

# 6<sup>TH</sup> INTERNATIONAL FISHERIES SYMPOSIUM & EXPO-2017

“Innovative and Sustainable Aquaculture for Blue Revolution”



8-9<sup>th</sup> February, 2017  
Faletti's Hotel, Egerton Road, Lahore

## PROGRAMME

### DAY-1 (08<sup>th</sup> February, 2017)

Inaugural Session (Crystal Hall)		9:30 to 11:00
➤ Guest to be seated		
➤ Recitation from Holy Quran		09:30 – 09:35
➤ Naat-e-Rasool Pak (SAW)		09:35 – 09:40
➤ Welcome Address by <b>Prof. Dr. Talat Naseer Pasha, S.I.</b> Vice Chancellor, University of Veterinary and Animal Sciences, Lahore		09:40 – 09:50
➤ Address by <b>Dr. Muhammad Ayub</b> , President Pakistan Fisheries Society		09:50 – 09:55
➤ Address by the Guest of Honour, <b>Dr. Juan Pablo Lazo Corvera</b> , President World Aquaculture Society (WAS) Ensenada, Baja California, Mexico		09:55 – 10:00
➤ Address by <b>Dr. Endhay K. Kontara</b> (President WAS-APC, Indonesia).		10:00 – 10:10
➤ Address by Guest of Honour <b>Mian Yawar Zaman</b> , Minister for Forestry, Wildlife and Fisheries Department, Punjab		10:10 – 10:20
➤ Address by <b>Mr. Asif Saeed Manais</b> , Minister for Livestock and Dairy Development Department, Punjab		10:20 – 10:30
➤ Distribution of Souvenirs and Shields		<b>10:30 – 10:40</b>
➤ Address by the Chief Guest		10:35 – 10:45
➤ Vote of Thanks by <b>Prof. Dr. Muhammad Ashraf</b> , Dean Faculty of Fisheries & Wildlife, UVAS, Lahore		10:45 – 10:50
➤ Inauguration of Expo-2017 by the Chief Guest, Royal Grand Hall, Faletti's Hotel, Lahore		10:50 – 11:00
➤ <b>Refreshment</b>		<b>11:00 – 11:30</b>
<b>Plenary session: 11:30 to 13:10</b>		
<b>Chair:</b>	Prof. Dr. A. R. Shakoori (University of the Punjab, Lahore, Pakistan)	
<b>Co-Chair:</b>	Prof. Dr. Arshad Ali, University of Florida (FL-USA)	
<b>Moderator:</b>	Prof. Dr. Anwar Malik, University of Education, Lahore	
<b>TITLE OF PRESENTATION, SPEAKERS &amp; AFFILIATION</b>		<b>TIME (hrs)</b>
An overview of Fisheries Sector of Pakistan. <b>Dr. Muhammad Ayub</b> <i>Pakistan Fisheries Society, Lahore, Pakistan &amp; Director ORIC, University of Veterinary and Animal Sciences, Lahore, Pakistan</i>		11:30 – 11:55
Innovative and Sustainable Aquaculture Practices for Blue Revolution. <b>Dr. Ram C. Bhujel.</b> <i>Aqua-Centre, School of Environment, Resources and Development (SERD) (AIT), Thailand.</i>		11:55 – 12:20
An overview on industrial production of insect larvae meal and future needs regarding research and development. <b>Prof. Dr. Grant Vandenberg</b> Professor, Deptt. of Sciences Animales, Université Laval Quebec, QC, Canada.		12:20 – 12:45
Functional Foods. <b>Prof. Dr. Anwar-ul-Hassan Gilani</b> Chairman, Pakistan Council of Science & Technology (PCST), Islamabad.		12:45 – 1300
<b>Technical Session Conclusion and Recommendations</b> <b>(Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>		13:00 – 13:10
<b>Lunch and Prayer Break:</b>		<b>13:10 to 14:00</b>

