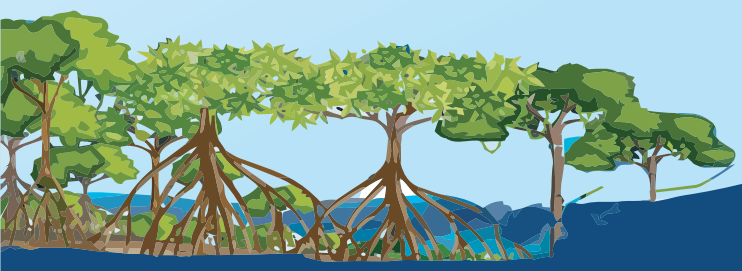
PROGRAMME BOOK

2nd International Conference on Sustainable Fisheries (ICSF) 2022

"Fisheries for Achieving SDGs"

16-18 SEPTEMBER



Faculty of Fisheries
Sylhet Agricultural University
Sylhet-3100, Bangladesh
www.sau.ac.bd

Programme

Inaugural Session: 9:00-12:30
16 September 2022, Friday

09:00 Registration
10:00 Guests take their seats
10:05 Recitation from the Holy Quran
Recitation from the Holy Geeta

10:10 Welcome Address

Professor Dr. M. M. Mahbub Alam, Member Secretary, ICSF-2022

10:15 Keynote Presentation

Emeritus Professor Dr. M. A. Sattar Mandal
Former Vice-Chancellor, Bangladesh Agricultural University, Mymensingh, and
Former Member, General Economic Division, Planning Commission, Bangladesh

Address by the Special Guests

10:40 **Prof. Dr. Syed Sayeem Uddin Ahmed,** Director (Research), Sylhet Agricultural University Research System

10:45 **Mr. Christopher Ross Price,** Regional Director, WorldFish, Bangladesh and South Asia, Dhaka

10:55 **Mr. Robert Douglas Simpson,** FAO Representative in Bangladesh, Dhaka

11:05 **Dr. Yahia Mahmud,** Director General, Bangladesh Fisheries Research Institute

11:15 **Mr. Kh. Mahbubul Haque,** Director General, Department of Fisheries, Bangladesh 11:25

Reception of **Dr. Shakuntala Haraksingh Thilsted,** Global lead for Nutrition and Public Health of WorldFish, Penang, Malaysia, being awarded World Food Prize 2021

11:30 Remarks from **Dr. Shakuntala Haraksingh Thilsted**

11:40 Address by the Chief Patron

Professor Dr. Md. Matiar Rahman Howlader, Honourable Vice-Chancellor
Sylhet Agricultural University, Sylhet

11:50 Address by the Chief Guest

Mr. Mohibul Hasan Chowdhury, Honourable Deputy Minister, Ministry of Education, People's Republic of Bangladesh

12:20 Address by the Chairperson

Professor Dr. Mrityunjoy Kunda
Dean, Faculty of Fisheries, Sylhet Agricultural University & Chairman, ICSF-2022

12:30 Prayer and Lunch Break

TECHNICAL SESSIONS

Technical Session 1: Aquaculture and Nutrition (Part-1)

Day-1
Sep. 16, 2022
Friday

Session Keynote Speaker: Dr. Arun Patel, Professor and Head, Department of Aquaculture, Central Agricultural University, Tripura, India

Title of the Keynote: Species and Feed Resources Diversification With Indigenous Potential Alternatives: Imperative For Resilience, Sustainability and Blue Transformation of Aquaculture

Chair: Dr. Arun Patel, Professor and Head, Department of Aquaculture, Central Agricultural University, Tripura, India

Co-chair: Sk. Ahmad Al Nahid, Associate Professor, Department of Fisheries Resource Management, Faculty of Fisheries, Chattogram Veterinary & Animal Sciences University, Khulshi-4225, Chattogram

Rapporteurs: 1. Mr. Aminur Rashid, Assistant Professor, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Mst. Fatema Jannat Munny, Lecturer, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 1:** Surma **Time:** 14.00 - 16.30

Author	Title	Organization
Md Badrul Islam[1,3], Md Moniruzzaman Sarkar[2], Md Redwanur Rahman[3], Mirola Afroze4 , Md Abu Hasan[4], Md Juwel Hosen[4] & MAA Shofi Uddin Sarkar[4]	Macro and micro mineral matter and lipid quality indices of freshwater crab *Paratelphusha lamellifrons* from Padma river, near Rajshahi city, Bangladesh	[1]Bangladesh Council of Scientific and Industrial Research, natural Products Research Division, BCSIR Rajshahi Laboratories-6206, Bangladesh, [2]Department of Zoology, University of Rajshahi, Bangladesh, [3]Institute of Environmental Science, University of Rajshahi, Bangladesh, [4]Bangladesh Reference Institute for Chemical Measurements, Dhaka, Bangladesh
Md. Mostafizur Rahman[1] & Dr. Mrityunjoy Kunda[2]	Present scenario, issues, and possibilities of biofloc fish farming In sylhet region, sylhet, Bangladesh	[1]Ph.D. Fellow, Fisheries Faculty, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Professor, Fisheries Faculty, Sylhet Agricultural University, Sylhet, Bangladesh

Author	Title	Organization
Fatema Jannat Munny[1], Md. Shahab Uddin[1] & Md. Shahidul Islam[2]	Proximate composition of *Labeo calbasu* at different seasons in Dekhar haor, Sunamgonj, Bangladesh	[1]Department of Aquaculture, Sylhet Agricultural University, Bangladesh, [2]Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Talukdar Jannat Tamanna Shimul, Sadia Afrin, Nahid Hasan Sezu, Shishir Kumar Nandi, Afrina Yeasmin Suma & Muhammad Anamul Kabir	Exploring the new candidate of fish feed ingredient from the haor aquatic weeds and its impact on the growth performance, blood biochemistry, liver and intestinal morphology of Asian catfish *(Clarias batrachus)*	Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet 3100, Bangladesh
Md. Akib Ferdous[1], Mohammad Hasna[1] Alam[2], Md. Shamsul Kabir[2], Manjurul Karim[2], Nasim Habib[1] & Md. Sherazul Islam[1]	Economic feasibility of an in-pond raceway system for commercial fish production in south-western Bangladesh	[1]Department of Fisheries and Marine Bioscience, Faculty of Biological Science and Technology, Jashore University of Science and Technology, Jashore, Bangladesh, [2]Feed the Future Bangladesh Aquaculture and Nutrition Activity, WorldFish
Sabuj Kanti Mazumder & Sutapa Debi	Synergistic effects of chitosan nanoparticles and vitamin E supplement on growth and biochemical responses of Pabda Fish	Department of Genetics and Fish Breeding, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
Md. Hamidul Islam[1*], Hafsa Siddiquee Mumu[2*], Ankhi-Un-Noor[3], Sadia Salam Linda[1] & M. Sadiqul Islam[4]	Effects of synbiotic supplementation on the growth and innate immunity of Gulsha tengra, Mystus Cavasius experimentally infected with *Aeromonas* sp.	[1]Deptartment of Fisheries Biology and Genetics, Bangladesh Agricultural University (BAU), [2]Department of Aquaculture, Bangladesh Agricultural University (BAU), [3]Department of Fisheries Management, Bangladesh Agricultural University (BAU), [4]Department of Marine Fisheries Science, Bangladesh Agricultural University (BAU), Bangladesh
Kanij Rukshana Sumi, Sheikh Masum Billah, Sumon Howlader & Subroto Sarkar	Effects of supplemental L-methionine for total replacement of fish meal by soybean meal on growth, feed utilization, and health status of stinging catfish, *Heteropneustes fossilis* fry	Department of Aquaculture Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh
Shaila Akter[1], Nirmal Chandra Roy[1] & Md Zobayer Rahman[2]	Effect of biofloc on growth, survival and water quality management of stinging catfish *Heteropneustes fossilis*	[1]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, [2]Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet

Author	Title	Organization
AHM Mohsinul Reza[1,2,3], Youhong Tang[1,2] & Jianguang Qin[1]	Visualizing the emerging platform of using microalga Chlamydomonas reinhardtii as a sustainable bio-factory for healthy Lipid production through biocompatible aggregation induced Emission	[1]College of Science and Engineering, Flinders University, SA 5001, Australia, [2]Institute for NanoScale Science and Technology, College of Science and Engineering, Flinders University, SA 5001, Australia, [3]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Mostafizur Rahman[1] & Mrityunjoy Kunda[2]	Suitability of *Mystus cavasius* cultured in biofloc system under different stocking densities, Bangladesh	[1]Ph.D. Fellow, Fisheries Faculty, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Professor, Fisheries Faculty, Sylhet Agricultural University, Sylhet, Bangladesh
Dulal Sutradhar[1], Md. Shahidul Islam[1], Mafia Akter[1], Israt Nur Suravi[1], Israt Jahan[1] & Nirmal Chandra Roy[2]	Effect of commercial feeds on growth and production Performance of shrimp *(Penaeus monodon)* in Bagerhat coastal ponds of Bangladesh	[1]Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet, Bangladesh
Sharmin Ferdewsi Rakhi[1, 2, 3], Youhong Tang[1, 2] & Jianguang Qin[1]	Tailoring conditions for improved growth and lipid accumulation in microalgae with aggregation induced emission-based luminogen	[1]College of Science and Engineering, Flinders University, Australia, [2]Institute for NanoScale Science and Technology, Flinders University, Australia, [3]Department of Fisheries, Ministry of Fisheries and Livestock, Government of the Peoples' Republic of Bangladesh
A. K. Das & B. K. Das	Status and prospects of cage culture in inland open waters of India with special emphasis on Pangas *(Pangasianodon hypophthalmus)*	ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata 700 120, India

Technical Session 2: Aquatic Resource Management and Conservation

Session Keynote Speaker: Dr. Sunila Rai, Aquatic Resources Department, Fisheries Program, Faculty of Animal Science, Veterinary Science and Fisheries, Agriculture and Forestry University, Rampur, Chitwan, Nepal

Title of the Keynote: Aquatic Resources And Disaster In Coldwater Fisheries In Nepal

Chair: Professor Dr. Gulshan Ara Latifa, Department of Zoology, University of Dhaka, Dhaka and President, Zoological Society of Bangladesh

Co-chair: Dr. Helena Khatoon, Assistant Professor and Head, Department of Aquaculture, Chattogram Veterinary and Animal Sciences University, Chattogram-4225, Bangladesh

Rapporteurs: 1. Ms. Armina Sultana, Assistant Professor, Department of Aquatic Resource Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Mr. Md. Abu Kawsar, Lecturer, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 2: Kushiara** **Time: 14.00 - 16.30**

Author	Title	Organization
Newton Saha[1], Prosun Roy[2] & Md. Yeamin Hossain[3]	Life-history traits of asian striped dwarf catfish, *Mystus tengara* (Bagridae) in the Payra river, Southern Bangladesh	[1]Department of Fisheries Management, Patuakhali Science and Technology University, Dumki, Patuakhali 8602, Bangladesh, [2]Department of Aquaculture, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh, [3]Department of Fisheries, University of Rajshahi, Rajshahi 6205, Bangladesh
MD. Habibur Rahman[1] Nazmun Naher Rima[2] Tasnim Sultana[3] Abdullah-Al Mamun[4]	Present status of fish diversity, threats and management of Noakhali coastal river-channel	[1]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Sonapur, Noakhali, Bangladesh. [2]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Sonapur, Noakhali, Bangladesh. [3]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Sonapur, Noakhali, Bangladesh. [4]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Sonapur, Noakhali, Bangladesh
Binay Kumar Chakraborty	Challenge of aquatic resources management in Bangladesh	Department of Fisheries, Bangladesh
Jewel, M.A.S., Bithy, K. & Joaddar, M.A.R.	Diversity and seasonal variations of macro-benthos communities in relation to hydrological parameters of Pasur river estuary, Khulna, Bangladesh	Faculty of Fisheries, University of Rajshahi, Bangladesh
Nishat Tasnim, Sumi Rani Das, Debasish Pandit, Ahmed Harun-Al-Rashid & Mrityunjoy Kunda	Spatial and temporal variations of zooplankton abundance and diversity in the Shari-Goyain river	Department of Aquatic Resource Management, Sylhet Agricultural University, Sylhet, Bangladesh
Rasel Mia, Ahmed Harun-Al-Rashid & Mrityunjoy Kunda	Monitoring spatio-temporal changes of the floating vegetation in baikka beel by using landsat 8 data	Department of Aquatic Resource Management, Sylhet Agricultural University, Sylhet-3100, Bangladesh.

