Volume-2 Issue-2:2017

Promoting Aquaculture for Sustainable Food Production

Newsletter

Introducation:

The Department of Fisheries &Aquaculture, UVAS aims to provide excellence in higher education, training, research and development, services and advice in the fields of sustainable Fisheries and Aquaculture consequently contributing to economic and social development of the country .

Mission:

Produce highly skilled professionals in the field of Fisheries and Aquaculture to meet the demand of growing Fisheries industry by resolving food and environmental problems.

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UVAS AND ATATURK UNIVERSITY, TURKEY SIGNED MOU UNDER MEVLANA EXCHANGE PROGRAMME IN FISHERIES & AQUACULTURE

The Department of Fisheries & Aquaculture, UVAS and Department of Aquaculture, Faculty of Fisheries, Ataturk University, Erzurum, Turkey signed MoU under Mevlana Exchange Programme in 2017. Under this programme every year 02 MS/M. Phil, 02 PhD students and 02 Faculty members will be provided with the opportunity to visit Ataturk University for their research and lectures. This year 01 Faculty member (Dr. Fayyaz Rasool, Assistant Professor) and 02 M. Phil students from UVAS are going to visit Turkey for one semester (September -December, 2017) to conduct their research in Ataturk University under the supervision of Prof. Dr. Murat Arslan, Dean, Faculty of Fisheries. This is one of the major outcomes of 6th International Fisheries Symposium & Expo-2017 in which Dr. Murat participated as invited guest speaker. Just after the Conference in Feb. 2017, Dr. Noor Khan, Chairman, Department of Fisheries & Aquaculture, UVAS requested him for collaboration which Dr. Murat not only generously accepted but with his sincere efforts he got approved the case from Higher Education Turkey and MoU was signed by both the Vice Chancellors/Rector Meritorious Prof. Dr. Talat Naseer Pasha (S.I) from UVAS and Prof. Dr. Omer Comakli, Rector of Ataturk University, Erzurum, Turkey to launch Mevlana Exchange Programme. This programme will further strengthen research and academic collaboration among these two institutions and play a significant role to enhance research capabilities of students, capacity building and faculty development.

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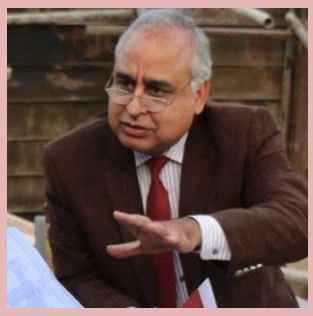
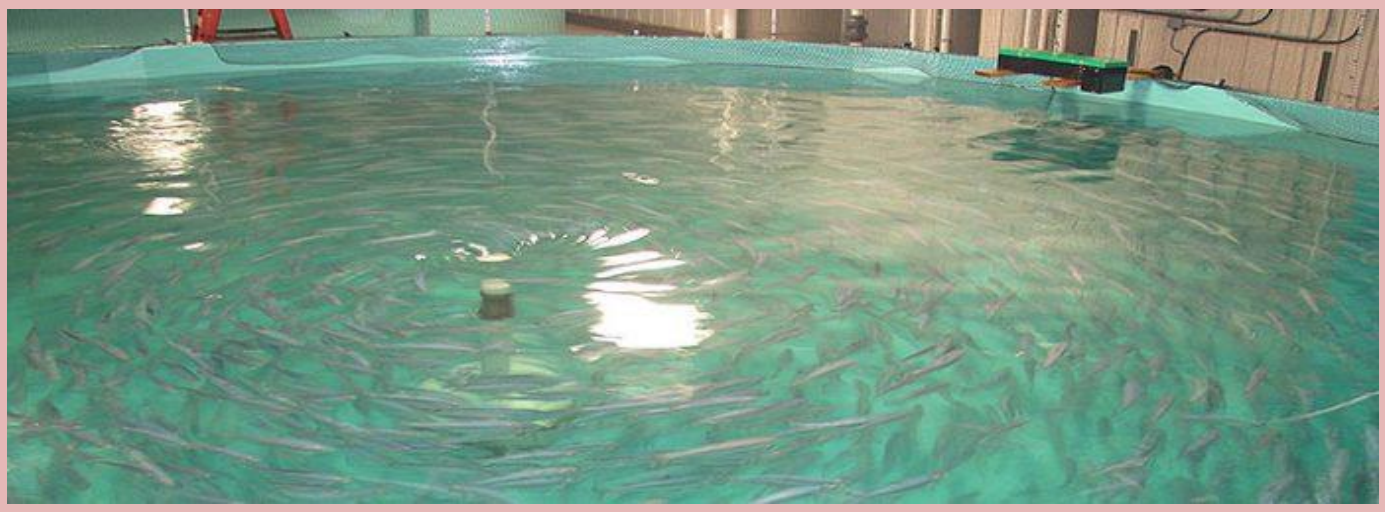
FISH FARMERS URGED TO FOCUS ON FISH FARMING



