



SDG-6 CLEAN WATER AND SANITATION

Sustainable Development Goal 6 (SDG 6) is one of the 17 global goals established by the United Nations as part of the 2030 Agenda for Sustainable Development. SDG 6 focuses on ensuring availability and sustainable management of water and sanitation for all. The goal addresses the critical need for access to clean and safe drinking water and adequate sanitation facilities, as well as the importance of proper water management to support sustainable development. Here are the key targets and indicators of SDG 6:

Goal: Ensure availability and sustainable management of water and sanitation for all.

Key Targets and Indicators:

Achieve universal and equitable access to safe and affordable drinking water for all: This target emphasizes the importance of providing access to clean and safe drinking water to everyone, especially to vulnerable populations. Indicators include the percentage of the population with access to safely managed drinking water services.

Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation:

This target focuses on ensuring access to proper sanitation facilities and ending open defecation.



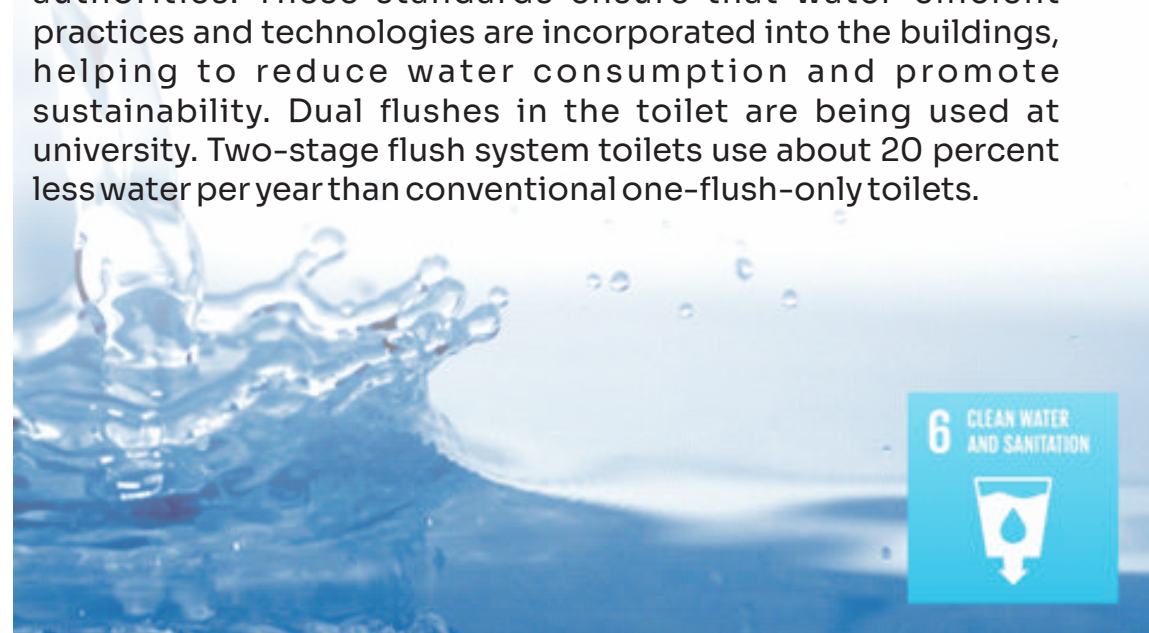
COMSATS University Islamabad has implemented measures to prevent polluted water from entering the water system, including addressing pollution caused by accidents and incidents on campus. The university has installed separate sieves for toilets, washrooms, and kitchens to ensure that solid waste and food waste do not mix with the water. This helps maintain the quality and cleanliness of the water supply.

The complete volume of water utilized at COMSATS College is taken from the main supply and estimated for two purposes:

- i. For human utilization
- ii. For cultivation

The University provides free drinking water to students, staff, and visitors. To ensure the quality of the water, a reverse osmosis water filtration plant has been installed on campus. This plant helps purify the water, making it safe and suitable for consumption. Students, visitors, and employees at the university benefit from this facility. Reverse Osmosis water filtration plants installed on the campuses.

