



Activities Report 2022



Highlights of Activities



- Research: Identification of Groundwater Potential Zone using GIS/Remote Sensing Techniques
- 4th China-Pakistan Marine Information Workshop
- Celebrations of World Water Day 2022
- Frontiers of Information Conference FIT- 2022



- SDG-4: Quality Education
- SDG-5: Promote Gender Equality and Empower Women and Girls
- SDG-6: Clean Water and Sanitation
- SDG-7: Affordable And Clean Energy
- SDG-13: Climate Action

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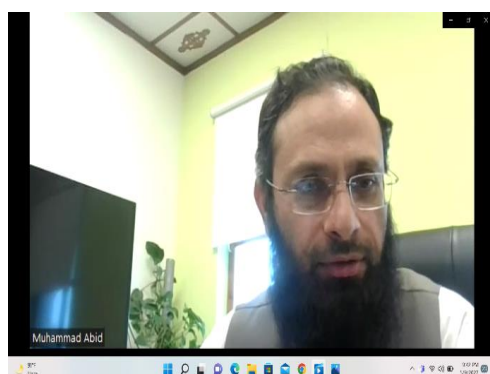
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International and National Level Meetings

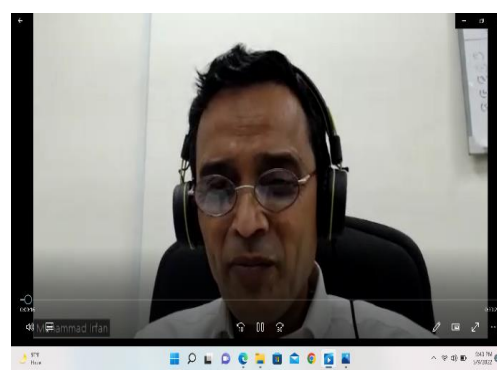
Meeting of the IHP-IX Working Groups: The Director Campus/ UNESCO Chair on Knowledge Systems for (IWRM) attended the online meeting on July 4, 2022 of First Meeting of the Working Groups for the IHP-IX implementation plan covering 2022-2029 and focused on UN 2030 SD agenda. In a meeting the election of the chairperson, vice-chairperson of the different working groups and role and responsibilities of management structure was addressed.

First meeting of the Working Group on Open Science Capacity Building: The Director Campus/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), COMSATS University Islamabad, Wah Campus attended online the First meeting of the Working Group on Open Science Capacity Building on May 12, 2022. The members discussed the opportunities, challenges and gaps for Open Science capacity building and the status of the implementation of the UNESCO representatives

Interview on the Study of Industrial Energy Efficiency and Decarbonization in Pakistan: The Centre for Industrial and Building Energy Audits on behalf of World Bank study on Industrial Energy Efficiency and Decarbonization in Pakistan, Prof. Dr. M. A Irfan Mufti has interviewed the Director Campus/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), COMSATS University Islamabad, Wah Campus Pakistan and as an expert in Academia and specifically in the field of Mechanical Engineering on April 26, 2022. He summarized his views keeping in view the SWOT (strengths, weaknesses, opportunities and threats) analysis and mentioned the barriers for highlighting the importance of knowledge dissemination related to Decarbonization through teaching and research. Regarding industrial interests in implementation of carbon credits and decarbonization, he mentioned his excellent experience of working with the industries and industrial welcoming aptitude. Regarding opportunities, he mentioned there is a huge potential to work in this area in Pakistan. He also mentioned CUI involvement in different courses, CPDs, research projects, joint collaborations with local industry and other international and national universities, implementation of renewable energy systems in different campuses regarding decarbonization. He thanked Prof Irfan Mufti for taking lead, appreciated his efforts related to decarbonization being the need of the time.



