, CIFE, Mumbai

Dr. K. V. Rajendran

Principal Scientist, CIFE, Mumbai

Dr. P. S. Ananthan

Scientist (S.S.), CIFE, Mumbai



Dr. A. K. Reddy
Senior Scientist, CIFE, Mumbai

Dr. V. K. Tiwari
Senior Scientist, CIFE, Mumbai

Dr. Arpita Sharma
Senior Scientist, CIFE, Mumbai

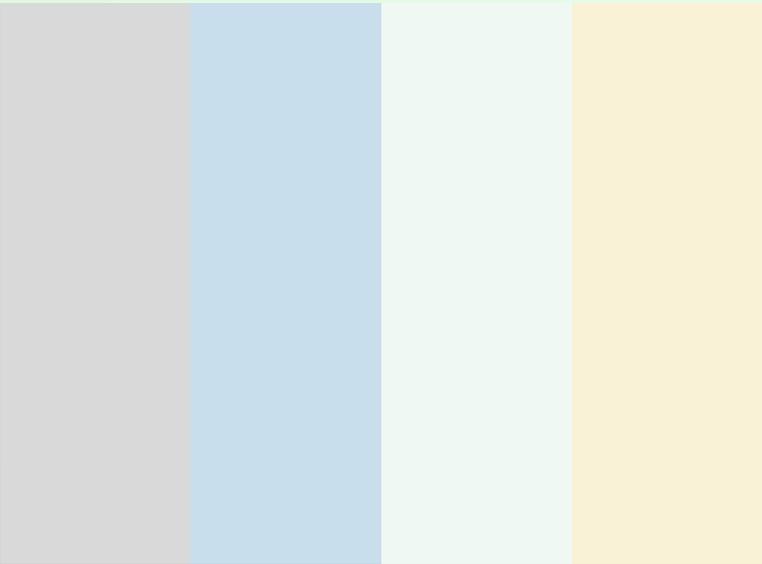
Dr. Kiran Dube
Principal Scientist, CIFE, Mumbai

Dr. G. Venugopal
Principal Scientist and OIC, CIFE
Centre, Kakinada

Dr. Somdutt
Sr. Scientist and OIC, CIFE Centre,
Powerkheda

Member Secretary

Dr. S. N. Ojha
Principal Scientist, CIFE, Mumbai



14. Personnel

Scientist Staff at CIFE Headquarters as on 31st March, 2010

Director

Dr. Dilip Kumar

Joint Director

Dr. R.S. Biradar

Head of Division

Dr. C.S. Purushothaman

Dr. S.K. Chakraborty

Dr. A.K. Pal

Dr. Gopalkrishna

Principal Scientists

Dr. M.P. Singh Kohli

Dr. S.D. Singh

Dr. S. Basu

Dr. K.K. Jain

Dr. (Mrs.) Neelam Saharan

Dr. (Mrs.) Kiran Dube Rawat

Dr. S.N. Ojha

Dr. K.V. Rajendran

Dr. G. Venkateshwarlu

Dr. N.K. Chadha

Dr. (Ms.) Sheila Immanuel

Dr. Nalini Ranjan Kumar

Dr. B.B. Nayak

Senior Scientists

Dr. (Mrs.) Latha Shenoy

Dr. (Ms) Geetanjali Deshmukhe

Dr. (Mrs.) Aparna Choudhari

Dr. P.K. Pandey

Dr. N.P. Sahu

Dr. V.K. Tiwari

Dr. S. Jahageerdar

Dr. Arpita Sharma

Dr. K. Pani Prasad

Dr. R.P. Raman

Dr. A.K. Reddy

Dr. Chandra Prakash

Dr. Ashok Kumar Jaiswar

Dr. R.S. Rana

Dr. Subodh Gupta

Dr. S. Munil Kumar

Dr. Rupam Sharma

Dr. Sumanta Kumar Mishra

Dr. Gayatri Tripathi

Dr. Satya Prakash Shukla

Dr. Swadesh Prakash

Dr. Zeba Jaffer Abidi

Dr. Asha T. Landge
Dr. A. Vennila
Dr. Makesh M
Dr. Dasgupta

Scientist (Senior Scale)

Dr. Suryakant Patil
Dr. S.B. Jadhao
Dr. P.S. Ananthan
Dr. Ajit Kumar Verma

Scientists

Mrs. Paromita Banerjee Sawant
Mrs. Vidyashree Bharati
Ms. Babita Rani A.M.
Mr. Gireesh Babu Pathakota
Mr. Kundan Kumar

Technical Staff

T-9
Mr. N.L. Singh

T (7-8)

Mr. Alkesh Dwivedi
Mr. R.D. Tandel
Mr. S.G.S. Zaidi
Dr. (Mrs.) Rama Sharma
Mr. G.K. Rao
Dr. S.K. Pandey
Mr. S.S. Kamat

T-6

Mr. A.K. Padmanabhan
Mr. D.R. Khogare
Dr. M.K. Chouksey
Mr. S.K. Sharma
Mr. Chandrakant M.H.
Mr. Dasari Bhoomaiah
Mrs. Nalini Poojary
Mr. P.K. Das
Mr. Ram Singh

T-5

Mrs. Madhavi Pikle
Mrs. Rajani H. Khandgale
Mr. J.P. Patil
Mrs. S.M. Bagwe
Mr. K.P. Shetty
Mr. S.M. Shinde
Mr. R.G. Kudale
Mr. Bhagat Singh Rawat
Ms. A. Mehta
Mr. C.B. Kareer
Mr. B.G. Mandhare
Mrs. S.S. Gajbhiye
Mr. J.M. Koli
Mrs. S.P. Nalawade
Ms. Revati B. Dhongde
Mrs. Rekha Nair

T-3

Mr. S.R. Bandkar

Mr. Avinash Sable
Mr. B.T. Phande
Mr. Suryakant L. Koli
Mrs. Bharati Ghagare
Mr. N.K. Aglave
Mr. Baburam Jaiswar
Mr. S.V. Patil
Mr. B.J. Rathod
Mr. Rajarshee Moitra
Mr. Yogesh Jadhao

T-I-3

Mr. S.R. Vinarkar

T-2

Mr. Sikandar Shaikh Hussain
Mr. Arun Anand Puri Gosavi
Mr. A.L. Kokane
Mr. R.D. Deshmukh
Mr. Dhanpat Singh Rawat
Mr. V.G. Dhindore
Mr. V.K. Bhave
Mrs. V.D. Misale
Mr. A.N. Mahadik
Mr. K. Dhana Raju
Mr. Mohd. Baqar
Mrs. Shahila Iftekhar

