



SDG-15 LIFE ON LAND



Sustainable Development Goal 15 (SDG 15), focused on "Life on Land," aims to protect, restore, and promote the sustainable use of terrestrial ecosystems, manage forests sustainably, combat desertification, and halt biodiversity loss. Achieving these targets is essential for the health of our planet and the well-being of current and future generations.

COMSATS University Islamabad (CUI) plays a significant role in advancing these objectives through various initiatives and programs. Key efforts include:

- 1. Research and Conservation Projects:** CUI conducts research on ecosystems and biodiversity, contributing to scientific understanding and promoting effective conservation strategies.
- 2. Educational Programs:** Courses like Fundamentals of Biology, Landscape Design, and Natural Resource Management equip students with the knowledge and skills needed to address ecological challenges and promote sustainable practices.
- 3. Community Engagement:** Collaborating with local communities, CUI fosters awareness and involvement in ecosystem conservation, empowering residents to take action to protect their natural resources.
- 4. Biodiversity Protection:** Through outreach and educational campaigns, CUI focuses on the importance of preserving threatened ecosystems and the species that inhabit them, encouraging sustainable land use practices.

These combined efforts reflect CUI's commitment to supporting SDG 15 and fostering a sustainable relationship between people and the land, ensuring a healthier environment for future generations.

COMSATS University Islamabad (CUI) is actively involved in the conservation and sustainable management of ecosystems and their biodiversity. The university collaborates with local communities to promote the protection of natural habitats and the species that inhabit them.

Key initiatives and programs at CUI include:

- 1. Educational Programs:** CUI offers various courses related to flora and fauna, such as Fundamentals of Biology, Landscape Design, and Natural Resource Management. These programs equip students with the knowledge to understand and address ecological challenges.
- 2. Agricultural Land Management:** The university provides programs focusing on sustainable practices for land use in agriculture, including disciplines like Soil Science, Environmental Geology, Soil and Water Conservation, and Natural Resource Management. These fields emphasize maintaining soil health, conserving water, and managing resources effectively.
- 3. Consultancy Services:** CUI offers consultancy to local farmers on post-harvest practices for vegetables. This includes guidance on handling, storage, and preservation techniques to minimize waste and enhance the quality of produce.
- 4. Conservation and Restoration:** The university's programs in soil and water conservation aim to develop strategies for the sustainable use and management of land resources, helping to prevent degradation and promote ecological health.

Through these efforts, COMSATS University Islamabad not only contributes to the achievement of SDG 15 but also plays a crucial role in empowering local communities to engage in sustainable practices, ensuring the preservation of ecosystems for future generations.

World Environmental Day organized by Department of Environmental Sciences

Department of Environmental Sciences COMSATS University Abbottabad Campus organized a one-day event on world environmental day. This day is specially celebrated to aware the people of environmental issues and this event. Environmental protection society Department of Environmental Sciences and collaboration with WASSA and WWF

jointly organized the event mainly lead by the chairman Prof. Dr.Irshad, HoD, Dr. Faridullah and also convene with Dr. Malik Tahir Hayat, and advertising committee Dr.Shumaila, DOO Environmental Sciences Dr. Awais Arfeen, and their team. At this event, they invite some students from City School. Where they perform about environmental issues. A quiz competition was also taken. Later on, Director WASSA and deputy WWF give the awareness about environmental issues, and then at the closing ceremony Director CUI, ATD Campus Dr. Maroof Shah, and chairmen Dr.Irshad also explain to people about the environmental issues and they conclude the vote of thanks.

1st Meeting of the Water, Environment & Agriculture Societies Consortium under Water Resource Accountability (WRAP)-Climate resilient Solutions for Improving water Governance (CRS-IWaG), IWMI - September, 2023

The 1st Meeting of the Water, Environment & Agriculture Societies Consortium under Water Resource Accountability (WRAP)-Climate resilient Solutions for Improving water Governance (CRS-IWaG) was organized on September 26, 2023 by the International Water Management Institute (IWMI), Lahore, Pakistan. On behalf of UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), CUI Wah Campus, Engr. Sarmad Manzoor from the Department of Civil Engineering attended the meeting and delivered a presentation on the operational implementation plan of UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), CUI Wah Campus activities with respect to Water Resource Accountability (WRAP) and Climate resilient Solutions for Improving Water Governance. The Director -IWMI & PROJECT Leader WRAP, Dr Mohsin Hafeez presented a welcome address along with a brief introduction about the IWMI and overview of WRAP Programme. All invited member (academic institutions) of the consortium presented their progress and future plan of action for improving the water governance. The

UNESCO Chair was actively participated and addressed the impacts of climate change on water resources accountability and resilient Solutions for Improving water Governance. This meeting provided a great networking opportunity for partners.



Invited talk on “CO2 Emissions from Pakistan Marine Industry: How Can Marine Industry be Greener?”

