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**Centers for Advanced Studies in Water**



Quarterly

**USPCAS-W**  
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# Newsletter

Vol. III | Issue: IV

**21<sup>st</sup> Convocation**  
Mehran University  
of Engineering & Technology  
4<sup>th</sup> Session  
January 8



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**MEHRAN UNIVERSITY**  
of Engineering & Technology  
Jamshoro, Sindh, Pakistan



**THE UNIVERSITY OF UTAH**





## International Science-Policy Conference on Climate Change

Three-Day International Science-Policy Conference on Climate Change in Pakistan was jointly organized by Global Change Impact Studies Centre (GCISC), USPCAS-W MUET, The University of Utah USA, Higher Education Commission (HEC) Pakistan and other academic, research and development institutions at Islamabad on December 18-20, 2017.

His Excellency Mr. Shahid Khaqan Abbasi, Prime Minister of the Islamic Republic of Pakistan, was the chief guest and chaired the inaugural session of the conference.

Addressing the session, the Prime Minister said that climate change had become one of the biggest challenges for humanity and had united all international community on one platform for action against its hazards. He said that Pakistan is committed to playing its role in global efforts for tackling climate change by adopting climate friendly-policies and meeting its international commitments.

He said that the new climate-friendly policies and intuitions corroborate that climate change is among the top priorities for the government of Pakistan. He added that Pakistan's climate policy revolved around three

objectives; saving human lives, promoting sustainable development and honoring the country's international commitments.

Speaking on occasion, Federal Minister for Climate Change Senator Mushahid Ullah Khan said the government aims to strengthen Pakistan's research capacity in climate change.

GCISC's Executive Director Dr. Tariq Banuri said that the conference created an opportunity for stakeholders to deliberate on Pakistan's development in the context of climate change.

Prominent speakers in the inaugural session were Prof. Steve Burian - Director USPCAS-W University of Utah USA, Dr. Tom Downing - President and CEO, Global Climate Adaptation Partnership of the United Kingdom, Dr. Youba Sokona - Special Adviser on Sustainable Development, the South Centre of UK, Dr. Adil Najam, the former Vice Chancellor of LUMS and Prof. Dr. Mohammad Aslam Uqaili, Vice Chancellor MUET.

Addressing the closing ceremony, Sartaj Aziz, Deputy Chairman Planning Commission, said that efforts are underway to tackle climate change through different projects.

The Conference provided a platform to more than 800 scientists, policy makers, lawyers, academics, media and civil society activists for in depth discussions and consultations through thematic workshops, roundtables, Solutions Exhibition, climate courses and sharing of experiences by climate-affected communities. The five themes of the conference were: Climate Science, Climate and Water, Agriculture & Food Security, Migration, Policy & Finance, Impacts & Adaptation.

The conference focused on to make connections between climate change and its effects on a variety of vital national interests, including: water and food security, energy production, and public health.

The USPCASW took a leading role at the conference in addressing the issue of water security.

The Center exclusively organized nine (09) technical sessions on Climate Change and Water Resources in which 26 renowned research scholars presented their research papers.

The Center also hosted a Round Table meeting in which participants stressed on the collaborative efforts for research in groundwater management.





## USPCAS-W Celebrates 1<sup>st</sup> Graduate Ceremony

USPCAS-W organized 1<sup>st</sup> Graduation Ceremony for awarding degrees to the 1<sup>st</sup> batch of MS students. The ceremony was held as 4<sup>th</sup> session of 21<sup>st</sup> Convocation of MUET in the Center's Auditorium.

Vice Chancellor MUET Prof. Dr. Mohammad Aslam Uqaili chaired the ceremony whereas Her Excellency Grace Shelton, US Consul General Karachi and Dr. Tariq Banuri, Professor from the University of Utah and Director GCISC, attended the ceremony as the guests of honor.

Speaking on the occasion, Dr. Mohammad Aslam Uqaili said that learning is an unending process which leads to knowing oneself, the neighbors and the world around for contribution of the learning and to bring the prosperity in the life of an ordinary man. *Universities are now working on Quadruple Helix approach by involving academia, industry, government, and communities to integrate the efforts to bring the change*, he added.

He said that academic and research programs at the Center were well aligned with the market needs and the students are adequately trained,

guided and mentored accordingly. He shared that 70% of the graduating students of the Center have already got jobs in different organizations while three of these have earned Ph.D. scholarship from the United States for further studies in the water sector.

The Vice Chancellor expressed his appreciation for USAID support and thanked American people for supporting education and health projects in the province. He also thanked the University of Utah, Government of Sindh, HEC and other organizations for their full support all along.

The Honorable Guest Grace Shelton, US Consul General expressed that American people believe in strengthening bilateral relations with people of Pakistan and support for development in education, research and health sectors of the country. She congratulated the graduating students and expressed that the departing students with their newly acquired skills and knowledge will make essential contributions to enhance an access to clean water, sanitation, and proper hygiene;

protect water-related ecosystems; and help Pakistan adapt to the threats posed by climate change.

