

ICAR-Central Institute of Brackishwater Aquaculture  
Society of Coastal Aquaculture and Fisheries



**BRAQCON 2019: WORLD BRACKISHWATER AQUACULTURE CONFERENCE**  
**22 to 25 January 2019**  
**Chennai, India**

**PROGRAMME AT A GLANCE**

<b>22 January, 2019 Farmers' Conclave</b>	
<b>Time</b>	<b>Inaugural session Venue: Main hall</b>
09:59	Invocation
10:00	Welcome address: <b>Dr. K.K. Vijayan</b> , Convenor
10:10	Felicitations of guests
10:20	Lighting of lamp
10:25	Introductory address: <b>Dr. J.K. Jena</b> , DDG (Fisheries Science), ICAR
10:35	Presidential address: <b>Mr. Tarun Shridhar</b> , IAS, Secretary, DAHD&F, Govt. of India
10:45	Address of guest of honour: <b>Prof. M. S. Swaminathan</b>
11:00	Felicitation address: <b>Mr. K. Gopal</b> , IAS, Secretary (AHD&F), Govt. of Tamil Nadu, India
11:10	Special address: <b>Mr. D. Jayakumar</b> , Hon'ble Minister of Fisheries, Govt. of Tamil Nadu
11:20	Release of publications, products and handing over of profit-sharing cheques to the beneficiary farmer groups
11:40	Inaugural address: Chief Guest <b>Shri. Radha Mohan Singh</b> , Hon'ble Union Minister of Agriculture & Farmers Welfare
11:55	Vote of thanks: <b>Dr. S.V. Alavandi</b> , Organising Secretary
12:00	National Anthem
	<b>Tea</b>
<b>Session-I (12:30-13:30)</b>	
<b>Farming Scenario in South East Asian Countries</b>	
<b>Chairs:</b> Dr. B. Meena Kumari, Chairperson, NBA, India; Dr. S. Felix, Vice Chancellor, TNFU, India	
<b>Rapporteur:</b> Dr. M.Kumaran, CIBA, Dr. Joe K. Kizhakudan, CMFRI	

<b>Venue: Main Hall</b>		
12:30	<b>Dr. Weimin Miao</b> , FAO Regional Office, Thailand	Fisheries and aquaculture for food and nutrition security and poverty alleviation
12.40	<b>Dr. Arun Padiyar</b> , FAO Consultant, India	Sustainable brackishwater aquaculture in India – Farmers perspective
12.50	<b>Dr. Celia L. Pitogo</b> , The Philippines	Pond-side recognition of problems and diseases affecting shrimp using Level-I diagnostics.
13.00	<b>Dr. S. Felix</b> , India	Build back better coastal aquaculture hotspot in India
13.10	<b>Dr. Salin R. Krishna</b> , Thailand	Brackishwater aquaculture in and around Thailand - Present status, challenges and way forward
13.20	<b>Mr. Chandra L Ramprakash</b> , Malaysia	Experiences of brackishwater aquaculture in Malaysia and Myanmar
13:30	<b>Mr. S. Santhana Krishnan</b> , India	Enterprising opportunities in Indian aquaculture and understanding of market
13.40 – 14.00	<b>Lunch</b>	
<b>Session-II: (14:00-17:00)</b>		
<b>Status of Aquaculture of Coastal States</b>		
<b>Chairs:</b> Dr. G.S. Sameeran, IAS, Director of Fisheries, Tamil Nadu, Shri Rama Sankar Naik, IAS., Commissioner Fisheries, Andhra Pradesh		
<b>Rapporteurs:</b> Dr. A. Panigrahi, CIBA, Dr. P.K. Patil, CIBA		
<b>Venue: Main Hall</b>		
14.00	Presentation by Director/Commissioner of fisheries of coastal states of India	Andhra Pradesh, Tamil Nadu, Kerala, Gujarat etc.
14:30	Presentation of Success stories by farmers	
	Farmers and farmer groups multilingual presentations	Farmers from AP, TN, KL, Gujarat, WB, Odisha
	<b>Tea</b>	
17:00	<b>Session-III: (17:00-18:00)</b> <b>Panel Discussion</b> Panel members: Led by Director CIBA, Mr. S. Santhana Krishnan, Directors/Commissioners of Fisheries Dept.- AP, TN, KL, etc., YG Prasad, DDG (Fisheries Science), Representatives from SAP, AISHA, AISFA, SEAI <b>Venue: Main Hall</b>	All the farmer participants and presenters
18:00	Consolidation of Farmers Conclave Proceedings & Vote of thanks by <b>Dr. M. Kumaran</b> , Organising Secretary, Farmers Conclave - 2019, CIBA.	

