

CIFE NEWS

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FROM THE DIRECTOR'S DESK

Development of any food farming sector largely depends upon appropriate technologies, national resource base, availability of finance, institutional environment, and facilitating policy. In India, we have no dearth of aquafarming technologies appropriate to various agro-climatic zones/conditions. We have plenty of natural resources which are still unutilized/under-utilized. The country has several ongoing schemes that offer subsidies/input assistance. Through the quality of extension services, separate departments of fisheries at State level provide technical assistance to farmers. Despite all these, the lack of proper fisheries and aquaculture policy in the country is one of the major handicaps for the effective and sustainable utilization of aquatic resources for development of fisheries and aquaculture in the country. Most of the countries in the world today already have their fisheries and aquaculture policy in place. Thus, a need has been felt to have a comprehensive policy framework for fisheries and aquaculture in the country. As fisheries is a State subject, hence, every State and UTs must have their own fisheries and aquaculture policy depending on their aqua-climatic conditions, priorities and needs. At the same time we also must have our own national level policy frame work and both should be in conformity with each other. We must take a bottom up approach with the involvement of all stake holders in formulating the policy frame work.

During this period, CIFE conducted a "Participatory Review Workshop for Fisheries and Aquaculture Development in Bihar" in partnership with the Department of Fisheries, Government of Bihar during 23-24 July 2006 at Patna. An "Action Plan for Fisheries and Aquaculture Development in Bihar" was formulated during the workshop and submitted to the Govt. of Bihar for the development of natural resources of the state for productive, profitable and sustainable fisheries and aquaculture.

The fisheries and aquaculture policy initiative is the niche area for CIFE and a major research project of the Institute. To achieve the goal, CIFE has planned to conduct five Zonal level consultations covering all states and UTs of the country. The first such Zonal workshop on fisheries and aquaculture policy for North Eastern States of India has been conducted in December 2006 at Guahati the second one is planned to be held in Hyderabad covering all the East Coast States of India.

CIFE also organized a National Seminar on Fisheries of North-Eastern States at Guahati, Assam on 6 December, 2006 in Hindi to create awareness among the local population about more efficient utilization of the vast aquaculture resources available in the region. The Seminar got a very good response from scientists, officials and academicians apart from fish farmers, NGOs and fishery entrepreneurs of all the slst&IC States.



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Research Highlights

Thermal Ecological Studies in Kaiga

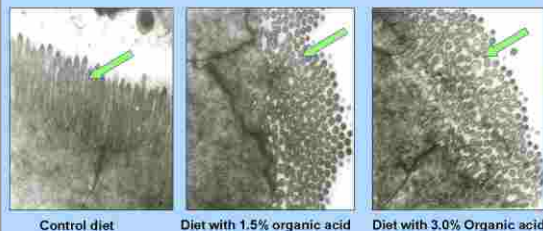
CIFE, Mumbai, conducted thermal ecological studies in association with BARC, to assess the impact of thermal effluents from nuclear power plant in Kaiga on some important fish species of Kali River, Karnataka. Thermal tolerance and metabolic responses of 9 different fish species were assessed based on physiological, biochemical and molecular tools. Laboratory studies on thermal tolerance limits of important fishes of Kadra reservoir (*Gonoproktopterus curmuca*, *Danio aequipinnatus*, *Eetroplus suratensis*, *Horabragrus brachysoma*, *Labeo calbasu*, *Mastocembelus armatus*, *Ompok malabaricus*, *Parluciosoma daniconius* and *Puntius filamentosus*) was established by critical thermal methodology (CTM). This method effectively generated baseline data on the impact of warm water discharges from Kaiga nuclear power plant on the fishes of Kadra reservoir. CTM method serves as an effective tool to suggest the cultural potential of new candidate species in wide agro-climatic regions of the country.



Dietary Nutraceuticals for Aquaculture

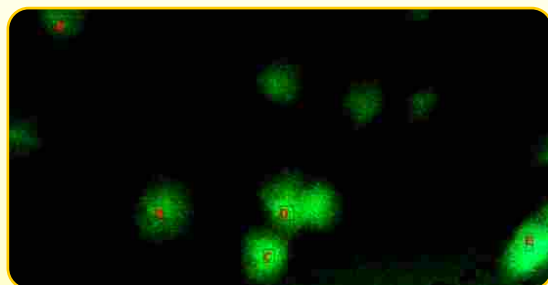
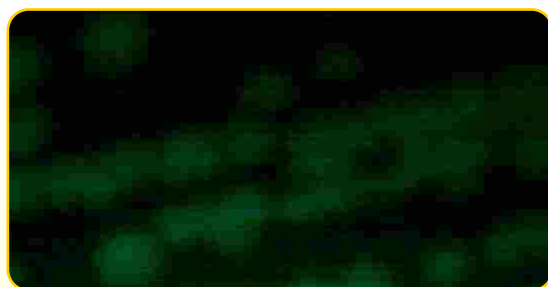
Dietary supplementation of microbial phytase derived from *Aspergillus niger* significantly improved the growth performance and bone mineralization of *Pangasius pangasius* and *Labeo rohita* fingerlings. Supplementation of citric acid (3%) and microbial phytase (500 IU) has shown further improvement of growth parameters in *L. rohita*, which can be effectively utilized for reducing water pollution and improving nutrient availability of low cost plan based feeds.

Organic acids influences nutrient absorption by increasing the surface area of the microvilli (Electron microscopic photograph of intestinal lumen of *Labeo rohita*)



Development of Bacterial Lead Biosensors

CIFE has completed lab tests on two bacterial lead biosensors that have been designed to detect Pb from lead resistance operon on plasmid pMOL30 of *Ralstonia metallodurans*, to drive the expression of green fluorescent protein (GFP). The first narrow range biosensor estimates Pb^{2+} concentrations between 100 - 400M and the other between 100 - 8000 μ M Pb^{2+} . Water samples collected from natural sources can be sterilized and used to make media for growing the biosensor. Fluorescence and cell density measurements made after 12 h of growth in LB broth can be used to find the bioavailable Pb ion concentration in water by means of a simple formula. No fluorescence is produced in the absence of Pb ions. The biosensor is not induced by Hg or Cd and only minimally at very high concentrations of Zn.