Speaking in the ceremony, Prof. Dr. Tariq Banuri highlighting the supportive and dedicated role of Prof. Dr. Mohammad Aslam Chaudhry - the Chief of Party, said that the University of Utah in Dr. Chaudhry's coordination always has pleased to support in advancing the development and the sustainability of the Center. Dr. Banuri further opined that pursuit of excellence is a habit and that we have tried to inculcate such habits in students for achieving excellence in selected segments of their degree program.

In the ceremony, the degrees were conferred on over 31 MS Scholars of the first batch. Besides, three students viz. Ms. Iram Sifat and Mr. Daniyal Aziz from EnvEng and Mr. Daniyal Hassan from IWRM, were presented shields and certificates of merit on their outstanding performance.

MUET Officials, senior faculty, former vice-chancellors, water experts, civil society representatives, students' parents attended the ceremony.



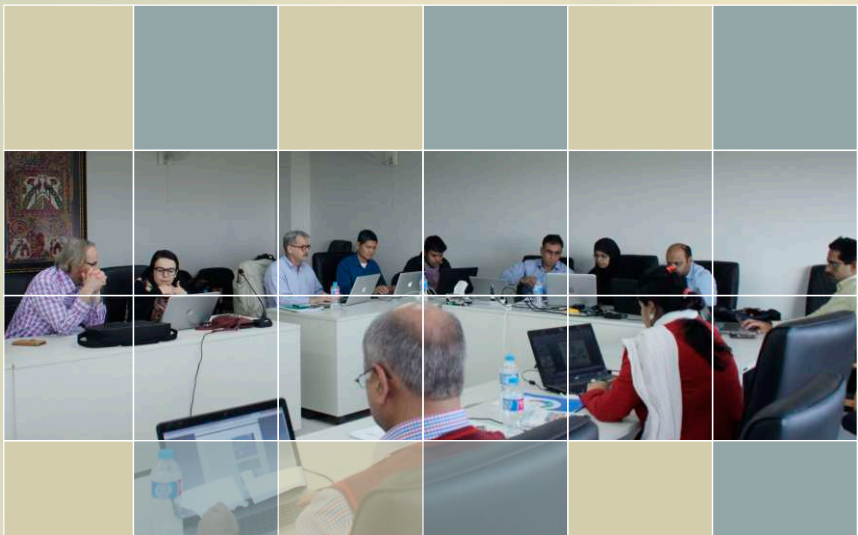


# The University of Utah

## December Mission

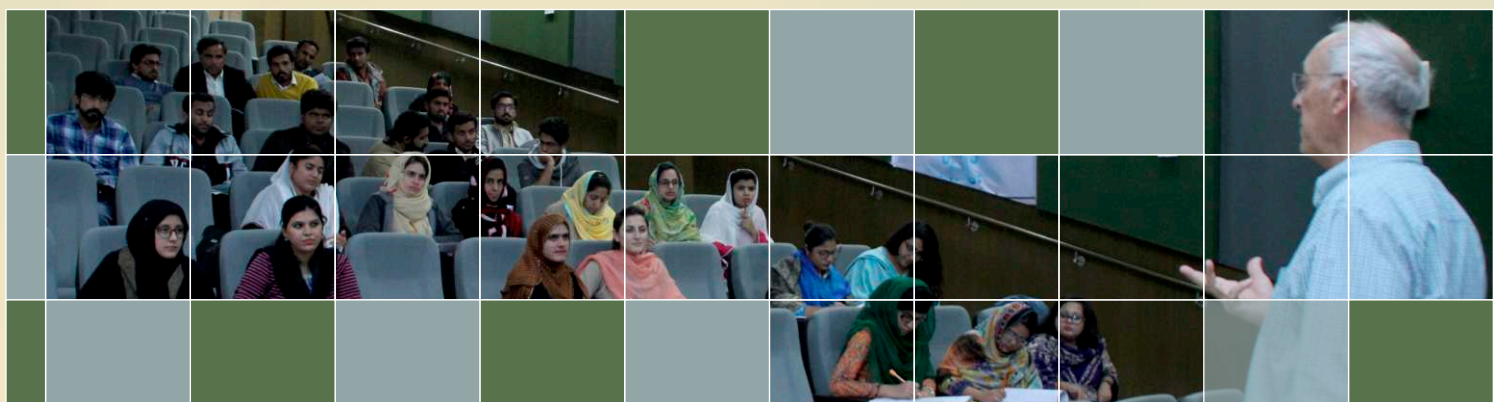
The University of Utah (UU) December Training Mission led by Prof. Dr. Steve Burian visited the Center. Dr. Rick Bereit, Dr. Allan Andales, Dr. Tim Gates, Dr. Jeff Ullman, Dr. Mercedes were in the delegation, whereas the theme of the Mission was: **Taking the Next Step.**

The UU December Mission was especially the student-focused one, and consisted of a series of different activities which included thesis writing workshop, research meetings, a proposal writing workshop, and administrative and informational meetings with the students.



### Thesis Workshop:

Prof. Rick Bereit facilitated the workshop for the MS and Ph.D. students of 2016 batch. The students were involved in formulation of their research priorities by starting to write their proposals. The goal of this workshop was to improve student accuracy and effectiveness in their technical and professional writing in English. The approach focused on rules and standards of correct grammar, syntax, and sentence and paragraph construction, using short PowerPoint presentations.



