



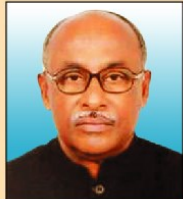
FISHERIES NEWSLETTER

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Mr. Md. Ashraf Ali Khan Khasru MP New State Minister for Fisheries and Livestock



Mr. Md. Ashraf Ali Khan Khasru MP, a veteran freedom fighter joined as the State Minister for Ministry of Fisheries & Livestock (MoFL) on 10 January 2019. He was born in a respectable Muslim family of political heritage in Netrakona district on 22 March 1949. He completed his Bachelor of Arts (BA) degree from Netrakona Govt.

College. The hon'ble State Minister was actively involved in student politics. During his long political career, he held many important positions of Bangladesh Awami League and its various front organizations. He was the Publicity Secretary of Netrakona district Chhatra League during 1966-68, Organizing Secretary during 1968-69 and General Secretary in 1969-70. Because of engaging in active student politics of Bangladesh Chhatra League, he suffered imprisonment for anti-Ayub movement in 1964. In 1971, he joined the liberation war of Bangladesh as a company commander. During the state of emergency of Military led government in 1976, he was imprisoned again for one year. He also gave leadership in anti-autocratic movement in 1990.

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Workshop on Impact of Sanctuary on Increasing Hilsa Production and Jatka Conservation

As part of the National Jatka Conservation Week 2019, Bangladesh Fisheries Research Institute organized a Workshop on 'Impact of Sanctuary on Increasing Hilsa Production, Stock Assessment, Jatka Conservation' and Progress of Research at Shilpakala Academy in Chandpur on 23 March 2019.



Hon'ble Minister of Education Dr. Dipu Moni MP, State Minister of Fisheries & Livestock Mr. Md. Ashraf Ali Khan Khasru MP and other guests on the dais

Dr. Dipu Moni MP, Hon'ble Minister of Education was present as the Chief Guest while Hon'ble State Minister of Fisheries & Livestock Mr. Md. Ashraf Ali Khan Khasru MP was present as the

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Jatka Conservation Week 2019 Observed

"Jatka Conservation Week 2019" was launched for a week in 37 districts from 16 to 22 March with the slogan "Kono Jal Felbo Na, Jatka Ilish Dhorbo Na". The launching ceremony of the week was



State Minister, MoFL Mr. Md. Ashraf Ali Khan Khasru MP delivering inaugural address at a function organized in observance of Jatka Conservation week in Bhola

inaugurated at Charfashion in Bhola on 16 March 2019 by the hon'ble State Minister of Fisheries & Livestock Mr. Md. Ashraf Ali Khan Khasru MP as the Chief Guest. Mr. Abdullah Al Islam Jakob MP (Bhola-4) was present as the Special Guest. Secretary of the Ministry Mr. Md. Raisul Alam Mondal presided over the

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Reception to New State Minister of MoFL

The hon'ble new State Minister of Fisheries and Livestock (MoFL) Mr. Md. Ashraf Ali Khan Khasru MP was accorded a cordial reception by the Secretary, MoFL Mr. Md. Raisul Alam Mondal along with the Heads of all Departments and Institutions working



Secretary, MoFL with his colleagues welcoming the hon'ble new State Minister Mr. Md. Ashraf Ali Khan Khasru MP at the Ministry

under the Ministry on 10 January 2019. The Secretary and Heads of all Departments welcomed the new Minister with floral wreaths at a function organized in the conference room of the Ministry

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Editorial

Fisheries Newsletter is a quarterly publication of Bangladesh Fisheries Research Institute (BFRI). It covers exclusive information on various news and events about fisheries research and development activities. The current volume of the Newsletter contains information and issues like workshop, training, impact of management measures on conservation of important hilsa fisheries, news on different significant national events and visits of national and international delegates at the institute including Ministers and Secretaries. We are pleased to release the present issue of the Fisheries Newsletter (Volume 18-19, Number 4, 1) reflecting the above information and events. We cordially invite important information and events of fisheries interest including information on upcoming national and international events.

