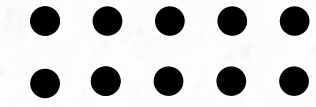# MARMARA UNIVERSITY

CLIMATE ACTION PLAN

2023–2028

SUSTAINABLE DEVELOPMENT G🔆ALS

LETTER FROM RECTOR

Marmara University has an education and management approach that aims for access to global knowledge, continuous innovation and progress. In this direction, our indispensable priority goal as the administration is to make our university, which has a deep-rooted history of 141 years, a pioneer of innovations and to prepare it stronger for the future. Marmara University, which contributes to the development and progress of science and adds value to society with the qualified people it graduates, is one of the leading educational institutions of our country. In addition to scientific research; it has a well-deserved and privileged reputation in the fields of culture and art, health and sports. Our university, where education and training are effectively provided in four different foreign languages, including Turkish, is also a pioneer and unique with this feature. With its campuses located in the European and Asian continents, our university is heavily preferred by local and foreign students. In this context, our university, which hosts a large number of students coming through the Erasmus Program and Turks Abroad and Related Communities (YTB), ranks first in international student mobility practices. Marmara University, with its deep-rooted history dating back to 1883, has an education and management philosophy that aims for universal knowledge, continuous development and progress. Today, we recognize that our role extends beyond education and research; we must also be leaders in environmental stewardship and sustainability.

▪ Significantly reduce our carbon emissions by 2023 and achieve carbon neutrality by 2028.

▪ Integrate sustainability across all faculties' curricula and empowering every graduate to address environmental challenges.

▪ Enhance our research capabilities in climate science, renewable energy, and sustainable technologies.

▪ Transform campuses as a model best practices in energy efficiency, waste reduction, and sustainable resource management.

▪ Engage with local communities, authorities and businesses to promote sustainable practices and support for transition to a low-carbon economy.

▪ To increase green areas within the campus and preserve biodiversity.

▪ Reducing water consumption and expanding rainwater harvesting systems.

▪ Encouraging the purchase of environmentally friendly products and services.

▪ Developing infrastructure and systems that are resilient to climate change.

I invite every member of the Marmara University community to embrace this vision and play an active role in its realization. Together, we can create a more sustainable future, inspire positive change in our society, and contribute to global efforts in combating climate change.

With love and respect...

Prof. Dr. Mehmet Emin Okur
RECTOR

LETTER FROM COORDINATOR
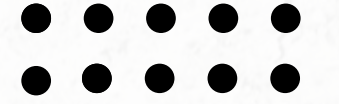
Climate change, which is devastating our world, is not only one of the biggest problems of our time; it is a crisis directly facing our universities, cities, and ways of life. This reality, known as the consensus of scientists, imposes not only individual but also institutional responsibilities on us.

As Marmara University, we are among the leading institutions in practice and research, not only producing knowledge but also being part of the solution to climate change.In line with this understanding, the Marmara University Climate Action Plan for the 2023-2028 period has been completed. This plan goes beyond simply reducing our carbon footprint; it embraces reducing greenhouse gas emissions, increasing energy efficiency, promoting nature-based solutions, and spreading a sustainable lifestyle culture across the campus. It also embraces a holistic sustainability approach encompassing education, analysis, planning, research, social impact, and social responsibility. As the Sustainability Office, we have developed this plan with valuable contributions from various academic and administrative units, students, and external stakeholders, building an inclusive and inclusive process. The Sustainability Office's 2023-2028 Climate Action Plan includes many concrete and lasting goals, ranging from energy efficiency and waste management to sustainable transportation, alternative green infrastructure projects, efficient water use, and green transformation. More importantly, the Sustainability Office embraces the responsibility of leaving a livable, green world for future generations. This responsibility will be realized with the collective contributions of all our university staff. This goal, central to our university's educational vision, manifests itself not only in theory but also in daily life. These steps will be achieved with the contributions of our valued students, as well as our academic and administrative staff. It is important to remember that universities are responsible not only for generating knowledge but also for implementing and transforming it. As Marmara University, we are taking and will continue to take decisive steps to pioneer this transformation. Shaping our future, creating a green world, and leaving a livable world for future generations will only be possible through the steps we take together today.

I thank you for being together on this journey and would like to emphasize my belief that together, we can build a more resilient future to create a more sustainable world.

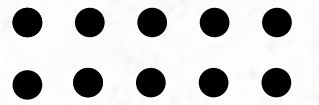*Sustainability Office Coordinator*
Assoc. Prof. Dr. Savaş Evran

Working Group

- **Assoc. Prof. Dr. Savas EVRAN**
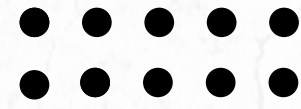
- **Data Analyst Zeynep Ozturk KUYUMCU**

Sustainability Office

The Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as Global Goals, are a set of 17 integrated and interrelated goals to end poverty, protect the planet and ensure that humanity enjoys peace and prosperity by 2030.
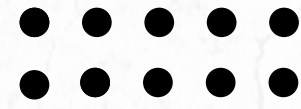
Climate Change Mitigation and Adaptation Strategy

There has been an increase in greenhouse gas emissions released into the atmosphere as a result of fossil fuel use, and as a result, the average global temperature has increased by approximately 1.1°C from 1850 to 2020, and if this trend continues, the global temperature increase is expected to reach 3°C by the end of this century. Climate Action Plans are directly related to the SDGs and are particularly prominent for SDG 13, "Climate Action." SDG 13 calls for urgent action to combat climate change and the impacts that will arise from these changes. In line with this goal, it aims to increase resilience against climate-related hazards and natural disasters, integrate them into strategic national policies on climate change, and raise public awareness. The main objectives of climate action plans are of critical importance for the success of the SDGs. In line with this purpose, Turkey's 2024-2030 Climate Change Mitigation and Adaptation Strategy and Action Plans are developing policies that aim to reduce greenhouse gas emissions and adapt to climate change. These plans primarily support the achievement of SDG 13 targets by determining strategies and actions in industries such as industry, energy, and agriculture.

Sustainability Office

Climate Change Mitigation and Adaptation Strategy

Turkey has decided to achieve its net zero emission target by 2053. The 2053 net zero emission target is intended to be not only an environmental policy but also a part of economic and social transformation. Turkey's accession to the Paris Agreement was announced on September 21, 2021, and the 2053 Net Zero Emission Target was announced as a whole with the green development revolution on September 27, 2021. Following these developments, Turkey became a party to the Paris Agreement on November 11, 2021. Turkey has demonstrated its determination to combat climate change both by setting a net zero emission target and by becoming a party to the Paris Agreement. Apart from these SDGs, climate action plans are also directly related to other SDGs such as SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities). Transitioning to clean energy and building sustainable cities contribute to combating climate change and support the achievement of the targets of these SDGs. As a result of this report, SDGs and climate action plans are important and critical tools that complement each other and work together for a sustainable future. This integration plays a critical role in achieving global climate goals.

Sustainability Office
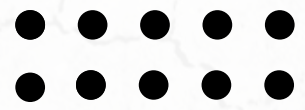
INTRODUCTION

Marmara University is one of the oldest educational institutions in Turkey. Established on 16 January, 1883 under the name Hamidiye Ticaret Mekteb-i Âlisi, and affiliated with the Commercial, Agriculture, Forestry and Mining industry, Marmara University began its life in a house behind the Istanbul High School for Girls in Cağoğlu. The first graduates (13 people) matriculated in 1887. On 21 September, 1889 the school was affiliated with the Education Ministry; in 1893 the school was closed, with the idea that it would be reformed and reopened in the near future. On 15 October, 1897 the school, still affiliated with the Education Ministry, was reopened; from this date on the university has provided education. The institution became known as the Istanbul Economic and Commercial Sciences Academy in 1959; in 1982, with regulations that were carried out, the institute became officially known as Marmara University and took its place among Turkish Institutes of Higher Education.

In the 1982 - 1983 academic year, education began at Marmara University, which consisted of 9 faculties, 1 school, 1 institute. Today, the number of faculties is 21, the number of schools is 4, and there are 12 institutes. The number of currently operating associate and degree courses at the university is 199.

