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Partnering Universities:



MEHRAN UNIVERSITY
of Engineering & Technology
Jamshoro, Pakistan



National Workshop on Assessment of Environmental Degradation of Manchar Lake

U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W) housed at Mehran University of Engineering and Technology (MUET) Jamshoro in collaboration with Pakistan Council of Research in Water Resources (PCRWR), Government of Pakistan organized a National Workshop on Assessment of Environmental Degradation of Manchar Lake. PCRWR with the patronage of USPCAS-W MUET, initiated a study in April 2016 to assess the Environmental Degradation of the Lake. This workshop was aimed to share the finding of the study and also to sensitize the stakeholders for the rehabilitation and restoration of the lake.

Sindh Minister for Planning and Development Mir Hazar Khan Bijarani chaired the workshop. He said the workshop findings revealed that the greed and irresponsible interventions of Homo sapiens had altered the environmental scenario of the Lake. Mr. Bijarani assured that Sindh Government will initiate the schemes for the rehabilitation of the lake. He also thanked U.S. Agency for International Development (USAID) for establishing Water Research Center - USPCAS-W at MUET.

Vice Chancellor MUET Dr. Mohammad Aslam Uqaili said that role and responsibilities of the academia have been extended as

compared to past. In present circumstances, he said, the universities have to seek the efficient, cost-effective and sustainable solutions to the problems of the country through research, besides imparting the formal education to award the degrees. Dr. Uqaili said that MUET provides the conducive environment to the faculty and students for their professional career growth.

Dr. Ashfaq Ahmad Sheikh, Secretary PCRWR and Dr. Bakhshal Lashari, Project Director USPCAS-W MUET also spoke on this occasion.

Engr. Zamir Ahmed Soomro, the Principal Investigator (PI) of the workshop research study also serves as a Director in one of the regional offices of PCRWR and Ms. Uzma Imran, USPCAS-W Faculty member and the Co-PI of the study shared the technical and social aspects of the study.

Dr. Rasool Bux Mahar, Deputy Director (Academics and Research) at USPCAS-W presented vote of thanks.

In question-answer session, Special Secretary Sindh Irrigation Department Engr. Ahmed Junaid Memon suggested that the removal of mercury from the polluted lake water could be carried as the study suggested to tackle these issues.

Prof. Dr. M. Munir Babar suggested that in order to supply fresh water to the lake, Dadu Canal after its remodeling and widening may be extended. Other stakeholders comprising of academia, growers, environmentalists, dwellers of the lake also participated in the workshop and shared their opinion and suggestions.





Utah University Jul-August 2017 Mission

The University of Utah (UU) mission led by Prof. Dr. Steve Burian, visited Center in this quarter. The mission conducted series of activities. Dr. Tariq Banuri, Dr. Sajjad Ahmad,

Dr. Jim Vanderslice, Dr. Jennifer Weidhaas, Dr. Jose Chavez and Dr. Jeff Ullman were included in the mission. Focusing the training theme Building Collaborative Research

Partnerships, the mission imparted an intensive training to MUET faculty in the preparation to plan, acquire, train to conduct, administrate, and execute client-driven research projects.

The mission conducted following workshops:

Collaborative Research Development Workshop

The goal of this workshop was to advance MUET research collaborations and training capacity related to climate vulnerability assessment and adaptation planning and engineering.

The workshop involved MUET faculty and also invited stakeholders in three case studies:

- ☐ Tarbela Reservoir
- ☐ Lower Indus River
- ☐ Pakistan Clean Water and Sanitation Access

Dr. Steve Burian says, "Assessing vulnerabilities of water systems is not exclusively a Pakistan problem, it is a \$20 trillion dollar global problem." Other speakers also stressed the urgent need to increase the amount and quality of data for climate vulnerability assessment and adoption.

Human Subjects Research Workshop

This workshop was aimed to advance MUET capacity to incorporate effective social sciences research into client-driven projects. The workshop introduced basic strategies and techniques for human subjects research, techniques to manage and analyzed the data. The objective was to establish competency in human subjects' research and data analysis. Verifying the identified client-driven projects, the mission members also made field visits:

- ☐ Combined Effluent Treatment Plant (CETP) Korangi Industrial Area, Karachi.
- ☐ Distributary points of Jamrao Canal in Mirpurkhas, Irrigation Department





Board of Governors Meeting

5th meeting of the Board of Governors (BoG) of the Center, held at Committee Room of the Vice Chancellor Secretariat. Vice Chancellor MUET Prof. Dr. Mohammad Aslam Uqaili chaired the meeting. In the meeting, the progress of the Center was reviewed and future plans were discussed.

