



## CENTURION UNIVERSITY OF TECHNOLOGY & MANAGEMENT, ODISHA

### Webinar

on

## **“Casting into the future of Fisheries and Aquaculture”**

**Date: 22<sup>nd</sup> and 23<sup>rd</sup> June 2021**

Number of Participants: 102

**Coordinators:** Dr.Sambid Swain, Dr.Amruha Gopan, Dr.Nisha Elizabeth Joshua,  
Dr.Sagarika Swain

### **About the Session:**

A National webinar was conducted on Casting into the future of Fisheries and Aquaculture, on 22nd and 23rd June, 2021, organised by School of Fisheries, Centurion University of Technology and Management, Paralakhemundi, Odisha. The resource persons were well known eminent scientists in the field of fisheries and aquaculture.

### **Objective:**

1. To educate the academic and research communities about different problems and prospects of the fisheries and aquaculture

### **Outcome:**

1. Provided knowledge about the management of fisheries and aquaculture culture in a scientific manner.
2. Developed professional skill to guide the entrepreneurs and stakeholders
3. Scientific knowledge to be a concerned human resources and entrepreneur.

The webinar was blessed with the presence of the Chief Guest, Dr. B. P. Mohanty Assistant Director General (I.Fy), ICAR, New Delhi and Guest of honour, Dr. N. P. Sahu Joint Director, ICAR-CIFE, Mumbai for the first sessions. Then in the afternoon session was rewarded with the resource persons such as Dr. M. Krishnan P.S. and Head (Retd.), Social Sciences Div., ICAR-CIFE, Mumbai and Dr. Latha Shenoy P.S. (Retd.), FRM Division, ICAR-CIFE, Mumbai.

### **Details of the Resource Persons:**

**Dr. B. P. Mohanty** joined the Agricultural Research Service under the Indian Council of Agricultural Research in 1994. With three decades of experience in Fisheries Research and allied activities, he joined as the ADG (Inland Fisheries) of ICAR, New Delhi in 2020. Dr. Mohanty was the Coordinator in ICAR Outreach Program on “Nutrient profiling of Food Fishes from

India” and also significantly contributed for successful implementation of Pradhan Mantri Matsya Sampada Yojana. He is well known for his conceptualization and development of NutriFishIN Database and the mobile application NutrifishApp. His work on NutriFishIN Database received Appreciations from World Bank and FAO and were impressed to initiate a Global program titled “NutriFish1000” on World Food Day 2018.

**Dr. Narottam Prasad Sahu** is the Joint Director of Central Institute of Fisheries Education, Mumbai and is the Principal Scientist in the Biochemistry & Physiology Division at ICAR-CIFE, Mumbai. His research interests include Enhancing carbohydrate utilization as a strategy to reduce fish production cost, stress physiology and mitigation strategies, immune ceuticals, utilization of protein isolates from non-edible seed etc. He won the Best Indian Fishery Scientist award in 2006, Best Scientist award in 2004, and the Best Young Scientist award in 2003. He has authored several national and international peer-reviewed research papers, research bulletins etc. Under his able mentorship several scientific projects were successfully completed.

**Dr. M. Krishnan** served the Indian Council of Agricultural Research in the Indian Agricultural Research Service for 38 years in research, teaching, student guidance, training and extension. Besides ICAR-IARI, New Delhi, ICAR- CIBA, Chennai and ICAR-NAARM, Hyderabad, he worked as Head of Division, Fisheries Economics, Extension and Statistics at the ICAR-Central Institute of Fisheries Education, Mumbai. Dr. Krishnan has completed a number of international consultancy projects for NACA, Bangkok, FAO, Rome and SAARC Agriculture Centre, Dhaka. Dr. Krishnan is specialized in Resource Management and Fisheries Development and Policy and has published more than 150 papers in national and international impact factor journals. Presently he is Adviser to State Level Project Advisory Committee for Marine Resources, Andhra Pradesh and Adjunct Professor, College of Fisheries (SVVU), Nellore.