Awards / Honours / Recognitions

Awards / Honours / Recognitions

- ❖ Dr. Dilip Kumar, Director CIFE has awarded by Indian Society of Environment Education and Research (ISEER), Jodhpur.
- ❖ Dr. Dilip Kumar has been awarded by Ashirwad Swasti Chinh by Ashirwad a literary cultural organization based in Mumbai for promotion of official language (Hindi) for the year 2006-'07.
- ❖ Dr. Dilip Kumar, Director CIFE has been bestowed with Zoological Society of India Gold Medal for his outstanding contribution in fisheries research and education.
- ❖ Dr. A. K. Pal, Principal Scientist, Division of Fish Nutrition and Biochemistry, Central Institute of Fisheries Education, Mumbai, has been awarded "Bharat Ratna Dr. C. Subramaniam Award for Outstanding Teachers" for the biennium 2004-'05 for excellent teaching in fisheries science. The



Award, which carries a certificate, a cheque of Rs. 50,000/- and a citation, was presented to him by Shri Akhilesh Prasad, Union Minister of State for Food, Govt. of India in a ceremony on August 18, 2006 at New Delhi.

- ❖ Dr. A K Pal, Principal Scientist, Central Institute of Fisheries Education, Mumbai has been admitted as a Fellow of National Academy of Veterinary Sciences (India) at the 5th Convocation of the Academy at the College of Veterinary Science & Animal

Husbandry, JNKVV, Jabalpur in recognition of his significant contributions.

- ❖ He has also been honoured with the Fellowship of the Linnean Society of London for the cultivation of the Science of Natural History especially in branch of ecophysiology of fishes.
- ❖ Dr. Ram Singh, Technical Officer, CIFE Mumbai was awarded "Best Paper Award" for his presentation on "Mapping of Fisheries Profile of Gujarat state through GIS in XXVI INCA International Congress at New Delhi, 22-24 November, 2006.

Dr Sanjay Jadhao selected as an Associate of NAAS



Dr. Sanjay Jadhao, Scientist, Division of Fish Nutrition & Biochemistry, CIFE, Mumbai is one of the eight scientists (below 40 years of age) selected from all over the country across disciplines during 2006 by National Academy of Agricultural Sciences (NAAS) as an Associate. The selection is w.e.f. from Jan 1, 2007 for the period of five years. Out of total 25 associates selected so far, Dr. Jadhao is the only animal/fish nutritionist.

Career Advancement

Name	From	To
Scientist		
1. Dr.R.P.Raman	Scientist (SS)	Scientist (SG)
2. Dr.M. Makesh	Scientist	Scientist (SS)
3. Dr.K. Venkateshwaran	Scientist (SG)	Sr. Scientist
4. Dr.V.K.Tiwari	Scientist (SG)	Sr. Scientist
Administrative		
1. Shri Ashok G.Kolambkar	LDC	UDC
Technical		
1. Smt.V.D.Misale	T-1	T-2
2. Dr.R.S.Rana	T-6	T-7-8
3. Shri A.D.Ragabhatg	T-6	T-7-8
4. Shri V.N.Acharyulu	T-5	T-6
5. Shri S.P.Singh	T-5	T-6

वार्षिक दिवस 2006 का आयोजन

संस्थान में दिनांक १० जुलाई २००६ को वार्षिक दिवस समारोह का आयोजन किया गया। इस कार्यक्रम में मुख्य अतिथि विश्व खाद्य पुरस्कार विजेता एवं प्रसिद्ध मत्स्य वैज्ञानिक डॉ. एम. वी. गुप्ता थे। संस्थान के निदेशक डॉ. दिलीप कुमार ने अपने स्वागत भाषण में संस्थान की उपलब्धियों का संक्षिप्त ब्योरा प्रस्तुत किया। डॉ. गुप्ता ने केन्द्रीय मात्सिकी शिक्षा संस्थान, मुंबई के क्रियाकलाप, शिक्षा एवं अनुसंधान कार्य की सराहना की तथा संस्थान के निदेशक डॉ. दिलीप कुमार के मात्सिकी विकास के क्षेत्र में योगदान की भूरि-भूरि प्रशंसा की। इस अवसर पर संस्थान के वार्षिक पुरस्कारों की भी घोषणा की गई। मुख्य अतिथि के कर कमलों से ये पुरस्कार प्रदान किये गये। इसी के साथ एक सांस्कृतिक संध्या का भी आयोजन किया गया जिसमें कई ख्याति प्राप्त कलाकारों तथा संस्थान के विद्यार्थियों, कर्मचारियों एवं उनके बच्चों ने आकर्षक कार्यक्रम पेश किये



के. मा. शि. सं. मुंबई को आशीर्वाद प्रथम पुरस्कार

संस्थान को आशीर्वाद संस्था द्वारा मुंबई स्थित भारत सरकार के केन्द्रीय कार्यालयों द्वारा राजभाषा हिन्दी में सर्वाधिक कामकाज करने के लिए प्रथम पुरस्कार के रूप में २००६ का आशीर्वाद चल वैजयन्ती प्रदान किया गया।

संस्थान के वार्षिक पुरस्कार 2006

सर्वश्रेष्ठ विभाग : मात्सिकी स्रोत प्रबंध विभाग
सर्वश्रेष्ठ वैज्ञानिक : डॉ. अर्चना सिन्हा
(कोलकाता केन्द्र)
सर्वश्रेष्ठ युवा वैज्ञानिक : डॉ. बी. बी. नायक,
सर्वश्रेष्ठ शिक्षक : डॉ. जी. वेंकटेश्वरलू,
सर्वश्रेष्ठ तकनीकी कर्मचारी : डॉ. ए.के. रेड्डी
सर्वश्रेष्ठ प्रशासनिक कर्मचारी : श्री जोगेंद्र सिंह,
सर्वश्रेष्ठ सपोर्टिंग कर्मचारी : श्री शिरीश मालवणकर,
सर्वश्रेष्ठ हिन्दी में कार्य : श्रीमती एम.रमा मणी, काकिनाडा केन्द्र
सर्वश्रेष्ठ प्रौद्योगिकी हस्तांतरण : डॉ. आलोक कुमार जैन, लखनऊ केन्द्र
सर्वश्रेष्ठ मत्स्य किसान : श्री अमूल्य कुमार दास, श्री जयनयालमन चिली, श्री अनिल सक्सेना
सर्वश्रेष्ठ स्कूली छात्र : मास्टर संजोग एस. गजभिए, स्वाति रायजादा
डॉ. हीरालाल चौधरी अवार्ड
सर्वश्रेष्ठ युवा वैज्ञानिक : डॉ. पी. राउतराय (सीफा, भुवनेश्वर)