UNESCO Chair on IWRM, CUI Wah Campus



Prof. Dr. M. A Irfan Mufti

Interview On The Study To Explore The Place Of Environmental Education In Pakistan

Prof. Dr. Muhammad Abid, T.I. was interviewed by Ms Tooba Rauf student of MPhil Education in International Development, Faculty of Education, Cambridge University UK regarding 'A comparative case study to explore the place of environmental education in the public and private sector higher educational institutes of Pakistan'. The aim of the study was how teachers and students working in university level understand environmental education, its integration in university education and university's role in promoting environmental awareness at Broader level (local and national). Interview was based on Prof Abid's professional experience working in Polyester industry, design and development of boilers, heat exchangers and chemical equipment, and research related to petrochemical, oil and gas industry; teaching and research in multidisciplinary domains related to water, environment, health and education. Prof Abid highlighted the important indicators that will provide a base to develop a working paper for the policy development related to environmental education, its effectiveness, integration with, engineering, technology and social sciences to understand the science-technology and society concept and to produce graduates to look into the problems as a solution providers as challenges with climate change and technological developments and implementations are badly effecting the globe.



UNESCO Chair on Knowledge Systems on IWRM

25th Session of the IHP Intergovernmental Council Sessions: The Director Campus/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), COMSATS University Islamabad, Wah Campus attended online meetings from 26-29 April, 2022 as member of National Committee of UNESCO Intergovernmental Hydrological Programme (IHP). The chair presented the contribution of the Chair, in the field of water education by capacity development and activities performed to achieve sustainable development goals. He further discussed strategic development plans of integrated water management systems, research, training and future avenues of collaborations. The members deliberated on the international cooperation towards solving the water resources challenges under a changing climate impact.

Celebrations of International Day of Mathematics (IDM)

COMSATS Mathematical Olympiad (CMO) -2022

March 25, 2022

COMSATS University Islamabad (CUI), Wah Campus under the flagship of UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) organized COMSATS Mathematical Olympiad (CMO) from March 12 – 25, 2022 to celebrate the **International Day of Mathematics (IDM)**. The theme of the event was to foster an interest in Mathematics and improve the skills of participants through a healthy problem-solving competition.

The event started with preparatory sessions from March 7 to 10, 2022 by senior PhD faculty members of the Department of Mathematics to the college level students on different topics from the intermediate level syllabus. In these preparatory sessions about 500 students participated from 23 different schools and colleges of Wah, Taxila, Hassanabdal, Islamabad, Rawalpindi and Faisalabad, Pakistan. A Campus visit was also arranged for all the participants on March 9, 2022.

On March 12, 2022, 393 participants appeared in the **written test**. Top 6 contestants were selected for the final quiz competition held on March 25, 2022. The chief guest, the Director Campus, Heads of Departments, College Principals, Teachers and Students from different colleges attended the event. The event started at 2pm with the recitation of the Holy verses from the Holy Quran. Dr. Shabieh Farwa, Head of Mathematics Department briefed about the purpose and motivation of this activity.

In the final quiz round all the contestants performed very well. At the end of the final round, the message regarding the importance of Mathematics, from the Director General, UNESCO Pakistan, Ms Audrey Azoulay was read. The Director, CUI, Wah Campus, Professor Dr. Muhammad Abid, T.I, addressed the audience and encouraged the students by highlighting the significance of mathematical logic in every field. The Chief guest Prof. Dr. Sajid Qamar, Dean Faculty of Sciences, COMSATS University Islamabad also addressed the gathering. Besides the historical importance of the subject, he further elaborated the need of mathematical skills to cope with the current challenges across the globe. At the end, he distributed certificates, shields and cash prizes among the winners of the top three positions.

1. Syed Faiq Haider Naqvi, from The Scholars Science College, Wah Cantt.
2. Muhammad Yousuf Khalid from Cadet College Hassanabdal.
3. Rafia Mushtaq from F. G. Post Graduate College for Women, Wah Cantt.

Event at Glance:





Celebrations of World Water Day - 2022

Seminar on Monitoring Climate Extreme Events Through Remote Sensing and Modeling &

Poster Competition on March 31, 2022

UNESCO Chair on Knowledge Systems for Integrated Water Resource Management (IWRM) at CUI Wah celebrated **World Water Day** on March 31, 2022 at COMSATS University Islamabad, Wah Campus and organized a Seminar titled “**Monitoring Climate Extreme Events through Remote Sensing and Modelling**” followed by a **Poster Competition** with this year theme "**Groundwater: Making the invisible visible**".

