

# COMSATS University Islamabad

# SUSTAINABLE DEVELOPMENT GENALS

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# Task Force for QS World & QS Asia Rankings, Times Higher Education (THE) University Impact Rankings and Times Higher Education (THE) World University Rankings



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# SDG-1: NO POVERTY

"OVERCOMING POVERTY IS NOT A GESTURE OF CHARITY. IT IS THE PROTECTION OF A FUNDAMENTAL HUMAN RIGHT, THE RIGHT TO DIGNITY AND A DECENT LIFE." NELSON MANDELA

#### **Student Financial Aid Offices**

Student Financial Aid Offices (SFAO) at COMSATS University Islamabad (CUI) provide a platform for the students, which are financially challenged, to explore the financial assistance opportunities available and to seek any support required in this regard. CUI aims at making the education accessible to sectors of the societies, which otherwise, may not be able to afford it being financially constrained, by creating as well as identifying the prospects to help the situation.

#### Students Receiving Financial Aid

The total number of students enrolled at CUI as of Fall 2021 was 34,323. Among these, the number of students coming from a low-income background, which cannot afford to pay the tuition fee, and were provided with the financial assistance, is 5,342 or 8.3% of the total enrollment. These students are supported by both University sources as well as externally funded scholarships, which includes around 17 different scholarship

programs.

In 2021, the University disbursed an amount of PKR.924.94 million among students, which includes those enrolled in the bachelor, master, and PhD programs.

#### **Anti-poverty Programs**

#### Low-income, blue-collar worker's children

The University seeks to admit students who are in the bottom 20% of household income group in the country and provides scholarships, targeting labor class/ low-income sections of society. Few of these programs are the 'Workers Welfare Fund Islamabad,' the 'Workers Welfare Board Islamabad,' and the 'Punjab Workers Welfare Board Islamabad,' all of which offer CUI-funded scholarships targeted towards low-income and blue-collar workers' children.

#### **Ehsaas Scholarship Program**

The Ehsaas Scholarship at CUI also caters to lowincome families and one of its objectives is to award direct, individual scholarships to academically qualified students who, without financial assistance, could not obtain university education.

Furthermore, CUI has graduation/completion targets for students who fall in the lowest 20% of household income group and offers scholarship programs to ensure that the students do not drop out due their inability to meet financial obligations. To achieve this target, Ehsaas Scholarship Program is a major source of funding from the Government of Pakistan. This social safety net program aims to provide 50,000 undergraduate scholarships and has an annual budget of PKR. 6 billion.

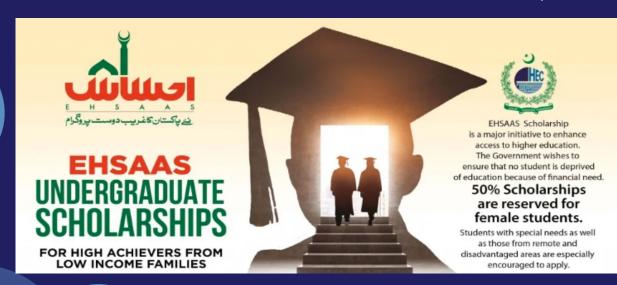
### Support (Food, Transportation, and Housing) for Students from Low-Income Families

In some instances, the scholarships only covering the tuition fee of students is not enough to help students to complete their studies. The students belonging to low-income families find it hard to afford other expenses required to be incurred to complete their degrees. Therefore, besides providing financial aid covering tuition fee, the University also provides support and assistance for food, housing, and transportation to students from low-income families, to enable them to complete their studies.

One of the fully funded scholarship at CUI which covers hostel, messing (food) and transportation charges, besides covering other expenses includes The 'Workers Welfare Fund'.

#### Memorandum of Understanding/Agreement

CUI signed a Memorandum of Understanding (MoU) with the Pakistan Bait-ul-Maal, in June

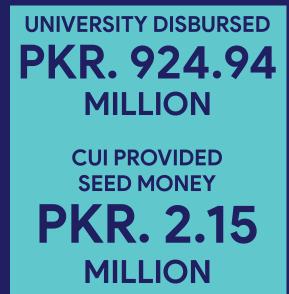


2021, to provide scholarships to 50 students. Mr. Malik Zaheer Abbas Khokar, Managing Director, Pakistan Bait-ul-Maal and Dr. Zafar Khan Safdar, Director Administration, Pakistan Bait ul Maal visited the Abbottabad Campus of CUI to sign the MoU. The MoU was signed for the next two years.

CUI has also an agreement with the Ihsan Trust/ Meezan Bank that offers Qarz-e-Hasna (interestfree loans) to students for their studies. The loan is payable in installments which start either after they graduate or it can be repaid monthly and the amount is fixed as per convenience/ affordability of the student.

Another window of opportunity for students is called 'Financial Assistance for Walk-in Needy Students (FAWNS),' which is administered by the CUI Endowment Fund.

For more details on the scholarships/ financial assistance provided by CUI, please see CUI Annual Report 2020-21.



## Support for Students from Low-Income Countries

As with any dynamic institution, CUI's long term goal is to promote socio-economic development through education, research, and outreach. Hence, CUI extends well-endowed scholarships programs for international students. The University's International Office manages all international student scholarships and establishes bonds with other institutions and governments, to create a platform to study in a different, yet compatible, environment. CUI offers various scholarships to students of low-income countries like, Afghanistan, Bhutan, Gambia, Kenya, Myanmar, Nepal, Senegal, and Sri Lanka. These scholarships provide subsidies on tuition fee.



Different scholarships offered by CUI are as below:

- > CUI scholarships for member countries
- CUI scholarships for OIC/ IESCO member countries
- > ICTP Scholarships (International Center for Theoretical Physics)

Beside these, following scholarships are offered in collaboration with the Higher Education Commission of Pakistan:

- Prime Minister Scholarships for Afghan Refugees
- Scholarships for Least Developed Countries (OIC)
- Allama Muhammad Iqbal Scolarships for Afghan Students
- Pak-Sri Lanka Higher Education Cooperation
   Program

Furthermore, The World Academy of Sciences (TWAS) has an agreement with CUI, offerings PhD, Sandwich, and Postdoctoral Fellowships for developing countries, especially to those who come from least developed countries.

Queen Elizabeth scholarships are also available for the international students.

#### Local Start-up Assistance

CUI helps the local community by supporting business start-ups that are financially and socially sustainable, through relevant education and resources, like mentorship program, training workshops and access to the University facilities.

CUI conducted a training session on "Entrepreneurship" for the physically challenged people of the Hazara Division on November 24, 2021. The session was mutually organized by Ms. Komal Khan (CEO), Creative Opportunity and Dr. Syed Afzal Moshadi Shah, In-charge Student Start up Business Center at Abbottabad Campus of CUI. The session was attended by more than 50 physically challenged people. Dr. Syed Afzal Shah introduced the concept of Entrepreneurship to the participants and highlighted its importance, linked it with real world examples and how it can be beneficial for the physically challenged people.

The participants were explained how internet technology provides a level field ground to them.

Furthermore, the Business Incubation Center (BIC)/ Student Startup Business Center (SSBC) at CUI arranges free training program, comprising of 12 modules, in November-December each year. These modules include, business plan development, business opportunities, mentorship. SSBC also held a seminar on 'Tech Trends in Global Job Market,' in July 2021.

SSBC at CUI conducted a free online training session for students of the University of Lahore in April 2021 on "Business Education and Future Job Trends". The session was attended by more than 70 students and faculty members. It was held in an interactive manner where the participants raised the questions and were provided with the response instantly.

The BIC-SSBC Management Committee provides seed money to student startups to support their business ideas. So far, the Center has granted seed money worth PKR.2.15million to various student groups. During 2020-21 an amount of PKR.150,000/- was awarded to a startup by the name of 'University Expert.'

Moreover, BIC/SSBC provides free office space to student startups in which they can also set up their product research laboratories and develop a prototype to launch their product.

SSBC arranged an awareness session – 'Mera Ghar, Mera Pakistan' – on Islamic Small & Medium Enterprise (SMEs) in June 2021. It also arranged a virtual training session on Islamic banking operations and Islamic banking branch operations management, during June 2021.

#### **Policy Addressing Poverty**

The Centre for Policy Studies (CPS) established at CUI is aimed at bridging the gap between academia, research and the public policy making processes. To achieve its goals the Centre's team is a blend of academicians, scholarly researchers and policy practitioners who have had extensive experience in public policy formulation and implementations process at senior levels.

Through its collaboration and partnership with well-known policy centers and think tanks around the world, the Centre also examines Pakistan's policy alternatives based on best international practices in various fields. Apart from the team members at the CPS working on various issues, the faculty at COMSATS University Islamabad is also working in collaboration with the CPS. The Centre works with the faculty members to research eradicate poverty in all it dimensions which can eventually help the Government in making relevant policies.

Dr. Saima Nawaz, faculty member of CUI from

Department of Economics, published a paper in 2021 titled "Energy Poverty, Climate Shocks and Health Deprivations". Results achieved by the empirical analysis, addressing the endogenous nature of the relationship between energy poverty and health outcomes, show that energy poverty has a positive and significant impact on health poverty in Pakistan. The paper has a Policy Citation as well.

Few other faculty members of CUI from the Department of Economics published a paper titled "Scrutiny of income related drivers of Energy Poverty: A global perspective" in 2021. This paper explored the roles of a variety of incomerelated attributes of the problem of energy poverty which should be considered in the policymaking for alleviating various constraints for essential access of the people to useable energy. The study found that the stage of economic development is a key factor in the determination of energy poverty, and this has important policy implications at the global level while accounting for the income attributes of the relevant countries.







# SDG-2: ZERO HUNGER

"IF YOU WANT TO ELIMINATE HUNGER, EVERYBODY
HAS TO BE INVOLVED."
BONO

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#### **Campus Food Waste Tracking**

The provision of food at COMSATS University Islamabad (CUI) is outsourced, however, in order to keep a check on quality and other aspects associated with the food (food wastage, variety in food, quality etc.), the Campus Cafeteria Committee is responsible for monitoring and minimizing wastage of food.

The total food wastage at CUI is 111 metric tons per annum. The total population at the campus is 15,140. Therefore, the food wastage per person per annum is 7.33 kg. In future, due to the increased monitoring, this figure is likely to reduce drastically.











In the 2022 Global Hunger Index, Pakistan ranks 99<sup>th</sup> out of the 121 countries. With a score of 26.1, Pakistan has a level of hunger that is serious.

Understanding the importance of reducing food insecurity, CUI tries to contribute in any capacity possible. In this context, one of its centers "Bioprocessing & Food Processing Group (BFG)" works under the umbrella of the Biomass Research Conversion Center (BCRC) and integrates engineering with biology for designing sustainable systems that produce high-quality food products that protect the environment. It works on developing useful recyclable products, made from food processing waste, and designs new and innovative ways to process food, which can cater to the world's growing demand for food supplies.

#### Student Food Insecurity And Hunger

CUI has student cafeterias which offer a variety of nutritious food options at economical prices. The cafeteria and food committees at all campuses also ensure hygienic, high quality, tasty food while keeping an eye on the pricing as well. The committees provide feedback and issue warning letters and impose fine on the caterers in case any of the quality parameters are infringed.

#### **Students and Staff Hunger Interventions**

The University intervenes to target hunger among students and staff members, including ensuring supply and access to food at the campuses as well as arranging for food for staff who otherwise find it difficult to afford nutritious food. It also offers food at subsidized rates to students and lower-ranking staff members to make food affordable to everyone. To overcome food insecurity, the lower-

ranking staff members get 50% subsidy of regular rates. The cafeteria and food committees ensure the supply of affordable, good quality food during mealtimes.