## WEDNESDAY (08-02-2017)

### Oral Technical Sessions: Day-1 (Faletti's Hotel, Lahore)

Hall-1 (Crystal)		Hall-2 (Royal Grand)	
<b>Oral Technical Session I:</b> <b>A- Aquaculture, Water Quality Management and Value Addition</b> <b>Chaired by:</b> Dr. Juan Pablo Lazo Corvera (Ensenada, Baja California, Mexico) <b>Co-Chair:</b> Prof. Dr. Naureen Aziz Qureshi (VC, GCWUF, Faisalabad) <b>Moderator:</b> Dr. Sikender Hayat, Director (Deptt. Punjab Fisheries)		<b>ORAL TECHNICAL SESSION II:</b> <b>B- Fish Nutrition and Feeding-I</b> <b>Chaired by:</b> Prof. Dr. Grant Vandenberg (Université Laval Quebec, QC, Canada). <b>Co-Chaired:</b> Prof. Dr. M. Naeem Khan (PU, Lahore) <b>Moderator:</b> Dr. Muhammad Afzal Bhatti, Principal Scientific Officer (NARC, Islamabad)	
Time (Hrs.)	TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION	Time (Hrs.)	TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION
14:00–14:25 <b>(Keynote Lecture)</b>	Sustainable Fish Production To Meet Future World Demands <b>Dr. Juan Pablo Lazo Corvera</b> , Fish Nutrition Laboratory, Department of Aquaculture, Ensenada, Baja California, Mexico.	14:00–14:25 <b>(Keynote Lecture)</b>	Extrusion of Aqua Feed and its Benefits: <b>Mian N. Riaz</b> . Graduate Faculty, Nutrition and Food Science Dept. Texas A&M University.
14:25–14:50 <b>(Keynote Lecture)</b>	Fish for future: food security and aquaculture. <b>Naureen A. Qureshi</b> , Vice Chancellor, GCWUF.	14:25–14:45 <b>(Keynote Lecture)</b>	The use of soy-based extruded floating fish feed in integrated carp aquaculture in Pakistan: Transfer of modern fish feed technologies to Pakistan. <b>M. Naeem Khan</b> . Deptt. of Zoology, University of the Punjab, Lahore
14:50–15:05	Study on Polyculture of <i>Penaeus vannamei</i> and GIFT Tilapia. <b>Iftikhar Ahmad Qureshi</b> , Sikender Hayat, Sajid Mahmood and Hafiza Samra Ambreen. Department of Punjab Fisheries	<b>(Keynote Lecture)</b> 14:45–15:05	A comparative study of growth with different protein levels in <i>Cirrhinus mrigala</i> Hamilton, 1822. <b>Zaigham Hasan</b> , Wisal Khan, Syed Basit Rasheed, Fawad Khalil and Sajjad. Deptt of Zoology, University of Peshawar.
15:05–15:20	Sustainable Tilapia Farming: Current Trend and Future Scope. <b>Ram C. Bhujel</b> . Director Aqua-Centre SERD, AIT, Thailand.	15:05–15:20	Effect of vitamin D and vitamin premix supplementations on growth of <i>Labeo rohita</i> and <i>Cirrhinus mrigala</i> . <b>M. Ashraf</b> , Sadaf Aman, Daniel Masood and Irshad Hussain. Deptt. of Fisheries & Aquaculture, UVAS.
15:20–15:35	State of Aquaculture and Perspectives of Development. <b>Asylbaeva Sh. M.</b> National Academy of Sciences of the Kyrgyz Republic Bishkek, Kyrgyzstan	15:20–15:35	Effect of various protein feeds on the growth, body composition, hematology and endogenous enzymes of catfish ( <i>Pangasius hypophthalmus</i> ). Noor Khan, Usman Atique, M. Ashraf, M. S. Mughal, Fayyaz Rasool, <b>Hamda Azmat</b> , Khalid Javed Iqbal and M. Tayyab, UVAS. Lahore
15:35–15:50	Control of clay turbidity in fish pond by the application of various organic matters. <b>Kashifa Nagma Waheed</b> , Zehra Khatoon, Nasreen Kausar, Sikender Hayat and Imtiaz Begum. FR&TI, Manawan, Lahore	15:35–15:50	Effect of supplementation of selected plant leaves as growth promoters of <i>Labeo rohita</i> . <b>Sidra Nazir</b> , Ehsan Mahmood Bhatti and Imtiaz Begum. FR&TI, Manawan, Lahore.
15:50-16:00	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>	15:50-16:05	Dietary protein requirement of African Catfish, <i>Clarius gariepinus</i> (Burchell), determined using diets of varying protein level. Hasina Basharat, M. Ramzan Ali, Nagina Gilani, <b>Rehana Kausar</b> , Aziz Ahmed and Shamim Akhter NARC, Islamabad.
		16:05-16:15	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>