## BRAQCON 2019 – Scientific Conference

DAY 1: 23 January, 2019	
Time	Inaugural session, Venue: Main Hall
08:59	Invocation
09:00	Welcome address: <b>Dr. J.K. Jena</b> , DDG (Fisheries Science), ICAR
09:10	Felicitations of guests
09:15	Lighting of lamp
09:20	Introductory address: <b>Dr. K.K. Vijayan</b> , Convener
09:30	Special address: <b>Dr. J. Balaji</b> , IAS, Joint Secretary (Fisheries), DAHD&F, Govt. of India
09:40	Felicitation address: <b>Dr. Weimin Miao</b> , FAO
09:45	Felicitation address: <b>Dr. Yugraj Singh Yadava</b>
09:50	Felicitation address: <b>Dr. G. Chamberlain</b>
09:55	Felicitation address: <b>Dr. Robins McIntosh</b>
10:00	Felicitation address: <b>Dr. Jim Wyban</b>
10:05	Inaugural address: Chief Guest <b>Dr. Trilochan Mohapatra</b> , Secretary, DARE & DG, ICAR
10:20	Vote of thanks: <b>Dr. S.V. Alavandi</b> , Organising Secretary
10:25	National Anthem
	<b>Tea</b>

## Technical Sessions

Session I: (10:30-12:15) Aquaculture production systems		
Chairs: Dr. J. K. Jena DDG (Fisheries Science), Dr. K.K. Vijayan Director, CIBA		
Rapporteurs: Dr. T.V.Sathianandan, CMFRI, Dr. M. Kailasam, CIBA		
Each speaker: 20 Mins (Including discussion) oral presentation 6 min (Including discussion)		
Remarks by Chair: 10 mins		
Venue: Main Hall		
10:30	<b>Dr. George Chamberlain</b> , USA	Global shrimp farming industry: Strength, opportunities and way forward
10:50	<b>Dr. Jim Wyban</b> , USA	Selective breeding of <i>Penaeus vannamei</i> and its impact on world aquaculture: Lessons for future
11:10	<b>Dr. Robins McIntosh</b> , Thailand	Shrimp genetics are not everything
11:30-11:40	<b>Dr. Kazumasa Ikuta</b> , Japan	Aquaculture in Japan, Relevance of technological backstopping
11:40-12:05	4 Oral Presentations	

12:05-12:15	Remarks by Chair	
<b>Session II: (12:15 -15.00) Reproduction and larviculture</b> <b>Chairs:</b> Dr. A. Ramachandran, Vice Chancellor, KUFOS; Dr. Bindu R Pillai, Director, CIFA <b>Rapporteurs:</b> Dr. C.P. Balasubramanian, CIBA; Dr. S.K. Sahoo, CIFA Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion) Remarks by Chair: 10 mins <b>Venue: Main Hall</b>		
12:15	<b>Dr. Marcy N. Wilder</b> , Japan	Advances in science of reproductive physiology of crustaceans in relation to challenges in captive breeding and seed production
12:35	<b>Mr. Madhusudan Reddy</b> , India	Commercial scale larviculture of penaeid shrimp in India: Status and Challenges
12:55	<b>Dr. Ken Corpron</b> , USA	Aquaculture standards and certification
13:15-14:00	<b>Lunch</b>	
14:00	<b>Dr. Pung Pung Hwang</b> , Taiwan	Osmoregulation in euryhaline fish and rearing in different salinity regimes with special reference to brackishwater aquaculture
14:20-14:50	5 Oral Presentations	
14:50-15:00	Remarks by Chair	
12:15-15:00	Poster Presentations (Aquaculture production systems) Venue: Main Hall Annexe	
15:00-15:15	<b>Tea</b>	

