



Learning
Innovation
Centre



Climate Talks

Second Edition- August-September 2024

UCP Climate Change Research Council (CCRC) Newsletter



Message of Chair Climate Change Research Council

The time for climate action is now. Our planet is sending us urgent signals — from rising temperatures to extreme weather events, the impacts of climate change are accelerating. We must act swiftly and decisively to reduce emissions, transition to renewable energy, and protect vulnerable ecosystems. Every action, no matter how small, counts. It's not just about saving the planet for future generations; it's about protecting our communities, health, and economies today. Let's come together, raise our voices, and commit to bold, transformative changes. The future of our world depends on the choices we make now. Climate action is not an option — it's our responsibility.



Inside this Issue

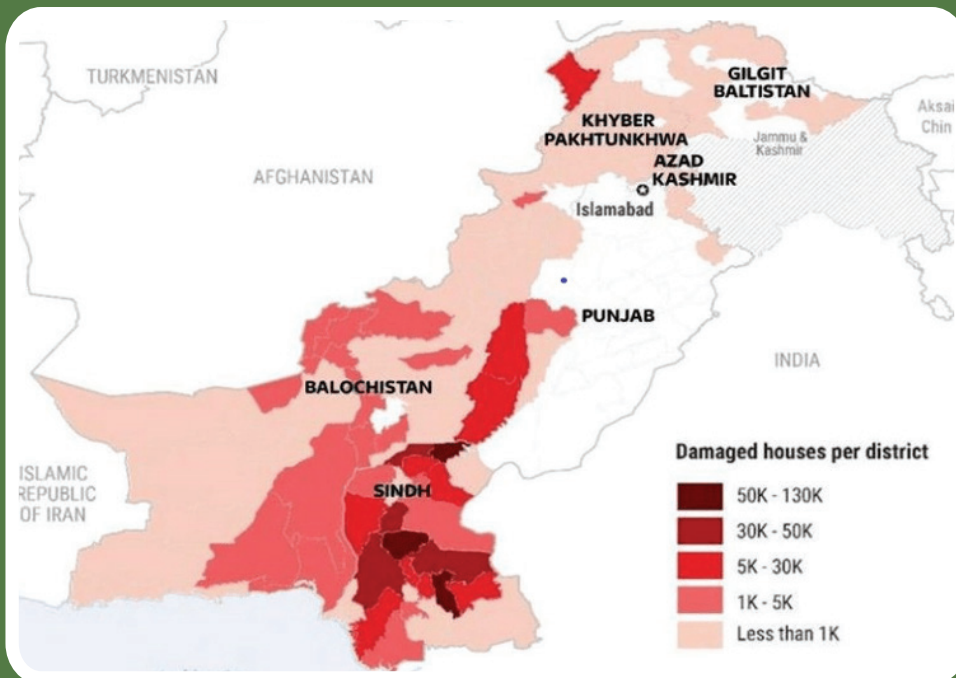
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Chair's Highlights

Beyond Bad Weathers: Climate Uncertainty in Pakistan



This UN map shows the scale of damage to houses across Pakistan as of 26 August 2023

Pakistan faces not just bad weather, but an increasingly uncertain climate future. The country is highly vulnerable to the impacts of climate change due to its geographical location, reliance on agriculture, and dense population. Erratic weather patterns, including unpredictable monsoons, prolonged droughts, and devastating floods, have become more frequent, threatening food security and water resources.

Glacial melt in the Himalayas and rising temperatures are altering river flows, increasing the risk of water shortages and extreme flooding events. This climate uncertainty poses serious challenges to Pakistan's economy, infrastructure, and public health. With limited adaptive capacity.

As researchers in Pakistan, we play a pivotal role in addressing climate change challenges. Here are key actions we can undertake:

Conduct Impact Assessments: Evaluate how climate change affects vital sectors like agriculture, water resources, and public health.

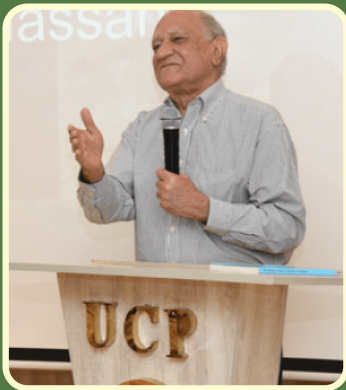
Develop Adaptation Strategies: Formulate and promote strategies to enhance resilience against climate-related risks.

