INDIAN ECOLOGICAL SOCIETY FISHERIES AND AQUACULTURE CONFERENCE

IESFAC 2023

FISHERIES AND AQUACULTURE AN ECOLOGICAL PERSPECTIVE



COLLABORATIVE HOST ORGANISATION

GURU ANGAD DEV VETERINARY & ANIMAL SCIENCES UNIVERSITY (GADVASU)
LUDHIANA, PUNJAB, INDIA - 141004

Website: www.iesfaconf.in







Chief Patron Dr. J.K. Jena Deputy Director General (Fisheries) Indian Council of Agricultural Research (ICAR) New Delhi, India



Conference Chair Dr. Inderjeet Singh Vice Chancellor Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) Ludhiana, Punjab- India



Conference Co-Chairs Dr. A.K. Dhawan President, Indian Ecological Society Punjab Agricultural University Ludhiana, Punjab- India



Conference Co-Chairs Dr. J.P.S. Gill Director of Research Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) Ludhiana, Punjab- India



Conference Co-Chairs Dr. Asha Dhawan IES Advisor for IESFAC-2023 Former Dean (Retd.), College of Fisheries Guru Angad Dev Veterinary and Animal Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) Ludhiana, Punjab- India



Organizing Secretary Dr. Meera D. Ansal Dean, College of Fisheries Sciences University (GADVASU) Ludhiana, Punjab- India





ABOUT THE CONFERENCE

In view of significant role of fisheries sector in food and nutritional security; livelihood/employment generation; and contributions to economic growth, 'Indian Ecological Society' (IES), Punjab Agricultural University (PAU), globally acclaimed for its efforts in restoring ecological health, is organizing conference on 'Fisheries and Aquaculture: An Ecological Perspective', in collaboration with Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) at Ludhiana, Punjab from 22 to 24 February, 2023. The said event will offer an interactive platform for showcasing recent challenges and advances to combat the impact of changing environment on fisheries sector and vice versa. The conference aims to deliberate on ecofriendly innovations and advanced technologies for sustainable development of fisheries sector to achieve envisaged production targets within the realms of environmental well-being, climate change, public health and food safety. Conference website: https://www.iesfaconf.in

ABOUT THE INDIAN ECOLOGICAL SOCIETY

The Indian Ecological Society (IES), established in 1974 at College of Agriculture, PAU, Ludhiana, Punjab, is one of the pioneering organizations committed to protect the environment by creating awareness, promoting ecological studies and providing deliberation opportunities to renowned ecologists through organizing national and international scientific events. The society sponsors conferences/ seminars/ workshops/ lecture series to highlight ecological perspectives of various anthropogenic activities involving serious issues like environmental pollution, depletion of resources, distinction of germplasm, food safety concerns etc. Further, recent research findings in the field of basic/applied ecology are published by IES in its widely circulated "Indian Journal of Ecology" (IJE). The society is managed by senior academicians and assisted voluntarily by a multidisciplinary team of scientists from India and abroad. http://www.indianecologicalsociety.com

ABOUT GADVASU. LUDHIANA. PUNJAB

Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), carved out of its parent university, PAU in year 2005 at Ludhiana, is today country's top ranking Veterinary and Animal Sciences University. University is mandated to produce competent human resource, develop need based innovative



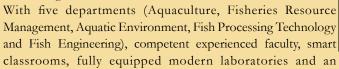
technologies and provide extension services for holistic development of the animal husbandry, dairy and fisheries sectors under the umbrella of one-health. GADVASU is known for academic and R&D excellence owing to its State-of-Art infrastructure; dynamic competent faculty; well-equipped laboratories; multispecialty utility/capacity building services and strong linkages with national and international institutes. With five constituent colleges viz., College of Veterinary Science, College of Dairy Science and Technology, College of Fisheries and College of Animal biotechnology at Ludhiana and College of Veterinary Science at Bathinda, GADVASU is producing world class professionals (graduates and postgraduates) to serve the animal husbandry, dairy and fisheries sectors at regional, national and global levels. Website: http://www.gadvasu.in

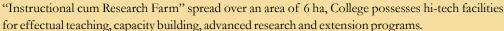




ABOUT COLLEGE OF FISHERIES, GADVASU

College of Fisheries, GADVASU was established in April, 2008, to produce professionally competent human resource (graduates and postgraduates) to serve the fisheries sector in different capacities (teaching, research, extension, planning and livelihood generation) for productivity enhancement and socio-economic sustainability. Since its establishment, the College has registered commendable academic growth and has made significant R&D contributions for the development of the inland fisheries sector in the northwestern region of India.