Close to 3,000 academic staff and more than 70,000 students are making contributions to Marmara University's academic activities today, making it one of the most important institutes of higher education in Turkey. In the academic faculties, including the Economics Faculty, Business Faculty, Faculty of Fine Arts, Political Sciences Faculty, Engineering Faculty, Medicine Faculty, Dentistry Faculty and Theology Faculty, education is provided in five different languages, Turkish, English, French, German and Arabic; these qualities make Marmara the only multilingual university in Turkey.

Marmara University has rapidly expanded, providing education-training and research activities from 1982 on, in the faculties, institutes, schools and vocational schools and research-implementation centers. In addition to education and training, the University has developed in social services, giving great importance to publishing and consultancy projects; in this century when the industrial society has been replaced by the information society, in keeping with the demands of society, the university has made contributions to the development of man power and technology as needed by the country; the education approach of providing solutions to economic, political, cultural and similar problems of the university has been represented at home and abroad. Marmara University, which sets out with the vision of becoming an international university that guides social development with its leadership in education and research, operates in 8 campuses distributed on the Anatolian and European sides of Istanbul.

Campuses on the Anatolian side are as foolows: Acıbadem, Anadoluhisarı, Bağlarbaşı, Recep Tayyip Erdoğan Complex, Göztepe, Kartal, Mehmet Genç Complex

Campus on the European side is as folows: Sultanahmet

With a total area of 3,254,430.28 m², the largest campus is Recep Tayyip Erdoğan Complex with 2,637,169 m².
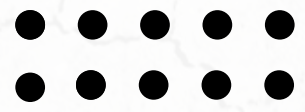
Our Campuses ·····

- Acıbadem Campus
- Anadoluhisarı Campus
- Bağlarbaşı Campus
- Göztepe Campus
- Kartal Campus
- Mehmet Genç Complex
- Recep Tayyip Erdoğan Complex - Maltepe Campus
- Recep Tayyip Erdoğan Complex - Health Campus
- Sultanahmet Campus

With a total area of 3,254,430.28 m², the largest campus is Recep Tayyip Erdoğan Complex with 2,637,169 m².

Sustainability Office

OBJECTIVES

Climate change is one of today's biggest global challenges and threats sustainable development and the life quality of future generations. In this context, while universities are focusing on their academic achievements, they should also lead the way with their environmental friendly and sustainable practices. As Marmara University, we act with the awareness of this responsibility and take decisive steps in the fight against climate change.

Marmara University - Climate Action Plan (2023-2028) includes many strategic goals, from reducing energy consumption across the campuses to minimizing the carbon footprint and more sustainable resource management to raising social awareness. The plan also aims to build a sustainable future by encouraging student and staff participation while systematizing the steps our university takes towards becoming carbon-neutral.

Our actions include energy efficiency, the use of renewable energy, sustainable water and waste management, and the protection of biodiversity.

Sustainability Office
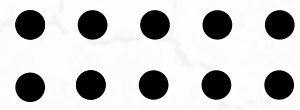
METHODOLOGY

Turkey continues to pursue its Long-Term Climate Strategy studies with a low-emission and climate-resilient development approach in line with the 2053 net-zero emission target. In order to jointly combat climate change on a global scale, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992, the Kyoto Protocol in 1997 and the Paris Agreement in 2015. With the Paris Agreement, a paradigm shift was made in combating climate change and numerical targets were determined to limit global temperature increase. As of 2023, 195 Parties have signed this agreement. It was stated that in order to achieve the target of limiting global temperature increase to 1.5 °C, a 45% emission reduction should be achieved by 2030 and net-zero emissions should be achieved by mid-century.

In this report, Marmara University's Climate Action Plan has a comprehensive methodology for sustainability and combating climate change. The plan aims to increase energy efficiency in all units of the university, use renewable energy sources and reduce the carbon footprint.

In this context, smart energy management systems are used to monitor and manage energy consumption on campuses. An important component of the plan is education and awareness-raising activities. Awareness is raised on climate change through seminars, workshops and training programs organized for students and staff. In addition, scientific contributions are made to climate change and sustainability through research projects carried out within the university.

The Climate Action Plan included in this report adopts the GHG Protocol Institutional Standard for carbon emission analyses. Marmara University has been evaluated according to the GHG Protocol in terms of 3 carbon emission scopes.

THE SDG REPORT 2025

2024: HOTTEST YEAR ON RECORD

GLOBAL TEMPERATURE REACHED 1.55°C ABOVE PRE-INDUSTRIAL LEVELS

13 CLIMATE ACTION

United Nations | Department of Economic and Social Affairs

FOR FULL REPORT
UNSTATS.UN.ORG/SDGS/REPORT/2025

GHG PROTOCOL IN TERMS OF 3 CARBON EMISSION SCOPES

Scope 1: Direct GHG emissions

These emissions are emissions from sources directly controlled by the company, such as combustion of equipment owned or operated by the company, such as vehicles, boilers and furnaces.

Scope 2: Electricity indirect GHG emissions

These emissions are indirect emissions from energy sources purchased by the company and occur during the production of energy types such as electricity, heat or steam.

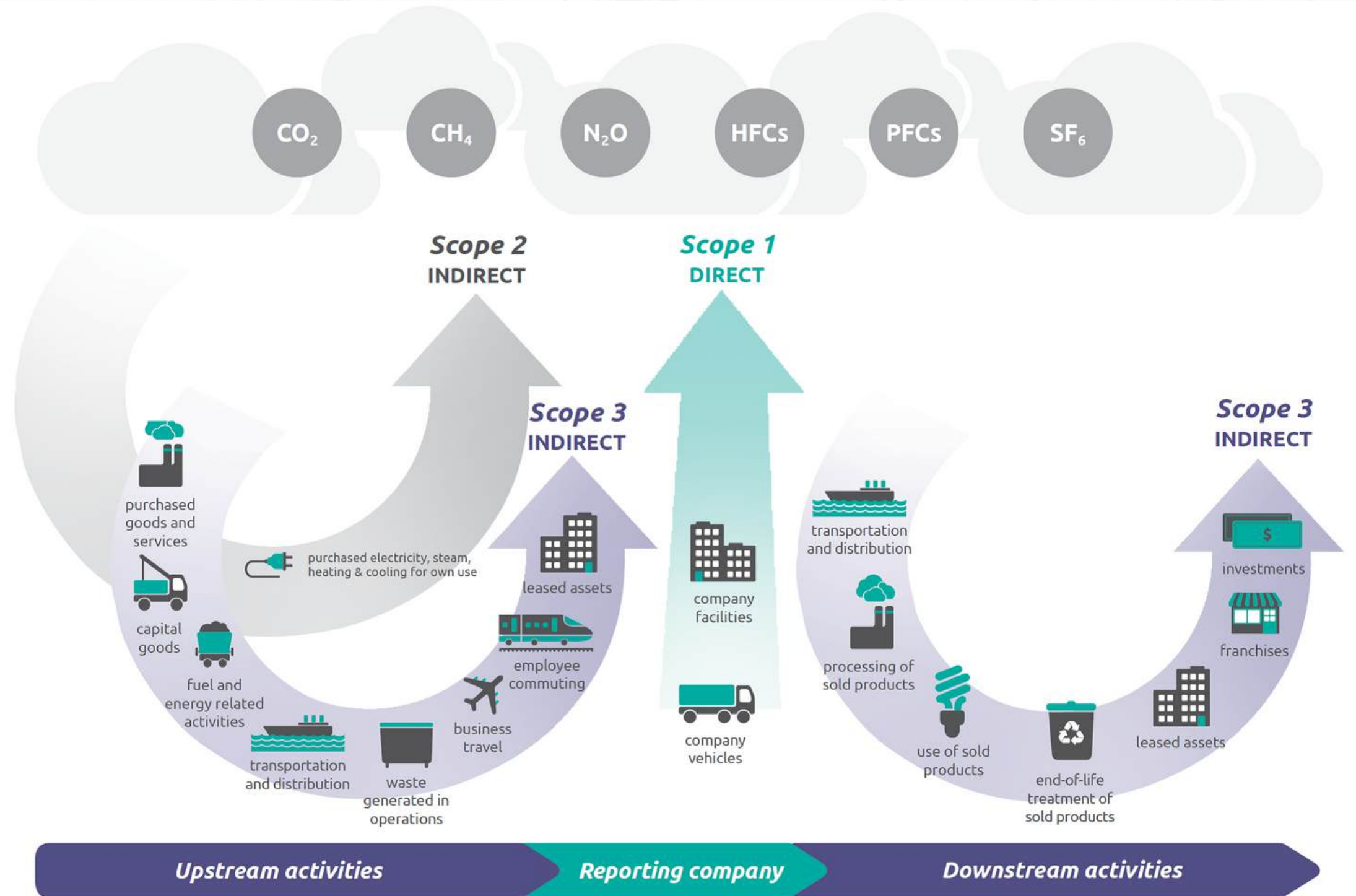## Scope 3: Other indirect GHG emission

These emissions are considered other indirect emissions that occur in the company's value chain. This scope includes a wide range of areas such as supply chain activities, business travel, and waste management, and are often the most difficult to measure.