Furthermore, during Ramadan (the month of fasting) each year, CUI arranges Iftar-comedinner for security guards, drivers, and other operational maintenance staff that are present on the campus at the time of breaking of the fast. This is done through donations, which are solicited from faculty members and staff.

#### Sustainable Food Choices on Campus

Cafeterias at all CUI campuses offer a wide range of food items, including vegetarian and vegan food in addition to meat options.

The University provides healthy and affordable food choices for everyone, including guests, on campus. Healthy and affordable food choices are available to students, faculty members, staff, visitors, and guests at all cafeterias. There is a list of pre-approved items along with recommended brands and price limits adherence to which is ensured by the cafeteria committees. The use of caustic soda and Chinese salt is strictly prohibited for preparation of food.

#### Agriculture & Aquaculture Sector

The number of graduates produced by CUI during 2021 was 8,606 in different degree programs. Currently, CUI is offering 'Bachelor of Science in Food Sciences and Nutrition', at its Sahiwal Campus from which 33 students have graduated so far.

Moreover, the University tries to provide awareness on food security and sustainable agriculture/aquaculture knowledge, skills or technology to local farmers and food producers. CUI faculty members engage in and carry out different surveys and projects on sustainable agriculture knowledge, in different areas of Pakistan. The findings of these surveys help the local farmers to improve their technical knowledge and skills. Dr. Arif Alam from the Abbottabad Campus published two research articles on food security during 2021.

CUI jointly organized the 3<sup>rd</sup> China-Pakistan Marine Information Workshop in November 2021 in collaboration with the College of Underwater Acoustic Engineering, Harbin Engineering University (HEU), China at its Wah Campus. The event was part of the 'One Belt One Road' initiative under the China Pakistan Economic Corridor (CPEC). Prof. Dr. Shahid Baig, Chairman, Pakistan Science Foundation (PSF) was the Chief

Guest on this event. The workshop was 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. 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.

A full-day seminar, 'Evaluating the potential of Zero Energy Cool Chamber for Horticultural Crops (ZECC),' was conducted on March 11, 2021 at the Vehari Campus. Significant results were shared with farmers, fruit and vegetable growers, local technical officers, agricultural research and extension officers, retailers, faculty members and

students. Growers described problems being faced, especially pertaining to fertility and unavailability of good quality certified seeds. After the seminar, participants visited the zero-energy cool chamber and got practical demonstration about this technology.

Another seminar on Food, Environment and Public Health in Educational Institutes was organized by the Department of Environmental Sciences, Vehari campus, in collaboration with the Punjab Food Authority, for awareness of students, faculty members and staff.

The University always purchases food/products directly from the local vendors through its Purchase Committee. In case of large events, vendors are selected through the Public Procurement Regulatory Authority (PPRA) Rules, which stipulate an open merit method of selection of vendors.







# SDG-3: HEALTH CARE

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#### **Health Care**

University health/medical centres enhance primary care utilization, decrease emergency room utilization, and minimize hospitalizations. These days almost all universities have a medical centre. The COMSATS University Islamabad (CUI) also has medical centres on each of its campuses. In this regard, Medical Centre at CUI Islamabad was established in 2007, which maintains a formulary of life-saving drugs and other essential drugs that are provided free of cost to the employees and students of CUI. There are three Medical Officers, two staff nurses, and two nursing assistants. The services offered include consultation, first aid management/vital signs monitoring, nebulization, random blood sugar testing with a glucometer, E.C.G., dressings/cut wound stitched, securing hemostasis in case of bleeding from nose/deep wounds, stabilizing patients in case of hypo or hypertension/shock, counselling/psychotherapy, ambulance services, minor surgical procedures, and three beds for observation (separate for Male & Female patients). Since 2007 the medical centre has dealt with different types of emergencies, including but not limited to minor emergencies, fainting/unconsciousness/fits, SOB (signs of breathlessness), minor RTA's (Renal Tubular Acidosis), chest pain (first aid before shifting to hospital), dehydration/vomiting, and allergies, etc.

The duties of the senior medical officer include but not limited to

- Provision of First Aid.
- > To provide Primary Health Care services to all.
- > To promote Health education.

- Counseling & psychological assistance of students.
- Awareness about the preventive measures relating to common Seasonal and deadly diseases by arranging seminars and Vaccination Camps.
- > Curative and Diagnostic services.
- > Referral services.
- > Follow-up services.
- Medical cover during Sports.
- > Medical cover during seminars, conferences, Convocations and every event of CUI.
- Verification of Medical cases.
- > Verification of Scholarships Forms.
- Provision of medical fitness certificates for new inductees.
- > Minor Emergencies are entertained.
- Serious emergencies are referred to Hospitals.
- Referral Services and Liaison with CMH ATD.
- > Visits and inspection of Food points.
- > Preparation of monthly report.
- > The duties of the dispenser include but not limited to
- > Facilitate SMO in providing First aid.
- > Facilitate SMO in emergencies.
- Receiving patients.
- Maintaining vital signs.
- > Dispensing medicines prescribed by SMO.
- Dressing (ASDs).
- > Stitching of wounds.
- > Provision of injections in emergencies.
- > Height and weight record.

- Performing duties in every educational and sports event.
- > Daily and Monthly record keeping of patients.
- Daily and Monthly record keeping of medicines.



Health care Unit of COMSATS Islamabad Campus



Medical camp for blood donation

#### Health Safety and Security

The CUI is committed to the health, safety, and security of all its faculty, staff, and students. As part of this commitment, CUI has medical centres, safety offices and security offices. These centres and offices are equipped with the latest tools and technologies and have professionals to deal with unforeseen situations. Further, CUI has a Health Safety and Security Committee (HSSC) to monitor the operations of the medical centre, safety offices, and security offices, drafting policies for the University and initiating MOUs between CUI and different organizations working in the field of health safety and security. Prof Dr Qadeer (Chief Engineer, E&CE Dept.) chaired the HSSC. Currently, members of the HSSC are Lt Col (R) Sheik Aftab (Manager of Security Office), Dr Zulfigar Ali Khan (Manager of Medical Centre), Dr Uzair Iqbal Janjua (Assistant Professor, Computer Science Dept.), Dr Naseer Ali Shah (Assistant Professor, BioScience Dept.), Chief Proctor (Pictorial Board). Mr Amer Satti (Assistant Professor, Management Science Dept.), and Mr Wajid Kamran (Deputy Registrar Admin). HSSC directly report to the Rector of the University. In 2021 under the direction of Prof. Dr Muhammad Tabassum Afzal (Rector CUI), HSSC arranged fire fighting drills each semester to familiarize and reinforce proper evacuation routes and practices. The goal is to have the proper actions whenever fire alarms sound so that everyone safely evacuates the area in an orderly manner. These drills may also be helpful during an earthquake.

Further, the University's Rector believes that the University management should teach every University student the fundamentals of first aid because it's advantageous for all students. He

believes that providing first aid is crucial in responding quickly to incidents so that injuries can be treated effectively and efficiently before a qualified medical staff arrives to provide more specialized care. Therefore, in 2021 with the collaboration of different hospitals, the HSSC provided training to 20 University students. Lastly, HSSC is also responsible for defining policies, preparing procedures, and work instruction against epidemics like COVID-19 and dengue fever.



**HSSC Meeting with external stakeholders** 

September 2021							
Date	Total no. of	Non Emergencies		Emergencies treated	Referred to		
	patients	Students	Staff		hospital		
6 <sup>th</sup>	212	83	120	07	02		
13 <sup>th</sup>	123	47	74	02	Nil		
20 <sup>th</sup>	242	132	107	03	Nil		
27 <sup>th</sup>	249	136	107	04	02		
October 2021							
04 <sup>th</sup>	185	99	81	05	Nil		
11 <sup>th</sup>	285	144	128	08	05		
18 <sup>th</sup>	367	197	157	10	03		
25 <sup>th</sup>	488	251	226	07	04		
November 2021							
<b>1</b> st	416	238	175	03	Nil		
8 <sup>th</sup>	228	115	109	04	Nil		
15 <sup>th</sup>	397	246	145	04	02		
22 <sup>nd</sup>	373	195	172	04	02		
29 <sup>th</sup>	347	158	180	08	01		



Dengue Spray in University Premises under the Supervision of HSSC

#### Mental Health Support

Maintaining the well-being of humans is a CUI priority, as higher well-being is associated with better mental and physical health. CUI has medical centres in which professionals are equipped with all necessities for emergencies and routine tasks. In addition, CUI has a Counselling and Wellness centre (CWC). The CWC has specialized psychologists responsible for counselling faculty, staff and students, for Stress reduction. In addition, CWC, from time to time, conducts workshops and seminars for the mental health and well-being of faculty, staff and students. On 14th October 2021, to observe World Mental Health Day, CUI, in collaboration with its Centre of Excellence, organized a Workshop on "Engaging" University Faculty for Mental Health Wellbeing of Youth". In the workshop faculty members belonging to various fields of arts and science participated. The subject event along with the overarching theme of mental health and wellbeing of youth also had the backdrop of Sustainable Development.

### CUI Secretariat and CUI Islamabad join hands to observe World Mental Health Day with workshop on "Engaging University Faculty for Mental Health Wellbeing of Youth"

Opening the event, Dr. Azeema Fareed, Pr. Medical Officer and Focal Person CUI Telehealth Project, underscored the significance of the subject and need for creating awareness about it among people of all age groups. She also highlighted CUI efforts and contribution towards the realization of 2030 Global Agenda.

In his welcome address on occasion, Registrar CUI, Dr Sajjad A. Madani, highlighted several challenges for youth in the digital age. He especially mentioned the mental wellbeing challenges surfacing from the overuse of social media and is having a profound social and psychological impact.

The first speaker for the technical session, Dr Aisha Kashif, Counselor, Psychologist United Nations (UN), Islamabad, acquainted the participants with a spectrum of the term "mental health" and briefly shared factors affecting mental health and peace. She shed light on the myths and stigmas associated with the mentally sick person and mental illnesses. While discussing stress-related issues in University students, she stated that the University environment presents a distinct set of challenges to students and could be a factor determining the mental health of students.

Dr Noreen Akhter, Deputy Director Sr. Psychologist National University of Sciences & Technology (NUST), Islamabad, focused on the

warning signs and identification of at-risk cases. Dr Akhter focused on the lack of connection between parents/teachers and youth and the unhealthy use of social media and digital tools.

The last speaker, Dr Saima Kalsoom, a Psychologist at National Defence University (NDU), Islamabad, highlighted teachers' role in contributing to students' mental health and peace. In connection with this, she considered teachers' psycho-education literacy vital. She advised University policymakers to provide faculty with a favourable environment to manage their relationship with young minds effectively. She suggested practising yoga for a healthy mind and body.

During the Q&A session, topics such as parents' education, the consequences of social media, awareness of sexual harassment and other sensitive issues were deliberated. Discussing these issues, guest speakers added that lack of awareness regarding child mental health issues and absence of parent-child connection are root causes of an increasing trend in mental illnesses in the young generation.

The Chief Guest for the event, Dr Akhtar Nazir, incumbent Executive Director CUI, and Federal Secretary, Ministry of Science and Technology, Government of Pakistan, appreciated the subject event organized by CUI Secretariat Telehealth Desk and CUI Islamabad. In light of critical global

stats on youth mental health, Dr. Nazir considered it essential to give this field of medical science due importance to ensuring healthier societies. He further emphasized the need to keep debates open on this and other health issues through awareness events, which he deemed a significant step forward for relevant measures at societal and national levels.

Delivering his vote of thanks at the closing ceremony, Prof. Dr Tabassum Afzal, Rector of CUI, considered the subject very timely owing to increased stress and other mental health-related issues since the onset of COVID-19. Further, Prof. Dr Afzal cited examples of stress management from Islamic history and urged the faculty to take initiatives for the wellbeing of youth's mental health. The event concluded with the distribution of certificates among the participants and the presentation of the shield to the Chief Guest.