काकिनाड़ा केंद्र में हिन्दी पखवाड़ा का आयोजन

संस्थान के काकिनाडा केन्द्र में दिनांक १४-२८ सितम्बर २००६, तक हिन्दी पखवाड़ा का आयोजन किया गया। कार्यक्रम का उद्घाटन डा. के. एल. टी. भीमरेड्डी, हिन्दी विभागाध्यक्ष जी. बी. आर. कालेज, अनापती ने किया। पखवाड़ा के दौरान विभिन्न कार्यक्रमों कविता, कहानी, चुटकुले, वर्णमाला इत्यादि का आयोजन किया गया।

भारत के उत्तर-पूर्वी राज्यों की मात्स्यिकी विषय पर गुवाहाटी में राष्ट्रीय संगोष्ठी

केन्द्रीय मात्स्यिकी शिक्षा संस्थान, मुंबई द्वारा दिनांक ६ दिसम्बर २००६ को होटल अंबरीश, गुवाहाटी में राजभाषा हिन्दी में "भारत के उत्तर-पूर्वी राज्यों की मात्स्यिकी" विषय पर राष्ट्रीय संगोष्ठी का आयोजन किया। संगोष्ठी का उद्घाटन भारतीय कृषि अनुसंधान परिषद के भूतपूर्व उप महानिदेशक (मत्स्य) डॉ. पी. वी. देहादराय के कर कमलों से किया गया। संस्थान के निदेशक डा. दिलीप कुमार ने अतिथियों का स्वागत करते हुए इस संगोष्ठी की आवश्यकता पर प्रकाश डाला। संयुक्त निदेशक डॉ. सुभाष चन्द्र मुखर्जी ने संगोष्ठी की रूपरेखा प्रस्तुत की। इस अवसर पर असम राज्य के मत्स्य निदेशक डॉ. ए. के. राय एवं असम मत्स्य विकास निगम के अध्यक्ष डॉ. देवेश्वर मलाकर ने भी अपने विचार व्यक्त किए।

इस संगोष्ठी में कुल ३६ पेपर प्राप्त हुए जिनमें से ६ अतिथि वक्ताओं सहित ३ तकनीकी सत्रों के अन्तर्गत कुल २१ पेपर प्रस्तुत किए गए। संगोष्ठी में भारत के विभिन्न संस्थानों से ८० प्रतिनिधियों ने भाग लिया। इस अवसर पर एक सांस्कृतिक संध्या का आयोजन किया गया जिसमें स्थानीय असमी कलाकारों तथा प्रतिभागियों ने हिस्सा लिया।



ARS Forum Lecture Series

ARS Forum, CIFE, Mumbai, organized a talk on "Rainwater Harvesting and Recycling for Better Water Management" by Dr. Shashidhar R. Kashyap, Sr. Manager of Eureka Forbes Ltd., Mumbai. Dr. R. P. Raman, Sr. Scientist Co-ordinated the lecture series.



हिन्दी पखवाड़ा 2006 का आयोजन

केन्द्रीय मात्स्यिकी शिक्षा संस्थान, मुंबई में दिनांक 14 सितम्बर 2006 को हिन्दी पखवाड़ा का आयोजन किया गया। कार्यक्रम का उद्घाटन संस्थान के निदेशक एवं कुलपति डा. दिलीप कुमार ने दीप प्रज्वलित कर किया। इस अवसर पर संस्थान के प्रधान वैज्ञानिक डॉ. एस. डी. सिंह ने मंच एवं सभा में उपस्थित सभी अतिथियों का स्वागत करते हुए कर्मचारियों एवं अधिकारियों से अपील किया कि हिन्दी पखवाड़ा के अन्तर्गत होनेवाले कार्यक्रमों में भाग लें। निदेशक महोदय ने अपने अध्यक्षीय भाषण में संस्थान की हिन्दी की उपलब्धियां पर प्रसन्नता व्यक्त किया, साथ ही यह भी सुझाव दिया अभी इसे और भी प्रगति करनी है। संस्थान की पत्रिका जलचरी को उत्कृष्ट एवं लोकप्रिय बनाने हेतु इसमें उच्च कोटि के वैज्ञानिक लेखों का समावेश किया जाए। श्री. राजेश्वर प्रसाद उनियाल ने संस्थान में हिन्दी की उपलब्धियों पर प्रकाश डाला। वरिष्ठ वैज्ञानिक डॉ. आर. पी. रमण ने हिन्दी पखवाड़ा के अन्तर्गत आयोजित होने वाली विभिन्न प्रतियोगिताओं की रूपरेखा प्रस्तुत किया। प्रधान वैज्ञानिक डॉ. एम. पी.

सिंह कोहली एवं संयुक्त निदेशक डॉ. सुभाष चन्द्र मुखर्जी की उपलब्धियां एवं इसे और अधिक लोकप्रिया बनाने हेतु महत्वपूर्ण सुझाव भी दिए। श्री प्रताप कुमार दास, तकनीकी अधिकारी (रा.भा.) ने मंच संचालन किया।



के. मा. शि. सं., मुंबई में वीडियो कान्फेरेंसिंग की शुरुआत

संस्थान के निदेशक डा. दिलीप कुमार के अन्तरराष्ट्रीय अनुभव एवं विशेष प्रयास से संस्थान में विडियो कान्फेरेंसिंग की सुविधा प्रारंभ की गई है। इस क्रम में, सबसे पहला विडियो कान्फेरेंसिंग फ्रांस के प्रसिद्ध वैज्ञानिक संस्थान INRA के वैज्ञानिकों के साथ की गई।

राजभाषा कार्यान्वयन समिति की बैठक

संस्थान में दिनांक 17 अगस्त 2006 एवं 29 दिसम्बर 2006 को क्रमश 53 एवं 54 वीं राजभाषा कार्यान्वयन समिति की बैठक का आयोजन किया गया।