The resource person Dr. Mukhtar Ahmed, from Department of Agronomy, PMAS, Pakistan enlightened the participants about the impact of extreme climate events (ECE) on the agricultural sector of Pakistan using remote sensing techniques to predict scenarios to explore possible options to mitigate the effect of ECE and to achieve sustainable development goals.

Seminar and Poster competition supported the Chair effort to achieve the Sustainable Development Goal 6: Water and Sanitation for all.

A large number of students from schools, colleges and universities and professionals participated in the poster competition. The purpose of this competition was to raise awareness about groundwater. Groundwater is an important source of fresh water which is invisible but its impact is visible everywhere.

Experts from academia and industry evaluated posters. In the category of University students Ms. Rida Malhi from Department of Civil Engineering, CUI Wah Campus got first position and runner up was Ms. Neelum Urooj from University of Wah. In the category of Schools Mr Waqas Khan came first and runner-up was Mr. Hassnain Shabir from F. G Model Public School, Taxila, Pakistan. The winners and runners up of the poster competition were awarded with cash prizes and certificates. All judges and audience acknowledged the efforts of participants' in highlighting the awareness on Groundwater: Making the invisible visible.

Chief Guest Mr. Raza Shah UNESCO representative addressed the youth; delivered a message of Director General Audrey Azoulay and gave prizes to the winners.

The event ended with vote of thanks by the Chair and Director Campus Prof. Dr. Muhammad Abid (T.I) and presented shields to Chief Guest and Guest Speaker.

Event at Glance:



Seminar on Monitoring Climate Extreme Events through Remote Sensing and Modeling

Poster Competition Gallery







Poster Competition
World Water Day 2022





Roundtable Discussion at PCRWR on March 22, 2022

World Water Day is celebrated each year on March 22 with a specific theme. This year's theme is "**Groundwater - making the invisible visible**".

Many of the world's largest cities, and numerous smaller cities and towns, rely on groundwater as their major source of freshwater. This dependence will intensify, particularly in the rapidly urbanizing areas of developing countries and emerging economies.

Groundwater is the prime source of household water as well as Groundwater depletion due to intensive withdrawals for agriculture is also becoming an issue of increasing concern. Groundwater is a hidden treasure that sustains our lives. As climate change gets worse, groundwater will become more and more critical. With the adverse impacts of climate change and variability, groundwater will become a grave concern.

Keeping in view the issue and theme of World Water Day 2022, PCRWR has organized a Roundtable Discussion session on March 30, 2022.

Representatives from various organizations including IWMI, UN Habitat, WaterAid, CDA, ICIMOD and ADPC participated in the discussion session.

Focal Person UNESCO Chair on Knowledge Systems for IWRM, Engr. Summera Fahmi Khan got the opportunity to represent the Chair as one of the Panelists of the discussion session.

The Focal Person highlighted the challenges associated with the groundwater management and also proposed some solutions including groundwater recharge, rainwater harvesting, porous pavements, installation of drainage galleries, conjunctive use of surface water with groundwater, replacing high yielding water crops and adaptation of modern irrigation techniques like drip irrigation instead of flood irrigation.

The Focal Person also highlighted the importance and contribution of youth and involvement of women for managing this precious resource. Impact of climate change on availability of groundwater was also discussed.

The Focal Person highlighted how the Chair has been actively involved in creating awareness by organizing a Poster Competition on the subject issue and capacity building by conducting a seminar.

The event ended with a vote of thanks by the Chairman PCRWR.