Author	Title	Organization
Debasish Pandit[1,2], Mohammad Mahfujul Haque[3], Ahmed Harun-Al-Rashid[1] & Mrityunjoy Kunda[1]	Water pollution threatens fisheries resources in the shari-goyain, a transboundary river between India and Bangladesh	[1]Department of Aquatic Resource Management, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Department of Oceanography, Khulna Agricultural University, Khulna, Bangladesh, [3]Department of Aquaculture, Bangladesh Agricultural University, Mymensingh, Bangladesh
Iftekhar Ahmed Fagun, Ahmed Harun-Al-Rashid & Mrityunjoy Kunda	Geospatial analysis of deforestation in Lakshmi baor freshwater swamp forest of Bangladesh using multisensory satellite imageries	Department of Aquatic Resource Management, Sylhet Agricultural University, Sylhet, Bangladesh
Kazi Ahsan Habib & Md. Jayedul Islam	A study on the diversity of reef-associated fishes of Bangladesh.	Aquatic Bioresource Research Lab., Department of Fisheries Biology and Genetics, Faculty of Fisheries, Aquaculture &Marine Science, Sher-e-Bangla Agricultural University, Dhaka-1207.
Md. Ashekur Rahman[1], Md. Yeamin Hossain[1] & Jun Ohtomi[2]	Reproductive aspects of monsoon river prawn, Macrobrachium malcolmsonii in relation to eco-climatic factors for its management and conservation	[1]Department of Fisheries, University of Rajshahi, Rajshahi-6205, Bangladesh, [2]Faculty of Fisheries, Kagoshima University, 4-50-20 Shimoarata, Kagoshima 890-0056, Japan
Salman Ahmed[1]; Dr. Dinesh Chandra Shaha[1] & Jahid Hasan[2]	Fish diversity in relation to salinity gradient in the bhadra river estuary, Sundarbans, Bangladesh	[1]Dept. of Fisheries Management, Faculty of Fisheries, Bangabandhu Sheikh Mujibur Rahman Agricultural University, [2]Dept. of Fisheries Management, Faculty of Fisheries, Bangabandhu Sheikh Mujibur Rahman Agricultural University
Afrat Athina[1], Farhan Bin Habib[2], Golam Shakil Ahamed[1] & Md. Tariqul Alam[1]	Status of agrochemicals use in Manu River project at Moulvibazar Sadar upazila of Northeastern Bangladesh and farmers' attitude to its impact on the fisheries resource	[1]Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Bangladesh [2]Faculty of Fisheries, Sylhet Agricultural University, Bangladesh
Aminur Rashid[1], Md Atique Ashab[2], Kulsuma Begum[3], Md Yousuf Jamil[4]	Larval rearing of tilapia *(Oreochromis niloticus)* at different levels of feeding in biofloc culture system	[1,4]Department of Aquaculture, Sylhet Agricultural University, Sylhet, [2]Faculty of Fisheries, Sylhet Agricultural University, Sylhet, [3]Department of Biochemistry and chemistry, Sylhet Agricultural University, Sylhet

Technical Session 3: Climate Change and Fisheries

Session Keynote Speaker: Md. Abdus Salam, Department of Aquaculture, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh-2202, Bangladesh

Title of the Keynote: Aquaponics, BSFL and HF: To Address the Food and Nutrient Security, Water and Land Use and Adaption of Climate Change

Chair: Professor Dr. Md. Shahab Uddin, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Co-chair: Professor Dr. Md. Shahidul Islam, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Rapporteurs: 1. Mr. Md. Nazmul Alom Tipu, Department of Rural Sociology and Development, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Ms. Mafia Akter, Lecturer, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 3: Meghna** **Time: 14.00 - 16.30**

Author	Title	Organization
Gourab Chowdhury*, Oihane Diaz de Cerio, Belen Gonzalez-Gaya, Nestor Etxebarria & Ibon Cancio	Oxidative stress and antioxidant defenses in sea anemones, *Anemonia sviridis* after bleaching: Understanding mechanisms to better study the effects of climate change in intertidal habitats	Plentzia Marine Station (pie-UPV/EHU), University of the Basque Country, Plentzia-48620,
Most. Shakila Sarmin[1], Md. Yeamin Hossain[1*], Md. Ashekur Rahman1 & Kazi Ahsan Habib[2]	Reproductive biology of carangid species *Megalaspis cordyla* in the Bay of Bengal considering the effect of climatic factors	[1]Department of Fisheries, University of Rajshahi, Rajshahi 6205, Bangladesh [2]Department of Fisheries Biology and Genetics, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
Sharif Ahmed Sazzad[1,2], Atiqur Rahman Sunny[3] & Nadir Hossain[4]	Livelihood characteristics and vulnerabilities of small-scale fishers to the impacts of climate variability and change	[1]Department of Sociology, University of Dhaka, Bangladesh [2]Pathfinder Agro and Fisheries Consultation Center, Bangladesh [3]Worldfish, Bangladesh Office, Dhaka, Bangladesh [4]Department of Agricultural Finance and Banking, Sylhet Agricultural University, Sylhet, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 3:** Meghna **Time:** 14.00 - 16.30

Author	Title	Organization
Md. Arif Billah[1*], Md. Motaher Hossain[2] & Mohammad Abu Jafor Bapary[3]	Study on the consequences of climate change on dried fish processing community of Dublar island: Escaping contrivances & future approaches	Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Atiqur Rahman Sunny[1,2], Shamsul Haque prodhan[1] & Md. Ashrafuzzaman[1]	Environmental changes and its impact on wetland ecosystem services, aquatic biodiversity and human wellbeing: insights from Bangladesh	[1]Department of Genetic Engineering and Biotechnology, Shahjalal University of Science and Technology, Bangladesh, [2]WorldFish, Bangladesh Office, Dhaka, Bangladesh
Kazi Rabeya Akther* & Nirmal Chandra Roy	Investigate the reasons for the Halda river's uneven spawning of Indian Major Carps (IMCs), a natural fish spawning heritage of Bangladesh	Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh.
Alaka Shah Roy[1*], Nirmal Chandra Roy[1] & Partho Protim Barman[2]	Evaluation of fish production and diversity in the northeastern region of Bangladesh	[1]Department of Fish Biology and Genetics, Sylhet Agricultural University [2]Department of Coastal and Marine Fisheries, Sylhet Agricultural University
Md. Rabiul Hasan[1], Mst. Shefaly Khatun[2*], Zannatul Mawa[1], Most. Shakila Sarmin[1] & Md. Yeamin Hossain[1]	Reproductive biology of *Heteropneustus fossilis* in wetland ecosystem (Gajner Beel, Bangladesh) in relation to eco-climatic factors: Suggesting a fruitful policy for aquaculture, management and conservation	[1]Department of Fisheries, University of Rajshahi, Rajshahi-6205, Bangladesh, [2]Department of Zoology, Rajshahi College, National University, Bangladesh
Mohammad Amzad Hossain[1], Tumpa Rani Sarker[1,*], Lipi Sutradhar[1], Monayem Hussain[2] & Mohammed Mahbub Iqbal[1]	Toxic effects of chlorpyrifos on the growth, and vital organ's histo-pathology of freshwater mussel, *Lamellidens marginalis*	[1]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet- 3100, Bangladesh, [2]ECOFISH-II Project, WorldFish, Bangladesh Office, Gulshan, Dhaka 1213, Bangladesh.
Aminur Rashid[1*], Md Atique Ashab[2], Kulsuma Begum[3] & Ayon Das[4]	Effects of biofloc technology on growth performances, water quality parameters, hematology and liver histology of monosex tilapia *(Oreochromis niloticus)* at different feeding levels	[1,4]Department of Aquaculture, Sylhet Agricultural University, Sylhet, [2]Faculty of Fisheries, Sylhet Agricultural University, Sylhet [3]Department of Biochemistry and chemistry, Sylhet Agricultural University, Sylhet

Author	Title	Organization
Md. Saddam Hossain* & Zakir Hossain	Biofunctional compounds as PUFAs modulate the reproductive performance and gonadal maturation of the endangered catfish, *Ompok pabda*	Fisheries Biology and Genetics, Bangladesh Agricultural University, Mymensingh
N. K. Suyani[1], S. S. Rathore[2] & B. Sureandiran[1]	Two-decadal trends in landings of non-penaeid shrimps in India	[1]College of Fisheries Science, Kamdhenu University, Veraval, Gujarat, India [2]College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore, Karnataka, India
Md. Sazedul Hoque*, Fatima Tamanna & Md. Mahmudul Hasan	Public health concerns associated with pesticides and heavy metals in common dried fish consumption in coastal area of Bangladesh	*Department of Fisheries Technology, Faculty of Fisheries, Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh.

Technical Session 4: Fish Health, Pharmacology and Pollution (Part-1)

Session Keynote Speaker: Dr. Md. Shirajum Monir, Bangladesh Fisheries Research Institute, Freshwater Station, Mymensingh-2201, Bangladesh

Title of the Keynote: Present Status and Challenges of Infectious Diseases in Farmed Fish in Bangladesh; A Call for Sustainable Strategies

Chair: Dr. Md. Anisur Rahman,Director (Admin & Finance), Bangladesh Fisheries Research Institute, Bangladesh

Co-chair: Professor Dr. Md. Abdullah-Al-Mamun,Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Rapporteurs: 1. Ms. Israt Nur Suravi, Lecturer, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Ms. Nishat Tasnim, Lecturer, Department of Aquatic Resource Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 4: Padma** **Time: 14.00 - 16.30**

Author	Title	Organization
Md. Abu Kawsar[1*], Tofael Ahmed Sumon[2] & Debasish Pandit[3]	Aquaculture pharmaceuticals used for fish health care in Narsingdi district, Bangladesh: a matter of human health concern	[1]Department of Aquaculture, Sylhet Agricultural University, Bangladesh [2]Department of Fish Health Management, Sylhet Agricultural University, Bangladesh [3]Department of Oceanography, Khulna Agricultural University, Bangladesh

Author	Title	Organization
Md. Faruk Hasan[1],*, Mutasim Billah[2], Khirun Nahar[2], Alam Khan[3], Amit K. Dutta[1] & Biswanath Sikdar[1]	Determination of heavy metals from selective dry fishes and evaluation of cytotoxic effects of *Channa punctata* on zebrafish embryos	[1]Department of Microbiology, University of Rajshahi, Rajshahi 6205, Bangladesh, [2]Department of Genetic Engineering and Biotechnology, University of Rajshahi, Rajshahi 6205, Bangladesh, [3]Department of Pharmacy, University of Rajshahi, Rajshahi 6205, Bangladesh
Natasa Tasnia Shipra[1*], Md. Rajibul Islam[2], Sree Juwel Kumar Chowdhury[3], Irin Jerin Jesi[4] Iftekhar Ahmed Fagun[5] & M.M. Mahbub Alam[1]	Aquarium keepers' awareness and practices toward ornamental fish species' health management in Bangladesh	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [2]Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [3]Marine Security and Safety Research Center, Korea Institute of Ocean Science & Technology, Busan, Korea [4]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [5]Department of Aquatic Resource Management, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Toma Chowdhury[1], Mohammad Amzad Hossain[1*], Gourab Chowdhury[1], Monayem Hussain[1], Bipresh Das[1] & Mohammed Mahbub Iqbal[1]	$Pb(NO_3)_2$ toxicity causes retarded growth and hemocytes count, and histological alternations in gill, kidney, and muscle of tropical Pearl Mussel, *Lamellidens marginalis*	[1]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [2]ECOFISH-II Project, WorldFish, Bangladesh Office, Gulshan, Dhaka-1213, Bangladesh
Sanjay Singh Rathore[1*], Muhammad Abdullah-Al-Mamun[2] & Nitin Kanji Suyani[3]	Antimicrobial Resistance in Aquaculture: Current Status and Future Scope	[1]Department of Aquaculture, College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore-575002, Karnataka, India [2]Department of Fish Health Management, Sylhet Agricultural University, Sylhet- 3100, Bangladesh [3]Department of Fisheries Resources and Management, College of Fisheries Science, Kamdhenu University, Veraval- 362265, Gujarat, India
S. Bragadeeswaran & S. Priyadarshini	Pharmacology properties of icthyocrinotoxins from South east of India	Centre of Advanced Study in Marine Biology Annamalai University Parangipettai - 608502, India
M. S. Khatun*, M. S. Islam, H.M. R. Islam,N. Begum & D. A. F. M. Shofiquzoha	Efficacy of locally isolated beneficial bacteria (*bacillus* spp.) On production of black tiger shrimp *(Penaeus monodon)*	Bangladesh Fisheries Research Institute, Shrimp Research Station (SRS), Bagerhat, Bangladdesh