In carbon emission analyses, Marmara University used Scope 1 for calculations related to natural gas use, Scope 2 for electricity consumption, and Scope 3 for water, waste, and transportation. The results for Recep Tayyip Erdoğan main complex in carbon emission analyses are as follows:

- **Scope 1** emission is determined as 980.017 $kgCO_2e$
- **Scope 2** emission is calculated as 4.975.607 $kgCO_2e$
- **Scope 3** is exemanied as 568.324 $kgCO_2e$

ACCELERATE
CLIMATE
ACTION
FOR ALL SDGs

CO₂ CH₄ N₂O HFCs PFCs SF₆

Scope 2
INDIRECT

Scope 1
DIRECT

Scope 3
INDIRECT

Scope 3
INDIRECT

purchased goods and services

purchased electricity, steam, heating & cooling for own use

leased assets

transportation and distribution

investments

capital goods

company facilities

employee commuting

processing of sold products

franchises

fuel and energy related activities

business travel

company vehicles

use of sold products

leased assets

transportation and distribution

waste generated in operations

end-of-life treatment of sold products

Upstream activities   **Reporting company**   **Downstream activities**

Click here for Source and detailed information

Sustainability Office

4. ACTIONS TAKEN TO DATE

4.1. Energy

Energy efficiency

Numerous environmentally friendly systems and practices have been implemented at Marmara University within the framework of reducing the carbon footprint. In this direction, the Recep Tayyip Erdoğan Campus, whose foundation was laid in 2019, was designed as "GREEN" campus. Ensuring energy efficiency is one of the priority issues.

The heating and cooling systems are designed centrally and high efficiency devices are preferred. In addition, heat insulation systems are used in the buildings. In order to increase energy efficiency and to meet the need for lighting in buildings with minimum consumption, the buildings are designed to benefit from natural light and retrofitted with LED bulbs and lighting systems.

The campus incorporates various systems that contribute to a "GREEN" building. In this context, the focus was on ensuring energy efficiency, heating and cooling systems were designed centrally, and high-efficiency devices were preferred. Additionally, thermal insulation systems were used in buildings. It is powered with LED bulbs and lighting systems to increase energy efficiency and meet the lighting needs in buildings with minimum consumption. Buildings are designed to benefit from natural light. In addition, it is aimed to produce energy with approximately 1.763 kWp photovoltaic solar panels placed on building roofs.

Sustainability Office

Energy Saving in Marmara

According to the Energy Efficiency Law No. 5627, a 15% energy saving target has been defined for public buildings in order to use public resources efficiently and reduce energy costs. In this context, it has been determined that we have achieved 16% and above savings with the energy efficiency measures we have implemented in the building/campus belonging to Marmara University between 2019-2023.

We have been entitled to receive a certificate of superior achievement. The campus will produce most of its own energy with solar energy, which is renewable energy.
The Göztepe Campus Ord. Prof. Nihad Sayar Building (School of Foreign Languages), Engineering Faculty a Building, Technical Education Faculty (Mechatronics) and Atatürk Education Faculty (Main Building) Buildings, for which a reinforcement project was prepared within the scope of the project, were acquired.

The project, signed between the Republic of Turkey and the World Bank on 07.09.2021, is guaranteed by the Ministry of Treasury and Finance, and its implementation is carried out by the Ministry of Environment, Urbanization and Climate Change. The tender process of the work included in the investment program within the scope of this project is about to be completed.

Our university continues the necessary work with determination to increase the structural performance of its buildings with low earthquake resistance and to minimize the risk against the expected Istanbul Earthquake. Energy efficiency application will be carried out in the said buildings within the scope of the Earthquake Resistance and Energy Efficiency in Public Buildings Project (KADEV) in 2024.

Sustainability Office

Table 1. Smart Building Implementation

No	Name	Place	automation		safety				energy		water		Indoor environment				lighting				Building Area (m²)
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	Atatürk Eğitim Fakültesi	İstanbul,Göztepe Yerleşkesi	x		x				x		x		x				x				19.755
2	Marmara Üniversitesi İşletme Fakültesi	İstanbul, Göztepe Yerleşkesi	x		x				x		x		x				x				19.703
3	Marmara Üniversitesi Hukuk Fakültesi	İstanbul, Göztepe Yerleşkesi	x		x				x		x		x				x				19.243
4	Marmara Üniversitesi İletişim Fakültesi	İstanbul, Göztepe Yerleşkesi	x		x				x		x		x				x				17.976
5	Eczacılık Fakültesi	İstanbul, Başıbüyük Sağlık Yerleşkesi	x		x				x		x		x				x				28.507
6	Mühendislik Fakültesi M1,M2,M3M,M4,M5	İstanbul,Küçükyalı	x		x				x		x		x				x				46.797
7	Teknoloji Fakültesi T1,T2,T3,T4,TH2,TH5	İstanbul, Küçükyalı	x		x				x		x		x				x				43.579
8	Atatürk Eğitim Fakültesi	İstanbul, Küçükyalı	x		x				x		x		x				x				52.666
9	Bankacilik Ve Sigortacilik Yüksekokulu B1 Binasi	İstanbul, Küçükyalı	x		x				x		x		x				x				11.605
10	İşletme Fakültesi I1, I2	İstanbul, Küçükyalı	x		x				x		x		x				x				23.360
11	İktisat Fakültesi K1, K2	İstanbul, Küçükyalı	x		x				x		x		x				x				23.107
12	Siyasal Bilgiler Fakültesi S1	İstanbul, Küçükyalı	x		x				x		x		x				x				11.755
13	Teknoloji Fakültesi İTA, NBU, TH1, TH3, TH4	İstanbul, Küçükyalı	x		x				x		x		x				x				14.274
14	Mühendislik Fakültesi MH1, MH2, MH3	İstanbul, Küçükyalı	x		x				x		x		x				x				5.667
15	Yemekhane Ve Öğrenci Merkezi Binasi	İstanbul, Küçükyalı	x		x				x		x		x				x				21.818
16	Nizamiye	İstanbul, Küçükyalı	x		x				x		x		x				x				1.093
17	Yemekhane - Kütüphane	İstanbul, Küçükyalı	x		x				x		x		x				x				14.501
18	Engelli Diş Hastanesi	İstanbul, Küçükyalı	x		x				x		x		x				x				6.152
19	Mehmet Genç Külliyesi	İstanbul, Dragos	x		x				x		x		x				x				104.097
Total																					485.655

Please compile one row for each building (or homogeneous part of it) by ticking with a "X" for each requirement

Smart Buldings

Smart building implementation have been detected as 51.7%.

Marmara University effectively uses Information and Communication Technologies (ICT) in energy and climate change related programs. The university carries out renewable energy and energy efficiency projects. Energy production is provided by photovoltaic solar panels placed on the roofs of the buildings on the campus. In addition, students are provided with practical experience in wind energy technologies through projects such as the "Wind Energy and Virtual Experience Center". Such projects contribute to sustainable energy solutions and support climate change management.

Sustainability Office

As seen in Table 2, a decrease in electricity consumption has been achieved.

