



NBFGR



हर कदम, हर उगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद्

Agri search with a human touch

News

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From the Director's Desk....

Scientific evidence is an essential component of regulatory mechanisms to protect endangered aquatic species. NBFGR has been providing such scientific support on demand for judicial agencies. During the period under report, the Bureau examined a suspected flesh based on the DNA markers and confirmed it to be of the endangered mammal *Dugong dugon*. Strengthening the functional genomics work, the Institute identified a biomarker candidate in *Clarias batrachus* for exposure to hypoxic environment. Evaluation of fish communities and trophic metrics in two central Indian rivers viz., Ken and Betwa yielded useful findings which could be used to identify and prioritize sites and support restoration efforts.



The Institute organized the Launch Workshop of the project entitled 'National Surveillance Programme for Aquatic Animal Diseases' funded by NFDB, Hyderabad, which was inaugurated by Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR. NBFGR has been taking the lead in coordinating this mega-project of national importance, which is being monitored by Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Govt. of India. Keeping in view the priority given for sustainable development of tribal people by the Council under Govt. of India policy, the Institute organized a series of awareness and short-term training programmes on fish culture and conservation, especially for tribal people. Compliments go to all my colleagues for their sincere involvement and dedication in achieving the targets.

J.K. Jena
Director

RESEARCH HIGHLIGHTS

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Forensic Examination of Dugong Sample

Dugong (Dugong dugon) is an endangered marine mammal, which is enlisted as one of the protected species and its fishing is prohibited under Schedule I of the Indian Wildlife Protection Act, 1972. Flesh, suspected as that of dugong seized from fishermen in Keelakarai, near Mandapam, Gulf of Mannar coast, by the Tamil Nadu Forest Department was sent to NBFGR Kochi Unit as per the order of the Judicial First Class Magistrate, Ramanathapuram, was analyzed and identified as that of the endangered mammal *D. dugon*, based on



Photograph courtesy: National Geographic

the DNA sequence information of 16SrRNA (545 bp) and Cytochrome C Oxidase I - COI (658 bp) genes and comparing the sequences with the known dugong DNA sample (NCBI GenBank NC 003314).

Biomarker candidate identified in fish for exposure to hypoxic environment

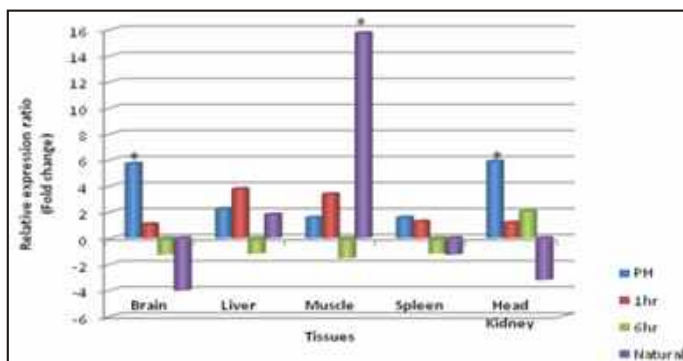
In aquatic ecosystems, hypoxic stress is known to cause different physiological (such as erythropoiesis, angiogenesis) and metabolic (glycolysis) changes in organisms, mediated by hypoxia-inducible factors (HIFs) which play a central role in adaptive processes. Three isoforms of the HIF- α subunit (HIF-1 α , -2 α and -3 α) had been reported earlier and widely studied in mammals; however, the information regarding fish HIFs is very limited. The present study aimed at characterization of three HIF- α subunits, HIF-1 α , -2 α and -3 α , from hypoxia-tolerant *Clarias batrachus* as well as to elucidate their expression pattern under short- and long-term hypoxic conditions and identification of biomarker candidate. The complete cDNAs of HIF-1 α , -2 α and -3 α were characterized. In *C. batrachus*, HIF- α subunits were found to be structurally similar in DNA binding, dimerization, degradation and transcriptional activation domains, but differed in their oxygen-dependent degradation domains. Presence of c-Jun N-terminal kinase binding domain in HIF- α subunits was observed for the first time in fish. In adult *C. batrachus*, three HIF- α mRNAs were detected in different tissues under normoxic conditions; however, HIF-1 α was highly expressed in comparison to HIF-2 α and -3 α in all the tissues studied. Short-term hypoxia exposure caused significant increase in three HIF- α transcripts in brain, liver and head kidney, while after long-term hypoxia exposure, significant up-regulation of HIF-1 α in spleen and -2 α in muscle was observed and HIF-3 α significantly

down-regulated in head kidney. These observations suggest that the differential expression of HIF- α subunits in *C. batrachus* was hypoxic time period dependent and may play specialized roles in adaptive response to hypoxia. HIF-2 α , with its highly elevated expression in muscle tissues, can be a robust biomarker candidate for exposure to hypoxic environment