WHO CAN ATTEND?

Conference is open for all professionals, researchers, academia, policy makers, extension functionaries, industry and students.

WEATHER

In Punjab, the month of February offers a pleasant weather with minimum night time temperature of 8.0-9.0°C and maximum day time temperature of 21.0-22.0 °C.

ABOUT THE CITY

Standing on the old bank of River Satluj, Ludhiana is the largest city of Punjab, known as 'Manchester of India' and ranked as one of the easiest cities in India for Business by the World Bank. It is famous for its 'Hosiery Industry' and 'Textile Industry' sourcing production to top corporate brands all over India. Ludhiana is Asia's largest hub for bicycle manufacturing and is producing more than 50% of India's bicycle production each year. Both State Agriculture University (PAU) and State Veterinary University (GADVASU), also located in this city, are well known for their outstanding contributions in 'Green Revolution' and 'White Revolution' at State and National levels; with prospective role to play in 'Blue Revolution' in coming years, in special reference to aquaculture development in inland saline areas of north western states of the country.

HOW <u>to reach?</u>

Ludhiana is well connected by rail, road and air. The domestic flights connect Mohali Airport, Punjab to many important cities of the country. IGI Airport, Delhi is well connected to almost all parts of the country. Road distance of Ludhiana from Chandigarh and IGI Delhi airport is about 108 and 335 Km, respectively. New Delhi is also well connected to Ludhiana by rail with a journey time ranging between 5-6 hrs.





INAUGURAL SESSION

Inaugural session will kick start with keynote addresses by renowned experts to present an insight into the important issues and concerns related to the conference. Details of keynote lead speakers will be updated with second announcement of the conference.

TECHNICAL SESSIONS

The conference will host eight technical sessions on following theme areas for deliberations to identify key issues and formulate strategic recommendations for sustainable development of fisheries sector in light of recent advances and ecological safeguards.

- Aquaculture Production Systems

o Freshwater, brackish water, inland saline and marine water aquaculture systems: Eco-system based fish and shellfish culture systems, Species diversification, Aquaculture in degraded lands, Integrated fish farming models, Organic aquaculture, Rotational aquaculture, Integrated multi-trophic aquaculture (IMTA) systems, Intensive aquaculture systems like aquaponics, biofloc based aquaculture, recirculatory aquaculture (RAS), Aqua mimicry, Reservoir Aquaculture/Open waters (cage, pen culture etc.) aquaculture systems, pond cage aquaculture, Azolla culture, seaweed culture, makhana culture, bioremediation modelsetc.

- Sustainable Aquafeeds and Feeds Technologies

o Fish and shellfish nutrition: Feed formulation and manufacturing, Feeding regimes, Conventional/non-conventional/Novelfeed ingredients; Feed additives- binders, preservatives, antioxidants, colorants etc., Ayurveda in fish/shellfish nutrition, probiotics etc., Nutraceuticals; Nanotechnology, Live food, Larval nutrition, Broodstock nutrition, Nutrigenomics, Digestive physiology and endocrinology, feed storage and quality etc.

- Fish Genetics, Breeding and Biotechnology

O Genomics in stock improvement/brood stock management, Selective breeding, Early and multiple breeding, Brood banks, Marker assisted selection, Transgenics, Biochemical and molecular genetics, Cryo-preservation of fish gametes, Nanotechnology, Sex manipulations, Microbial genetics, Algal and microbial biotechnology for aquaculture etc.

- Aquaculture Environment/Health Management & One Health

• Water quality management and engineering, Aquatic medicines, Existing and emerging pathogen in Aquaculture, Novel disease diagnostic and therapeutic approaches, Antimicrobial resistance, Zoonoses, Ayurveda for aquatic animal health management, Ecotoxicology and remediation strategies, Genomics in Aquatic animal health and environment management, bioremediation models etc.

- Responsible Aquaculture, Climate Resilience and ICT/AI in Fisheries

o Impact of aquaculture on environment and vice-versa, Responsible use of antibiotics/supplements in aquaculture, climate resilient aquaculture systems, Global warming/climate change and fisheries/aquaculture, Renewable energy in fisheries and aquaculture, IOT's in aquaculture, AI-based platforms, automation and informatics in aquatic science/aquaculture systems, Technology transfer through mobile apps etc.