### Proposal Writing Workshop:

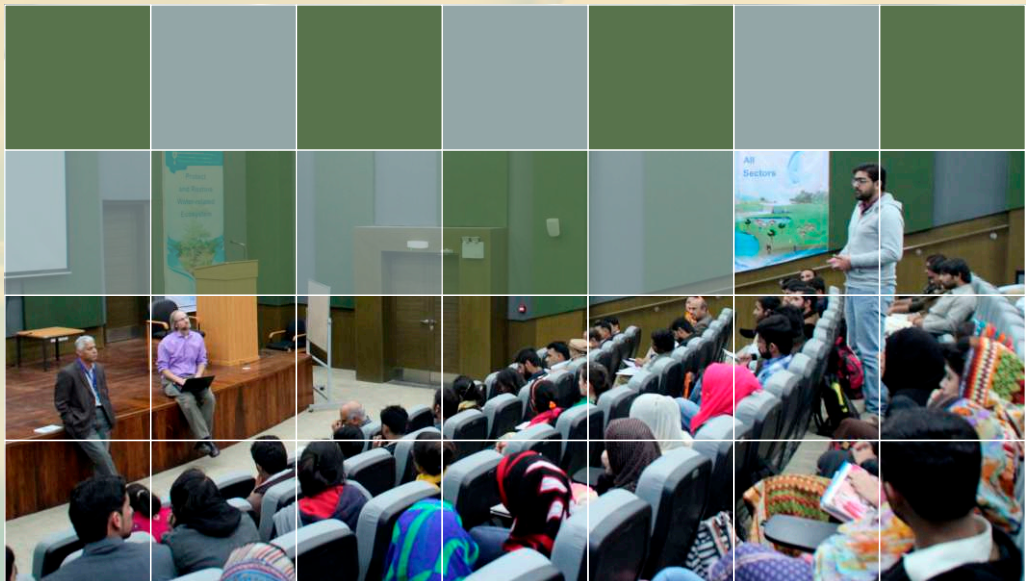
Prof. Rick Bereit also facilitated the proposal writing workshop. Overall goal was to clarify the purpose and contents of a proposal. The workshop stimulated interest in good writing habits among participating students and helped them develop their creative thinking methods. Establishing guidelines for writing efficient and objective-oriented proposals were the primary objectives of the workshop.

### Research Meetings

The selected students were invited to participate in project and research group meetings. Students learned to describe their research goals and objectives and how to prepare updates regarding progress, preliminary results, and other matters related to their research.

### Administrative and Informational Meetings

All students were involved with the departmental meetings covering a range of essential topics including semester exchange program, performance expectations, examples of success stories, and other administrative items. The students also participated in question and answer session with The University of Utah and Colorado State University faculty.





## HEC Executive Director Visits the Center

Prof. Dr. Arshad Ali, Executive Director Higher Education Commission (HEC) Pakistan, visited MUET Water Center in October 2017. While visiting the Center, he said that the community is supposed to be the ultimate beneficiary of research carried out by the academia in Pakistan. He said the achievement of the Sustainable Development Goals (SDGs) depends on the industry-academia and government linkages.

He said that the days were gone when the research work was compiled and decorated for the bookshelf of libraries but now the modern Information Communication Technologies have paved the way for various vistas and new corridors of research especially the applied research. While interacting with the Center's Ph.D. Scholars, he inquired about their research work, implementation and applicability of

their results: and the target beneficiaries. He emphasized to initiate the entrepreneur activities based on their respective research and also to build strong and effective linkages with industries and communities. Dr. Ali visited all the sections, laboratories and library of the center and appreciated the Center's efforts for undertaking various applied research projects.

He also thanked US Agency for International Development (USAID) Pakistan for the generous support in establishing this water research center at MUET. While touring the Center's building, Dr. Karman Ansari, Director Career Counselling, and Placement briefed HEC Executive Director about the targets, facilities and research projects of the Center. He also met with faculty of the Center and representatives from the University of Utah, USA.



**Academia in Pakistan has to work for knowledge transfer as to benefit the community, says Dr. Arshad Ali, HEC Executive Director.**

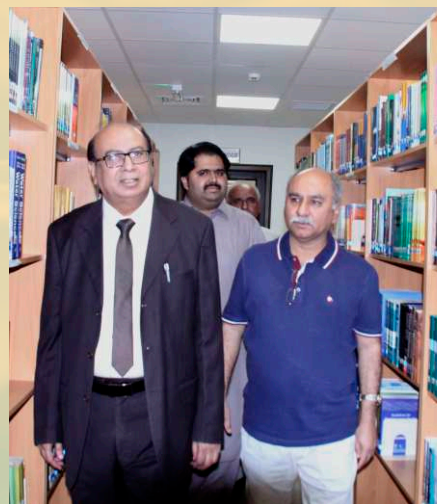
## Chairman CIEC visits the Center

Chairman of Charter Inspection and Evaluation Committee (CIEC), Government of Sindh and Former MUET Vice Chancellor Prof. Dr. Abdul Qadeer Khan Rajput visited the Center. Dr. Kamran Ansari, Director Career Counselling and Placement briefed Dr. Rajput about the facilities provided to the students, faculty, and staff in MUET Water Center.

Dr. Rajput while expressing the great pleasure said that the process for the establishment of the Center was initiated during his tenure as MUET Vice Chancellor.