Ms. Khawar Mumtaz apprised the board on her meeting with the gender committee of MUET and

congratulated Vice Chancellor for having an approved gender policy in MUET as being 1st public sector university in the country. Vice Chancellor Sindh Agriculture University Tandojam Prof. Dr. Mujeeb-u-ddin Sahrai Memon, showed the great interest of his participation in the National Water Research Network and offered his contribution to the network. BoG members including Dr. Mohammad Ashraf, Chairman

Pakistan Council of Research in Water Resources (PCRWR), Dr. Arjumand Nizami, Country Director Inter-Cooperation Pakistan, Pro-Vice-Chancellor MUET Dr. Tauha Hussain Ali, Dean Dr. Khan Mohammad Brohi, Registrar MUET Dr. Abdul Waheed Umrani, Director Finance MUET Mr. Munir Ahmed Shaikh, USPCAS-W Deputy Director Prof. Dr. Rasool Bux Mahar and others attended the meeting. The members also visited the new building of the Center.



Pre-Admission Test held to Enroll 3rd Batch

The Pre-Admission Test for MS/PhD fall session 2017 was held on Saturday, July 29, 2017, in five different cities Islamabad, Multan, Quetta, Peshawar and Jamshoro, simultaneously.

In total 380 candidates including 45 female appeared in the test. The Center's administration monitored the arrangements of the entrance test.





Welcome and Orientation Session for 3rd Batch

A welcome and orientation session for third cohort of MS and Ph.D. students was held on Monday, August 21, 2017. Speaking in the ceremony Pro-Vice Chancellor of MUET Prof. Dr. Tauha Hussain Ali said that consistency is a prerequisite for one's success, therefore, all of us must be consistent for our career goals. Dr. Ali said that USPCAS-W, as a Country's premier national center of excellence in water, provides a conducive environment for academic and research activities.

Dr. Jeffery Layton Ullman, Technical Advisor to USPCAS-W from University of Utah, said that the Center is committed to change the academic culture of Pakistan through the partnership, which also encompasses curriculum development, teaching, mentoring, research, and the establishment of new laboratories.



Dr. Bakshal Lashari, Project Director said that the Center was established with the generous support of USAID and technically supported by the University of Utah, USA. He said, "Center is focusing on achieving the Sustainable Development Goals (SDGs), particularly SDG-06 which is supposed to Ensure Availability and Sustainable Management of Water

and Sanitation for all by the year 2030." Dr. Kamran Ansari, Center's Director Career Counseling and Placement, gave a detailed presentation on the academic policies. Later on, the students of the new batch toured MUET and visited Center's new building. On this occasion, the students were presented printing and promotional material by the management of the Center.

Society of Water Managers Welcomes New Batch



As part of the orientation week for the newly enrolled 3rd batch of the Center, Society of Water Managers (SWM) organized an interactive session. The session involved introducing the students with the aims and objectives of the society. Ms. Rakhshinda Bano, the patron of the society presented the shields to the founding members and former office bearers of the society.

The students of the new batch also registered themselves in the society by submitting the registration forms and showed their interest for active participation in the activities of the Society.

Sensitization on Gender Equity

Ms. Uzma Imran, USPCAS-W Faculty Member, and Gender Focal Person conducted a session on the women empowerment and informed the new students regarding the Gender Equity Policy (GEP) of the Center and MUET. Mr. Shahid Panhwar, Monitoring and Evaluation Specialist, also interacted the new batch students for their expectations and queries regarding the academic, research and social activities.





Faculty on Exchange Visit to USA



The third cohort of USPCAS-W Faculty went on the exchange visit to USA. Apart from the visit to Utah University, two faculty members i.e. Dr. Bakhshal Lashari and Dr. Abdul Latif Qureshi also visited Colorado State University whereas, Dr. Kamran Ansari and Dr. Altaf Ali Siyal visited University of Nevada, Las Vegas.



4th Cohort of Students on Exchange Visit to the USA

The fourth cohort consisting of fifteen (15) MS Scholars of 2016 batch of the Center departed to the University of Utah, USA in September 2017. Before their departure Dr. Bakhshal Lashari, Project Director USPCAS-W conducted a consultative meeting with them at the Center. In meeting, Dr. Lashari said that the exchange visit is one of the fully funded premier component of the Center to benefit the students for harnessing their research skills.

Dr. Lashari further suggested the exchange students to get themselves involved in academic, research and co-curricular activities at University of Utah, USA.

Prior to leaving Pakistan, they also presented their first seminar regarding their research studies which they have to undertake. The group, included six female and nine



male students, went from the four masters programs at USPCAS-W MUET. The exchange group will spend four months in University of Utah, USA and will be facilitated and supported by their mentors for catering their teaching and research need. The students will participate in specific courses and work on their research projects in

co-supervision of their respective professors and mentors at USA.