- Aquatic Ecosystem Assessment, Management and Conservation

 Aquatic resources, Aquatic ecology and biodiversity, population modelling and stock assessment, aquatic contaminants and pollutants, Exotic, Remote sensing and GIS in fisheries management and conservation, Fishing methods etc.





TECHNICAL SESSIONS

- Fish Processing, Value Addition, Quality Assurance & Marketing

 Fish processing and value addition: Preservation and packaging, fish/shellfish products and by-products, Fish based functional products, Fisheries safety and quality assurance, supply chain management, processing waste management/utilization towards circular bio-economy (zero waste processing technologies), demand and supply, e-marketing platforms etc.

- Capacity Building & Socio-Economic Empowerment

O Fisheries education and governance, Training and skill development, Human resource development, Gender and social equity, food/nutritional security, consumption, livelihood/employment generation, women/rural empowerment, Climate change adaptation and risk management, Fisheries Start-ups/ entrepreneurship development, Aquaculture economics and marketing, Doubling farmers income, Societal development/SHGs/FPOs/cooperatives, policies/ schemes/programs, economicgrowthetc.

ACADEMIA-FARMER-INDUSTRY INTERFACE

An Academia-Farmer-Industry Interface will be Organized on February 24, 2023 under Special Session for Feedback Based Deliberations to Formulate Backward & Forward Strategic Action Plan for Sustainable Development of the Sector

AWARDS

- · Best Oral Presentation Awards
- · Best Poster Presentation Awards

IMPORTANT DATES

Last Date of Submission of Abstract : 20.01.2023

Issue of Acceptance Letters for Abstracts (on/before) : 24.01.2023

Last Date for Submission of Full Papers : 30.01.2023

Last Date for Payment of Registration Fee : 30.01.2023

Request for Accommodation (upto) : 30.01.2023

REGISTRATION DETAILS

Delegates (IES -Members)	:	Rs. 5,000/-
Delegates (Non IES -Members)	:	Rs. 6,000/-
Students	:	Rs. 2,500/-
Industry	:	Rs. 10,000/-
Guest/Accompanying person	:	Rs. 2,500/-

BANK DETAILS

For RTGS/NEFT, details of the Conference Bank Account A/c Name: IESFAC-2023 A/c No.: 922020047626985 Bank: Axis Bank Limited Branch: PAU, Ludhiana IFSC: UTIB0000042





SUBMISSION OF ABSTRACTS

An extended abstract/abstract based on original research findings shall be submitted and should not have been submitted earlier for publication/presentation in any media or platform. The abstract will pass through peer-review process and selected for oral/poster presentations during different technical sessions. Abstracts without registration fee will not be accepted for oral/poster presentations.

- Full Papers of Extended Abstracts/Abstracts will be published in Special Issue of "Indian Journal of Ecology" on Fisheries
- · Abstract Book of Conference will be published with ISBN Number

AUTHOR GUIDELINES

Author guidelines and abstract sample can be accessed at http://iesfaconf.in/sample-extended-abstract/

ACCOMODATION

Limited accommodations are available at the university (PAU/GADVASU) Guest Houses. The registered delegates who pay their registration fee online, can submit request for accommodation at https://www.iesfaconf.in upto 10.01.2023. Delegates can also book their accommodation in 3/4/5 Star Hotels in Ludhiana at their own level through online portals (www.goibibo.com etc.) and shall prefer to stay in hotels near to the university, to facilitate transit to the conference venue.

PLACES TO VISIT

Punjab offers a rich heritage to feel the fragrance of historic monuments and memorials, including the Holi Golden Temple, Jalian Wala Bagh and Wagah Border in Amritsar; Sukhna Lake, Rock Garden and Rose Garden in Chandigarh; Virasat-e Khalsa in Ananadpur Sahib-Ropar, Museum of Rural life in PAU, Ludhiana etc. Paid excursion trips to any favorite destination can be organized for interested delegates on 25th February 2023. Interested delegates must inform their preferred destination(s) well in advance.

PARTNERS/SPONSOR OPPORTUNITIES

Sponsors and co-sponsors from related industry/agencies are invited to support the event and be partners in promoting ecological health for a healthy future. All sponsorships will be duly acknowledged/listed on/in conference website; FB page, program booklet and conference proceedings; with prominent display on the event signage and an opportunity of setting up an exhibition stall during the conference, where farmers will also be invited for an interactive session.

