

14 LIFE
BELOW WATER



SDG-14 LIFE BELOW WATER

Sustainable Development Goal 14 (SDG 14) is one of the 17 global goals set by the United Nations as part of the 2030 Agenda for Sustainable Development. SDG 14 is focused on "Life Below Water" and aims to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. The goal recognizes the critical role that oceans play in supporting life on Earth and emphasizes the need to address various challenges related to marine ecosystems.

SDG 14 highlights the interconnectedness of various challenges related to oceans and emphasizes the need for a coordinated, global effort to address them. Achieving this goal requires collaboration among governments, the private sector, civil society, and the international community.

COMSATS University Islamabad offers educational programs on freshwater ecosystems for local or national communities. These programs are likely designed to provide knowledge and awareness about the importance of freshwater ecosystems and their conservation. The university's initiative in offering such educational programs demonstrates its commitment to environmental education and community engagement.

COMSATS University Islamabad's environmental science department is actively involved in conducting educational outreach activities for local communities. Raising awareness about issues like overfishing, illegal, unreported, and unregulated fishing, as well as destructive fishing practices, is essential for promoting sustainable fishing practices and conserving marine ecosystems. Educational outreach activities can play a crucial role in engaging and empowering community members to become actively involved in addressing these environmental challenges.

19th International Conference on Frontiers of Information Technology

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).

A two-day 19th International Conference on 'Frontiers of Information Technology' (FIT-2022), organized by COMSATS University Islamabad (CUI) started on Monday, December 12, 2022 at COMSTECH Secretariat, Islamabad. Minister, Planning and Development and Special Initiatives, Mr. Ahsan Iqbal Chaudhary and Executive Director COMSATS, Ambassador Dr. Mohammed Nafees Zakaria graced the occasion and inaugurated the COMSATS University Islamabad's 19th International Conference on Frontiers of Information Technology on Monday.

Speakers from France, Netherlands, China, Ireland, Portugal, UK, USA and Pakistan are participating in the two-day conference organized by COMSATS University Islamabad in COMSTECH Secretariat, Islamabad.

Prof. Dr. Muhammad Tabassum Afzal, Rector, COMSATS University Islamabad, in his welcome address appreciated the support extended by the government in promoting the research and development. He said that Pakistan was in a dearth of high-performance computing infrastructure and there was a need to realize the economic potential of Information Technology through better training and resource management. Prof. Afzal said that the dearth of dollars confronted by the economy can be easily cured by encouraging IT related exports and technology-



based startups.

The 4th China Pakistan Marine Information Workshop (CPMI-2022)

The 4th China Pakistan Marine Information (CPMI-2022) was held in CUI Wah campus, on 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, 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.



COMSATS University Islamabad in collaboration with UNESCO, established a water chair at the university. The UNESCO Chair aims to enhance knowledge and understanding of integrated water resource management and foster cooperation among stakeholders in Pakistan. Through various awareness talks and

events, the collaboration between Comsats University Islamabad and the UNESCO Chair seeks to educate students, faculty, and the wider community about the importance of sustainable water management and the need to adhere to the policies set by the government. By following the Water Policy 2018 and actively engaging with the UNESCO Chair, Comsats University Islamabad contributes to the national goal of ensuring water security and sustainable development in Pakistan. The UNESCO Chair on Knowledge Systems for IWRM supervised a Training Activity at the campus level, with a main focus on enlightening the importance of water conservation. Various activities were arranged to encourage students to conserve drinking water resources and promote water-saving practices. These activities included displaying handmade pamphlets highlighting water-saving and conservation techniques, as well as organizing a walk within the campus premises to raise awareness about the importance of saving water for a sustainable life. This initiative demonstrates the university's commitment to promoting water conservation and creating awareness among its students and the wider community.

By adopting a government policy to ensure sustainable harvesting of food from aquatic ecosystems on campus, COMSATS University is taking proactive steps towards promoting responsible and environmentally friendly practices. This policy demonstrates the university's commitment to preserving aquatic ecosystems and ensuring the long-term sustainability of food sources. By implementing sustainable harvesting practices, the university can help protect biodiversity, maintain ecosystem health, and support local communities that rely on these resources. This initiative aligns with global efforts to promote sustainable food systems and contributes to a more sustainable campus environment.