Workshops

4th China-Pakistan Marine Information Workshop

The fourth China Pakistan Marine Information (CPMI-2022) was held in CUI Wah campus on Wednesday, November 16, 2022 and was jointly organized by academic and research institutions from China and Pakistan; including COMSATS University Islamabad, FAST, Pakistan Science Foundation, Pakistan Scientific & Technological Information Center, National Institute of Oceanography (Pakistan Partners), and Harbin Engineering University, China Association of Science & Technology, Chinese Society of Naval Architecture, and Heilongjiang Science and Technology Association (Chinese Partners). This was the fourth workshop of this series as part of the One Belt One Road initiative under China Pakistan Economic Corridor (CPEC) with this year's theme "Smart Ocean Informatics" with oral and poster presentations.

The worthy Rector CUI, Prof. Dr. Muhammad T. Afzal was the chief guest. On behalf of Chairman, Pakistan Science Foundation (PSF), Dr. Miskatullah graced the opening ceremony as guests of honor.

In his opening remarks the Rector CUI, Prof. Dr. Muhammad T. Afzal, extended his gratitude for bringing the China Pakistan Marine Information Workshop in COMSATS and organizing it successfully to strengthen the scientific collaboration in the field of marine engineering and sciences. He mentioned that CUI strongly believe in internationalization and working in emerging technologies and always take lead to bring research and academic programs to benefit Pakistan. He mentioned that there are a lot of opportunities in Pakistan at the coastal side of Gawaddar for the development of marine sciences and engineering under CPEC to explore. He appreciated the efforts of Prof. Dr. Muhammad Abid, Director Campus/UNEWSCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), Prof Gang Qiao, Dean of College of Underwater Acoustic Engineering, HEU, China and Dr. Niaz Ahmad for his throughout support in bringing this event a success.

The officials from China, Vice President Harbin Engineering University (HEU), China, Mr. Jingwei Yin, Co-Chair of Workshop, Dean, College of Underwater Acoustic Engineering, Harbin Engineering University, Prof, Qiao Gang, Secretary- General of the Chinese Society of Naval Architecture, Secretary of the party committee of Heilongjiang Science and Technology Association) addressed and assured their collaborative support in the field of Marine Information research and development. They emphasized on international cooperation and the integration of Artificial Intelligence and Information Technology in the field of Marine Technologies. They thanked the organizers from CUI and HEU organizing this workshop and bringing both Pakistani and Chinese researchers, academicians and young scholars together to share their expertise.

Prof. Dr. Muhammad Abid, Director Campus/UNEWSCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) in his remarks highlighted that this forum was designed and given an opportunity to scientists, engineers, academicians and industry professionals and researchers to deliberate on this emerging area of Marine Engineering and Sciences in Pakistan and China.

He further discussed the collaborative activities which have already been held between HEC and CUI. He mentioned that a graduate program of Underwater Acoustic Communications for capacity building will be offered in CUI with both sides experts.

He extended thanks to Chief Guest the worthy Rector CUI, Guest of Honors, Prof. Yin Jingwei, Vice President HEU for all cooperation and support; Prof. Qiao Gang, Dean Engineering and Dr. Niaz Ahmed, Focal person of HEU; Keynote Speakers; Young Scholars, Distinguished Guests; dedicated team of my colleagues from CUI, specially of CUI Wah organizers of this event to make this event a success.





3 Days Training Workshop on (APSIM) Decision Support tool for Agriculture Systems Modeling and Simulation

The UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), CUI Wah Campus in collaboration of Faculty of Crop & Food Sciences, Department of Agronomy, PMAS-Arid Agriculture University, Rawalpindi jointly organized a 3 Days Training Workshop on APSIM: Decision Support tool for Agriculture Systems Modeling and Simulation on hybrid mode from May 25 – 27, 2022.

Prof. Dr. Muhammad Abid, T.I., Director Campus/UNESCO Chair on Knowledge Systems for IWRM, CUI Wah Campus in his remarks, as a guest of honor, thanked Dean, FCFS, Prof. Dr. Fayyaz-ul-Hassan, Chairman Department of Agronomy, Prof. Dr. M. Ansar and all the organizers for inviting and giving him an opportunity for highlighting the global significance and climate change challenges affecting the agriculture system and its serious impacts increasing day by day in Pakistan.