<b>ORAL TECHNICAL SESSION III: C- Aquaculture, Water Quality Management and Value Addition-II)</b>		<b>TECHNICAL SESSION IV: D- Fish Farmers Session/ Workshop-I Fish Culture Techniques</b>	
<b>Chaired by:</b> Prof. Dr. Afzal Kazmi Deptt. of Zoology, Uni. of Karachi		<b>Chaired by:</b> Mr. Iftikhar Ahmed Qureshi (DG, Punjab Fisheries)	
<b>Co-Chaired by:</b> Dr. Cherdasak Virapat (DG, NACA, Thailand)		<b>Co-Chaired by:</b> Prof. Dr. Muhammad Afzal (Chairman Deptt. of Zool, UAF)	
<b>Moderator:</b> Prof. Dr. N. T. Narejo (Uni. of Sindh, Jamshoro)		<b>Moderator:</b> Dr. Amina Zuberi (Quaid-e-Azam Uni, Islamabad)	
16:00 – 16:25 <b>(Keynote Lecture)</b>	Community-based fisheries management for blue swimming crab <i>Portunus pelagicus</i> (Linnaeus) in Songkhla Lake in Southern Thailand. <b>Cherdsak Virapat</b> , Director-General of Network of Aquaculture Centres in Asia-Pacific (NACA).	16:15-16:30	Prospects of aquaculture practices in Pakistan with reference to culture of high commercial value fish species, <i>Hypophthalmichthys molitrix</i> (Silver carp), <i>Aristichthys nobilis</i> (Big Head Carp), <i>Ctenopharyngodon idella</i> (Grass carp), <i>Onchoryncus mykiss</i> (Rainbow Trout), <i>Clarias gariepinus</i> (African catfish), and <i>Oreochromis niloticus</i> (Nile tilapia). <b>Ch. Noor Elahi</b> , Himalaya Fish Hatchery, Mureedkey.
16:25--16:40 <b>(Keynote Lecture)</b>	Trends and Challenges in Modern Aquaculture and its Socio-Economic Impacts in The Asia-Pacific Region. <b>Pongpat Boonchuwong</b> , Department of Fisheries, Ministry of Agriculture & Cooperatives, Phaholyothin road, Jatujak, Bangkok, Thailand.	16:30-16:45	Economic Feasibility of White Shrimp, <i>Litopenaeus vannamei</i> (BOONE), and Nile Tialpia, <i>Oreochromis niloticus</i> L., in freshwater ponds in Punjab. <b>M. Junaid Wattoo</b> , Munir Hussain, Asim Ali, Kanwal-u-Nisa and Syed Adeel Hassan. Fisheries Development Board, Islamabad.
16:40-16:55 <b>(Keynote Lecture)</b>	Biochemical Composition of Catfish, <i>Rita rita</i> From Indus River Near Jamshoro. <b>N.T. Narejo</b> , University of Sindh, Jamshoro.	16:45-17:00	Polyculture of Tilapia with Indian Major Carps in Semi-Intensive System. <b>Mr. Shahid Iqbal Sindhu</b> , Tawakal Fish Hatchery
16:55-17:00	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>	17:00-17:05	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>