He appreciated the MUET management and Center's administration for providing conducive environment to the students and faculty for their higher learning and research activities at the Center. He also appreciated the communication and media team for updating and disseminating the Center's activities & achievements.

Dr. Rajput met with the faculty, students of the Center and also interacted with the representative from the University of Utah, the partnering university of the Center.





## Sindh Chief Minister Meeting: MUET to assist Sindh Government in Safe and Clean Drinking Water Initiative



Sindh Chief Minister Syed Murad Ali Shah chaired a high-level meeting on the provision of safe and clean water to the people of the province, held at Karachi in December 2017.

In the meeting, Sindh Chief Minister sought suggestions from researchers of higher learning institutions as to ensure the availability of safe and clean drinking water in all districts of the province.

MUET Vice Chancellor Prof. Dr. Mohammad Aslam Uqaili, Project Director USPCAS-W MUET Prof. Dr. Bakhshal Khan Lashari and a delegation from the University of Utah, USA attended the meeting.

Deliberations on the matter led to formulation of a committee, headed by Vice Chancellor NED University of Engineering and Technology Dr. Sarosh Hashmat Lodi, to find out the condition of the existing system of safe and clean drinking water.

To help the committee technically, the MUET Water Center was assigned a role whereby a proforma was designed for mapping the present system of water supply in the

province. Through the prescribed proforma, the desired data can be collected to draft the policy guidelines and make informed decisions for provision of safe and clean water in all districts of the province.

It was known that Sindh Chief Minister Syed Murad Ali Shah had taken the step following the Supreme Court's directives of setting up models for provision of safe and clean drinking water to the people of Sindh.

He was keen to resolve the issue with assistance, suggestions, and recommendations of the academia and other organizations of relevance to the issue.

While quoting the meeting, Dr. Uqaili addressing in DICE Energy and Water Conference said that MUET had endeavored many times to find out ways and means to resolve the issues of water and energy crisis being faced by the country, adding that it was a responsibility of higher learning institutions to create awareness among the masses and to find out solutions to the country's problems.

## Formulation of Sindh Water Policy

Sindh Irrigation and Drainage Authority (SIDA) in collaboration with the Center organized 2nd consultative meeting of water experts on Formulation of Sindh Water Policy (SWP).

Dr. Asadullah Kazi Chancellor ISRA University Hyderabad chaired the meeting. In his opening remarks, Dr. Kazi stressed on the restoration of Indus Delta which is being destroyed by sea intrusion and sea encroachment in the consequences of climate change. He suggested that the SWP may be formed by keeping these factors in the view.

Prof. Dr. Bakhshal Khan Lashari, Project Director USPCAS-W MUET said that formulation of the policy may be focused around the targets of SDG-6.

Mr. Nazeer Ahmed Memon, GM Transition, SIDA said that the policy formulation is of the serious concern in view of the 18th amendment. Mr. Ghulam Mustafa Talpur, Water Governance Consultant gave a detailed presentation on the issues and options for development of SWP.



Prof. Dr. Mohammad Aslam Chaudhry, Chief of Party USPCAS-W University of Utah, USA, Prof. Aijaz Ahmed Qureshi, Technical Specialist in Water Sector Improvement Project (WSIP), Ms. Zahida Detho, Social Activist and other participants from SIDA, USPCAS-W and water sector participated in the meeting and shared their views.



## Seminar on Gender, Water Governance & Peace Building

Strengthening Participatory Organization (SPO) Hyderabad in collaboration with USPCAS-W MUET organized a seminar on Seminar on Importance of Women and Marginalized Group in Water Governance and Peace Building Process, held in the auditorium of USPCAS-W MUET, Jamshoro in December 2017.

The essential purpose of the event was to describe that women and marginalized groups can understand and claim their role in local water governance and related peacebuilding processes and policy gaps in Sindh water management ordinance 2002 regarding exclusion of landless women and marginalized groups in water governing bodies.

Dr. Bakhshal Lashari, Project Director MUET Water Center, Mr. Mustafa Baloch, Regional Head SPO, Dr. Ghazal Panhwar from the University of Sindh, Jamshoro, Mr. Pervaiz Banbhan from SIDA and others spoke in the seminar. The students, civil society representatives from a different organization, participated in the symposium.



## Workshop on Sindh Barrages Improvement Project



A consultative workshop on Sindh Barrages Improvement Project (SBIP) held at USPCAS-W MUET Jamshoro. The participants of the workshop shared their views for the rehabilitations and to improve the operational work of barrages in the province. Engr. Aijaz Shaikh, Project Director SBIP, Prof. Dr. Bakhshal Khan Lashari, Project Director USPCAS-W MUET, official of Irrigation Department, senior faculty of USPCAS-W MUET participated in the meeting.

## Training on Firefighting and Fire Drill

The Center has organized a firefighting and fire drill training for staff, faculty and students.

Mr. Khalid Latif, Founder and Technical Director of KL – TECHNICAL & HSE SERVICES, delivered a presentation on *Human Factor in Safety* in Industry and academia and also discussed the causes of fire. His colleagues Mr. Owais and Abdul conducted sessions on *Basics of Fire-Fighting and Fire Drill*. The participants of the training were also involved in the different exercises of firefighting and fire drill outside of the USPCAS-W building.