Director General department of Fisheries Punjab, Mr. Iftikar Ahmed Qureshi motivate the fish farmers to pay focus on fish farming as it is highly profitable business. A total expense on one-acre fish farming was nearly Rs. 90,000, including digging cost of soil, he said and added properly managed farm helped to generate profit from Rs. 200,000 to Rs 220,000. The department of fisheries is providing the technical consultation and also prepare feasibility report for farmers to get loans from banks. The fish farming business was almost risk-free as there was no disease to affect the farms, he said and added only care could help generate good profits and margins.He said the fisheries department would provide all possible services to farmers which would also improve their financial status.



GOVT TRAINS 2,455 FISHERMEN TO ENHANCE SEAFOOD EXPORTS

A model shrimp farm in thatta district had been established by the fisheries development board (FDB) with funding from the export development fund (EDF) to enhance supply of raw material for seafood industry.

FDB PAKISTAN
Fisheries Development Board

The government has trained around 2,455 fishermen and fisheries related personnel on modern fishing techniques to improve quality and enhance seafood export. The training was imparted on different aspects of hygiene, deckhand and navigational electronic equipment with an aim to reduce post-harvest losses onboard fishing vessels and bring high quality products that can fetch higher price in market. Sources at the Commerce Division, while enumerating the steps taken by the government to enhance export of seafood products. A model shrimp farm in Thatta district had been established by the Fisheries Development Board with funding from the Export Development Fund (EDF) to enhance supply of raw material for seafood industry. They said several new projects including establishment of regional offices and testing laboratories at Peshawar and Gwadar, upgradation and accreditation of quality control laboratories for environmental contamination and reactivation of hatchery complex for production of fish and shrimp seeds, were being implemented to curb seafood smuggling to Afghanistan and other countries.

SIGNIFICANT INCREASE OF TILAPIA SEED AMONG FISH FARMERS IN PAKISTAN

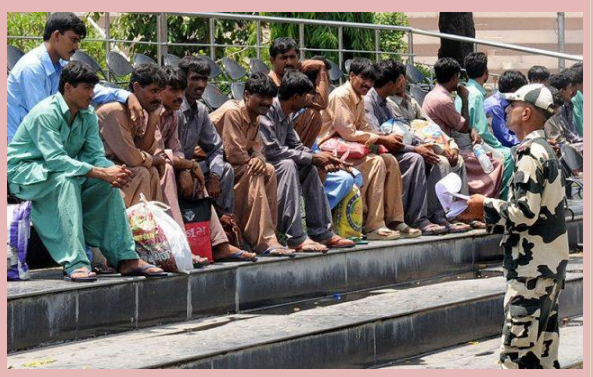
Tilapia is becoming popular among Pakistan fish farmers. Demand of tilapia is increasing very rapidly. UVAS is producing the GMT Tilapia in its own hatchery and supplying to the fish farmers at small scale, while the Tawakal fish hatchery is producing the sex reversed tilapia. This year tilapia seed production target was set 2.5 million, keeping in view about 50% increase in demand. But this 2.5 million tilapia seed was supplied within only two months, April and May, and still there was much demand. Tilapia seed imported from abroad is additional to this. Tilapia is playing an important role in increasing the production and profit of the fish farmers.