Administration and Finance

Sr. Administrative Officer
Mr. Suresh Kumar
Finance & Accounts Officer

--

Administrative Officer

--

Assistant Director (Official Language)

Dr. R.P. Uniyal

Assistant Administrative Officers

Mr. Sunil Kumar
Mrs. Valsa Pavithran
Mrs. T. Padmavathi
Mrs. Swati S. Parab
Mr. B.L. Kokkula

Private Secretaries

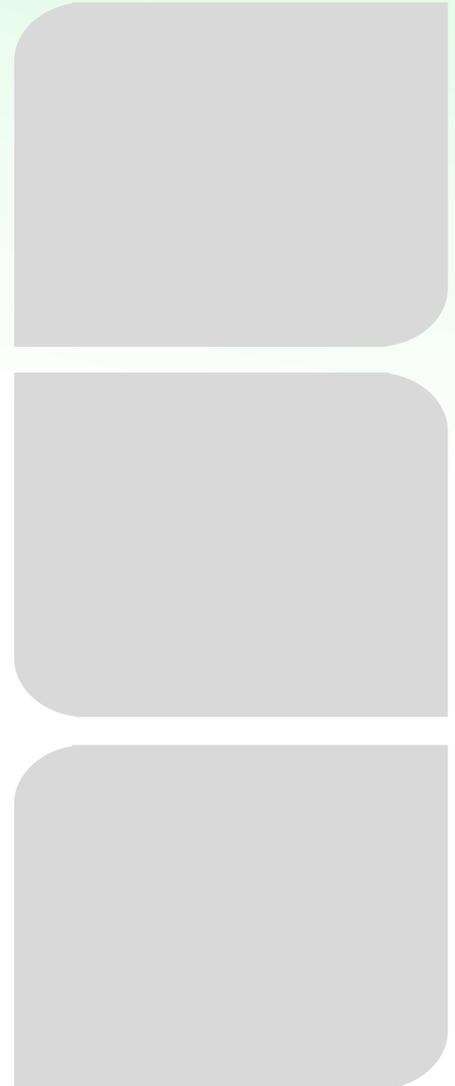
Mr. G.S. Fernandes

Stenographers (Grade-III)

Mrs. S.R. Arutla
Mr. P.R. Ninawe
Mrs. Pragati R. Gadre

Assistants

Mrs. N.Y. Raorane
Mrs. Sushma Singh
Mrs. S.R. Wadhavkar
Mrs. D.N. Behl
Mrs. S.V. Kadam
Mrs. A.A. Shukla



Mrs. D.S. Naik
Mrs. F. G. Fernandes
Ms. C.S. Khundol

Upper Division Clerks

Mr. D.S. Ingale
Mr. R.R. Kadam
Mrs. S.S. Koli
Mr. V.S. Kuveskar
Mr. D.V. Raorane
Mrs. S.V. Pawar
Mrs. A.U. Joshi
Ms. Y.S. Dhatavkar
Mr. A.G. Kolambkar
Mrs. S. S. Parab
Mr. B.P. Chauhan
Mr. P.G. Angne

Lower Division Clerks

Mrs. C.C. Raut
Mrs. Anu Grover
Mr. S.H. Bhosale
Mr. K.K. Jagtap
Ms. N.A. Sawant
Mr. M.B. Waghela
Mr. N.L. Ghane
Mr. Shirish P. Malvankar
Mr. R.N. Kamble

S.S.Gr.IV

Mr. M.R. Wasnik
Mr. V.P. Tiwari
Mr. S.R. Jaiswar

S.S.Gr.III

Mr. B.S. Tamankar
Mr. A.R. More
Mr. D.B. Gaikwad
Smt. V.J. Tambe

S.S.Gr.II

Smt. K.R. Ahire
Smt. Kamla Jai Kishore
Mr. T.G. Gaikwad
Mr. J.K. Makwana
Mr. A.R. Dore
Mr. B.R. Chavan
Mr. M.P. Kotian
Mr. G.B. Kamble
Mr. A.R. Shingade
Mr. J.N. Dhanu
Mr. V.N. Ondkar

S.S.Gr.I

Mr. Vinod Kumar Yadav
Mrs. R.H. Chavan
Mr. A.N. Joyashi
Mr. G.N. Zendekar
Mr. A.D. Sonawane
Mr. Sambhaji S. Shelke
Mr. Deepak M. Bhokase
Mr. Ninad V. Kandalgaonkar

Vessel Staff

Skipper (T-7)

Mr. K. Satyanarayana

Engineer FTV (T-9)

Mr. Josey Jacob

Engine Driver (T-5)

Mr. S.K. Chodankar

Additional Engine Driver (T-6)

Mr. S.L. Kotian

Mate (T-4)

Mr. S. Maity

Deckhands (T-2)

Mr. K.V. Rajendran

Mr. A.P. Dhawade

Cook

Mr. S. Kamaraju

S.S.Gr.IV

Mr. B.N. Sukur

Mr. G.G. Zendekar

S.S.Gr.III

Mr. V.M. Patil

Mr. S.B. Padyal

S.S.Gr.II

Mr. A. Lavande

S.S.Gr.I

Mr. Fakirmiyan U. Mullaji
(7.12.2009)

CIFE Rohtak Centre

Principal Scientist

Dr. V.K. Sharma (Officer-in-charge)

Technical Staff

T-7

Dr. M. Ali

T-6

Mr. Inderjit Singh

T-5

Mr. Ashok Kumar

T-4

Mr. Sanjeevan Kumar

Mr. Hasan Javed

T-2
Mr. Kishan Kumar

Administrative Staff
Upper Division Clerk
Mr. V.K. Sinha

Supporting Staff Grade-II
Mr. Gyani Ram
Mr. Gyan Chand
Mr. Lavesh Kumar

CIFE Powarkheda Centre

Principal Scientist
Dr. Somdutt (Officer-in-charge)

Technical Staff
T(7-8)
Dr. R.K. Upadhyay

T-5
Mr. L.P. Bamalia

T-4
Mr. Gurubachan Singh

T-3
Mr. Anil D. Kulsunge

T-2
Mr. Anup Singh

T-1
Mr. Raghuvir Prasad

Administrative Staff
Assistant
Ms. Asha Dhurve

Lower Division Clerk
Mr. Hari M. Potpose

Supporting Staff

Grade-III
Mr. Hari Singh
Mr. Lallu Prasad
Mr. Vishnu Lal
Mr. Mangli Prasad

Grade-II
Mr. Surendra Kumar
Mr. Ram Keval Prasad
Mr. Shambhu Dayal
Mr. Manoharlal
Mr. Ram Swaroop
Mr. S. Prajapati