Evaluation of fish communities and trophic metrics in rivers Ken and Betwa

Knowledge in the trophic ecology of any given system is fundamental in understanding the ecosystem as a whole. Fishes are good indicators of the functioning of the freshwater ecosystems, and of ecological integrity of river systems. The ecological condition of the two tropical rivers viz. Betwa and Ken of the Ganga basin was assessed by comparing the trophic metrics of the fish community and habitat. The analysis of trophic niches of the available fish species indicated dominancy of carnivores in river Ken and omnivores in Betwa. However, the trophic level score of carnivores species was recorded similar in both the rivers, whereas for omnivorous species it was higher in Betwa. Relatively undisturbed sites of Betwa and Ken were characterized by diverse fish fauna and high occurrence of threatened species.

The Bray-Curtis index for trophic level identified the carnivores species (>0.32) as an indicator species for aquatic degradation. Anthropogenic exposure were found higher especially in the lower stretches of both the rivers as reflected in the water quality as well as in fish community structure. The trophic level score of carnivorous species was recorded similar (33.33%) in both rivers, whereas it was higher for omnivorous species for Betwa (36.51%). The relative abundance of top carnivore species in river Ken like *Notopterus notopterus* (1.21%), *Sperata aor* (2.41%), *S. seenghala* (2.91%), *Mystus tengara* (2.16%), *Rita rita* (5.23%) and *Xenentodon cancilla* (5.9%) showed higher abundance than Betwa. On the other hand, the relative abundance of omnivorous species like *Chnada ranga* (5.31%), *Rasbora daniconius* (3.05%), *Puntius amphibious* (2.85%), *P. chola* (2.45%) and *Rhinomugil corsula* (1.66%) were recorded higher in Betwa than river Ken. The mean score for habitat orientation was 35.8 (± 8.8) for Betwa and 34.87 (± 7.06) for Ken showing no major differences between the two rivers but the mean trophic level score of river Betwa (29.25%, ± 9.34) was recorded higher as compared Ken (26.9%, ± 6). This indicates that the fishes of River Betwa were likely to be responding to ecosystems stress, resulting in the considerable degradation of fish community structure especially in the lower stretch. The results provided for a novel method of assessment of the trophic metrics of fish community in tropical rivers in Central India. This can be used to identify and prioritize sites and support restoration efforts.



Relative HIF-2 α mRNA expression in *C. batrachus* following short-term (PH, 1 & 6 hr) & long-term (Natural) hypoxia exposure
 PH: progressive hypoxia upto 0.98 mg/l dissolved oxygen, H1 and H6: hypoxic time period 1 and 6 hr at 0.98 mg/l dissolved oxygen, after progressive hypoxia, NTR: long term hypoxia exposure in natural habitat. Asterisk (*) above/below bars represents significant difference ($p < 0.05$) in the expression levels in comparison to their respective normoxic control groups.

IMPORTANT EVENTS

Launch Workshop of National Surveillance Programme for Aquatic Animal Diseases

The two-day Launch Workshop of the project entitled 'National Surveillance Programme for Aquatic Animal Diseases' was organized during 27-28 May, 2013 at the Institute. The project, being funded by the National Fisheries Development Board, Hyderabad, is proposed to be implemented by 8 ICAR fisheries research institutes, 12 fisheries colleges and other organizations in 14 selected states of aquaculture importance. The NBFGR has been taking the lead in coordinating this mega-project of national importance, which is being monitored by Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Govt. of India. The workshop included the Pre-Launch Workshop Consultative Meet on May 27, 2013 and the Launch Workshop on May 28, 2013, which was inaugurated and launched by Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR. The inaugural function was presided over by Dr. B. Meenakumari, Deputy Director General (Fy.), ICAR and attended by Dr. Vishnu Bhat, Fisheries Development Commissioner, DAHDF; Dr. C.V. Mohan, Research and Development Manager, NACA, Bangkok and Dr. Madhumita Mukherjee, Executive Director (Tech.), NFDB as the Guests of Honour. More than 50 fish health experts from leading fisheries research institutions, fisheries colleges and other organizations participated in the workshop.