Inform Policy Development: Provide scientific insights to guide national policies on climate change mitigation and adaptation.

Monthly Spotlight

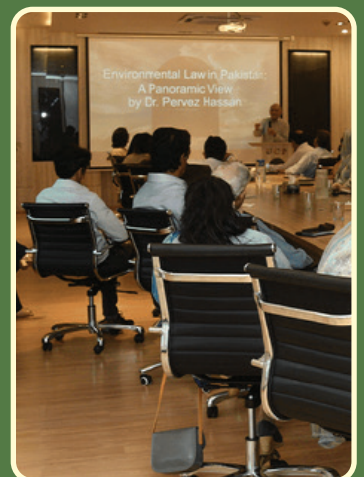
Session on “Environmental Law”

The Faculty of Law hosted a comprehensive information session titled "Environmental Law in Pakistan: A Panoramic View" on August 29, 2024, in collaboration with the Climate Change Research Council (CCRC). The event brought together a diverse audience, including legal professionals, environmentalists, scientists, researchers, and academics, to delve into the complexities of environmental law at both national and global levels. Key discussions revolved around the intersections of law, policy, and environmental science, emphasizing the urgent need for effective legal frameworks in addressing climate change and environmental degradation.

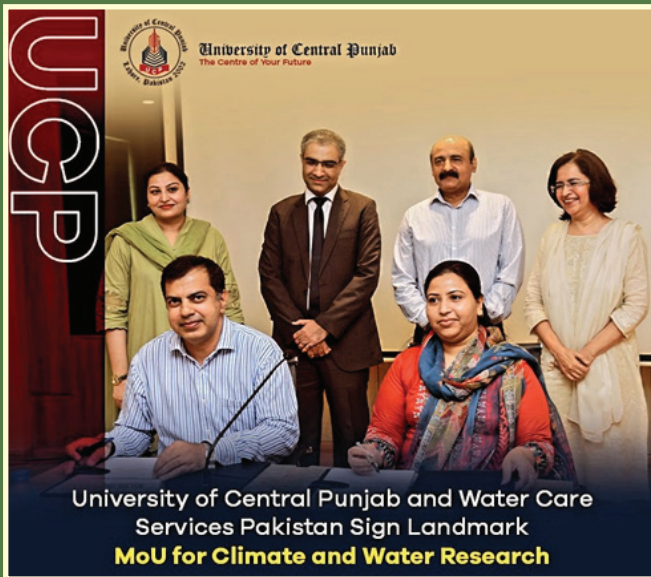


Dr. Pervez Hassan, Senior Advocate of the Supreme Court and a prominent authority in environmental law, led the session with a detailed overview of Pakistan's legal framework for environmental protection. He focused on foundation legislation, such as the Pakistan Environmental Protection Act (PEPA) 1997, explaining its significance in regulating industrial activities, managing natural resources, and controlling pollution. Dr. Hassan also outlined critical challenges, such as weak enforcement mechanisms, lack of awareness, and institutional inefficiencies, which hinder the effective implementation of these laws.

The session further explored global best practices, discussing how Pakistan could learn from international environmental frameworks to strengthen its own legal mechanisms. Participants engaged in thought-provoking discussions on the future of environmental law in Pakistan, the role of judicial activism in environmental protection, and opportunities for reform to meet the evolving environmental challenges posed by climate change and rapid urbanization.



3rd CCRC Convention



University of Central Punjab and Water Care Services Pakistan Sign Landmark MoU for Climate and Water Research

On July 31, 2024, the University of Central Punjab (UCP) took a major step towards tackling climate change and wastewater treatment by signing a Memorandum of Understanding (MoU) with Water Care Services Pakistan (WCSP). This partnership, spearheaded by the Climate Change Research Council (CCRC) under the leadership of Dr. Hadia Awan, Dean of the Faculty of Law, aims to foster research and innovation in climate and water sciences.

The MoU was officially signed by Pro-Rector, Dr. Hammad Naveed, and Director Technical of WCSP, Mr. Abdul A. Khurram. Also present were Dr. Hafiza Rizwana Kausar, Dean of the Faculty of Science and Technology, members of the CCRC, and staff from the Learning Innovation Centre. Professor Dr. Muhammad Akhyar Farrukh, from the Faculty of Science and Technology, serves as the focal person and principal investigator of the joint project initiated under this MoU.