CUI follows building standards that aim to minimize water use. All the buildings on campus are designed and constructed in accordance with the standards set by the relevant regulatory authorities. These standards ensure that water-efficient practices and technologies are incorporated into the buildings, helping to reduce water consumption and promote sustainability. Dual flushes in the toilet are being used at university. Two-stage flush system toilets use about 20 percent less water per year than conventional one-flush-only toilets.



Save Nature, Save Water, Save the Future.

Every drop counts. Conserve every drop of the water for your future generation.

Save Water Freshwater is 0.002% on earth. Save the drop. Save Life **Save Life**

Water Conservation Tips

- Turn off the water while brushing your teeth, Miswak, shaving and try to take short shower.
- Regularly check taps, pipes and toilet for leaks and if it occurs fix leakage problem.
- Use a broom / mop to clean driveways, sidewalks and steps by using AC/ rain water.
- Put a filled plastic bottle in your toilet tank and don't flush the toilets unnecessarily.
- Install shut-off valve on water hoses or low volume / high pressure nozzles or flow restrictors on taps and showers to save water.
- Water your lawn only when it needs and water during the cool parts of the day (morning/evening).
- Plant drought-resistant trees and plants and mulch around the plant to save water in the soil.
- Don't let the tap open while you clean vegetables, washing dishes, clothes / utensils.
- Install Rainwater harvesting system and use the harvested water for kitchen gardening and plantations.
- Educate your children about the water conservation and share the tips with friends / neighbors / servants.
- Open the tap at low pressure and don't let the tap open when not required.
- Use high efficiency plumbing fixtures and try to install other water-saving devices in the buildings.
- Use water saving technology like sensors and water saving toilet's tank etc.
- Reduce consumption of water by design and using water meters.

Imagine one day without water, so use it wisely

According to Sunnah 2/3 L of water is recommended for Wudhu.

Remember 3R REDUCE, REUSE and RECYCLE

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CCRD Project sponsored by **D 8 Organization for Economic Cooperation**

COMSATS University Islamabad has a dedicated horticulture section that is planned and maintained on a sustainable basis. The university focuses on planting indigenous local varieties of trees, shrubs, and ground cover that are well-suited to the climatic conditions and requirements of the area. The selection of plants includes less water-dependent species such as Cassia fistula Linn, Pongamia Pinata, Sapium, Silver Oak, Argun, Persian lilac, and Mountain Ebony. To oversee the horticulture affairs of the university, there is a dedicated horticulture society in place. This society ensures the proper care and maintenance of the university's horticultural areas.

Safe drinking water

Table of Contents

- Drinking water sanitation: How to test it and fix it
- Drinking water: How to protect it from contamination
- Drinking water: How to store it
- Drinking water: How to purify it
- Drinking water: How to use it
- Drinking water: How to dispose of it
- Drinking water: How to conserve it
- Drinking water: How to protect it from contamination
- Drinking water: How to store it
- Drinking water: How to purify it
- Drinking water: How to use it
- Drinking water: How to dispose of it
- Drinking water: How to conserve it

Drinking Water Comes from Rivers, Lakes, and Aquifers

Drinking Water: Public Water Supply or Private Well

Drinking Water: How to Test it and Fix it

COMSATS University Islamabad has a policy in place to maximize water reuse. As part of this initiative, rain harvesting tanks have been installed on campus, and the collected water is utilized for horticultural purposes. Additionally, water recharge wells have been constructed to help increase the groundwater table. It is worth noting that the university implements the National Water Policy issued by the Government of Pakistan, ensuring compliance with national guidelines and regulations related to water management and conservation.

At each campus of COMSATS University Islamabad, the overhead tanks of each building have been installed with measurement gauges. These gauges help monitor and measure the water levels in the tanks, allowing for efficient management and control of water usage on campus. This helps ensure that water resources are effectively utilized and allows for timely replenishment or conservation measures to be implemented as needed.

COMSATS University Islamabad actively measures and promotes the reuse of water. To facilitate this, a Rain/Storm Water Tank with a capacity of more than 205,000 gallons has been constructed on campus. This tank is used to store rain and stormwater for subsequent reuse. Additionally, rain harvesting tanks have been installed, and the collected water is utilized for horticultural purposes. Furthermore, water recharge wells have been installed to help increase the groundwater level. These measures contribute to the university's efforts in water conservation and sustainability.



COMSATS University Islamabad actively promoted conscious water usage in the wider community through various projects.