Dr. Yahia Mahmud

Workshop on Emerging Issues in Shrimp Farming Held

A day-long workshop on 'Emerging Issues in Shrimp Farming and Way Forward' was held at the Conference Hall of the Shrimp Research Station (SRS) of BFRI in Bagerhat on 05 December 2018. Professor Dr. Md. Nasiruddin, Vice Chancellor of Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj was present as the Chief Guest. Professor Dr. Ghausiatur Reza Banu, Head, Fisheries and Marine Resources Technology Discipline, Khulna University, Syed Lutfur Rahman, Chief Scientific Officer, Brackishwater Station, BFRI and Abdul Wadud, Deputy Director, Fish Inspection and Quality Control (FIQC), Khulna were present as the Special Guests. The Chief Guest in his speech emphasized that the Station should undertake collaborative research with the universities for conducting more effective research through utilization of expertise available at the universities and sharing of knowledge between the experts of the two institutions. Scientists from different Stations and Sub-stations of BFRI, officials from the DoF, teachers of Universities,



Dr. Md. Nasiruddin, Vice Chancellor, Bangabandhu Sheikh Mujibur Rahman Science and Technology University and other guests present in the workshop

representatives from different NGOs, entrepreneurs, and shrimp farmers were present at the workshop. Mr. H. M. Rakibul Islam, Senior Scientific Officer, Shrimp Research Station, Bagerhat presented the keynote paper. The workshop was chaired by Dr. Khan Kamal Uddin Ahmed, Chief Scientific Officer, Shrimp Research Station, Bagerhat.

Jatka Conservation Week 2019 Observed

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launching program. Underlining the importance of hilsa in national economy, the Minister in his inaugural address as Chief Guest said, hilsa solely is now a product of Bangladesh as it has been recognized as a GI (Geographical Indication) product of the country, which has given Bangladesh the exclusive rights on Hilsa resources. Bangladesh has also established sovereign rights over 1,18,813 sq km area of the Bay of Bengal under the dynamic leadership of hon'ble Prime Minister Sheikh Hasina, which has opened a new horizon to explore the ocean resources for the benefit of the country. Fisheries sector has been making an important contribution in food security, nutrition, and foreign currency earning through exporting fish and fishery products, said the Minister. The Minister urged upon all concerned to fully stop the use of banned fishing gears and catching of jatka during banning period for increasing hilsa production. Mr. Md. Raisul Alam Mondal, Secretary, MoFL said in his address as Chairman that there is no alternative to make awareness and cooperation of the people for proper implementation of the government's plan undertaken for protection of jatka and mother hilsa. Among others Director General, DoF, Mr. Abu Sayed Md. Rashedul Haque, Deputy Commissioner of Bhola, Mr. Mohammad Masud Alam Siddiqui, Additional DIG of the Naval Police, Mohammad Mahbubur Rahman, Police Super of Bhola, Mr. Mokter Hossain, General Secretary of Awami Fisheries League, Alhaj Abul Bashar and others spoke on the occasion. After the meeting, hon'ble Minister led a Naval Rally with about hundred trawlers from Samraj Ghat of Meghna river. The week-long program includes video shows and awareness programs about jatka conservation over bator and television, running mobile courts at the river and fish markets to stop catching, trading, marketing of jatka.

It may be mentioned here that two-month ban on fishing at six sanctuaries in nine major rivers in the country's southern region has been in force from 1 March to April 30 to increase fish production by saving Jatka. Catching of any kind of fish by any means from those rivers in six districts of Barishal, Bhola, Patuakhali, Shariatpur, Chandpur and Laxmipur was totally prohibited.

State Minister of MoFL Visits BFRI's Marine Fisheries and Technology Station

Hon'ble State Minister of Fisheries & Livestock (MoFL) Mr. Md. Ashraf Ali Khan Khasru MP visited the Marine Fisheries and Technology Station (MFTS) of BFRI in Cox's Bazar on 26 January 2019. During the visit, Mr. Md. Raisul Alam Mondal, Secretary, MoFL; Dr. Yahia Mahmud, Director General, BFRI; Mr. Abu Sayed Md. Rashedul Haque, Director General,



DC, BFRI is briefing Fisheries Minister about research on Seabass breeding in Cox's Bazar

Department of Fisheries; Dr. Md. Zulfikar Ali, Chief Scientific Officer, MFTS and other senior officials were present. Hon'ble Minister visited the seaweed culture, seabass breeding and other ongoing research activities of the Marine Station. Referring to the vast unexplored marine resources of the Bay of Bengal, the Minister advised the BFRI scientists to strengthen and diversify research for proper utilization of economically important traditional and non-traditional fisheries items for sustainable development of marine fisheries resources.