4:00-18:00	<b>Parallel session</b> <b>Quality and safety standards for fish and fishery products: International prospective:</b> Chairman, EIC of India <b>Venue: Hall 2 (CIBA Auditorium Floor 3)</b>	
------------	---	--

<b>Session III: (15:15-18:05) Fish and shell fish nutrition</b> <b>Chairs:</b> Dr K. Gopakumar, Former DDG (Fisheries Science); Dr. Debajit Sarma, Director, DCFR <b>Rapporteurs:</b> Dr. P. Vijayagopal, CMFRI; Dr. Debasis De, CIBA Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion) Remarks by Chair: 10 mins <b>Venue: Main Hall</b>		
15:15	<b>Dr. Chris G. Carter</b> , Australia	Advances in nutritional physiology of aquaculture species
15:35	<b>Dr. V. P. Venugopalan</b> , India	Radiation processing of fish and fishery products for shelf life extension
15:55	<b>Dr. Lena Burri</b> , Norway	Alternate feed resources in global aqua-feed basket
16:15	<b>Mr. Siddhartha Yarabolu</b> , India	Use of <i>Vibrio</i> free <i>Artemia</i> naupli and future developments
16:35	<b>Dr. Antony Jesu Prabhu</b> , Norway	Rearing system (RAS) based feeds: Aquaculture nutrition and beyond
16:55-17:55	10 Oral Presentations	

17:55- 18:05	Remarks by Chair	
15:15-18:05	Poster Presentations (Reproduction and larviculture) Venue: Main Hall Annexe	
18:30 to 19:30	<b>Cultural Programme, Venue: Main Hall</b>	
19:30-21:00	<b>Dinner</b>	

<b>DAY 2: 24 January, 2019</b>		
9:30-11:30	<b>Parallel session CEO round table meeting Venue: Hall 3 (CIBA Conference Hall Floor 2)</b>	
<b>Session IV: (09:30-13:00) Aquatic animal health</b>		
<b>Chairs:</b> Dr. K.M. Shankar, Emeritus Professor, Veterinary College, Shimoga, Karnataka; Dr B.K. Das, Director, CIFRI		
<b>Rapporteurs:</b> Dr. S.K. Otta, CIBA; Dr. N.K. Sanil, CMFRI		
Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion)		
Remarks by Chair: 20 mins		
<b>Venue: Main Hall</b>		
09:30	<b>Dr. Kenton Morgan, UK</b>	Epidemiological approaches to the aquatic animal health management: Opportunities and challenges
09:50	<b>Dr. Mrs. Indrani Karunasagar, India</b>	Is early mortality syndrome (EMS) due to bacteria or complex aetiology?
10:10	<b>Dr. Kallaya Sritunyalucksana, Thailand</b>	New paradigms to solve the global aquaculture disease crisis and the role of novel diagnostic solutions
10:30	<b>Dr. Iddyia Karunasagar, India</b>	Microbes of economic importance in aquaculture
10:50	<b>Dr. Chris Hauton, UK</b>	Crustacean immunity as a tool in health management in shrimp farming.
11:10	<b>Dr. Masahiro Sakai, University of Miyazaki, Japan</b>	Fish cytokines: Application for aquaculture.
11:30-11:40	<b>Tea</b>	
11:40-12:40	10 Oral Presentations	
12:40-13:00	Remarks by Chair	
09:30-13:00	Poster Presentations (Fish and Shellfish Nutrition) Venue: Main Hall Annexe	
13:00-14:00	<b>Lunch</b>	
14:00-18:00	<b>Parallel session Aquaculture Startup Venue: Hall 3 (CIBA Conference Hall Floor 2)</b>	

