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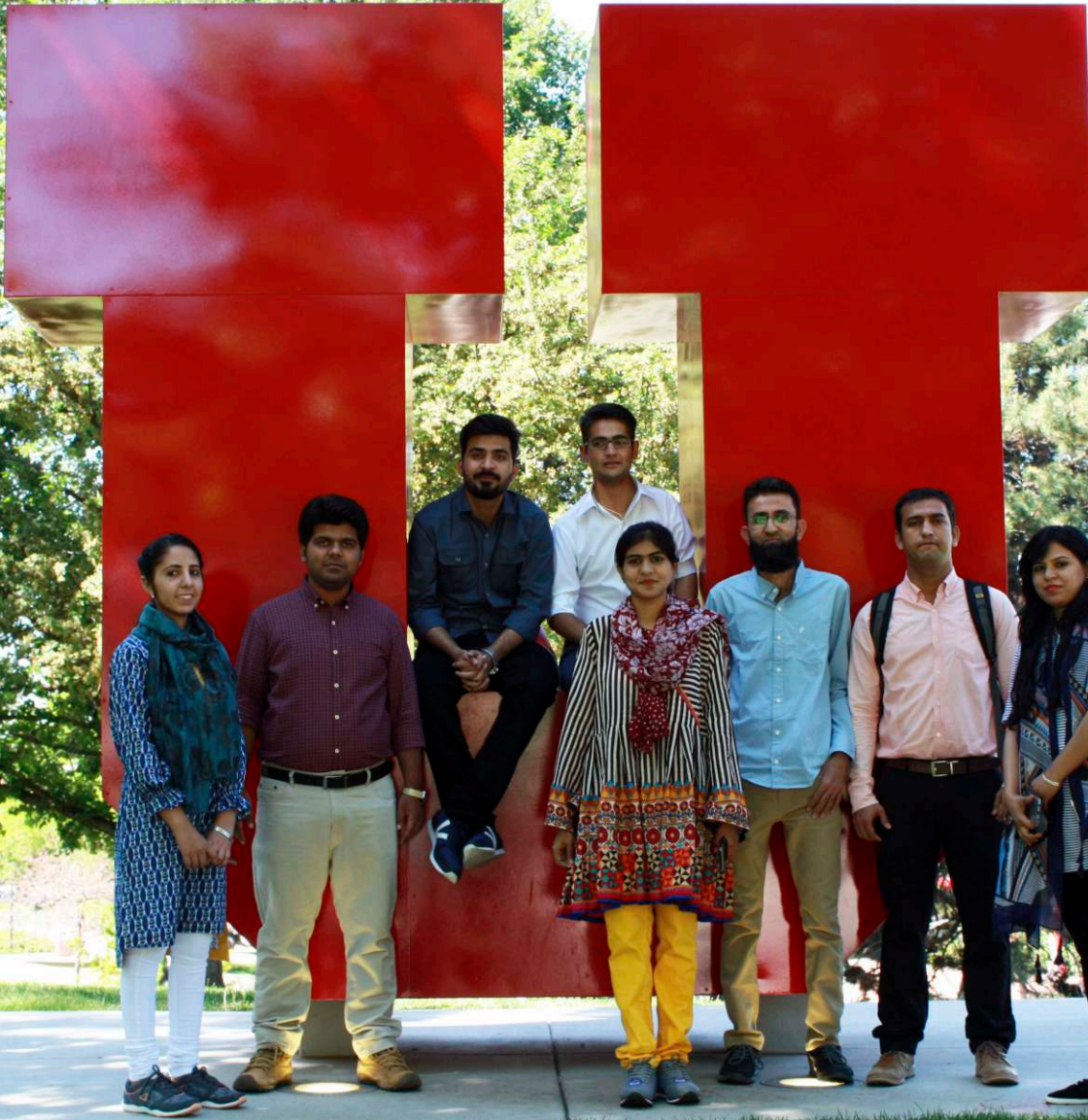


USPCAS-W
save water save life

Quarterly

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MEHRAN UNIVERSITY
of Engineering & Technology
Jamshoro, Sindh, Pakistan



National Water Policy - Experts Review at USPCAS-W MUET

A consultative meeting on recently approved National Water Policy was held at the U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET Jamshoro. The meeting was chaired by Dr. Tariq Banuri of the University of Utah, USA, and attended

by several national experts and visiting delegation of the University of Utah, USA. Dr. Banuri briefed the participants about various elements of the policy, including the need to develop a coherent framework to guide its implementation. He explained that water specific Sustainable Development Goal (SDG-6) is a useful framework to achieve this objective..