CIFE Kakinada Centre

Principal Scientist
Dr. G. Venugopal (Officer-in-charge)

Scientist (Selection Grade)
Mr. S.S.H. Razvi

Scientist
Dr. Sakthivel M. (Dr.M.Abbas)

Technical Staff

T(7-8)
Dr. P. Rami Reddy

T-6
Mr. K.B.S. Murthy
Mr. J. Krishna Prasad
Mr. K. Murali Mohan
Mr. P. Srinivasa Rao
Mr. V.N. Acharyulu

T-5
Mr. K. Radha Krishna Reddy
Mr. B. Krishna Rao
Mr. R.R.S. Patnaik
Mr. P. Satyanarayana

T-I-3
Mr. Y.S. Murty

T-2
Mr. M. Satyanarayana

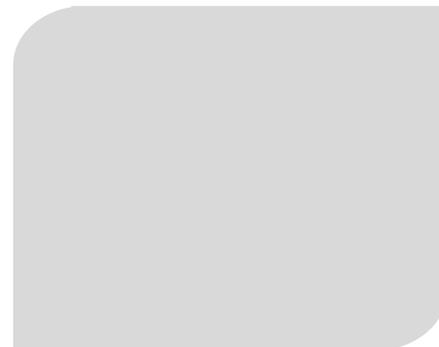
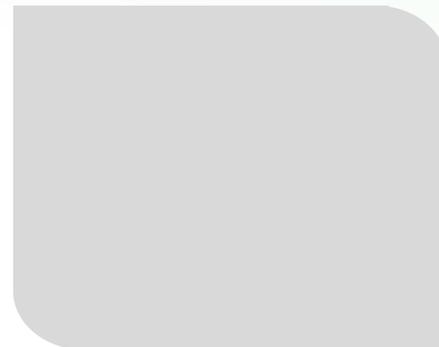
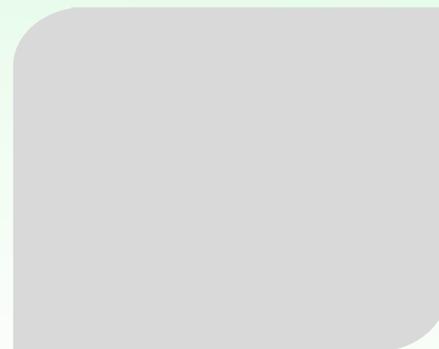
T-1
Mr. A. Gurraiah
Mr. K. Mallaiah

Administrative Staff
Assistants
Mr. P.V.G. Krishnamurthy
Mr. B. Veera Raju

Upper Division Clerk
Mr. B. Laxman Rao

Lower Division Clerk
Ms. M. Rama Mani

Supporting Staff
Grade-IV
Mr. M.H. Reddy
Mr. M. Krishna
Mr. M. Ch. Appa Rao
Mr. Shivaram Kale



Grade-III

Mr. K. Satyanarayana
Mr. K. Niranjan
Mr. N. Venkata Ramana
Mr. K. Prasad

Grade-II

Mr. V. Shivaji
Mr. O. Veeraraju
Mr. T. Satyanarayana
Mr. P.V.K. Reddy
Mr. P.D. Reddy
Mr. S. Valisha
Mr. A.L. Reddy
Mr. S.S. Reddy
Mr. Y. Buchilingam
Mr. M. Govindu
Mr. M.A. Rao
Mr. G.V.V. Satyanarayana
Mr. S.N. Saheb

CIFE Kolkata Centre**Principal Scientists**

Dr. (Mrs.) Archana Sinha (Officer-in-charge)
Dr. R.C. Das

Senior Scientists

Dr. B.K. Mahapatra
Dr. G.H. Pailan
Dr. Shubendu Dutta

Scientists (Selection Grade)

Dr. P.K. Roy

Scientists (Senior Scale)

Dr. Parimal Sardar

Technical Staff**T-6**

Mr. S.K. Sharma

T-4

Mr. P.K. Patra
Mr. R.K. Mondal

T-3

Mr. S.K. Das

T-2

Mr. T.K. Ghosh

**Administrative Officer
Personal Assistant**

Ms. Kaberi Biswas

Upper Division Clerk

Mr. C.N. Sahani
Mr. P.K. De

Lower Division Clerk

Mr. Ram Milan Singh

Supporting Staff**Grade-IV**

Mr. Bhagwat Dhar
Mr. B.D. Mondal
Mr. T.C. Balmiki

Grade-III

Ms. Manju Paul
Mr. R.N. Prasad
Mr. R.N. Das
Mr. R. Chowdhary

Appointments

Sr.No.	Name	Post	Date of Appointment
1.	Dr. R. S. Biradar	Head of Division	15.04.2009
2.	Dr. C. S. Purushothaman	Head of Division	28.04.2009
3.	Dr. A. K. Pal	Head of Division	28.04.2009
4.	Dr. Gopalkrishna	Head of Division	28.04.2009
5.	Dr. S. K. Chakraborty	Head of Division	01.05.2009
6.	Dr. S. Dasgupta	Sr.Scientist	10.06.2009
7.	Dr. Asha T. Landge	Sr. Scientist	17.06.2009
8.	Shri Kundan Kumar	Scientist	20.06.2009
9.	Dr. B. B. Nayak	Principal Scientist	13.07.2009
10.	Dr. A. Vennila	Sr. Scientist	07.07.2009
11.	Shri Murlidhar, P.A.	Scientist	27.08.2009

Promotion

Sr.No.	Name	Post	Date of Appointment
1.	Shri B. Laxman Rao	UDC to Assistant CIFE Kakinada Centre	21.7.2009
2.	Mr. Pradeep Angne	LDC to UDC CIFE, Mumbai	22.7.2009

Promotions (DPC for Administration staff)

S.No.	Name	Designation	Promoted/ Grant of Adv. Increment	Promotion w.e.f. DPC
1.	Ms. C. S. Khundol	UDC	Assistant	01.01.2009
2.	Shri V. K. sinha	UDC	Assistant	01.01.2009
3.	Shri N. L. Ghane	LDC	UDC	01.01.2009
4.	Shri B. P. Chauhan	LDC	UDC	01.01.2009
5.	Shri R. N. Kamble	SSGI	LDC	09.01.2009
6.	Shri B. L. Kokkula	Assistant	Assistant Admn. Officer	01.06.2009