**Session V: (14:00-16:30) Aquaculture genetics and biotechnology****Chairs:** Dr. Gopal Krishna, Vice Chancellor, CIFE; Dr. Kuldeep K. Lal, Director, NBFGR**Rapporteurs:** Dr. M.S. Shekar, CIBA; Dr. T. Raja Swaminathan, NBFGR

Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion)

Remarks by Chair: 10 mins

**Venue: Main Hall**

14:00	<b>Mr. Robin Pearl, USA</b>	Genetic improvement programs in shrimp farming: An industrial perspective
14:20	<b>Mr. Gustavo Pinedo Mahr, Mexico</b>	Selective breeding in shrimp for a better aquaculture trait-A Mexican experience
14:40	<b>Dr. K.K. Vijayan, India</b>	Towards domestication and genetic improvement of native Indian white shrimp <i>Penaeus indicus</i>
15:00	<b>Dr. Dushyant Singh Baghel, India</b>	De novo genome sequencing and hybrid assembly approach for complex fish genomes
15:20	<b>Dr. Vindhya Mohindra, India</b>	Genome sequence of anadromous Hilsa shad, <i>Tenulosa ilisha</i> (Hamilton, 1822) as a resource for salinity adaptation and evolution
15:40-15:50	<b>Tea</b>	
15:50-16:20	5 Oral Presentations	
16:20-16:30	Remarks by Chair	
14:00-16:30	Poster Presentations (Aquatic Animal Health) Venue: Main Hall Annexe	

**Session VI: (16:30-18:30)****Aquatic environment and climate change****Chairs:** Dr. A. Gopalakrishnan, Director CMFRI; Dr. K.K. Ramachandran, Group Head, Atmospheric Process (Atp), National Centre for Earth Science Studies, Trivandrum**Rapporteurs:** Dr. P.U. Zacharia, CMFRI; Dr. M. Muralidhar, CIBA

Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion)

Remarks by Chair: 10 mins

**Venue: Main Hall**

16:30	<b>Dr. M. Sudhakar, India</b>	Environmental factors of significance in relation to aquatic biological resource in relevance to climate change
16:50	<b>Dr. Kirsten Benkendorff, Australia</b>	The risks of pesticide pollution in prawn and oyster aquaculture
17:10	<b>Dr. P. K. Krishnakumar, Saudi Arabia</b>	Aquatic pollution & its impact on estuaries and brackishwater aquaculture
17:30	<b>Mr. C. M. Muralidharan, FAO</b>	Need for ecosystem approach to brackishwater shrimp farming

	consultant	- A case from Andhra Pradesh, India
17:50-18:20	5 Oral Presentations	
18:20-18:30	Remark by Chair	
16:30-18:30	Poster Presentations (Aquaculture genetics & biotechnology) Venue: Main Hall Annexe	

### DAY 3 – 25 January, 2019

#### Session VII: (09:30-11:30) Brackishwater ecosystem, estuarine biodiversity and conservation

**Chairs:** Prof. Dr. Ramesh Ramchandran, Director, NCSCM; Dr. B. Madhusoodhana Kurup, Former Vice Chancellor, KUFOS

**Rapporteurs:** Dr. R. Saraswathy, CIBA; Dr. P. Lakshmi Latha, CMFRI

Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion)

Remarks by Chair: 10 mins

**Venue: Main Hall**

09:30	<b>Mr. N. Vasudevan</b> , India	Integration of mangrove conservation with rural livelihood : Maharashtra experience
09:50	<b>Dr. Amir Neori</b> , Israel	Integrated multi-trophic aquaculture systems: Models for brackishwater aquaculture
10:10	<b>Dr. Sunil Mohamed</b> , India	Ecosystem approach to sustainable aquaculture
10:30	<b>Dr. Rajeev Raghavan</b> , India	Sustainable development goals, aichi biodiversity targets and estuarine conservation
10:50-11:20	5 Oral Presentations	
11:20-11:30	Remarks by Chair	
09:30-11:30	Poster Presentations (Aquatic environment and climate change) Venue: Main Hall Annexe	
11:30 -11:40	<b>Tea</b>	