# Diploma Course launched

The Center has launched Diploma Course on Flood Forecasting and Flood Hazard Management for the officials of Sindh Irrigation Department. The six-month diploma course is a part of an agreement signed between MUET and Sindh Government on Capacity Building of Officers/ Officials of Sindh Irrigation Department.

Secretary Irrigation Jamal Mustafa Syed, speaking in the launching ceremony held at the Center, said that being located at the lower Indus basin, the people of the Sindh who are allied in the water sector must have to be equipped with better water management skills. He said that irrigation department was looking forward to the MUET Water Center for filling the technical

capacity gaps by imparting sophisticated training to the nominated officers of the department through the diploma course. The secretary emphasized upon the nominated officials to get the maximum benefit from the diploma course and then work efficiently in the field. He thanked the management of MUET and University of Utah for putting all possible efforts in designing the diploma course.



***Universities are now not limited only to produce the graduates but to play an important role in creation, application, and integration of knowledge, says Dr. Mohammad Aslam Uqaili, VC MUET.***

On this occasion, Vice Chancellor MUET Dr. Mohammad Aslam Uqaili said that in today's technological era, the academia has to play a significant role to promote Technology Venture Commercialization (TVC) by undertaking applied research in different sectors.

Welcoming the guests, the Project Director Dr. Bakhshal Lashari said that at the end of the course, the participants would be able to handle geospatial data and satellite images for flood mapping, estimate flood losses, explain early warning systems, use HEC-HMS for rainfall run-off modeling and describe the operational practices for flood forecasting and management.

The six-module diploma course was specially designed for the capacity building of the concerned officials in consultation with professors from American Universities, i.e., the University of Utah and the University of Nevada, Las Vegas. The resource persons from these universities will also conduct the training sessions during the course which will end in May 2018. The course is meant for the 17 officials of Irrigation Department who have been nominated for participation in the diploma course.





# Workshop on Ground Water Data Analysis and Modelling

A three-day workshop on Ground Water Data Analysis and Modelling was held at the Center in November 2017.

The workshop was part of a four year project on Improving Ground Water Management to Enhance Agriculture and Farming Livelihood in Pakistan signed by the Australian

Dr. Michael Mitchell, Research Fellow at CSU's Institute of Land, Water, and Society (ILWS), said the project aims to develop a shared understanding building on groundwater data analysis and modeling to help people make informed and right decisions for the use of water for agriculture purposes.

Director General PCRWR Dr. Ashfaq Ahmed Sheikh said that the Governments of Pakistan and Australia initiated this four-year project with support from the Australian Government last year and that it is being implemented in different areas of the three provinces of the country.



Government through the Australian Centre for International Agricultural Research (ACIAR) and Charles Sturt University (CSU), Australia, with twelve implementing partners from Pakistan including MUET, 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. The Water Expert said that farming livelihoods in rural areas of Pakistan were severely affected by rapid depletion of groundwater and salinity.

Dr. Catherine Allan, Associate Professor in CSU's School of Environmental Science, speaking in the workshop, said that through the project, they were connecting with the concerned stakeholders to identify and develop solutions together for the improvement of groundwater management suitable for local conditions in selected regions of three provinces of the country: Punjab, Sindh, and Balochistan.

**Rapid depletion of groundwater and salinity is severely affecting farming livelihoods in rural areas of Pakistan, say water experts.**

Dr. Jehangir F. Punthakey, Director of Australia-based groundwater and environment firm Ecoseal Developments, who leads the project, said that the project focuses on different canals and basins of Pakistan where the groundwater data analysis and modelling will be done in Pishin Lora Basin (PLB) of Balochistan, Rohri Canal at Shaheed Benazirabad and Naushehro Feroze Districts of Sindh and in the Lower Bari Doab Canal (LBDC) of Punjab.

Prof. Dr. Bakhshal Lashari, Project Director MUET Water Center, speaking in the inaugural session said that this project provides great opportunity to build the capacity of Center's faculty and students while contributing to the achievement of project objectives as per our commitments. Thanking the participants, Dr. Lashari said that the Center is always open for water-related researchers to benefit from the research laboratories of this national level Center.

The experts vowed to contribute and coordinate their efforts for improving groundwater management through data analysis and modeling throughout the country. The academia, researchers, students, civil society representatives and officials of irrigation department from Sindh, Punjab, and Balochistan participated in the workshop.





## Four-day Workshop on Data Analysis using SPSS held at the Center

A four-day training workshop on Statistical Package for Social Scientists (SPSS) was held at MUET WaterCenter in November 2017.

Speaking at the certificate distribution ceremony Dr. Bakhshal Lashari, the Project Director USPCAS-W MUET said that the Center had initiated such training course to cater

the data analysis needs of the researchers in their respective fields. He noted that SPSS was widely used for socio-economic analysis and now it is also used in the engineering fields to assess the socio-economic impacts.

The workshop resource person Dr. Muhammad Mujtaba Shaikh,

Assistant Professor MUET said that the scope of SPSS had been widened, and now this statistical package is not limited to the social scientists, but it is for all who can use this tool in research. As the name suggests, this package contains a variety of well-defined formulas and built-in statistical tests that can be useful for researchers and scientists, he added.