Author	Title	Organization
Sarker Mohammed Ibrahim Khalil[1,2,*], Amedeo Manfrin[3], Luana Cortinovis[3] & Donatella Volpatti[1]	The response of rainbow trout *(Oncorhynchus mykiss)* to autogenous vaccines against *Lactococcus garvieae*, *Lactococcus lactis* and *Yersinia ruckeri* O1 biotype1 & biotype2	[1]Department of Agricultural, Food, Environmental and Animal Sciences (DI4A), , via Sondrio 2/a, 33100, University of Udine, Italy; [2]Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [3]Istituto Zooprofilattico Sper.le delle Venezie, Viale Università 10, 35020 Legnaro (PD) Italy
Jaima Zinat*, Arman Hossain, Mobasshirin Rahman, Md. Moshiur Rahman, Sarker Mohammed Ibrahim Khalil, Md. Abdullah-Al-Mamun & M. M. Mahbub	Ecotoxicological effects of chlorpyrifos on gulsha *Mystus cavasius*	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Shafiq Rheman[1*], Md. Samun Sarker[2], Mohammed A. Samadb, Chadag Vishnumurthy Mohan [3] & Jerome Delamare-Deboutte ville[3]	Prevalence and antibiotic susceptibility patterns of *Escherichia coli* isolated from wet market aquatic foods in Dhaka, Bangladesh	[1]WorldFish, Bangladesh, [2]Antimicrobial Resistance Research Centre (ARRC), Animal Health Research Division (AHRD), Bangladesh Livestock Research Institute (BLRI), [3]WorldFish, Malaysia
Mohammad Amzad Hossain, Lipi Sutradhar*, Tumpa Rani Sarker, Shuva Saha & Mohammed Mahbub Iqbal	Toxic effects of chlorpyrifos on the growth, hematology, and different organs histopathology of Nile tilapia, *Oreochromis niloticus*	Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet-3100, Bangladesh
M. Lokman Ali & Sadman Sarar	Determination of toxicity level of copper sulfate pentahydrate (CuSO4.5H2O) on tilapia *(Oreochromis niloticus)*	Department of Aquaculture, Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh
Md. Abdullah Al Mamun[1], M. M. Mahbub Alam[1] & Shamima Nasren[2]	Analysis of various drinking water samples from restaurants in Sylhet town to detect the coliform bacteria by most probable number (MPN) method	[1]Laboratory of Fish Diseases Diagnosis and Pharmacology, Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh [2]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Poster Session and Tea Break

Venue: KHAN'S PALACE, Sylhet **Hall Room 2:** Kushiara **Time:** 16.30-17.30

Author	Title	Organization
Md Afsar Ahmed Sumon[1]*, Mohammad Habibur Rahman Molla[2] & Foysal Ahammad[2]	Identification of marine fish peptide as a treatment option against the multidrug-resistant *Acinetobacter baumannii*	[1]Department of Marine Biology, Faculty of Marine Sciences, King Abdul-Aziz University, Jeddah-21589, Saudi Arabia, [2]Department of Biology, Faculty of Science, King Abdul-Aziz University, Jeddah-21589, Saudi
Kazi Rakib Uddin[1]* & Md. Abu Kawsar[2]	Increasing fish disease burden and use of antibiotics in pond-based aquaculture in south Chattogram, Bangladesh	[1]Faculty of Fisheries, Sylhet Agricultural University, Bangladesh [2]Department of Aquaculture, Sylhet Agricultural University, Bangladesh
Israt Jahan, Md. Shahidul Islam, Md. Mostafa Shamsuzzaman, Israt Nur Suravi*, Mafia Akter & Dulal Sutradhar	Growth performance and cost-benefit analysis of brackishwater fin fishes *(Mugil cephalus* and *Rhinomugil corsula)* with prawn *(Macrobrachium rosenbergii)* in polyculture at coastal	Department of Coastal and Marine Fisheries, Sylhet Agricultural University Sylhet, Bangladesh
A H E Azaz Ibnasina[1]*, Md Al Imran[1], Debashis Biswas[1]	Challenges and opportunities in the traditional production and distribution of dried fish in Sylhet district	[1]Faculty Of Fisheries, Sylhet Agricultural University, Bangladesh
Hafizur Rahman, Abdullah Al Mizan*, Md. Ashraf Husssain & Md. Abu Sayeed	Gear and craft used for fishing at Bamunji and Chatal *Beel* of Jamalpur, Bangladesh	Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Nazmul Islam Bappy[1,2,*], Hafsa Akter[1,3] & Tanjin Barketullah Robin[1]	A novel in *silico* strategy to predict the possibility of a farmer being infected while handling a diseased fish	[1]Faculty of Biotechnology and Genetic Engineering, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Department of Animal and Fish Biotechnology, Sylhet Agricultural University, Sylhet, Bangladesh, [3]Department of Biochemistry and Chemistry, Sylhet Agricultural University, Sylhet, Bangladesh
Anamika Deb[1]*, Airin Gulshan[2] & Subrata Kumar Das[3]	Investigating potential therapeutic effects of *Heliotropicum indicum* (Indian heliotrope), *Mikania micrantha* leaves (Japani lota) and *Musa acuminata* (Banana) peels as biomedicine to treat fish diseases caused by various pathogenic microorganisms	[1]Department of Pharmaceuticals and Industrial Biotechnology, Faculty of Biotechnology and Genetic Engineering, Sylhet Agricultural University, Sylhet-3100. [2]Department of Pharmaceuticals and Industrial Biotechnology, Faculty of Biotechnology and Genetic Engineering, Sylhet Agricultural University, Sylhet-3100. [3]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100.

Author	Title	Organization
Refah Shanjidah[1,2]*, Kazi Md. Ali Zinnah1[2] & Dilruba Afrin[1,2]	Screening of extended-spectrum beta-lactamase producing e. Coli from retail Rohu fish of Sylhet city	[1]Department of Animal and Fish Biotechnology, Sylhet Agricultural University, Sylhet, Bangladesh [2]Faculty of Biotechnology and Genetic Engineering, Sylhet Agricultural University, Sylhet, Bangladesh
Nurul Amin Rani* Nadim Ahmed & Anindita Ash Prome	Bioinformatics approach to construct epitope based vaccine against *Cyprinid herpesvirus*1 & *Cyprinid herpesvirus* 3	Faculty of Biotechnology and Genetic Engineering, Sylhet Agricultural University
Mst. Armina Sultana[1]*, Mrityunjoy Kunda[1] & Benoy Kumar Barman[2]	Harnessing the knowledge of local community on fish assemblage, biodiversity trends, and management options in the Meghna river basin of Bangladesh	[1]Faculty of Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh, [2]WorldFish, Dhaka, Bangladesh
Yeseul Kang[1], Md. Abdullah-Al-Mamu m[2], Tilak Chandra Nath[1,3], Keeseon S. Eom[1] & Dongmin Lee*	Integrated taxonomic identification of *Euclinostomum heterostomum* (Rudolphi, 1809) Travassoso, 1928 (Trematoda: Clinostomidae) of *Channa punctata* (Bloch, 1793) in Sylhet, Bangladesh	[1]Department of Parasitology, Parasite Research Center and International Parasite Resource Bank, School of Medicine, Chungbuk National University, Chungdae-ro 1, Seowon-gu, 28644 Cheongju, Republic of Korea, [2]Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [3]Department of Parasitology, Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Al Walid Hasan, Dr. Md. Shahab Uddin & Dr. Md. Tariqul Alam	Present status of fish fry and fingerlings culture in Sylhet Sadar Upazila	DepartmentofAquaculture,SylhetAgriculturalUniversity,Sylhet-3100,Bangladesh
Md. Atick & Chowdhury[1]*	Pop's: a major barrier to safe fisheries in Bangladesh	Letter of Agreement Member, Pesticide Risk Reduction in Bangladesh Project, Department of Fisheries (DoF), Dhaka-1000, Bangladesh
Dongmin LEE & Keeseon S. EOM	Genetic Differences among Genus *Metagonimus* in Korea : Comparative Analysis of Complete Mitochondrial Genome of *Metagonimus yokogawai, M. takahashii* and *M. miyatai* (Digenea: Heterophyidae)	Department of Parasitology, Parasite Research Center and International Parasite Resource Bank, School of Medicine, Chungbuk National University, Chungdae-ro 1, Seowon-gu, 28644 Cheongju, Republic of Korea
Reashanujjaman*	Review assessment: living communities of mangrove ecosystem, Sundarban; Bangladesh	Faculty of Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh

Author	Title	Organization
Zannatul Mawa[1], Sajeda Sultana Mitu[2], Md. Ashekur Rahman[1], Most. Shakila Sarmin[1] & Md. Yeamin Hossain[1]*	Reproductive features of *Anabas testudineus* from wetland ecosystem in Bangladesh: Implications for its conservation under changing eco-climatic conditions and suggestions for best aquaculture	[1]Department of Fisheries, University of Rajshahi, Rajshahi 6205, Bangladesh, [2]Fisheries and Marine Bioscience, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh
Kazi Ahsan Habib, Md. Nazmus Sakib & Md Jayedul Islam	Genetic diversity and population structure of Asian green mussel *(Perna viridis)* in the Bay of Bengal, Bangladesh	Aquatic Bioresource and Research Lab, Department of Fisheries Biology and Genetics, Faculty of Fisheries, Aquaculture & Marine Science, Sher-e-Bangla Agricultural University, Dhaka-1207.
Md. Golam Kibria Suman[1]*, Md. Khalid Saifullah[1], Anika Tasnim[1], Md. Nayeem Ahmed Bijoy[1] & Ashiqur Rahman Shrabon[1]	Role of aquatic plants as natural purifier	Department of Aquatic Resource Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh.
Rahatul Zannat Tanha[1], Abdullah Al Zabir[2], Asif Mahmud[3] & Tahmid Ahmed[4]	Perception of climate change and its influencing factors in wetland community	[1]Faculty of Agricultural Economics and Business Studies, Sylhet Agricultural University, Sylhet. [2]Department of Agricultural Statistics, Sylhet Agricultural University, Sylhet. [3]Department of Agricultural Economics and Policy, Sylhet Agricultural University, Sylhet. [4]Department of Department of Environmental Science, Bangladesh University of Professionals, Dhaka.
Reashanujjaman, Fatin Ilham Fahim, Mushfikur Rahman Tareque* & Shreejon Barua	The Sundarbans: a dependable livelihood hub and a biological powerhouse	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Sabrina Jannat Mitu[1], Md. Shariful Islam[2], Tania Akter Tama[1] & Mohammad Mahmudul Islam[1]	Straddling stocks: transboundary cooperation of managing small-scale fisheries of Bay of Bengal	[1]Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet-3100, [2]Faculty of Fisheries Aquaculture and Marine Science, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh
Md. Abdul Baten, Ashoke Kumar Sarker & Gopal Chandra Datta	Pro-poor homestead based nutrition-sensitive carp-tilapia-mola polyculture along with other nutrition-sensitive and specific interventions have enhanced dietary diversity of woman and young children at north-eastern Bangladesh	Suchana Program, WorldFish, Bangladesh

PLENARY SESSION

Day-2
Sep. 17, 2022
Saturday

Speech by: Dr. Essam Mohammed Yassin, Director General, WorldFish
Plenary Keynote Speech: Dr Shakuntala Haraksingh Thilsted, Global lead for Nutrition and Public Health of WorldFish, Penang, Malaysia

Title of the Keynote: Aquatic Food System for Nourishing People and Planet

Chair: Emeritus Professor Dr. M. A. Sattar Mandal
Former Vice-Chancellor, Bangladesh Agricultural University, Mymensingh, and Former Member, General Economic Division, Planning Commission, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 1:** Surma **Time:** 9.30 - 10.00

Tea break: 10.00-10.30

Technical Session 5: Fish Biology, Genetics and Biotechnology

Session Keynote Speaker: Dr. Md. Shamsul Alam, Professor, Department of Fish Biology and Genetics,Bandladesh Agricultural University, Mymensingh

Title of the Keynote: Fish Genetic Resources of Bangladesh: Sustainable Production and Stock Improvement

Chair: Dr. Md. Golam Hossain, Bangladesh Country Coordinator, Feed the Future Innovation Labfor Fish and Former Director General, Bangladesh Fisheries Research Institute

Co-chair: Professor Dr. Sohel Mian, Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Rapporteurs: 1. Dr. Shamima Nasren, Associate Professor, DepartmentofFishBiologyand Genetics,FacultyofFisheries,SylhetAgriculturalUniversity, Sylhet-3100, Bangladesh

2. Ms. Israt Nur Suravi, Lecturer, DepartmentofCoastal and Marine Fisheries,FacultyofFisheries,SylhetAgriculturalUniversity, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 1:** Surma **Time:** 10.30 - 13.00

Author	Title	Organization
Imran Parvez & Afsana Akhter	Annotated checklist of the freshwater siluriform fishes of Bangladesh throughnomenclatural revisions	Faculty of Fisheries, Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh

Author	Title	Organization
Afsana Akhter[1] Imran Parvez[1] & Md. Atick Chowdhury[2]	DNA barcoding of some rare siluriform fishes from North-West part of Bangladesh	[1]Faculty of Fisheries, Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh, [2]LoA Member, Pesticide Risk Reduction in Bangladesh Project, Department of Fisheries (DoF), Dhaka, Bangladesh
MD Zobayer Rahman[1], Sarker Mohammed Ibrahim Khalil[1], Mohammed Abdullah Al Mamun[1], M M Mahbub Alam[1], A Hossain[1], Shamima Nasren[2] & Shaila Bithi[2]	Ovarian histology and histopathology of Olive Barb *Puntius sarana* exposed to endocrine disrupting chemicals (17? Methyl Testosteron Hormone) in laboratory condition	[1]Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, [2]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University
Matthew G. Hamilton[1], Mohammed Yeasin[1], Md. Badrul Alam[2], Md. Rayhan Ali[1], Md. Fakhruddin[1], Md. Mazharul Islam[3], Benoy K. Barman[1], Kelvin Mashisia Shikuku[4], Colin C. Shelley[1], Cristiano M. Rossignoli[1] & John A.H. Benzie[1]	On-farm trials of WorldFish genetically improved Rohu	[1]WorldFish [2]Entrepreneur [3]Chemonics International [4]International Livestock Research Institute
F.A. Chamily*, M. Z. Iqbal & M. Asaduzzaman	Salinity and Source Induced Body Shape Variation in Long Whiskers Catfish *(Mystus gulio)*: A Multivariate Approach	[1]Faculty of Fisheries, Chattogram Veterinary and Animal Sciences University, Khulshi 4225, Bangladesh
Smriti Biswas*, Vipin Vyas & Anubhuti Minare	Fecundity, Length at Maturity and Gonadal Developmental Stages of *Securicula gora* (Hamilton, 1822) Fish From Narmada River, Madhya Pradesh, India	[1]Department of Zoology and Applied Aquaculture, Barkatullah University, Bhopal, Madhya Pradesh, India

Author	Title	Organization
Md. Abdul Karim*, Hong Zhou, Deng Peng, Pan Yuhao & Md Saif Uddin	Is 18S rDNA A Good Marker for Barcoding Free-Living Marine Nematodes? A Case Study in the Jiaozhou Bay, China	College of Marine Life Sciences, Ocean University of China, Qingdao, China
Md. Rakeb-Ul Islam[1,2*] & Hideyuki Imai[2]	High Genetic Diversity in *Acanthopagrus datnia* Populations Across Coastal Water of Bangladesh Revealed from Mtdna Analysis	[1]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Noakhali 3814, Bangladesh, [2]Laboratory of Marine Biology and Coral Reef Studies, Faculty of Science, University of the Ryukyus, Nishihara, Okinawa 903-0213, Japan
Md Jayedul Islam & Kazi Ahsan Habib	Genetic diversity and population structure of paradise threadfin *(Polynemus paradiseus)* in the Bay of Bengal, Bangladesh.	Aquatic Bioresource and Research Lab, Department of Fisheries Biology and Genetics, Faculty of Fisheries, Aquaculture & Marine Science, Sher-e-Bangla Agricultural University, Dhaka-1207.
Shawon Ahmmed[1], Md. Hashmi Sakib[1], Md. Reaz Morshed Ranju[1], Md. Latiful Islam[1] & Yahia Mahmud[2]	Embryonic development and reproduction of Dimua river prawn *Macrobrachium villosimanus* under captive condition	[1]Bangladesh Fisheries Research Institute, Brackishwater Station, Paikgacha, Khulna-9280, Bangladesh, [2]Bangladesh Fisheries Research Institute, Mymensingh-2201, Bangladesh
Kalpajit Gogoi[1], Francois Rajts[2], Sourabh Kumar Dubey[1], Ben Belton[2], Rashmi Ranjan Das[1], Arun Padiyar[1], Shakuntala Haraksingh Thilsted[2] & Chadag Vishnumurthy Mohan[2]	Developing a breeding protocol for mass seed production of small indigenous fish species *Amblypharyngodon mola* to promote nutrition-sensitive aquaculture in India	[1]WorldFish, Cuttack, Odisha 753001, India [2]WorldFish, Penang, Malaysia
M. M. Mahbub Alam[1,2] & Snæbjörn Pálsson[1]	Genetic variation of *Parapenaeopsis sculptilis* (Decapoda, Penaeidae) and reassessment of the phylogenetic relationships within the genus *Parapenaeopsis* based on mitochondrial DNA variation	[1]Department of Life and Environmental Sciences, University of Iceland, Iceland, [2]Faculty of Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh
M. M. Mahbub Alam[1,2] & Snæbjörn Pálsson[1]	Mitochondrial DNA variation of *Metapenaeus monoceros* (Decapoda, penaeidae) reveals high genetic variation within Bangladesh with distinct lineages in the Indian ocean	[1]Department of Life and Environmental Sciences, University of Iceland, 101 Reykjavik, Iceland, [2]Faculty of Fisheries, Sylhet Agricultural University, 3100 Sylhet, Bangladesh

Technical Session 6: Oceanography and Blue Economy (Part 1)

Session Keynote Speaker: Mr. Sayeed Mahmood Belal Haider, Director General, Bangladesh Oceanographic Research Institute, Cox's Bazar

Title of the Keynote: Prospects, Potentials, Risks and Challenges to Meet Blue Economy Dream: Bangladesh Perspective

Chair: Prof. Dr. Muhammad Abdur Rouf, Fisheries & Marine Resource Technology Discipline, Khulna University

Co-chair: Professor Dr. Md. Mostafa Shamsuzzaman, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Rapporteurs: 1. Mr. Mohammad Mosarof Hossain, Associate Professor, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Ms. Anuradha Talukdar, Lecturer, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 2:** Kushiara **Time:** 10.30 - 13.00

Author	Title	Organization
A.F. Rabby*[1], M. Aktaruzzaman[1], T. Rahman[1], M. R. hossain[1], Z. Islam[1], S. Rahman[1] & Yahia Mahmud[2]	Length-Based Bayesian Biomass (LBB) and Length Based Spawning Potential Ratio (LBSPR) of marine fishes in the Bay of Bengal, Bangladesh	[1]Bangladesh Fisheries Research Institute, Marine Fisheries and Technology Station, Cox's Bazar [2]Bangladesh Fisheries Research Institute, Mymensingh
Reashan Ujjaman* & Mohammad Mosarof Hossain	Horseshoe crab: an unappreciated non-conventional marine living resource having huge potential for blue economy development and attaining unsustainable development goals (SDGs) in Bangladesh	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Samiya Mohamed Abdirahman, Md. Yeamin Hossain & Md. Rashedul Kabir Mondol*	Biological features of Skipjack tuna (*Euthynnus affinis* Cantor, 1849) from the Bay of Bengal, Bangladesh	Department of Fisheries, University of Rajshahi, Rajshahi-6205
Zahidul Islam[1]*, Jakia Hasan[1], Shafiqur Rahman[1] & Yahia Mahmud[2]	Bangladeshi indigenous marine microalgae: a potential source of nutritional supplements	[1]Marine Fisheries and Technology Station, Bangladesh Fisheries Research Institute, Cox's Bazar-4700, Bangladesh, [2]Bangladesh Fisheries Research Institute, Mymensingh-2201, Bangladesh

Author	Title	Organization
Arvind Kumar & Dwivedi*	Prospects to achieve the goals of blue revolution in India through pradhan mantri matsya sampada yogna	Department of Zoology & Applied Aquaculture, Barkatullah University, Bhopal-462026, Madhya Pradesh, India
Tasnim R.*, Sarkar S.[2], M. A. Wahab[3], M. Nahiduzzaman[3] & M. Asaduzzaman[1]	Spatial prediction of seaweed habitat mapping for mariculture in the coastal area of Bangladesh using a generalized additive model	[1]Faculty of Fisheries, Chattogram Veterinary and Animal Sciences University, Khulshi 4225, Bangladesh, [2]Department of Oceanography, Shahjalal University of Science and Technology, Sylhet 3114, Bangladesh, [3]WorldFish, Bangladesh and South Asia Office, Banani, Dhaka 1213, Bangladesh
Md. Mohiuddin[1]*, M. A. Wahab[2], M. Nahiduzzaman[2] & M. Asaduzzaman[1]	Effects of culture depth on the growth performances of green mussel Perna viridis in raft culture system	[1]Faculty of Fisheries, Chattogram Veterinary and Animal Sciences University, Khulshi 4225, Bangladesh, [2]WorldFish, Bangladesh and South Asia Office, Banani, Dhaka 1213, Bangladesh
Ujjal Banik[1]*, M. A. Wahab[2], M. Nahiduzzaman[2] & M. Asaduzzaman[1]	Comparative enactment of different farming systems of *gracilaria tentuistipitata* seaweed cultured at the south-east coast of Bay of Bengal, Bangladesh	[1]Faculty of Fisheries, Chattogram Veterinary and Animal Sciences University, Khulshi 4225, Bangladesh, [2]WorldFish, Bangladesh and South Asia Office, Banani, Dhaka 1213, Bangladesh
M. Z. Iqbal[1]*, M. Mohiuddin[1], M. A. Wahab[2], M. Nahiduzzaman[2] & M. Asaduzzaman[1]	Linkage among the environmental parameters and growth performances of *Hypnea* sp. seaweed under the off-bottom long line and net culture systems	[1]Faculty of Fisheries, Chattogram Veterinary and Animal Sciences University, Khulshi 4225, Bangladesh, [2]WorldFish, Bangladesh and South Asia Office, Banani, Dhaka 1213, Bangladesh
N. K. Suyani[1] & S. S. Rathore[2]	A quantum jump in the seafood exports of India	[1]College of Fisheries Science, Kamdhenu University, Veraval, Gujarat, India, [2]College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore, Karnataka, India
Md. Hashmi Sakib[1]*, Shawon Ahmmed[1], Rafia Afrin[1], Md. Latiful Islam[1] & Yahia Mahmud[2]	Length-weight relationship and condition factor of blood cockle *Tegillarca granosa* from the Sundarbans estuary of Bangladesh	[1]Bangladesh Fisheries Research Institute, Brackishwater Station, Paikgacha, Khulna-9280, Bangladesh, [2]Bangladesh Fisheries Research Institute, Mymensingh-2201, Bangladesh
Fatin Ilham Fahim*, & Mohammad Mosarof Hossain	Nutritional, biomedical, cosmeceutical values of Sea Cucumber: aptitudes for promoting blue growth and attaining Sustainable Development Goals (sdgs) in the context of Bangladesh	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh

Author	Title	Organization
Md. Yeamin Hossain[1]*, Md. Ashekur Rahman[1], Most. Shakila Sarmin[1] & Kazi Ahsan Habib[2]	Bay of Bengal fisheries: present stock status and future management policy in Bangladesh	[1]Department of Fisheries, University of Rajshahi, Rajshahi 6205, Bangladesh, [2]Department of Fisheries Biology and Genetics, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Technical Session 7: Fishing, Processing and Value addition

Session Keynote Speaker: Prof. Dr. A.K.M. Nowsad Alam, Department of Fisheries Technology, Bangladesh Agricultural University, Mymensingh, Bangladesh

Title of the Keynote: Fisheries Resource Utilizationthrough Innovation Enterprise: Quality and Safety Issues

Chair: Dr. Md. Kamal, Professor, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh, Bangladesh

Co-chair: Professor Dr. Md. Motaher Hossain, Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Rapporteurs: 1. Mr. Md. Jakiul Islam, Associate Professor, Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Mr. Deabasish Pandit, Lecturer, Department of Oceanography, Faculty of Fisheries and Ocean Sciences, Khulna Agricultural University, Khulna, Bangladesh, Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 3:** Meghna **Time:** 10.30 - 13.00

Author	Title	Organization
Sk. Ahmad Al Nahid, Saifuddin Rana & Antar Sarkar	Consumer preference test of ready to eat Shrimp Balachao; a potential value-added fishery product in Bangladesh	Department of Fisheries Resource Management, Faculty of Fisheries, Chattogram Veterinary & Animal Sciences University, Khulshi-4225, Chattogram
Umme Hani, Md. Ashraf Hussain & Md. Abu Sayeed	Valorization of silver carp (*Hypophthalmichthys molitrix*): preparation of fish pickle and shelf life assessment	Department of Fisheries Technology and Quality Control Sylhet Agricultural University, Sylhet-3100, Bangladesh
Taushik Lahiri[1,2], Muhammad Arifur Rahman[2] & Abdullah-Al Mamun[1]	Seafood marketing system in southwest coastal flood plain areas of Bangladesh and its impact on local food security	[1]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Noakhali-3814, Bangladesh, [2]WorldFish, Bangladesh and South Asia Office, Dhaka, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 3:** Meghna **Time:** 10.30 - 13.00