Table 2. Electricity Consumption

AREAS	Years		Trend
	2022	**2023**	
Electricity Consumption Amount (Kwh)	32.771.286	28.910.954	Reduction
Electricity Consumption Amount Per Indoor Area (Kwh)	47,11	39,07	Reduction
Electricity Consumption (Personnel +Student) (Kwh)	409,61	371,38	Reduction

As seen in Table 3, there has been a decrease in natural gas consumption.

Table 3. Natural Gas Consumption

AREAS	Years		Trend
	2022	**2023**	
Natural Gas Expense Consumption Amount (m3)	3.171.537	1.566.981	Reduction
Natural Gas Expense Per Closed Area (m3)	4,56	2,12	Reduction
Natural Gas Expense Per Person (Staff + Student) (m3)	39,64	20,13	Reduction

As seen in Table 4, there has been a decrease in telephone and internet access.

Table 4. Telephone and Internet Access Consumption

AREAS	Years		Trend
	2022	**2023**	
Telephone and Internet Access Expenses (TL)	255.847,49	124.302,45	Reduction
Telephone and Internet Access Expenses per Personnel (TL)	48,81	27,33	Reduction

Sustainability Office

Table 5. Planning, implementation, monitoring and/or evaluation of all programs related to Energy and Climate Change through the utilization of Information and Communication Technology (ICT)

Stage	Activities/Programs	ICT Utilization	Evidence	Responsible Team/Department
Planning	Data Collection and Analysis, Defining Sustainability Goals	ICT for data analysis, sustainability goal-setting tools	Energy consumption analysis reports, sustainability goals	Energy Management, ICT Dept
Implementation	Smart Energy Management, Integration of Renewable Energy	Smart sensors, Building automation systems, Renewable energy monitoring tools	Energy optimization logs, Renewable energy data	Facility Management, Energy Dept
Monitoring	Real-Time Monitoring of Energy and Climate Data	ICT-based real-time tracking systems	Real-time energy consumption and carbon emission reports	Energy Management, ICT Dept
Evaluation	Reporting and Continuous Improvement	ICT for reporting and data analysis tools	Periodic energy reports, Feedback on policy effectiveness	Energy Management, ICT Dept, University Administration

Sustainability Office

Solar Energy System

Renewable energy is also used to meet the campus' energy demand. For this purpose, photovoltaic solar panels with a capacity of 1,763 kWp placed on the building roofs in Marmara University Recep Tayyip Erdoğan Campus. With this initiative, the campus will produce most of its own energy with solar energy, which is renewable energy.

Sustainability Office

Solar Energy Efficiency

Our campus' fixed-angle photovoltaic (PV) system contributes to our sustainable energy goals with its variable energy production capacity throughout the year. The graph shows the monthly energy output, with the highest efficiency in June, July and August. The energy produced in these months is above 250 kWh and reaches a maximum of 278.09 kWh in July. In the fall and winter months, energy production naturally decreases, reaching its lowest level of 110.86 kWh in December.

Sustainability Office
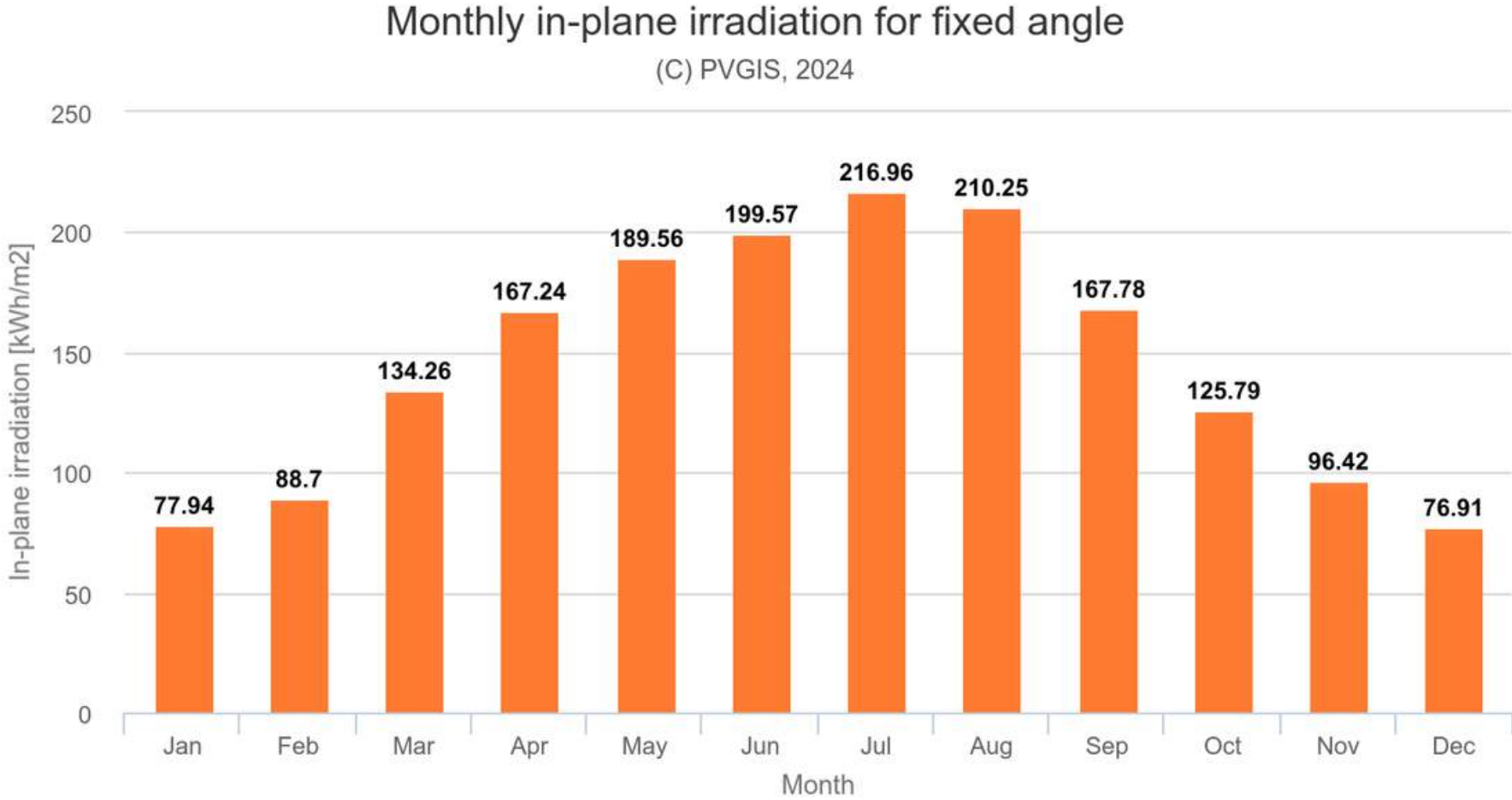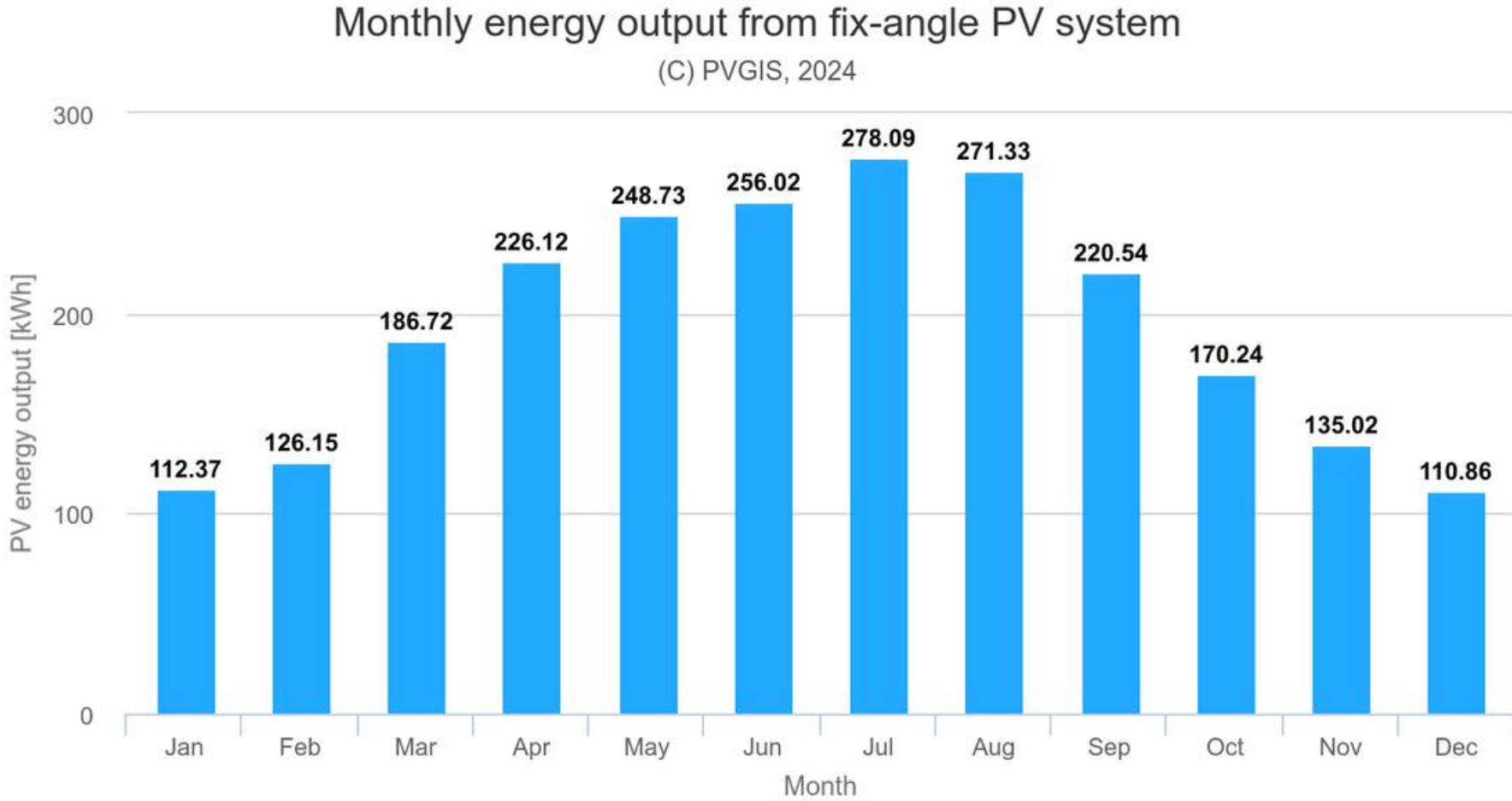
Monthly energy output from solar panels