The training coordinator Mr. Waqas Ahmed, who also serves as an Assistant Professor at USPCAS-W MUET, said that the workshop was focused on the fundamentals of SPSS and its efficient use to carry out basic to advanced level data analysis. There were 20 participants, including the center faculty and students, who benefited from this training workshop.



## ICARDA-USDA Project Quarterly Meeting

A quarterly meeting on "Pakistan Water Dialogue: Diffusion and Adoption through Partnerships and Action of the Best Watershed Rehabilitation and Irrigation Practices", a project implemented by International Centre for Agricultural Research in the Dry Areas (ICARDA), and funded by United States Department of Agriculture (USDA) and US Agency for International Development (USAID) was held at MUET Water Center in October 2017.

ICARDA Country Manager Dr. Abdul Majid chaired the meeting and said that efforts are being undertaken to strengthen Pakistan's water productivity by using best irrigation practices and modern technologies. He said that this project was aimed at increasing the capacity of rural farmers and would help adopt modern cost-effective and efficient irrigation practices and technologies like drip, sprinkler, raised-bed planting and pipe irrigation systems by the farming community. He said that 13 different techniques were being used on water component of the project in this phase whereas productive work was being carried



out on the soil component of the project.

Dr. Bakhshal Lashari, Project Director USPCAS-W, said that the role of Agriculture Service Providers (ASPs) is highly essential so all the implementing partners of the project may include ASPs in their agenda and activities. He said the government and farmers are significant stakeholders of the project, so their efforts in supporting and strengthening this project need to be highlighted. The project implementing partners included Prof. Dr. Abdul Latif Qureshi from USPCAS-W MUET, Mr. Mushtaq Ahmed Gill from South Asian Conservation Agriculture Network (SACAN) Lahore, Mr. Ahmad Zeeshan Bhatti from PCRWR Islamabad, Dr. Riffat Bibi

from Soil and Water Conservation Research Institute (SAWCRI) Chakwal, Ms. Marjan Aziz from Barani Agriculture Research Institute (BARI) Chakwal, Dr. Abid Hussain from Social Sciences Research Institute (SSRI) National Agricultural Research Centre (NARC), Dr. Muhammad Munir Ahmed from Climate Change Alternate Energy and Water Research Institute (CAEWRI) NARC, Dr. Allah Bakhsh from Water Management Research Centre (WMRC), University of Agriculture Faisalabad, and Mr. Muhammad Yousuf Channa from Sindh Agriculture Extension Department, Government of Sindh who presented their progress reports and future adoption plan of the project activities.



# Graduate Seminars

## Community-Government Partnership for Metered Drinking Water: A Case Study

Mr. Nazir Ahmed Wattoo, Director of Anjuman Samaji Behbood (ASB) and Mr. Muhammad Naveed Iftikhar, Public Policy Advisor and a Research Scholar at University of Delaware, USA, delivered a graduate seminar on the Community-Government Partnership for Metered Drinking Water: A Case Study of Bhalwal, Sargodha District of Pakistan.

In his presentation, Mr. Wattoo introduced ASB and its efforts for the provision of metered clean and safe drinking water to the community of Bhalwal under Changa Pani (good water) Program. He said that misuse of the resources was one of the most significant problems in Pakistan, which was mostly misinterpreted as lack of resources, deeply rooted in moral instead of economic grounds.

He emphasized on the government to focus on the participatory



development instead of the conventional development.

***“Water measurement is water management,” said Mr. Wattoo.***

On this occasion, Dr. Tariq Banuri, Executive Director Global Change Impact Studies Centre (GCISC) Islamabad and Professor at the University of Utah, delivered a motivational speech on the career goals, community services, achieving Sustainable Development Goals (SDGs) and sustainable

solutions to the water and climate change-related problems in Pakistan.

While sharing his presentation, Mr. Iftikhar said that world needs better urban policies as to cities have to serve as engines of economic success rather than places of sickness, crime, and despair. He emphasized research work on the potential impact of climate change on water quality.

## Redefining Water Resource Management for Sustainable and Equitable Use in Pakistan



This graduate seminar was given by Mr. Ghulam Mustafa Talpur, Oxfam International's Regional Head in Asia on Inequality Campaign. His overall message was that the vision of fair and just society in Pakistan could only be materialized by an equitable distribution of natural resources and providing equal opportunities to all and sundry.

***“Pakistan needs a paradigm shift in water governance,” said Mr. Talpur.***

While highlighting the importance of water, Mr. Talpur quoted Sir Charles Trevelyan, a British Civil Servant, who stated: ***“Water is more valuable than land, because when water is applied to land, it increases its productivity at least six-folds and renders great extent of land productive.”***

He viewed that fair distribution of resources is a panacea for all ills, as faced by Pakistan today. He said

that virtuous cycle of water-wealth and power exists in Pakistan, a few who usurped the resources of many deny the legal rights including water rights to the rest of majority population. He opined that Pakistan is considered as a gender-blind water system, where the woman played a critical role in agriculture but avoided from the right of land ownership. He suggested that the practical land reforms are needed to be introduced granting the land rights to women.