He appreciated the efforts of generating an effectiveness of agricultural production model System sIMulator (APSIM) simulating gene practices of multi-feed farms framework. It maps climate risk, climate change adaptation and mitigation domains of irrigation. He encouraged the participants to explore new tools and techniques of research in the fields of agriculture and environmental education, integrating with engineering technology and social sciences for effective decision-making. He further said that more planning and collaborative efforts of water management to satisfy the domestic, rural, irrigation and urban needs are required.

The workshop concluded on May 27, 2022 on the closing remarks of Director ORIC, Prof. Dr. Khalid Saifullah Khan. He presented a certificate and a souvenir to the UNESCO Chair for his support in successfully organizing this training workshop.

Workshop on Energy Efficiency and Decarbonization of Industries in Pakistan:

In continuation of study conducted by the Centre for Industrial and Building Energy Audits on behalf of World Bank. The Director Campus/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), COMSATS University Islamabad, Wah Campus Pakistan attended the workshop on July 04, 2022 on **Energy Efficiency and Decarbonization of Industries in Pakistan**, organized by the World Bank at Serena Hotel Islamabad, Pakistan.

Conferences

Water Informatics and Communication Technical Session offered in 19th International Conference on Frontiers of Information Technology (December 12 – 13, 2022) at Islamabad, Pakistan

Water Informatics and Communication Technical Session was organized during 19th International Conference on Frontiers of Information Technology, held on December 12-13, 2022 at COMSTECH Secretariat, Islamabad, Pakistan under the umbrella of UNESCO Water Chair on Knowledge Systems for Integrated Water Resources Management (IWRM).

The underwater world that covers 70% of the earth has an enormous impact on human civilization, affecting climate change, food security, minerals, and natural resources. This track acknowledged the importance of the underwater world and provides a promising window of insight to integrate research, technology and expertise in the field of water informatics and communication technologies. A vast and diverse group from academia, researchers, government organizations and civil society organizations participated and contributed to this track.

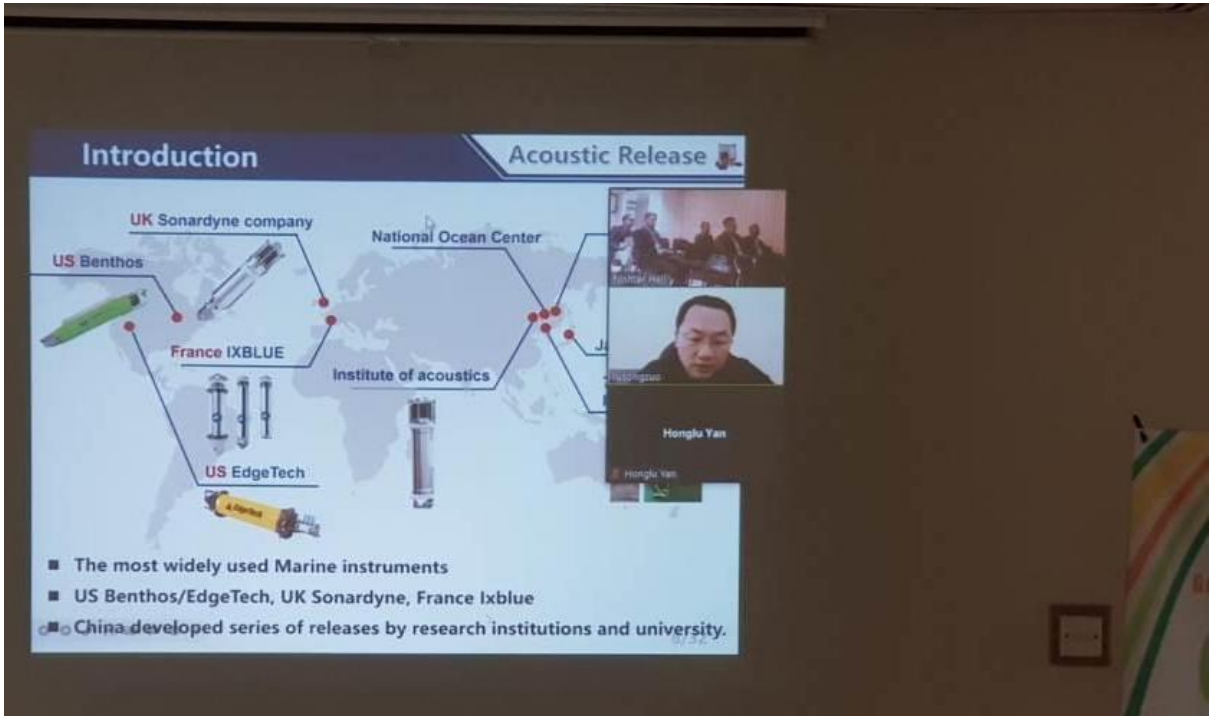
The session was held on December 13, 2022 including two invited talk and research paper presentations. The invited talks were presented by