The participants noted various gaps and identified research needs to support policy implementation.

Dr. Aslam Chaudhry of the University of Utah mentioned the need for elaborating specific actions and measures to translate policy into action. For strengthening linkages between research and policy implementation, he suggested to first assess the current status of research relevant to various policy objectives and then to identify areas for more analysis.



The participants discussed and identified several critical areas for further study.

Dr. Steve Burian of the University of Utah mentioned that the UU team would be happy to provide technical assistance to USPCAS-W faculty and other national researchers in implementing the research agenda.

Dr. Fateh Mari, Coordinator of Water Sector Improvement Project (WSIP) Government of Sindh, mentioned that creating a workable structure by careful mapping of policy objectives with issues outlined in the policy document will help in advancing the policy implementation. Dr. Mari also informed that Sindh water policy is currently under preparation and that consultation with different stakeholders is underway.

Dr. Bakhshal Lashari, Project Director of the Center said that coordination mechanism among various

departments needs to be defined for effective implementation of the policy.

Other experts who participated in the meeting and shared their ideas included, Dr. A b u b a k r Muhammad, Director Center for Water Informatics &

Technology (WIT), Lahore University of Management Sciences (LUMS), Dr. Muhammad Naveed Iftikhar, a policy advisor, Prof. Mushtaq Mirani, Engr. Ehsan Laghari, water expert, Dr. Rasool Bux Mahar, Deputy Director (Academics and Research), and faculty from the University of Utah and MUET Water Center. Principal recommendations that emerged from the meeting include addressing the inconsistencies in the policy document, mapping of policy objectives with critical issues to be addressed, clustering of policy measures and actions in line with the targets of water SDG, mainstreaming cross-cutting issues, defining obligations of federal and provincial governments, and setting targets and milestones, among others.

(For detailed meeting note please follow the link : <http://water.muuet.edu.pk/wp-content/uploads/2018/07/Review-of-National-Water-Policy.pdf>)



World Bank Delegation Visits USPCAS-W MUET

World Bank delegation comprising of Ms. Tazeen Fasih, Lead Economist and Ms. Ghazala Syed, Education Training Specialist visited U.S. Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET Jamshoro. The aim of the visit was to learn about the facilities of center and the scope of work being carried out by the Center. They held a meeting with the management and technical team of the Center and the University of Utah, USA.

Dr. Bakhshal Lashari, Project Director of the Center briefed the World Bank delegation about the academic research, training and outreach programs of the Center.



University of Utah May 2018 Training Mission: Faculty-Students Capacity Building



The University of Utah May 2018 Mission visited center for 10 days from 3 – 12 May and conducted different capacity building and collaborative research activities for faculty and students of the center.. The mission included Dr. Tariq Banuri, Dr. Steve Burian, , Dr. Mohammad Aslam Chaudhry, Dr. Mike Barber, , Dr. Jennifer Weidhaas, Dr. Rick Beriet, Dr. Tim Edgar, Dr. Jeff Ullman, Dr. Mercedes Ward and two PhD Scholars: Ms. Quinn Sahulka and Mr. Rubayat Jamal.

This time the theme of the mission was: Improving Research with Attention to Details. The mission emphasized on reinforcing the essential details of the core research activities by conducting two learn-by-doing workshops: i. Applied Statistics for Research and ii. Research Proposal Development.

Applied Statistics for Research:

Dr. Tim Edgar, Professor of Geography at University of Utah, conducted the workshop on Applied Statistics for Research for USPCAS-W faculty. In the workshop, Dr. Edgar introduced some basic statistical tools and explained methodology and process of hypothesis formulation and testing; calculations of sampling means, and analysis of variance. The workshop participants used sample data to learn the process and also applied these tests to their research data samples.