Wind Energy and Virtual Experience Center

As an indicator of Marmara University's commitment to innovation and renewable energy, the 'Wind Energy and Virtual Experience Center' was established in cooperation with Nordex Enerji A.Ş. The center, opened on June 5, 2024, enables students to gain knowledge and experience in wind energy Technologies and offers students practical experiences with a wind turbine prototype, virtual reality applications, simulations and interactive educational materials. The establishment of this center not only demonstrates the determination and high awareness of our university in the field of innovation and renewable energy, both also shows that our universities pioneering role in sustainability besides education and research.

Wind Energy and Virtual Experience Center

Certificates

Marmara University has been awarded the Green Energy Certificate within the scope of its support for environmentally friendly energy sources. This certificate shows that some of the energy used in our university is provided from renewable sources and is a symbol of her commitment to sustainability. In addition, in line with the 15% energy saving target in public buildings in accordance with the Energy Efficiency Law No. 5627, more than 16% savings were achieved between 2019-2023 and a Certificate of Outstanding Achievement was received for this achievement.

This step not only reduces the negative impact on the environment, but also enables us to demonstrate greater commitment to our sustainability values. This transition to green energy is a demonstration of our commitment to reducing environmental impacts.

Click to see the **Green Energy Certificate.**

YEK·G

Yararlanıcı Taraf Adı / Beneficiary Name
Marmara Üniversitesi İdari ve Mali İşler Daire Başkanlığı

Organizasyon Adı / Organization Name
K2 SAKARYA ELEKTRIK PERAKENDE SATIŞ A.Ş.

Tüketim Miktarı / Consumption Amount
9397 MWh

Tüketim Dönemi / Consumption Period
Ocak 2023 - Temmuz 2023 / January 2023 - July 2023

Adres / Address
Kadıköy / İSTANBUL-ASYA

Bu itfa bildirimi, Ocak 2023 - Temmuz 2023 tüketim dönemindeki 9397 MWh'lik elektrik tüketiminin yenilenebilir enerji kaynaklarından üretildiğini teyit etmektedir.

This Cancellation Statement confirms that 9397 MWh of electricity consumption in the January 2023 - July 2023 consumption period was generated from renewable energy sources.

Bu itfa belgesi, içerdiği YEK-G belgelerinin Piyasa İşletmecisi olan EPİAŞ tarafından itfa edildiğini tasdik etmektedir. İfa belgesinde yer alan YEK- G belgeleriyle ilişkilendirilen yenilenebilir elektriğin çevresel nitelikleri yararlanıcı tarafından ilgili tüketim döneminde tüketilmiştir. İfa belgesinde yer alan YEK-G belgeleri devredilemez ve söz konusu YEK-G belgelerinin başka bir tedarikçiye ve/veya son tüketiciye ifası mümkün değildir. Bu itfa belgesinin kopyalanması, değiştirilmesi ve ileriye dönük satışı yasaktır.

This cancellation statement document confirms that YEK-G documents subjected to the cancellation statement have been cancelled by EXIST, the Market Operator. The environmental qualities of the associated renewable energy included in the cancellation statement document have been consumed by the beneficiary party in the relevant consumption period. YEK-G documents included in the cancellation statement are not transferable and the cancellation of the relevant YEK-G documents to another supplier and/or consumer is prohibited. Any later sale or cancellation or this cancellation statement is forbidden. It is forbidden to copy or amend this cancellation statement as well.

EPİAŞ

4.2. SUSTAINABLE TRANSPORTATION

Marmara University has taken various steps to achieve its sustainability goals. In particular, it has reviewed its on-campus transportation policies in order to optimize the ratio of parking areas to the total campus area. The university aims to increase green areas by reducing parking areas. In this direction, on-campus bicycle paths and pedestrian paths have been expanded, and projects encouraging the use of public transportation have been implemented. In addition, smart parking systems and electric vehicle charging stations have been established for the efficient use of parking areas. These steps aim to reduce the carbon footprint on campus and support sustainable transportation solutions. These efforts contribute to Marmara University's goals of creating an environmentally friendly campus.

Total main campus area: **3.146.509m²**
Total parking area: **73.124m²**
Ratio: **0.02**

Sustainability Office

Number of Transportation Initiatives to Decrease Private Vehicles on Campus:

- Bicycle road in campus and shared bikes initiative.
- Electrical car charge area
- New policy for personnel vehicles reduced
- Public transport (bus) station in the campus
- Limiting parking zone for students
- New bicycle road and shared road (with cars) for increasing number of zero waste vehicles and decreasing parking area for cars
- Bicycle-Sharing System: Within the scope of the protocol signed between the Istanbul Provincial Health Directorate of the Ministry of Health and Marmara University for the purpose of "Developing Physical Activity Opportunities", a "Shared Bicycle Area" was created. In the project developed within the scope of this protocol, bicycles were offered to the service of students, faculty members and administrative staff with the organization of Marmara University Health, Culture and Sports Department. The bicycles, which will increase in number in the later stages of the project, can also be used on various campuses of our university. Bicycles can be purchased with a university ID and a filled form. The bicycles, which can be used on campus after being purchased, will be used both for healthy living and transportation. Within the scope of the project, students, faculty members and administrative staff as well as campus security officers started to use the 3 bicycles allocated to them on campus.
- Bicycle Club: The university's bicycle club organizes bicycle-related events, raises awareness about bicycle use, and organizes various tours and competitions.
- Electric Scooters and Vehicles: Electric scooters and electric vehicles are available for rent on campus. These vehicles provide sustainable transportation and reduce carbon emissions.
- Private Vehicle Restrictions: The use of private and conventional fuel vehicles on campus is restricted except in necessary situations.
- Carbon Footprint Reduction: Studies are being conducted to reduce the carbon footprint by reducing vehicle use.
- On-Campus Transportation: Sustainable means of transportation are encouraged to reduce the personal vehicle use of staff.
- Public transport (bus) station in the campus
- Public transport (subway) station near the campus

Sustainability Office

Sustainable vehicles

Within the framework of the Marmara University's carbon reduction actions, it is aimed to reduce the use of personal vehicles in order to provide staff with more environmentally friendly and sustainable transportation to campus. To this end, electric scooters are available for rent around the campus and electric vehicles are provided for use on campus. These practices encourage sustainable transportation while at the same time reducing carbon emissions.