नगर राजभाषा कार्यान्वयन समिति की बैठक

संस्थान में दिनांक 14 जुलाई 2006 को नराकास की बैठक का आयोजन किया गया। इसमें कुल 65 कार्यालयों ने भाग लिया। इसी के साथ, हिन्दी पखवाड़ा 2006 के दौरान नराकास हेतु विभिन्न प्रतियोगिता जैसे सुलेख, भाषण, निबंध, गीत, कविता इत्यादि का भी आयोजन किया गया एवं पुरस्कार तथा प्रमाण पत्र वितरित किए गए।



Participatory Review Workshop for Fisheries and Aquaculture Development in Bihar



A 'Participatory Review Workshop for Fisheries and Aquaculture Development in Bihar' was jointly organised by Department of Fisheries, Government of Bihar and Central Institute of Fisheries Education, Mumbai during 23-24 July 2006 in Patna. The Honourable Dy Chief Minister who also holds charge of Animal Husbandry and Fisheries, Government of Bihar inaugurated the workshop. Dr Dilip Kumar, Director CITE chaired the session, while Shri Amir Subhani, Secretary, Department of Animal Husbandry and Fisheries, Bihar was the Guest of Honour. Scientists from



CIFE, CIFRI, CIFA, College of Fisheries along with the District Fisheries Officers. Fisheries Extension Officers and other staff of Department of Fisheries were delegates who actively reviewed the present scenario of fisheries and aquaculture development, charted out the major issues and suggested a suitable action plan to overcome these challenges.

The workshop was conducted in a truly participatory way. There were three technical sessions. During the first session three sub-groups namely, Kosi, Gandak and Sone conducted the "SWOL Analysis of Open Water Bodies (churs and mauns)", "Ponds/tanks and Seed Supply and

Marketing" in separate groups, and the summary was discussed in a joint session. The second session was devoted to identifying the "HRD and policy requirements", followed by development of Suitable Action Plan for each of the identified challenges and opportunities. In the concluding session, the DFOs/FEOs, NGOs shared field experiences including video footages, followed by training need assessment and feedback session. The workshop has created lot of excitement, enthusiasm and energy among all the participants.



The workshop has also helped in bringing the agenda of fisheries development into the mainstream in Bihar with lot of electronic and print media covering the program in detail.

Finally, an "Action Plan for Fisheries and Aquaculture Development in Bihar" was formulated and submitted to the Govt of Bihar for the development of natural resources of the state for productive, profitable and sustainable fisheries and aquaculture so as to meet the local



demand, and enhance the nutritive and livelihood security of the Fishers / farmers as well as consumers.

Zonal Workshop on Policy Issues and HRD in Fisheries and Aquaculture for North Eastern States, Guwahati (Assam), 7 - 8, December 2006

Central Institute of Fisheries Education, Mumbai, and Department of Fisheries, Govt. of Assam, jointly organized a Zonal Workshop on Policy Issues and HRD Needs in Fisheries and Aquaculture for North Eastern States consisting of Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Arunachal Pradesh and Sikkim



The specific objectives of the zonal workshop included reviewing the policy related issues and recommend inputs for developing policy to support sustainable fisheries and aquaculture development, critically examining the services delivery systems in terms of its adequacy, accessibility and quality, and evolve an effective model with approaches and strategies and assessing the present human resource status as well as the future requirements for fisheries and aquaculture development, and prepare strategies for HRD.



The participants included academicians, researchers, department of fisheries officials, extension officers, representative fishers, farmers, representatives of NGO's, Co-operatives and industry from different North Eastern States in addition to the policy makers and experts from across the country.

CIFE Celebrates National Science Day

The National Science Day was celebrated on 28th February, to mark the discovery of "Raman Effect" by the great Indian Scientist Sir C. V. Raman. On this occasion an eminent scientist of TIFR, Bhatnagar Award laureate, Dr. Girjesh Govil, FNA was the chief guest while Dr. Dilip Kumar, Director and Vice Chancellor, CIFE, presided over the function. Dr. Govil presented a talk on status of scientific research in India. Dr. R. P. Raman, Sr. Scientist, CIFE Mumbai co-ordinated the programme.

Brainstorming Session on "Your Vision of Fisheries Education and Research in India".

To promote awareness and understanding of fisheries science, a "Brainstorming Session on "Your vision of Fisheries Education and Research in India" was organized on 28 February. In this programme, many scientists and faculty members of CIFE and Mumbai Regional Centre of CMFRI participated and deliberated on various issues. Dr. R. P. Raman, Sr. Scientist, CIFE Mumbai, was the convener of the Brainstorming Session.

CALENDER OF EVENTS

Dr. Dilip Kumar, Director CIFE participated in the following meetings programmes etc. :

- ✳ ICAR oversight committee on OBC reservation held in New Delhi on 70-9 August 2006.
- ✳ Participated in the 11th Plan Committee of Fisheries at Kolkata on 29 August 2006.
- ✳ Participated in the oversight sub-committee meeting on OBC with Chairman and members of planning commission at New Delhi on 23 August 2006.
- ✳ Attended meeting on perspective plan at ICAR, New Delhi on 28-29 August 2006.
- ✳ Attended the meeting of the reconstituted Task Force on Aquaculture & Marine Biotechnology, New Delhi on 3-4 September 2006.
- ✳ Attended the inaugural function of National Fisheries Development Board, Hyderabad on 9 September 2006.
- ✳ Attended the DPC meeting for merit promotion of Scientific staff in the discipline of Fish & fishery Science on 11-12 September 2006 at CMFRI, Cochi.
- ✳ Attended short course on Vigilance Administration and Management at NAARM Hyderabad from 18-20 September 2006.