Transfers

S.No.	Name	Designation	From	To	Date
1.	Dr. Shiv Pratap Singh	Scientist	CIFE Kakinada Centre	CIRG, Makhdum	17.01.2009
2.	Dr. M Sakhtivel	Scientist	CIFE Kakinada Centre	CMFRI, Regional Centre, Mandapam	01.04.2009
3.	Mrs. Paromita Banerjee Sawant	Scientist	CMFRI, Mumbai Regional Centre	CIFE HQ Mumbai	01.04.2009
4.	Dr. Suresh Babu	Scientist Centre	CIFE HQ	CIFE Kakinada	05.05.2009
5.	Dr. P. K. Ghosh	Principal Scientist	CIFE, Mumbai	CIFA Regional Centre Rahara (West Bengal)	12.9.2009
6.	Dr. Sudhir Raizada	Principal Scientist	Rohtak Centre	NBFGR, Lucknow	1.9.2009

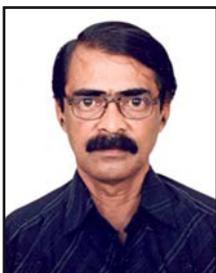
Retirement

Sr.No.	Name	Place	Date of Retirement
1.	Dr. S. C. Mukherjee	CIFE Mumbai	28.2. 2010
2.	Shri S. S. Kocharekar	CIFE, Mumbai	31.05.2009
1.	Mr. Y. Samba Murthy	Kakinada	31.7.2009

Sad Demises

Mr. V. P. Tiwari SS Gr.IV 11 March, 2010

Obituary



It is with great sadness that we bid adieu to Dr. K. Venkateshvaran (26th February, 1955 - 14th August, 2009) who joined CIFE, Mumbai as a Scientist on 22nd March, 1982 and then held the post of Principal Scientist on 29th October, 2008. During his service, he rose through the ranks, relying on his scientific acumen, quick wit and his generous sense of humour. He rendered meritorious services for a period of 27 years 4 months and 24 days.



15. संस्थान की हिन्दी की प्रगति का प्रतिवेदन (1 अप्रैल 2009 से 31 मार्च 2010)

राष्ट्रीय संगोष्ठी

संस्थान के मुख्यालय मुंबई में दिनांक 16 अप्रैल 2009 को "भारतीय प्राचीन ग्रंथों में उपलब्ध मत्स्य एवं मात्स्यिकी सम्पदा" विषय पर एक दिवसीय राष्ट्रीय संगोष्ठी आयोजित की गई। इस संगोष्ठी हेतु आमंत्रित देश भर के सात विशेषज्ञों ने अपने-अपने रोचक लेख पढ़े एवं संगोष्ठी को रोचक एवं ज्ञानवर्धक बनाया।

केन्द्रीय मात्स्यिकी शिक्षा संस्थान एवं उत्तरांचल संस्कृत विश्वविद्यालय के संयुक्त तत्वावधान में दिनांक 28 से 30 जुलाई 2009 तक हरिद्वार में भारत के प्राचीन ग्रंथों में मत्स्य एवं मात्स्यिकी विषय पर एक लेखशाला का आयोजन किया गया। इस लेखशाला का उद्घाटन उत्तराखण्ड के पशुपालन एवं मात्स्यिकी मंत्री माननीय श्री त्रिवेन्द्र सिंह रावत के कर कमलों से दीप प्रज्वलित कर किया गया। इस अवसर पर संस्थान के निदेशक डा. दिलीप कुमार, संयुक्त निदेशक डा. सुभाष चन्द्र मुखर्जी, डा. सुधा पाण्डे, कुलपति, संस्कृत विश्वविद्यालय, हरिद्वार उत्तराखण्ड, प्रो. महावीर अग्रवाल, उपाध्यक्ष उत्तराखण्ड संस्कृत अकादमी, डा. बी. डी. जोशी, विभागाध्यक्ष, हरिद्वार भी उपस्थित थे। इस लेखशाला में कुल 11 लेख प्रस्तुत किए गए। इन लेखों पर गहन चर्चा के बाद इसे पुस्तक के रूप में सम्पादित कर प्रकाशन हेतु उपलब्ध कराया गया। दिनांक 30 जुलाई को लेखशाला का समापन किया गया।

केन्द्रीय मात्स्यिकी शिक्षा संस्थान एवं मत्स्योद्योग संचालनालय-छत्तीसगढ़ के संयुक्त तत्वावधान में भारतीय मत्स्य विकास में विभिन्न राज्यों की भूमिका एवं योगदान का एक दशक (1999-2009) विषय पर रायपुर में दिनांक 12-13 सितम्बर 2009 को दो दिवसीय राष्ट्रीय कार्यशाला आयोजित की गई। इस राष्ट्रीय

कार्यशाला का उद्घाटन 12 सितम्बर 2009 को नवीन विश्राम गृह, रायपुर के सभागृह में छत्तीसगढ़ शासन के कृषि, पशुपालन, मछलीपालन एवं श्रम विभाग के माननीय मंत्री श्री चंद्रशेखर साहू के कर कमलों से दीप प्रज्वलित कर किया गया। इस अवसर पर डा. पी. वी. देहादराय, भूतपूर्व उपमहानिदेशक, भा.कृ.अनु.प. श्री सरदीप मिंज, अपर मुख्य सचिव एवं कृषि उत्पादन आयुक्त - छत्तीसगढ़ शासन, श्री बी. एल. अग्रवाल, सचिव-कृषि एवं मछली पालन, छत्तीसगढ़ शासन, डा. दिलीप कुमार, निदेशक, के.मा.शि.सं. मुंबई डा. एस. सी. मुखर्जी, संयुक्त निदेशक के.मा.शि.सं. मुंबई डा. वी. के. शुक्ला, संचालक मत्स्योद्योग छत्तीसगढ़ शासन विराजमान थे। समारोह की अध्यक्षता डा. एस. एन. द्विवेदी, भूतपूर्व महानिदेशक मध्य प्रदेश विज्ञान एवं प्रौद्योगिकी परिषद ने की।

इस राष्ट्रीय कार्यशाला में कुल 4 तकनीकी सत्र संचालित किए गए। इसके अलावा क्षेत्र भ्रमण व किसान गोष्ठी का भी आयोजन किया गया। इस राष्ट्रीय कार्यशाला से उभर कर आई मुख्य संस्तुतियां इस प्रकार हैं -