Sustainability Office

Bicycle-Sharing system

Within the scope of the protocol signed between the Istanbul Provincial Health Directorate of the Ministry of Health and Marmara University for the purpose of "Developing Physical Activity Opportunities", a "Shared Bicycle Area" was created. In the project developed within the scope of this protocol, bicycles were offered to the service of students, faculty members and administrative staff. Bicycles can be purchased with a university ID and a filled form. The bicycles, which can be used on campus after being purchased, will be used both for healthy living and transportation.

Zero-Emission Vehicles

Marmara University has taken various steps to achieve its sustainability goals. It has developed policies that encourage the use of zero-emission vehicles (ZEV) in campus transportation. In this context, it aims to offer more sustainable transportation solutions by reducing the use of private vehicles on campus. The university offers electric scooter rental services for staff and students. These scooters provide an easy and environmentally friendly transportation option on campus. In addition, electric vehicles are also available for use on campus. These vehicles both provide sustainable transportation and reduce carbon emissions. Bicycle use is also encouraged. Marmara University has created a "Shared Bicycle Area" within the scope of the protocol it signed with the Istanbul Provincial Health Directorate. With this project, students, academic and administrative staff can use bicycles. Bicycles can be obtained with university IDs for use for healthy living and transportation. The Bicycle Club organizes various events to raise awareness about bicycle use and inform students. The club organizes activities such as bicycle tours, competitions and trainings. In addition, campus security guards also use bicycles. With its sustainable transportation policies, Marmara University offers both environmentally friendly solutions and makes on-campus transportation more efficient.

Table 6. Planning, implementation, monitoring and/or evaluation of all programs related to Transportation through the utilization of Information and Communication Technology (ICT)

Stage	Activities/Programs	ICT Utilization	Evidence	Timeline	Responsible Team/Department
Planning	Data Collection and Analysis for Transportation: Collecting data on traffic flow, public transport usage, etc.	Digital data collection systems	Collected data reports	Jan 2024 - Feb 2024	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Defining Transportation Strategies: Establishing goals for increasing public transport, bicycle, and EV usage.	Digital platforms for strategic planning	Strategic plan documents	Jan 2024 - Feb 2024	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Resource Optimization: Optimizing parking areas, service vehicles, and routes using ICT-based software.	ICT-based software for resource management	Optimization reports	Jan 2024 - Feb 2024	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Implementation	Smart Parking Systems: Installing sensors to monitor parking occupancy levels.	Sensors and digital display boards	Installation logs, occupancy reports	Mar 2024 - Apr 2024	Facility Management, Digital Transformation and Data Management Coordinatorship
	Integration of Public Transport and Shuttle Systems: Tracking public transport and shuttle vehicles digitally.	Mobile applications for real-time tracking	Usage reports from digital systems	Mar 2024 - Apr 2024	Facility Management, Digital Transformation and Data Management Coordinatorship
	Installation of Bicycle and Electric Vehicle Stations: Setting up and managing charging stations digitally.	Digital management systems	Installation records, usage statistics	Mar 2024 - Apr 2024	Facility Management, Digital Transformation and Data Management Coordinatorship
Monitoring	Real-Time Traffic Tracking: Monitoring traffic flow and public transport usage with sensors.	IoT devices and centralized data systems	Real-time monitoring reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Digital Dashboards: Analyzing and monitoring transportation data graphically through digital control panels.	Digital dashboards	Dashboard analytics reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Performance Monitoring: Tracking public transport usage rates and traffic data.	Data analysis tools	Performance monitoring reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Evaluation	Reporting: Periodically reporting the effectiveness of transportation programs through digital systems.	Digital reporting systems	Evaluation reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Feedback and Improvement: Reviewing transportation plans based on user feedback and digital data.	Digital feedback systems	Feedback analysis reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	Evaluation of Sustainability Goals: Assessing the achievement of sustainability goals using digital data.	Data analytics tools	Sustainability evaluation reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship

Sustainability Office

4.3. WASTE MANAGEMENT

Marmara University has adopted the Zero Waste Directive in order to ensure the effective management of waste generated from education, research and service activities. This directive aims to collect wastes by separating them according to recycling and disposal types at the source, to store them safely temporarily and to send them to licensed waste processing or disposal facilities in accordance with the legislation.

Collection of Recyclable Non-Hazardous Wastes

Recyclable non-hazardous wastes (paper, glass, metal, plastic) generated throughout the campus are collected separately from other wastes and recycled. Special collection points have been created for each type of waste and these points are located in areas easily accessible by students and staff. The responsible persons designated for each unit regularly inspect and ensure that the wastes are collected correctly. Recyclable materials are sent to licensed recycling facilities to minimize the negative impact on the environment.

Sustainability Office

Collection of Special Wastes

Special collection areas have been located in the campus for waste batteries, vegetable waste oils, electronic waste and other recyclable special wastes. These wastes are subjected to a special treatment process due to their harmful effects on the environment and are safely sent to licensed waste treatment facilities. In particular, vegetable waste oils are collected separately in food preparation units to prevent environmental pollution. Likewise, a separate collection system has been established for electronic goods, and informative materials on how to collect electronic waste have been prepared for students and staff.

Management of Other Wastes

Non-hazardous and hazardous wastes not specified above are collected in accordance with the provisions of the Environmental Law and related legislation. While it is ensured that these wastes are kept safely in temporary storage areas, necessary health and safety measures have been taken, especially for medical waste. The management of medical waste is controlled by the health units of our university and these wastes are regularly delivered to licensed waste disposal facilities.

Sustainability Office

Collection of Biodegradable Wastes

Biodegradable wastes are collected separately, especially in cafeterias and food preparation units, where they are generated intensively. These wastes are sent to appropriate facilities for composting, thus enabling organic wastes to participate in the recycling process. In particular, food waste is used in compost production for sustainable agriculture and landscaping on campus, thus creating a circular waste management system.

Labeling of Collection Units

All waste collection units used throughout the campus is placed in accordance with the color codes and labeling rules specified in the relevant regulations. Informative signs and writings specific to each waste type clearly indicate which wastes users should accumulate in which units. In addition, accumulation equipment has been provided in accordance with the volume, quantity and specifications determined in line with the needs. This ensures the correct and safe collection of waste.

Temporary Storage Areas and Sending Waste to Licensed Facilities

Wastes accumulated throughout the campus are collected in Temporary Waste Storage Areas, which are created in a safe and environmentally friendly manner. These areas are organized in accordance with the relevant regulations and necessary measures have been taken to ensure that the wastes are kept in a healthy manner. Wastes accumulated in temporary storage areas are regularly transported to licensed waste processing or disposal facilities. These processes are carried out meticulously to minimize harmful effects on the environment.

Trainings

In order to effectively implement the zero waste management system, regular trainings are provided for students, staff and administrative units. In these trainings, topics such as zero waste principles, how to properly sort waste and the importance of recycling are addressed. In addition, the zero waste management system is continuously improved through regular audits and awareness raising activities after the trainings.

Environmental Legislation and Licenses

Marmara University fully complies with all relevant legal regulations in environmental management and waste disposal processes. Necessary permits and environmental permits/licenses have been obtained in line with the Environmental Law and related legislation. The University's practices in this area are constantly updated in line with sustainability goals and necessary steps are taken to fulfill environmental responsibilities.

Sustainability Office

Zero Waste in Marmara

As a result of all these efforts, Marmara University has received the Basic Level Zero Waste Certificate by meeting certain criteria on all campuses.