Research Proposal Development:

Research Proposal Development Workshop was conducted by Dr. Mike Barber and Dr. Jennifer Weidhaas, both Professors of Civil and Environmental Engineering, University of Utah, USA. They described two approaches to research proposal development, one was to identify funding opportunity and then develop an idea, and other was to develop ideas first and then search for funding opportunity. However, the focus of this workshop was to identify funding opportunity first and then develop

best fitting idea. MUET faculty participants learned how to identify research question, explore funding opportunities considering Pakistan's scenario and to write proposal for the identified proposal call. Furthermore, the participants were also introduced to organizational and time management tips and tools for proposal preparation. In the end of workshop, some USPCAS-W MUET faculty shared their insight on successful proposals to external funding opportunities.



UU Mission Students Engagements:



Professor Rick Bereit, University of Utah conducted Thesis Writing Workshop and delivered seminars and exercises to improve accuracy and effectiveness of the students' technical and professional writing in English targeting improvement in thesis writing.

Professor Tim Edgar conducted Applied Statistics Workshop for students, which was aimed to provide training in the use of descriptive and inferential statistics that participants can apply in their current and future research.

UU Scholars Engagements:

Utah PhD Scholars Ms. Quinn Sahulka and Mr. Rubayat Jamal interacted with MS and PhD Scholars of the center and conducted experiments in the lab. They collected drinking water samples from one of the tertiary health facilities at Hyderabad for biological, chemical and physical analysis. The scholars further prepared culture plates for bacterial identification in Water Quality Laboratory of the Center.

At the end, the mission also conducted the individual consultation, advisory, administrative and informational meetings with the faculty, staff and MS/PhD Students of the Center.



Brainstorming on Center's Sustainability Plan



Dr. Mohammad Aslam Uqaili, Vice Chancellor MUET chaired 1st session of the leadership meeting on the sustainability of USPCAS-W MUET, Jamshoro. Dr. Uqaili pledged that after the USAID funding ends in December 2019, the MUET would continue supporting the Center along with striving for getting additional financial support and policy guidelines from Higher Education Commission (HEC) of Pakistan, Government of Sindh, and other potential revenue streams. Dr. Tariq Banuri, Associate Director USPCAS-W University of Utah, made some suggestions and recommendations for fundraising to

the sustainability of the Center; and also suggested for preparation of five-year sustainability plan. Earlier, Dr. Bakhshal Lashari, Project Director USPCAS-W presented one-year sustainability plan and Dr. Steve Burian, Director USPCAS-W University of Utah (UU), USA made a presentation on "Motivators enabling Sustainability" for sustaining the activities of the Center.

Dr. Tauha Hussain Ali, Pro-Vice Chancellor MUET chaired second session of the leadership meeting. Dr. Rasool Bux Mahar, Deputy Director (Academics and Research) gave a presentation on cost recovery of Center's laboratories and MUET

clean water entrepreneurial opportunities. Dr. Kazi Suleman, Manager Research USPCAS-W, briefed about the business and corporate engagement for fundraising to the sustainability of the Center. Mr. Waqas Ahmed gave a presentation on executive training courses and workshops. Concluding the session, Dr. Tauha Ali advised to do SWOT and cost-benefit analysis for the potential plans. These plans included initiatives like; establishment of a Training Unit, marketing of research outputs, and linkages with the industry, and commercialization of laboratory services etc.

Habib University Dean Prof. Dr. Craig Phelan

Prof. Dr. Craig Phelan, Dean, School of Arts, Humanities, and Social Sciences, Habib University Karachi visited USPCAS-W MUET. He held meeting with Dr. Bakhshal Lashari, and University of Utah team comprised of Dr. Steve Burian, Dr. Tariq Banuri and Dr. Mohammad Aslam Chaudhry. In meeting, they shared the ideas of common interest pertaining to the academic and research opportunities for future collaboration.

Dr. Craig also went around the USPCAS-W building and laboratories, and interacted with the students presenting Posters of their research at the Center.