Dr. S. Ayyappan delivering the inaugural address

Dr. Ayyappan, in his inaugural address, emphasized the prospects of increasing agricultural productivity of the country by 30% through lessening the biotic and abiotic stresses. He cited the successful example of zoning concept of Foot and Mouth Disease free Haryana state through animal disease surveillance programme. He advised the scientists to take holistic approach in disease investigation

instead of concentrating only on limited pathogen(s) of their area of interest. He congratulated Dr. J.K. Jena, Director, NBFGR and National Coordinator of the project for taking lead in initiating such programme of national importance in very short time-span. Dr. Meenakumari appraised the humble attempt of NBFGR for taking such a challenging task of Surveillance Programme on Aquatic



Dignitaries releasing the Institute publications

Animal Disease to reach the goal. She stressed the need on the involvement of State Fisheries Departments for successful implementation of the programme. The participating organizations presented the activities to be commenced under the surveillance programme and the modalities of implementing the surveillance programme were finalized for both passive and targeted surveillance in the selected states. Institute publications were also released on this occasion.

Review-cum-Training workshop on 'Exploration and Characterization of Fish Germplasm Resources and Indigenous Knowledge in North-Eastern Region of India'

NBFGR, under its NE component, has initiated a 'Participatory programme on exploration and characterization of fish germplasm resources and indigenous knowledge in North-eastern region of India' involving collaborators from various institutions from NE region. During the year 2012-13, seven project proposals were provided technical and financial supports. In this connection, a review-cum-training workshop was organized involving collaborating partners and researchers for identified thematic work programmes at NBFGR, Lucknow during 14-16 May, 2013. The purpose of the workshop was to review the progress made in the identified projects and undertake capacity development programme for the collaborators from the NE region. A total of nine collaborating researchers from the region participated in the workshop. In his opening remarks,



Review-cum-Training workshop on exploration & characterization of fish germplasm resources

Dr. J.K. Jena, Director, NBFGR, Lucknow emphasized the importance of the biodiversity assessment and conservation in NE region, and appraised the collaborating institutions with regard to the initiative on exploration of fish diversity in network mode. He also conveyed thanks and appreciation to all the partners for their good work.

Prof. J.R. Dhanze, Dean, College of Fisheries, Central Agricultural University, Lembucherra, Agartala, Tripura and Prof. W. Vishwanath, Department of Life Science, Manipur University, Imphal participated in the workshop as resource persons and shared their experiences on fish germplasm explorations and fish taxonomy. Besides review of ongoing projects in NE region, the workshop also included demonstrations by the NBFGR scientists on the protocols for fish and tissue collections and preservation during germplasm explorations. New project proposals were also discussed during the workshop.



Demonstration on fish tissue collection

Awareness Programme on Fish Conservation and Tribal Communities in Kerala

A one-day awareness programme on “Fish Conservation and Tribal communities” was conducted at



Dignitaries on the dais

Kalpetta, Wayanad, Kerala by NBFGR unit Kochi in association with the Community Agrobiodiversity Centre of MS Swaminathan Research Foundation (CABc-MSSRF) and Fisheries Research Station, Puthuvypu, KUFOS, Kerala on the occasion of World Biodiversity Day on 22nd May, 2013. Shri Sasidharan, state award winning fish farmer from Wayanad, inaugurated the function. Shri Dattan and Smt Sosamma Kurien, entrepreneurs in ornamental fish aquaculture from the district made felicitation addresses. Dr. Anil Kumar, Director CABc and Dr. C. P. Shaji, eminent fish taxonomist were the Guests of Honour. Over one hundred tribal community members, planners, educators, students and research scholars attended the programme.



Children view the poster exhibition

Shri Sasidharan, in his inaugural address, said that this effort by NBFGR in highlighting the importance of conserving indigenous fish resources will give impetus to the conservation of freshwater ecosystems. Dr. Anil Kumar, in his presidential address, pointed out that the theme for the 2013 Biodiversity Day was Water and

Biodiversity, which was reflected by the theme of the conservation programme. He applauded the work done by NBFGR, towards conservation of fishes, especially in the Western Ghats region and expressed willingness to extend all support for the conservation programme.