Marmara University has met the criteria for the Basic Level Zero Waste Certificate by implementing the following measures:

- Separating recyclable materials: Paper, glass, metal, and plastic wastes are collected separately from other types of waste.
- Strategic placement of storage equipment: Containers for glass and textile/clothing wastes are positioned in easily accessible locations to facilitate separate collection.
- Establishment of collection centers: Waste Collection Centers and collection points have been set up and are operational.
- Public information and waste collection program: A waste collection program has been established and communicated to the public, ensuring that waste is collected according to the schedule.
- Special waste management: Specific guidelines and information are provided for the disposal of batteries, vegetable waste oil, electrical and electronic equipment waste, medicine waste, and bulky wastes, directing them to the Waste Collection Center or arranging for their collection.
- Biodegradable waste recovery: Efforts are made to recover biodegradable wastes through separate collection methods such as composting and biomethanization.
- Awareness and data recording: Initiatives are carried out to raise awareness about the zero waste management system, with data being recorded to monitor the system's implementation.
- Compliance with provincial plans: The university adheres to the provincial Zero Waste Management System Plan

Sustainability Office

Zero Waste Initiatives

In March 2019, Marmara University signed a Zero Waste Protocol with the Istanbul Governorship. The protocol has two implementation phases: the first phase involves transitioning the university to zero waste practices, while the second phase requires faculty and students to participate in zero waste training and inspections at national education institutions and public agencies.The zero waste initiatives at our institution have been carried out as follows:

- To establish a roadmap for implementing the Zero Waste system at the university, meetings were held under the coordination of our General Secretariat with the Administrative and Financial Affairs Department, the Environmental Protection and Research Coordination, and the Department of Environmental Engineering. Based on these meetings, decisions were made regarding the actions to be taken, and a "Zero Waste Unit" was established under the Administrative and Financial Affairs Department to monitor these activities.

Sustainability Office

- Since the protocol also assigned training and inspection responsibilities to our institution, 340 volunteer students were selected to participate in training and inspection activities at national education and public institutions. In April and May, these students received training on Zero Waste practices.

- To monitor the implementation, a meeting was held in the Göztepe Campus Institutes Building Conference Hall with the participation of all faculty, vocational schools, and institute secretaries, as well as campus and administrative managers. Information was provided by our General Secretary and the Administrative and Financial Affairs Department.

- To collect waste in our units, three types of collection units were designated: Blue, Green, and Black (Paper, Plastic, Metal – Glass – Household Waste). It was determined that approximately 2400 collection units of each color were needed for all campuses. These units were procured and distributed to all campuses and buildings. Additionally, Waste Information Boards were prepared to indicate which waste type should be disposed of in which unit and were placed at the locations of the collection units.

- According to relevant regulations, waste must be separated and transported to "Temporary Waste Collection Areas." For this purpose, 8 "Temporary Waste Collection Areas" were established across all campuses and locations, and 48 waste containers of 770 liters each were procured for use in these areas.

Sustainability Office

- Guidelines for the implementation of the Zero Waste system at the university, titled "Marmara University Zero Waste Implementation Principles," were developed. These principles were communicated to all university units to ensure that collection and sorting processes were conducted accordingly.

- To ensure proper management and monitoring of waste processes, it was deemed necessary to designate a waste officer from each academic and administrative unit. Letters were sent to all units requesting the appointment of a responsible person to oversee zero waste activities.

- To support the monitoring and control of zero waste practices and, if needed, contribute to training and inspection activities, it was requested that 300 students be employed under the Social Work Project – "Protection of Nature" – conducted by İŞKUR during the summer period. This request was fulfilled, and 300 students participated in the program.

- After receiving waste management training, the students employed under the Social Work Program were assigned to various academic and administrative units across our campuses and locations based on need and began their work.

- The Zero Waste initiatives, conducted under the auspices of the Presidency, are a project that will provide significant added value to our country, which is dependent on external energy sources. As a leading academic institution, we hope that Marmara University will also make significant contributions to our country in the field of zero waste.

Sustainability Office

Zero Waste Protocol

The Zero Waste Protocol signed between Marmara University and Istanbul Governorship has been signed in March 2019.

Stages of the protocol:

Roadmap and Coordination: Meetings were held between the Department of Administrative and Financial Affairs, Environmental Protection and Research Coordinatorship, Environmental Engineering Department and the General Secretariat to determine the roadmap for the work on zero waste practices at our university and a "Zero Waste Unit" was established to follow up these processes.

Training and Audit: Pursuant to the Zero Waste Protocol, 340 volunteer students were identified to conduct training and audits in national education and public institutions, and these students were trained on zero waste practices in April and May.
Meetings and Briefings: In the meetings held at Göztepe Campus, secretaries of all faculties, colleges, vocational schools and institutes, campus and administrative supervisors were informed about zero waste practices.

ZERO WASTE

Sustainability Office

Waste Collection Units: Collection units for paper, plastic, metal, glass and household wastes were placed in 3 modules (blue, green, black) on all campuses and a total of 2400 units were provided. In addition, information signs indicating which waste is to be disposed of in which unit were hung.

Temporary Waste Collection Areas: A total of 8 "Temporary Waste Collection Areas" were established on campuses and 48 770 liter waste containers were provided.

Implementation Principles: Marmara University Zero Waste Implementation Principles regarding the implementation of the zero waste system were determined and announced to all units.

Waste Officers: A waste officer has been identified from each academic and administrative unit to monitor waste management.

Social Work Program: 300 students were employed within the scope of İŞKUR Social Work Project to contribute to zero waste activities during the summer period.
Waste Management Trainings: Students participating in the project were assigned to campuses after receiving training on Waste Management.

The work carried out in this context demonstrates Marmara University's commitment to zero waste management and its commitment to sustainability goals.

Sustainability Office

Marmara University carries out its waste management programs using Information and Communication Technologies (ICT) as follows:

Table 7. Planning, implementation, monitoring and/or evaluation of all programs related to Waste Management through the utilization of Information and Communication Technology (ICT)

Stage	Activities/Programs	ICT Utilization	Evidence	Timeline	Responsible Team/Department
Planning	Data Collection and Analysis: Data on current waste amounts, types, and collection frequencies are collected digitally. Defining Waste Management Strategies: Goals for recycling, reduction, and reuse are set. Optimization of Resources: ICT software is used for vehicle route planning and personnel needs. Setting Sustainability Goals: Targets for environmental sustainability are defined and tracked.	Waste audit software, data analytics, route planning tools	Strategic plan documents, waste audit reports, digital tracking	Ongoing (Updated annually)	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Implementation	Smart Waste Collection: Sensors in bins monitor fill levels, and collection routes are optimized. Establishing Recycling Stations: Digital stations ensure waste sorting by type. Digital Awareness Campaigns: Awareness is raised via apps, websites, social media, and digital seminars.	Smart sensors, waste management software, digital platforms for awareness campaigns	Installation logs, waste segregation reports, campaign analytics	Ongoing (Starting March 2024)	Facility Management, Digital Transformation and Data Management Coordinatorship
Monitoring	Real-time Monitoring: Waste processes are tracked using sensors and IoT devices. Digital Dashboards: Data analysis and graphical monitoring of waste management. Performance Monitoring: Efficiency of collection processes, recycling rates, and energy savings are tracked.	Smart waste bins, IoT devices, real-time tracking software	Recycling rate reports, dashboard analytics	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Evaluation	Reporting: Efficiency and recycling rates are periodically reported through digital systems. Feedback and Improvement: Areas for improvement are identified through digital reports. Evaluation of Sustainability Goals: Progress toward recycling and energy-saving goals is evaluated digitally.	Data analysis tools, feedback systems, sustainability tracking	Program evaluation reports, stakeholder feedback	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship

Marmara University Waste Management

Sustainability Office

4.4. WATER MANAGEMENT

In the GREEN buildings constructed in Recep Tayyip Erdoğan Campus, design strategies and equipment that will increase water efficiency have been preferred. In addition, it is aimed to protect the vegetation, existing water resources and streams within the campus boundaries. To this end, the Çobanlar Stream has been cleaned and rehabilitated. In addition, drip irrigation, micro irrigation, sprinkler and surface irrigation systems have been emphasized in order to minimize water and energy consumption in plant irrigation within the campus. In this context:

- It is aimed to achieve savings of nearly 80% in water consumption.
- By reducing the consumption of natural water resources, it is aimed to obtain more efficiency from these resources.
- It is aimed to conserve water resources by maximizing energy and time savings.
- Efficient irrigation in a shorter time compared to classical methods, thus saving time.
- It is aimed to meet the water needs of animals by using irrigation and water storage systems.