UVAS ANNOUNCED ADMISSION IN BS FISHERIES & AQUACULTURE DEGREE PROGRAMME

UVAS announced BS(Hons) Fisheries and Aquaculture admission in fall 2017. Fisheries and Aquaculture is an important vibrant sector witnessed as the primary source of protein for millions of people. The fisheries sector as a whole contributes to about 1 % to the country's GDP . During the last decade the sector has been strengthened with the much needed technical manpower and competent extension personnel with effective transfer of technology . Research and Development has helped the sector in addressing various issues like good quality fish seed, artificial pelleted feed and introduction of new species. Being highly progressive sector it has been considered as a major source of employment generation and career avenues in various fields of fisheries and aquaculture sector in coming years.

THE SINDH ASSEMBLY APPROVED A SUMMARY TO PROVIDE FINANCIAL ASSISTANCE OF RS.10,000/- TO EACH FAMILY OF FISHERMEN WHO WERE ARRESTED BY INDIA.

The Sindh Assembly under the chairmanship of the Speaker Agha Siraj Durrani and Sindh Minister for Fisheries Muhammad Ali Malkani answering the questions of MPAs during question hour on fisheries said that fish farming had not been generally decreased at Badin, Tando Bago and Pangrio Talhar. He said that in 2014 the number of fish farms in these areas was 272 and in 2016 it now stood at 305. Adding that there is no fish farm in Mithi due to sandy area and shortage of water. To another question, he admitted that there is no medical facility on boats being provided to the fishermen but dispensaries have been set up for their health. To improve the life of fishermen, the fisheries department has taken various initiatives for the betterment of fishermen, these including abolishing the leasing system, construction of model village for fishermen at Manchar lake, Keenjhar lake and zero point Badin which include provision of dispensaries, construction of fishmen colony at Murad Shah Mian and Rylo Mian at downstream Kotri Barrage, provision of fishing gears, such as boats, nets, engines and insulated ice boxes, bicycles and plastic boxes and construction of R.O plants and landing jetties.



On a question regarding decline in population of Shark since 1999, he admitted in accordance with a recent survey the population of the spice had been on the decline. Replying to a question, he said that boats are initially registered by the Mercantile Marine Department (MMD) government of Pakistan according to the Pakistan Merchant Shipping Ordinance 2001. Each fishing boat either belongs to Sindh or Balochistan has to obtain registration certificate from principal officer of MMD. Sindh government only issues permission and license for fishing to the boats operating in territorial waters.

TRAINING WORKSHOP, ENTITLED 'IMPROVING TRANSPARENCY AND TRACEABILITY IN TUNA FISHERIES IN NORTH INDIAN OCEAN', ORGANISED BY WWF-PAKISTAN

Technology can Ensure Sustainable Future for Tuna Fisheries

Most developing countries lack the capacity to address the issue of illegal, unreported and unregulated (IUU) fishing, mainly due to an unavailability of research data, financial constraints and lack of access to modern technology. This was an observation made by speakers during the first day of a training workshop, titled 'Improving Transparency and Traceability in Tuna Fisheries in North Indian Ocean', organised by the World Wide Fund for Nature – Pakistan (WWF-Pakistan). The workshop was conducted under a project, Areas Beyond National Jurisdiction (ABNJ) which is financially supported by Global Environmental Fund (GEF), United Nations' Food and Agriculture Organisation (FAO), International Seafood Sustainability Foundation and Common Oceans.