The inaugural session was followed by a technical session. Dr. C.P. Shaji captivated the audience with a presentation on the indigenous fish resources of the region. Dr. K. Dinesh and Sarath of KUFOS conducted a session on setting up small aquaculture units for raising ornamental fish. After the technical session, there was an interaction with tribal people regarding the practices they used for conserving fishes in their area. An exhibition and poster display, illustrating important indigenous species was also part of the programme.

Awareness Programme on "Modern Fish Culture and Conservation" for Tribal Community in UP

The Institute organized an awareness programme on "Modern Fish Culture and Conservation" for the tribal community of the district Sonbhadra at Renukot, Sonbhadra on 29 April, 2013. Smt. Anita Rakesh President, District Panchayat, Sonbhadra was Chief Guest on the occasion and the function was presided over by Smt Rubi Prasad, Hon'ble Member of Legislative Assembly, Dudhi. Shri Mahendra Singh, Chief Development Officer, Sonbhadra and Shri N. K. Dadhichi, HR Head, Aditya Birla Chemicals Private Limited, Sonbhadra were the Guests of Honour. Dr. P.K. Varshney, Principal Scientist, NBFGR welcomed the guests. Speaking on the occasion chief guest Smt. Anita Rakesh emphasized that such awareness programmes are of immense importance for the development of the district and the state in general. Smt. Rubi Prasad said that such programmes may bridge up the gap between tribal community and main stream and

will be helpful in their upliftment. The programme was attended by 235 fish farmers of Sonbhadra district. In the technical sessions the problems of aqua-farmers on various aspects of aquaculture were attended to and solutions were suggested by the experts. It was concluded that some progressive fish farmers will be selected and trained further at NBFGR, Lucknow.

Annual Institute Research Committee (IRC) meeting

The annual meeting of the Institute Research Committee (IRC) for the year 2012-13 was held at NBFGR, Lucknow on 17, 18, 20 and 23 April, 2013 under the Chairmanship of Dr. J.K. Jena, Director, NBFGR. Member Secretary, IRC, Dr. K.K. Lal welcomed the chairman and members of IRC. In his introductory remarks, the Chairman, IRC emphasized the role of prioritization, monitoring and evaluation (PME) cell. He also invited the concern personnel to speak and discuss on issues related to administration, finance, management services, etc. The chairman said that the externally funded projects should be discussed equally as the institutional projects in IRC meeting. He advised the members to avoid taking up small budget external projects just because of manpower. Dr. Jena also informed that several ICAR platforms are coming up in 12th Five Year Plan, which can help building resources including manpower. He informed the availability of 10 lakh budget under TSP fund. He emphasized the need for regular inputs to timely publish newsletter, annual reports and other regular reports to be sent to the Council. He advised PME Cell to discuss mechanism of receiving such inputs and research publications. After chairman's address, Dr. P.K. Pradhan, Sr. Scientist presented the RFD report of NBFGR which was followed by presentation of projects progress reports by the respective PIs.



Guest of Honour Shri Mahendra Singh, CDO, Sonbhadra addressing the participants



Dr. J.K. Jena, Director chairing the IRC meeting

EXTENSION ACTIVITIES

Short-Term Training Programmes for Tribal Fish Farmers on 'Fish Culture and Conservation'

Three batches of short-term residential training programmes were organized for the aqua-farmers of Lakhimpurkhiri and Sonbhadra districts of U.P. during 14-16 May, 26-28 June and 2-4 July, 2013. Total 70 tribal aqua-farmers undergone training in these programmes. In these trainings aspects of aquaculture and conservation of endangered fish species were imparted through the expert faculty in the laboratories.