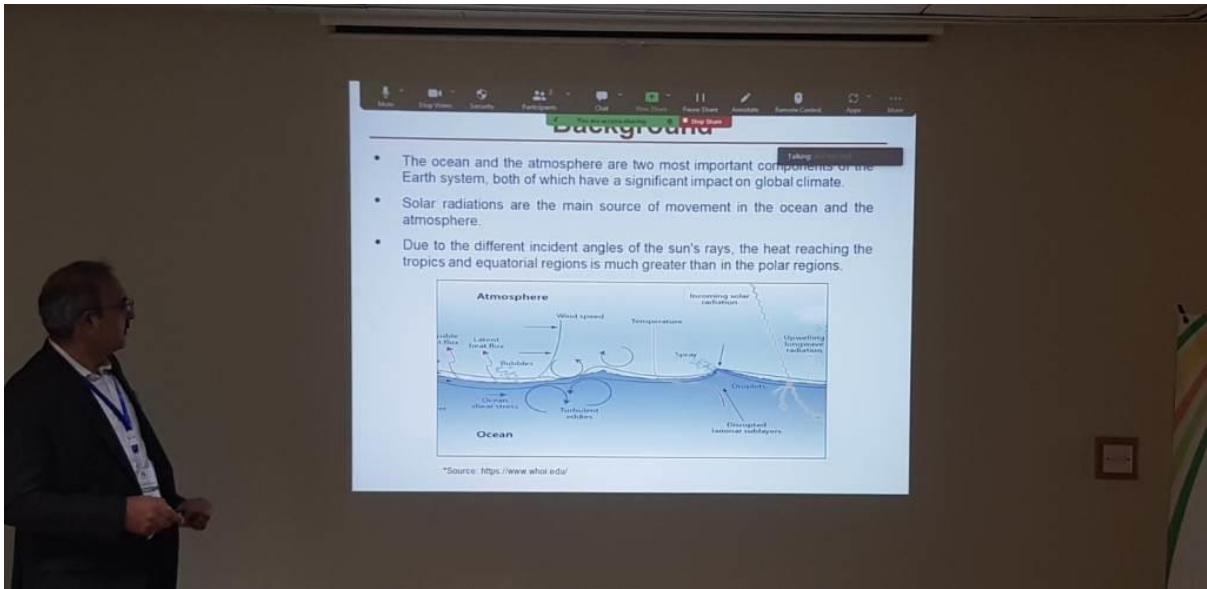
1. Deep Sea Underwater Acoustic Release: Design Consideration and its Marina Trench Application was delivered online by Songzuo Liu, College of Underwater Acoustic Engineering, Harbin Engineering University, China.
2. SST Variability in the Tropical Indian Ocean during ENSO AND IOD Events by Sartaj Khan, Centres of Excellence in Science and Applied Technologies (CESAT), Pakistan.

