



SDG-14 LIFE BELOW WATER



Supporting aquatic ecosystems through education

Comsats University Islamabad (CUI) offers educational opportunities to the public through its community outreach program on fresh-water ecosystems, including water irrigation practices, water management and conservation, for local communities engaged in agricultural activities. It is also on the lookout to find new and better ways to promote efficient irrigation practices for which number of activities are planned throughout the academic year.

In addition, CUI's community outreach program also covers sustainable management of fisheries, aquaculture, and tourism. The programs lay emphasis on how to avoid overfishing, illegal, unreported and unregulated and destructive fishing practices.

Specific activities and events were undertaken during 2021 to achieve the project's objective of increasing awareness and understanding by the public on how climate change could alter the future availability of water resources, which is depleting fast and cannot be taken for granted. The thrust of these activities is on sharing the project's findings with researchers and policy makers.

Supporting aquatic ecosystems through action

CUI is implementing the Government of Pakistan's Water Policy, for which awareness talks are arranged at all campuses, like the UNESCO Chair on Knowledge Systems for integrated Water Resource Management (IWRM). In addition, events aimed at promoting conservation and

sustainable utilization of the oceans, seas, lakes, rivers, and marine resources have been held.

CUI adheres to a policy that ensures that all food supply coming into the campus is only from aquatic ecosystems that have sustainably been harvested. The University works directly with researchers and industries for maintaining and extending existing ecosystems and ensuring their biodiversity – both plants and animals – especially focusing on those ecosystems threatened with extinction.

The University plants native species on its campuses for preserving these species. The Environmental Management Plan (EMP) of CUI ensures assessment of environmental impact of all projects, pertaining to flora and fauna and their habitats at all campuses. A range of technologies and practices are being developed to enable the marine industry to prevent, or at least minimize, any possible damage to aquatic ecosystems.

Water sensitive waste disposal

CUI follows strict water discharge and quality standards guidelines, to ensure that water discharge systems are designed in such a manner that they protect ecosystem, wildlife, and are in line with human health and welfare.

The vulnerability of the country's water sector to the negative impact of climate change requires identification of gaps, and recommendations for action to fill these gaps. CUI is also working on improving assessment of drought and its impact on food and water resources in South Asia and has devised the Smart Water Metering and Pricing project to mitigate it. Research is also being conducted to measure the impact of climate

change on waterborne diseases and their prevention.

CUI is actively engaged in an action plan to reduce plastic waste on campus and has completely banned the use of all kinds of plastics on all its campus.

The policy on preventing and reducing marine pollution, particularly from land-based activities, ensures that any construction material used is properly disposed and that it is never disposed of in any adjacent water body, to prevent consequent marine pollution. The Environment Management Plan is also being implemented at the University for all development activities, under the IEE/EIA Regulations 2000 of the Government of Pakistan.

Maintaining a local ecosystem

The University develops and supports programs and encourages the maintenance of good aquatic stewardship practices, while monitoring the health of surrounding aquatic ecosystems.

Apart from carrying out research activities, Council for Scientific and Industrial Research (CSIR), Ghana, which is part of the COMSATS network, offers M. Phil degree programs in Climate Change and Integrated Natural Resources Management; Soil Health and Environment Resources Management; Fisheries and Aquaculture; AGRO-Processing Technology & Biosciences; Plant Breeding & Biotechnology; and industrial Animal Nutrition and Feed Production.

The University also collaborates with the local community in its efforts to maintain shared aquatic ecosystems. The UNESCO Chair on

Knowledge Systems for IRM supervised a training activity, focusing on the importance of water conservation which encourages students to conserve drinking water resources and motivates them to use water sparingly and being mindful in saving each drop.

UNESCO Lecture Series
Earth Materials for a Sustainable and Thriving Society
 Organised in collaboration with IUGS and iCRAG

A six-lecture series:

- Earth materials: the foundation for development
- Climate neutrality, the circular economy, and earth materials
- Suppliers, consumers, and the global minerals supply chain
- Mineral extraction and communities
- The neglected minerals and materials of development
- Earth materials and a sustainable future

The series commences 26 January 2021. Please visit <https://bit.ly/UNESCOlectures>. All sessions will be conducted in English with live captioning in French, Spanish, Portuguese, Arabic, Swahili, and Hindi.

CUI has implemented a watershed management strategy, based on location-specific diversity of aquatic species, and routinely conducts activities on climate change, water quality and water-related challenges. Plans are also in place to install a wastewater treatment plant, at all campuses, to minimize alteration of aquatic ecosystems and to minimize physical, chemical, and biological alterations of related aquatic ecosystems.

Go Beyond Borders
18th International Conference on Frontiers of Information Technology (FIT 2021)
 December 13-14, 2021 | Islamabad - Pakistan

CALL FOR PARTICIPATION

About FIT
 18th International Conference on Frontiers of Information Technology (FIT21) will be held from December 13-14, 2021 at Islamabad, the beautiful capital of Pakistan. COMSATS University Islamabad (CUI) is organizing this prestigious event for the last engineers' team. Familiarity with technology is mandatory to enable a person to live and to cope with challenges of the modern world and ICT holds the key to cope with the said challenges. This conference is a premier forum for the presentation and exchange of experiences and knowledge along in the field of Information and Communication Technologies.