Trainee farmers with guest and staff of NBFGR

PARTICIPATION IN WORKSHOPS/SEMINARS/MEETINGS/TRAININGS

- Dr. J.K. Jena, Director participated in the following:
 - Monitoring meeting of the DBT twinning programme at New Delhi during 15-16 April, 2013.
 - Delivered an invited talk in the International Workshop on 'Status of good practices and lessons learnt in aquaculture in the SAARC region' convened by CMFRI, Kochi and SAARC Coastal Zone Management Centre, Male, Maldives at Kochi on 4 June, 2013.
 - Brainstorming Session on 'Sanitary and Phytosanitary (SPS) Issues in Fisheries' at NAAS, New Delhi on 27 June, 2013.
 - Scoping Consultation on 'National Architecture and Roadmap for CoMBINE (Coastal and Marine Biodiversity Integrated Network)' at the National Centre for Sustainable Coastal Management, Chennai on 28 June, 2013.
- Dr. J.K. Jena, Director and Dr. K.K. Lal, Principal Scientist and Head, Fish Conservation participated in the Annual Workshop and CAC Meeting of NAIP (GEF) sub-project 'Harmonizing biodiversity conservation and agricultural intensification through integration of plant, animal and fish genetic resources for livelihood security in fragile ecosystems' at NBPGR, New Delhi on 7 May, 2013.
- Dr. A.K. Singh, Principal Scientist participated in the International Day for Biological Diversity programme on 'Water and Biodiversity' on 22 May, 2013 at UP Biodiversity Board, Lucknow.
- Dr. K.K. Lal, Principal Scientist and Head, Fish Conservation participated in the first meeting of the National Repositories designated under Section 39 of the Biological Diversity Act, 2002 and Rules, 2004 convened by Chairman, National Biodiversity Authority, India for preparation of draft guidelines on repositories during April 2013 at Hyderabad,.

STAFF NEWS

Staff News

- Dr. L.K. Tyagi Sr. Scientist (Agril. Extension) was promoted from Pay Band Rs. 15600-39100+ RGP Rs. 8000/- to Pay Band Rs. 37400- 67000+RGP Rs. 9000/- w.e.f. 25.01.2012.
 - Dr. T. Rajaswaminathan, Scientist (Fish Health) Pay Band Rs. 15600-39100 + RGP Rs. 8000/- was re-designated as Sr. Scientist Pay band Rs. 15600-39100 + RGP Rs. 8000/- w.e.f. 23.05.2012.
 - Shri Akhilesh Kumar Mishra, Technical Officer was awarded the Ph.D. degree in Zoology on 29 May, 2013 by the H.N.B. Garhwal University, Srinagar, Garhwal.
- The NBFGR family congratulates them for their achievements.

समाचार सारांश

अनुसंधान समाचार

ड्यूगांग नमूने की विधि वैज्ञानिक जाँच

ड्यूगांग जो कि एक संकट ग्रस्त समुद्री स्तनधारी है तथा भारतीय वन्य जीव संरक्षण अधिनियम, 1972 की अनुसूची-I में संरक्षित प्रजाति के रूप में सूचीकृत है, के संदिग्ध मांस का एक नमूना तमिलनाडु वन विभाग द्वारा मण्डपम के निकट कीलाकरारी स्थित मन्नार की खाड़ी के तटीय क्षेत्र में एक मछुआरे से बरामद कर, रामानाथापुरम के प्रथम श्रेणी मजिस्ट्रेट के आदेशानुसार एन.बी.एफ.जी.आर. की कोचि इकाई में जाँच हेतु भेजा गया था। उक्त नमूने की पहचान 16SrRNA(545bp) तथा CoI (658bp) जीन अनुक्रमों के आधार पर ड्यूगांग के रूप में की गयी।

कम आक्सीजन वाले पर्यावरण में मछली को जोखिम में डालने वाले सम्बद्ध जीन की पहचान

जलीय पारिस्थितिक तन्त्र में कम ऑक्सीजन से उत्पन्न हुआ तनाव जीवों में अनेक प्रकार के कार्यात्मक (एरिथ्रोप्वायेसिस, एन्जियोजेनेसिस) तथा उपापचयी (ग्लाइकोलिसिस) परिवर्तन उत्पन्न करता है जिसमें अनुकूली प्रक्रियाओं में केन्द्रीय भूमिका निभाने वाले हाइपोक्सिया इन्ड्यूसिवल फैक्टर्स एक माध्यम का कार्य करते हैं। अतीत में स्तनधारियों में एच.आई.एफ.-1 α , -2 α तथा -3 α की पहचान की जा चुकी है किन्तु मछलियों में इस प्रकार के अध्ययन अत्यन्त सीमित मात्रा में हुए हैं। इस अध्ययन में कम आक्सीजन वाले पर्यावरण में जीवित रह सकने वाली मछली *क्लेरियस बैटरेकस* में तीन एच.आई.एफ.- α उप इकाईयों (एच.आई.एफ.-1 α , -2 α तथा -3 α) की पहचान तथा उनके अल्प व दीर्घकालिक हाइपोक्सिक पारिस्थितियों में एक्सप्रेसन पैटर्न की जाँच की गयी। समस्त एचआईएफ.- α उपइकाईयों डी.एन.ए. बाइन्डिंग, डाइमेराइजेशन, डीग्रेडेशन तथा ट्रांसक्रिप्शनल एक्टिवेशन डोमेन्स में संरचनात्मक समानता वाली पायी गयी किन्तु आक्सीजन डीपेन्डेंट डीग्रेडेशन डोमेन्स में भिन्न पायी गयी। मछलियों में एच.आई.एफ.- α उपइकाईयों में C-Jun तथा N-टर्मिनल काइनेज़ बाइन्डिंग डोमेन पहली बार देखे गये।