Prof. Dr. Tabassum Afzal, Rector
COMSATS University Islamabad (CUI) and
The Chief Guest for the event,
Dr. Akhtar Nazir, incumbent Executive Director
COMSATS, and Federal Secretary,
Ministry of Science and Technology,
Government of Pakistan



Dr. Aisha Kashif, Counselor, Psychologist United Nations (UN), Islamabad

#### **CUI Tele-health Project**

CUI Telehealth (CTH) positively influences the health outcomes of the people in the project areas through timely intervention by qualified health practitioners for minor or major ailments or in chronic disease management, like treatment of hypertensive crisis and monitoring of diabetes etc. CTH service serves a larger section of the population through its Outpatient ambulatory care. However, owing to the special needs of the people in the project area, it has also been providing specialists' opinions through Telehealth.

Healthcare through CTH is presently being regularly provided in various medical disciplines, including primary healthcare, dermatology, internal medicine, antenatal care and ultrasounds. There is a massive response to the outpatient service as the number of patients seeking primary care at the Tele-clinics is growing. Most cases dealt with through outpatient service pertain to women's health, especially perinatal check-ups and related gynaecological issues. Tele-ultrasound is an essential service feature,

dramatically facilitating doctors at the CUI Resource centre in diagnosis. Nutritional deficiencies, respiratory infections and gastrointestinal ailments are other major diseases treated at the Telehealth clinics at the primary care level.



Dr. Azeema Fareed,
Pr. Medical Officer and Focal Person
COMSATS Telehealth Project

### Medical Imaging and Diagnostics Lab CUIIslamabad

Professor Dr Sohail Asghar is the Principle Investigator (PI) of the R&D project named "Medical Imaging and Diagnostics Lab". The project is funded with 97.5 million PKR. The project's main objectives are capacity building, the lab's sustainability, academic and industry relationship development, and AI-based Diagnostic tools for Brain Tumor Detection, Breast Cancer Detection, and Tuberculosis Detection. In this regard, in 2021, the project team made 3 international collaborations, conducted 3 industrial events, gave 2 pieces of training each of 5 days, and produced 16 journals and 3 conferences. In addition, the team has already developed an AI-based application for Brain

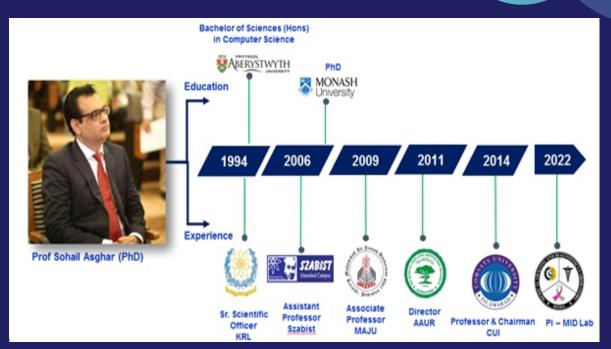
Tumor Detection, Breast Cancer Detection, and Tuberculosis Detection under the registered startup name AI Care.

# Achievements in extracurricular activities included but were not limited to

- > Participated in the DUBAE expo and represented Pakistan internationally.
- Participated in the BRATS international challenge and ranked third in the survival prediction task.
- Participated in National Idea Bank event and ranked third for one of its products named TASHKHEES at a city level
- Participated in IRCAI top 100 AI SOLUTIONS and was selected in the top 100
- > Participated in the TBX11K challenge and proposed TB model ranked first for a year.

#### **Smoking Free Campus**

Smoking may harm people's health directly and indirectly through passive Smoking among non-smokers. Additionally, Smoking puts the University and its residents at risk of fire. The CUI agrees that it is essential to prevent Smoking for these reasons. Further, CUI is collaborating with the Higher Education Commission of Pakistan (HEC). HEC has a clear and strict policy against Smoking and drugs in Universities. CUI followed the HEC smoking policy very strictly. Therefore, Smoking is not permitted in University buildings, indoor and outdoor environments, and vehicles, and 'Smoking free campus' boards are hung at different University locations. A 10,000 PKR is imposed on the smoker in case of policy violation.









# SDG-4: QUALITY EDUCATION

## Session on Entrepreneurship for Special People of Hazara Region

COMSATS University Islamabad (CUI) conducted a training session on "Entrepreneurship" for the physically challenged people of the Hazara Division on 24 November 2021. The session was mutually organized by Ms Komal Khan (CEO) of Creative Opportunity and Dr Syed Afzal Moshadi Shah, In-Charge Student Startup Business Center (SSBC), CUI. More than 50 physically challenged people attended the session.

Dr Syed Afzal Moshadi Shah introduced the concept of entrepreneurship to the participants, highlighted its importance, and linked it with realworld examples and how it can benefit physically challenged people. The participants were explained how internet technology provides a level field ground to physically challenged individuals. To motivate the participants of the session, video of successful Stephen Hopkins, Nick Vujicic and Peter Hayden Dinklage were shown. The participants thoroughly enjoyed the session and acknowledged that it increased their learning on "Entrepreneurship". They have also shown that they will use this learning in future initiatives. In the closing remarks, Ms Komal Khan thanked CUI for facilitating this workshop and giving exceptional care and hospitality.

In his closing remarks, the Director of CUI encouraged the participants to live a successful life and shared examples from his personal life to boost the participants. He also assured to facilitate special people in every capacity. He also extended his full support to Created Opportunity for every initiative they will take for special people. The director presented Souvenirs to Ms Komal



A group photo of the "Session on Entrepreneurship for Special People of Hazara Region" event

Khan, CEO of Creative Opportunity.

#### World Disabled Day Event

The students from Eventix Society, CUI, under the supervision of faculty members from the Department of Management Sciences, organized activities in collaboration with Young's Muslim Inclusive Education System (YMIES), a project of ILEF (ALIF) Welfare Society, Wah Cantt to celebrate "International Day of Disabled Persons" on December 3, 2021. This day was celebrated to show solidarity and raise awareness amongst students and the community regarding their responsibility towards disabled children. The activities started with a half-kilometre walk with disabled children on the main GT road towards their school to show solidarity with disabled children. The Eventix Society students placed a painting and gaming stall to make this day unique for special children. The kids enjoyed face painting and playing games. A cash amount earned from the stall was handed over to the school's principal for support and care of disabled children. In the end, gifts were distributed among disabled students by the CUI students. The students of CUI also showed their willingness to teach some academic skills to disabled children biweekly. Young's Muslim Inclusive system appreciated the efforts CUI students.



**World Disabled Day Event** 



**World Disabled Day Event** 

# A Good Teacher of Tomorrow May Be A Student Today

A teacher's quality is determined by the level of professional competencies, including knowledge, understanding, skills, and attitudes they bring to the teaching profession. CUI follows the Outcome Based Education system; all passed-out students have the skills mentioned earlier. Further. presentation skills are essential to communication and help teachers communicate confidently, motivate the students to listen and keep a lecture interesting. During the degree, the students of CUI must give presentations at least 10 times in a single semester in different courses. Therefore, students gave presentations around 80 to 100 times throughout their degree. It helps them to polish their presentation skills for teaching jobs. Although according to the Alumni surveyor, most of the Alumni are working in the industry; however, those who want to be a teacher quickly get jobs because of the skills developed during their Bachelor's degree. Many COMSATS students are teaching successfully in different public and private schools and colleges.

#### **Resource Sharing**

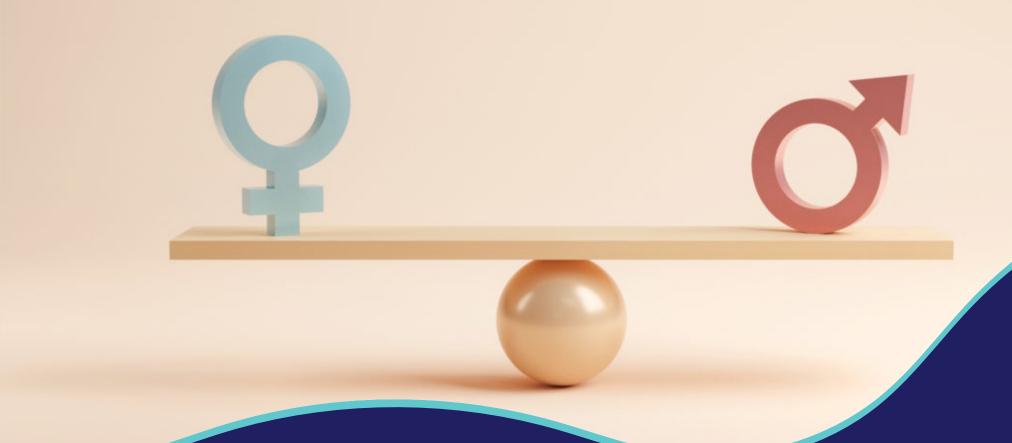
CUI provides access to educational resources for those not studying at the university - e.g. computers, library, online courses, and access to lectures. COMSATS Community Development Unit (CCDU) is integral to CUI. Its main objective is to provide access to the resources, as mentioned earlier, to local youth in a marginalized community. CCDU believes in community empowerment and working with a bottom-up approach to uplift the extremely vulnerable, marginalized and poorest of the poor. CCDU is working with youth and children with the vision that they are agents of change and hold the key to a prosperous future and sustainably developed nation. Further, CUI has it up to mark library. Everyone from the community can access the library. For this purpose, temporary cards are issued to those who are not students in CUI.

Dr Assad Abbas completed PhD at North Dakota State University (NDSU), USA. He has been an Assistant Professor at the Department of Computer Science, COMSATS University Islamabad (CUI), Pakistan, since 2004. Like many other faculty members of CUI, Dr Asad Abbas also uploaded all his lectures online. These online lectures are freely available to everyone. As a result, students can choose to learn anything they want from the comfort of their own homes without having to travel to lecture halls or classrooms. Further, students gain more access to subject-matter experts.

## Prime Minister's Skills Development Programme

CUI has been working on the development of skills of youth. Under Prime Minister's Skills Development Programme, CUI launched free courses. This program encourages females, minorities, disabled and rural communities to attend the free courses.

In 2021, two courses were launched, i.e., a certificate in Office Management and a certificate in IT (Web and Mobile App Development) of 6 months each. Two batches of 150 trainees have successfully trained under this program. The project has provided free-of-cost quality training, stationary, training material and other resources needed for the training. These trainees can now secure jobs and earn by working online on different platforms supporting themselves and their families. In these short courses, 44 females, 3 disabled and 3 persons from minorities participated. More than a hundred students are registered for batch 3. Other than this, CUI offered many vocational and non-vocational training programs freely or with minimum cost for community well-being. In 2021 COMSATS offered different non-vocational training programs, including but not limited to workshops on ILETS, workshops on GRE, and workshops on the Arabic language.





# SDG-5: GENDER EQUALITY

"No country can ever truly flourish if it stifles the potential of its women and deprives itself of the contribution of half its citizen."

Michelle Obama

According to UNFPA, gender equality is a central component to development, yet Pakistan currently ranks the second lowest country in the world for gender equality, according to the Global Gender Gap Index. Although efforts to promote gender equality are apparent within Pakistan's vision 2025, there is still much more to be done to improve the realities for women and girls across the country.

COMSATS University Islamabad (CUI) strives to provide an environment which is conducive for women be it students, faculty, and or women at administrative positions. It aims to provide a competitive atmosphere where anyone can achieve his/ her goals despite the gender. CUI makes education and job opportunities accessible to the women through a selection criteria based on open merit considering previous academic achievement, without gender bias. As per Clause 5(1) of the CUI Act No. XI of 2018:

"The University shall be open to all persons of either gender and of whatever religion, race, creed, class colour or domicile and no person shall be denied the privileges of the University on the grounds of religion, race, caste, creed, class, colour or domicile."