17:00 Tea Break, Crystal Hall, Faletti's Hotel

### THURSDAY (09-02-2017)

#### Oral Technical Sessions: Day-2 (Faletti's Hotel, Lahore)

<b>ORAL TECHNICAL SESSION V: G- Fish Physiology, Breeding and Genetics)</b>		<b>TECHNICAL SESSION VI: C- Fish Health and Disease-I</b>	
<b>Chaired by:</b> Prof. Dr. K.P. Lone (Uni. of Health Sciences, Lahore)		<b>Chaired by:</b> Dr. M. Nazir Bhatti (Ex-DG, Punjab Fisheries)	
<b>Co-Chaired by:</b> Prof. Dr. Patrick Sorgeloos (Uni. Of Ghent, Belgium)		<b>Co-Chaired by:</b> Dr. Steven W. Bird (New Zealand)	
<b>Moderator:</b> Prof. Dr. Farkhanda Manzoor (LCWU, Lahore)		<b>Moderator:</b> Dr. Zaigham Hassan (University of Peshawar, KPK) Islamabad)	
Time (Hrs.)	TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION	Time (Hrs.)	TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION
08:30–08:55 <b>(Keynote lecture)</b>	Can aquaculture become the new blue biotechnology of the future? <b>Patrick Sorgeloos</b> , Director of the Laboratory of Aquaculture & Artemia Reference Center, Faculty of Agricultural Sciences, State University of Ghent, Belgium	08:30–08:55 <b>(Keynote Lecture)</b>	The contribution of Fish Health Research To Sustainable Aquaculture. <b>Steven W. Bird</b> , Department of Biological Sciences, School of Science and Engineering, University of Waikato, Hamilton, New Zealand.
8:55 – 9:15 <b>(Keynote Lecture)</b>	The aquatic chicken comes of age – Fishgen's YY male technology update. <b>Eric E. Roderick</b> , Executive Director, Fishgen Ltd. University of Wales, Swansea, UK.	08:55–09:20 <b>(Keynote Lecture)</b>	Some observations on endoparasitic PEA CRAB <i>Arcotheres placunae</i> from Pakistan. <b>Quddusi B. Kazmi</b> , M. Afzal Kazmi and Razia Sultana, Department of Zoology, University of Karachi, Karachi.
9:15 – 9:35	Importance of short sequence of CO1 gene in mitochondrial DNA for fish identification. <b>Asma Karim</b> , Zohaib Gill & Shah Faisal. Department of Zoology.Govt. College of Science, Wahdat Road, Lahore, Pakistan	09:20–09:35	Parasitic diseases in tilapia, <i>Oreochromis sp.</i> from earthen ponds in Punjab, Pakistan. <b>Zafar Iqbal</b> , Fish Disease and Health Management Laboratory, Zoology Department, University of the Punjab, Lahore.

9:35 – 10:55	Cloning, sequencing and expression of growth hormone from Indus River Catfish ( <i>Bagarius bagarius</i> ). <b>Haji Muhammad</b> , Zafar Iqbal and Qamar Bashir, University of the Punjab, Lahore.	09:35–09:50	Acute Toxicity of Aluminium to <i>Chana marulius</i> , <i>Mystus seenghala</i> and <i>Wallagu Attu</i> . <b>Sidra Abbas</b> and Muhammad Javed. UAF.
10:00–10:15	Cytochrome b gene assisted genetic variability studies among the populations of <i>Labeo rohita</i> . <b>Fayyaz Rasool</b> , Syed Shafat Hussain, Shakeela Parveen, Tanveer Hussain and Noor Khan. UVAS, Lahore.	09:50–10:05	Clinico-Hematological and some serum biochemical changes induced by Fipronil in common carp ( <i>Cyprinus carpio</i> ). <b>Abdul Ghaffar</b> , IU Bahawalpur.
10:15–10:30	Biphenol-A induced biochemical changes in liver and kidney of Grass Carp ( <i>Ctenopharyngodon idella</i> ). <b>Mehwish Faheem</b> , Atif Yaqub and Khalid P Lone. GCU, Lahore & UHS, Lahore	10:05–10:20	First detection of Megalocytivirus in <i>Crassostrea iredalei</i> from Marudu Bay, Sahah and Johor, Malaysia. <b>Sandra C.Z.</b> , George B., Tee K. H. Siti, N. K.A. and Mohd-Effendy A. W. Malaysia.
10:30–10:45	Quality Assessment of Marine Shell Fisheries: Dietary Exposure to metal contaminants in sea food. <b>Nayab Kanwal</b> and Noor-us-Saher. CEMB, Uni. of Karachi.	10:20–10:35	Evaluation of Cd (II) & Cr (VI) accumulation in Thaila Fish <i>Gibelion catla</i> (Formerly <i>Catla catla</i> ) collected from industrially polluted water. <b>Atif Yaqub</b> , Khalid .M. Anjum, Sidra Bari, Mehwish Faheem, M. Ayub, M. Kamran. GCU, Lahore.
10:45–11:00	Genetic Structuring of wild populations of <i>Catla catla</i> as revealed by SSR genotyping. <b>Khalid Abbas</b> , Yusara Waris and Sajid Abdullah. UAF	10:35–10:50	Effects of nickel nanoparticles on histopathological, biochemical and hematological parameters of <i>Labeo rohita</i> . <b>Zakia Kanwal</b> , Sumaira Pervaiz, Shafaq Fatima, Mahnoor and Sifwa Ehsan. LCWU, Lahore.
11:00-11:05	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>	10:50-11:05	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>