केन एवं बेतवा नदियों में मत्स्य समूहों एवं ट्रॉफिक मेट्रिसेस का मूल्यांकन

गंगा बेसिन की केन एवं बेतवा नदियों में पारिस्थितिकीय परिस्थितियों का तुलनात्मक आकलन, मत्स्य समूहों एवं उनके वास स्थलों के सन्दर्भ में किया गया। उपलब्ध मत्स्य प्रजातियों के पोषक निचेस के विश्लेषण द्वारा केन नदी में मांसाहारी तथा बेतवा नदी में सर्वाहारी मछलियों का आधिक्य पाया गया। पोषक स्तर स्कोर का मान मांसाहारी मत्स्य प्रजातियों हेतु दोनों ही नदियों में समान जबकि सर्वाहारी मत्स्य प्रजातियों हेतु बेतवा नदी में अपेक्षाकृत अधिक पाया गया। अपेक्षाकृत शान्त क्षेत्रों मत्स्य प्रजातियों का वैविध्य पाया गया जबकि संकटग्रस्त प्रजातियों की प्रचुरता पायी गयी।

मांसाहारी प्रजातियों हेतु ब्रे-कर्टिस इण्डेक्स के मान (>0.32) द्वारा इन प्रजातियों द्वारा जलीय वातावरण में क्षरण व्यक्त हुआ। परिणामों से मध्य भारत की नदियों के मत्स्य समूहों के ट्रॉफिक मेट्रिसेस का आकलन करने हेतु एक नवीन विधि का आधार उपलब्ध हुआ जिससे इन नदियों में रेस्टोरेशन प्रयासों की सहायता हेतु वासस्थलों की प्राथमिकता निर्धारित की जा सकेगी।

महत्वपूर्ण घटनाएँ

जलीय जीवों में होने वाले रोगों की निगरानी की राष्ट्रीय परियोजना पर कार्यशाला

27 एवं 28 मई, 2013 को उपरोक्त विषयक दो दिवसीय कार्यशाला का आयोजन संस्थान में किया गया। उक्त परियोजना जो कि राष्ट्रीय मत्स्य विकास बोर्ड, हैदराबाद द्वारा वित्त पोषित है, को भा.कृ.अ.प. के 8 मात्स्यिकी संस्थानों, 12 मात्स्यिकी महाविद्यालयों तथा जलकृषि महत्व के 14 चयनित राज्यों में स्थित अन्य संस्थानों द्वारा कार्यान्वित किया जाना प्रस्तावित है। राष्ट्रीय मत्स्य आनुवांशिक संसाधन ब्यूरो, लखनऊ द्वारा इस मेगा परियोजना को कार्यान्वित करने में शीर्ष भूमिका निभायी जा रही है जिसकी मानीटरिंग भारत सरकार के कृषि मन्त्रालयाधीन पशुपालन, डेयरी एवं मात्स्यिकी विभाग द्वारा की जायेगी। कार्यशाला का उद्घाटन कृषि अनुसंधान एवं शिक्षा विभाग के सचिव तथा भा.कृ.अ.प. के महानिदेशक डा. एस. अय्यपन ने किया जबकि भा.कृ.अ.प. की उपमहानिदेशक (मात्स्यिकी) डा. बी. मीनाकुमारी द्वारा कार्यक्रम की अध्यक्षता की गयी। इस कार्यक्रम में डी. ए.एच.डी.एफ. के मात्स्यिकी विकास आयुक्त डा. विष्णु भट्ट, नाका बैंकाक के अनुसंधान एवं विकास प्रबन्धक डा. सी.वी. मोहन तथा एन.एफ.डी.बी. की अधिशासी निदेशक (तकनीकी) डा. मधुमिता मुखर्जी विशिष्ट अतिथियों के रूप में उपस्थित रहे। इस कार्यशाला में शीर्ष मात्स्यिकी संस्थानों, मात्स्यिकी महाविद्यालयों तथा अन्य संस्थानों से 50 से अधिक मत्स्य स्वास्थ्य विशेषज्ञों ने भाग लिया।