The number of women who started a degree program at CUI in 2021 was 4,117, out of a total of 9,977 who were admitted that year. Thus, the proportion of women among all admitted students was 41%, which is quite impressive in terms of gender equality in a developing country like Pakistan. The total number of students currently enrolled at all the seven campuses of the University is 34,323.

The University systematically measures and

tracks women's application rate, acceptance, and entry, through its Quality Enhancement Cell (QEC), which collects and compiles women's application data. It provides the relevant data to the Higher Education Commission of Pakistan (HEC) annually.

#### Women's Access Schemes

The University provides numerous support services, which include exclusive scholarships for women, mentoring and women's access schemes.

#### Mentoring

A seminar come webinar on 'Empowerment of Women through Development of Digital Skills for Selling on Amazon' was arranged at the Sahiwal Campus in April 2021, by the Dukhtaran-e-Pakistan (Daughters of Pakistan) Program, in collaboration with the University of Sahiwal and CUI.



#### **Scholarships**

The Scottish Scholarship Scheme is a fully funded scholarship offered exclusively to females, which covers their tuition fees, hostel costs, travel to and from home to university twice a year for four-year

bachelor's degree at an HEC-recognised Pakistani public university in the subject areas of education; sustainable energy; food security & agriculture and health science.

In addition, Pakistan-USAID Graduate Level Scholarships were also offered in Fall 2021 for studies in Engineering and IT, to female students only. Furthermore, the Ehsaas Scholarship Program, makes it mandatory that among the recipients at least 50% are females.

#### **Other Access Activities**

CUI conducted a Breast Cancer Awareness Day at the Abbottabad campus in October 2021. Faculty members from the Pharmacy Department explained the audience of the major risk factors and how to avoid them.

CUI has established a 'Women in Engineering (WIE) Society,' under the IEEE Chapter, in which female students of engineering disciplines participate in mentoring sessions, under the supervision of senior female professors.

The University is an open merit University which allows female applicants to apply in any of the programs offered by the University. 15,716 application were submitted by women at CUI during 2021.



Proportion of Senior Female Academics		Percentage
Number of Employees (2021)		
Number of Academic Staff		
Number of Senior Academic Staff		
Number of Senior Female Academic Staff		11%
Proportion of Women Receiving Degrees:		
Total Number of Graduates (2021)	8,606	
Number of Graduates in STEM		77%
Number of Graduates in Medicine		2%
Number of Graduates in Arts, Humanities & Social Sciences		22%
Total Number of Female Graduates	3,206	48%
Number of Female Graduates in STEM	2,281	34%
Number of Female Graduates in Medicine	49	42%
Number of Female Graduates in Arts, Humanities & Social Sciences	879	47%

#### **Maternity and Paternity Policies**

The University has maternity policy in place that support women's participation in the workforce. The University's leave rules allow female employees to avail 90 days of maternity leave, which are not deducted from their 'earned' or 'casual' leave balances. Female employees are eligible for such leave after one year's satisfactory and uninterrupted service.

## Childcare Facility for Faculty, Staff and Students

The University offers childcare facilities to its faculty members, staff as well as to married students, which allows recent mothers to attend the University without having to worry about taking care of their babies, who are looked after by well-trained staff. Such facilities are available at all campuses. The Abbottabad campus has the capacity to look after 50 children at any given time.

#### Tracking of Women's Graduation Rate

The University measures and tracks the likelihood of female students to graduate, in comparison with their male counterparts. Schemes are also in place to close gaps, if any, between male and female students in terms of opportunities. The Quality Enhancement Cell annually measures female graduates' data and forwards it to the Higher Education Commission each year. 3,206 females students graduated out of 8,606 graduates from CUI during 2021.

## Policies to Protect Against Discrimination

The University also has a policy that protects those reporting discrimination in educational or employment opportunities. The Registrar Secretariat has formally notified committees that periodically deal with cases of harassment, including sexual harassment, and abuse of authority, at all campuses.

Moreover, Grievance Committees are also notified at CUI to address any grievances/complaints filed by the CUI employees.







# SDG-6: CLEAN WATER AND SANITATION

#### Water in the Community - SDG 6.5

COMSATS University Islamabad (CUI) carried out several activities at its campuses during 2021 that align with and contribute towards the Sustainable Development Goal of achieving 'Clean Water and Sanitation.'

These activities are efforts to raise awareness about efficient use of water resources among students, faculty members and staff, while sensitizing them to avoid wastage. The Centre for Climate Research and Development (CCRD) at CUI organized a seminar titled 'Capacity Building of Faculty and Staff for Water Conservation,' in this connection.



CUI organized a seminar titled 'Capacity Building of Faculty and Staff for Water Conservation.'

Another activity, the 'Water Conservation Support Project,' was carried out off-campus in Sector I-8, for carrying out the feasibility study for 24/7 supply of drinking water to the residents by the municipal authorities. A similar project titled, 'Smart Water Metering and Pricing Project (SWMP)' revealed that the residents of the area

were forced to buy water from private suppliers, due to lack of capacity of municipal water supplier.

Several other projects on water security were carried out by CCRD, in coordination with local, regional, and federal governments.



The Center for Climate Research & Development drive a campaign for water conservation and hosted the banners for creating awareness about sustainable use of water.

#### **Water Consumption**

During 2021 an effort was made to measure the volume of water consumed in the university, which is supplied from various sources, so that its

usage could be monitored and eventually controlled. A total of 1,128,300 gallons (4,271,080 liters) per year were used for human consumption, while 339,000 gallons (1,283,254 liters) year were consumed for horticulture. Thus, close to 1.5 million gallons (5.55 million liters) of water was consumed during by the University during 2021.

#### Water Usage and Care

Multiple septic tanks have been installed at University to treat wastewater. A separate tank has been built for each building. The centralized building design wing of the University has ensured that sieves are in appropriate places to ensure separate wastage flow from toilets, washrooms and kitchens in such a manner that solid / food waste does not mix with it, preventing pollution and contamination in the water system. A foolproof mechanism is in place to ensure prevention of polluted water from entering the main water system.

Numerous water filtration plants have been installed, at COMSATS University Islamabad, providing free drinking water to students, faculty members, staff and visitors, through a network of fountains. These filtration plants are based on the reverse osmosis process.



Water Filtration Plant at University





#### **Water Reuse**

Comsats University has a water reuse policy in place to maximize water waste across the University. Rain harvesting tanks have been constructed and installed for harvesting water



and for horticulture purposes. The total capacity of these tanks is 205,000 gallons (or 776,010 liters). In addition, water recharge wells have also been constructed to recharge and replenish the ground water table thereby improving its sustainability.

#### Water in the Community

Educational opportunities for raising awareness for water management are being created for local communities to learn about good water management practices. A UNESCO Water Chair has been established at the University, for organizing activities that highlight the importance of water, its efficient use and conversation, for example the 'Trash-free COMSATS - Awareness Campaign.'

A Project Meeting was held on the 'Satpara Lake Sedimentation and Climate Modeling Deliberations' for studying possible improvements in supply of irrigation water for Satpara Lake Sedimentation and Climate Modeling project, as a multidisciplinary team. It was also decided to submit a joint research proposal to a funding agency, under the UNESCO Water Chair on IWRM. PSF or HEC.

In keeping with continued cooperation on water security with local, regional, national, or global governments on water security, CCRD is working on a project titled, 'Improving Assessment of Drought and Mitigating its Impact on Food and Water in South Asia,' in collaboration with the Kathmandu Institute of Applied Sciences (KIAS), Nepal.

The Director (Wah) Campus / UNESCO Chair on Knowledge Systems for Integrated Water Resources Management (IWRM), CUI Wah Campus launched the UN World Water Development Report and IWRM Implementation Guidelines for Pakistan, during a meeting held on October 6, 2021. In the meeting, an effective approach to managing scarce water resources its effectiveness with scientific policies were discussed.

The Director (Wah) Campus also attended the 24th Session of the Intergovernmental Council (IGC) of the Intergovernmental Hydrological Program on June 29, 2021, which is an intergovernmental program of the UN devoted for water research and management, and related education and capacity development.







# SDG-7 AFFORDABLE AND CLEAN ENERGY

#### Journey Towards Affordable and Clean Energy

The University has upgraded its buildings to a higher energy efficiency and plans to replace all conventional lights to LED lights, which save 75% energy. In the first phase, 1,500 LED lights have been installed in three buildings at the Islamabad campus.



To support energy conservation, the Lahore campus is trying to implement on-campus solar energy, solar heating, making buildings more energy efficient and promoting sustainable transportation.

### Carbon management and reducing CO2 emissions

CUI's Energy Research Center (ERC) promotes and collaborates with industrial partners to provide technical support for low-carbon industries. A 100kW Solar Power Plant was commissioned at the Islamabad Campus as far back as 2016. It has saved 456 tons of CO2 emission so far, which is equivalent to CO2 absorption capacity of 14,700 fully grown trees. Another 300kW Solar Power Plant, at the Sahiwal Campus, has produced 57,282 kW/h, saving 34

tons of CO2 emission since commissioning. A similar 400 kW plant is planned for the Vehari Campus, which will save 350 tons carbon dioxide emissions. The Islamabad campus plants over 5,000 tree samplings each.

# Energy efficiency plan in place to reduce energy consumption

CUI had installed Multi Digital Scroll System (MDS) Technology, enabling a 30% saving in energy consumption in air-conditioning. Where this technology is not installed, DC inverter type air-conditioners have been installed to save electricity consumption. In addition, Building Management Systems has also resulted in highly efficient use of energy-consuming devices, aided by the Power Factor Improvement Panel.

ERC actively develops smart energy-related programs and promotes sustainable development curricula with the relevant ministries, emphasizing an ever-increasing share of renewable energy in the energy mix.

CUI has also aligned its policies with the execution of the 'four conservations initiative' (water, electricity, paper, and fuel conservation), and is striding towards the ultimate goal of achieving 100% renewable energy. The strategies to devised include education, research and online activities.

## Energy wastage identification through energy reviews

A comprehensive energy audit was conducted and the measures for energy conservation taken by CUI were found to be adequate by the auditor.

This research has indicated that a significant proportion of the total energy consumed is by airconditioning, followed by lighting systems. Solutions, including timer switches, aimed at reducing energy wastage and fulfilling the sustainable development goals, are now in place.

## Moving away from carbon-intensive energy industries, like coal and oil

The University plans to eventually phase out diesel generators and replace them with renewable energy technologies. A feasibility study supported the potential of solarization of all campuses. Based on this, solar energy is now being prioritized and a 400kW Solar Power Generation Facility is already in place at the Islamabad campus. Based on its success, establishment of another 700kW solar power generation facility has been recommended.

#### **Energy use density**

The total energy used at CUI is 9,794,280 KWh in Year 2021. The total University floor space is 217,458 square metres. Thus, giving the energy use density of 45KWh per square metre.

## Local community outreach for energy efficiency

Energy Research Center (ERC) conducts a wide range of programs for the local community to learn about importance of energy efficiency and use of clean energy. This is done by training current students through technical education and training awareness campaigns for the public through a variety of clean and renewable energy-related activities, projects, and seminars.

CUI also partakes in an energy storage initiative to boost the energy efficiency of local industries and extends cooperation to manufacturers for providing services related to high-efficiency and clean energy, such as solar power and electricity storage devices.

Furthermore, one of the objectives of the 100 kW Power Plant installed the Islamabad campus and a 300 kW Solar Generation Facility at the Sahiwal Campus, is to create a demonstration effect for faculty and students for inspiring them towards undertaking research and development purposes in the field of renewable energy.