The UNESCO Chair on Knowledge Systems for Integrated Water Resource Management (IWRM), COMSATS University Islamabad, Wah Campus in collaboration with Cranfield University, UK, and several institutions from Pakistan including NUST, GIKI, NEO, University of Karachi, and Okara University jointly organized a workshop on Emerging Trends & Technologies: Carbon Capture and Storage, Climate Change and Net Zero on August 21, 2023 at CUI, under the Pak UK Education Gateway Mobility Partnership for Faculty funded Program by British Council. The workshop was comprised of a series of invited talks, panel discussion as part of its technical program by renewed academicians and industrial representatives. Dr Adnan Syed, Lecturer, Surface Engineering Precision Centre Cranfield University, UK presented the opening remarks. Mr. Mubbashir Sheikh Higher Education Programme Manager, British Council Pakistan presented the mobility program objectives and aims of establishing higher education linkages between Pakistan and UK to explore cutting-edge research and contributing towards the attainment of the Sustainable Development Goals 13 and 14. The Director Campus / UNESCO Chair on Knowledge Systems for Integrated Water

Resource Management (IWRM) delivered his invited talk on “CO2 Emissions from Pakistan Marine Industry: How Can Marine Industry be Greener ?” along with the Defence & Maritime Analyst, Cmdr (R) Syed Muhammad Obaidullah. He deliberated on the challenges and way forward for the emission of CO2 for Pakistan Maritime Industry on costal area's of Karachi Port, Port Qasim and Gawadar. He expressed that since 2016 Pakistan Navy has annually planted one million mangroves to mitigate the footprints of carbon. Pakistan's 1050km of coastline industry which needs shaping with international cooperation in the maritime sector for a brighter future. The workshop was attended by the academia other than the partner institutions including LUMS, International Islamic University, Islamabad, Capital University of Science & Technology, Punjab University, Riphah University, NUTECH, Pak Austria, University of Wah, UET Lahore, Bahria University, CCRD, CUI Campuses. The representatives of scientific and industrial organizations i.e. GCISC, IWMI, HUBCO, QATPL, POL, SIEMENS, CREECO, ASHRAE Pak Chapter, WAPDA, Energy Sector, SDPI, OPML, Pakistan Navy.

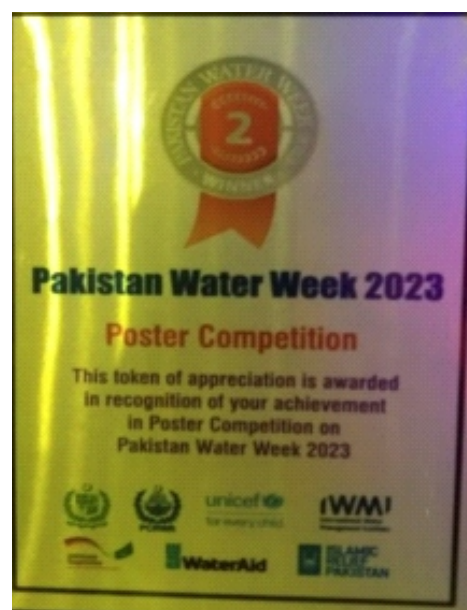


Pakistan Water Week - National Exhibition

The students of CUI Wah Campus under the platform of UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), CUI Wah Campus participated in the National Workshop organized by the Pakistan Council of Research in Water Resources (PCRWR) in the activities during Pakistan Water Week - 2023 with the focus on the future of “Transformative Approaches”. The objectives of the Pakistan Water

Week 2023 are to enhance the awareness, sharing knowledge among young water professionals by giving them an opportunity to share their vision for a water secure future. The event was held on December 7 – 8, 2023 at Pak- China Friendship Center, Islamabad.

A total of Fifteen students participated in the Poster Competition and Seven Short Documentaries were presented by CUI Wah Campus students. Ms. Nasira Zahid from Department of Computer Science, CUI Wah Campus got Second Position in the Poster Competition among the 50 posters made by other universities and college students. The students highlight the importance of water and related emerging issues in a graphical form to create awareness among the audience.



PUBLICATIONS

Publications Title	First Author	Publisher	Impact Factor	Weblink
The occurrence, characteristics, and adaptation of A-to-I RNA editing in bacteria: A review	Weixue Liao, Wenhan Nie, Iftikhar Ahmd	Frontiers in Microbiology	6.064	https://doi.org/10.3389/fmicb.2023.1143929
Impacts of COVID-19 pandemic on environment, society, and food security	Hafiz Mohkum Hammad	Springer Nature	5.8	https://link.springer.com/article/10.1007/s11356-023-25714-1
Prolonged Repellent Activity of Plant Essential Oils against Dengue Vector, Aedes aegypti	Abdullah Haris Muhammad Azeem, Muhammad Ghazanfar Abbas, Muhammad Mumtaz, Raimondas Mozuratis, Muhammad Binyameen	MDPI	4.927	
Phosphorus extractability in relation to soil properties in different fields of fruit orchards under similar ecological conditions of Pakistan	Sumera Bibi Muhammad Irshad Faridullah	Frontiers	4.49	https://doi.org/10.3389/fevo.2022.1077270
Nitrogen Mineralization in Texturally Contrasting Soils Subjected to Different Organic Amendments under Semi-Arid Climates	Hafiz Muhammad Rashad Javeed	Land	3.905	https://doi.org/10.3390/land12050989
Enrichment and Characterization of Proficient Lignocellulolytic Novel Bacterial Isolates from diversified Galiyat Forests of Lower Himalaya	O.A. Malik, A. Iqbal, M. I. Rashid	Forests	3.28	https://www.mdpi.com/1999-4907/14/6/1180
Unraveling the impact of human perturbation on nitrogen cycling in terrestrial ecosystems of lower Himalaya, Pakistan	Tahir Zaman, Saeed Ahmad Asad	Springer Link	3	https://link.springer.com/article/10.1007/s10661-023-11964-6

Total Publications:10, High Impact Factor Publications are highlighted

In 2023 the most of projects carried out in SDG 15, almost **40.17 million PKR** worth was earned through this SDG, among them a project titled **“Adapting to climate change through climate smart agricultural practices in water limited landscapes in South Asia”** is worth mentioning.