KEYNOTE ADDRESS
 Atiq-ur-Rahman
 Co-Chair of the UN Committee on Science, Technology and Innovation for UNESCO
 Pakistan

FIT-2021 TRACKS

- Modeling & Simulation for Emerging Technologies
- Smart Grid, Energy & Electronics
- Data Science & Advanced Analytics
- Pattern Recognition, Image & Natural Language Processing
- Adaptive Systems, Networks, IoT & Cloud Computing
- Software Engineering
- Network, Cyber & Information Security
- Water Informatics and Communication Technology

Stockholm World Water Week Conference 2021:

CUI faculty member attended the World Water Week 2021, sessions arranged virtually by the International Water Management Institute (IWMI) under the theme “Building Resilience Faster”, on August 23, 2021.

International Conference on Environment and Sustainable Development:

The Director Campus attended online the 3rd International Conference on Environment and Sustainable Development, on September 14, 2021 organized by Government College University (GCU), Lahore.



3rd China Pakistan Marine Information Workshop on November 16, 2021

COMSATS University Islamabad (CUI) and College of Underwater Acoustic Engineering, Harbin Engineering University (HEU), China jointly organized the 3rd China-Pakistan Marine Information Workshop on November 16, 2021 at CUI, Wah Campus as a part of One Belt One Road initiative under China Pakistan Economic Corridor (CPEC). Prof. Dr. Shahid Baig, Chairman, Pakistan

Science Foundation (PSF) was the Chief Guest on this event. Prof. Dr. Muhammad Abid, T.I., Director/ UNESCO Chair on Knowledge Systems for Integrated Water Resources Management, CUI Wah Campus welcomed the guests. In the opening address, he informed that workshop is designed to provide a dedicated platform to scientists, engineers, academicians, industry professionals and researchers from Pakistan and China to deliberate on this emerging area of Marine Science and Technology in Pakistan. He added that as part of One Belt One road initiatives, the College of Underwater Acoustics Engineering, Harbin Engineering University, China has played an enormous role towards capacity building in Pakistan. Realizing the importance of Marine Engineering and Marine Science, CUI has also signed a MoU with HEU, China to carry out research in the field of Marine Informatics and Engineering and currently 12 students of HEU are doing research at CUI Wah Campus.

Prof. Qiao Gang, Co-Chair of workshop, Associate Dean for Scientific Research, College of Underwater Acoustic Engineering, Harbin Engineering University, China assured his support for research and development in this emerging field in Pakistan.





The Chief Guest, Prof. Dr. Shahid Baig, Chairman, Pakistan Science Foundation (PSF) in his address shared the importance of the workshop and area under discussion Marine Engineering and Marine Sciences. He thanked the organizers from CUI and HEU organizing this workshop every year and bringing both Pakistani and Chinese experts together. He assured all facilitation from PSF related to the Marine Engineering and Marine Sciences. He also mentioned different funding schemes already in place with China since long.

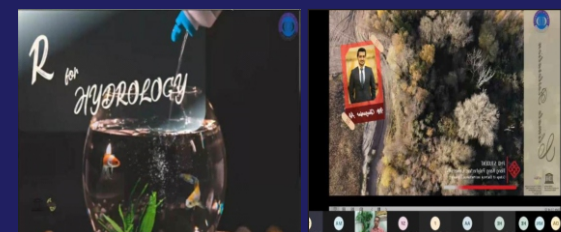
Prof. Dr. Muhammad Mujahid, Rector Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology Haripur, appreciated the theme of the conference bringing multidisciplinary people on board. He appreciated the efforts of CUI to initiate research jointly with HEU on this very needy topic to establish in Pakistan and assured all possible participation on behalf of his institution.

Prof. Dr. Muhammad Abid extended thanks to Chief guest, Guest of honor, Prof. Yin Jingwei, Vice President HEU for all cooperation and support;

Prof. Qiao Gang, Dean Engineering and Dr. Niaz Ahmed, Focal person of HEU; Session Chairs, Keynote Speakers; Distinguished Guests; dedicated team of my colleagues from CUI, specially of CUI Wah; Ushers, Volunteers, organizers of this event, local government and all to make this a successful event. Scientists and entrepreneurs from China and Pakistan participated in the workshop. Invited talks, posters exhibition and panel discussions were arranged during the workshop for the development of joint working paper to address this highly pertinent area.



The webinar to provide hands on training aiming to strengthen capacity building on “Introduction to R for Hydrology” was organized on June 4, 2021 by UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM) at COMSATS University, Wah Campus. New technology tools are rapidly emerging like R Programming Language of Data Science. By keeping its significance this warmup activity was arranged to engage youth to interact with an expert and gain advantage with his expertise in the field of Hydrology.



The webinar “Restore Our Earth” was organized online on April 29, 2021 through MS Teams to highlight the importance of our mother land by taking initiatives of saving the atmosphere from increasing heat-trapping emissions in air, fuel burning and industrial waste. The technologies, views and innovative ideas of participants from diverse fields of life were presented with the aim of spreading civic sense of saving the earth from climate changes and to remind the community that earth is providing life and sustenance and that each of us now has the responsibility of managing natural resources for the protection of earth. Measures taken to hold the land with the trust to keep land healthy for our future generation was deliberated.

The message of the UN Secretary-General was also presented which he delivered on April 22, 2021 on the recognition of Earth Day celebrations mentioning the protection and threats faced by our planet. To raise the importance of making environment clean through green houses and measures taken to protect the environment with changes in weather patterns was presented through audio and video messages of participants.

The guest speaker Dr. Hassan Abbas presented his talk on the significance of water resources, earth system assessment, impacts of climate change and its vulnerabilities on natural and human environments.