A short course on energy audit was conducted by Engr. Rao Zeeshan, Senior Engineer, to raise the awareness of clean energy for CUI employees, sensitizing CUI human resources towards the changing environmental trends.

## The pledge to achieve 100% renewable energy

The mission of the Energy Research Center (ERC) is to develop actively smart energy-related programs, improve the quality of the domestic talent in basic research, development of smart energy and promote sustainable development curricula in collaboration with the Ministry of Environment and the Ministry of Science & Technology, Government of Pakistan. The ERC endeavors to improve and advance its commitment to renewable energy through continuous education.

Apart from establishing the ERC, the University has also aligned its policies with the execution of 'four conservations' – water, electricity, paper, and fuel conservation – initiative, aggressively moving

towards the goal of 100% renewable energy. The policies include University-based education activities (including academics altering their programs to coordinate their teaching on some aspect of climate change0; research activities (such as conferences and workshops on climate change); education activities beyond the university (such as talks to schools, community groups or the general public on climate change; online activities (such as webinars, discussion groups, forums, social media, podcasts and campaigns.

CUI is moving towards renewable energy sources and plans to commission Solar Power Plants at all its campuses. A 100 KW Solar Power Plant has already been installed at the Islamabad campus and a 300 kW Solar Generation Facility at the Sahiwal Campus. Furthermore a 400 KW system is at advanced stage of completion and another 700 KW Solar Power plant at Islamabad campus is planned.

# Policy development for clean energy technology

Another mission of the Energy Research Center is to inform and support governments in clean energy and energy-efficient technology policy development by promoting and pitching relevant projects. This includes commissioning and collaborating on projects with government agencies, like the Ministry of Science & Technology and the Ministry of Education.

These policies play a central role in the deployment of renewable energy technologies as participation by the government reduces some of the perceived risks of the private sector. It also helps leverage financing and increasing capital

flows towards R&D. Renewable projects require huge amounts of investments in infrastructure, to which the private sector is generally risk-averse, unless they have the right incentives.

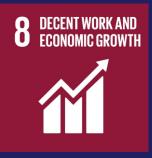
In accordance with government projections on energy conservation, the University is striving towards the goal of reducing the annual electricity consumption by 1% each year. This is being done by diligently reviewing and gradually replacing high energy-consuming equipment in a phased manner.

#### Assistance to low-carbon innovation

CUI provides assistance for start-ups that foster and support low-carbon technology through its Business Incubation Center, which was established at the Islamabad Campus with the aim to assist and support budding entrepreneur and business initiators in its student body. 'Smart Sense' is an engineering technology company engaged in research, design, development, integration, and sustainability of advanced solar technology systems, products and services that was successfully incubated at CUI.

7,794,280 KWH
UNIVERSITY FLOOR SPACE
217,458
SQUARE METRES





# SDG-8 DECENT WORK AND ECONOMIC GROWTH

#### **Employment Practices**

The University has a policy to pay all staff and faculty members at least the 'living wage,' or subsistence level compensation as defined by the government or by the local poverty indicator for a family of four, expressed as an hourly wage.

As per CUI HR policy, all staff and faculty are entitled to draw a salary (minimum with maximum ranges) along with other allowances and benefits, including a living wage. In addition, adhoc allowances are also granted to the staff and faculty members on an annual basis, according to which salaries are fixed across the university.

The 'living wage' is not defined or fixed by the Government of Pakistan. However, the minimum wage currently being taken into consideration for practical purposes is PKR.25,000.00/-(US\$115.00/-) per month and CUI has also notified this as its minimum wage. An analysis of gross salaries of CUI employees indicated that not a single employee draws salary below this threshold.

Although, unions and associations of academic, administrative and support staff, aimed at collectively advocating for the rights of employees exist at CUI. However, none of these associations are legally recognized by the University.





International staff, as well as faculty members from abroad, including women, are recruited by the University in accordance with the standard operating procedures (SOPs) governing special incentives and recruitment practices for hiring foreigners.

CUI enforces the country's labor laws, in terms of working hours, for all its employees and pays overtime compensation its lower staff grade employees for working beyond normal office hours.

The University has a well-defined policy on non-discrimination at the workplace, including religion, sexual preferences, gender, or age. It also has well-defined and strictly enforced rules against harassment, sexual harassment, and abuse of authority.

As per the CUl's Act No. XI of 2018, the University "shall be open to all persons of either sex of whatever religion, race, creed, color, or domicile as far as admission and appointment of either gender is concerned, and no such person shall be denied the privilege on the ground only of sex, religion, creed, race, color, or domicile. (Clause No. 5, Pg-195

- University open to all classes, creeds, etc.—(1) The University shall be open to all persons of either gender and of whatever religion, race, creed, class, colour or domicile and no person shall be denied the privileges of the University on the grounds of religion, race, caste, creed, class, colour or domicile.
- (2) An increase in any fee or charge that is in excess of ten percent per annum on annual basis from the last such increase may not be made except in special circumstances, and only with the approval of the Chancellor.
- (3) The University shall institute financial aid programmes for students in need, to the extent considered feasible by the Senate, given the resources available, so as to enable admission and access to the University and the various opportunities provided by it to be based on merit rather than ability to pay:

#### CUI ACT 2018, (Clause No. 5, Pg-195)

The University also has a policy commitment against forced labor of all kinds, modern forms of slavery in any form whatsoever, human trafficking, and child labor.

The University follows a policy of 40-working hours per week, clearly mentioned in employment contracts. However, the staff grade employees are eligible for additional 'over-time' compensation, in accordance with prior approved rates for various grades. Furthermore, the Efficiency & Discipline Statutes, 2006, and Rules for Harassment, Sexual Harassment and Abuse of Authority, 2009, are also implemented. Thus, no one in authority is allowed to exploit employees for personal gains.

Employees are at liberty to engage themselves for volunteer work outside office hours. Employees are, however, not permitted to undertake any commercial activity during office hours. For this, they need to obtain prior written permission for consultancy in which case, the fee is divided in the ratio of 25:75 between the University and the employee.

The University's policies guarantee equivalent rights to workers, even when outsourcing routine operational activities to third party employment agencies. While outsourcing such activities, existing employees are not barred from participation.

While outsourcing activities to third parties, an effort is made to ensure that employees of third party receive salary equivalent or more than the minimum wage, applicable. According to expression of interest for outsourcing of security services, 'The contractor shall abide by all the prevailing applicable labor laws of Pakistan and any violation thereof shall make it liable to disqualification/ penalty.' For outsourcing of janitorial services, submission of the 'minimum wage certificate' is mandatory.

At CUI, employees are categorized according to their pay scales and their pay packages are according to the provisions for each pay scale. These pay scales are qualification and experience based revised payscales. To ensure equity, the University has a policy on pay scale equity, including a commitment to the measurement and elimination of gender pay gaps.

The University measures and tracks pay scale gender equity in terms of employee rights of pay and privileges and there is no discrimination at all. Pay scale of CUI are equally applicable to all genders.

The University has a process for employees to appeal on employee rights and/or pay. Such a process is part of the CUI Act, 2018, as well as policies. The grievance redressal process is there and besides policy documents, it is also mentioned in the employment contract. Further, as per Employees Efficiency & Discipline Statutes, 2006, Clause 26(A), the employee has the right to prefer an appeal within 30 days of the issuance of the order imposing the penalty to the appropriate

appellate authority.

Employees can present their grievances related to their salaries and promotions. There is a devised mechanism and notified committees to address this grievance.

The total number of employees is 5,080. Among them, number of academic staff is 2,083. The University's total expenditure during 2021 was PKR.6,623.787 million. The number of students 34,323.

As per policy, students are provided with internship opportunities for work placement for a monthly stipend.

In this regard, severe open house conducted sessions at CUI in order to explores internships opportunities and job placement opportunities in the markets. We are really grateful for an excellent session given by Mr. Abdullah Hassan, Technical Lead Stella Technologies on "Selecting the right FYP, Project to product".)



Selecting the right FYP, Project to product

We are also thankful to our alumni Mr. Haider Zada from Arbisoft, Ms. Ishra from LMKR for accompanying Stella Technologies team and guiding their juniors in selecting FYPs.

Dr. Majid Iqbal, Head Department of Computer Science also expressed his views and presented the shield to our guest speaker.

This session was followed by a recruitment drive from Stella Technologies.



Seminar on "Exploring the horizons of Information and communication technologies".

#### Speakers:

Mr. Naveed Ramzan (General secretary, Agile society of Pakistan. He will deliver talk on Industrial career opportunities).

Mr. Qaseem Ramzan (Founder Toggletech. He will deliver talk on career opportunities in online world).

It was great pleasure to host Mr. Naveed Ramzan, Secretary General Agile Society of Pakistan and Mr. Qaseem Ramzan Founder Toggletech. They both have an interactive session with first three semester students on "exploring the horizons in information and Communication technologies" in industry as well as online world.

Mr. Muhammad Rashid Mukhtar, convenor ILC and Dr. Majid Iqbal, Head Department of Computer Science also expressed their views about future possibilities.

Dr. Majid lqbal presented the shields to our respected guest speakers.







As per policy, all employees at CUI are working on a contract basis. All employees, except faculty members working on the Tenure Track System, are on a secure contract, which means they can continue to work till the age of superannuation (60 years), unless they themselves resign prior to that.





MINIMUM WAGE CURRENTLY

PKR. 25,000/-

**TOTAL NUMBER OF EMPLOYEES** 

5,080

**TOTAL EXPENDITURE DURING 2021** 

PKR. **6,623.787**MILLION

**NUMBER OF STUDENTS** 

34,323





# SDG-9 INDUSTRY, INNOVATION, AND INFRASTRUCTURE

Innovation and entrepreneurship is the backbone of economic and social development of a country. COMSATS University Islamabad is actively engaged in promoting and providing an enabling environment for an ecosystem of entrepreneurship and innovation to flourish.

For this, CUI started the Business Incubation Center (BIC) / Student Startup Business Center (SSBC) where students are given an opportunity to gain practical experience of conceiving and launching commercially viable products and services in the market, as part of their Final Year Project (FYP).

BIC provides the following services free-of-cost to students: co-working space; Internet and IT services; management training; seed funding and grants; access to all CUI facilities and brand name; networking opportunities; mentoring, by faculty and entrepreneurs; opportunity to participate in national and international startup events; and cash awards to top performing graduates. The Student Startup Business Center (SSBC), in collaboration with the National Center of Artificial Intelligence (NCAI), conducted a 5-days training workshop on 'Artificial Intelligence' in August 2021.

Table	
Total research income from industry and commerce	PKR. 886,474,688
Research income from industry and commerce per academic staff	PKR. 413,660
Research income from industry and commerce by subject area: (STEM)	PKR. 866,474,688
Research income from industry and commerce by subject area: (Medicine)	PKR. 200,000,00
Number of academic staff by subject area: (STEM)	1,893
Number of academic staff by subject area: (Medicine)	42
Number of academic staff by subject area: (Arts & Humanities/Social sciences)	208
Total number of students enrolled	34,323
International Students from developing countries	430
Number of students with disabilities	09



MOBILE MONEY SERVICES ARE BRINGING FINANCIAL SERVICES TO THE UNDERSERVED FOR THE FIRST TIME, EMPOWERING WOMEN AND LIFTING HOUSEHOLDS OUT OF POVERTY.





# SDG-10 REDUCED INEQUALITIES

33

#### Measures against discrimination

Reducing inequalities and ensuring that no one is left behind, is an integral part of COMSATS University Islamabad's policy commitments and its efforts for achieving Sustainable Development Goals. The University has a uniform, non-discriminatory admissions policy. It is open to all persons regardless of gender, religion, race, creed, class, color, or domicile, and no person is denied any of the privileges of the University, on any such grounds. All admissions are offered purely on open academic merit.