BFRI Celebrated Independence and National Day 2019

BFRI celebrated the 49th Independence and National Day on 26 March 2019 with recalling the millions laid down their lives to free the country from Pakistani occupation. On this occasion, the day-long program of BFRI started with hoisting National Flag by the Director General of the Institute at the office premises. Other programs organized to celebrate the

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Meeting on Exchange of Views for Development of Marine Fisheries Resources Held

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Hon'ble Secretary, MoFL briefed about the on-going research, resource survey system, surveillance and other development programs and future plan of the Ministry related to blue economy and stressed the need for capacity building for sustainable exploitation and proper utilization of the marine resources. Among others, Joint Secretary, Mr. Md. Toufiqul Arif; Director General, BFRI, Dr. Yahia Mahmud; Director General, DoF, Mr. Abu Sayed Md. Rashedul Haque; Principal, Marine Fisheries Academy, Captain Masuk Hasan Ahmed; Director (Marine), DoF, Dr. Abul Hasnat; and Project Director, Sustainable Coastal and Marine Fisheries, Mr. Hasan Ahmed Chowdhury spoke on the occasion.



Hon'ble Fisheries Minister Mr. Md. Ashraf Ali Khan Khasru MP and Secretary, MoFL talking in the consultation meeting

Thereafter, hon'ble State Minister practically watched the marine fisheries survey works being carried out at the Sea by 'RV Meen Sandhani' of DoF and reached at Cox's Bazar on 26 January 2019 along with the expedition of survey vessel. At Cox's Bazar, he visited BFDC's Fish Landing Center and inaugurated the newly built pontoon over there.

State Minister of Fisheries Visits BFRI Headquarters and Freshwater Station, Mymensingh

Hon'ble State Minister for Fisheries and Livestock Mr. Md. Ashraf Ali Khan Khasru MP visited the Bangladesh Fisheries Research Institute Headquarters and Freshwater Station of BFRI in Mymensingh on 13 February 2019. During the visit, he observed the ongoing field research activities of BFRI on breeding of various endangered fish species, pearl culture, improved strain breeding, culture and breeding of Mekong Pangas and mud eel, brood management program and expressed his satisfaction at the progress of the research. Thereafter, he joined in a meeting for exchanging views with BFRI scientists and other officials at the conference room of the institute, which was presided over by Dr. Yahia Mahmud, Director General, BFRI. In the meeting, the hon'ble State Minister remarked that the development of fisheries sector has become quite visible today due to proper implementation of the multifarious programs taken up by the present government. The hon'ble Minister advised the scientists to further diversify the research in various disciplines to maintain the current trend of development of the fisheries sector. At this time, he mentioned that the hon'ble Prime Minister Sheikh Hasina, the highly competent daughter of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman would provide all out supports for the development of the country's important fisheries sector.



Dr. AHM Kohinoor, PSO showing the hon'ble State Minister Mr. Md. Ashraf Ali Khan Khasru MP the research progress on improved strain development of Koi fish

Mrs. Mahbooba Panna, Joint Secretary, MoFL, Mr. Abu Sayed Md. Rashedul Haque, Director General, Department of Fisheries, Dr. Md. Nurullah, Director (Plan. & Res.), Md. Khalilur Rahman, Director (Admin. & Fin.) and other senior officials of BFRI were present among others during visit.

BFRI Observed Bangabandhu's Birth Anniversary and National Children's Day

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Guest in his speech said, Bangabandhu Sheikh Mujibur Rahman was a great human with all virtues and was totally non-partisan towards people of all religions and beliefs. He loved the people of Bangladesh selflessly. The nation's architect was born on this day in 1920 in Tungipara of Gopalganj. The present government is doing everything to give the children a bright future by building a developed and prosperous Bangladesh, free from hunger, poverty and illiteracy as dreamt by Father of the Nation, the Director General added. Later, he distributed prizes among the winners of the competition. Dr. Md. Nurullah, Director (Res and Plan), Dr. Md. Khalilur Rahman, Director (Admin and Fin.), Dr. AHM Kohinoor, Principal Scientific Officer, BFRI Ladies Club's President and Principal Scientific Officer, Dr. Mohosena Begum Tanu, Mr. Md. Asadur Rahman, Deputy Director, Freshwater Station, and Mr. Sheikh Rasel, Deputy Director (Fin.) spoke among others. The officers and employees of the institute attended the function.

Training of University Students at BFRI

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The students were trained on fish disease and health management, fish feed and nutrition, culture of chuchia fish, conservation and breeding of indigenous fish, in-breeding depression in artificial breeding of fish, freshwater pearl culture etc. The students of Bangladesh Agricultural University, Sylhet Agricultural University, Hajee Mohammad Danesh Science and Technology University, Sher-e-Bangla Agricultural University and Chittagong Veterinary and Animal Sciences University took part in the training programs.