Author	Title	Organization
A.S.M. Salman, Abdullah Al Mizan, Md. Ashraf Hussain & Md. Abu Sayeed	Development of ready-to-eat cutlet using low-priced fish: effect of storage conditions on the quality of cutlet	Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Suprakash Chakma[1], Md. Arifur Rahman[2] & Newton Saha[3]	Determination of sensory attributes, microbial, biochemical and pesticides contents of dried shark and ray in southern region of Bangladesh	[1]Department of Fisheries Technology, Patuakhali Science and Technology University, Patuakhali, Bangladesh, [2]Department of Fisheries Biology and Genetics, Patuakhali Science and Technology University, Patuakhali, Bangladesh, [3]Department of Fisheries Management, Patuakhali Science and Technology University, Patuakhali, Bangladesh
Md. Tohirul Islam, Anik Paul, Md. Motaher Hossain, Md. Ashraf Hussain & Mohammad Abu Jafor Bapary	Effect of natural preservatives assimilated ice on the shelf-life of tilapia, *Oreochromis niloticus*	Department of Fisheries Technology and Quality Control Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Syeda Nusrat Jahan & Md Rasel Hossain	Shelf life assessment of oven dried Channa punctatus in different packaging system	Department of Fisheries, University of Rajshahi, Rajshahi, Bangladesh
Md. Siddikur Rahman Sujon[1], Diponkor Adikari[1], Abdullah Al Mizan[2], Md. Ashraf Hussain[2] & Md. Abu Sayeed[2]	Fishing gears used in inland waters of Bangladesh: a comprehensive review	[1]Faculty of Fisheries, Sylhet Agricultural University, Bangladesh [2]Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Bangladesh
Md. Sohan Khan, Md. Moshiur Rahman, Queen Roy, Md. Ashraf Hussain, Md. Motaher Hossain & Mohammad Abu Jafor Bapary	Effect of LEDs generated visible light wavelength in reduction of microbial quality loss of dried fish during storage	Faculty of Fisheries, Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Moshiur Rahman, Md Sohan Khan, Queen Roy, Md. Ashraf Hussain, Md. Motaher Hossain & Mohammad Abu Jafor Bapary	Effects of visible light wavelength on the sensory attributes and insect infestation in dried fish	Faculty of Fisheries, Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Author	Title	Organization
Muhammad Hasan Jamil Sakib[1], Md. Motaher Hossain[1], Mohammad Abu Jafor Bapary[1] & Golam Shakil Ahmed[2]	Microbial status of catla *(Catla catla)* at different marketing channel in sylhet sadar	[1]Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, [2]Department of Aquaculture, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Ashraf Hussain[1], Tofael Ahmed Sumon[2], Sabuj Kanti Mazumder[3] & Md. Tawheed Hasan[4]	Essential oils and chitosan as alternatives to chemical preservatives for fish and fisheries products: a review	[1]Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet 3100, Bangladesh, [2]Department of Fish Health Management, Sylhet Agricultural University, Sylhet 3100, Bangladesh, [3]Department of Genetics & Fish Breeding, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh, [4]Department of Aquaculture, Sylhet Agricultural University, Sylhet 3100, Bangladesh
M. Tariqul Islam, Z. Naeem, S. Khatun, S. Aktar, M. Amanullah & M. Yeamin Hossain	Production and acceptability of fish crackers-an innovative product for the snacks industry of Bangladesh	Department of Fisheries, University of Rajshahi, Rajshahi 6205, Bangladesh
Md. Sohel Rana, Md. Mehedy Hasan, Md. Ashraf Hussain & Md. Abu Sayeed	Quality evaluation of ready to eat fish products developed from low cost *Pangasius hypopthalmus* and *Hypophthalmicthys molitrix*	Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Tanvir Islam Badhan[1], Ifthekar Ahmed Fagun[2] Md. Ashraf Hussain[1] & Md. Abu Sayeed[1]	Consumer behavior towards value-added fish products: case of fish burger and fish pickle prepared from low cost fish	[1]Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, [2]Department of Aquatic Resource Management, Sylhet Agricultural University

Technical Session 8: Fish Health, Pharmacology and Pollution (Part 2)

Chair: Prof. Dr. S. M. Rafiquzzaman, Dean, Faculty of Fisheries, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh

Co-chair: Professor Dr. Tanvir Rahman, Department of Aquaculture, Bangladesh Agricultural University, Mymensingh-2022, Bangladesh

Rapporteurs: 1. Ms. Mafia Akter, Lecturer, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Ms. Nishat Tasnim, Lecturer, Department of Aquatic Resource Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 4:** Padma **Time:** 10.30 - 13.00

Author	Title	Organization
Tayeeba Ferdous Mahi[1]*, Gorab Chowdhury[1], Asim Kumar Baishnab[2], Mohammad Amzad Hossain[1,3] & Mohammed Mahbub Iqbal[1]	$Pb(NO_3)_2$ toxicity provokes retarded growth, erythrocytes abnormalities and histological alternations in vital organs of juvenile nile tilapia, *Oreochromis niloticus*	[1]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [2]Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [3]Coastal Marine Ecosystems Research Centre, Central Queensland University, QLD 4680, Australia.
Tutul Kumar Saha*, Mariom & Zakir Hossain	Immuno-physiological activities in Rohu *Labeo rohita* using beta-glucan as a diet	Department of Fisheries Biology and Genetics, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh - 2202, Bangladesh
Arman Hossain[1], Md. Abdullah Al Mamun[1], Md. Zobayer Rahman[1], Md. Moshiur Rahman[1], M. M. Mahbub Alam[1] & Shamima Nasren[2]	Studies on the parasitic fauna of open water fishes in the northeast Bangladesh	[1]Laboratory of Fish Diseases Diagnosis and Pharmacology, Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [2]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Most. Afsara Tasnim*, Md. Abdullah-Al-Mamun, Shahida Akter, Md. Zobayer Rahman, Md. Moshiur Rahman, Sarker Mohammed Ibrahim Khalil[1] & M. M. Mahbub Alam	Histopathological changes in different organs of diseased Mrigal *Cirrhinus cirrhosus*	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Anupoma Achariya[1]*, Jannatul Mawa[1], Md. Abdullah-Al-Mamun[1], Shamima Nasren[2] & M. M. Mahbub Alam[1]	Molecular, biochemical and histopathological identification of bacteria in diseased Nile tilapia *(Oreochromis niloticus)* from biofloc aquaculture system with antibiotic sensitivity of isolated bacteria	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh [2]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet, Bangladesh

Author	Title	Organization
Jannatul Mawa[1], Anupoma Achariya[1], Md. Abdullah-Al-Mamun [1], Shamima Nasren[2] & M. M. Mahbub	Molecular and biochemical identification of pathogenic bacteria in diseased Tengra *(Mystus cavasius)* from biofloc aquaculture system with antibiotic sensitivity of isolated bacteria	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh [2]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet, Bangladesh
Rikta Sarkar[1]*, Md. Istiaque Hossain[2], Md. Mokter Hossain[1], Uttam Kumar Sarker[1], Tofael Ahmed Sumon[1], Md. Abdullah-Al-Mamun[1] & M. M. Mahbub Alam[1]	Histopathological changes in different organs of diseased Thai Koi *(Anabas testudineus)*	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh [2]Department of Fisheries, Faculty of Fisheries, University of Rajshahi, Rajshahi, Bangladesh
Shahida Akter*, Md. Abdullah-Al-Mamun, Most. Afsara Tasnim, Md. Sabbir Hossain, Tofael Ahmed Sumon, Sarker Mohammed Ibrahim Khalil[1] & M. M. Mahbub Alam[1]	Histopathological changes in different organs of diseased Vietnam Koi *Anabas testudineus*	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Shila Akter*, Md. Azharul Islam, Md. Mokter Hossain, Md. Moshiur Rahman, Sarker Mohammed Ibrahim Khalil, Md. Abdullah-Al-Mamun & M. M. Mahbub Alam	Identification of pathogenic bacteria from diseased Vietnam Koi, *Anabas testudineus* and assessment of their sensitivity to antibiotics	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Uttam Kumar Sarker[1]*, Md. Istiaque Hossain[2], Md. Mokter Hossain[1], Rikta Sarkar[1], Md. Moshiur Rahman[1], Sarker Mohammed Ibrahim Khalil[1], Md. Abdullah-Al-Mamun[1] & M. M. Mahbub	Effects of major immunostimulant on health and production of Tilapia *(Oreochromis niloticus)*	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh [1]Department of Fisheries, Faculty of Fisheries, University of Rajshahi, Rajshahi, Bangladesh

Author	Title	Organization
Khadija Akter[1]*, Md. Istiaque Hossain[2], Md. Abdullah-Al-Mamun [1], Jaima Zinat, Anupoma Achariya[1], Tofael Ahmed Sumon[1] & M. M.	Ecotoxicological effects of cypermethrin on indigenous catfish *Clarias batrachus*	[1]Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh [2]Department of Fisheries, Faculty of Fisheries, University of Rajshahi, Rajshahi, Bangladesh
Sharmin Akter*, Md. Abdullah-Al-Mamun , Md. Sabbir Hossain, Md. Zobayer Rahman, Sarker Mohammed Ibrahim Khalil[1] & M. M. Mahbub Alam[1]	Ecotoxicological effects of cypermethrin on indigenous Koi *(Anabas testudineus)*	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Mobasshsirin Rahman[1]; Md. Abdullah Al Mamun[1], S.S. Rathore[2], K.M. Nesara[3] , Md. Moshiur Rahman[1], Arman Hossain[1], Anupoma Achariya[1], M. A Kabir[1], M. M. Mahbub Alam[1] & Shamima Nasren[4]	Effects of natural spirulina *(Arthrospira platensis)* on growth, haemato-biochemical indices, gut morphology and disease resistance of stinging catfish, *Heteropneustes fossilis*	[1]Laboratory of Fish Diseases Diagnosis and Pharmacology, Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [2]Department of Aquaculture, College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore, Karnataka, India. [3]ACI Godrej Agrovet Pvt. Ltd., Rajshahi, Bangladesh [4]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Md. Abdullah Al Mamun[1], M. M. Mahbub Alam[1] & Shamima Nasren[2]	Evaluation of feed utilization, immune response and disease resistance of biofilm of *Aeromonas hydrophila* for oral vaccination of climbing perch, *Anabas testudineus*	[1]Laboratory of Fish Diseases Diagnosis and Pharmacology, Department of Fish Health Management, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh [2]Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Technical Session 9: Aquaculture and Nutrition (Part 2)

Chair: Dr. Md. Yeamin Hossain, Department of Fisheries, Faculty of Agriculture, University of Rajshahi, Rajshahi 6205, Bangladesh

Co-chair: Dr. Md. Sazedul Hoque, Associate Professor & Chairman, Department of Fisheries Technology, Faculty of Fisheries, Patuakhali Science and Technology University, Dumki-8602, Patuakhali.

Rapporteurs: 1. Mr. Aminur Rashid, Assistant Professor, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Mst. Fatema Jannat Munny, Lecturer, Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 1:** Surma **Time:** 14.00 - 16.30

Author	Title	Organization
Md. Moazzem Hossain[1] & Md. Aman Ullah Parosh[2]	Development of sustainable climate resilient aquaculture using Asian watergrass as fish feed	[1]Department of Fisheries Management, Patuakhali Science and Technology University, Dumki, Patuakhali, Bangladesh [2]Department of Aquaculture, Patuakhali Science and Technology University, Dumki, Patuakhali, Bangladesh
S. M. Rafiquzzaman, Abdullah-Al Mamun, Nazia Tasnim, Assaduzzaman, Mehedi Hasan, Shahittya Mitra Pranto & Mehedi Hasan Ayon	Qualitative and quantitative study of the status of biofloc technology in Bangladesh	Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh
Pratikshya Neupane, Sunila Rai, Hemu Kafle & Rahul Ranjan	Growth performance of different fish species during dry period in Chitwan, Nepal	Kathmandu Institute of Applied Science, Kathmandu, Nepal
Nahid Hasan Sezu*, Sadia Afrin, Talukdar Jannat Tamanna Shimul, Shishir Kumar Nandi, Afrina Yeasmin Suma & Muhammad Anamul Kabir	Effect of fish protein hydrolysates on growth and reproductive performance of pabda *(Ompok pabda)* broodstock in captivity	Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Sylhet 3100, Bangladesh

Author	Title	Organization
Marjana Jannat Munni & Nirmal Chandra Roy	Effect of probiotic and prebiotic as an alternative to antibiotic on growth and blood profile of Nile Tilapia *(Oreochromis niloticus)*	Department of Fish Biology and Genetics, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Joya Saha, Md. Amzad Hossain, Taslima Akter, Md. Rabiul Islam & Mousumi Das	Dietary microalgae can improve growth, immunity and gut microbiota dynamics in fish	Department of Aquaculture, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
Helena Khatoon, Mohammad Redwanur Rahman & Shanur Jahedul Hasan	Aquaculture wastewater as a low cost medium for mass production of microalgae and it's utilization as feed for culturing shrimp postlarvae	Department of Aquaculture, Chattogram Veterinary and Animal Sciences University, Chattogram-4225
Sanjay Singh Rathorea, Muhammad Abdullah-Al-Mamun b & Nitin Kanji Suyanic	Metabolomics and Fish Nutrition: with Reference to Sustainable Feed Development	[1]Department of Aquaculture, College of Fisheries, Karnataka Veterinary, Animal and Fisheries Sciences University, Mangalore-575002, Karnataka, India, [2]Department of Fish Health Management, Sylhet Agricultural University, Sylhet- 3100, Bangladesh, [3]Department of Fisheries Resources and Management, College of Fisheries Science, Kamdhenu University, Veraval- 362265, Gujarat, India
Md. Latiful Islam[1], Shawon Ahmmed[1], Md. Motiur Rahman[1] & Yahia Mahmud[2]	Nursery rearing of orange mud crab *Scylla olivacea* (Herbst, 1896): optimizing stocking density in rice-crab farming system	[1]Bangladesh Fisheries Research Institute, Brackishwater Station, Paikgacha, Khulna-9280, Bangladesh, [2]Bangladesh Fisheries Research Institute, Mymensingh-2201, Bangladesh
Seikh Razibul Islam, Rezaul Hoque, Azharul Islam Shabuj, Md. Sariful Alam & Muhammad Meezanur Rahman	Adoption of improved salt-shrimp *(Penaeus monodon)* integrated aquaculture practices in traditional salt production areas of cox's bazar	WorldFish Bangladesh and South Asia Office, Dhaka-1212, Bangladesh
Shishir Kumar Nandi, Afrina Yeasmin Suma & Muhammad Anamul Kabir	Using of Fermented Water Spinach Meal (FWM) as a protein source in fish feed for the reproductive performance of female Singhi *(Heteropneustes fossilis)* broodstock in captivity	Department of Aquaculture, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Afrina Yeasmin Suma, Shishir Kumar Nandi & Muhammad Anamul Kabir	Effects of Fish Protein Hydrolysate (FPH) on the growth performance, blood biochemistry, liver and intestinal histopathology and disease resistance to *Aeromonas hydrophila* of Pabda *(Ompok pabda)* fry in captivity	Department of Aquaculture, Sylhet Agricultural University, Sylhet-3100, Bangladesh
S. M. Rafiquzzaman, Nazia Tasnim & Assaduzzaman	An overview on aquafeed production in Bangladesh: current status, challenges and future prospects	Bangabandhu Shekh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