The project primarily focuses on sustainability of tuna fisheries worldwide by reducing illegal catch and supporting marine ecosystems and species. Four countries from the Northern Indian Ocean, in addition to local participants from government fisheries departments, maritime security agency and academia participated in the workshop. Hammad Naqi Khan, director general of WWF-Pakistan, shared that marine resources were confronting major threats that include pollution, destructive fishing methods and IUU fishing. The WWF-P chief emphasised the need to introduce technology, improve facilities at landing ports and build the capacity of officials of relevant departments. "Transboundary collaborations and exchange of research data and expertise can help increase the depleting tuna stocks of the Arabian Sea," James Geehan, a fisheries statistician from the Indian Ocean Tuna Commission (IOTC) Secretariat, said data reports vary considerably according to species. Talking about fisheries in Pakistan, he said that no catch-and-effort or size data is submitted and that highly conflicting catch data was being reported to WWF-Pakistan and government departments over recent years. Although a crew-based Regional Observer Scheme had been implemented in recent years, no data had been submitted to the IOTC Secretariat. In addition, Vessel Monitoring Systems (VMS) were partially implemented on a limited number of vessels in Pakistan and that number needed to enhanced. Hawwa Raufath Nazir, project officer from Ministry of Fisheries and Agriculture, Maldives, shared that all products of tuna and grouper exported from Maldives are required by law to be accompanied with a catch certificate. She also informed that most instances of IUU fishing are known from foreign vessels. She said losses from IUU fishing in the Maldives EEZ were estimated to be between $5.16 –37.19 million. Due to the high sea-to-land mass ratio, she said, it was very challenging to combat IUU fishing. Each year, during the fishing season, joint surveillance operations were conducted with the help of neighbouring countries. "So far, no IUU cases have been recorded this year," she added.Alfred Schumm, director of WWF-International, shared that IUU fishing accounted for 20 percent of the total global fish stocks. In order to tackle this issue, governments need to ensure regular monitoring, surveillance and sustainable management of fisheries. He emphasised that transparency and traceability could only be possible through placement of Automatic Identification System (AIS); VMS, and Global Positioning System (GPS). "This would not only improve fisheries management but would support in traceability of other products from the oceans," he added. Muhammad Wasim, director general of Marine Fisheries Department, Pakistan, said that as per data from 2016, there are 19,148 fishing boats operating in Pakistani waters and the annual fish production is 588,581 metric tonnes. He pointed out that IUU fishing problem mainly exists on Pakistan's eastern border by Indian fishing boats. Every year, said Wasim, about 100 Indian boats are apprehended by the Pakistan Maritime Security Agency (PMSA). He termed fishing at high seas, outside the country's EEZ, also a kind of IUU fishing. He shared that although no IUU fishing boat is authorised to land their fish catch at any port but no law is in place to tackle such matters. Wasim stated that traceability and transparency in the fish trade was important to combat IUU fishing.

DEAD FISH SPARK FEARS OF RAWAL LAKE CONTAMINATION

Local mafia' poured poison in Rawal Dam, kills tonnes of fish

Water supply from the Rawal Dam was suspended after a large number of dead fish were spotted in the lake, sparking fears that the waters had been poisoned or contaminated. Rawalpindi Deputy Commissioner Talat Mehmood Gondal said the dead fish were first discovered a few days ago, after recent rains raised the water level in the Rawal Lake. The reservoir, which is the main source of water for the twin cities along with Khanpur Lake, was last tested by the National Agriculture Research Council (NARC) on July 11 and declared "fit for human consumption". While the lake itself is situated in the federal capital, its water is the property of the Punjab Irrigation Department, possibly because its key catchment areas lie in Murree.