#### Session VIII: (11:40-13:20) Socio-economic and livelihood issues of fisheries and aquaculture

**Chairs:** Dr. M.A. Atmanand, Director, NIOT, Dr. Yugraj Singh Yadava, Director, BOBP-IGO, India

**Rapporteurs:** Dr. T. Ravisankar, CIBA; Dr. Shyam S. Salim, CMFRI

Each speaker: 20 Mins (Including discussion); oral presentation 6 min (Including discussion)

Remarks by Chair: 10 mins

**Venue: Main Hall**

11:40	<b>Dr. Yugraj Singh Yadava</b> , India	Challenges in implementing integrated coastal zone management in India
12:00	<b>Dr. S. Shubin</b> , UK	Exploring different dimensions of poverty in relation to aquaculture in India & Bangladesh
12:20	<b>Dr. Md Abdus Salam</b> , Bangladesh	Aquaponics for tropics with brackishwater species: Bangladesh experience, relevant to India and other Asian countries
12:40-13:10	5 Oral Presentations	

13:10-13:20	Remarks by Chair
11:20-13:20	Poster Presentations (Brackishwater ecosystem, estuarine biodiversity and conservation) Venue: Main Hall Annexe
13:20-14:15	<b>Lunch</b>
14:15-15:30	Poster Presentations (Socio-economics and livelihood issues of fisheries and aquaculture) Venue: Main Hall Annexe
15:30-17:00	<b>Valedictory Session</b> <b>Venue: Main Hall</b>
15:30	Welcome address by Dr. S.V. Alavandi, Organising secretary
15:40	Conference recommendations presented by expert panellist
16:00	Award distribution
16:30	Valedictory address by Chief Guest, Dr. M.V. Gupta, World Food Prize Laureate (2005)
16:45	Convenor's address by Dr. K.K. Vijayan
16:55	Vote of thanks by Dr. K. Ambasankar
17:00	National Anthem
<b>National expert panel</b> Dr. M.V. Gupta, World Food Prize Laureate Dr. K. Gopakumar, Former DDG (Fisheries Science), ICAR, Dr. S.D. Thripathi, Former Director, CIFE & CIFA; Dr. M.J. Modayil, Former Director, CMFRI & Member, ASRB; Dr. Dilip Kumar, Former Director, CIFE; Dr. G. Syda Rao, Former Director, CMFRI; Dr. George John, Former Senior Advisor, DBT, Govt. of India; Dr Pravin Putra, ADG (Marine Fisheries), ICAR. <b>Panel Secretariat</b> Dr. A.R. Thirunavukkarasu, Former Principal Scientist, CIBA; Dr. T.C. Santiago, Former Principal Scientist, CIBA; Dr. P. Ravichandran, Former Principal Scientist, CIBA; Dr. V.V. Sugunan, Former ADG (Inland Fisheries), ICAR; Dr. G. Gopakumar, Former Principal Scientist, CMFRI; Dr. V.S. Chandrasekaran, Former Principal Scientist, CIBA; Dr. G. Gopikrishna, Former Principal Scientist, CIBA; Dr. N.P. Sahoo, Principal Scientist, CIFE; Dr. P.K. Asokan, Principal Scientist & SIC, CMFRI Research Centre, Kozhikode; Dr. V.R. Suresh, Principal Scientist & Head, Riverine Ecology and Fisheries Division, CIFRI; Dr. S.S. Mishra, Principal Scientist & Head, Fish Health Management Division, CIFA; Dr. Shivananda Murthy, Dean, College of Fisheries, Mangalore; Dr. K. Asok Kumar, Principal Scientist & Head, Fish Processing, CIFT; Dr. Gaurav Rathore, Head, FHM Division, NBFGR; Mr. M. Kathirvel, Secretary, SCAFi (Member secretary, Panel Secretariat)	