Partnership – Rs. 1,00,000/-Sponsorship – Rs. 50,000/- Co-Sponsorship-Rs. 25,000/-

ADVERTISEMENT IN SOUVENIR

Back Cover page: Rs. 20,000/-Full Page: Rs. 10,000/- Inner Page of Back Cover: Rs. 15,000/-Half Page: Rs. 5,000/-





NATIONAL ADVISORY COMMITTEE

Dr. Ravishankar C. N.

Director & Vice Chancellor

ICAR-Central Institute of Fisheries Education (CIFE)

Mumbai, Maharashtra

Dr. G. Sugumar

Vice-Chancellor

Tamil Nadu Dr. J. Javalalitha Fisheries University (TNJFU)

Nagapattinam, Tamil Nadu

Dr. Rosalind George

Vice-Chancellor

Kerala University of Fisheries and Ocean Studies (KUFOS)

Kochi, Kerala

Dr. Bimal Prasanna Mohanty

Assistant Director General (Inland Fisheries)

Indian Council of Agricultural Research (ICAR), New Delhi

Dr. Prem Kumar

Assistant Director General (Marine Fisheries)

IndianCouncil of Agricultural Research (ICAR), New Delhi

Dr. P. Pravin

Former Assistant Director General (Marine Fisheries)

Indian Council of Agricultural Research (ICAR), New Delhi

Dr. B.K. Das

Director

ICAR-Central Inland Fisheries Research Institute (CIFRI)

Kolkata, West Bengal

Dr. P.K. Sahoo

Director

ICAR-Central Institute of Freshwater Aquaculture (CIFA) Bhubaneswar, Odisha

Dr. Kuldeep K. Lal

Director

ICAR-Central Institute of Brackishwater Aquaculture (CIBA)

Chennai, Tamil Nadu

Dr. A. Gopalakrishnan

Director

ICAR-Central Marine Fisheries Research Institute (CMFRI)

Kochi, Kerala

Dr. George Ninan

Director

ICAR-Central Institute of Fisheries Technology (CIFT)

Kochi, Kerala

Dr. Pramod Kumar Pandey

Director

ICAR-Directorate of Coldwater Fisheries Research (DCFR)

Nainitial, Uttarakhand

Dr. Uttam K. Sarkar

Director

ICAR-National Bureau of Fish Genetic Resources (NBFGR)

Lucknow, Uttar Pradesh

Dr. M. Karthikeyan

Director

Marine Products Export Development Authority (MPEDA)

Kochi, Kerala

Dr. L. Narasimha Murthy

Senior Executive Director

National Fisheries Development Board (NFDB)

Hyderabad, Telangana

Dr. N.P. Sahu

Joint Director, ICAR-Central Institute of Fisheries Education (CIFE), Mumbai, Maharashtra

Dr. Sanjeev Kumar Chauhan

(General Secretary, Indian Ecological Society)

Director of Research

Dr. Y. S. Parmar University of Horticulture & Forestry, Nauni, Solan, Himachal Pradesh

Dr. Kamaldeep Kaur

Former Dean (Retired), College of Fisheries Guru Angad Dev Veterinary and Animal Sciences University (GADVASU) Ludhiana, Punjab

Dr. R.S. Chauhan

Former Dean, College of Fisheries

G.B. Pant University of Agriculture & Technology (GBPUAT)

Pantanagar, Uttarakhand

Dr. B. Ahilan

Dean, Dr. M.G.R Fisheries College and Research Institute, Tamil Nadu Dr. J. Jayalalitha Fisheries University (TNJFU), Ponneri, Tamil Nadu

Dr. Ved Prakash Saini

Dean, College of Fisheries

Bihar Animal Sciences University (BASU)

Patna, Bihar

Dr. A.K. Singh

Associate Dean, College of Fisheries Science Birsa Agricultural University (BAU)

Ranchi, Jharkhand

Dr. B.K. Sharma

Dean, College of Fisheries

MaharanaPratap University of Agriculture & Technology (MPUAT), Udaipur, Rajasthan

Dr. Yusufzai

Principal, College of Fisheries Science

Kamdhenu University, Veraval, Gujarat

Dr. Malobica Das Trakroo

Dean, College of Fisheries

GBPUAT, Pantanagar, Uttarakhand

Dr. Farooz Ahmad Bhat

Dean, Faculty of Fisheries, Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST) Srinagar, Jammu & Kashmir