In the first week, they have attended different courses and activities including writing classes and practicum, research activities, the Global-Local Water Seminar, professional development, technical courses, and a library tour and orientation.

Dr. Kamleshwar Lohana delivers a lecture on Skills, Knowledge, and Qualities



Dr. Kamleshwar Lohana, Assistant Professor at Mehran University Institute of Science, Technology, and Development (MUISTD) delivered a lecture on "Skills, Knowledge, and Qualities employers look for". The students of the outgoing batch of the Center attended the session.

Dr. Lohana gave a presentation on Career Planning for the Postgraduates in Water Sector, writing a resume, cover letter skills and interview.

Khawar Mumtaz Talks on Status of Women in Pakistan

Ms. Khawar Mumtaz, Chairperson Pakistan's National Commission on Status of Women (NCSW) and Member USPCAS-W MUET Board of Governors, visited the Center. While delivering a lecture on the 'Status of Women in Pakistan' in the graduate seminar, she said that though mindset towards the status of women is changing in Pakistan but still the violence against women is the big issue in the country.

She said the NCSW was trying its best to work and lobby with lawmakers, parliamentarians, and other decision-makers for the promotion of laws and regulations aimed at empowering women in social, economic and political spheres.



Ms. Khawar Mumtaz said that the NCSW has prioritized safeguarding and promoting the interest of women in Pakistan.

She appreciated women lawmakers for their active role in legislation process regarding women's issues in both houses of parliament and provincial

assemblies. Before addressing the seminar, she chaired a meeting about developing strategies for activation of the Women Resource Centre (WRC) recently established at MUET under its Gender Equity Policy. Gender Committee members from the Center and the University attended the meeting.

Dr. Zeeshan Khatri delivers a lecture on Pursuit of Technopreneurship





Workshop on Climate Change Projections



Two-Day Training Workshop on Climate Change Projections and Its Impact on Water System Performance held at USPCAS-W MUET Jamshoro. The workshop served as a strong platform for an effective network of experienced people. Dr. Bakhshal Lashari, Dr. Jeffery Layton Ullman, and Dr. Rasool Bux Mahar distributed the certificates among the workshop participants.

USPCAS-W faculty Mr. Ghulam Hussain Dars and Mr. Waqas Ahmed said that the workshop was aimed to advance the capacity of engineers, scientists, and water

managers related to climate change impacts on system performance.

The workshop was attended by the representative from Pakistan Meteorological Department,

PCRWR, LUMS Lahore, SUPARCO, BUITMS, NED University, Karakoram International University, PMAS Arid Agricultural University, SIDA, WAPDA, Sindh Agriculture University Tandojam, and MUET SZAB Campus Khairpur.



Ph.D. Scholars Highlighted

The work of two Ph.D. Candidates i.e. Mr. Abdul Ghani Soomro, and Ms. Aneela Memon of the Center, has been highlighted under caption "Spate Irrigation PhDs in Pakistan" in The Flood-Based Livelihoods Network – an online network of spate irrigation professionals and practitioners. Mr. Soomro's research work focuses on a Hydrologic Assessment of Sindh's Khirthar Mountain Range, using remote sensing and modeling. The study is geared towards identifying potential sites for the conservation of water resources. The research outcomes will be used by government stakeholders to develop infrastructure

(embankments, check dams and reservoirs). Such water harvesting will strengthen the livelihood base and increase agricultural productivity.

Ms. Aneela's research will use GIS and model to determine the climate change impacts on seasonal floods and groundwater in Kohistan's Dadu, Jamshoro and Thatta districts. The major issue in the study area is the lack of groundwater retention, causing agricultural productivity to be low during the dry months of the year. The modeling exercise will project the impact of climate change up to 2060 using baseline data from 1961 and 1990.

Based on this projection different water management strategies will be developed to cope with water stress in the study area.





Stakeholders Consultation on High-Efficiency Irrigation System:

In order to strengthen the water research network, a day-long meeting with the stakeholders on High-Efficiency Irrigation System (Drip System) under World Bank funded Sindh Irrigated Agriculture Productivity Enhancement Project (SIAPEP) implemented by Government of Sindh, was held on 24th August 2017. Engr. Ayaz Hussain Abro, Director SIAPEP, Dr. Bakhsal Lashari, Project Director

USPCAS- W, Prof. Dr. Abdul Latif Qureshi and Engr. Ghulam Mustafa Ujjan, Environment Social Development Specialist at SIAPEP spoke about SIAPEP project and discussed the possible partnership opportunities. The project is providing modern agricultural facilities including modern equipment, the seeds, and pesticides to the targeted farmers at the level of union councils on the

subsidized rates. Additionally; drip irrigation units having the high-efficiency irrigation system have also been installed and the selected watercourses have been lined.