World Environment Day: Beat Plastic Pollution

Talking about the theme "Beat Plastic Pollution" of World Environment Day 2018, Dr. Rasool Bux Mahar, Deputy Director (Academics and Research) of the Center said that the use of plastic in Pakistan has increased at the alarming level, pollutes the rivers and seas. Consequently, poses threat to the climate and ultimately affects the lives of people, animal and plants. **"Environment is actually a human attitude towards nature"**, he added. He stressed on taking necessary steps to minimize the use of plastic as required for the healthy environment and healthy life. He further said that the MS/PhD Scholars of the Center were being taught for healthy environmental practices in their professional and personal lives.



5-Day Workshop on Improving Groundwater Management and Modeling

Five-Day Training Workshop on Improving Groundwater Management and Modeling was held at USPCAS-W MUET, Jamshoro. The workshop was part of a four-year project *"Improving Ground Water Management to Enhance Agriculture and Farming Livelihood in Pakistan"* sponsored by the Australian Government through the Australian Centre for International Agricultural Research (ACIAR) and Charles Sturt University (CSU), Australia. The project has twelve implementing partners from Pakistan including MUET Water Center, Pakistan Council of Research in Water Resources (PCRWR), Sindh Agriculture University (SAU) Tandojam, University of Agriculture Faisalabad (UAF), NED University Karachi, Arid Agriculture University Rawalpindi, Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS) Quetta, the provincial irrigation departments of Punjab, Sindh and Balochistan, WAPDA and others.

Dr. Abdul Latif Qureshi, Professor and sectional head of Hydraulics Irrigation and Drainage (HID), USPCAS-W MUET informed that this training workshop helped the participants to design the conceptual model and to review flow packages used to construct groundwater models in Sindh, Punjab and Balochistan site areas. Dr. Qureshi warned that in the prevailing



scenario, the extraction of groundwater would cause the deterioration of water quality and quantity. He further said that salinity, as well as the rapid depletion of groundwater is affecting farming and livelihood of the people of Pakistan.

On this occasion, Dr. Jehangir Punthakey, Project Coordinator said that the project focuses on different canals and basins of Pakistan where the groundwater data analysis and modeling will be done. It includes Pishin Lora Basin (PLB) of Balochistan, Rohri Canal at Shaheed Benazirabad and Naushehro Feroze Districts of Nawabshah Division of Sindh province and Lower Bari Doab Canal (LBDC) of Punjab. He added

that through this project, the groundwater management would be significantly improved through capacity building of stakeholders and the farming community.

Twenty participants from project implementation partners and students of USPCAS-W MUET participated in the workshop. The training also included field visits to Kazi Ahmed, and Shaheed Benazirabad for field experiment. The resource persons for the workshop included Dr. Usman Khalid Awan from ICARDA, Mr. Naveed Iqbal, Deputy Director PCRWR, Dr. Muhammad Shafqat Ejaz from NED University Karachi, and Mr. Waqas Ahmed, Assistant Professor USPCAS-W MUET.

Encouraging Reading Habits

USPCAS-W Literary Society has established a bookshelf at Center's Canteen for promotion of reading habits among the students. Inaugurating the bookshelf Dr. Bakhshal Lashari said that reading books is one of the most significant habits. He suggested the students to spend their time in reading books apart from their course work. President of Literacy Society MS Student Imran Khan briefed about the objectives of the society. Initially 20 books including *The Alchemist*,

The Kite Runner, *Exist West*, *A brief history of Time*, *The Godfather*, etc. placed at the book shelf. The students, faculty, and staff of the center attended the bookshelf inaugural ceremony and vowed to contribute their books of general reading for this great cause.

"If you read more, you learn more and if you learn more, you achieve more", Dr. Lashari



Faculty and Staff Proceed on Exchange Training to USA



The 5th group of students and staff of the center including three females departed for Summer Exchange Training to University of Utah and Colorado State University, USA. Exchange training program is a regular feature of the Center for capacity building of the faculty, students and technical staff. The program is fully funded by the USAID Pakistan.

The goal of this particular summer exchange program 2018 is to inspire

next generation of water entrepreneurs in Pakistan. The program emphasis on to develop business, ventures and technologies to help achieve targets of Sustainable Development Goal (SDG) – 6 i.e. “clean water and sanitation for all”.