Technical Session 10: Oceanography and Blue Economy (Part 2)

Chair: Prof. Dr. Md. Kazi Ahsan Habib, Department of Fisheries Sher-e-Bangla Agricultural University (SAU), Sher-e-Bangla Nagar, Dhaka-1207

Co-chair: Dr. Md. Rakeb-Ul Islam, Associate Professor,Department of Fisheries and Marine Science, Noakhali Science and Technology University, Noakhali 3814, Bangladesh

Rapporteurs: 1. Mr. Mohammad Mosarof Hossain, Associate Professor, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

2. Ms. Anuradha Talukdar, Lecturer, Department of Coastal and Marine Fisheries, Faculty of Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 2:** Kushiara **Time:** 14.00 - 16.30

Author	Title	Organization
Israt Jahan[1*], Gourab Chowdhury[1,2], Andrea Osorio Baquero[2], Nicolas Couetard[2], Mohammad Amzad Hossain[1] & Mohammed Mahbub Iqbal[1]	Microplastics pollution in the Surma river system, northeast Bangladesh: an emerging threat to upstream water quality and aquatic life	[1]Department of Fish Biology and Genetics, Sylhet Agricultural University, Sylhet-3100, Bangladesh. [2]Plentzia Marine Station (PiE-UPV/EHU), University of the Basque Country, Plentzia-48620, Spain.
M.A. Alam[1], A.F. Rabby[2], Flura[1], M. Moniruzzaman[1], S. Rahman[2], M.A. Bashar[1] & Yahia Mahmud[3]	Length-based bayesian biomass (LBB) and length based spawning potential ratio (LBSPR) of Hilsha, *Tenualosa ilisha* (Hamilton, 1822) in the Bay of Bengal, Bangladesh	[1]Bangladesh Fisheries Research Institute, Riverine Station, Chandpur-3602, [2]Bangladesh Fisheries Research Institute, Marine Fisheries and Technology Station, Cox's Bazar, [3]Bangladesh Fisheries Research Institute, Mymensing-2201
Jabed Hasan*, Sumaiya Binte Mesbah & Md Shahjahan	Effects of temperature on ingestion of microplastics in nile tilapia	Laboratory of Fish Ecophysiology, Department of Fisheries Management, Bangladesh Agricultural University, Mymensingh- 2202, Bangladesh
Tanvir Rahman*[1], Towsif Iqbal[1], A.G.M. Sofi Uddin Mahamud[2], Shekh Mustakima[1], Zannatul Ferdous[1] & Tamanna Tabassum[1]	Microplastic cotamination in aquaculture: some preliminary investigations to uncover the upcoming threat in Bangladesh	[1]Department of Aquaculture, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh [2]School of Food Science and Technology, Chung-Ang University, 72-1 Nae-Ri, Daedeok-Myeon, Anseong-si, Gyeonggi-do 456-756, Republic of Korea

Author	Title	Organization
Md. Jaki Shahrier*, Md. Golam Rasul & A. K. M. Azad Shah	Shelf life extension of refrigerated nile tilapia *Oreochromis niloticus* fillets using seaweed extracts	Department of Fisheries Technology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh
Azizul Fazal[1]*, S. M. Sharifuzzaman[2] & M Shah Nawaz Chowdhury[2]	A habitat suitability index model for identifying potential mussel farming site in the Maheshkhali channel Cox's Bazar	[1]Department of Oceanography, Shahjalal University of Science and Technology, Sylhet, Bangladesh [2]Institute of Marine Sciences, University of Chittagong, Chittagong 4331, Bangladesh
Subrata Sarker[1]*, Tania Sultana[2] & Md. Samiul Huda[1]	Phytoplankton ecology in coastal habitats along the northern Bay of Bengal	[1]Department of Oceanography, Shahjalal University of Science and Technology, Sylhet 3114, Bangladesh [2]Alfred Wegener Institute for Polar and Marine Research, Germany
A.F. Rabby*[1], M. Aktaruzzaman[1], T. Rahman[1], M. R. hossain[1], Z. Islam[1], S. Rahman[1] & Yahia Mahmud[2]	Length-based bayesian biomass (LBB) and length based spawning potential ratio (LBSPR) of marine fishes in the Bay of Bengal, Bangladesh	[1]Bangladesh Fisheries Research Institute, Marine Fisheries and Technology Station, Cox's Bazar, [2]Director General, Bangladesh Fisheries Research Institute, Mymensingh
K M Azam Chowdhury[1]*, Wensheng Jiang[2] & Shaila Akhter[3]	Identification of potential productive zone and dominant physical-biogeochemical drivers of seasonal chlorophyll-a concentration in the Bay of Bengal	[1]Department of Oceanography & International Centre for Ocean Governance (ICOG), University of Dhaka, Dhaka 1000, Bangladesh, [2]Physical Oceanography Laboratory/CIMST, Ocean University of China and Qingdao National Laboratory for Marine Science and Technology, Qingdao 266100, China, [3]Bangladesh Betar, Ministry of Information and Broadcasting, Government of the People's Republic of Bangladesh, Dhaka 1207, Bangladesh
Md. Simul Bhuyan[1,2,3]*, Sayeed Mahmood Belal Haider[1], Mrityunjoy Kunda[2], Abu Sayeed Muhammad Sharif[1], Sk. Abid Husain[3], Enam Chowdhury[3], & Manickam Elangovan[4]	Experimental cultivation of seaweed on the Cox's Bazar coast, Bangladesh	[1]Bangladesh Oceanographic Research Institute, Cox's Bazar, Bangladesh, [2]Sylhet Agricultural University, Sylhet, Bangladesh, [3]Bangladesh Marine Fisheries Association, Dhaka, Bangladesh, [4]PG and Research Department of Zoology, Kamaraj College, Thoothukudi 628003, Tamil Nadu, India

Author	Title	Organization
Mosa. Tania Alim Shampa[1]*, Dr. Md. Kawser Ahmed[1], Dr. K M Azam Chowdhury[1], Mahmudul Hasan[1], & Muhammad Shahinur Rahman[2]	Spatio-temporal distribution of chlorophyll-a, total suspended matter, and colored dissolved organic matter in the coastal areas of Sundarban mangrove forest using remote sensing satellite imagery	[1]Department of Oceanography, University of Dhaka, Dhaka-1000 [2]Bangladesh Oceanographic Research Institute, Cox's Bazar-4730, Bangladesh

Technical Session 11: Socioeconomics, Livelihoods and Gender

Session Keynote Speaker: Mr. Sayed M Istiak, Director, Deep Sea Fisheries Ltd. and ASAP Healthy Food Ltd. Bangladesh

Title of the Keynote: Impacts of Bangladesh Fisheries Sector on the Socioeconomic Developments, Livelihoods and Gender

Chair: Dr. Shakuntala Haraksingh Thilsted, Global lead for Nutrition and Public Health of WorldFish, Penang, Malaysia.

Co-chair: Dr. Md. Tariqul Islam, Professor, Department of Fisheries, University of Rajshahi

Rapporteurs: 1. Mr. Sanzib Kumar Barman, Lecturer, Department of Fishery Resources Conservation and Management, Khulna Agricultural University, Khulna, Bangladesh

2. Mr. Kishor Kumar Tikader, Lecturer, Department of Fishery Resources Conservation and Management, Khulna Agricultural University, Khulna, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 3: Meghna** **Time: 14.00 - 16.30**

Author	Title	Organization
Muhammad Mizanur Rahman[1], Morgina Akter[1], Zahir Uddin Ahmed[2], A.N.M. Samiul Huda[1], Md Shajjadur Rahman[1] & Subrata Sarker[1]	COVID-19 and fisheries: A study on impacts of lockdown on artisanal fishing communities of Bangladesh	[1]Department of Oceanography, Shahjalal University of Science and Technology, Sylhet, Bangladesh [2]Department of Economics, Shahjalal University of Science and Technology, Sylhet, Bangladesh
Anuradha Talukdar, Amany Begum, Md. Mostafa Shamsuzzaman & Mohammad Mahmudul Islam	The premium of hilsa sanctuary: a socio-economic and eco-logical evaluation from the Meghna estuary, Bangladesh	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet-3100

Author	Title	Organization
Reashan Ujjaman, Md. Al Masruf Emon & Mohammad Mahmudul Islam	Social and technological changes in a coastal fishing village in Bangladesh	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Mohammad Mosarof Hossain & Mohammad Mahmudul Islam	What makes small-scale fisheries vulnerable? Towards viable responses in the context of Bangladesh	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Sabrina Jannat Mitu[1], Petra Schneider[2], Md. Shahidul Islam[1], Masud Alam[3], Mohammad Mojibul Hoque Mozumder[4], Mohammad Mosarof Hossain[1] & Md. Mostafa Shamsuzzaman[1]	Socio-economic context and community resilience among the people involved in fish drying practices in the South-East coast of Bangladesh	[1]Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh, [2]Department for Water, Environment, Civil Engineering and Safety, University of Applied Sciences, Magdeburg-Stendal, Breitscheidstraße 2, D-39114 Magdeburg, Germany, [3]Department of Agricultural Statistics, Sylhet Agricultural University, Sylhet-3100, Bangladesh, [4]Helsinki Institute of Sustainability Science (HELSUS), Fisheries and Environmental Management Group, Faculty of Biological and Environmental Sciences, University of
Md. Al Masruf Emon & Mohammad Mahmudul Islam	Towards livelihood viability of Munda indigenous communities of the Bangladesh Sundarbans	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Bangladesh
Kishor Kumar Tikadar[1], Md. Mehedi Alam[1] & Mohammad Mahfujul Haque[2]	Economic viability and seasonal impacts of integrated rice-prawn-vegetable farming on agricultural households in southwest	[1]Department of Fishery Resources Conservation and Management, Khulna Agricultural University, Khulna, Bangladesh, [2]Department of Aquaculture, Bangladesh Agricultural University, Mymensingh, Bangladesh.
Abdullah-Al Mamun[1], Shuva Bhowmik[1,2,3] & Md. Shahid Sarwar[4,5]	Ready to user fish powders (RUFPs) are critical in combating adolescent female malnutrition	[1]Department of Fisheries and Marine Science, Noakhali Science and Technology University, Noakhali-3814, Bangladesh, [2]Centre for Bioengineering and Nanomedicine, Division of Health Sciences, University of Otago, Dunedin 9054, New Zealand, [3]Department of Food Science, University of Otago, Dunedin 9054, New Zealand, [4]Department of Pharmacy, Noakhali Science and Technology University, Noakhali-3814, Bangladesh, [5]Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers, The State University of New Jersey, Piscataway-NJ 08854, USA

Technical Session 12: Fisheries Strategies, Planning and Policy

Session Keynote Speaker: Peerzadi Rumana Hossain, WorldFish, Bangladesh

Title of the Keynote: Co-Creating Inclusive Policy Propositions on the Revision of Bangladesh's National Fisheries Policy 1998 For Sustainable and Resilient Aquatic Food Systems

Chair: Dr. Dilip Kumar, Former VC, The Indian Council of Agricultural Research (ICAR), India

Co-chair: Professor Dr. Abdullah Al Mamun, Department of Fisheries and Marine Science, Noakhali Science and Technology University, Sonapur, Noakhali, Bangladesh.