Secretary, MoFL Visits Riverine Station of BFRI

Mr. Md. Raisul Alam Mondal, Secretary, Ministry of Fisheries and Livestock visited the Riverine Station of BFRI in Chandpur on 18-19 January, 2019. While visiting the Station, Dr. Yahia Mahmud, Director General, BFRI briefed the Secretary about the ongoing research activities of the Station. Besides, the Secretary visited the various construction works that have been in progress under the 'Strengthening of Hilsa Research Project'. After the visit, the Secretary had a meeting on exchange of ideas with the scientists and officers of the Station where he emphasized for conducting more adaptive research for rapid development of the fisheries sector. He also practically observed the data collection and analytical works on hilsa by the hilsa scientists on board of the hilsa research vessel 'MV Rupali Ilish'. At this time, the Secretary underscored the need for procurement of a new research vessel with all modern research facilities for the Station for proper riverine fisheries research. He expressed his satisfaction with the progress of overall research and development works of the Station.



Mr. Md. Raisul Alam Mondal, Secretary, MoFL observing the research and development works of the Riverine Station at Chandpur

Reception to New State Minister of MoFL

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where Secretary made a welcome speech for the Minister. Among others who spoke on the occasion are - Kazi Wasi Uddin, Additional Secretary, Mr. Subol Bose Moni, Additional Secretary; Mr. Dildar Ahmed, Chairman, Bangladesh Fisheries Development Corporation (BFDC); Dr. Yahia Mahmud, Director General, Bangladesh Fisheries Research Institute (BFRI); Mr. Abu Sayed Md. Rashedul Haque, Director General, Department of Fisheries (DoF); Dr. Himesh Ranjan Bhowmik, Director General, Department of Livestock Services (DLS) and Dr. Nathuram Sarkar, Director General, Bangladesh Livestock Research Institute (BLRI) Hon'ble State Minister in his speech on the occasion advised all officers to



Hon'ble new Minister of Fisheries Mr. Md. Ashraf Ali Khan Khasru MP receiving floral wreath from Dr. Yahia Mahmud, DG, BFRI

discharge their duties with utmost sincerity and honesty. The Minister expressed his firm commitment to achieve the expected progress of the Ministry for the development of fisheries and livestock under the visionary leadership of hon'ble Prime Minister Sheikh Hasina.

Mr. Md. Ashraf Ali Khan Khasru MP New State Minister for Fisheries and Livestock

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Mr. Ashraf Ali Khan Khasru MP worked as General Secretary of Netrakona District Awami League from 23 February 2004 to 2016. In 2016, he was again re-elected as the General Secretary of Netrakona District Awami League. Earlier, he was also the General Secretary of District Samik League in 1972-73 and Joint Secretary of the District Awami League during 1997-2004. His father freedom fighter Late Nurul Islam Khan (N I Khan) was the convener of reformed Awami League of Netrakona Sub-division in 1963. Besides, his mother also a freedom fighter Mrs. Hena Islam served as the Woman Secretary of Netrakona District Awami League. At present, his wife Kamrunnesa Ashraf Dina is acting as the President of Netrakona District Mahila League. Freedom fighter Mr. Md. Ashraf Ali Khan was elected as Member of Parliament from Bangladesh Awami League in 2008 and 2018 from Netrakona-2 (Sadar-Barhatta) constituency.

Workshop on Impact of Sanctuary on Increasing Hilsa Production and Jatka Conservation

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Main Speaker. Mr. Md. Raisul Alam Mondal, Secretary, MoFL was present as the Special Guest. Mr. Abu Sayed Mohammad Rashedul Haque, Director General, Department of Fisheries (DoF) was present as the Guest of Honor. Dr. Yahia Mahmud, Director General, BFRI presided over the program. Hon'ble Education Minister said in her speech that due to establishment of six sanctuaries based on research information of BFRI for conservation of hilsa and for implementation of various other programs by the present government, hilsa production has increased in the country by 78% during last ten years. She urged upon all concerned to continue and maintain the current trend of increase in hilsa production. The State Minister of MoFL in his speech informed that hilsa has marked a record production of 5 lakh 17 thousand metric tons in 2017-2018. The Minister further informed that more than 02 lakhs 38 thousand families of hilsa fishers living adjacent to Jatka rich areas of 85 Upazilas of 17 districts are being given 40 kg of rice per family for 4 months under the Social Safety Net Program as per commitment of the hon'ble PM for not catching Jatka. Thus, a total of 38 thousand 01 hundred 88 metric tons of food assistance has been given in 2018-19. As the provision of food was ensured, the fishers became self-motivated and kept themselves refrained from Jatka catching in many areas which greatly contributed to food security. The Special Guest Mr. Md. Raisul Alam Mondal, Secretary, MoFL said, the production of hilsa has increased due to proper implementation of the Hilsa Management Strategy by the government. Hilsa can play a leading role in creating employment, food security and foreign currency earning, the Secretary added. Mr. Mohammad Ashraf Alam, Senior Scientific Officer, BFRI and Mr. Md. Monowar Hossain, Principal Scientific Officer, Department of Fisheries presented the keynote papers. Among others, Mr. Abu Sayed Md. Rashedul Haque, Director General, DoF, Deputy Commissioner, Chandpur Mr. Md. Mazedur Rahman spoke on the occasion. Scientists, University teachers, extension workers, representatives from various government and non-government organizations, entrepreneurs involved in fisheries sector and the fishermen participated in the workshop.