The core objective of this partnership is to develop and implement "Novel Nanotechnology Approaches to Indigenous Wastewater Treatment for a Cleaner and Climate-Resilient Future." This groundbreaking project, the first of its kind in Pakistan, will utilize advanced nanotechnology to treat wastewater, addressing pressing environmental and public health challenges while contributing to a sustainable, climate-resilient future.

Additionally, the MoU outlines provisions for consultancy services to tackle industrial and environmental issues, benefiting both organizations and the wider community. It also highlights practical student engagement, with UCP students participating in small-scale industrial projects, fostering their innovation and problem-solving skills in real-world scenarios.

This collaboration aligns with several United Nations Sustainable Development Goals (SDGs), including SDG 6 (Clean Water and Sanitation), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 13 (Climate Action). The partnership marks a significant milestone in addressing Pakistan's environmental challenges through cutting-edge research and collaborative innovation.

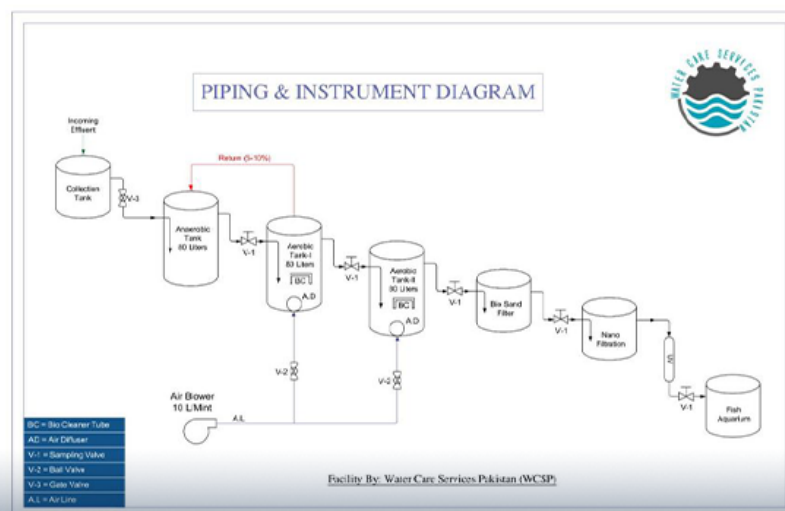
Pro-Rector UCP's Grant Award for RO-Plant Project



University of Central Punjab
The Centre of Your Future



Prof. Dr. Akhyar Farrukh
Principal Investigator



UCP starts pilot project for **waste water treatment** using indigenously developed nanoparticles **with industrial collaboration**. It focuses on United Nations **SDG-6** (Clean Water and Sanitation), **SDG-9** (Industry, Innovation and Infrastructure) and **SDG-13** (Climate Action).

The University of Central Punjab (UCP) has made a significant advancement in addressing climate change and wastewater treatment by allocating substantial funding to a pioneering research initiative. Pro-Rector Dr. Hammad Naveed has approved a budget of 1 million PKR for a groundbreaking project, in collaboration with Water Care Services Pakistan (WCSP), that integrates nanotechnology into wastewater treatment for enhanced climate resilience. This first-of-its-kind initiative, established through a Memorandum of Understanding (MoU) between UCP and WCSP, is a key part of broader efforts to advance research and innovation in climate and water sciences.

The project, initiated by the Climate Change Research Council (CCRC) under the leadership of Dr. Hadia Awan, Dean of the Faculty of Law, focuses on developing "Novel Nanotechnology Approaches to Indigenous Wastewater Treatment for a Cleaner and Climate-Resilient Future." Recently, experts from both UCP and WCSP visited a wastewater treatment site to assess its current conditions and evaluate the practical application of innovative nanotechnology solutions. The visit marked a critical step in implementing this ambitious project.

Project Updates

Visit of Nano-Chemistry Research Group to Wastewater Disposal Unit at Sundar Industrial Estate

The Nano-Chemistry Research Group, led by Prof. Dr. Muhammad Akhyar Farrukh from the Faculty of Science and Technology (FOST) at the University of Central Punjab (UCP), visited the wastewater disposal unit at the Sundar Industrial Estate's Board of Management on August 26, 2024. This visit marked a critical step in UCP's collaboration with Water Care Services Pakistan (WCSP) to explore advanced filtration techniques using nanotechnology. The focus of the visit was to examine industrial-scale wastewater filtration processes and assess how nanotechnology could enhance these methods. As part of this initiative, UCP plans to install a state-of-the-art nanofiltration system on its campus, aiming to address key water treatment challenges through research and practical solutions. This effort aligns with broader environmental sustainability goals and responds to the pressing global water crisis. According to a recent WHO report, over 2 billion people live in water-stressed regions, and 1.7 billion rely on drinking water contaminated with pollutants, leading to approximately 505,000 diarrheal deaths annually. UCP's proactive engagement in nanotechnology-driven water solutions represents a vital contribution toward solving these critical global issues.