The Center is aiming to develop a productive linkage with the project and integrate objectives and activities of it with the water research agenda.



World Water Week Celebrated: Pledge for Provision of Safe Drinking Water

The Center in collaboration with WWF Pakistan marked the celebration of World Water Week (Stockholm) 2017 by paying a joint visit to Keenjhar Lake. The focus of the week celebration was on a key challenge for which two Sustainable Development Goals (SDGs). The trip was hosted by WWF-Pakistan at their Keenjhar Conservation and Information Center. On this occasion, the

seminar was organized by WWF-Pakistan under its International Labor and Environmental Standards Applications in Small & Medium Enterprises in Pakistan project in collaboration with the Center. More than 100 individuals participated in the event including students, faculty members, representatives of relevant government and non-governmental organizations and media representatives.

Experts speaking at the seminar said that government and non-government organizations should invest more in the provision of safe drinking water, as 1.8 billion people around the globe use contaminated water, exposes them to different diseases. Students participated in the awareness walk with great enthusiasm and presented their posters with relevant technical information.



Success Stories



Mr. Hammad Malik got Ph.D. Scholarship

Mr. Hammad Malik, originally hails from Thari Mirwah- a small town of District Khairpur, now settled in Karachi. Mr. Malik belongs to the middle-class family, his father runs a small-medium scale business in Karachi. Due to his extraordinary research interest, he was offered admission in Ph.D. at the University of Utah by his project supervisor. Mr. Malik is now pursuing his Ph.D. and also working as Research Assistant at University of Utah, USA.

Why I opt MUET for my graduation:

"The reason behind choosing MUET for my graduate degree was due to its reputation, ranking, and modern research opportunities. I have successfully completed my B.E. in Metallurgical Engineering from MUET in 2014."

Why I Choose USPCAS-W for my Masters:

"I opted USPCAS-W for Masters as it featured different research aspects in terms of water and environment. The Center is equipped with modern facilities and qualified faculty. USPCASW proved my right choice as it provided one of the best opportunities for learning, research, and networking."

Exchange Visit to University of Utah:

"The exchange program was one of the attractive components for me to opt this Water Center. I was among the first exchange group visited University of Utah (UU), USA. The visit polished my research skills and provided an opportunity for networking. I dreamed to pursue further higher studies from the UU and surprisingly, I got an offer from my Mentor for Ph.D. at UU. I was guided by my mentor to work on the project "Magnetite Nanofibers for Heavy Metal Removal". That was the moment, I realized that I had made my parents, teachers, and friends proud. I think this is not an end to my promising educational path but a start to a brilliant professional career ahead." He advises USPCAS-W students, "dedicate your time, take advantage of all the resources made available to you. the exchange program can really increase your capacity to succeed-to make difference."

Ms. Iram Sifat is from Ghizer District the westernmost part of the Gilgit-Baltistan region of Pakistan, one of the outgoing MS Scholar of USPCAS-W MUET. She studied in the Environment Engineering in the MS Course at the Center and completed her research work on wastewater treatment. Presently, she has been selected for Fulbright Scholarship.

She says: **"Selection in the Fulbright Scholarship is one of my proud moments in life. I got support and motivations from USPCAS-W MUET to be part of this premier flagship scholarship program at the USA"**



Ms. Vengus Panhwar, from Dadu district of Sindh province, completed her Bachelors in Civil Engineering from Quaid-e-Awam University, Nawabshah. Ms. Panhwar now pursuing her Masters in Integrated Water Resource Management (IWRM), from USPCAS-W MUET. She is going to present a paper on **"Geospatial tools for Tsunami Hazard Mapping: A Case Study of Gawadar Port"** in GeoMundus 2017, will be held on 10th and 11th November 2017 at Institute for Geoinformatics, University of Münster, Germany.









About her experiences at USPCAS-W MUET,

she says: **"I am very happy with the choice of USPCAS-W for my higher studies, which has benefitted me enormously in enhancing my abilities, research and communication skills."**



SUSTAINABLE DEVELOPMENT GOAL 6: Ensure Availability and Sustainable Management of Water and Sanitation for All

SDG-6: Targets to be achieved by 2030

- 6.1:  Achieve universal and equitable access to safe and affordable drinking water for all
- 6.2:  Achieve access to adequate and equitable sanitation and hygiene for all
- 6.3:  Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials
- 6.4:  Substantially increase water-use efficiency across all sectors
- 6.5:  Implement integrated water resources management at all levels
- 6.6:  Protect and restore water-related ecosystems
- 6.a:  Expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs
- 6.b:  Support and strengthen the participation of local communities in improving water and sanitation management

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Vice Chancellor
MUET, Jamshoro

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