BFRI Celebrated Independence and National Day 2019

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day are- art and general knowledge competition among the children, pillow passing competition of the women, discussion on Independence Day, telling experience of the war of liberation, Milad and Doa Mahfil for salvation of the soul of the freedom fighters who sacrificed their life with a vow to build a prosperous and peaceful country. Dr. Yahia Mahmud, Director General, BFRI was present as the Chief Guest in the discussion meeting. The Chief Guest in his address said that freedom is the highest cherishing desire in human life. Under the leadership of Father of the Nation Bangabandhu Sheikh Mujibur Rahman, we the Bangalee have achieved the valuable freedom with the sacrifice of the three million lives. Under the wise and visionary leadership of the hon'ble Prime Minister Sheikh Hasina, Bangladesh is making enviable progress in all spheres of social and economic sectors. The Director urged all to spread the spirit of



Dr. Yahia Mahmud, Director General, BFRI distributing prizes among the winners of various competitions

liberation war to the new generation who will be the future leaders to lead the country. Later, he distributed prizes among the winners of various competitions. The Principal Scientific Officer Dr. Md. Enamul Hoq presided over the function. Among others Dr. Md. Nurullah, Director (Res. and Plan.), Dr. Md. Khalilur Rahman, Director (Admin. and Fin.), Principal Scientific Officer Dr. AHM Kohinoor, BFRI Ladies Club's President and Principal Scientific Officer Dr. Mohosena Begum Tanu, Mr. Md. Asadur Rahman, Deputy Director (FS) and Mr. Sheikh Rasel, Deputy Director (Fin.) spoke in the program.

BFRF Awarded Lifetime Achievement Award to Three Eminent Fisheries Scientists

Bangladesh Fisheries Research Forum (BFRF) has awarded Life Time Achievement Award to one eminent international and two national scientists and academicians for their outstanding contributions to fisheries research, education and development. The recipients are Dr. Dilip Kumar of India, former Director, Central Institute of Fisheries Education, Mumbai and Fisheries Advisor to the Government of India, Dr. M.A. Mazid, former Director General, Bangladesh Fisheries Research Institute and former Associate Professor, Bangladesh Agricultural University, Mymensingh



and Prof. Dr. Md. Saifuddin Shah, former Vice Chancellor, Khulna University and current Vice Chancellor, Feni University. The awards were handed over by Professor Dr. Shamsul Alam, Member (Senior Secretary), GED, Planning Commission, Government of the People's Republic of Bangladesh at a grand function held on 30 March 2019 at the auditorium of Bangladesh Agricultural Research Council in Dhaka. The function was presided over by Dr. A.K.M. Nowsad Alam, President, BFRF and Professor, Dept. of Fisheries Technology, Bangladesh Agricultural University, Mymensingh.

Prof. Dr. Md. Matar Rahman Howlader, Vice Chancellor, Sylhet Agricultural University, Mr. Robert D Simpson, FAO Representative in Bangladesh, Dr. Malcom Dickson, Country Director, WorldFish Center, South Asia Office, Bangladesh, Mr. Saleh Ahmed, Additional Director General, Department of Fisheries, Dr. Md. Khalilur Rahman, Director, BFRI were present and spoke as guest of honour. Dr. Md. Kabir Ikramul Haque, Executive Chairman, BARC presented the welcome address.