**11:05 – 11:25**

**Tea Break, Crystal Hall, Faletti's Hotel**

<b>Technical Session VII: Fish Farmers Session/ Workshop-II (Fish Feed &amp; Feeding)</b> <b>Chaired by:</b> Dr. Imtiaz Begum, Director Fisheries FR&TI, Lahore <b>Co-Chair:</b> Dr. Zahid J. Yaqub, CEO, Oryza Organics, Lahore. <b>Moderator:</b> Mr. R.S. N. Janjua, ASA Feeding Pakistan		<b>TECHNICAL SESSION VIII: F- Fish Conservation, Reservoir and Climate Change</b> <b>Chaired by:</b> Prof. Dr. Nasim Akhtar (Consultant UNIDO, Islamabad). <b>Co-Chaired:</b> Dr. Piria Marina (Un of Zagreb, Svetosimunska, Croatia) <b>Moderator:</b> Prof. Dr. Shafique Ahmad (UVAS, Pattoki)	
<b>Time (Hrs.)</b>	<b>TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION</b>	<b>Time (Hrs.)</b>	<b>TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION</b>
11:25–11:40	Fish Feed and Feeding. <b>Zahid J. Yaqub</b> , Oryza Organics, Pvt. Ltd., Lahore	11:25–11:50 <b>(Keynote Lecture)</b>	Are we losing our freshwater fish diversity? Balkan Peninsula key studies: Introductions, risk assessment and the impact of exotic invasions. <b>Piria Marina</b> . Faculty of Agriculture, University of Zagreb, Svetošimunska, Croatia.
11:40-11:55	Advantages of Floating Fish Feed in <i>Labeo Rohita</i> (Rohu) Farming. <b>Ch. Nabeel Akhtar</b> . AMG, Feed. Pvt. Ltd., Lahore.	11:50–12:10 <b>(Keynote lecture)</b>	Conflict management in coastal fisheries; empirical research and knowledge-based strategic needs for sustaining livelihood in the context of Pakistan's "open access" fisheries system generated conflicts. <b>Nasim Akhtar</b> . Expert Fisheries & Consultant. UNIDO, Pakistan.
11:55–12:10	Role of ASA/Feeding Pakistan in Pakistan Aquaculture. <b>R. S. N. Janjua</b>		
12:10-12:15	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>		
<b>Technical Session IX: Fish Health &amp; Disease-II</b> <b>Chaired by:</b> Prof. Dr. M. Sharif Mughal, VU, Pakistan <b>Co-Chair by:</b> Prof. Dr. Ghazala Siddique, CEMB, Uni. Of Karachi <b>Moderator:</b> Prof. Dr. Muhammad Arshad, University of Education, Lahore.		12:10-12:20 <b>(Keynote Lecture)</b>	Impact of Hydropower Projects and of the 1960s' Indus Water Treaty on the Fish Fauna found in the Indus and Jhelum River Basins common to India and Pakistan. <b>Muhammad Rafique</b> . Pakistan Museum of Natural History, Islamabad.