Dr. S. C. Mukherjee, Joint Director attended the following programmes / meetings etc. :

- ✳ 31st Board of Management Meeting at CIFE, Mumbai held on 7.7.2006.
- ✳ Nagar Rajbhasha Karyanvayan Samiti, 2nd Meeting at CIFE, Mumbai, held on 14.7.2006
- ✳ Attended awareness programme on "Aquatic Species Introduction and Quarantine" jointly organized by NBFGR and CIFE at Mumbai and Lecture on Overview of Fish Quarantine, held on 25.7.2006
- ✳ M.F.Sc. and Ph.D. syllabi of Fish Pathology and Microbiology Meeting for the revised syllabi held on 3-4.8.2006.
- ✳ NAIP - Meeting with delegates from other organizations at CIFE held on 19.08.2006.
- ✳ Visited Powarkheda alongwith other officers to assess the loss at the centre held on 23-24 August, 2006.
- ✳ Board of Examination Meeting and viva examination for thesis held on 05.09.2006
- ✳ Departmental Promotion Committee (DPC) at CMFRI, Cochin held on 11-13 Sept. 2006

- ✳ Academic Council Meeting, at Mumbai held on 12.10.2006.
- ✳ Meeting with Dr. A.B. Mandal, Director, Seed project at CIFE held on 24.10.2006
- ✳ Meeting of the sub-group VII on Fisheries Cooperatives, Public Private Participation / Fisheries Financing and Governance convened by Dr. Sudhir Bhargava at CIFE held on 27.10.2006
- ✳ Meeting with DOD team for Algal Biodiversity Project at CIFE held on 03.11.2006
- ✳ Tour to Kolkata - Guwahati - Kolkata - Mumbai for NE-Zone on Policy issue and HRD at Guwahati held on 4-9.12.2006
- ✳ **Dr. R.S. Biradar, Principal Scientist** attended meeting at New Delhi in connection with identifying properties in social sciences research in fisheries and aquaculture during 26-27 September 2006.
- ✳ **Dr. R.S. Biradar and Mr. D. Bhoomaiah**, Tech. Officer, attended short course on GIS application in Land Resource Management during 31st July to 4 August 2006 at ICRISAT, Hyderabad.
- ✳ **Drs. S.D. Singh, Principal Scientist, Aparna Chaudhari, and K.V. Rajendran** Senior Scientists, attended the Network Meeting on Biotechnology Research in Fisheries and Aquaculture, NRC for Coldwater Fisheries, Bhimtal, 22nd to 23rd September, 2006.
- ✳ **Dr. K.V. Rajendran**, Senior Scientist, attended the following programmes / meetings :
 - ✳ Fish Parasitologists in Fisheries and Aquaculture, Fisheries Division, ICAR, New Delhi on 13-11-2006.
 - ✳ Invited as speaker and resource person in the training workshop on Application of PCR for improved management of shrimp disease in the Asian region- PCR training workshop at Central Institute of Brackishwater Aquaculture, Chennai (23rd to 26 October 2006) jointly organized by CSIRO, Australia, MPEDA, and ICAR.
 - ✳ Invited as speaker at the Seventh Asia Pacific Marine Biotechnology Conference (APMBC) organized by the National Institute of Oceanography, Cochin (2nd to 5th November 2006). Paper presented- Shrimp domestication programmes: Status and issues.

- ✦ **Dr. Ram Singh, Tech. Officer** has participated in XXVI INCA International Congress organized in New Delhi (22-24 Nov.2006).

EVENTS

- ✦ An interactive meeting on "Guiding Principles Underlying the Draft National Policy for Farmers" was convened on July 10, 2006.
- ✦ Aquatic Species Introduction and Quarantine Awareness Programme Meeting was conducted on 25 July, 2006.
- ✦ A major revamping and upgradation of syllabi of M.F.Sc. and Ph.D. was conducted at CIFE w.e.f. 25-26 August, 2006. In this marathon meet several experts from different disciplines of fisheries science in the country including the faculties of CIFE were called to revise and upgrade the syllabi with latest knowledge inputs.
- ✦ Drs. M. Makesh, Scientist (SS) and K.V. Rajendran, Senior Scientist, carried out a detailed investigation on the mass mortality of catla and rohu at the Fish-prawn Farming Consortium, Kaikallur, Krishna District, Andhra Pradesh (3rd to 7th July 2006). Mortalities in these fishes have been occurring for quite long and the Farming Consortium had sought the help of experts to study the problem. On-farm and detailed laboratory investigations have been carried out and the investigation report has been submitted to the Commissioner of Fisheries, Andhra Pradesh and other officials and farmers.

Extension Council meeting :

Extension Council meeting was conducted on 27th Jan.,06.

Farmers Meet :

A Farmers Meet cum HACCP Workshop was conducted on 23.03.06 with MPEDA.

Exhibitions :

CIFE put up an exhibition at NIO, Goa during 23-24 February, 2006. The exhibition was inaugurated by noted fisheries scientist Dr. S. Z. Rasim and Dr. S. R. Shetye, Director, NIO.

Fishers Advisory services :

During this period 204 letters were dispatched to the interested farmers, entrepreneurs, business, visitors etc. and their queries solved.

Closure of CIFE Lucknow Centre, Chinhat

As per the orders of ICAR, New Delhi, CIFE Lucknow Centre at Chinhat has been closed and the farm facilities and infrastructures have been transferred to NBFGR, Lucknow.

TRANSFER OF TECHNOLOGY

CIFE has successfully trained the unemployed youth and women from different part of the country in field of aquarium management, ornamental fish breeding and



culture techniques. About 20 entrepreneurs trained from CIFE have established ornamental fish shop in the Mumbai and Maharashtra state and they are earning more than 20000/- per month. The institute has also trained State Govt. officials in the ornamental fish culture techniques. The breeding and rearing techniques of more than 30 species of exotic and indigenous varieties of ornamental fish have been standardized. The institute has taken lead in ornamental plant propagation and culture techniques, and also in maintenance of marine aquarium.

IMPORTANT VISITORS

Mr. Pradeep Kumar, Minister of Fy., M. P. visited CIFE on 10.11.2006

Dr. S. J. Kaushik, Vice President INRA, France visited CIFE and delivered a lecture in the Conference Hall, New Campus held on 13.11.2006

SHORT TERM TRAINING PROGRAMMES

CIFE Hq, Mumbai

Sr. No.	Names of the STTP	Duration	No. of Participants
1	Management of giant freshwater prawn hatchery and grow-out system	01-14 Aug., 2006	11
2	Aquarium management and ornamental fish culture	11-20 Sept., 2006	11
	Total		22

CIFE, Powarkheda Centre :

Sr. No.	Names of the STP	Duration	No. of Participants
1	Carp breeding and seed rearing	20-29 July,06	05
2	Farm management	18-27 Sept., 2006	10
3	Reverine fisheries management and harvesting	03-07 Jyuly,06	05
5	Fish in village	01-05 Aug., 2006	11
6	Carp culture	04-10 Sept., 06	17
8	Integrated fish farming	11-17 Sept., 06	18
9	Prawn culture	12-18 Sept., 06	10
	Total		76