Dr. Shivakumar Magada

Dean, College of Fisheries

Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar, Mangaluru, Karnataka

Prof. Bipul Kumar Das

Dean, Faculty of Fishery Sciences

West Bengal University of Animal & Fishery Sciences (WBUAFS)

Kolkata, West Bengal

Mr. Jasveer Singh

Director & Warden Fisheries

Punjab State Fisheries Development Board (PSFDB), Mohali, Punjab

Dr. Rajinder Peshin

(Vice-President, Indian Ecological Society)

Professor and In-charge, University Examination Cell, SKUAST-Jammu, Jammu & Kashmir





ORGANIZING COMMITTEE

Dr. Sanjeev Kumar Chauhan

Director of Research, Dr. Y. S. Parmar University of Horticulture & Forestry Nauni, Solan (HP) and General Secretary, Indian Ecological Society

Dr. S. K. Uppal

Dean, Post Graduate Studies, GADVASU

Dr. H. S. Banga

Registrar, GADVASU

Dr. Parkash Singh Brar

Director of Extension Education, GADVASU

Dr. S. P. S. Ghuman

Dean, College of Veterinary Science (COVS), GADVASU

Dr. Y. S. Malik

Dean, College of Animal Biotechnology (COABT), GADVASU

Dr. Baljinder Kumar Bansal

Dean, College of Veterinary Science, Rampura Phul, GADVASU

Dr. R. S. Sethi

Dean, College of Dairy Science & Technology (CODST), GADVASU

Dr. S. Rampal

Director Student Welfare-Cum-Estate Officer, GADVASU

Dr. Kamaldeep Kaur

Former Dean, College of Fisheries (COF), GADVASU

Dr. Amarjit Singh

Comptroller, GADVASU

Dr. A. K. Arora

Controller of Examinations, GADVASU

Dr. T. S. Rai

Librarian, GADVASU

Dr. S. S. Randhawa

Director of Clinics, COVS, GADVASU

Dr. R. S. Grewal

Director, Livestock Farms, COVS, GADVASU

Dr. J. S. Bedi

Director, Centre of One Health, COVS, GADVASU

Sh. Jasvir Singh

Director & Warden Fisheries, Punjab

Punjab State Fisheries Development Board (PSFDB)

Dr. Varinder Uppal

Head, Department of Veterinary Anatomy, COVS, GADVASU

Dr. Deepti Narang

Head, Department of Veterinary Microbiology, COVS, GADVASU

Dr. R. K. Sharma

Head, Department of Veterinary & Animal Husbandry Extension Education,

COVS, GÁDVASU

Dr. J. S. Hundal

Principal Scientist, Department of Animal Nutrition, COVS, GADVASU

Dr. Vaneet Inder Kaur

Principal Scientist (Fisheries), Department of Aquaculture, COF, GADVASU and Councillor, Indian Ecological Society

Dr. Jaswinder Singh

Associate Professor, Department of Veterinary & Animal Husbandry

Extension Education, COVS, GADVASU

Dr. Inderpreet Kaur

Associate Professor, Department of Dairy Economics & Business Management CODST, GADVASU

Dr. S. S. Sodhi

Associate Professor, Department of Animal Biotechnology, COABT, GADVASU

Dr. Sagar Chandra Mandal

Associate Professor cum Head, Department of Fish Genetics and Reproduction, College of Fisheries, Central

Agricultural University (CAU), Lembucherra, Tripura

Dr. Deepjyoti Baruah

Principal Scientist (Aquaculture), ICAR-Indian Agricultural Research Institute (IARI), Assam

Dr. Harpreet Singh

Associate Professor (Communication), GADVASU

Dr. Nitin Mehta

Associate Professor, Department of Livestock Products Technology COVS, GADVASU

Dr. Janmejay Parhi

Assistant Professor, Department of Fish Genetics and Reproduction College of Fisheries, CAU, Lembucherra,

Tripura

Subject Matter Specialist

Dr. Prem Kumar

Krishi Vigyan Kendra, Sher-e-Kashmir University of Agricultural Sciences & Technology, (SKUAST), Jammu

Dr. Archit Shukla

Consultant (Fisheries), Ministry of Fisheries Animal Husbandry and Dairying, GOI

All Faculty

College of Fisheries, GADVASU