## Institutional Reforms in Irrigation and Sustainable Water Resources Management in Sindh



Mr. Nazeer Ahmed Essani Memon, General Manager (Transition) SIDA, was the speaker for this graduate seminar held at the Center. While delivering his presentation, he said that water plays a vital role in power dynamics of Pakistan, one who controls water is believed to be dominant. He noted that Irrigation Management Transfer (IMT) reforms were being implemented in the country to increase the water use efficiency, increase agricultural productivity as well as to improve the sustainability of irrigation system and reduce public sector's financial burden.

Mr. Essani said that engagement of the different communities of this region in the irrigation system through one or other ways is as old as the Indus Civilizations because Indus River is flowing since millions of years in the region. He mentioned that country's irrigation system is one of the best methods developed in British Colonial era, but it was poorly managed in the bureaucratic structure of governance. While sharing the water resources challenges, Mr. Essani said that by the year 2025, Sindh Province would require additional water of 25 MAF

(Million Acre-Feet) to meet agriculture and non-agriculture demands. He was of the view that water reservoirs were needed to save the water otherwise the country will face the extreme water scarcity.

In this connection, he suggested the construction of small dams on hilly areas to store rainfall water and the stored water could then be regulated for irrigation purpose in an organized spate irrigation system. He also suggested for modification and modernization of the present physical structure of barrages on River Indus.

## Research Grant Awards:

In this quarter, two research grant calls for proposals were invited: one titled, "Award of Research Grants in Water 2018" and the other "Industry-Academia Research Seed Grant Program in Water 2018". The goal of the USPCAS-W Research Program is to stimulate competitive and innovative applied research that is multi-disciplinary and developed within the broader context of the water-development nexus to support the achievement of SDG-6.

To this end, critical features of the applied research agenda include the following themes:



- ☐ Overcoming water scarcity
- ☐ Developing and maintaining water infrastructure
- ☐ Improving water quality
- ☐ Improving water use efficiency and agricultural productivity
- ☐ Enhancing access to drinking water and sanitation
- ☐ Reversing groundwater depletion
- ☐ Reclaiming degraded lands
- ☐ Strengthening water governance
- ☐ Improving water management
- ☐ Managing wastewater for productive uses
- ☐ Adapting to climate change
- ☐ Improving performance of water utilities
- ☐ Protecting water ecosystems





Mr. Rehman is seen with Dr. Mike Barber, Professor of Civil & Environment Engineering, University of Utah

# Students' Exchange

The fourth cohort consisting of fifteen (15) MS Scholars of 2016 batch including six female students of the Center have returned after completion of their four-month exchange visit from University of Utah, USA.

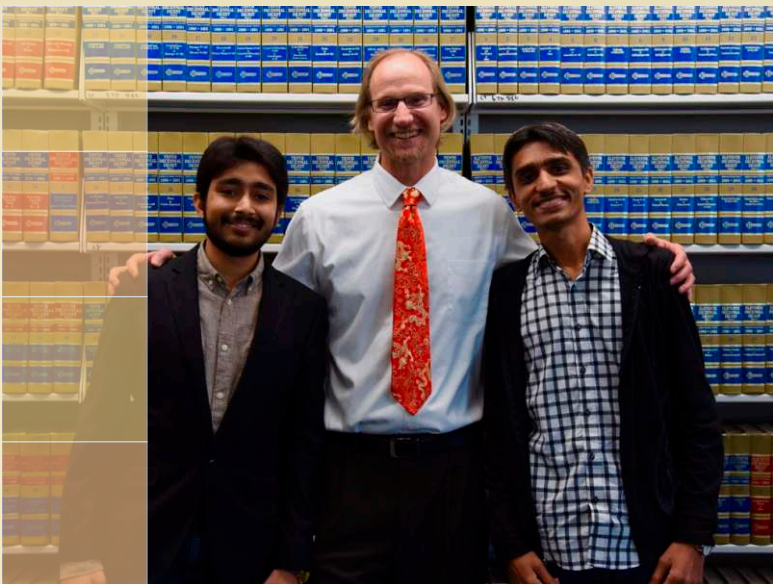
## Students' Exchange Experiences

The exchange visit offered a lot more than the academics only. Besides getting an "A" in the most challenging course on campus, attending a research training in Colorado State University and learning how they managed their water resources there, I participated in an extensive range of activities that helped me to explore different cultures and religions which enabled me to expand my professional and social network. Above all, I can feel a marked difference between my communication skills before and after going to USA. Overall, I enjoyed every bit of the exchange program. Ahmad Abdur Rehman (MS-HID-2016)

**Ahmad Abdur Rehman (MS-HID-2016)**

The Exchange Program has fulfilled my dream to study at USA. Apart from the coursework and research, I also liked field visits, water seminars, and cultural activities. During my stay at the University of Utah, I conducted research which enhanced my knowledge in analyzing extreme weather events. Further, I improved my academic writing, communication, and cross-cultural interaction skills. The field visits and water seminars were helpful to gain a global perspective of water-related issues. Also, I won cultural diplomat award for completing all the cultural activities before time. Overall, the exchange visit was the significant exposure to the developed world.