**Dr. Latha Shenoy** joined ICAR-Central Institute of Fisheries Education, Mumbai as Scientist in 1982. After close to four decades of experience in Fisheries education, research and human resource development she retired as Principal Scientist from ICAR-CIFE. Her areas of expertise include fish capture technologies, responsible fishing practices, fisheries resource management and marine fisheries regulatory/policy issues. As Principal Investigator, she led multi-disciplinary teams and executed inter-institutional externally funded research projects and Institutional projects. She has authored the University level text book titled ‘Fishing Gear and Craft Technology’ published by ICAR, New Delhi in addition to several other books/course manuals/research papers in peer reviewed journals/bulletins/book chapters/vocational modules/popular technical articles/proceedings of workshops/seminars/symposia and Training manuals. She has published a book titled ‘Sustainable blue revolution in India: Way forward’ in 2021. ICAR nominated her as the Regional Coordinator (Western region) for accreditation of State Agricultural Universities and constituent colleges.

**Dr. A. K. Reddy** superannuated as Principal Scientist in 2016 at ICAR-CIFE, Mumbai. Thereafter, he was appointed as ICAR Emeritus Scientist. His major areas of fields include Giant Freshwater Prawn seed production & culture, Carp seed production & culture, Shrimp seed production & culture, Inland saline aquaculture, Development of Fisheries and Aquaculture in North Eastern States, Management of open water bodies through community participation and establishment of Carp, Shrimp and Prawn Hatcheries in various parts of India. He was involved in several research projects funded by NABARD, ICAR, DBT, DST and the National Agricultural Innovation Project funded by the World Bank through ICAR. He won Dr. Hiralal Choudari Award for “Transfer of Technology” and Dr. Hiralal Choudari Award for “Best Technical Staff” twice and was given the Distinguished Technologist Award by the Academy of Science, Engineering and Technology, Bhopal in 2002. He collaborated with Universidad Juarez

Autonoma Tabasco, Mexico to establish a pilot hatchery for *Macrobrachium carcinus* and complete its life-cycle, and to train staff and students in 2013 and 2014.

**Dr. Felix** was the Vice-Chancellor of Tamil Nadu Fisheries University. He has around 34 years of teaching experience and is specialized in Aquaculture and Aquaculture Biotechnology and Systems development. He mobilized more than 150 Crores for the University in the form of Research & Development grants and contributed for obtaining 12-B status from UGC and ICAR accreditation for TNFU. He developed over a dozen off-campus facilities for TNFU for the benefit of students & farmers and developed and introduced raceway culture technology for the first time in India. The Aquatic Rainbow Technology Park created at Madhavaram for ornamental fish culture is the first of its kind in the country. He created two new Fisheries Colleges for the University and developed 36 constituent units for the University all over the state in a short span of time. He has 10 patents published on various aquaculture technologies to his credit. He is presently the President (elect) of the World Aquaculture Society (Asia Pacific Chapter).

**Dr. Sanath Kumar** is a Principal scientist (Microbiology) in Post-Harvest Department of Central Institute of Fisheries Education, Mumbai, India. He completed his B.F.Sc., M.F.Sc. and Ph.D. from the Department of Microbiology, College of Fisheries Mangalore. He has wide post-doctoral research experience in India and overseas laboratories in Japan, Germany and the USA. His research is on seafood-borne pathogens, their virulence mechanisms, physiology & genetics of pathogen persistence in food, antimicrobial resistance, toxins, membrane transporters of sugar and efflux pumps, metagenome analysis of disease causes in shrimps and microbial-mediated fish waste management. He has published over 90 research papers in peer reviewed international journals, several book chapters and popular articles.