1. किसानों को माइक्रोफाइनेंस की सुविधा हो।
2. जलाशयों की लीज 5 वर्ष से बढ़ाकर 10 वर्ष की जानी चाहिए।
3. पंचायत गांव स्तर पर ज्ञान केन्द्र बनाई जाए तथा अनुसंधान एवं विकास योजनाओं में सामंजस्य हो।
4. मछली पालन को कृषि का दर्जा, मत्स्य क्रेडिट कार्ड के साथ महिलाओं की भागीदारी बढ़ाई जाए।

दिनांक 13 सितम्बर 2009 को इस राष्ट्रीय कार्यशाला का समापन किया गया। इस राष्ट्रीय कार्यशाला के समन्वयक संस्थान के सहायक निदेशक (राजभाषा) डा. राजेश्वर उनियाल, एवं तकनीकी अधिकारी श्री प्रताप कुमार दास थे।

राष्ट्रीय कार्यशाला

केन्द्रीय मात्स्यिकी शिक्षा संस्थान, मुंबई के तत्वावधान में दिनांक 11-16 जनवरी 2010 तक हिन्दी का वैश्वीकरण एवं राजभाषा कार्यान्वयन विषय पर एक अल्पकालीन प्रशिक्षण एवं राष्ट्रीय कार्यशाला का आयोजन किया गया। यह कार्यशाला भारतीय कृषि अनुसंधान परिषद के मुख्यालय एवं विभिन्न संस्थानों में कार्यरत राजभाषा कर्मियों के लिए आयोजित की गई थी। इस कार्यशाला को दो भागों में आयोजित किया गया था। प्रथम भाग में विषय विशेषज्ञों के व्याख्यान आयोजित किए गए तथा द्वितीय भाग में प्रतिभागियों के साथ विस्तृत विचार विमर्श किया गया। इसीलिए इस कार्यक्रम का नाम अल्पकालीन प्रशिक्षण एवं राष्ट्रीय कार्यशाला रखा गया। इस राष्ट्रीय कार्यशाला में भारतीय कृषि अनुसंधान परिषद के 21 विभिन्न संस्थानों से 23 प्रतिभागियों ने भाग लिया। इस छह दिवसीय कार्यशाला में प्रत्येक दिन के लिए एक विषय निर्धारित किया गया था। सर्वप्रथम संस्थान के निदेशक, डा. दिलीप कुमार ने सभी उपस्थित प्रतिभागियों का स्वागत किया। कार्यशाला का उद्घाटन मुंबई के प्रखर साहित्यकार एवं वाग्धारा पत्रिका के संपादक डा. वागीश सारस्वत ने दीप प्रज्वलित कर किया।

इसी के साथ विभिन्न सत्रों में परिषद की राजभाषा नीति एवं अनुपालन विषय पर श्री हरीश चन्द्र जोशी, निदेशक, भा.कृ.अनु.प. नई दिल्ली ने, राजभाषा





की वर्तमान स्थिति विषय पर श्री राजेन्द्र रावत, फिल्म प्रभाग, मुंबई ने, हिन्दी का वैश्वीकरण विषय पर डा. राजन नटराजन पिल्लै, संपादक कुतुबनुमा ने, हिन्दी का वैश्वीकरण विषय पर डा. दिवा भट्ट, प्रोफेसर अलमोडा (उत्तराखण्ड) ने, हिन्दी एवं अन्य भारतीय भाषाएं विषय पर डा. सुशीला गुप्ता, निदेशक हिन्दुस्तानी प्रचार सभा ने, हिन्दी की गौरव गाथा विषय पर डा. राजेश्वर उनियाल, सहायक निदेशक (राजभाषा) ने, विपणन के क्षेत्र में हिन्दी विषय पर श्री संजीव निगम, साहित्यकार ने, राजभाषा नीति नियम एवं व्यवहारिक पक्ष विषय पर डा. एम. एल. गुप्ता, उपनिदेशक, राजभाषा विभाग मुंबई ने, संसदीय राजभाषा समिति का निरीक्षण विषय पर डा. राजेश्वर उनियाल, सहायक निदेशक (राजभाषा) ने, सूचना प्रौद्योगिकी में हिन्दी विषय पर श्री कलीम उल्लाह खान, सहायक निदेशक (राजभाषा) एम.टी.एन.एल ने, वैज्ञानिक शब्दावली व अनुवाद विषय पर श्री नरेश कुमार, केन्द्रीय अनुवाद ब्यूरो ने तथा देवनागरी लिपि एवं वर्तनी विषय पर डा. कामिनी गुप्ता, हिन्दी शिक्षण योजना, मुंबई ने व्याख्यान दिए। इसी के साथ श्री प्रताप कुमार दास ने हिन्दी का भावी परिदृश्य विषय पर डा. बालकवि बैरागी, पूर्व सांसद, नीमच म. प्र. द्वारा प्रस्तुत आलेख एवं श्रीमती रेखा नायर ने संसदीय राजभाषा समिति की प्रश्नावली विषय पर डा. कृष्ण कुमार गौरव, नई दिल्ली का प्रस्तुत आलेख पढा।

श्री सी.पी.सिंह, अभिषेक कुमार, श्री पी. राव, डा. धीरज शर्मा, डा. जेस्सी जोसेफ, डा. अंजेश कुमार, श्री दीप कुमार ठाकुर, श्री आर. एस. गौतम, श्री महेश गुप्ता आदि कई प्रतिभागियों ने भी अपने विचार प्रस्तुत किए। इस छह दिवसीय अल्पकालीन प्रशिक्षण एवं राष्ट्रीय कार्यशाला की सबसे महत्वपूर्ण उपलब्धि यह रही कि इस कार्यशाला में भा.कृ.अनु.प. के विभिन्न संस्थानों में कार्यरत राजभाषा कर्मियों ने भाग लिया तथा उन्होंने राजभाषा संबंधी व्यवहारिक कठिनाईयों एवं समस्याओं पर विस्तृत चर्चा कर ठोस संस्तुतियां दी। कार्यशाला के प्रारंभ एवं अंत में समस्त प्रतिभागियों को इस कार्यशाला से संबंधित मूल्यांकन प्रपत्र भी दिए गए। कार्यशाला से पूर्व मूल्यांकन प्रपत्र में कुल 7 प्रश्न दिये गए थे तथा अन्त में चार महत्वपूर्ण विषयों पर प्रश्न पूछे गए थे। दोनों मूल्यांकन प्रपत्रों के विश्लेषणात्मक तथ्य भी प्रस्तुत किए गए। कार्यशाला के अन्त में दिनांक 16 जनवरी 2010 को समस्त प्रतिभागियों को डा. सुभाष चंद्र मुखर्जी, संयुक्त निदेशक एवं श्री हरीश चन्द्र जोशी, निदेशक, भा.कृ.अनु.प. नई दिल्ली के कर-कमलों से प्रमाण-पत्र प्रदान किए गए।