The University does not track admission applications of underrepresented (and potentially

underrepresented) groups separately, including ethnic minorities, low-income students, non-traditional students, women, LGBT students, and disabled students, or newly settled refugee students. Admission applications are indiscriminately accepted from all segments of the population and admissions are offered solely on the basis of merit and academic achievements.

Similarly, recruitment of faculty members and staff is also carried out without any discrimination and strictly on merit and no attempt is made to hire people from any specific under-represented group.

However, the University does provide mentoring, counseling, and peer support programs to

students, staff, and faculty members from underrepresented groups to help them cope with and adjust to the new environment.

CUI has Career Development Centers to facilitate students in their career planning, which arranges internships, full-time employment and guidance through career development workshops, mock interviews, industry visits and job fairs.

All University buildings have special facilities, including ramps, for easy wheelchair access for people with disabilities. The Lahore campus has also made special arrangements to provide oncampus accommodation for persons with disabilities.

Table	
International Students from developing countries	
Number of international students from developing countries	430
Number of students with disabilities	9
Proportion of students with disabilities	9/34,323 = 0.03%
Number of employees with disabilities	26/5,163
Proportion of employees with disabilities	26/5,163 = 0.5%







SDG-11
SUSTAINABLE CITIES
AND COMMUNITIES

# Welcome to COMSATS Art Gallery



The CUI believes in providing access to its facilities to the public. It encourages students and faculty members of other universities, colleges, and schools to visit its campuses.

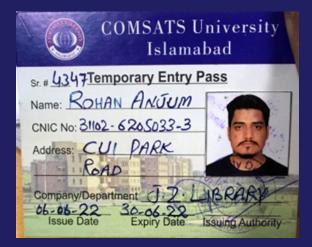


Visit of Chinese Ambassador Mr. Yao Jing



Inauguration of exhibition by H.E Mr. Khazar Farhado

Furthermore, students, from other universities, are allowed to visit the buildings, including libraries and may also use the laboratory facilities, on demand and with prior permission.



Most campuses of CUI are spread over several acres of land where students, faculty members and staff commute on foot, once inside the campus. Pedestrian access to every building is ensured. Motorized traffic on campus is restricted to entry and exit from the parking areas.



**Badminton Court** 



**Basketball Court** 



Volleyball Cour



**Cricket Ground** 

CUI promotes sustainable commuting practices like walking, cycling, or using some other non-motorized transport, and encourages the use of carpools and public transportation, to reduce the burden of vehicular traffic on roads.



During the COVID-19 pandemic, faculty members and employees were advised to work from home, as classes were being held online. As the lockdown restrictions were eased by the government, the University initially restricted physical presence on campus to a maximum of 50%, whereby staff attended office on a rotational basis, making the work environment more sustainable. Even in the aftermath of the pandemic, CUI continues to allow telecommuting or remote working for employees where the circumstances require, to reduce the need for employees to commute daily.

CUI provides subsidized hostel accommodation to students at all campuses. It has also launched affordable housing schemes for employees, including faculty members and staff.

The CUI maintains liaison with the building development authorities on a continuous basis, which grant approval of 'master plans' for all campuses. Similarly, approvals for all building drawings from the relevant development authorities are obtained before any work is begun.

All new buildings at CUI campuses are being planned in accordance with sustainable standards, which is a notch higher than the normal standards enforced by the Government of Pakistan, and other relevant authorities. CUI tries its best to build on brownfield sites wherever possible as it improves the environment and creates a safer, healthier space.

The CUI has established modern Student Service Centers at its Lahore and Islamabad campuses, which not only have cafeterias but also provide stationery shops, photocopying facility and document binding services under one roof.





**RESPONSIBLE** CONSUMPTION AND PRODUCTION

## **Ethical sourcing policy**

Pakistan Halal Authority has been and implement strategies, plans and programmes for promotion of imports and exports, trade and commerce with foreign countries and inter-provincial trade and commerce in Halal articles and processes. Pakistan Halal Authority. Pakistan Halal Authority performed the following practices:

- a) recommend mechanism for the Accreditation of Halal Certification Bodies and adoption of Halal Certification systems;
- b) develop policies, plans and programmes for ensuring compliance of Halal articles and processes with the Halal Standards;
- c) develop and authorize use of Halal logo for Halal articles and processes;
- d) may operate as a certification body after obtaining due accreditation from the National Accreditation Body;
- e) issue or renewal of the Halal certificate and / or authorizing the use of Halal Logo;
- f) maintain a register of all persons, firms and companies authorized to use the Halal logo;
- g) inspect and test Halal products and processes for their quality, specification and characteristics with relation to the Halal standards, for purposes of imports and exports, trade and commerce with foreign countries and inter-provincial trade and commerce;
- h) prohibit production, storage and sale in the Islamabad Capital Territory of such Halal products as do not conform to the Halal

standards;

- arrange and conduct public awareness campaigns in relation to the Halal sector in general and to Halal products and processes in particular;
- j) secure international recognition of the Halal logo to build confidence in the Halal Certification system and Pakistani Halal products abroad;
- k) co-ordinate with national and international organizations for strengthening the Halal sector;
- promote and encourage establishment of libraries and laboratories for the purpose of developing the Halal sector; and
- m) collect and circulate statistical and other information relating to the Halal sector;

## Policy waste disposal - hazardous materials

The National Hazardous Waste Management Policy, 2021 is an achievement in addressing the issue of hazardous waste management in Pakistan. The policy instrument will enable Pakistan to play a pivotal role in meeting the obligations under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. In addition, it would also help Pakistan achieve the relevant Sustainable Development Goals.

#### Policy waste disposal

The COMSATS University Islamabad has signed an Agreement with Private Partner to collect, dispose the waste and keep the university clean. The COMSATS University Islamabad has installed separate dust bin for plastic, garbage and glass wastage.



## Policy for minimization of plastic use

The COMSATS University Islamabad discourages use of plastic within the university. COMSATS University Islamabad has issue an Official memorandum that Styrofoam Crockery and Plastic Bags are banned in COMSATS University Islamabad.

# Minimisation policies extended to suppliers

The COMSATS University Islamabad signs annual contracts for the supply of stationary and equipment.

## Policy for minimization of disposable items

The Cafeteria of COMSATS University Islamabad serve food in washable crockery. Use of disposable plates and glasses is not allowed.





13 CLIMATE ACTION



SDG-13 CLIMATE ACTION - A 'CARBON-NEUTRAL UNIVERSITY' BY 2050

### Low-carbon energy use

Low-carbon energy tracking devices actively measure the amount of carbon energy used in the environment and have been incorporated across Comsats University Islamabad (CUI). Research conducted by the University indicates that direct emissions occurring within the boundaries of the University, emanating from fuel combustion for electric power generation and fuel combustion for space heating and cooking are considerably less than the indirect emissions that occur outside the University boundary, due to the government electric power generation plants and public transportation. Thus, the air quality inside CUI's lush green campuses it way better than what is outside its boundaries, providing a serene learning environment to its students.

The University's policy to reduce the carbon footprint has borne fruit and the quantum of carbon emissions at all campuses of CUI are gradually declining, having reduced by approximately 40% in 2020 over the last two years, as indicated by a recent study.

The mitigation values for the last four years have been given in tabular form as under:

Year	Consumption (GJ)	Mitigation (kwh)
2018	122453.7	128082
2019	139411.1	117660
2020	71792.3	96081
2021	75382.0	110493

projected values have been used for the year 2021 for both energy consumption and mitigation.

The emission and mitigation values for 2018, 2019, 2020, and 2021. Emission values for 2020 and 2021 are projected values since physical activities at CUI were shut down due to COVID-19 pandemic.

Carbon emissions reduced from 11,000 metric tons carbon dioxide in 2019 to just under 6,000 metric tons in 2020, showing a reduction of 45%. At the same time, the mitigation measures taken by the University almost doubled in year 2020, from the 2018 figures. Thus, CUI is moving towards the target of becoming a carbon neutral University by 2050.

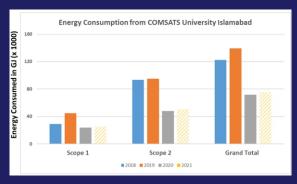


Figure Energy consumption of COMSATS University Islamabad during 2018, 2019, 2020 and 2021 (unit: Giga Joules x 1000)

**Important Note:** The energy consumption values for 2021 are projected values based on values for previous year. A factor of 5% rise in energy consumption has been used to compute value for 2021.

#### **Environmental education measures**

Multiple climate awareness programs, hands-on trainings and capacity building activities have been organized at all campuses. These include local education programs and campaigns on climate change risks, impact mitigation and reduction, adaptation, and devising an early warning mechanism.

CUI is actively engaged with the government on carbon mitigation activities, such as the onebillion tree plantation campaign, during which thousands of trees have been planted across all campuses, as well as in the surrounding community.





The Commission on Science & Technology for Sustainable Development in the South (COMSATS), in collaboration with CUI, regularly participates in cooperative planning with the government for prevention of climate change disasters. These activities are aimed at identifying and addressing key issues on climate change disasters, which has led to the conclusion that pursuing climate action and sustainable development, in an integrated and coherent manner, offers the most effective approach to achieve the SDG goals.

In its bid to inform and support the government of the local climate change disaster and risks, and to sensitize and equip them to take a proactive approach in monitoring the environment for early warning signs, Prof. Dr. Athar Hussain, Head, Centre for Climate Research and Development (CCRD) appeared on national television recently, where he spoke about the damage done by 'Cyclone Shaheen,' while elaborating on reasons for occurrence of cyclones, in general, so that their negative impact could be reduced as much as possible.

CUI frequently collaborates with nongovernmental organizations to impart environmental education to student and the public that helps them gear up to climate adaptation. In this connection, a seminar on 'Sustainable alternatives to plastic bags: conserving the environment,' was organized by Dr. Ishfaq Ahmad, an academic researcher at CCRD.

The University, in collaboration with other stakeholders, is actively working on environmental issues, like plastic pollution and devising its alternatives. A seminar highlighting the federal government's initiatives for conserving the environment, by adopting alternatives to plastic bags, was conducted recently.



# Commitment to becoming a 'Carbon-neutral university by 2050'

CUI has committed to becoming a carbon-neutral university in the next 28 years and has set a target date of 2050, by which it hopes to become fully carbon neutral, as defined and measured by the Greenhouse Gas Protocols.

CCRD, in collaboration with the American Institute of Pakistan Studies (AIPS), organized a one-day seminar entitled, 'Achieving Net Zero: Where CUI Stands,' in June 2021. CCRD and the Center for Policy Studies jointly organized an interactive event involving students, 'Gaming Climate Change' in December 2021. It also organized a training workshop on air quality monitoring, during which a demo was given on the very innovative 'air visual pro monitoring' device. It also co-organized an exhibition at the Pakistan Council for Research in Water Resources (PCRWR) in December 2021 as a part of the Pakistan Water Week 2021 awareness campaign.







The 'Azadi (Freedom) Tree Plantation' drive was held at the Wah campus in August 2021. The Director Campus, Prof. Dr. Muhammad Abid planted a Eucalyptus and Alstonia saplings. Heads of the Departments also planted trees. A large number of faculty and staff members participated to make the Green & Clean campaign successful.











# 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 throughaction

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 conversation which encourages students to conserve drinking water resources and motivates them to use water sparingly and being mindful in saving each drop.



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.



## 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 3<sup>rd</sup> International Conference on Environment and Sustainable Development, on September 14, 2021 organized by Government College University (GCU), Lahore.