CIFE, Kakinada Centre :

Sr. No.	Names of the STTP	Duration	No. of Participants
1	Brackishwater aquaculture in fisheries prawn harvesting management	04-13 Sept., 06	18
2	Fish and prawn culture	16-25 Sept., 06	37
3	Fish and prawn culture	06-15 Nov., 06	41
4	Fish and prawn culture	20-29 Nov., 06	40
5	Fish and prawn culture	04-12 dec., 06	33
	Total		169

CIFE Rohtak Centre :

Sr.No.	Names of the STTP	Duration	No. of Participants
1	Saline water aquaculture	18-23 Sept., 06	22
	Total		22

CIFE Lucknow Centre :

Sr.No.	Name of the STTP	Duration	No. of Participants
1	Hatchery and grow out accept of Indian Fisheries	16 April to 15 Oct., 06	15
	Total		15
	Grant Total		473

Exhibitions Organized :-

Sr. No.	Names of the Exhibition and Venue	Date
1	Confederation of Indian Industry (Western Region) Mumbai	04 Aug., 06
2	National Fisheries Development Board, Hyderabad	09 Sept., 2006
3	10th National Expo, Kolkata	01-08 Sept., 2006
4	Aquaculture and Fisheries NBFGR, Lucknow (U.P.)	21-22 Dec,06
5	Sustainable Fisheries Development for Food and Health Security, Mangalore	20-21 Dec.,2006

Student visitors to CIFE :-

Sr. No.	Primary	U.G.	P.G.	Others	Fisheries Graduates
1	40	50	12	12	08
2	74	05		15	
3		37			30
4		55	16		09
5		22			16
6	250	110			
7		110			
8	620	20			
9		60			
10		45			
11	230	44	100		36
Total	1140	627	133	12	112
Grant Total		1193			

CIFE Students' News

Career Achievements

- ◆ Mr. Dipesh Debnath, an M.F.Sc. and Ph.D. student of CIFE has got selected as a Scientific Officer (B) in the prestigious Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research (TIFR), Mankhurd, Mumbai.
- ◆ Mr. Biswajit Debanth has joined as a Subject Matter Specialist (T-6) in KVK, Tripura.
- ◆ Ms. Manmeet Kaur Nalwa has joined as a Farm Manager in State Fisheries Department in J & K.
- ◆ Dr. Harendra Prasad, a Ph.D. Scholar of CIFE has been selected as Assistant Director of Fisheries, Govt. of U.P.
- ◆ Mr. Raj Naresh Gopal, a M.F.Sc. student of CIFE has been selected as Assistant Director of Fisheries, Govt. of U.P.
- ◆ Ms. Garima Bajpeyi, a M.F.Sc. student of Fish Nutrition & Biochemistry has joined as Fisheries Officer in Department of Fisheries, Govt. of U.P.



& Microbiology) and Ph.D. Scholar has been selected as ARS Scientist in Fish & Fisheries Science.

Best Thesis Award

- ◆ Mr. Gireesh Babu has been awarded Dr. Jahilal Endowment Gold medal for Best M.F.Sc. thesis, "Design and Engineering of Biosensor Gen Constructs to Sense Aquatic Heavy Metal Toxicity in Aquatic Environment".



- ◆ Mr. Shivendra Kumar, a Ph.D. Scholar of CIFE has won the Best Thesis Award for his M.F.Sc. thesis titled "Effect of gelatinization and exogenous amylase on nutrient in the diet of *Labeo rohita* fingerlings" by PFGF, Mumbai.

Achievements in Higher Studies Abroad

- ◆ Mr. Amrish Sharma has joined Cell and Molecular Division of University of Hawaii, USA for Ph.D.
- ◆ Mr. Rajeev Kumar has joined University of British Columbia, Canada for Ph.D.
- ◆ Mr. Saugat Mishra has got selected for M.S. (Toxicology) in University of Saskatchewan, Canada.
- ◆ Mr. Jiwan Chetty has got selected for M.S. (Agricultural Biotechnology) in Ben Gurion University, Israel.



Achievements in ARS Examination

- ◆ Ms. Lopamudra Sahoo, M.F.Sc. (Fish Pathology & Microbiology) and a Ph.D. student of CIFE has been selected in ARS as Scientist (Aquaculture).
- ◆ Mr. Binod Kumar Chaudhary, M.F.Sc. (Fish Genetics & Biochemistry) and a Ph.D. student has joined ARS as Scientist (Fish & Fisheries Science).
- ◆ Mr. Kathirvel Pandian, M.F.Sc. has joined ARS as Scientist (Fish & Fisheries Science).
- ◆ Mr. Kuntia Murmu, M.F.Sc. (Fish Pathology



Election of New PGSSU Office Bearers

Post	Name of student elected
1. President	Mr. E. Suresh
2. Vice President	Mr. A. P. Muralidhar
3. General Secretary	Mr. S. Praveen
4. Finance Secretary	Mr. V. V. Ghotane
5. Student Representative to Academic Council	Mr. T. Chakraborty
6. Library Secretary	Mr. J. Cheriyan
7. Cultural and Literary Secretary	Mr. S. K. Das
8. Sports Secretary	Mr. C.S.Tejal
9. Class Representative	Ms. F. S. Hameed
10. Class Representative	Mr. S. Das
11. Class Representative	Mr. P. L. Lalrinsanga
12. Institute Representative from CIFA	Mr. N. B. P. Nanda

NEWS FROM CIFE KAKINADA CENTRE

Human Resource Development

During the period under report, a total of 18 training programmes were conducted at CIFE Kakinada Centre and hundred and sixty five trainees underwent training in different aspects of freshwater and brackishwater aquaculture. The In-service officers / students / entrepreneurs / farmers of different states were benefited from these programmes. Details are given in Table 1.