Rapporteurs: 1. Dr. Partho Protim Barman, Assistant Professor, Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh

2. Md. Ashraf Hussain, Assistant Professor, Department of Fisheries Technology and Quality Control, Sylhet Agricultural University, Sylhet, Bangladesh

Venue: KHAN'S PALACE, Sylhet **Hall Room 4: Padma** **Time: 14.00 - 16.30**

Author	Title	Organization
Diponkor Adikari[1], Fatema Jannat Munny[2] & Md. Abu Kawsar[2]	Smartphone apps and internet of things (IoT) pertaining to aquaculture: a promising future for smart aquaculture farming in Bangladesh	[1]Faculty of Fisheries, Sylhet Agricultural University, Bangladesh [2]Department of Aquaculture, Sylhet Agricultural University, Bangladesh
Amany Begum[1], Md Kutub Uddin[2], Md Mizanur Rahman[3], Md Mostafa Shamsuzzaman[1] & Mohammad Mahmudul Islam[1]	Assessment of policy, legal and institutional frameworks towards marine megafauna conservation in Bangladesh	[1]Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh [2]Sagar Seba, Dhaka, Bangladesh [3]Information and Communication Technology Division, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh
Hadayet Ullah, Md Jalilur Rahman & Md Abdul Wahab	Bridging the gap: fishers' knowledge as data source for improved fisheries management	WorldFish, Bangladesh & South Asia Office, Dhaka, Bangladesh

Author	Title	Organization
Abdullah-Al Mamun, S. M. Rafiquzzaman, Nazia Tasnim, Assaduzzaman, Mehedi Hasan, Shahittya Mitra Pranto & Mehedi Hasan Ayon	Influence of social media on the rapid dissemination of biofloc technology in Bangladesh	Department of Fisheries Biology and Aquatic Environment, Bangladesh Sheikh Mujibur Rahman Agricultural University
Md. Hasan Faruque	Prioritizing fisheries stock for monitoring and management: insights from hilsa *(Tenualosa ilisha)* gillnet fishery of Bangladesh	Fish Population Dynamics, Ecology and Climate Change Laboratory, Department of Fisheries, University of Dhaka, Dhaka-1000, Bangladesh
Md. Sazedul Hoque[1], Md. Mahmudul Hasan[1] & Muhammad Arifur Rahman[2]	Knowledge, practice, and economic impacts of covid-19 on small-scale coastal fishing communities in Bangladesh: policy recommendations for improved livelihoods	[1]Department of Fisheries Technology, Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh. [2]Research Assistant, ECOFISH-II Project (Cox's Bazar), WorldFish Bangladesh, Dhaka-1213, Bangladesh.
Shaima Arzuman Shahin[1], Ashir in Tishar[2] & Riffat Ara[3]	Reach the doorstep with nutrition messages to reduce micronutrient deficiencies in cost-effectively	[1]WorldFish Bangladesh [2]Health Nutrition and Population Programme, BRAC [3]Health Nutrition and PopulationProgramme, BRAC
Baishnaba Charan Ratha[1], Chadag Vishnumurthy Mohan[2], Arun Padiyar[1], Neetha Shenoy[1] & Sourabh Kumar Dubey[1]	Inclusion of dried fish and small fish powder in tribal diet plan: a potential strategy for alleviating Odisha's dual burden of malnutrition	[1]WorldFish, Cuttack, Odisha 753001, India [2]WorldFish, Penang, Malaysia
Md. Azharul Islam, Md. Mokter Hossain, Shila Akter, Md. Moshiur Rahman, Sarker Mohammed Ibrahim Khalil, Md. Abdullah-Al-Mamun & M. M. Mahbub Alam	Comparative analysis of management practices and profitability of carp-prawn polyculture, pabda and monosex tilapia farming in Bangladesh	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh

Author	Title	Organization
Md. Mokter Hossain, Shila Akter, Md. Azharul Islam, Tofael Ahmed Sumon, Sarker Mohammed Ibrahim Khalil, Md. Abdullah-Al-Mamun & M. M. Mahbub	Comparative analysis of management practices and profitability among crap polyculture, stringing catfish and Vietnam koi farming in Bangladesh	Department of Fish Health Management, Sylhet Agricultural University, Sylhet, Bangladesh
Rita Sinha[1]*, Shathi Deb Nath Gopa[2], Golam Shakil Ahamed & Md. Tariqul Alam[1]	Effect of nutrient management on plankton community in pond	[1]Department of Aquaculture, Faculty of Fisheries, Sylhet Agricultural University, Bangladesh [2]Faculty of Fisheries, Sylhet Agricultural University, Bangladesh
Md. Mostafa Shamsuzzaman*, Mohammad Mahmudul Islam & Amany Begum	Assessing fisheries policies of Bangladesh: need for constancy or transformation?	Department of Coastal and Marine Fisheries, Sylhet Agricultural University, Sylhet-3100, Bangladesh
Ehsanul Karim*, Md. Nahiduzzaman & Yahia Mahmud	Diversity and Seasonal Variation of Fish Assemblages Associated with Key Environmental Variables of Dingapota Haor; An Eutrophic Wetland of Northeastern Bangladesh	Bangladesh Fisheries Research Institute, Mymensingh-2201

Tea Break: 16:30-17:00

PLENARY SESSION

Chair : Dr. Md. Abdul Wahab
Professor, Department of Fisheries Management Bangladesh Agricultural University, Mymensingh, Bangladesh

Co-chair: Dr. Mostafa Ali Reza Hossain
Professor, BAU, Mymensingh, Bangladesh

Venue : KHAN'S PALACE, Sylhet **Hall Room 1: Surma**
Time : 16.15 - 17.00

Programme

Closing Session: 17.00 - 21.00
17 September 2022, Saturday

17:00 Welcome Address
Professor Dr. M. M. Mahbub Alam
Member Secretary, ICSF-2022

Address by the Special Guests

17:05 **Professor Dr. Syed Sayeem Uddin Ahmed**
Director (Research), Sylhet Agricultural University Research System

17:10 **Mr. Enam Chowdhury**
Managing Director, Deep Sea Fishers Ltd., Bangladesh

17:15 **Mr. Sayeed Mahmood Belal Haider**
Director General, Bangladesh Oceanographic Research Institute, Cox's Bazar

17:20 **Mr. Niraj Kumar Jaiswal**
Honourable Assistant High Commissioner of India, Sylhet

17:25 Address by the Chief Patron
Professor Dr. Md. Matiar Rahman Howlader
Honourable Vice-Chancellor, Sylhet Agricultural University, Sylhet

Address by the Special Guests

17:30 **Mr. Ariful Haque Choudhury**
Honourable Mayor, Sylhet City Corporation, Sylhet

17:35 **Mr. Hafiz Ahmed Mazumder**
Honourable MP, Sylhet-5 Constituency, Bangladesh National Parliament

17:45 Address by the Chief Guest
Mr. M. A. Mannan MP
Honourable Minister, Ministry of Planning, People's Republic of Bangladesh

18:00 Address by the Chairperson
Professor Dr. Mrityunjoy Kunda
Dean, Faculty of Fisheries, Sylhet Agricultural University & Chairman, ICSF-2022

18:05 Cultural Programme

19:00 Conference Dinner

Day-3
Sep. 18, 2022
Sunday

Field Trip

Time : 07:00 - 19:0
Location : Tanguar Haor, Sunamganj

Conference Organizing Committee, ICSF 2022

Chairman

Professor Dr. Mrityunjoy Kunda
Dean, Faculty of Fisheries, Sylhet Agricultural University, Bangladesh
Email: kunda.arm@sau.ac.bd

Member Secretary

Professor Dr. M. M. Mahbub Alam
Department of Fish Health Management, Sylhet Agricultural University, Bangladesh
Email: mhbb_alam@sau.ac.bd

Treasurer

Dr. Muhammad Anamul Kabir
Associate Professor, Department of Aquaculture, Sylhet Agricultural University, Bangladesh

Members:

Chairman, Department of Aquaculture, Faculty of Fisheries
Sylhet Agricultural University, Bangladesh

Chairman, Department of Aquatic Resource Management, Faculty of Fisheries
Sylhet Agricultural University, Bangladesh

Chairman, Department of Coastal and Marine Fisheries, Faculty of Fisheries
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Extended Abstracts

DIVERSITY AND SEASONAL VARIATION OF FISH ASSEMBLAGES ASSOCIATED WITH KEY ENVIRONMENTAL VARIABLES OF DINGAPOTA HAOR; AN EUTROPHIC WETLAND OF NORTHEASTERN BANGLADESH

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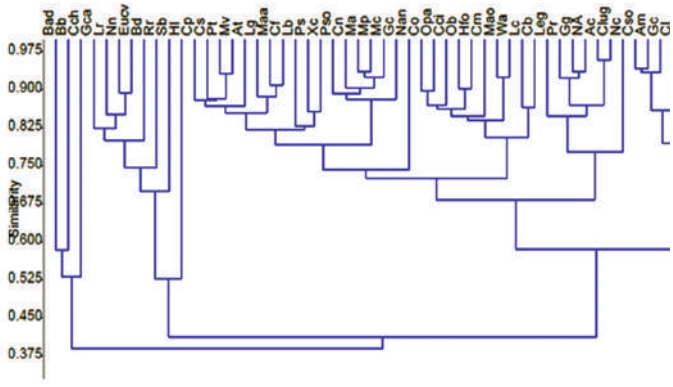
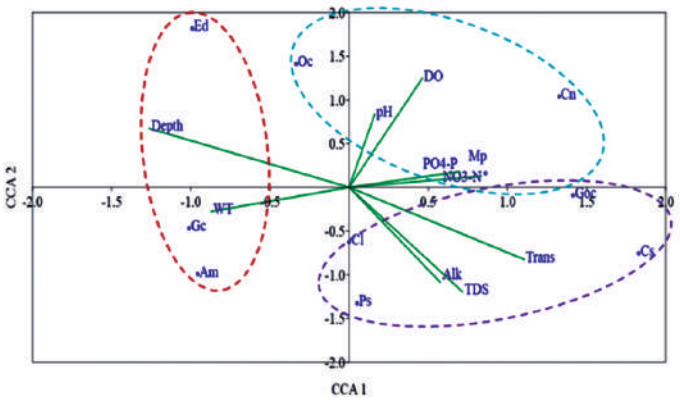
Many indigenous fish species in Bangladesh are thought to have their natural feeding and breeding grounds in wetland habitats. These habitats are also the most varied in the entire globe. Nevertheless, due to a number of both natural and artificial factors, Bangladesh's wetlands are in danger of being extinct. Wetlands therefore require special consideration in order to protect our nation's ecosystem. The present study was conducted to evaluate the abundance and diversity status of the Dingapota wetland in Bangladesh and to identify the governing environmental elements impacting the fish community assemblage as part of the conservation measures required for wetland ecosystems.

The current study examines seasonal variation in environmental variables as well as changes in various diversity indices of freshwater fish species at Dingapota Haor (Mohangonj Upazilla), Netrokona, Bangladesh. A total of 52 fish species were recorded from 7 orders during the study period. Cypriniformes comprises the most abundant order (47.91%) followed by Perciformes (20.71%) and Clupeformes (20.22%). Post-monsoon was the most specious and diversified season compared to monsoon and pre-monsoon. Fish community assemblage was significantly differentiated among the three seasons (ANOSIM, Global R = 0.803, P < 0.05) whereas the overall average dissimilarity among the three seasons was estimated as 39.92%. Diversity indices (Shannon-Weiner diversity (*H*), Margalef's richness (*D*) and Pielou's evenness (*e*)) were found to vary significantly among the seasons.

Groups	ANOSIM		Dis.sim SIMPER
	R	P	R
Mon vs. Post-mon	0.531	0.048	36.61
Mon. vs. pre-mon.	0.865	0.029	39.89
Post-mon vs. Pre-mon	0.906	0.032	43.25
Overall groups	0.803	0.0007	39.92





EFFECTS OF VISIBLE LIGHT SPECTRA ON THE MATURATION AND QUALITY OF SALTED HILSA (*Tenualosa ilisha*)

Ismail Hossain * , Rayhana Akter*, Subrina Murshed Simin, Md. Motaher Hossain, Md. Ashraf Hussain, Mohammad Abu Jafor Bapary**

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The development of attractive color, odour, texture and flavor in the salted product is quite desirable to processor which is mainly accomplished during maturing or ripening by physico-chemical process involving numerous autolytic, enzymatic, and microbiological actions. In recent years, LED lighting has gained popularity as a potential tool for food processing and preservation. It is still unknown whether the visible light spectrum has any effect on maturation during salting. The aim of the present study was to evaluate the involvement of LEDs generated visible light spectra on the maturation of hilsa *(Tenualosa ilisha)*. Following dressing, hilsa fish were exposed to several visible light spectra as blue (450 nm), green (535 nm) and red (630 nm) until complete maturation. Fish were also kept under dark condition as a control. The effects of LEDs light on maturation were assessed on the basis of sensory attributes (color, odor and texture), the proximate composition and bacterial load analyses during the ripening period. It has been observed that the fish exposed to LED light had improved color, texture and odor than those of the fish kept under control conditions where apparently better maturation were obtained under red LED light treated condition. At the end of the experiment, no significant variation in the protein content was observed between light-treated and dark maintained hilsa. On the contrary, the moisture content significantly declined under red LED light conditions in compare to control and other treatments. When lipid and ash content were compared between control and LEDs light treatment conditions, significant increase were demonstrated under red LED light treated fish. Although a sharp fall in bacterial load was only seen under blue light conditions, all light-treated hilsa significantly showed lower values than those of control fish. These results revealed that the physico-chemical and bacteriological parameters were influenced by the light wavelengths produced by LEDs where red LED-generated light spectra showed better performance in achieving the desired changes in physical parameters within the shortest time period. However, during the maturing process, subtle alterations were seen under blue light; as a result, the efficacy changed as red LED> green LED> blue LED. It is anticipated that these findings will ultimately help to improve the hilsa maturation as well as to shorten the maturation period during salting in glut season. More research is needed to understand the mechanism of hilsa maturation under light spectrum conditions so that consumers can acquire salted hilsa of superior quality at a lower cost.