# 3<sup>rd</sup> 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.





# SDG15: LIFE ON LAND

## Supporting land ecosystems through education

To ensure sustainable utilization of land, COMSATS University Islamabad undertakes the teaching of programs on management of land and agriculture that cover both managements of land for agriculture through sole sciences environmental geology, soil and water conservation, natural resource management and on flora and fauna programs like fundamental of biology and land scape design. In addition, it also conducts management of land for agriculture and tourism. Likewise educational outreach program are offered to the community at no cost and free consultancy services on harvesting of vegetables. In this context the university conducted one day seminar on the importance of Water: The Life. Further to this, the horticulture section of the University is responsible for maintaining the plant biodiversity.









Seminar on Water: The Life

Two faculty members of the University (Dr. Hafiz Faiq and Dr. Ghulam Abbas) have won research projects from Higher Education Commission of Pakistan (HEC). Their project was to promote and utilization of local food produce (Kinnow). Furthermore, they also worked on sustainable growth potential of quinoa as alternative food crop for salt-affected soils in various agroecological zones of Punjab, Pakistan".

The university is working in Gilgit Baltistan with local Communities on Medicinal Plants Utilization among Balti and Shina Communities in the Periphery of Deosai National Park, Pakistan.

The university under its Environmental Protection Society organized 'Clean Your Trash' with the help of Government Departments of District Abbottabad at Nathiagali and the university also organized Tree Plantation Campaign in Shimla Hills, Abbottabad under Go Green initiatives of the University.



Clean your Trash at Nathiagali



Tree plantation Campaign at Shimla Hills



Tree plantation Campaign at Shimla Hills

The Cafeteria Committee of COMSATS University Islamabad enforces a policy that ensures all food supplied on campus are sustainably farmed food and the quality is maintained and regularly observed by the management of University.



Rector visited the Farmed Food House



**Rector visited the Farmed Food House** 

The University works directly to maintain and extend existing ecosystems and preserve the biodiversity of plants and animals, especially those ecosystems that are under threat. Research is conducted on conservation of Endangered Bird Species by Mr. Muhammad Naeem Awan under its PhD Thesis titled "A Geospatial Assessment of Ecology and Conservation status of Western Tragopan (Tragopan melanocephalus, J.E. Gray 1829) in Western Himalaya, Pakistan".

For promotion of tourism and education outreach for local and foreigners, the University has built its own Montgomery Museum.



Montgomery Museum



**Montgomery Museum** 



**Montgomery Museum** 



**Montgomery Museum** 

## Supporting land ecosystems through action

For conservation and restoration of Land, COMSATS University Islamabad offers programs on Soil and water conservation, natural resource management. University is also working on restoration of heavy metal and salt affected soils. The outcomes of this go a long way in developing sustainable use, conservation and restoration of land as well as terrestrial ecosystem, in the vicinity of the University,

The University especially focuses to maintain the local biodiversity during planning and development process and strictly follows the bylaws.

Plantation at the University is carried out with the standard procedures of sustainable landscape, environmental friendly, socially acceptable and economically viable. Only native and adopted species of plants have been planted, these plants species encourage local biodiversity and support local flora and fauna.

Bio Safety Committee of COMSATS University Islamabad maintains and ensures that water discharge, quality standards and guidelines are strictly followed by to protect the ecosystem, benefiting wildlife, and human health and welfare. The University has its own Water Filtration Plant for students, staff and faculty members.



**Water Filtration Plant** 



Water Filtration Plant at COMSATS University Islamabad

## Land sensitive waste disposal

To uphold water quality in order to protect ecosystems, wildlife, and human health and welfare, Dr. Muhammad Imran faculty member of the COMSATS University Islamabad under the research project worked on Sequestration of dyes from textile industry wastewater using nanoparticles loaded biosorbents.

Food and Services Committee of the University enforces the policy on plastic waste reduction,

which seeks to minimize the use of plastic packaging. Students, staff and faculty members are encouraged to use biodegradable or paper packaging. The University had organized a community service walk on the theme "Say No to Plastic".

Inadequate disposal of medical waste, causing serious health issues e.g AIDS, Hepatitis and other fatal diseases. Handling such hazardous waste by incineration can destroy all pathogens and reduce the toxicity of toxic compound at high temperature. One of the major pollutants form the incineration process is particulate matter which is responsible for carrying carcinogenic compounds and toxic heavy metals. To handle such pollutants, an incinerator was designed and manufactured by the scientist of the COMSATS University Islamabad. This incinerator along with pollution control device was installed at Azam Memorial Hospital at Havellian, Pakistan.



Say No to Plastic





Incinerator and pollution control device at Azam Memorial Hospital Havellian



PEACE, JUSTICE AND STRONG INSTITUTIONS

# SDG-16 PEACE, JUSTICE, AND STRONG INSTITUTIONS

#### University governance measures

CUI, as a body, has elected representation from the faculty members as well as alumni on its highest governing statutory body. The University's Senate, which is the highest level of governance, includes faculty members and alumni as its members, while the Registrar, CUI, acts as the Secretary. The Rector, CUI is also a member of the body and represents the University in its entirety, including all officials and staff members.



## 4th meeting of CUI Senate held on 20<sup>th</sup> January 2021

The CUI Act, 2018, does not allow students to establish an independent union within the CUI system. However, The University does have large number of student societies and clubs at all campuses. Their activities are reported in the Annual Report 2020-2021 (Page Nos. 102-104)

CUI has written policies and procedures that identify local stakeholders outside the University and engages with them on a regular basis. The CUI, Act No. XI of 2018, Clause 4(xvii) stipulates cooperation "with other universities, public authorities or private organizations, inside as well as outside Pakistan, in such manner and for such purposes as it may prescribe." [Page 193-194, Clause 4(xvii), Page 204 Clause 18 (a), (b), (d), (e), (g), (i), (k), (l)].

The Statutory bodies of the University, namely the CUI Senate, the Syndicate, and the Academic Council, include and engage with stakeholders, including residents, the local government, private sector and civil society representatives.





5th meeting of CUI Syndicate held on 21<sup>st</sup> October 2021

There are eight (08) research centers at CUI, including IRCBM, CCRD, and CAST, among the prominent ones, which are engaged in cutting-edge research across its campuses. These centers interact and engage with local stakeholders for developing better products and solutions based on improved technologies that benefit society.

The University is committed to detection and prevention of organized crime, corruption, and bribery and adheres to principles published in the 'CIIT (CUI) Statutes Employees' Efficiency & Discipline Statutes, 2006.'

CUI's liberal policies fully support academic freedom, the freedom to choose areas of research and to speak publicly and teach about their area of research. Graduate students also have a similar kind of freedom to choose their area of research.

The University provides expert advice to local, regional, and the federal government through policy guidance and participation in various Committees. This is done through regional and national level Committees and task forces such as, the National Assembly Standing Committee on Science & Technology; the Senate Standing Committee on Science & Technology; and the Standing Committee on Cabinet Secretariat.



The Centre for Policy Studies (CPS) was established at CUI in 2012. CPS has undertaken research related activities on a variety of subjects, like the economy, the environment, security, elections, and foreign policy. CPS regularly organizes seminars, panel discussions, guest lectures and round tables for exchange and crossfertilization of ideas. The University provides outreach, general education, upskilling and capacity-building to policy- and lawmakers on economics, law, technology, and climate change.

The Faculty Development Academy (FDA) organized a talk on 'Current Economic Scenario of Pakistan' to the students and faculty members of the Department of Economics, CUI in February 2021. Dr. Muhammad Zubair, Chief Economist, Planning Commission of Pakistan, while sharing his rich experience and deep insight, dilated upon the core economic principles and, more importantly, their application to solving real-world

issues. A seminar on 'Economy of Pakistan in 2047,' was organized by the FDA in November 2021, covering topics like economic growth, fiscal reforms, and food security in Pakistan.

The policy-focused research at the University is carried out in collaboration with government departments. The Centre of Policy Studies, in collaboration with government departments, is involved in policy-focused research. Two sessions on 'Anticipatory Policing and Gender-Based Crimes' and 'What do climate change and sustainable development mean for law enforcement agencies,' were organized in coordination with the National Police Bureau. Such events help officers and CUI faculty in policy research and development.

The University provides an impartial platform and 'safe' space for different political stakeholders, encouraging them to come together and openly discuss challenges and their solutions.

CUI's R&D Laboratory, that operates under the management of ORIC, developed the electronic voting machine (EVM) for Pakistan that is likely to be used in the next general elections. The system was built to support a comprehensive voting system to ensure regulatory bodies of security, accuracy, privacy, cost-effectiveness, and sustainability.







17 PARTNERSHIPS FOR THE GOALS



SDG-17 REPORT

Sustainable Development is the bedrock of COMSATS' mandate long before the institution of the United Nations' Development Agendas (MDGs and SDGs). Accordingly, the Organization has streamlined its undertakings for meeting the challenges pertaining to various dimensions of sustainability through suitable tools and mechanisms. By expanding the scope of its activities towards Asia, Africa and Latin America. COMSATS has been able to establish itself as an ardent advocate of science for development of the South. The CUI management is directly involved in national government or regional nongovernment organisations, SDG policy development - including identifying problems and challenges, developing policies and strategies, modelling likely futures with and without interventions, monitoring and reporting on interventions, and enabling adaptive management.

Since its establishment, COMSATS has organized/co-organized over 250 national and international events on various subjects ranging from scientific capacity-building, renewable energy, water resource management, mathematical modelling, weather prediction, biotechnology, nanotechnology, repair and maintenance of scientific equipment, national innovation systems, science journalism and telecommunication & Internet Security to South-South and North-South collaboration in research and development. These events have provided a useful platform to the members of the scientific community, development-experts, donor and development agencies, and the decision-makers to share their views and experiences on contemporary issues of vital concern.

COMSATS Centre for Climate and Sustainability is developed for the said purpose, several SDGs related activities are conducted through this center. Which are reported in SDG Report 2021 and Annual Report 2020-2021

Workshop on "Engaging University Faculty for Mental Health Wellbeing of Youth", 14 October 2021, COMSATS University Islamabad (CUI), Islamabad, Pakistan

To observe this year's World Mental Health Day, COMSATS in collaboration with its Centre of Excellence, COMSATS University Islamabad (CUI), Islamabad, organized a Workshop on "Engaging University Faculty for Mental Health Wellbeing of Youth", on 14th October 2021. Held at CUI, Islamabad, the Workshop had physical and virtual participation of 30 faculty members belonging to various fields of arts and science. The subject event along with the overarching theme of mental health and wellbeing of youth also had the backdrop of Sustainable Development Goals 3 (Good Health and Wellbeing) and 4 (Quality Education).

Opening the event, Dr. Azeema Fareed, Pr. Medical Officer and Focal Person COMSATS Telehealth Project, underscored the significance of the subject and need for creating awareness about it among people of all age groups. She also highlighted COMSATS' efforts and contribution towards the realization of 2030 Global Agenda.







## CCIB Workshop on Technical Innovation in Traditional Plant Medicine, 13 October 2021, Beijing, China

COMSATS in collaboration with its Centre of Excellence in China, the Tianjin Institute of Industrial Biotechnology (TIB), organized a virtual workshop on 'Technical Innovation in Traditional Plant Medicine', from the platform of COMSATS Joint Centre for Industrial Biotechnology (CCIB), on 13th October 2021. The objective of the event was to provide a platform for interaction, knowledge sharing, and expertise exchange in the field of biomedicine and synthetic biology, with a purview to contribute towards 'Good Health and Well-Being', Sustainable Development Goal 3 of the UN Global Agenda 2030.

With physical and virtual participation (at CCIB/TIB and COMSATS Secretariat) of over 60 scientists/officials belonging to 13 Member States of COMSATS, including Bangladesh, China, Egypt, Ghana, Iran, Jamaica, Kazakhstan, Nigeria, Pakistan, Sri Lanka, Sudan, Tanzania, and Turkey, the webinar covered talks by experts from China, Kazakhstan, and Pakistan.