The researchers presented following research papers and shared insights of their research

1. Experimental Study and Results on Real-Time Communication via Gigabit Ethernet in Underwater Sensor Array System by Kashif Waqas, Umer Hamid and Shahid Ali.
2. Measurement-based Analysis of Characteristics of Fast Moving Underwater Acoustic Communication Channel by Yang Wang, Hanglu Yan, Chenyu Pan and Songzuo Liu
3. TARIQ: Towards Area Adjustment and Rounding of Intermediate Nodes for Quadrilateration in Blockchain Enabled Underwater Beacon Node Localization by Sheikh Umer, Tariq Ali and Sana Yasin

The whole session talks were very informative and acknowledged by the participants.









Introduction

User Survey

- 48 questions
- 5 major aspects: reliability design, release mechanism, trigger method, function, deploy and recover

Acoustic Release

64 valid questionnaire

unit	copies	unit	copies
中科院声学所	6	海洋一所	5
中国船舶工业系统工程研究院	1	海洋二所	1
中船重工710所	2	海洋三所	3
中船重工715所	5	国家海洋局北海分局	1
中船重工726所	1	北海市地质工程勘察院	1
中船重工750试验场	2	锦城实验室	2
中船重工760所	1	武汉普惠海洋光电技术有限公司	1
中航工业607所	1	珠海云洲智能科技有限公司	1
中国船舶研究院	1	成都中电锦江信息产业有限公司	2
中电科(宁波)海洋电子研究院	1	中科长城海洋信息系统有限公司	1
辽海装备	1	中科创隆	1
			7/32

Henglu Yan

Trainings and Competitions

Pakistan Water Week 2022

UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) supported the students of CUI, Wah Campus to actively participate in Pakistan Water Week -Student Competitions, jointly organized from 24 -28th, October 2022 by the Pakistan Council of Research in Water Resources (PCRWR) and International Water Management Institute and partners

Following students were participated in different competitions:

Documentary Competition theme: Climate Change and Its Impact on Agriculture and Water

1. Muhammad Suleman
2. Waseem Khan

Essay Competition theme: The Possible Role of Youth in Addressing Climate and Water Challenges of Pakistan

1. Muhammad Rehan
2. Chaudhry Hamza Haider

Poster Competition theme: Mitigation and Adaptation Strategies for Climate Change

1. Muhammad Suleman
2. Rida Malhi

Mr. Muhammad Suleman's, Registration No. Fa20-CVE-045, documentary was selected and appreciated by the judges. In recognition of his creativity and the way he presenting his idea to highlight the public awareness on climate change impacts on the agriculture of Pakistan through short documentary titled "Climate Change and Its Impact on Agriculture and Water", was awarded with the Certificate of Appreciation.

The UNESCO Water Chair/Director Campus Prof. Dr. Muhammad Abid,T.I., applauded the efforts of all participants and encouraged them to pursue volunteer work to control the causes that contributed in climate crises of our mother land like pollution, waste, deforestation, use of plastic bags, waste fire makes environment which produces toxic gases , Floods and Drought. He highlighted that we collectively need to create awareness among public to take step forward to control harmful causes to save our environment for the well-being of all.

The Director Campus/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) in a ceremony held on December--- presented the certificate of Appreciation to Mr. Suleman and appreciated his efforts and dedication.



Training on Empowering Women in Geospatial Information Technology – 2022

Engr. Sumera Fahmi Khan from the Department of Civil Engineering/focal person of UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) was attended the online training titled “Training on Empowering Women in Geospatial Information Technology – 2022 edition from August 16-19, 2022. The training was organized by the International Centre for Integrated Mountain Development (ICMOD) and the Bangladesh Forest Department (BFD) within the framework of the SERVIR-HKH Initiative supported by the United States Agency for International Development (USAID) and National Aeronautics and Space Administration NASA).

The training aimed to train and enhance the capacity building of young professionals on improved techniques to access the Hindu Kush Himalaya (HKH) region on the use of Earth observation (EO) data and geospatial information technology (GIT) to empower women and enable them to use EO data for different applications. This will support them in bridging the gender gap in the EO/GIT field and help to build the foundation for women's leadership in the EO/GIT sector in HKH region.