**Mehran Sattar (MS-IWRM-2016)**



Mr. Mehran Sattar and Mr. Faris Ahmed are seen with Prof. Dr. Steve Burian, Director USPCAS-W, University of Utah



Ms. Uzma Jabeen is seen receiving a certificate from Prof. Dr. Steve Burian, Director USPCAS-W, University of Utah

I am from Hunza, Gilgit, currently doing MS in Water Resources Management at USPCAS-W. I had a great experience for one semester at the University of Utah. The exchange visit improved my technical writing, communication and professional skills. I got the opportunity to learn fundamental and advanced hydroinformatics concepts using multiple softwares during the course study. The most exciting moment was exploring new places and interacting people from different cultures in the United States.

**Uzma Jabeen (MS-IWRM-2016)**



## 3<sup>rd</sup> Karachi International Water Conference

MS students of Batch 2015 namely Mr. Shoaib Ahmed, Syeda Fatima Zehra, Mr. Sultan Shaikh and Ms. Saira Halepoto accompanied by Mr. Sahib Khan Bhand, Communication, Media and Outreach Expert of the Center participated in the 3<sup>rd</sup> Karachi International Water Conference organized by Hisaar Foundation on November 21-22, 2017 at Karachi.

On this occasion, the Center also placed a stall in the exhibition to bring awareness and to project the center activities. The stall was visited by students, water experts, and representatives from academia and industry, where they were briefed about the objectives and activities of the Center.



Moreover, Syeda Sara Hassan, Assistant Professor of the Center also participated in the conference and spoke in the session on 4D-Water Security: Watersheds, Groundwater, and Environment.

The conference was inaugurated by Honorable Governor Sindh Mohammad Zubair and attended by the academia, researchers and water experts from different countries of the world.

## 4<sup>th</sup> Batch Joins USPCAS-W MUET



Starting from the Academic Year 2017-18, MUET Water Center has switched to twice-a-year enrollment program, one in Fall and other in Spring. Following the due process, 58 MS and 5 PhD students including 24 females have been enrolled in the Spring Session 2018. The entrance test for MS/ Ph.D. students was conducted on Sunday, November 26, 2017. In total 432 candidates including 51 female appeared in the pre-admission test which was held in five different cities of Pakistan viz. Islamabad, Multan, Quetta, Peshawar, and Jamshoro, simultaneously.

Pro-Vice-Chancellor MUET Prof. Dr. Tauha Hussain Ali, Dean Faculty of Architecture & Civil Engineering Prof. Dr. Khan Muhammad Brohi, Dean Faculty of Engineering Prof. Dr. Hafeez-ur-Rahman Memon, Dean Faculty of Electrical, Electronic & Computer Engineering Prof. Dr. Bhawani Shankar Chowdhry, Project Director USPCAS-W MUET Prof. Dr. Bakshal Khan Lashari, Deputy Director (Academics and Research) Dr. Rasool Bux Mahar, Incharge Admission Committee Prof. Dr. Kamran Ansari visited MUET Pre-Admission Test Center and reviewed the entry test arrangements.



## The Center New Faculty and Administrative Staff:

In keeping with the human resource needs, the center has inducted the following faculty, research and administrative staff:



Dr. Kazi Suleman Memon as Manager Research:

Dr. Memon is Ph.D. in Soil Science from the University of Hawaii, U S A . He has remained Dean and Coordinator (Projects and Programs) at Sindh Agriculture University Tandojam.

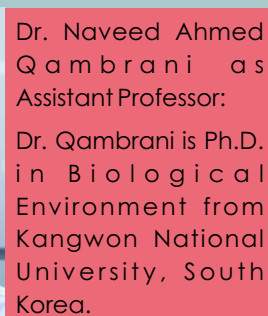


Dr. Aneela Yasmin as Associate Professor: Dr. Yasmin is Ph.D. in Biotechnology from Institute of Plant Genetics, University of Hannover, Germany



Dr. Muhammad Rizwan as Assistant Professor:

Dr. Rizwan is Ph.D. in Environmental Engineering and Energy from Myongji University, South Korea



Dr. Naveed Ahmed Qambrani as Assistant Professor:

Dr. Qambrani is Ph.D. in Biological Environment from Kangwon National University, South Korea.



Dr. Tanveer Ahmed Gadhi as Research Associate: Dr. Gadhi is Ph.D. in Chemical Engineering from Politecnico di Torino, Italy.

## Learning Management System

Moodle-based Learning Management System (LMS) has been introduced in the Center. Through LMS, the teachers, students, and mentors will interact with each other through this system. They can create, share and edit the courses online. The system also provides for conducting examinations online, dividing students into the classrooms and to perform learning exercises. The system is developed by vServices – a professional IT Portal.



## Shifting to New Hostel

The female faculty, students, and staff of the Center have been moved to the newly established Women Hostel in the second week of December 2017.









The hostel building was constructed with the financial support by the Government of Sindh. The hostel consists of 36 rooms to accommodate 85 females and one dining hall having a capacity of 70 people. Presently, 30 female faculty, students and staff are living in the hostel where they have been provided all the necessary facilities including free internet.





## 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

#### Chief Patron:

Dr. Mohammad Aslam Uqaili  
Vice Chancellor  
MUET, Jamshoro

#### Patron:

Dr. Bakhshal Lashari  
Project Director  
USPCAS-W, MUET, Jamshoro

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