Blue Economy Dialogue Held

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Rear Admiral (Retd) Md. Khurshed Alam, BN, Secretary, Maritime Affairs Unit, Ministry of Foreign Affairs and Mr. Robert D Simpson, FAO Representative in Bangladesh were present as the Special Guest. Mr. Md. Raisul Alam Mondal, Secretary, MoFL presided over the inaugural session of the workshop. Hon'ble State Minister in his inaugural speech said, marine fish production (6.5 lakh tons) accounted for 16 percent of the total production of 42.77 lakh tons in 2017-18. The Bay of Bengal is the home to 475 species of fish and 36 species of shrimp and thus, marine fisheries is one of the priority sectors of the government. The government has already taken up a project with Tk. 2,000 crore with the financial assistance from the World Bank for sustainable development of marine and coastal fisheries, the Minister added. He emphasized for increasing marine fish production by sustainable exploitation and development of mariculture of potential marine organisms. Ms Jacqueline Alder, fishcode Manager of FAO presented the keynote paper highlighting the huge opportunities in the area of blue economy, especially in post-harvest development. Rear Admiral (Retd) Md. Khurshed Alam, BN, mentioned in his speech that although Bangladesh has gained its right to explore resources within 118,813 sq km of the Bay of Bengal, we are able catch fish only up to 70 km from the shoreline out of 660 km available and up to 100 meter depth due to lack of capacity. Mariculture is also yet to develop, he added.

The government is currently encouraging entrepreneurs for deep sea fishing and it has already accepted all 2-3 proposals that were received, said Mr. Md. Raisul Alam Mondal, Secretary, MoFL. The blue economy has a significant positive impact on Bangladesh as fisheries and aquaculture support livelihood of 1.7 crore people many of whom depend on the sea for income, food security and nutrition, said Robert D Simpson, FAO representative in Bangladesh. Mr. Md. Toufiqueul Arif, Joint Secretary (Blue Economy), MoFL and Mr. Abu Sayed Md. Rashedul Haque, Director General, Department of Fisheries also delivered their speech in the program. A total of 6 technical sessions were held in the workshop. The technical sessions were chaired by Mr. Md. Abul Kalam Azad, Chief Coordinator of SDGs, Mr. Sajjadul Hassan, Secretary, Prime Minister's Office, Professor Ainun Nishat, expert of water resources management and climate change and Dr. Kazi Khaliqzaman, Chairman, PKSF.

Research Success

Nutritional Evaluation of Mussels and Snails as Non-conventional Food Items

Mussels, snails and oysters are important non-conventional food items in Bangladesh. Even though mussels and snails are not traditional food items in Bangladesh, they have great economic and nutritional importance. These are rich source of high quality protein, vitamins, minerals and omega-3 (EPA, eicosapentaenoic acid and DHA, docosahexaenoic acid) and omega-6 (LA, linoleic acid and ALA, alpha-linolenic acid) fatty acids. These elements can reduce the risk of cardiac disease, keep eyes well, reduce mental disorders and tension, and play an important role in neuro-development of infants. Mussels and snails are popular food items in the developed countries. There is increasing demand of these items abroad. In Bangladesh, only some tribal communities consume mussels and snails. Nevertheless, mussels and snails are used for production of poultry feed, fertilizers and lime. Considering the immense potential of mussels and snails as new source of nutritious foods to reduce pressure on conventional food items as well as to earn foreign exchange, BFRI has undertaken a development project entitled "Conservation, propagation and culture of mussels and snails in Bangladesh". Research has been in progress to identify the nutritionally rich and economically important mussels and snails species from fresh and marine



Saccostrea cucullata *Lamellidens marginalis* *Lamellidens corrianus* *Pila globosa*

water environment of the country. Under the project, mussels and snails are being collected from freshwater, coastal and marine environments and then stored at -20°C in the Nutrition Lab of BFRI. Then samples were prepared in the laboratory for chemical analysis. The results of the proximate analyses revealed that oyster (*Saccostrea cucullata*) contains 65.3% crude protein, 11.2% crude lipid, 13.8% ash on dry weight basis and 88.4% moisture. Freshwater apple snail (*Pila globosa*) contains 49.6% crude protein, 3% crude lipid, 16.8% ash on dry weight basis and 83.4% moisture. On the other hand, freshwater mussels, *Lamellidens marginalis* and *L. corrianus* contain 36.9-40.9% protein, 4.4-4.8% lipid, 11.4-13.1% ash and 84.8-85.4% moisture (Table 1). The results also showed that oyster contains higher levels of essential amino acids and fatty acids than the freshwater mussels and snails (Table 2 and 3). Omega-3 fatty acids (EPA and DHA) are also found higher in oyster than those of freshwater mussels and snails. However, omega-6 fatty acids like linoleic acid (LA) and alpha-linolenic acid (ALA) are higher in freshwater mussels and snails than in the oyster.