12:15–12:30	Resistance of <i>Enterococcus faecium</i> recovered from retail fish in Lahore city towards human use antibiotics. <b>Ali Ahmed Sheikh</b> , Maria Butt, Aftab Ahmed Anjum and Waseem Shehzad, UVAS, Lahore.	12:20-12:40 <b>(Keynote Lecture)</b>	Stress on capture Fisheries: Integrated Multi-Trophic Aquaculture (IMTA) is an Approach to Environmentally Sustainable Management. <b>Ghazala Siddiqui</b> , CEMB, University of Karachi, Karachi.
12:30–12:45	Role of phytase in improving growth performance, nutrient digestibility and haematological indices of <i>Catla catla</i> fingerlings fed <i>Moringa oleifera</i> leaf meal (MOLM) based diet. Mudassar Shahzad & <b>Syed Makhdoom Hussain</b> , GCU, Faisalabad	12:40–12:55	Commercially Important Crustaceans of Pakistan. Quddusi B. Kazmi and <b>Afzal Kazmi</b> . Marine Reference Collection and Resource Centre, University of Karachi, Pakistan.
12:45–13:00	Phylogenetic analysis of the Mitochondrial control region of four species of <i>genus Schizothorax</i> from River Neelum and Jhelum of Azad Jammu and Kashmir, Pakistan. <b>Tasleem Akhtar</b> , Ghazanfar Ali and Nuzhat Shafi. Uni. of AJK, Muzaffarabad.	12:55–13:10 <b>(Keynote Lecture)</b>	Fish stock Assessment of Hundrap lake district Ghizer, Gilgit Baltistan. <b>Inayat Ali</b> , Ghulam Mohiud Din, Maqbool Ahmad, Abrar Hussain, Azhar Hussain, Qamar Abbas, Syed Safer Hussain. Department of fisheries, Gilgit-Baltistan
13:00-13:15	Comparative effects of dietary free and nano layer-encapsulated probiotic <i>Geotrichum candidum</i> on silver carp ( <i>Hypophthalmichthys molitrix</i> ). Amina Zuberi, Saba Rauf, Muhammad Imran, Tariq Mahmood and <b>Naima Younus</b> . QAU, Islamabad.	13:10–13:15	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>
13:15-13:20	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>		
<b>13:20 – 14:00 Lunch and Prayer Break, Crystal Hall, Faletti's Hotel</b>			
<b>Oral Technical Session X: B- Fish Nutrition and Feeding (II) Chaired by:</b> Prof. Dr. Muhammad Ashraf (Dean, FF&W, UVAS) <b>Co-Chair:</b> Prof. Dr. Murat Arslan (Ataturk Uni. Erzurum, Turkey) <b>Moderator:</b> Dr. Zafar Ullah Bhatti (Punjab Fisheries Department)		<b>TECHNICAL SESSION XI: E- Fish Ecology and Eco-Toxicology Chaired by:</b> Dr. Endhay Kontara (President WAS-APC, Indonesia). <b>Co-Chaired:</b> Dr. Muhammad Ayub (Director ORIC, UVAS/ President PFS) <b>Moderator:</b> Prof. Dr. Muhammad Naeem (BZU, Multan)	
<b>Time (Hrs.)</b>	<b>TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION</b>	<b>Time (Hrs.)</b>	<b>TITLE OF PRESENTATION, SPEAKERS AND AFFILIATION</b>
14:00–14:20 <b>(Keynote Lecture)</b>	Influences of dietary hazelnut oil supplementation with oxidized and fresh fish oil on growth performance, fatty acid composition and antioxidant defense system in Rainbow Trout. <b>Murat Arslan</b> and Seyda Tacer. Faculty of Fisheries, Ataturk University. Erzurum 25240, TURKIYE.	14:00–14:25 <b>(Keynote Lecture)</b>	Sustainable Aquaculture Development with special Reference to Shrimp Farming in Indonesia. <b>Endhay Kusenendar Kontara</b> . MMAF. Indonesia.
14:20-14:40 <b>(Keynote Lecture)</b>	Effect of total and/or partial replacement of fish oil by plant oils on growth performance, fatty acids and flesh quality of rainbow trout ( <i>Oncorhynchus mykiss</i> ). <b>M. Yildiz</b> , I. Kose, G. Issa, T. Kahraman, E. Guven, S. Ofori-Mensah, M. A. Baltaci and K. Yuruten. Department of Aquaculture, Fisheries Faculty, Istanbul University, Laleli, Istanbul, Turkey.	14:25–14:40 <b>(Keynote Lecture)</b>	Dissolved Carbon, Nitrogen and Phosphate in an integrated multi-trophic aquaculture (IMTA) system: A case study of Sanggou Bay and potential of IMTA in coastal area of Pakistan. <b>Tariq Mahmood</b> , Jianguang Fang, Zengjie Jiang, Jing Zhang. National Institute of Oceanography, Karachi, Pakistan
14:40–15:00	Effect of variable feeding rates on growth performance of <i>S. seenghala</i> in captivity. <b>M. Ramzan Ali</b> , Rehana Kausar, Hasina Basharat and Shamim Akhtar. NARC, Islamabad.	14:40–14:55	Contemplating Enzymatic Profile (LDH, CPK, SGPT, ALK PHOSP.) of freshwater fish Grass carp ( <i>Ctenopharyngodon idella</i> ) under toxicological impinge of Atrazine (Herbicide). <b>Ahsan Khan</b> , Nazish Shah, M. Adnan, S. M. Jawad, A. M. Yosafzai. Department of Zoology, University of Sawabi, Khyber Pakhtunkhwa (KPK), Pakistan
15:00-15:15	Studies on Partial Replacement of Fish Meal With oil Seed Meals in the Diet of Major and Chinese Carps. <b>Muhammad Zubair Anjum</b> , Muhammad Shoab Alam, Muhammad Mushtaq, Muhammad Irfan and Iftikhar Ahmad. Department of Zoology, PMAS-Arid Agriculture University Rawalpindi.	14:55-15:10	Assessment of copper induced genotoxicity in peripheral erythrocytes of <i>Cirrhina mrigala</i> by using single cell gel electrophoresis and micronucleus test. <b>Safina Kausar</b> , Muhammad Javed, Rahila Ilyas, Faiza Ambreen and Moazma Batool. GCWUF, Faisalabad.