S. No.	Duration	No. of participants	Status of participants
1	3-7 July, 06	13+2	Fish Farmer / Fishery officers

3. Bihar Farmers sponsored by fish farmers Development Agency :

Under Raasthreyee Samvikas Programme Rohtas and Vaisali district farmers sponsored by FFDA were given training, the details of which are as follows :

3.1. Training Programmes sponsored by FFDA Rohtas:

A total of 76 fish farmers sponsored by FFDA, Rohtas covering Rohtas, Gaya, Kaimur, Siwan, and East Champaran districts of Bihar were given training on “Kaarp evam magur machili me beej utpadan evam palan” The programme covered all the aspects of breeding and culture of carps and magur fish. They were taken to field visits in the areas of East, West, and Krishna districts and Kolleru area for fish seed and culture tanks. The farmers interacted with the AP farmers, scientists and technical personnel. Details of the three programmes are shown below :

S.No.	Date/Duration	No. of participants
1	10-19 July, 2006, 10days	26(25 farmers and 1 officer)
2	8-17 Aug 2006 , 10 days	25
3	5-14 sept, 206 , 10 days	25

3.2 Training programme sponsored by FFDA, Vaishali district:

Two training programmes on “Fish & Prawn culture” were conducted for 71 farmers and four officers. Important topics covered were management practices of pond, feed, health, water & soil analysis three days field visits to fish culture tanks, fish hatcheries, processing units, seed transportation, seed tanks and harvesting of the ponds were shown at East and West Godavari districts & Krishna districts. Personal Interaction with A.P. farmers and technical personnel were also arranged. Details are as follows :

S.No.	Date/Duration	No. of participants
1	4-13 December, 06 10 days	35(33farmers & 2 officers)
2	18-27 December,06, 10days	40 (38 farmers,& 2 officers)

4. Training Programme for Bihar Government sponsored Farmers:

Under the instructions from Shri Sushil Kumar Modi, Hon'ble Deputy Chief minister and Minister for Animal Husbandary and Fisheries, Govt. of Bihar, the Directorate of Fisheries, Bihar, has decided to send 1000 fish farmers for training in modern fish culture technology at CIFE Kakinada Centre. Accordingly, a batch of 40 farmers from Bihar was deputed to CIFE Kakinada center from August 2006 onwards. So far, 4 batches underwent training on fish and prawn culture The farmers and officers were given hands-on training. An illustrative manual in Hindi language was provided. Farmers were taken on three days field trip to carp culture tanks, scampi farm and commercial marketing and packaging centers in West Godavari and East Godavari and Krishna Districts.

S. No.	Date/duration	No. of participants
1	22-31 August, 2006, 10 days	42 (40 farmers and 2 officers)
2	16-25 Sept, 2006, 10 days	39 (37 farmers and 2 Officers)
3	6-15 Nov, 2006, 10 days	43 (41 farmers and 2 Officers)
4	20-29 November,2006, 10 days	42 (40 farmers and 2 officers)
	Total	158 farmers and 8 Officers



Shri M. M. Pallam Raju, Hon'ble Union Minister of State for Defence, Dr. Dilip Kumar, Director CIFE, Mumbai, Dr. T. Rajyalaxmi, Ex-Director, CIBA, Shri Ram Gopal Principal, SIFT, Kakinada and Dr. G. Venugopal during the Validictory Function of First Batch of Bihar Fish Farmers at CIFE Kakinada held on 31.8.2006

5. Training programme for Industrial Fisheries students of Bihar:

A total of 19 B. Sc. students from Jawaharlal Nehru College, Delhi-on-Sone (Rohtas) underwent training during 4-13 Sept. '06 on Brackishwater Aquaculture and Giant Prawn Hatchery Management in English medium. Classroom lecture, on-farm demonstrations and field visits to East Godavari, West Godavari and Krishna district and prawn culture ponds etc., were arranged. Interactions with all farmers were also arranged.

6. Training programme on Magur hatchery and culture techniques :

A total of 7 participants from A. P., Maharashtra, Tamilnadu, under-went training programme during 28th July to 3rd August, 2006. They were demonstrated various aspects of magur breeding, hatchery management seed rearing, and culture techniques through on-farm demonstrations and field visits.

News from CIFE Kolkata Centre

A. Training Programmes:

1. *Organized:* "Management of Ornamental fish culture" from 4-10 August, 2006, Total No. of participants - 8.
2. Dr. Subhendu Datta, Scientist (SS) and Dr. Parimal Sardar, Scientist (SS), *Attended* Refresher Course on, "Complementary role of livestock and fisheries in sustainable hill farming" from 9th - 29th August, 2006 attended by organized by Division of Animal Production, ICAR Research Complex for NEH Region, Barapani, Meghalaya.
3. 23 in-service candidates from different State Fisheries Dept. admitted in one-year PG Diploma course on Inland fisheries of CIFE, Kolkata Centre started from 1st Sept, 2006.
4. Dr. Archana Sinha, Sr. Scientist, attended the training programme on, "Hindi me Computer ka Aadharbhoot Gayan" organized by Rajbhasha Bibhag Kolkata on 9-13 Oct, 2006.

B. Seminars / Symposia / Workshop :

Organized:

State level Workshop on "Emerging challenges in sustainable fisheries management in W.B." from 5-6

April, 06 jointly organized by State Fisheries Dept. of W.B. and CIFE, Mumbai.

Participated:

1. Dr. P.K.Ghosh, Principal Scientist, attended a Seminar on "Indigenous Knowledge & Technology" on 24.6.06 organized by Social, Environmental and Biological Association (SEBA), Kolkata at Bidhannagar, Govt College, Kolkata.

C. Exhibitions/Demonstrations:

1. An exhibition stall on behalf of CIFE was opened in 10th National Expo held on 1-8 Sept, 2006 at Baranagar, Kolkata, organized by Central Calcutta Science & Culture Organization for Youth.
2. An exhibition cum demonstration stall was opened on behalf of CIFE at Rajendra Agricultural University, Pusa, Bihar, on 2-5 March, 2006.
3. An exhibition cum demonstration stall was opened on behalf of CIFE at Pailan, Meen Bhavan, Kolkata, for State level Workshop on "Emerging challenges in sustainable fisheries management in W.B." from 5-6th April, 06 jointly organized by State Fisheries Dept. of W.B. and CIFE, Mumbai.

News from CIFE Powarkheda Centre

Training programmes.

Following Short Term Training Programmes were conducted during at CIFE Powarkheda Centre during the reported period. A total 203 personnel were trained through above STPs during reported period.