Comsats University Islamabad's commitment to planting native species on its campus is a commendable effort towards preserving biodiversity. By focusing on native species, the university can help maintain the ecological balance and support the habitats of local flora and fauna. Additionally, the inclusion of an Environmental Management Plan (EMP) as part of its Environmental Impact Assessment (EIA) approval showcases the

university's dedication to responsible environmental practices. By considering the impact of its projects on flora, fauna, and their habitats, Comsats University is taking proactive measures to minimize any potential negative effects and ensure the preservation of these important ecosystems.



Comsats University Islamabad is demonstrating its commitment to upholding water quality and protecting ecosystems, wildlife, as well as human health and welfare. Adhering to these standards ensures that the university's water discharges meet the necessary criteria to minimize negative impacts on the environment and maintain the overall well-being of the surrounding ecosystems. This responsible approach to water management contributes to the preservation of natural resources and supports sustainable practices on campus. The university conducted an environmental assessment through PEPA.

The Tree Plantation Drive 2022

The Tree Plantation Drive at COMSATS University Islamabad, Wah Campus was started and inaugurated by the Member of the Provincial Assembly Punjab (MPA), Malik Taimoor Masood Akbar on February 4, 2022. He planted a tree opposite to the Mechanical Block. On the behalf of Director Campus, Prof. Dr. Muhammad Abid, T.I., Sr. Manager Student Affairs Dr. Akmal Javaid planted a tree for heightening campus plantation drive. This event was organized by the Services Section under the supervision of Manager Services, Dr. Muhammad Nawaz. The Heads of Department, Section heads and staff members participated in the drive and planted trees.



CUI is also taking steps to reduce plastic waste and promote sustainability. Implementing a complete ban on the use of plastics can be an effective measure to minimize environmental impact and encourage the adoption of alternative, eco-friendly

materials. Comsats University Islamabad has indeed implemented a ban on plastics; it is a significant step towards creating a more sustainable campus environment.



COMSATS University Islamabad ensures not to dispose of any construction material in any adjacent water body to prevent marine pollution. The university implements an Environment Management Plan (EMP) for all development activities. This EMP is implemented in accordance with the IEE/EIA Regulations 2000 of the Government of Pakistan. This indicates that the university is committed to responsible construction practices and environmental protection. For more specific details about the EMP and its implementation, it would be best to refer to the relevant documentation or contact the university's environmental management department.

COMSATS University Islamabad is demonstrating its commitment to minimizing physical, chemical, and/or biological alterations of related aquatic ecosystems. This proactive approach is crucial for preserving the health and integrity of these ecosystems. By implementing measures to minimize alterations, such as pollution control, habitat preservation, and responsible resource management, the university is contributing to the conservation and sustainable use of aquatic ecosystems. This aligns with global environmental goals and

ensures the long-term health and resilience of these valuable ecosystems.

By adopting the government policy to monitor the health of aquatic ecosystems, COMSATS University Islamabad is demonstrating its commitment to environmental stewardship and the preservation of these vital ecosystems. Monitoring the health of aquatic ecosystems is crucial for understanding their ecological status, identifying potential threats, and implementing appropriate conservation measures. By actively participating in this monitoring effort, the university can contribute valuable data and insights to inform decision-making and promote sustainable management practices. This initiative showcases the university's dedication to environmental research and its role in safeguarding the health and integrity of aquatic ecosystems.

The collaboration between Comsats University Islamabad and the Council for Scientific and Industrial Research (CSIR) in various research activities is a valuable opportunity for both faculty and students. The availability of MS programs in areas such as Climate Change and Integrated Natural Resources Management, Soil Health and Environment Resources Management, Fisheries and Aquaculture, Agro-Processing Technology and biosciences, Plant Breeding and biotechnology, and Industrial Animal Nutrition and Feed Production further enhances the educational offerings and benefits the academic community. This collaboration not only enriches the learning experience but also fosters innovation and promotes sustainable practices in areas related to climate change, natural resource management, agriculture, and biotechnology.