Water, fish samples sent to labs for testing; officials point to turf war between local fishermen, contractor

Fig: A dead labeo rohita and silver carp floats on Rawal Lake in Islamabad (Photo credit: Tanveer Shahzad)

Further still, the fish and other aquatic life in Rawal Lake are the jurisdiction of the Islamabad chief commissioner and the Islamabad Capital Territory (ICT) administration. ICT Director Fisheries Lubna told that fresh samples had been forwarded for testing to Pakistan Council of Research in Water Resources (PCRWR) and the National Institute of Health (NIH), while samples from the dead fish had been sent to the Punjab Forensic Science laboratories in Lahore and the NARC. Water and Sanitation Authority Spokesperson Mohammad Umer Farooq told that the Small Dams Organisation – which manages the dam – had suspended its water supply from Rawal Lake around. In an initial report from the district water-testing laboratory of the Public Health Engineering Department, the water from the lake was not found to contain any poisonous substance, and there were no arsenic particles in it, either. "Water samples were also sent to the Pakistan Council of Scientific and Industrial Research (PCSIR) for further testing," The reports were in, a decision could be taken to restore the water supply from Rawal Dam.In the meanwhile, residents of Rawalpindi will be supplied water through 408 tubewells that will run round the clock, and a water tanker service will also be operational 24 hours a day to ensure the water supply, the spokesperson said, calling on citizens to use water judiciously. A huge, illegal and unplanned construction has been carried out in Bani Gala, Bhara Kahu and other catchment areas of the Rawal Dam.

Turf war

There were rumours that the alleged poisoning was linked to a dispute between local fishermen and the contractor, Younas Enterprises, who won fishing rights in the area through an auction, conducted late last year. The contract was awarded in March 2017, and the contractor was due to begin netting from October this year. Over the past several years, however, a large number of local fishermen, who are at odds with the contractor, have established illegal businesses along the lake shore. To control these elements, the ICT administration recently imposed Section 144 to curb illegal fishing in Rawal Lake, and an operation in this regard was conducted on Friday, July 7. "The dead fish started to appear a day after all the illegal fishing setup was removed from the lakeside," said an official of the Fisheries Department. He feared that local fishermen may have used dynamite to kill fish in large numbers. Another official in the Rawalpindi administration expressed the fear that the fishermen may have poisoned the waters following their tussle with the contractor. He said that the local administration and Special Branch were working to establish how the rumour spread.

Expert opinion
Not everyone was convinced that dead fish found in the lake were killed by a poisonous substance. The fish could have died due to low oxygen levels in the water. The initial reports suggested that the Silver carp fish, died in high temperature and low oxygen. “There was less oxygen in the Rawal lake in last few days as the day temperature rose and rain occurred in the night. The other animals and fishes in the dam are alive which made it clear that the water is safe,”. “There is no clear reason why the fish are dying in mass numbers,” “The summer heat is normal, the water level is on the rise and most importantly, initial tests have cleared the quality of water as fit for human consumption.”
Dr Javed Akram, vice chancellor of the Pakistan Institute of Medical Sciences (Pims) told that over the past few years, a number of poultry farms had been set up in Bhara Kahu and other catchment areas of Rawal Dam. “In this season, poultry farmers spray their farms with chemicals, which are washed into the nullahs and eventually reach Rawal Dam. Moreover, there are a number of factories that have been dumping their chemical waste here. Even hospital waste is also thrown in the streams,” he said. “In developed countries ‘soakage pits’ are used to treat the waste as water passes through sand and other filters before it flows into the streams, but there is no such vision here.

Rawal Dam was constructed on Korang River in the 1960s and has a catchment area of around 275 square kilometres. It can store 84,000 acre feet of water in an average rainfall year. Rawal Dam supplies 28 million gallons per day (MGD) to Rawalpindi’s City and Cantonment areas, via the Rawal Filtration Plant. Currently, Rawalpindi City’s daily requirement of water is 60MGD, but the agency provides around 54MGD.
There are three main sources of water for Rawalpindi city; Rawal Dam (which provides 28MGD) and Khanpur Dam (6MGD). The remaining water is obtained from 408 tube wells The lake’s water level currently stood at 1,740 feet, against a maximum level of 1,752 feet. It is expected that the reservoir will reach that volume after a few more rains.

