Sustainability Report 2022

Sustainable Campus Center

CIU SUSTAINABILITY TIMELINE

SUSTAINABLE ENERGY RESEARCH CENTRE

Sustainable Energy Research Center was founded in 2011 to deal with campus sustainability issues relating to energy while also providing technical service for the public and the government.

2011

SCIENCE AND TECHNOLOGY BUILDING

The Science and Technology Building is a unique project. It is an Energy Efficient and Smart design with solar chimneys, integrated Solar PV Panels on the facade, etc.

2016

CENTRE OF EXCELLENCE

2009

The subjects of "Energy" and "Environment" were selected in 2009 as Centre of Excellence to begin the sustainability efforts of CIU.

PHOTOVOLTAIC POWER PLANT PROJECT

2015

Solar Photovoltaic Plant Project was commissioned in 2015 to develop a peak power of 1.3 MW as the first private Renewable Energy Plant in Northern Cyprus which provides around 30% of the energy requirement of the campus today.



ENERGY AUDIT OF EDUCATIONAL BUILDINGS & SUSTAINABILITY POLICY

Energy Audit of educational buildings such as EHB was carried out to determine the areas that are open for energy efficiency and savings across the campus. This project was a result of the energy monitoring systems implemented in 2019. Additionally, sustainability policy for the campus was refined and relaunched.

FREE DRINKING WATER & COMMUNITY GARDEN

Free drinking water project was realized where 31 fountains were placed across the campus. Additionally, a community garden where students can grow their own plants was established.

2019

2020

2022

BIOGAS PROJECT

2021

Pre-engineering study of 1.56 MW Biogas Plant has been completed and local permissions were obtained. Installation is planned to end in 2025.

ENERGY AND WATER SOURCE MONITORING

Energy source monitoring as well as water source monitoring in regards to consumption was installed in all the buildings to better realise the consumption areas and allow for future savings.

ENERGY AND CLIMATE

UI GreenMetric World Sustainable University Ranking:130th, Turkey: 5th, Cyprus:1st

Indicators

- Energy Efficient Applications
- Smart Building Program Implementation
- Number of renewable energy sources in campus
- The total electricity usage divided by total campus population
- The ratio of renewable energy production towards total energy usage per year
- Elements of green building implementation
- Greenhouse gas emissions reduction program
- The ratio of total carbon footprint divided by campus population

Throughout the years since the Solar PV Panel Plant was established, the system consistently provided around 30% of the energy requirement of the whole campus with clean energy. This drastically decreases the carbon emissions of the campus buildings and with the addition of the biogas plant, the percentage of renewable and clean energy provided to the whole campus will be 100%, mitigating all carbon emissions of the electricity needs of the campus.



PHOTOVOLTAIC PLANT

The Project was commissioned in 2015 by the Sustainable Energy Research Center. It is a unique solar energy project due to the application of 5 different mounting types, namely on a level roof, an inclined roof, terrain, façade, and carports. It remains the largest solar energy project in any university on the island. The PV project helps to mitigate 470 tons of CO_2 /year.

BIOGAS PLANT

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t (ST)

This project will be the first and largest private Biogas Plant of Northern Cyprus with peak capacity of 1560 kW. Additionally, 1000 kW heat capacity will be produced. The biogas plant will lead to 3000 tons of CO₂ reductions annually.





Smart Building Implementation

The goal is to provide clean and affordable energy to the whole campus.

75% Automation Systems

50 % of all buildings in the campus are equipped with sensors in order to minimise energy consumption while providing better comfort. On top of this, 100% of the buildings are equipped with smart lighting systems such as sensors, solar shading and efficient LED lighting to allow for the best

75% Energy Monitoring & Management

75 % of the buildings are equipped with energy monitoring and management systems, allowing us to record energy consumptions of each building and contol the energy using systems.

63% Water Management Systems

63 % of the buildings are equipped with water management systems like monitoring systems (Flow meters). Additionally, greywater collection & recycling system is used for flushing and irrigation which is done only through the water that is recycled.



100% DOUBLE GLAZING

All the buildings on the campus are equipped with double glazing windows, and according to the new energy policy on campus, any renovation or maintenance should also adopt to this type of window.

80% HIGH-EFFICIENT EQUIPMENT

The Cyprus International University has a strict policy in relation to using high-efficient electrical equipment, such as Energy Star label or with A+ and A++ energy consumption standards.