संस्थान एवं बिहार सरकार के संयुक्त तत्वावधान में राष्ट्रीय लीची अनुसंधान संस्थान, मुजफ्फरपुर में दिनांक 5-6 दिसम्बर 2009 तक "मन एवं चौर में मात्स्यिकी विकास के लिए तकनीकी उपलब्धि कराना" संबंधी विषय का दो दिवसीय कार्यशाला आयोजित की गई।

हिन्दी पखवाड़ा

संस्थान में प्रतिवर्ष की भांति इस वर्ष भी हिन्दी पखवाड़ा आयोजित किया गया। दिनांक 12-13 सितम्बर 2009 को रायपुर में इस पखवाड़ा का उद्घाटन समारोह सम्पन्न हुआ एवं संस्थान में दिनांक 15 से 29 सितम्बर 2009 तक हिन्दी पखवाड़ा के अन्तर्गत विभिन्न कार्यक्रमों एवं प्रतियोगिताओं का आयोजन किया गया। दिनांक

8 अक्टूबर 2009 को संस्थान में हिन्दी पखवाड़ा का समापन समारोह आयोजित किया गया । इस हेतु पखवाड़ा में आयोजित विभिन्न प्रतियोगिताओं (निबंध/लेखन/महिला दिवस एवं अन्य प्रतियोगिताओं) में विजयी प्रतिभागियों को नगद पुरस्कार, प्रोत्साहन भत्ता एवं प्रमाण - पत्र देकर पुरस्कृत किया गया ।

नगर राजभाषा कार्यान्वयन समिति उत्तर मुंबई (कार्यालय)-

चौपाल

केन्द्रीय मात्स्यिकी शिक्षा संस्थान, उत्तर मुंबई की नगर राजभाषा कार्यान्वयन समिति, उत्तर मुंबई (कार्यालय) का अध्यक्षीय कार्यालय भी है । इस वर्ष नराकास के तत्वावधान में दिनांक 16 दिसम्बर 2009 को केन्द्रीय कपास प्रौद्योगिकी अनुसंधान संस्थान, माटुंगा में नगर राजभाषा कार्यान्वयन समिति, उत्तर मुंबई (कार्यालय) के समस्त कार्यालयों हेतु सरकारी कार्यालयों में हिन्दी समस्याएं व समाधान एवं बाजार की हिन्दी और हिन्दी का बाजार विषय पर एक चौपाल का आयोजन किया गया । इस चौपाल में संस्थान के डा. राजेश्वर उनियाल, सदस्य सचिव (नराकास उत्तर मुंबई कार्यालय) सहायक निदेशक (राजभाषा) ने हिन्दी चौपाल की पृष्ठभूमि पर प्रकाश डाला । श्री प्रताप कुमार दास, तकनीकी अधिकारी (राजभाषा), सुश्री रेवती धोंगडे, तकनीकी अधिकारी (राजभाषा) तथा श्रीमती रेखा नायर, तकनीकी अधिकारी (राजभाषा) ने भी चौपाल में भाग लिया ।

बैठक

दिनांक 13 मार्च 2009 को नगर राजभाषा कार्यान्वयन समिति, उत्तर मुंबई (कार्यालय) की 7 वीं बैठक का आयोजन किया गया, जिसमें संबंधित कार्यालयों से प्रस्तुत तिमाही प्रगति प्रतिवेदनों की समीक्षा की गई ।

शैक्षणिक -

जलवाणी

संस्थान के एम. एफ. एस. सी के छात्र-छात्राओं हेतु प्रतिवर्ष दो समूहों में हिन्दी जलवाणी पाठ्यक्रम संचालित किया गया तथा शैक्षणिक वर्ष के प्रथम सत्र के अंत में संबंधित लिखित परीक्षा भी संचालित की गयी । उक्त परीक्षा हेतु प्रश्न-पत्र तैयार कर प्रस्तुत किए गए तथा अन्य आवश्यक कार्रवाई की गई ।

शोध सारांश

इस संस्थान के एम.एफ.एस.सी/पी.एच.डी. के समस्त छात्र-छात्राओं के शोध निबंधों/प्रबंधों में हिन्दी सारांश भी प्रस्तुत किया जाता है ।

प्रश्न मंच प्रतियोगिता

केन्द्रीय मात्स्यिकी शिक्षा संस्थान, विश्वविद्यालय स्तर का शैक्षणिक संस्थान होने के कारण संस्थान में इस वर्ष (2009) से संस्थान के मेधावी छात्र-छात्राओं के लिए इस संस्थान ने प्रत्येक वर्ष हिन्दी में विश्वविद्यालय स्तरीय प्रतियोगिता आयोजित करने का निर्णय लिया गया । तदनुसार वर्ष 2009-10 के लिए शिक्षा

दिवस (11 नवम्बर 2009) के उपलक्ष्य में संस्थान के छात्र-छात्राओं के लिए एक प्रश्न मंच प्रतियोगिता आयोजित की गई ।

1) प्रथम पुरस्कार	श्री शशि भूषण सुश्री रेमया	- FGB - P H T
2) द्वितीय पुरस्कार	श्री दीपांग जोन कश्यप श्री मुलीयस	- M.F.Sc. 1 - M.F.Sc. 1
3) तृतीय पुरस्कार	श्री मुजाइद खान श्री रवेश	- FGB - AEM
4) प्रोत्साहन पुरस्कार	श्री अविनाश रसाल श्री नयन मकवाना	- FGB - FGB
5) प्रोत्साहन पुरस्कार	श्री किरण श्री चंदन	- FGB - FEX

प्रकाशन

1. भारत के प्राचीन ग्रंथों में उपलब्ध मत्स्य एवं मात्स्यिकी पुस्तक प्रकाशन हेतु उपलब्ध कराया गया ।
2. संस्थान की गृहपत्रिका जलचरी अंक 17 को मुद्रित किया गया ।
3. संस्थान का वार्षिक प्रतिवेदन 2007-08 का हिन्दी प्रतिवेदन उपलब्ध कराया।
4. संस्थान का समाचार पत्र मत्स्य दर्पण अंक 44-45 एवं 46 को द्विभाषी मुद्रित किया गया ।

प्रतिनिधित्व

डा. राजेश्वर उनियाल, सहायक निदेशक (राजभाषा) ने दिनांक 23-24 अप्रैल 2009 को " राष्ट्रीय अस्मिता के संवर्धन में अनुवाद की भूमिका" विषय पर केन्द्रीय मात्स्यिकी प्रौद्योगिकी संस्थान, कोच्चीन में आयोजित दो दिवसीय राष्ट्रीय संगोष्ठी में भाग लिया ।