The group participants Dr. Muhammad Rizwan, Assistant Professor, Mr. Mehran Khan, Water and Environment Laboratory Technician, MS scholars Ms. Sorth

Ansari, Mr. Aizaz Ali Qureshi, Ms. Sabira Muneer, Mr. Asrlan Mehmood, Mr. Muhammad Shoaib Jamro and Marvi Sharma will spend their exchange stay at University of Utah whereas Mr. Muneer Ahmed Memon, Soil Scientist will learn exchange experiences at Colorado State University, USA.

Before this cohort, 68 students and 13 faculty members including 23 female visitors have availed the exchange scholarship opportunity so far.

Success Story

The thought of getting Ph.D. from a well reputed University was on my mind since I started my undergraduate studies. I was fortunate to have the encouragement of my family and mentors to explore my abilities. After graduation in Civil Engineering, I decided to pursue my Masters in one of the best institute, U.S.-Pakistan Center for Advanced Studies in Water. The most distinctive feature of the Master's program is the exchange visit at the University of Utah, was enormously helpful for my professional development. My research interests led me to apply to the University of Utah for the Ph.D. degree. Here I'll work as a Graduate Research Assistant with Dr. Steve Burian.

Daniyal Hassan
USPCAS-W Alumnus 2015



Graduate Seminars and Lectures

Graduate Seminar on Water Treatment held at USPCAS-W MUET



Dr. Ghulam Mustafa, a Membrane Scientist and Assistant Professor, International Center for Chemical and Biological Sciences (ICCBS), University of Karachi conducted seminar on an Efficient Anti-Fouling Strategy to Enhance the Applicability of Pressure-Driven Membranes in Waste Water Treatment, held at the USPCAS-W, MUET.

While, delivering his lecture, he said that membrane technology can be a flexible and viable long-term strategy for treatment of water.

He said that water is an extremely valuable commodity on earth and is requisite for life, survival and economic development; therefore, adequate processing of water (cleaning and recycling) is essential. He added that with the use of modern membrane technology the water could be treated effectively and economically.

Lecture on “International Negotiation on Climate Change and Pakistan's Response”

Dr. M. Zia-ur-Rahman Hashmi, Head, Water Resources & Glaciology Section at Global Change Impact Studies Centre (GCISC), Government of Pakistan delivered a special lecture on “International Negotiations on Climate Change and Pakistan's Response” at USPCAS-W MUET Jamshoro. MS students of the Integrated Water Resources Management (IWRM) program participated and benefited from this lecture as a part of their course. Mr. Ghulam Hussain Dars, Assistant Professor IWRM of the Center facilitated the speaker in the session.



Field Visit and Event Participation:

Dr. Bakhshal Lashari, Project Director USPCAS-W MUET, participated in 3rd Indus Basin Knowledge Forum - Managing System under Stress: Science for Solutions in the Indus Basin, convened in Laxenburg, Austria from 31st May to 2nd June, 2018. The forum provided an interface to develop an equitable and sustainable future direction of the basin, while with an emphasis on science-based decision making. The integration, between the multitude of disciplines as well as both upstream and downstream, working with a basin-wide approach, offered additional opportunities to develop and share knowledge and find solutions.