70% VRF SYSTEM

The Science and Technology, Çevik Uraz, CIU Sports Arena Complex, Student Services Center, Soli Apartment, Rectorate building, International Center and Student Union, alltogether cover a total area of 70,000 m2 and are equipped with a high-efficiency VRF system.

52% THERMAL INSULATION

The roofs of more than 52% of the total buildings oncampus (Academic Zone), are equipped with thermal insulation. With the new project in place, it is projected that this number will be 75% by the end of 2025.

% 60 NATURAL LIGHTING

More than half of the buildings in the campus are designed with maximum natural day-lighting allowance to decrease consumption of electricity for illumination.

TRANSPORTATION

UI GreenMetric World Sustainable University Ranking:165th, Turkey: 14th, Cyprus:1st

Indicators

- The ratio of total vehicles divided by total campus population
- Shuttle services
- Zero emission vehicles policy on campus
- The ratio of zerio emission vehicles divided by total campus population
- Transportation program, designed to limit/decrease the parking area on campus for the last 3 years
- Number of transportation initiatives to decrease private vehicles on campus
- Pedestrian policy on campus

25 Shuttles operate on the weekdays with 16 disabled friendly access points provded across all the busses

> On average, approximately 5,000 Students and public use the campus busses daily.

Shuttle Services are provided for **FREE** for all the students and the Staff.

Electric car charging is provided for **FREE** for anyone that is visiting the campus.

Around **19,000** m² of open space or horizontal type parking space in the university campus which equates to 3 % of the total campus area.

Currently 100 % of buildings and facilities have disabled access through the use of ramp pathways.

Two main stations on campus provide 38 bicycles to be used within the campus area. In total, 70 electrical bicycles are utilized by the staff, campus management, maintenance office and security staff.

There is 640 m of pathways across the campus made of tactile paving, ensuring ease of access to the various locations for the visually impaired.

Water Score: 1000 out of 1000



UI GreenMetric World Sustainable University Ranking: 21st, Turkey: 1st Cyprus:1st

Indicators

- Water conservation program
- Water recycling program
- The use of water efficient appliances
- Piped water consumed

CIU is equipped with Drip irrigation for more than 100,000 m² of forest land and high trees, and around 150,000 m² of flowers and grass area. All of the green areas are covered by the latest technology underground irrigation piping, equipped with the drip irrigation system. The irrigation system is purely supported by the water treatment plant.

CIU lake has a capacity of 800 m³ (800,000 liters) of water and it is only filled by rain.





70,000 liters of municipal water daily is treated to provide Free Drinking Water through 31 fountains situated around the campus.

Additionally, CIU has two underground water reserves with capacities of more than 650,000 liters (650 m³) on the east side and 400,000 liters (400 m³) underground water storage for the west side of campus.





One of the most important factors in maintaining the water management system is the monitoring issue. The CIU Sustainable Campus Office has completed a large project in applying water flow meters for all the campus buildings individually in 2019.

Additionally, 100% of the water consumed and used in the campus gets recycled through the university water treatment plant and is used in irregation, therefore no additional water is required for landscape maintanance.

Cyprus International University Water Treatment System



30,000 m² 550 Olive Trees

30,000 m²

of different varieties of trees 23,000 m 700 Pine Tr

1,200 m² 100 Date Palm Trees

More than $102,000 \text{ m}^2$ of CIU is covered by forest, tall green plants and trees. The total forest area amounts to





Setting and Infrastructure Score: 1250 out of 1500

SETTING AND INFRASTRUCTURE

UI GreenMetric World Sustainable University Ranking: 68th, Turkey: 6th Cyprus:1st

Indicators

- The ratio of open space area towards total area
- Area on campus covered in forest
- Area on campus covered in planted vegetation
- Area of campus for water absorbance
- The ratio of open spaces area divided by campus population
- University budget for sustainability effort

Around 197,000 m² of the campus is covered with plant vegetations (including lawns, gardens, green roofs and internal planting), reaching almost 24 % of the total campus area.

203,800 m² area, equaling to 32 % of CIU's campus, is non-retentive surfaces (e.g. earth, grass, concrete block, etc.) for water absorption.