The project titled "Smart Water Metering and Pricing Project (SWMP)" was implemented to conduct a feasibility study for providing a continuous municipal drinking water supply to the residents of Sector I-8 in Islamabad, Pakistan, as a model. Another similar project, also called "Smart Water Metering and Pricing Project (SWMP)," highlighted that the private tanker mafia has taken advantage of the limited capacity of the municipal water suppliers, specifically the Capital Development Authority (CDA). This has resulted in a high-cost burden on the residents, as they rely on private tankers for their water needs.

CCRD of CUI focuses on mainstreaming climate change into development policy and community-based adaptation to climate change across the country. In this regard, CUI faculty engage in providing support for water conservation and improving the quality of water in the country.

CCRD CUI conducted the webinar on "Feasibility Study for Provision of Safe Drinking Water through Water Conservation (SDWC)" on 30th March 2022. The purpose of organizing this webinar is to share the outcomes of the ongoing feasibility study for the Provision of Safe Drinking Water through Water Conservation (SDWC) with the D-8 member countries. To gather scientists, water experts, and academicians around the globe to exchange their views and experiences to address the key challenges/research gaps related to water.

The University takes measures to ensure sustainable water extraction. Recharging wells have been constructed on campus to replenish the groundwater. Additionally, the university has planned its landscaping in a way that maximizes the absorption of rainwater. This helps in maintaining the groundwater level and promotes sustainable water management practices.

COMSATS University Islamabad actively cooperated with local, regional, national, and global governments on water security. Several projects and events were organized to address this issue.

1. Celebrations of World Water Day – 2022 Seminar on Monitoring Climate Extreme Events Through Remote Sensing and Modeling & Poster Competition on March 31, 2022
2. Water Informatics and Communication Technical Session offered at 19th International Conference on Frontiers of Information Technology (December 12 – 13, 2022) in Islamabad, Pakistan
3. 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.

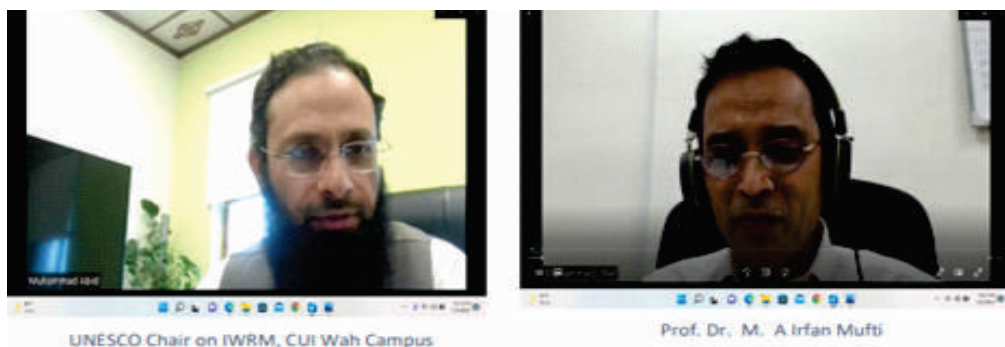


Poster Competition
World Water Day 2022



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



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.



4th China-Pakistan Marine Information Workshop (November 16, 2022).

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.

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 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.



The Department of Civil Engineering conducted an industrial visit of students of BS 6th semester on June 13, 2022. 71 students of 6th semester of Civil Engineering Department along with the faculty members visited the Sangjani Water Treatment Plant. Mr. Ameer Mehmood Khan, Assistant Director, gave a detailed briefing to the students. Students got the opportunity to have a detailed inside view of various components of Sangjani Water Treatment Plant. Industrial visits are part of the curriculum and are very valuable as they provide the students the opportunity of learning through travel, especially to places that they may not otherwise get to visit. Sangjani Water Treatment Plant is Asia's 3rd largest treatment plant which takes water from Khanpur Dam and treats almost 25 million Gallons of water per day.

The water treatment plant takes water from Khanpur Dam and supplies this to the users in Islamabad and Rawalpindi. Representatives from CDA briefly explained the intake structure, components of water treatment like sedimentation, coagulation, filtration and disinfection and storage of treated water. They also explained about the quality testing of water from the source and treated water and the frequency of testing. The visit ended with the words of thanks and exchange of souvenirs.