भारत के पूर्वोत्तर क्षेत्रों में 'मत्स्य जननद्रव्य संसाधनों के अन्वेषण एवं लक्षण वर्णन तथा देशज ज्ञान' विषय पर पुनरीक्षण एवं प्रशिक्षण कार्यशाला

एन.बी.एफ.जी.आर. ने अपने एन.ई. कम्पोनेंट के अन्तर्गत 'भारत के पूर्वोत्तर क्षेत्र में मत्स्य जननद्रव्य संसाधनों के अन्वेषण एवं देशज ज्ञान' नामक विषय पर एक सहभागिता कार्यक्रम का प्रारम्भ किया। वर्ष 2012-13 के दौरान इससे सम्बन्धित सात परियोजनाओं को तकनीकी एवं वित्तीय सहायता उपलब्ध करायी गयी। इस सम्बन्ध में एन.बी.एफ.जी.आर. के लखनऊ स्थित मुख्यालय पर 14 से 16 मई, 2013 तक एक दो दिवसीय पुनरीक्षण एवं प्रशिक्षण कार्यशाला का आयोजन किया गया जिसमें सहयोगी स्थानों ने भाग लिया। कार्यशाला का उद्देश्य चिन्हित परियोजनाओं की प्रगति की समीक्षा तथा पूर्वोत्तर क्षेत्र के सहयोगियों में क्षमता विकास कार्यक्रम का संचालन था। इस कार्यशाला में क्षेत्र से कुल नौ सहयोगी शोधार्थियों ने

भाग लिया। कार्यशाला में पूर्वोत्तर क्षेत्रों में चलायी जा रही परियोजनाओं की समीक्षा के अतिरिक्त प्रतिभागियों को एन.बी.एफ.जी.आर. के वैज्ञानिकों द्वारा जननद्रव्य अन्वेषण हेतु मत्स्य एवं उसके ऊतकों के नमूने संग्रह कर उन्हें परिरक्षित करने सम्बन्धी प्रोटोकाल सम्बन्धी प्रशिक्षण प्रदान किया गया तथा नये परियोजना प्रस्तावों पर चर्चा भी की गयी।

केरल में 'आदिवासी समुदाय एवं मत्स्य संरक्षण' पर जागरूकता कार्यक्रम

एन.बी.एफ.जी.आर. कोचि इकाई द्वारा कलपेट्टा, वायानाड, केरल में 'मत्स्य संरक्षण एवं आदिवासी समुदाय' विषय पर एम.एस. स्वामीनाथन फाउण्डेशन के एग्रोबायोडायवर्सिटी सेन्टर तथा फिशरीज रिसर्च स्टेशन पुथूवायपू, केरल के सहयोग से विश्व जैवविविधता दिवस 22 मई, 2013 को एक दिवसीय जागरूकता कार्यक्रम का आयोजन किया गया जिसका उद्घाटन वायानाड के राज्य पुरस्कार विजेता मत्स्य कृषक श्री शशिधरन द्वारा किया गया। जिले में सजावटी मछली जलकृषि उद्यमियों श्री दत्तन एवं श्रीमती सोसम्मा कुरियन द्वारा स्वागत भाषण दिया गया। फाउण्डेशन सेन्टर के निदेशक डा. अनिल कुमार तथा जाने माने मत्स्य वर्गीकरणविद् डा. सी.पी. शाजी विशिष्ट अतिथियों के रूप में उपस्थित थे। आदिवासी समुदाय के लगभग सौ सदस्यों, योजनाविदों, शिक्षाविदों, विद्यार्थियों तथा शोधार्थियों ने कार्यक्रम में भाग लिया।