QUALITY ATTRIBUTES OF DRIED SNAKEHEAD, *Channa marulius* COLLECTED FROM SYLHET SADAR

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Great snakehead, *Channa marulius* known as Gajar fish, is one of the high-priced fish in Bangladesh having its own color, flavor and taste. In Sylhet region, huge amount of *C. marulius* is caught every year. After mitigating local demand as raw fish, large amount is dried specially for export purposes. However, the quality attributes of this dried fish is largely unknown. The present study aimed to investigate the sensory, nutritional and microbial quality of traditionally dried *C. marulius* in producer and retailer level. For this purpose, dried snakehead was collected from three processors of Tuker Bazar fish drying yard and three retail markets of Sylhet Sadar. When the sensory attributes were evaluated, comparatively better quality score for color, odor and texture were observed in processor level than those of retail markets. The moisture content was lower in the dried fish of producer level in compare to the samples collected from retail markets. On the other hand, higher protein and lower ash content were found in the samples collected from producer level whereas the lipid content was more or less similar both in processor and retail market levels. Significantly, higher TPC values were demonstrated in the market collected dried fish in comparison to the samples of producer level. This study revealed that the quality attributes of dried *C. marulius* is moderate satisfactory in producer level that are mainly used for export purposes. Comparatively lesser quality grade dried fish are sold in the retail markets which further degraded probably due to rough handling, poor preservation facilities and longer time requiring for selling. This study also uncovered that dried *C. marulius* has a vast potential in foreign markets, therefore, substantial improvement at different stages of handling, transportation and drying activities is needed to ensure high quality dried fish products for export purposes as well as expanding export markets from Sylhet region. Training of the fish processors, handlers and retailers on various aspects of *C. marulius* drying including hygiene, sanitation, cleanliness, using of potable water and premium quality raw materials, improved processing and preservation is highly recommended.

STUDY TO DEVELOP SASHIMI MEAT FROM THE CUTTLEFISH *(Sepia officinalis)* AND EVALUATE ITS QUALITY AS READY TO EAT PRODUCTS

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The cuttlefish belong to the family Sepiidae. It has significant commercial export value for the artisanal and industrial fisheries. Cuttlefish are primarily bottom dwellers in a range of habitats, including rocky, sandy, and muddy substrates, seagrass, seaweed, and coral reefs. The increase in the human population has led to a greater demand for fishery products. Cephalopods have high commercial value, particularly in the Asian and Mediterranean markets. Japan is the principal consumer of cuttlefish (Boucaud-Camou 1990). In 2017, Japan imported about 11,506 Mt frozen cuttlefish from Thailand, Vietnam, Morocco, Somalia, and Malaysia. Cuttlefish are a good source of protein, minerals, vitamins, and essential lipids (Sinanoglou & Miniadis-Meimaroglou 2000). Generally, cuttlefish are consumed in various forms, i.e., eaten raw as sashimi or sushi, cooked as tempura, deep-fried, boiled, etc. (Kunisaki 2000). In 2020-21, Bangladesh exported 942 MT of cuttlefish (EPB 2021), earning USD 24,30,752 and the average price was USD 2.58/kg (EPB 2021). The study objective was to produce value-added raw-ready-to-eat/cook sashimi meat by developing a commercial-based method. This method triggers the earning of more revenue compared to unprocessed whole cuttlefish, which are usually caught by the fishing trawlers as bycatch. The process flow of the whole cuttlefish was as landing on deck, washing, grading, freezing in a blast freezer, and storage in the cold room at the vessel. The whole block of frozen cuttlefish was purchased from the fish trawlers, defrosted, and processed while maintaining all compliance with seafood HACCP. After processing cuttlefish, preparing sashimi meat, weighing, panning, and freezing in a blast freezer, after 4 hours of freezing and packaging, they stored the final products in a refrigerated container for export. They bought 20,354 kg of frozen whole cuttlefish, whose sizes ranged from 50 gm to 300 gm, and produced 10,304.58 kg of final products. The head parts of the final products weighed 4595.5 kg, and the meat was 5709.08 kg. The overall yield was 50.62 percent, with the meat accounting for 55.40 percent and the head accounting for 44.60 percent. Among the byproducts (offal) were defrosted wastage of 1.5 %, other fish mixed with block was 0.5%, trim meat wastage of 4%, egg wastage of 3%, drop wastage of 4%, 10 to 20 gm size of 4.5%), and the rest of the wastage of 36%. Daily production was 500 kg by skilled labor. The final product packet size was 1 kg or 2 kg. The researcher has made seven to eight-category finished products as per the weight and buyer's requirements. The researcher has conducted the sensory assessment using Torry Freshness Scale and microbiological tests from the FIQC laboratory. Torry Freshness score was 8. According to the regulations of Japan and Bangladesh, test results were for Salmonella-absent, Vibrio-absent, E.coli/F.coli less than 0.30/gm, and SPC-6.6x104. These results confirmed that the produced meat was ready to eat. The product is processed and exported under the approved HACCP program. After adding the value of the cuttlefish, the export price was USD 7.16/kg as per PI, which is 178 percent higher than that of the whole cuttlefish.

AN ASSESSMENT OF MANAGEMENT PRACTICES AND USAGE OF LIVE FEED (*Artemia* AND ALGAE) IN THE SHRIMP HATCHERIES (*Penaeus monodon*) IN COX'S BAZAR, BANGLADESH

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The present study gathered information on present operation procedure, usage of feed, chemicals, and health products (disinfectants, probiotics, and antibiotics), live feed management, trend in shrimp post larvae (PL) production and PL price of the shrimp hatcheries. The survey was conducted in 25 shrimp hatcheries in Cox's Bazar during March-September 2021. Secondary data was collected from Shrimp Hatchery Association of Bangladesh, Department of Fisheries and Hatcheries Suppliers' Association.

In 2021, shrimp PL production reached 6.4 billion. The result showed declining trend in PL production since 2018 and increase PL price for last two years. The hatcheries production facilities comprising larval rearing, broodstock maturation, spawning, hatching, algae production and *Artemia* hatching tanks. The hatcheries can be categorized small, medium and large on the basis of volume of larval rearing tanks. All hatcheries pumped sea water from the Bay of Bengal, and used crude salt during June to October to maintain the salinity. Seawater treatments include disinfection, filtration through sand filter, cartridge filter, carbon filter, bag filter. All hatcheries depend on wild broodstock except two specific pathogen free (SPF) hatcheries depend on imported PL or broodstock. Squid, cow liver, crab meat, mussel were common broodstock diet. Twenty-five percent hatcheries used imported polychaete and one SPF hatchery fed krill to broodstock. All hatcheries used live feed, algae (*Skeletonema*) and freshly hatched *Artemia* nauplii. None of the hatcheries had temperature controlled room for *Artemia* hatching, and preservation facilities of *Artemia* nauplii. The hatcheries technicians were not aware of about the significance of different stages of *Artemia* (umbrella, Instar I, Instar II) in larval rearing. All hatcheries were interested to use locally produced *Artemia* cyst and biomass considering cost-effectiveness, pathogen-free, nutritional profile, preferred smaller size, high hatching rate and specific hatching time. *Artemia* cyst comprises 7-16% of the production cost. Fifty-six percent hatcheries applied *Artemia* replacement diet. On an average, 25-35 kg *Artemia* cyst was used per ten million of PL. Application of probiotics, antibiotics, vitamins and minerals were common in larval rearing. The purpose of the application of probiotics were to inhibit growth of pathogenic bacteria, prevent disease, and improve water quality, digestion, and better metamorphosis. The results suggest to improve knowledge and skill of hatchery technicians for better management practices, quality of *Artemia nauplii*, feeding *Artemia* biomass for better PL quality.

ADOLESCENTS' KNOWLEDGE, ATTITUDE AND PRACTICES (KAP) TOWARDS FISH CONSUMPTION: AN EMPIRICAL STUDY FROM BANGLADESH

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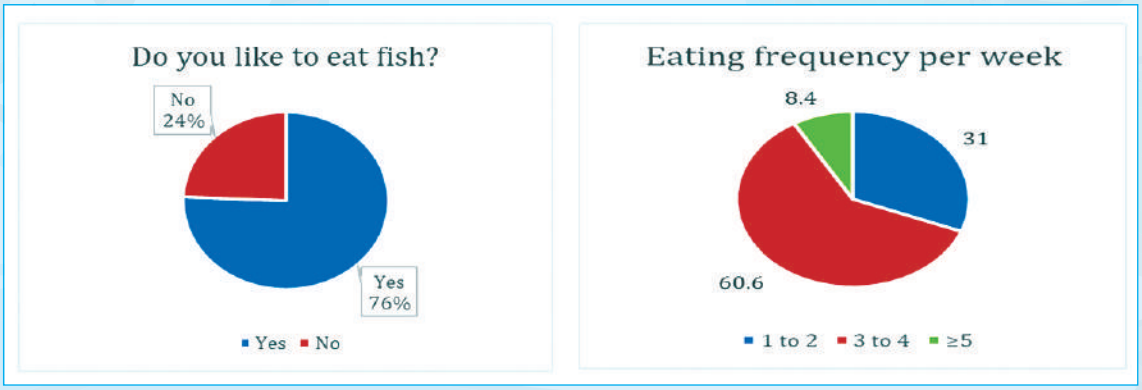
Fish is considered one of the most nutritious food products having high quality protein, lipid, essential amino acids, polyunsaturated fatty acid as well as other micronutrients. These nutrients are very crucial for youngsters for their growth and mental development. Information on fish consumption preferences and their regulating factors among the younger generation of Bangladesh is very scant. Therefore, this study was conducted to examine the knowledge, attitude and practices of Bangladeshi adolescents towards fish intake, where an online survey was administered among 1158 adolescents using a pre-tested Google form.

Findings of the survey reveals that two-thirds of the respondents love to eat fish, with the majority (60.6%) eating fish 3 to 4 times a week. Fishes from freshwater bodies (74.34%) are mostly consumed by the respondents, while just 25.65% said they eat marine fish. Nutritional value, taste, availability of protein, and family pressure are among the identified reasons for the fish consumption. Respondents mentioned lower taste, disliking of odor, presence of more fish bone, being vegetarian, allergy, and fish availability status as reasons for not preferring fish from both freshwater and marine sources. The availability of freshwater fish is stated to be higher than that of marine fish in many areas. When it comes to freshwater fish, 71% of adolescents prefer large fish, while 63.6% prefer small indigenous fish species. Among the numerous species, *Tenualosa ilisha, Macrobrachium rosenbergii, Labeo rohita, Penaeus monodon,* and *Catla catla* are the most preferred fish species. Fish-based fast food was preferred by 67.6% of respondents. More than half of the participants showed negative perception towards non-fish seafood such as crab, oyster, loligo, squid , octopus etc. Processed and convenient fishery products (i.e., ready-to-eat and/or ready-to-cook products) received a favorable feedback from the adolescents. These insights into consumer behavior and their underlying reasons will be of great interest for the government as well as fish producers in their future strategies to enhance fish consumption among adolescents which eventually will help to prevent malnutrition.



TRANSFORMATIVE BANKING MODEL TO INCREASE WOMEN'S ENTREPRENEURSHIP IN AQUACULTURE

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Access to formal banking systems is one of the major challenges for women's entrepreneurship development in Bangladesh. Women in rural areas, in many cases, cannot avail the traditional banking services and its higher loan amounts, as women have restricted mobility, limited access to information, limited entitlement to property and therefore collateral and little or no networks. This is further problematic in the aquaculture and fisheries sector where women have limited visibility, require bigger loans that what micro-credit systems allow and are hardly recognized as farmers or entrepreneurs. In this context, WorldFish developed a banking model that could be transformative for women's entry into and benefits from the formal banking system. This paper focuses on the effectiveness of this banking model as an approach to make rural women bankable. It examines the efficiency of an unconventional model to increase women's access to formal financial institutes and the benefits derived in terms of gender relations, decision-making and business growth. For this research, a qualitative study was conducted in July 2022 with 30 women and 6 other stakeholders in Northwestern part of Bangladesh. The findings show that this newbanking system creates an enabling environment for women to increase women's entrepreneurship and have a transformative impact on women's banking access in Bangladesh. This article illustrates the importance of transformative banking, as a tool to increase women entrepreneurship especially in the aquaculture sector.

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