भारतीय राजभाषा परिषद, नई दिल्ली द्वारा दिनांक 9 से 11 दिसम्बर 2009 तक जगन्नाथधाम पुरी, उड़ीसा में आयोजित तीन दिवसीय राष्ट्रीय संगोष्ठी में संस्थान के संयुक्त निदेशक डा. सुभाष चन्द्र मुखर्जी ने भाग लिया ।

दिनांक 28 से 30 जुलाई 2009 तक हरिद्वार में "भारतीय प्राचीन ग्रंथों में उपलब्ध मत्स्य एवं मात्स्यिकी सम्पदा" विषय पर आयोजित लेखशाला में संस्थान के निम्नलिखित अधिकारियों ने भाग लिया –

डा.दिलीप कुमार	निदेशक
डा.एस.सी.मुखर्जी	संयुक्त निदेशक
डा. अर्पिता शर्मा	वरिष्ठ वैज्ञानिक
डा. एस. पी. शुक्ला	वरिष्ठ वैज्ञानिक
डा. आर. पी. उनियाल	सहायक निदेशक (रा.भा.)
श्री प्रताप कुमार दास	तक.अधिकारी (रा.भा.)
श्री भूमैया	तकनीकी अधिकारी
श्री आर. पी. शर्मा	तकनीकी अधिकारी

दिनांक 12-13 सितम्बर 2009 को रायपुर में केन्द्रीय मात्स्यिकी शिक्षा संस्थान एवं संचनालय, मात्स्यिकी, छत्तीसगढ़ के संयुक्त तत्वावधान में “भारतीय मत्स्य विकास में विभिन्न राज्यों की भूमिका एवं योगदान का एक दशक” विषय पर आयोजित राष्ट्रीय संगोष्ठी में निम्नलिखित अधिकारियों ने भाग लिया –

डा.दिलीप कुमार	निदेशक
डा.एस.सी.मुखर्जी	संयुक्त निदेशक
डा. कमलकांत जैन	प्रधान वैज्ञानिक
डा. एस. पी. शुक्ला	वरिष्ठ वैज्ञानिक
डा. राजेश्वर उनियाल	सहायक निदेशक (राजभाषा)
श्री प्रताप कुमार दास	तकनीकी अधिकारी (राजभाषा)
श्री वी. एस. परमार	प्रशासनिक अधिकारी

अन्य

विश्व स्वास्थ्य दिवस के अवसर पर संस्थान में दिनांक 22 सितम्बर 09 को आर.जी.स्टोन अस्पताल, खार रोड, मुंबई के डा. हेमेन्द्र शाह, ने स्वास्थ्य संबंधी विषय पर रोचक व्याख्यान दिया ।

16. कार्यकारी सारांश

वर्तमान वर्ष में संस्थान ने अध्यापन नियामकों की कमी को दूर कर अध्यात्मिक एवं शैक्षणिक दक्षता के अवसरों को मजबूत किया है। छात्रों को शैक्षणिक, पूर्ण प्रायोगिक एवं क्षेत्र आधारित ज्ञान दक्षता को बढ़ावा दिया गया जिसमें 45 दिनों का ट्रेनिंग कार्यक्रम विभिन्न क्षेत्रों में दिए गए। आज के वैश्विक युग में संसाधनों के निरंतर उपयोग के लिए अनुसंधान कार्यक्रम के द्वारा तकनीक एवं तकनीकी उपकरणों का विकास, पुनः संशोधन तकनीक और गुणवत्ता बढ़ोत्तरी महत्वपूर्ण स्थान रखते हैं। भारत सरकार मानव संसाधन मंत्रालय द्वारा गठित टेन्डन कमिटी के अध्ययन में संस्थान का मूल्यांकन देश में टी.आई.एफ.आर (टाटा इन्स्टीट्यूट ऑफ फण्डामेन्टल रीसर्च) और आई.आई.एस. (इण्डियन इन्स्टीट्यूट ऑफ साइन्स) के साथ “ब्राइट स्पॉट” रूप में किया गया है।

जो संस्थान के मानव संसाधन के विकास क्षमता एवं दक्षता को दृष्टिगोचर करता है जैसा कि के.मा.शि.सं. मत्स्य विज्ञान में पी.एच.डी. एवं स्नातकोत्तर डिग्रियां प्रदान करती है। इसलिए सभी परियोजनाएं पूर्णतः उपयोगिता के आधार पर हैं। कुल 25 संस्थागत अनुसंधान परियोजनाएं जिनमें 22, बाह्यनिधि परियोजनाएं 2, अन्तरराष्ट्रीय परियोजनाएं 7, एन.ए.आई.पी. द्वारा प्राप्त वित्त परियोजनाएं, और एक संविदा अनुसंधान परियोजनाएं चला रही है। ये सभी अनुसंधान परियोजनाएं अन्तर शाखा एवं अन्तर विभागीय हैं। जबकि बाह्यनिधि परियोजनाएं बाह्य कारकों के प्रधान क्षेत्रों में एवं संस्थागत परियोजनाएं, संस्थान के मूल्यां एवं अनुसंधान सलाहकार समिति (RAC) के विधिवत निर्देशन पर आधारित है। अन्तर विभागीय अनुसंधान परियोजनाओं के चयन का मुख्य उद्देश्य इन परियोजनाओं के विभिन्न व्यवसायिक क्षेत्रों में समस्याओं एवं भविष्य में निहित समस्या के समाधान एवं अग्रणी

अवसरों के निर्माण तथा उपयोगिता को बढ़ाने के आधार पर किया गया है । व्यवसायिक टाइगर श्रिंप (पीनीयस मोनाडॉन का व्यवसायिक उत्पादन गत वर्ष की अपेक्षा अधिक एवं उल्लेखनीय रहा है) ।