1. Proximate composition of the oyster, snails and mussels

Species	Protein (%)	Lipid (%)	Ash (%)	Moisture (%)
<i>Saccostrea cucullata</i>	65.3%	11.2%	13.8%	88.4%
<i>Pila globosa</i>	49.6%	3.0%	16.8%	83.4%
<i>Lamellidens marginalis</i>	36.9%	4.4%	13.1%	84.8%
<i>Lamellidens corrianus</i>	40.9%	4.8%	11.4%	85.4%

2. Amino acids profile of the oyster, snails and mussels

Species	Asp	Thr	Met	Val	Leu	Ileu	His	Lys	Tyr	Arg
<i>S. cucullata</i>	4.5	2.7	1.1	2.1	3.5	2.4	2.7	4.1	2.5	2.8
<i>P. globosa</i>	3.4	2.1	0.8	1.6	2.6	1.8	2.0	3.1	1.9	2.2
<i>L. marginalis</i>	2.6	1.6	0.6	1.2	2.0	1.4	0.8	2.4	1.5	1.6
<i>L. corrianus</i>	2.8	1.7	0.7	1.4	2.2	1.5	0.9	2.6	1.7	1.8

Asp: Aspartic acid; Thr: Threonine; Met: Methionine; Val: Valine; Leu: Leucine; Ileu: Isoleucine; His: Histidine; Lys: Lysine; Tyr: Tyrosine; Arg: Arginine

3. Fatty acids profile of the oyster, snails and mussels

Species	SFA	UFA	MUFA	PUFA	LA	ALA	ARA	EPA	DHA
<i>S. cucullata</i>	51.2	48.8	22.2	26.6	2.3	2.9	6.3	9.6	5.3
<i>P. globosa</i>	48.5	51.5	30.1	21.4	9.2	4.6	7.5	0.0	0.0
<i>L. marginalis</i>	44.9	55.1	43.8	11.3	3.3	3.1	2.6	1.1	0.9
<i>L. corrianus</i>	44.0	56.0	22.0	34.0	8.7	11.6	7.0	6.5	0.0

SFA : Saturated fatty acids; UFA: Unsaturated fatty acids; MUFA: Mono-unsaturated fatty acids; PUFA: Poly-unsaturated fatty acids; LA: Linoleic acid; ALA: Alpha-linolenic acid; ARA: Arachidonic acid; EPA: Eicosapentaenoic acid; DHA: Docosahexaenoic acid

The results indicate that oyster is a good source of especially EPA and DHA. On the otherhand, freshwater mussels and snails also are good sources of protein and LA and ALA with some deficiencies in EPA and DHA. The research is being continued to assess the nutritional values of more species of mussels and snails, especially, of marine species and to popularize the marine mussels and snails as quality seafood items in Bangladesh.

(Contributor : Dr. Mohammed Moniruzzaman, Senior Scientific Officer & Sonia Sku, Scientific Officer, Bangladesh Fisheries Research Institute)

Impact of Hilsa Fishing Ban on Breeding Success

About 48% of mother hilsa were able to shed their eggs last year in 2018 when hilsa fishing ban was enforced for a period of 22 days from 7 to 28 October, says a research report of Bangladesh Fisheries Research Institute. During the ban, catching, selling, buying, storage, transportation and exchange of hilsa were totally prohibited all over the country. During this period, two research teams from the Riverine Station of BFRI, Chandpur lead by Dr. Md. Anisur Rahman and Dr. Mohammad Ashraf Alam, carried out extensive field investigations in the major spawning grounds of hilsa with the research vessel 'MV Rupali Ilish'. The results of the investigation revealed that hilsa fishing ban for 22 days had a great impact on the overall breeding success of hilsa. Hilsa catch were predominantly composed of mature male and female; the abundance of fully mature mother hilsa increased by 20% from 73% to 93%, where 47.74% mother hilsa were found to shed eggs (spent fish) during this period. Partially spent hilsa increased from 0 to 22% and oozing hilsa 3 to 10% due to imposition of the fishing ban. When above percentages are lumped together, the rate of breeding success of hilsa become around 80%. As a result of fishing ban, seven lakh 6 thousand kg of hilsa eggs were released last year, which was about 4.4% higher than the previous year. At 50% hatching success of these eggs, the number of larvae produced will be about 3,52,966 crore and if 10% of this survives, approximately 35,297 crore juvenile hilsa added to the hilsa population. During the experimental fishing, it was observed that out of the total larvae produced at the spawning grounds, about 83% were composed of hilsa larvae and 17% were other fish indicating a huge positive impact of imposition of fishing ban. Due to conservation of jatka and mother hilsa by banning fishing, the production of hilsa has been increased from 4.96 lakh tons in 2016-17 to 5.17 lakh tons in 2017-18.