# Webinar on South-South Cooperation: creating Headways for Post -Pandemic Inclusive Recovery, 21 September 2021.

To celebrate United Nations Day for South-South Cooperation (12th September 2021), COMSATS organized a webinar entitled "South-South Cooperation: Creating headways for Post-Pandemic Inclusive Recovery", on 21st September 2021. Joined by notable speakers from United Nations Office for South-South Cooperation (UNOSSC), New York; South Centre, Geneva; Alliance of International Science Organizations (ANSO), Beijing; InterAcademy Partnership (IAP), Trieste: Network of African Science Academies (NASAC), Nairobi: United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Bangkok; and Islamic World Educational, Scientific and Cultural Organization (ICESCO), Rabat, the webinar had virtual gathering of over 90 persons from 28 countries. Overall, participation included individuals from Bangladesh, Benin, Canada, China, Egypt, France, Ghana, the Gambia, Italy, Jordan, Kazakhstan, Kenya, Morocco, Nigeria, Palestine, Pakistan, Sri Lanka, Sudan, Syria, Switzerland, Tanzania, Thailand, Tunisia, Turkey, Uganda, USA, Venezuela, and Yemen.



Opening the session, Executive Director COMSATS, Dr. Akhtar Nazir (Federal Secretary, Ministry of Science and Technology, Government of Pakistan), welcomed the participants and extended gratitude to distinguished speakers to become a part of the event bearing an important theme relating to global development. He opined that resolution of contemporary socio-economic challenges requires enhanced global cooperation, particularly, South-South and Triangular Cooperation, in various sectors. He considered digital technologies indispensable for inclusive recovery from the pandemic and, in this connection, communicated COMSATS' resolve to work with like-minded institutions.





Virtual Conference on Ecosystem Restoration in the Global South, 7 June 2021,

COMSATS Centre for Climate and Sustainability (CCCS) in collaboration with the United Nations Environment Programme-International

Ecosystem Management Partnership (UNEP-IEMP) organized a virtual conference to commemorate the World Environment Day. The conference bearing the theme of the Day – Ecosystem Restoration – was held on 7th June 2021 with speakers from China, Colombia, Ghana, Jamaica, Jordan, Kazakhstan, Pakistan, and Sri Lanka.





## Webinar on Addresses Deforestation Challenges in the Global South, 18 February 2021

COMSATS Centre for Climate and Sustainability (CCCS) in collaboration with the Council for Scientific and Industrial Research (CSIR) of Ghana, Forestry Research Institute (FORIG) of Ghana, and Forestry Research Network of Sub-Saharan Africa (FORNESSA) co-organized a webinar entitled "Sustainable management of forests and challenge of deforestation in the Global South", on 18th February 2021. The webinar was aimed at sharing knowledge and insights on the theme of the event as well as propose actions for governments to accelerate and scale up efforts to mitigate deforestation.



The event was moderated by Dr. Ernest Gordon Foli, Principal Research Scientist at FORIGS – CSIR, and member of UN Secretary General's Advisory Group on the Global Sustainable Development Report (2019), and included following speakers: Dr. Tonjock Rosemary Kinge, Associate Professor of Mycology, Department of Biological Sciences, University of Bamenda, Cameroon; Mr. Mauricio Andrés Valencia Camelo, Environmental Engineer, International Centre for Physics (CIF), Colombia; Mr. Jacob Amoako, Measurement, Reporting and GIS officer at Climate Change Directorate of the Forestry Commission of Ghana; Prof. Dr. Maher J. Tadros, Department of Natural Resources and

Environment, Jordan University of Science & Technology, Jordan; Dr. Steve Makungwa, Forest measurements, modeling and climate change expert at University of Agriculture and Natural Resources, Malawi; Mr. Shiva Pariya, Forest Officer, Ministry of Industry, Tourism, Forests and Environment, Nepal; Dr. Samuel Olalekan Olajuyigbe, Senior Lecturer, Department of Forest Production and Products, University of Ibadan, Nigeria; and Mr. Ashiq Ahmad Khan, Scientific Representative of EvK2CNR Association, Pakistan.

In his opening remarks, Ambassador Shahid Kamal, Head of CCCS, highlighted the importance of forests and discussed the environmental, economic and social aspects of this ecosystem. Prof. Daniel Ofori, Director of FORIG/CSIR, delivered his key note address in which he highlighted the challenges of deforestation and mitigative strategies to cope this challenge.

The speakers highlighted some key points on the theme of the event. Significance of forests from cultural, economic, social and environmental perspectives was highlighted. Deforestation was considered a key contributor towards water scarcity and creating imbalances in ecosystems. Irrational urban development was considered a key challenge threatening forests and related ecosystems, due to loss of biodiversity and overuse of wood for timber and fuel. Loss of natural habitats causes major environmental setbacks in terms of climate change and biodiversity. Commercially, forests were considered important for providing ecotourism opportunities for livelihood of people, which is why reduction in forest cover could increase unemployment.

The event recommendations included:

- Alternate and clean fuel is best approach to reducing demand of fuel wood coming from forests;
- Mainstreaming of new technologies and environment-friendly approaches is necessary to reduce dependence on fuel wood;
- Formulation and implementation of suitable government level policies is necessary for forest preservation and regeneration; and
- Urban forestry could be a good approach for clean environment and fresh air, while agro forestry could be a useful adaptive approach to address food insecurity.

## Webinar on Modeling and Simulation on Climate Change and Environmental Pollution: Strengthening Resilience in the Global South, 12 January 2021

COMSATS organized a webinar on "Modeling and Simulation on Climate Change and Environmental Pollution: Strengthening Resilience in the Global South", on 12th January 2021. Co-organized by COMSATS Centre of Excellence in Nigeria – National Mathematical Centre (NMC) – and COMSATS Centre for Climate and Sustainability (CCCS), the webinar gathered scientists, researchers and policy makers to exchange information, share knowledge and good practices to strengthen climate actions in the Global South, as well as highlight the role of modelling and simulations for evidence-based knowledge to help formulate policies and legislation for climate action.



The webinar was moderated by Mr. Bilal Anwar, General Manager, Commonwealth Climate Finance Hub, and included following speakers: Dr. Daniel Tutu Benefoh, Deputy Director, Climate Change Unit, Environmental Protection Agency, Ghana; Prof. Dr. Ghasem Azizi, Department of Physical Geography, University of Tehran, Iran; Prof. B. O. Oyelami, Head of Mathematical Modeling and Simulation Research Group, National Mathematical Centre (NMC), Nigeria; Dr. Zia Ur Rehman Hashmi, Head of Water Research Section, Global Change Impact Studies Centre, Ministry of Climate Change, Pakistan; and Prof. Hüseyin Toros, Professor of Climate Change, Air Quality and Modeling, Istanbul Technical University (ITÜ), Turkey.

Welcoming the participants, Ambassador Shahid Kamal, Head of CCCS, stated that the past decade was the hottest with record increase in the level of carbon emissions. He considered climate change as one of the biggest challenges of all time and deemed mathematical modeling and simulation important for decision making relating to climate mitigation and adaptation within the framework of Paris Climate Agreement and 2030 Development Agenda. Speaking on the occasion, Dr. Stephen Onah, Director of NMC, Nigeria, opined that mathematical modeling is the most efficient way to predict and mitigate adverse impacts of climate change.



comsats' programmes are formulated keeping in view all the three aspects of sustainable development, i.e. social, economic and environmental. The mandate of COMSATS lends it the flexibility to work within a wide range of technology spectrum. On the high-end of the spectrum, special attention is being given to build indigenous capacity and competence in the emerging sciences and technologies. On the other end of the spectrum, efforts are being made to bring the benefits of technological revolutions in the areas of education, health, and energy to as large a cross-section of population as possible, particularly in socio-economically disadvantaged sections of COMSATS' Member States.

Dr. Khalid Saeed Khan. Member of Government of Pakistan's Task Force on COVID-19, and Distinguished Investigator, University of Granada, Spain, visited COMSATS' flagship projects in Pakistan, COMSATS Telehealth Centre and COMSATS University Islamabad (CUI), on 26th January 2021. During his visit to CTH, Dr. Khan was shown around the facilities and given a briefing on telehealth model of CTH. CTH. it was informed is currently working with 06 active telehealth clinics of Baluchistan and 01 in Jhelum (Punjab). Besides provision of primary and secondary healthcare services, the Programme is also helping to build capacity of paramedical staff as well as to create awareness among general public. Dr. Nadia Rasheed, Project Manager along with her team of doctors briefed the esteemed quest regarding

the operations of CTH at CIS.

COMSATS Centres of Excellence urged to initiate new projects and programmes related to SDGs to be facilitated by COMSATS Secretariat for submission of the joint proposals through donor agencies and international partner organizations for potential funding. In this connection, one project titled "Feasibility Study for Provision of Safe Drinking Water through Water Conservation (SDWC)", led by CUI Pakistan having participation from Egypt and Nigeria, was submitted by COMSATS under D-8 Project Support Fund which had been approved. Moreover, ITI-Sri Lanka signed MoUs with CUI-Pakistan and ICCBS-Pakistan for collaboration in a number of fields of science and technology in presence of Prime Ministers of Pakistan and Sri Lanka, on 23rd February 2021. Furthermore, another cooperation agreement is being worked out to be signed by CUI-Pakistan and UTG-Gambia to facilitate academic exchange between the two higher education institutions of COMSATS' network

The COMSATS Centres of Excellence are providing postgraduate scholarships and postdoctoral fellowships at COMSATS' Network. Under this center CUI-Pakistan offers scholarships to the students vetted by COMSATS Secretariat in master's & PhD Programmes. Open for admission in Fall 2022 semester, the call for nominations under this offer was disseminated among the Centres of Excellence and the Focal Points. Moreover, ANSO has invited COMSATS to recommend students belonging to its member states for availing scholarships for young students for Fall 2022 semester, announcement of which has been disseminated among the Focal Points and Centres of Excellence. Pertinent actions in

this respect are being taken. COMSATS participated in the opening ceremony of the 34th Khwarizmi International Award (KIA), organized by IROST-Iran, on 7th February 2021. In this connection, certificates of the winners and Executive Director's message were shared with IROST

#### COMSATS Telehealth (CTH) for All

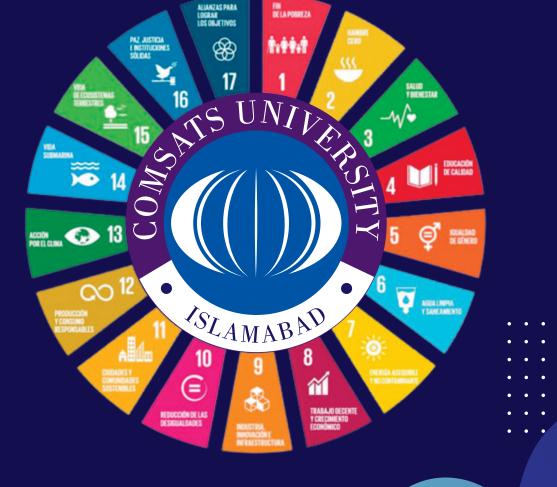
During the 23rd Council meeting, the Centres of Excellence were urged to emulate COMSATS Telehealth programme in their respective countries. This advice was especially pertinent and relevant in view of the healthcare related issues and pressing needs created by the COVID-19 pandemic. As an effort in this direction,

possibilities of collaboration with COMSTECH were explored to extend the benefits of CTH programme to common member states. COMSATS' team held discussions with Prof. Dr. M. Iqbal Choudhary, Director ICCBS-Pakistan/Coordinator General COMSTECH, and discussed opportunities in this respect with a special focus on African region. The discussions led to a team from COMSTECH visiting COMSATS Telehealth facility in Islamabad for orientation on the telehealth system and its operations.



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