टाइगर श्रिम्प का पालन, वर्ष में दो फसल के उद्देश्य से किया गया और समयवधि के अन्त में प्रथम फसल 90 दिनों में पूरा कर लिया गया । प्रयोग दो 0.25 हेक्टेअर के समान तालाब में किए गए और कुल 404 किलो श्रिम्प (1617 किलो/प्रति हेक्टेअर) 82% उत्तरजिविता पहले तालाब से तथा कुल 420 किलो (1680 किलो/हेक्टेअर) एवं 72% उत्तरजिविता से दूसरे तालाब में, उत्पादन पाया गया । संस्थान का मुख्य उद्देश्य बड़े क्षेत्र के अनुपयोगी लवण प्रभावित मृदा बाढ़ग्रसित और पंकयुक्त स्थल संसाधन का प्रयोग करना है । संस्थान ने इस संदर्भ में एक पदचिन्ह महाराष्ट्र के कराड तालुका जिले में एन.ए.आई.पी. उपपरियोजना के द्वारा “ए वेल्यू चैन ऑन फिस प्रोडक्शन इन फ्रेजाइल एग्रीकल्चरल लैण्ड एण्ड अनयुटिलाइज्ड एक्वेटिक रिसॉर्सेस इन महाराष्ट्र” के अन्तर्गत बनाया है । जहां दो कार्प कृषि और दो कार्प बिज पालन का पूर्ण कार्यान्वयन शेरी एवं गाण्डी गांव के किसानों के सम्मिलित भूमि पर कर दी गई है । जिसमें कार्प का पालन एवं बीज उत्पादन पूर्णतः सफल रहा और 700 से 1200 ग्राम तक की वृद्धि 8 से 9 महीने में पाई गई । उसी प्रकार झींगा मछली में बीमारी की समस्या का समाधान, WSSV, IHHNV, HPV और MBBV का पीसीआर से गुणन, गुणसूत्र क क्रमबंधन एवं एन्टीसेन्स, एस. आई. आर. एन. ए. पद्धति से उसका प्रायोगिक आंशिक समाधान भी किया गया । अनुसंधान निरंतर रूप से प्रदेशीय तकनीकी ज्ञान के विकास के लिए लगातार कार्यशालाएं आयोजित करती रही है । मात्स्यिकी से निरंतर विकास की प्रबलता और दृढ़ता के ध्यान में रखकर संस्थान ने BQBP - IGO के सहयोग से उत्तरदायित्वपूर्ण मात्स्यिकी हेतु आचार संहिता कोड आफ कन्डक्ट आफ फिसरीज पर अन्तरराष्ट्रीय प्रशिक्षण का आयोजन किया ।

वर्तमान वर्षावधि में 13 पी.एच.डी. और 40 एम.एफ.एस.सी. और 69 एम.एफ.एस.सी. सत्र के लिए नामांकित किए गए । गतवर्षों की तरह संस्थान ने 26 सीटों में से 23 कृषि अनुसंधान वैज्ञानिकों की सीट आई. सी. ए. आर., (ए.आर.एस.) परीक्षा 2009-10 में प्राप्त किया । छात्रों ने एन. डी. आई. करनाल (हरयाणा) में आयोजित अन्तर विश्वविद्यालय क्रीड़ा संकुल 2010 में 13 स्वर्ण, 7 रजत, एवं 5 कांस्य पदक प्राप्त किए । इसके साथ ही सर्वश्रेष्ठ महिला खिलाड़ी, सर्वश्रेष्ठ पुरुष खिलाड़ी एवं स्वच्छ क्रीड़ा पुरस्कार पाकर संस्थान को गौरवान्वित किया । वर्तमान वर्ष चिर अविलंबित विकास की अवधि भी रही जिसमें संस्थान की नए मूलभूत व्यवस्था जैसे होस्टल, वैज्ञानिक निवास, इन्डूर क्रीड़ा संकुल, स्टाफ क्वाटर्स और निदेशक निवास के निर्माण का शिलान्यास एवं प्रारंभ हुआ । संस्थान में महत्वपूर्ण, वैज्ञानिक महाकुंभ, “20 वां अखिल भारतीय जूलोजी कांग्रेस” और “बायोरीसार्स एण्ड इक्ट मेनेजमेंट फॉर फुड, लाइलीहुड एण्ड इन्वाइरोमेन्ट सेक्युरिटी” पर राष्ट्रीय सम्मेलन का सफलतम संचालन किया ।

संस्थान का नौवां दीक्षांत समारोह का संचालन 19 अप्रैल 2009 को पूर्व राष्ट्रपति डा. ए. पी. जे. अब्दुल कलाम के साथ किया गया। डी. एस. सी. की उपाधि रतन टाटा और प्रोफेसर हीरालाल चौधरी को उनके मातृस्यकी के क्षेत्र में बहुमूल्य योगदान को देखते हुए प्रदान किया गया।

वर्तमान वर्ष में संस्थान की विकास यात्रा में कुल 43 अनुसंधान पत्रों की भूमिका भी महत्वपूर्ण है जो ऊंचे इम्पैक्ट फेक्टरस एवं उच्च मूल्य पत्रिकाओं में आकर संस्थान के अनुसंधानिक विकास की सबलता को दृढ़ करता है।

अनुसंधान के नियमित कार्यक्रमों में एस.आर.सी., आर.ए.सी. बोर्ड आफ मेनेजमेंट, एकाडेमिक काउन्सिल एवं एक्टेन्शन काउन्सिल की बैठकें पूर्ण नियोजित रही तथा संस्थान के वैज्ञानिकों ने विभिन्न स्थानों में आयोजित 53 वर्कशॉप / सेमीनार/ सम्मेलन/ कांग्रेस तथा 7 ट्रेनिंग प्रोग्राम / विन्टर स्कूल, 8 ब्रेन स्टारमिंग सेशन, 26 बैठकों और 21 आमंत्रित व्याख्यानों में भाग लिया। कुल 29 बैठकें, वर्कशॉप, कानक्लेव और 1 सी. ए. एफ. टी. कार्यक्रम आयोजित किए।

जलकृषि विस्तार एवं उद्देश्य का संशोधन तथा विकास को सुनिश्चित करने के लिए संस्थान ने बहुत सारे क्षेत्र आधारित कार्य अनुसंधान परियोजनाएं कार्यान्वित किए हैं। अनुसंधान ने जलकृषि प्रसार के लिए ट्रिक्ल डाउन सिस्टम प्रसार के द्वारा किसानों के सक्रिय भागीदारी विशिष्ट आधारित जलकृषि तकनीक स्थानांतरण आधारित कार्यक्रमों से महत्वपूर्ण प्रभाव उत्पन्न किए। जिसमें कुल 53 अल्पकालीन प्रशिक्षण कार्यक्रम, 4 विभिन्न केन्द्रों पर आयोजित किए गए। जिसमें 1013 प्रतिभागियों ने भाग लिया। संस्थान ने देश के विभिन्न भागों में 34 प्रदर्शनियों का आयोजन किया। संस्थान 2250 विद्यार्थियों, किसानों, शिक्षाविदों, नीति निर्धारकों और संस्थान व्यवसायिकों के द्वारा अवलोकित हुआ है।