**Dr. Annam Pawan Kumar** works as Senior Scientist in the Division of Fish Genetics and Biotechnology with ICAR-Central Institute of Fisheries Education Mumbai. He worked as a Research Associate with the Department of Biology, University of Bogota, Columbia in 2013, to study conservation of genetic resources. He was involved in several noteworthy projects funded by ICAR-CIFE, DST, Department of Environment and Forestry (GoI) and Department of Biotechnology (GoI). He was the recipient of Dr. Hiralal Chaudhary Gold Medal for securing first position in M. F. Sc. programme of Fish Genetics and Biotechnology of the academic year 2004-06 at CIFE, Mumbai, recipient of Prof. Ali Kunjhi Award for Best Ph.D. thesis in Fisheries in India during 2012 and recipient of “Best Young Faculty award” from ICAR-CIFE for the year 2014-15. He has a number of publications in acclaimed journals and has reviewed 52 research articles for 27 international journals.

In this webinar 1198 number of participants were registered and attended the webinar online, including, students of fisheries all over India and other countries, farmers, stakeholders, faculties, scientists, private entrepreneurs etc. The programme provided an opportunity to Faculty members, Research scholars, post graduate and under-graduate students to enrich their theoretical knowledge and research aptitude by a lecture session of eminent speakers in the area on sustainable management of fisheries, aquaculture and export. The aim of this webinar was to provide current scenarios and trends of fisheries and aquaculture and how to develop it in a sustainable way forward to meet nutritional security.

## **Presentations**

### **1. Introduction to the Webinar: Fisheries & Aquaculture for Livelihood, Food & Nutritional Security and a Zero hunger world**

Dr. B. P. Mohanty Assistant Director General (I.Fy), ICAR, began the webinar with an introductory presentation, first explaining briefly about the Indian Council of Agricultural Research, Fisheries Science Division, about its vision “Fish for All for Ever’ and the mission, Sustainable growth of Indian fisheries and aquaculture by interfacing research, education and extension resulting in a proper fit between the human needs and the habitat, with an important role in global fisheries. Then he explained about the importance of food, nutrition and nutrients, FAO goal of a world without hunger, food security and identified key elements (figure 2). He emphasized that fish can play an important role in preventing Protein-Calorie malnutrition. He has briefed about the micronutrients such as vitamins and minerals and their deficiency diseases and explained fish as a tool for fighting three dimensions of hunger; by emphasizing its importance as a Superfood. Fish are important source of Quality Animal Proteins, rich source of micronutrients (minerals and vitamins), fish oils are rich source of PUFAs, especially w-3 EPA & DHA, rich source of antioxidants, Small indigenous fishes are nutrient dense-rich source of Micronutrients (minerals and vitamins), fish - a source of all nutrients (except carbohydrates) and finally availability and affordability is better for fish compared to any other animal origin meat. Dr. Mohanty concluded his presentation by highlighting the importance of fish or nutrition security and livelihood security, fighting hunger, and alleviating malnutrition. He encouraged the webinar participants to eat more fish by illuminating that ‘Let Food be thy Medicine’.

### **2. Moving towards feed-based aquaculture: Challenges and Strategies**

Dr. N. P. Sahu Joint Director, ICAR-CIFE, Mumbai, an eminent scientist in fish nutrition in India has delivered the second lecture in the webinar regarding the topic Moving towards feed-based aquaculture: Challenges and Strategies. He has delivered about the importance of culture fisheries over capture fisheries, feed based aquaculture to boost fish production. He has also given a brief description about Pradhan Mantri Matsya Sampada Yojana – PMMSY and its highlights such as it is a scheme to bring about a blue revolution through sustainable and responsible development of the fisheries sector in India. The scheme intends to address critical gaps in fish production and productivity, quality, technology, post-harvest infrastructure and management, modernization and strengthening Value-Chain, traceability, establishing a robust fisheries management framework and fishers’ welfare. It will be implemented in all States and UTs for a period of five years

### **3. Trends in seafood exports of India**

Dr. M. Krishnan P.S. and Head (Retd.), Social Sciences Div., ICAR-CIFE, Mumbai, an eminent scientist in the field of fisheries economics, India has delivered a class on trends in seafood exports of India, where he explained in detail about the impact of COVID 19 on seafood export and future challenges.