Training of University Students at BFRI

BFRI conducted training on 'BFRI Evolved Technologies for Fisheries Development' for 90 students of different public Universities in 3 batches each for 3 days on 27-29 November, 02-04 and 05-07 December 2018 at the conference room of BFRI in Mymensingh. Dr. Yahia Mahmud,



Dr. Yahia Mahmud, DG, BFRI addressing the students of different public Universities

Director General of the Institute inaugurated the training program as the Chief Guest. The Director General in his inaugural speech, stated that the fisheries sector has been recognized as one of the most promising sectors for national economic development and nutritional food security of Bangladesh. The country is now self-sufficient in fish production. After that he gave an overview of BFRI evolved technologies for the trainees and asked them to learn expertise to face the future challenges of the fisheries sector so that they can contribute to fulfill the nutritional demands of the ever growing population of the country.

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Blue Economy Dialogue Held

A two day-long on "Bangladesh Blue Economy Dialogue on Fisheries and Mariculture" was held on 19-20 February 2019 at Pan Pacific Hotel Sonargaon, Dhaka jointly organized by the Ministry of Fisheries and Livestock (MoFL) and Food and Agriculture Organization (FAO). Hon'ble State Minister of Fisheries and Livestock Mr. Md. Ashraf Ali Khan Khasru MP inaugurated the program as the Chief Guest.



Mr. Md. Ashraf Ali Khan Khasru MP hon'ble State Minister for Fisheries delivering inaugural speech in blue economy dialogue

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BFRI Observed Bangabandhu's Birth Anniversary and National Children's Day

Bangladesh Fisheries Research Institute observed 99th birth anniversary of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman and National Children's Day on 17 March 2019 in Mymensingh. A day-long program was organized by the Institute on this occasion, which includes art and general knowledge competition, song, discussion on Bangabandhu's life and works and prayer seeking eternal peace of the departed soul of Bangabandhu. Dr. Yahia Mahmud, Director General, BFRI was present as the Chief Guest in the discussion meeting. The Chief



BFRI Celebrates birthday of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman and National Children's Day

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Hon'ble Minister, MoFL Visits Marine Fisheries Academy

Hon'ble State Minister of Fisheries Mr. Md. Ashraf Ali Khan Khasru MP visited the Marine Fisheries Academy on 24 January 2019 in Chattogram. The Secretary, Ministry of Fisheries Mr. Md. Raisul Alam Mondal, Joint Secretary (Blue Economy) Mr. Md. Towfiqul Arif along with Heads of different Departments of the Ministry also accompanied the Minister during the visit. After seeing the various activities, the Minister expressed his satisfaction with the overall management of the Academy and assured that the government will adequately support the Academy so that the cadets get better opportunity to equip themselves worth for seagoing. He further said, there is no alternative to development of skilled manpower to harness the enormous potential of the vast resources of the ocean. He mentioned, it is possible to make the country economically more prosperous by proper development of the marine fisheries resources. Later, a cultural program was organized in the Academy.



Hon'ble State Minister of Fisheries Mr. Md. Ashraf Ali Khan Khasru MP and Secretary MoFL receiving floral reception from the cadets of the Marine Fisheries Academy

Meeting on Exchange of Views for Development of Marine Fisheries Resources Held

Hon'ble State Minister, MoFL Mr. Md. Ashraf Ali Khan Khasru MP participated as Chief Guest in a meeting on exchange of views for exploration and management of marine fisheries resources with the officials of various respective organizations which was held at Chattogram Circuit House conference room on 23 January 2019. Mr. Md. Raisul Alam Mondal, Secretary of MoFL presided over the meeting. In the meeting, the Minister listened to expert views from all concerned about the present status and programs for sustainable development of the marine fisheries. He asked all concerned to work in a coordinated manner with utmost dedication and sincerity for the development of mariculture and judicious exploitation of marine resources of the country. He further said, Bangladesh established sovereign rights over the extended area of maritime boundary in the Bay of Bengal under the wise and visionary leadership of the hon'ble Prime Minister Sheikh Hasina, which increased the responsibilities of Fisheries Department as well as other agencies manifold to identify the areas of research and investment and accordingly implement programs to develop and take benefits from vast resources of the ocean.

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Fisheries Newsletter publishes information/data/report on all phases of fisheries research, development and management activities from home and abroad. Contributions are invited for publication. The editor reserves the right to select or shorten them to meet space requirement. The newsletter comes out in January, April, July and October each year.

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