15:30-15:35	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>	15:10-15:25	Studies on the influence of heavy metals on SOD enzyme in the organs of fish <i>Channa marulius</i> and <i>Wallago attu</i> . <b>Moazma Batool</b> , Sajid Abdullah, Safina Kousar and Muhammad Umer Ijaz. GCWUF, Faisalabad.
		15:25-15:40	Detection of heavy metals (ZN, MN, CO, CD, NI) in water and fishes of Balloki Headworks, from Q-B Link canal, River Ravi and three confluence. <b>Joshua G.</b> Younas H. Shams S.B. and Nadeem S. Department of Zoology, Kinnaird College, Lahore.
		15:40-15:45	<b>Technical Session Conclusion and Recommendations (Participants: Session Chair, Co-Chair(s) and Session Moderator)</b>

### CLOSING CEREMONY (Crystal Hall) Faletti's Hotel

TIME (hrs.)	
15:30 – 15:45	Guests to be seated
15:45 – 15:50	Recitation of Holy Quran and Naat
15:50 – 16:05	Concluding Address by Meritorious Professor Dr. Talat Naseer Pasha ( S.I.), Vice Chancellor, University of Veterinary & Animal Science, Lahore
16:05 – 16:20	Conference recommendations by Dr. Muhammad Ayub, President Pakistan Fisheries Society
16:20 –16:25	Address by Dr. Ghazanfar Abbas, Consultant Eco Science Foundation, Islamabad
16:25 –16:30	Address by Mr. Iftikhar Ahmed Qureshi, DG, Punjab Fisheries Department
16:30 – 16:40	Distribution of Shields by the Chief Guest
16:40 – 17:00	Address by the Chief Guest
17:00 – 17:05	Vote of Thanks by Prof. Dr Muhammad Ashraf, Dean Faculty of Fisheries & Aquaculture UVAS, Lahore.
17:05 – 17:30	<b>Concluding Tea</b>

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