उ.प्र. के आदिवासी समुदायों हेतु 'आधुनिक मत्स्य पालन एवं संरक्षण' विषय पर जागरूकता कार्यक्रम

संस्थान द्वारा 29 अप्रैल, 2013 को सोनभद्र जिले के आदिवासी समुदायों हेतु रेनूकूट में 'आधुनिक मत्स्य पालन एवं संरक्षण' विषय पर एक जागरूकता कार्यक्रम का आयोजन किया गया। इस कार्यक्रम में सोनभद्र की जिला पंचायत अध्यक्ष श्रीमती अनीता राकेश मुख्य अतिथि के रूप में उपस्थित थीं जबकि दुधी विधान सभा क्षेत्र से माननीया विधायक श्रीमती रूबी प्रसाद ने कार्यक्रम की अध्यक्षता की। सोनभद्र के मुख्य विकास अधिकारी श्री महेन्द्र सिंह तथा आदित्य बिरला केमिकल्स प्राइवेट लिमिटेड के मानव संसाधन विभाग के प्रमुख श्री एन.के. दधीचि विशिष्ट अतिथियों के रूप में कार्यक्रम में उपस्थित रहे।

विस्तार गतिविधियाँ

आदिवासी मत्स्य कृषकों हेतु 'मत्स्य पालन एवं संरक्षण' विषय पर अल्पकालिक प्रशिक्षण कार्यक्रम

उ.प्र. के लखीमपुर खीरी व सोनभद्र जिलों के जलकृषकों हेतु 14 से 16 मई, 26 से 28 जून तथा 2 से 4 जुलाई, 2013 के बीच तीन अल्पकालिक प्रशिक्षण कार्यक्रमों का आयोजन किया गया जिसमें कुल 70 आदिवासी जलकृषकों के प्रशिक्षित किया गया। इन प्रशिक्षण कार्यक्रमों में प्रयोगशालाओं में विशेषज्ञों द्वारा किसानों को मत्स्य प्रक्षेत्र निर्माण, संमिश्रित मत्स्य संवर्धन, कैटफिश संवर्धन, मत्स्य भोजन, आर्थिक रूप से महत्वपूर्ण कार्प व कैटफिशेज के जीवन चक्र के विभिन्न लक्षणों, जलीय घासों व कीटों के निवारण, मत्स्य रोग व उनका प्रबंधन, विदेशी मत्स्य प्रजातियों का प्रभाव, मृदा एवं जल संरक्षण एवं उनका महत्व आदि विषयों पर प्रायोगिक जानकारी दी गयी।

स्टॉफ समाचार

- डा. एल.के. त्यागी, वरिष्ठ वैज्ञानिक (कृषि विस्तार) के वेतनमान ₹ 15600-39100 + आर जी पी ₹ 8000/- से वेतनमान ₹ 37400-67000 + आर जी पी 9000/- में दिनांक 25.01.2012 से प्रोन्नत किया गया।
- डा. टी. राजा स्वामीनाथन, वैज्ञानिक (मत्स्य स्वास्थ्य) को वेतनमान ₹ 15600-39100 + आर.जी.पी. ₹ 8000/- में दिनांक 23.05.2012 से वरिष्ठ वैज्ञानिक का पदनाम दिया गया।
- डा. अखिलेश कुमार मिश्र, तकनीकी अधिकारी को हेमवती नन्दन बहुगुणा गढ़वाल विश्वविद्यालय श्रीनगर, गढ़वाल द्वारा दिनांक 29.05.2013 को प्राणि विज्ञान में पीएच डी की उपाधि प्रदान की गयी। एन.बी.एफ.जी.आर. परिवार इन सभी को उनकी इस उपलब्धि के लिए बधाई देता है।

Direction and Guidance: Dr. J.K. Jena, Director

Compilation & Editing: Dr. L.K. Tyagi, Sr. Scientist and OIC, Extn. & Training Cell

Hindi Translation: Dr. Akhilesh Kr. Mishra, Technical Officer and OIC, Hindi Cell

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Canal Ring Road, P.O. Dilkusha, Lucknow 226 002, UP, INDIA

Tel: 0522-2442441, 2442440, 2441735; Fax: 0522-2442403

E-mail: nbfg@sancharnet.in; director@nbfg.res.in

Website : http://www.nbfg.res.in