WORLD AQUACULTURE SOCIETY EVENTS IN JULY AND AUGUST, 2017

Jul 24, 2017 - Jul 27, 2017

Asian-Pacific Aquaculture 2017 - Transforming For Market Needs
Location: Kuala Lumpur, Malaysia

ASIAN PACIFIC AQUACULTURE 2017 Asian-Pacific Aquaculture 2017 is the place to learn about the latest in aquaculture, see the newest technology in the trade show with exhibits from around the world and enjoy the many tourist sights in Malaysia. APA 2017 - VISIT THE MAJOR EXHIBITION APA 2017 will have a large exhibition featuring international companies showcasing the latest in products, services and all aquaculture related information. Don’t miss this opportunity to see the items that will enhance your aquaculture peration. SPECIAL PRODUCER SESSIONS APA 2017 will have special sessions to address the everyday practical concerns and needs of aquaculture farmers. Specific information will be provided on current problems farmers are facing. Check online for more details.

Aug 21, 2017 - Sep 8, 2017

Aquaculture Laboratory hybrid course at Oregon State University
Location: Hatfield Marine Science Center, Newport OR, USA

Aquaculture Laboratory is aimed at students who would like to develop a practical understanding and the basics techniques associated with aquaculture and aquaculture research. The first week of this course is held online and will provide an overview of aquaculture as well as planning for the on-campus portion. The second and third weeks are held at the Hatfield Marine Science Center in Newport Oregon. Course topics are centered around west coast species including: salmonids, oysters, algae and ornamental species. Course activities will include: 1) Field trips to the Oregon Hatchery Research Center, Alsea Hatchery, and behind the scenes at Oregon Coast Aquarium; 2) Student led research projects centered on PNW species and 3) Hands on activities associated with water quality testing, system design/component breakdown and live feeds cultures. This course is open to non-OSU students and student housing is available at the Hatfield Marine Science Center. For more information contact: Chris Langdon (chris.langdon@oregonstate.edu)

FISHERIES AND AQUACULTURE

Total marine and inland production: **936,882 MT**

Export quantities (fish and fishery products): **86,608 MT**

Export quantities (fish and fishery products): **$197.3 million**

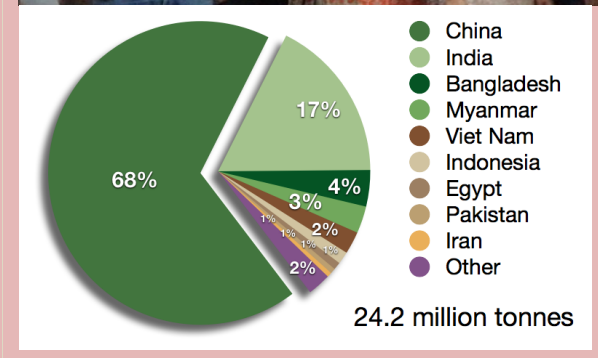
The fishery sector recorded a 1.9% growth in 2010-11. The Government of Pakistan is encouraging improvements by the introduction of new methodologies, developing aquaculture, development of fishery related value added products and up gradation of socio economic conditions of the fishermen's community. While marine and inland fishing are the mainstay of the sector, aquaculture is being practiced on a small scale and has huge potential for growth; it is among the few sectors that were given priority for credit extension by the Agricultural Development Bank of Pakistan. With a potential to earn more than one billion dollars per annum in exports, Pakistan's fishery sector is poised to play a pivotal role in economic growth and increasing food security.

IRRIGATION INFRASTRUCTURE

channelling the potential.

With less than 240 mm of rainfall annually, Pakistan is considered a 'high water stress' region. Consequently, Pakistan's agriculture, and hence the economy, is heavily dependent on irrigation which is currently over extended and inadequate in terms of meeting the requirements. To benefit from agriculture-driven economic growth, investments in irrigation infrastructure are essential. Strategies for efficient water distribution, gathering and storage, and methods for conservation and application of water need to be implemented so as to minimise water wastage and maximise yields.

FISHERIES AND AQUACULTURE HIGHLIGHTS IN PAKISTAN



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