Comsats University Islamabad has got the approval for the Environmental Impact Assessment (EIA) of CUI. The Environmental Management Plan (EMP) of the EIA is being implemented in order to ensure watershed management in its jurisdiction. Post-EIA monitoring report is sent to the Pakistan Environmental Protection Agency (Pak-EPA) on an annual basis.

UNESCO Chair on Knowledge Systems for Integrated Water Resource Management at CUI Wah celebrated World Water Day

on March 31, 2022 at COMSATS University 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 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.

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. Seminar and Poster competition supported the Chair effort to achieve the Sustainable Development Goal 6: Water and Sanitation for all. The winners and runners up of the poster competition for school category and university category were awarded cash prizes and certificates.



Department of Mechanical Engineering AIAA CUI Wah Chapter arranged Water Rocket Competition at Campus ground on Thursday 2nd June, 2022. About 60 students across 5 different Universities including HITEC, University of Wah, UET Taxila, CUST Islamabad and COMSATS Wah participated in the event. The students, working in groups of four, were tasked to design and construct a rocket using simple materials and creating the conditions for optimal aerodynamics that could achieve the greatest distance when launched at an angle of 45 degrees. The students were allowed to build the rockets, using materials like plastic bottles, foot pumps, clay blocks, electrical wiring tape, as well as grocery bags and plastic folder sheets. Teams could only power the rockets using water and air pressure propulsion, and were encouraged to design and experiment with creative nose cones and fins for their rockets to achieve maximum Range, Time of Flight and Height. The teams had three attempts to test the longest distance their rocket could reach. After careful deliberation, judging panel from Mechanical Engineering Department of Comsats University, Wah Campus selected Our HITEC University as the winner, with All Comsats University, Wah Campus as the first runner up and University of Wah as the second runner up. Capital University of Science & Technology was nominated for the Best Design Award.



Maritime Security Workshop (MARSEW-5)

The Director Campus attended the fifth edition of Maritime Security workshop from December 7 – 10, 2022 at Pakistan Naval War College Lahore. This year the theme of the workshop was “Secure Seas – Prosperous Pakistan”. The workshop was divided into two phases. In the first phase of MARSEW-5 involved discussion on various maritime and maritime security related topics, in the second phase the field trip of Pakistan Navel's operational commands and coastal facilities of Creeks Area at Karachi was witnessed. During the visit the team was given the briefing on CPEC maritime related projects and the Pakistan Navy's reforms and initiatives in the social-economic uplift of marine security. On December 15, 2022 President Dr. Arif Alvi addressed the concluding session of the 5th Maritime Security Workshop 200 (MARSEW-5) held at Pakistan Navy War College. On the occasion the Director Campus received a commendation certificate from the President of Pakistan Dr. Arif Alvi on successful completion of the workshop. The Senators, Parliamentarians, Senior bureaucrats, officers from the Armed Forces, Academia, Media Personalities and dignitaries from maritime and business sectors participated in the MARSEW-5.



Students of DME Secured Best Poster Award at 4th China-Pakistan Marine Information Workshop

Two groups of the students of the Mechanical Engineering Department presented their project posters in the 4th China-Pakistan Marine Information Workshop (CPMI-2022) held at CUI Wah Campus on November 16, 2022. The project titled “Design and Analysis of an Ultrasonic Acoustic Sensor using Equivalent Circuit Method” secured first position in the poster competition and was awarded with a cash prize of Rs. 10,000/-. The project was supervised by the Assistant Professor, Dr. Muhammad Shakeel Afzal of Mechanical Engineering Department.

A prize and certificate distribution ceremony was held on December 23, 2022 in the Department of Mechanical Engineering (DME) chaired by the Director Campus. The Chairperson, Mechanical Engineering Department, Dr. Atta ur Rehman Shah and faculty members of the Department also

attended the ceremony. The Director Campus, Prof. Dr. Muhammad Abid, T.I., awarded certificates of appreciation to participants and a cash prize to the winners. The Director Campus and Chairperson DME appreciated the students and their supervisors for their outstanding work.