### **4. Current status and road to sustainable marine fisheries development in India**

Dr. Latha Shenoy P.S. (Retd.), FRM Division, ICAR-CIFE, Mumbai a well-known scientist in the field of fisheries resource management, in India has delivered her lecture on the topic Current status and road to sustainable marine fisheries development in India. She has started the lecture with the important role of fisheries in the Indian economy and presented the revalidated marine fisheries resource potential of India (figure 3). Detailed

about the issues in marine fisheries such as about 60% of global fish stocks are fully fished, 30% overfished and 10% underfished, overfishing (biological overfishing, growth overfishing, recruitment overfishing, ecosystem overfishing), destructive fishing, bycatch/discards, climate change impact.

Then she explained about sustainable development goals (SDG) such as SDG 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development and Indian scenario of SDG 14 (Figure 4). She has also given views on sustainability and development in the context of PMMSY as it is a revolutionary scheme of Government of India that aims to bring about a blue revolution in India through sustainable and responsible fisheries development. She concluded with management measures and technical interventions to mitigate impact of overfishing/unsustainable practices, Gear or exploitation related: Gear selectivity, banning specific gear practices, gear substitution, modifying or deploying a gear in a less harmful manner, Habitat related: Protecting vulnerable habitat and closed areas including MPAs, measures to reduce bycatch/discards. Followed by a questions and answer session and after the completion of the webinar certificates have been issued for all the participants online (Figure 5)

Figure 1: Webinar Flyer elements

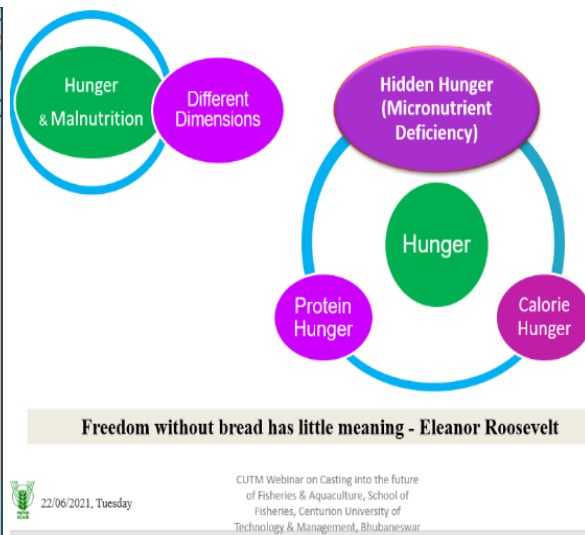


Figure 2: Food security and identified key elements

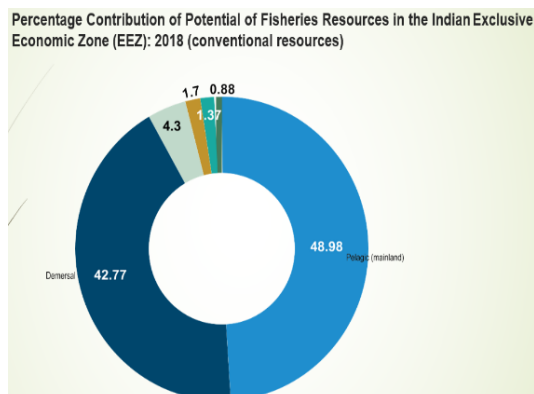


Figure 3: revalidated marine fisheries resource potential of India

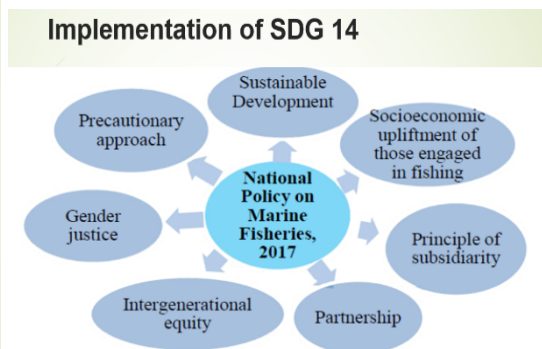


Figure 4: SDG 14

You Tube Link:

<https://www.youtube.com/watch?v=XdWHNU6Qtiw&t=37s>

<https://www.youtube.com/watch?v=qGUoRJwugvk>

<https://www.youtube.com/watch?v=NlvCBfjUpAk>

### List of Participants

Sl.No	Full Name of the Participant
1	Ananya Mishra
2	Nihal R
3	Ashok Kumar
4	Swapna Suchismita
5	SUBHASHREE ROUT
6	Amit Kumar sahu
7	Sandeep Jena
8	Umesh Chandra Rana
9	Sushree mandal
10	Jajnasmita Sahu
11	Biswajit Mishra
12	GANESH CHANDRA NAYAK
13	Dr Yahaswi Nayak
14	Sriram chhatoi
15	Animesh Ankuria
16	Satyajit Mohanty
17	Rupam Thakur
18	PRITAM SARKAR
19	Bijay Kumar Paikaray
20	Amrutha Gopan
21	Ashok panigrahi
22	Dhruv Mehta
23	Saurav s kumar
24	SUDIPTA BARMAN
25	Madhabendu Bera
26	Avijit Pramanik
27	Pratyasha pradhan
28	Pallabi Mohapatra
29	Nirupama chinara
30	Ankures Bhattacharya
31	Aiswarya S
32	Amrutha R Krishnan
33	Nisha Raj
34	Chinmayee Behera
35	RAMJANUL HAQUE
36	Abhisek Gharai

37	Harapriya ghosal
38	Krishna Dipayan Mohantu
39	Aravind. R
40	Mr. Prasanta Jana
41	DIPANKAR CHATTERJEE
42	M Trushna
43	ADARSH K C
44	Brijesh Das
45	Situsmita sethi
46	SMRUTIREKHA MOHAPATRA
47	Sailesh Mahapatra
48	Rainy Baral
49	Rainy Baral
50	SHINAS N
51	Soumyadip Purkait
52	Soumitra Singh Yadav
53	Siddhartha Shankar Sharma
54	Debrata Mitra
55	Mausumee Mishra
56	Sibananda pala
57	Bikram Jena
58	Soumen Mohanty
59	B. NAVEEN RAJESHWAR
60	Raghu Gogada
61	veeresh M U
62	veeresh M U
63	Akhil RS
64	Bishwa Ranjan Pradhan
65	Bharadwaj bag
66	Laken kumar Majhi
67	SWAGATIKA HOTA
68	Priyanka Mohapatra
69	Asima Mishra
70	SWARNA PRAVA SAHOO
71	Swagatika Mishra
72	Rakesh Kumar Nayak
73	Hruday pradeep jena
74	Geethu Mohan
75	RAJ KUMAR APPADI
76	Tirumani NagaSaiRam
77	Nitish Kumar sahuo
78	Avinash barru
79	Upendra Kurmapu
80	PRIYA VARGHESE
81	Mr. ASIM GIRI
82	Rajesh M
83	Sangamithra E R
84	Suvenu samal
85	Sibsankar Nayak
86	Sanskar sharma
87	Dr. Sagarika Parida

88	Vijay Laxmi Das
89	Abhipsa Das
90	Alaka Adhyapika Swain
91	Yandra vera venkata dileep
92	Priyanka Pradhan
93	Tinu Bisoi
94	Shubhashree Samal
95	Sulagna Satpathy
96	Dr. Devanand T N
97	Subhranshu Singh Barik
98	Baidehi Mohapatra
99	Gunti.charitha
100	ARUNKUMAR D
101	Ankita priyadarshani
102	Sonia



**Figure 5: Certificate for the participants**

Prof. KVD Prakash  
 Dean - IIE & HRD

Dr. Prasanta Ku. Mohanty  
 Dean Academic