100% of the campus buildings are equiped with access and equipment for disabled. Additionally, the campus is monitored 24/7 with the security team and open for health inspections through the health infrastructure. Education Score: 1350 out of 1800

EDUCATION

UI GreenMetric World Sustainable University Ranking:109th , Turkey:6th Cyprus:1st

Indicators

The ratio of sustainability courses towards total courses/modules
The ratio of sustainability research funding towards total research funding

- Sustainability publications
- Sustainability events
- Sustainability student organizations
- Sustainability website
- Sustainability report



Publications related to Sustainability are cited on Google Scholar during the 2021-2022 academic Year.

50

Master and PhD thesis' dedicated to the same subject during the 2022 – 2023 Academic Year.



undergraduate students participating on the Sustainable Campus Project, as well as 40 members of staff and Graduate Students.

54

events in 2022-2023 were held (e.g. conferences, workshops, awareness raising, practical training, etc.)

35

members of staff and Graduate Students are working in sustainability organizations.

3800

courses have been taught during the 2022-2023 Academic year relating to sustainability.

We have **504** Publications related to Sustainability written by academicians.

Community Garden

the distance was

Local vegetables and intercontinental agricultural plants and seeds are planted in order to produce organic agricultural products on the naturally amended soil within the campus. Some of our yields consist of spinach, radishes, parsley, celery, broad beans. The organic waste from produced plants is utilized to amend the soil to carry out a sustainable farming system.



Café Nature

Cafe Nature is a zone managed by a combined group of 10 graduate and undergraduate students with the main aim to translate the environmental issues we face through places similar to this. Therefore, no plastic or single use cups/straws are used, allowing the students to recognise the importance of reducing waste.

Sustainability Workshop

10 undergraduate students from various departments are working in the sustainable workshop to educate other students with their innovation for recycling purpose of different materials (cigarette buds, paper, glass etc.). The workshop carries out all the tasks of recycling paper and organic waste of the university.



UI GreenMetric World Sustainable University Ranking:315th, Turkey:17th Cyprus:2nd

Indicators

- Recycling Program for University Waste
- Program to reduce the use of paper and plastic in campus
- Organic Waste Treatment
- Inorganic Waste Treatment
- Toxic Waste Treatment
- Sewerage Disposal

Cyprus International University uses the Dual Stream Recycling Plan to collect, separate and send recycling material waste to local recycling companies.

The recyclables are sorted as Category 1: paper/cardboard, Category 2: electric waste and Category 3: metals/glass/plastic/toxic/organic

100% of paper waste had been collected by campus management student for sustainable campus (SSC) and delivered to the sustainability workshop. Around 720kg of paper waste was recycled the past year.

In addition to paper waste, more than 60% (300 kg) of cardboard were reused by sustainability workshop.

Clothes Donation: Fabric recycling is done through the cooperation of a private company. All second hand clothes collected in designated boxes around of the campus are sent for recycling process to create a budget for cancer patients.

Paper Waste is collected through designated paper trash bins that are spread around the campus and mainly in offices. The average monthly amount of newspaper and wasted paper collected is around 60 kg. Sustainable campus center creates a constant program to recycle the paper that was collected and make recycled pencils in the Sustainability Techno Workshop. Approximately 5 gr of recycled paper is required to produce a pencil.

Yard Trimming: Campus Management team collects the organic waste (grasses or leaves) around the campus which is nearly 50 kg/day and sends to be recycled or reuses in the university greenhouse as mulch and peat.

We Are Nature café is not only used as a reflection of the waste management on the campus, but also to educate the students and the public on the adverse effects of harmful materials upon the environment, such as singleuse plastic.

The green design center was founded in 2018 in the public sphere 'We Are Nature Café' and is situated in the middle campus area where students can gather and enjoy a sustainable green environment. This center has had a substantial impact upon the students on the campus with a variety of activities.

This area is designated as a plastic free zone (PFZ) and plans to educate students to reduce the usage of plastic in their day-to-day life.



SUSTAINABILITY IMPROVEMENT TRENDS

UI GreenMetric World Sustainable University Ranking:71st, Turkey:5th Cyprus:1st



2021 2022

University Improvement Trend Line









This certificate is awarded to

Cyprus International University

as The 71st World's Most Sustainable University in 2022 UI GreenMetric World University Rankings

Jakarta, 12 December 2022

Prof. Ari Kuncoro, S.E., M.A., Ph.D Rector of Universitas Indonesia



Prof. Dr. Ir. Riri Fitri Sari, M.M., M.Sc Chairperson of UI GreenMetric World University Rankings



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