Certificate of appreciation

PRESENTED TO

Summera Fahmi Khan

for serving as a volunteer trainer during the online training on
Empowering women in geospatial information technology-2022 edition
16–19 August 2022

Organised by: International Centre for Integrated Mountain Development (ICIMOD) and the Bangladesh Forest Department (BFD)
within the framework of the SERVIR-HKH Initiative supported by the United States Agency for International Development (USAID) and the National Aeronautics and Space Administration (NASA)

Izabella Koziell
Deputy Director General
ICIMOD

Birendra Bajracharya
Chief of Party, SERVIR-HKH
ICIMOD

Poonam Tripathi
Geospatial Training Analyst
Geospatial Solutions
ICIMOD

Ongoing Activity

Survey: Identification of Groundwater Potential Zone using GIS/Remote Sensing Techniques

Description: This study, an integrated concept will be used to identify the groundwater potential zones in Pakistan using remote sensing, geographic information system, and analytic hierarchy process (AHP).

Climate change is causing adverse impact on the availability of surface water and increasing population and urbanization is also putting pressure on the natural resources. Consequently, demand for groundwater has been increasing. However, the effective utilization and management of this natural resource is not possible without the recognition of potential zones.

A research work has been done in this context to delineate groundwater potential zones using the modern Geographic Information System (GIS) and Remote Sensing (RS) technology integrated with the Analytic Hierarchy Process (AHP) technique for Rawalpindi district of Pakistan. Seven influencing factors have been identified and within each influencing factor, sub-classes have been assigned ranks and then these layers are integrated to delineate groundwater potential zones. The delineated zones are then divided into five classes varying from poor to excellent zones.

It has been found that excellent groundwater potential zone (GWPZ) cover only 0.37% of total area. However, 69.17% area has good GWPZ, 28.04% area has moderate GWPZ, almost negligible area is associated with fair GWPZ and only 2.4% area is classified as having poor GWPZ.

The technique adopted to delineate potential areas of groundwater in Rawalpindi district of Pakistan is time, labor, and finance efficient, and can assist in quick decision-making for sustainable water resources management.

The paper is under consideration for publication in the edited volume 2023.

Research Publications

Research studies in collaboration with national and international partners were published in different journals .

Publications:

Name of Author(s)	Journal	Title of the Publication	Year
Nadeem Shaukat et al.	Frontiers in Earth Science	Sediment load forecasting of Gobindsagar reservoir using machine learning techniques	2022
Toqeer Ahmed et al.	Desalination and Water Treatment	Effects of water qualities of Kabul River on health, agriculture and aquatic life under changing climate	2022
Shahzal Hassan et al.	Water Science and Technology	Prediction of the Amount of Sediment Deposition in Tarbela Reservoir Using Machine Learning Approach	2022
Muhammad Hasan Ali Baig et al.	Remote Sensing	Assessing Meteorological and Agricultural Drought in Chitral Kabul River Basin Using Multiple Drought Indices	2020

The Chair is actively involved with following national partners to work with capacity building and research.

- Water and Power Development Authority
- Ministry of Climate Change, Government of Pakistan,
- Pakistan Council of Research in Water Resources
- Pakistan Science Foundation
- University of Baltistan, Skardu
- Pir Mehr Ali Shah Arid Agriculture University Rawalpindi
- National Research Center of Intercropping at Islamia University of Bahawalpur
- Pakistan Meteorological Department
- University of Engineering and Technology (UET), Pesahwar
- National Institute of Oceanography (NIO)
- Karakoram International University, Gilgit-Baltistan
- Pakistan Institute of Engineering and Applied Sciences, Islamabad
- Centre for Climate Research and Development, CUI, Islamabad
- Department of Environment and Earth Sciences, CUI, Abbottabad Campus

The international level partners involved in research studies are

- Nazarbayev University, Kazakhstan
- Kabul Technical University, Afghanistan
- Harbin Engineering University, China
- Institute for Sustainable Industries & Liveable Cities, Victoria University, Melbourne, Australia
- College of Engineering, IT & Environment, Charles Darwin University, Australia