Energy Research Expo 2018

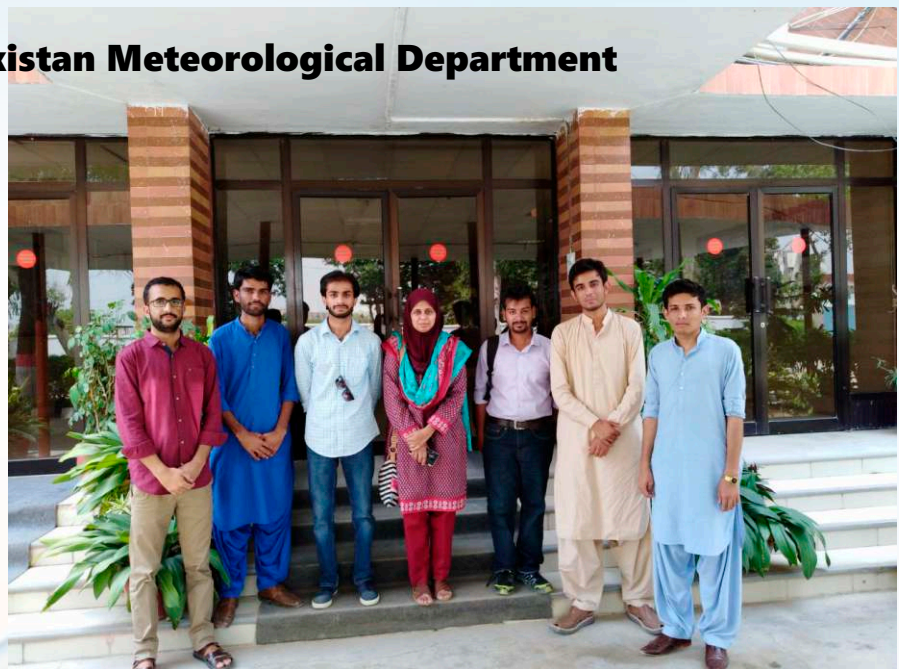


Faculty and students of USPCAS-W participated in Energy Research Expo 2018 Islamabad which was organized by U.S.-Pakistan Center for Advanced Studies in Energy (USPCASE) housed at National University of Sciences & Technology (NUST), partnered by Arizona State University (ASU) USA. The expo aimed at showcasing potential in providing renewable and sustainable green energy solutions to cater to Pakistan's increasing energy needs. The expo was inaugurated by Director Education USAID Dr. Christopher Steel. The one-day exhibition

showcased over 40 research projects, including 10 from the faculty and students of USPCAS-W MUET.. Participants from the Water Center included Prof. Dr. Rasool Bux Mahar, Deputy Director (Academic and Research), Prof. Dr. Zubair Ahmed, Head Environmental Engineering, PhD scholars: Mr. Muhammad Muqeet, Mr. Asim Abro, and MS students: Mr. Muhammad Shoaib Jamro and Ms. Shane Zehra.

IWRM Students visit Pakistan Meteorological Department

USPCAS-W students of Integrated Water Resource Management IWRM Program (Batch 2018) visited Pakistan Meteorological Department (PMD) Karachi, under the guidance of Dr. Arjumand Zaidi. They visited Early Warning Tsunami Center, Weather Station and met PMD officials. The students were briefed about the functions and working of the Tsunami early warning system and also introduced to different equipment and sensors in use for the purpose. On this occasion, the PMD official briefed about the hazard planning and risk management.



Sukkur IBA University Students Visit USPCAS-W MUET

Sukkur Institute of Business Administration (IBA) University students visited USPCAS-W MUET. They were taken around the center and its facilities while Mr. Muhammad Ali, Assistant Professor and Academic Coordinator of the Center briefed them about the academic and research programs of the Center. Mr. Arfan Ali, the President of the Society of Water Managers (SWM) also briefed the students about the activities of the society.



Social Gathering held at MUET's New Women Hostel

A Social Gathering was held at MUET's New Women Hostel in which female students as well as management and faculty of the center participated. The students shared their suggestions to improve the administration and management of the hostel. On this occasion, student, faculty and management staff planted trees.



Awareness Session on Fulbright Scholarship

Syed Faraz Hussain, Education USA Adviser, United States Educational Foundation in Pakistan (USEFP) conducted an awareness session on Fulbright scholarship program and Graduate Record Examination (GRE) at USPCAS-W MUET on April 09, 2018. Vast majority of the students of the Center and other departments of the university participated in the session and asked many questions and clarifications regarding the scholarship program and GRE exam. Mr. Hamid Ali Shaikh, the Exchange Scholarship Coordinator at USPCAS-W MUET facilitated the session.



Students Exchange Experiences

Experience of Exchange visit at University of Utah (USA)

"I am thankful to USAID for providing me a wonderful exchange opportunity to visit University of Utah (UU), USA. When I arrived at Utah, I tried to understand the speedy language and difficult phonetics of American people but I with the help of my Utah teachers and mentors gradually developed the pitch to understand as well as to speak them in their own language.