Table : Short Term Training Programs at Powarkheda

S. No.	Name of The Training Programme	Category
1	STTP on "Nadi Jal prabhandan aur matsyakhet" (03-07 July, 2006).	SHG Farmers from Tah. Budhani & Tah. Sohagpur sponsored by ADF, Hoshangabad.
2	STTP on "Carp breeding and seed rearing" (20-29 July 06).	Local farmers and students from Dept. of Limnology, Bhopal.
3	STTP on 'Gramin talabon men matsya paalan' (Hindi) (1-5 th August, '06).	SHG fish farmers from village Gurjadwada, Tah. Babai, Dist. Hoshangabad, sponsored by ADF, Hoshangabad.
4	STTP on "Carp seed production and fish culture" (04-10 September, '06).	Dept. of Industrial Fish & Fisheries, Jawaharlal Nehru College, Dehri-On-Sone, Rohtas (Bihar).
5	STTP on "Carp seed production and fish culture" (11-17 th September, '06).	Dept. of Industrial Fish & Fisheries, Jawaharlal Nehru College, Dehri-On-Sone, Rohtas (Bihar).
6	STTP on 'Prawn culture' (12-18 September, '06).	Private fish farmers from Vaishali Dist. Hajipur, sponsored by DFO, Hajipur (Bihar).
7	STTP on 'Freshwater farm management' (18-27 September, '06).	Local fish farmers and students from dist. Hoshangabad, M.P.
8	STTP on 'Gramin talabon men matsya paalan' (8-12 October, '06).	SHG fish farmers from village Sivania & Suktawa, Tah. Itarsi, sponsored by ADF, Hoshangabad.
9	STTP on 'Carp culture' (11-17 October, '06).	Private fish farmers from Vaishali Dist. Hajipur, sponsored by DFO, Hajipur (Bihar).
10	STTP on 'Carp culture' From 15-21 st November 06	Private fish farmers from Vaishali Dist. Hajipur, sponsored by DFO, Hajipur (Bihar).
11	STTP on 'Carp culture' From 01-07 th December 06	Private fish farmers from Vaishali Dist. Hajipur, sponsored by DFO, Hajipur (Bihar).
12	STTP on 'Gramin Talabo mai Matstya Palan' From 02-06 th January 06	SHG fish farmers from village Sohagpure & Seoni Malwa, Dist. Hoshangabad, sponsored by ADF, Hoshangabad.

Extension Activities:

I. Exhibitions:

- (I) 'Kisan Mela cum exhibition' program at Powarkheda, on 26-27th May, 2006, organized by the Agriculture Dept. Hoshangabad.
- (II) 'Western Regional Agriculture Fair & Exhibition 2007' at Indore from dated 14th February to 17th February 2007, arranged by the National Institute of Soyabean Research (ICAR) Indore (M.P.).
- (III) 'Kisan Mela cum exhibition' under Bharat Nirman Abhiyan - 2007 at Manawar dist. Dhar (M.P.) from 12th March to 17th March 2007, organized by Press Information Beuro, Govt. of India Indore.
- (IV) Kisan Mela cum exhibition' at Powarkheda, dist. Hoshangabad from 16-17th March 2007, organized by Agriculture Dept. Hoshangabad.

II) T. V. Talks:

Dr. R. K. Upadhyay, Tech. Officer (T-6) of this centre gave live T.V. talk with farmers on dated 10.05.06 and on 01.01.07. Th program was telecasted by Bhopal Doordarshan .

III) Pamphlets :

Two type of pamphlets (in Hindi) viz. 'Kendriya Matsya Shisksha Sansnthan Powarkheda Kendra Ek Drishti Mai' & 'Mahajheenga ka Meethe Pani Men Samvardhan' for distributions to the farmers/visitors.

Participation of faculty in conferences, workshop/seminars, meetings, training programs, etc.

Dr. Somdutt, Shri S.S.H.Razvi and Dr. R.K.Upadhyay attended workshop on 'Conservation Assessment of Freshwater Fish for Central India', organized by NBFGR, 25th November, 2006

News from CIFE Rohtak Centre

1. The Centre standardized the technology of hatchery seed production of giant freshwater prawn (*Macrobrachium rosenbergii*) using amended inland ground saline water. In the technology, the ionic levels of calcium, potassium and magnesium were evaluated and optimized for commercial level production of prawn post larvae with an average survival of 44%. The center produced 2.0 lakh prawn post larvae during 2006. A total of 1,15,800 post larvae were sold to various agencies in Bihar, Himachal Pradesh, Mizoram and Madhya Pradesh.
2. The Center has successfully demonstrated the technology of nursery rearing of prawn post larvae in inland low salinity water of 3-4 ppt. In this activity, two identical cement lined ponds of 0.045 ha were stocked with prawn post larvae



(7-8 mm) @ 2.67 lakh PL/ha (12000 PL per pond). The ponds were manured with cow during and DAP to maintain moderate turbidity in water. The commercial prawn feed was given to the seed and around 20-30% pond water was changed every fortnight. The prawn juveniles were harvested after 45 days of rearing with a survival of 60 and 52 percent respectively.

4. The center conducted indoor experiments to evaluate the cause of poor survival and growth in moderately inland saline water of more than 7 ppt in field conditions. Since the level of potassium is very poor in inland ground saline

water, indoor nursery experiments with moderate 7.0 ppt salinity water were conducted in triplicate set with two levels of potassium i.e. 75% and 100% equivalent to seawater and with two stocking densities 30 and 45 PL/m³ during May-June, 2006. It was evaluated that prawn post larvae did not survive more than 30 days in raw saline water whereas, their average survival was recorded between 88.3% at 75.0 percent potassium level and 85.8% at 100 percent potassium level at stocking density of 30 PL/m³ after 45 days of rearing. The survival was also insignificant at higher density of 45m³ showing 85.0 and 81.1 percent respectively at potassium levels of 75% and 100%. However, there was slight decrease in the body length and weight in the prawn juveniles at stocking density 45m³.

5. In order to assure availability of prawn brood stock round the year in extreme winter climate, a trial for raising prawn brood stock was carried out in open and poly house covered pond of 0.045 ha area. Overall, 640 prawn juveniles were stocked in the poly-house pond in December 2006. They were provided with aeration and fed on pelletized commercial diet.



The berried female prawns were seen all through the culture period. The prawns were finally harvested in April with a survival of 84% when more than 60% female population was found in berried condition. With the availability of berried female in early season, the production of prawn seed could commence from March onwards.

Short Term Training Programmes :

The center organized three short-term training programmes on various aspects of inland saline aquaculture for the benefit of state fisheries officials, students and the farmers.