Dr. Tanzeela Riaz from Department of Zoology FOST is working on a project entitled: Adapting Horizons: Biodiversity Conservation in a Dynamic World". They hosted an impact symposium on "Roaring for Change: Wildlife Conservation on World Environment day" on 25th June 2024 featuring an awareness walk, experts talks and panel discussion. The event aimed to educate and mobilize the community to take action in preventing the world's precious wildlife and ecosystems. The event was graced by Prorector Dr. Hadia Awan focusing on UN Sustainability Goals, SDG 13 "Climate Action", SDG 14 "Life Under Water" and SDG 15 "Life on Land". Let's aim to roar for a change together.

Dr. Raja Irfan Sabir, Associate Professor, Faculty of Management Sciences, University of Central Punjab, had successfully published the 2 papers on his projects Titled: Role of Green and Multisensory Packaging in Environmental Sustainability: Evidence from FMCG sector of Pakistan. Raja Irfan Sabir. Paper accepted for presentation at International Conference on Climate Induced Natural Disasters and Mitigation, Karakoram International University, Gilgit, September 25-26, 2024.

AND

How do Social Media Platforms Shape the Public Perception and Support of Policy Issues and Initiatives in Climate Change? Muhammad Waqas Farooq, Abdul Rauf, Raja Irfan Sabir, Faiza Nawaz. Bulletin of Business and Economics. 13(2), 1018-1025.

<https://doi.org/10.61506/>.

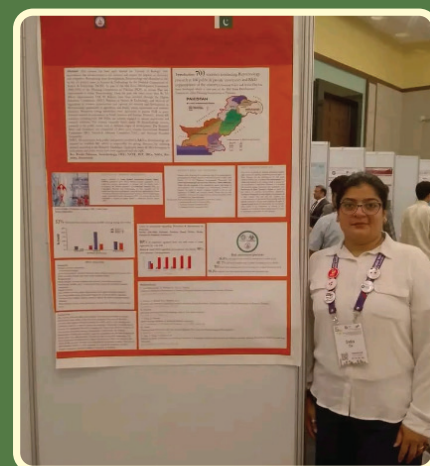


Raja Irfan Sabir's research paper on the role of green and multisensory packaging in promoting environmental sustainability within the Fast-Moving Consumer Goods (FMCG) sector of Pakistan has been accepted for presentation at the International Conference on Climate Induced Natural Disasters and Mitigation, hosted by Karakoram International University in Gilgit on September 25-26, 2024. This paper explores innovative packaging solutions that not only reduce environmental impact but also enhance consumer engagement and awareness regarding sustainability practices.

The study by Muhammad Waqas Farooq, Abdul Rauf, Raja Irfan Sabir, and Faiza Nawaz investigates the influence of social media platforms on public perception and support for climate change policies and initiatives. Published in the Bulletin of Business and Economics (Volume 13, Issue 2, pages 1018-1025), the research examines how social media can be leveraged to raise awareness and foster community engagement on climate-related issues. The paper can be accessed at the following link: <https://doi.org/10.61506/>.



Dr. Sumera Zaib, Head of Department, Basic & Applied Chemistry at the University of Central Punjab, has given the invited talk at the Pakistan Paint & Construction Chemicals Expo '24. The topic of her talk was "Driving Innovation and Sustainability in Construction Materials through Circular Economy and Green Chemistry". Her presentation focused on advancing the UN's Sustainable Development Goals (SDGs) through eco-friendly and sustainable construction practices.



Ms Sadia Zia recently represented University of Central Punjab, at the 17th Asia Pacific Biosafety Association Annual Bio-risk Conference in Manila, Philippines, from September 1st to September 7, 2024.

She presented her paper titled "Country Report on Emerging Biotechnology in Pakistan & Experience Sharing." The event also includes advanced pre-conference training workshops on IFBA review and Cyber-Biosecurity. She is Working on Dual Use of research highlighting the importance of cyberbiosecurity for the environment because of the increasing reliance on digital technologies to monitor, manage, and protect natural resources and ecosystems.



Our mission: To protect and hand on the planet to the next generation.