"I enjoyed and learned lot during the exchange visit at USA, so many activities, like field trips, culture events, meet with kind peoples, hiking on mountains, ice skating are my wonderful and unforgettable events".

Anila Memon

PhD Scholar IWRM-2015



Going on exchange visit and exploring different parts of USA was a great opportunity for me. I have learned advanced research techniques along with improved communication skills. I have been extremely inspired with positive attitude of teachers and students in sharing knowledge and skills. The research mentoring was very fruitful for me. I am thankful to USAID and the MUET Water Center for the opportunity of exchange visit to USA, which was once my dream."

Nageena Makhdoom

MS Scholar, HID 2016



"It was a wonderful experience for me to visit University of Utah. The combination of courses and co-curricular activities, social events and field exposure visits were all blended in a way to give the exchange student a pleasant learning environment. I have been awarded with the Certificate and Special Achievement Award."

Zia Uddin Abro

PhD Scholar HID-2015



"I attended global health course, and leaned the global perspective regarding the health. I also won the best foreign language award in the term project. The water seminars and field visits helped understand water related issues and cost-efficient sustainable solutions based on modern research. This visit also helped me explore the United States by visiting new places, people and understand diverse cultures."

Imdad Ali

MS Scholar, WaSH-2016

"My experience to study at University of Utah had been incredible. I learnt extensive laboratory analysis and various anaerobic reactors related to my research work. I studied "Water Reuse" course, which helped me understand how to cope with critical water related issues in Pakistan, by applying the best possible solutions being used in other countries. The field trips were extremely adventurous and provided an opportunity to experience beautiful landscapes, camping, cultural activities and most of all, academic knowledge. It is a great opportunity to polish oneself; by exploring new places, technologies and meet people belonging to diverse backgrounds."

Jassica Lawrence

MS Scholar, Env.Eng.-2016



Alumni Corner: Success Stories

I grew up in a small town of Matiari in Sindh Province. Since childhood, I have been a talkative and curious person but over the years I noticed that our educational system and society discouraged people who would question. I was often mocked for being outspoken; eventually, this led me to loose my confidence and burry myself in books. My voice slowly became stranger to me, and silence took its place. Curiosity was replaced by fear. Confidence was replaced with torment, and societal norms became my reality. I started believing that women were not supposed to have a voice but would often question that too. Luckily, I found those answers when I began my master's program at the USPCAS-W. This program helped me find my voice, perspective, goals, and passion. The center provided an exchange training opportunity at University of Utah, which indeed opened enthralling avenues for me to explore.

During my exchange visit at USA, I had an opportunity to exhibit my research interests and skills, which ultimately paved the way for an offer of a scholarship to pursue PhD at University of Nevada Las Vegas (UNLV), USA.

I am hoping this transition will help me become a better person who will serve Pakistan. Thanks to USPCAS-W MUET for enabling me to reach where I am today but more importantly for helping me find 'MySelf'. I would encourage all the girls in the Science, Technology, Engineering and Mathematics (STEM) field to have your own voice and make yourself heard!



Rubab Saher Bashir
USPCAS-W Alumnae 2015



Danyal Aziz
USPAS-W Alumnus 2015

Getting admission in USPCASW is a decision that I will always cherish. At the USPCASW, I got a platform to realize my true potential. During exchange visit to The University of Utah in fall 2016, I started to think about pursuing higher studies at a reputable university like The University of Utah. When I went back to Pakistan in spring 2017, I had to complete my research and pass out by August 2017. Soon after graduation, I joined Abasyn University Peshawar as lecturer. During that time, I got an offer for a research position at the Global Change Impact Studies Center Islamabad where I worked with very able water and climate researchers. Dr. Tariq Banuri was the Executive Director of GCISC at that time and under his visionary leadership, I learnt and experienced a lot. Due to the nature of my job, I strongly felt to start PhD sooner so, I applied to University of Utah. Currently, I am working with Dr. Steve Burian in the department of Civil and Environmental Engineering. I want to express my sincerest thanks to my mentors at the USPCASW and GCISC who offered their kind help, valuable guidance, and believed in me.

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