Groundwater is used for agricultural irrigation in the campus and this water is stored for both agricultural irrigation and fire extinguishing in emergencies. Water transfer is realized with electrical control systems.

Sustainability Office

Rainwater Harvesting

Rainwater, collected from building roofs, is directed through pipes to the rainwater filter and the filtered water is stored in underground water tanks. The stored water is used for various purposes within the campus.

Sewerage System in Marmara

Marmara University's sewerage system is designed to provide effective wastewater management throughout the campus. This system aims to dispose of wastewater safely and without harming the environment. The sewerage infrastructure is built using modern engineering techniques and is supported by regular maintenance work. Various projects are carried out to increase the efficiency of this system and achieve sustainability goals.

THESDGREPORT2025

PROGRESS IN WASH SERVICES (2015–2024)

74%
68%

80%
66%

58%
48%

SAFELY MANAGED DRINKING WATER

SAFELY MANAGED SANITATION

BASIC HYGIENE SERVICES

TARGET 6›A

EXPAND WATER AND SANITATION SUPPORT TO DEVELOPING COUNTRIES

TARGET 6›B

SUPPORT LOCAL ENGAGEMENT IN WATER AND SANITATION MANAGEMENT

Sustainability Office
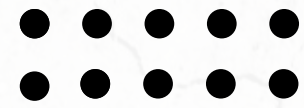
Marmara University has taken several important steps within the scope of water conservation programs. The university uses various design strategies and high-efficiency devices to increase water efficiency throughout the campus. The use of rainwater in the landscape irrigation system provides water efficiency. The aim is to protect the vegetation, existing water resources and streams within the campus borders. For this purpose, cleaning and rehabilitation works were carried out in Çobanlar Creek within the campus. Low energy consumption systems such as drip irrigation, micro irrigation, sprinkler and surface irrigation were preferred in plant irrigation. In this way, it was aimed to save approximately 70% in water consumption. In addition, groundwater is used for agricultural irrigation and stored for fire extinguishing in emergency situations. With rainwater storage systems, water after rain is directed to the rainwater filter via pipes over the building roofs and the filtered water is collected in underground water tanks. This water is used for various purposes within the campus. As seen in Table 7, there has been a decrease in water consumption.

SERVICE AREAS	Years		Trend
	2022	2023	
Water Exhaust Consumption Amount (m3)	34.004.091	499.192	Reduction
Water Exhaust Consumption Amount Per Closed Area (m3)	48,88	0,67	Reduction
Water Expense Per Person (Staff + Student) (m3)	425,01	6,41	Reduction

Sustainability Office

Groundwater

The water extracted from underground is stored and used for both agricultural irrigation and fire extinguishing in emergency situations. Water transfer works with electrical control systems. In this way, groundwater is used for agricultural irrigation within the campus. Groundwater is filtered before use and then used. In addition, groundwater is filtered by resting in underground tanks. Especially after rain, the water that goes underground is kept in underground tanks and the resting process is carried out.

Groundwater is used for agricultural irrigation within the campus. The water extracted from underground is stored and used for both agricultural irrigation and fire extinguishing in emergency situations. Water transfer works with electrical control systems.

Table 9. Planning, implementation, monitoring and/or evaluation of all programs related to Water Management through the utilization of Information and Communication Technology (ICT)

Stage	Activities/Programs	ICT Utilization	Evidence	Timeline	Responsible Team/Department
Planning	- Data collection and analysis on water consumption, rainwater, and leaks	- Digital systems for data collection and analysis	- Water consumption reports, analysis documents	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	- Defining water management strategies	- Digital platforms for setting conservation and reuse targets	- Water management strategic plan	Jan 2024 - Feb 2024	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	- Optimization of water distribution systems	- Software-based route planning and resource optimization	- Optimization reports	Ongoing	Digital Transformation and Data Management Coordinatorship
Implementation	- Smart water collection systems (real-time monitoring and leak detection)	- Sensors, digital devices, and IoT systems	- Monitoring data, system logs	Mar 2024 - Apr 2024	Facility Management, Digital Transformation and Data Management Coordinatorship
	- Installation of rainwater collection and reuse systems	- Digital management tools for monitoring and optimizing reuse systems	- Installation logs, reuse system reports	Ongoing	Facility Management, Digital Transformation and Data Management Coordinatorship
	- Digital awareness campaigns on water conservation	- Mobile apps, websites, social media platforms	- Training materials, campaign reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Monitoring	- Real-time monitoring of water consumption and distribution systems	- Sensors, IoT devices for tracking	- Water consumption and leak reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	- Monitoring rainwater collection and usage data	- Digital dashboards	- Dashboard reports	Ongoing	Sustainability Office, Digital Transformation and Data Management Coordinatorship
Evaluation	- Reporting efficiency of water management and conservation measures	- Digital systems for reporting and feedback	- Periodic water management reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	- Feedback and improvement efforts based on system performance	- Data analysis tools, feedback collection systems	- Improvement reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship
	- Evaluation of water-saving and sustainability goals	- Data analytics and sustainability goal tracking	- Sustainability evaluation reports	Annually	Sustainability Office, Digital Transformation and Data Management Coordinatorship

4.5. BIODIVERSITY ON CAMPUS

It is aimed to protect the existing ecosystem by adopting a sensitive, environmentalist approach to protect natural resources. It was aimed to protect the vegetation, existing water resources and streams within the boundaries of the complex, and for this purpose, the Çobanlar Stream within the land was cleaned and rehabilitated.

Magnolia , Palm trees planted in our greenhouse on our campus, and Sardinia, Paşa Kılıcı and Fern as well as the production of ancestral seeds from medicinal plants such as rosemary , thyme, bitter melon, and ancestral seeds of tomato and pepper species from Çorum. It is tried to spread traditional products by making a contribution to the local seed production efforts by producing for the purpose of production and reproducing the seeds obtained.

5. CARBON REDUCTION STRATEGY

Marmara University's 2023-2028 Action Plan reveals the steps taken towards becoming carbon neutral. Our university will continue its determination to develop innovative and effective solutions to achieve its carbon neutral goal at the same pace. Marmara University operates in 8 campuses distributed on the Anatolian and European sides of Istanbul. Of these, Acıbadem, Anadoluhisarı, Bağlarbaşı, Recep Tayyip Erdoğan Complex, Göztepe, Kartal, Mehmet Genç Complex campuses are on the Anatolian side and Sultanahmet campus is on the European side. The buildings on campuses other than the Recep Tayyip Erdoğan Complex are old and not designed as green building. In the near future, all of these campuses are planned to be gathered on the Recep Tayyip Erdoğan Complex and all new buildings will be constructed with features of green building. It is aimed to reach the highest level of energy efficiency in the buildings. In this context, elements such as maximum use of natural lighting, rainwater harvesting, green roof applications, gray water use, solar panels and insulation will be prioritized during the design phase. In addition, solar panels and wind turbines will be placed in the campus to meet energy needs. The transition from existing old buildings to new buildings will significantly reduce the carbon footprint. The buildings that will not be moved to the Recep Tayyip Erdoğan Complex are planned to be rebuilt or undergo a major renovation due to earthquake safety. Through this process, efficiency and the use of renewable energy will be prioritized in the design and ensured to reduce the carbon footprint. In the coming years, we will further increase our efforts in environmental responsibility and sustainability, focusing on our goal of creating impactful and lasting change both on our campuses and on a broader scale by awareness studies. Our carbon reduction hierarchy helps identify which actions will be most impactful and efficient.

Sustainability Office

The carbon reduction hierarchy

Avoid — Avoid carbon intensive activities by building green campus

Reduce — Reduce energy demand with efficiency measures and awareness

Replace — Replace fosil fuels with renewable energy

Offset — Offset what remains

Sustainability Office
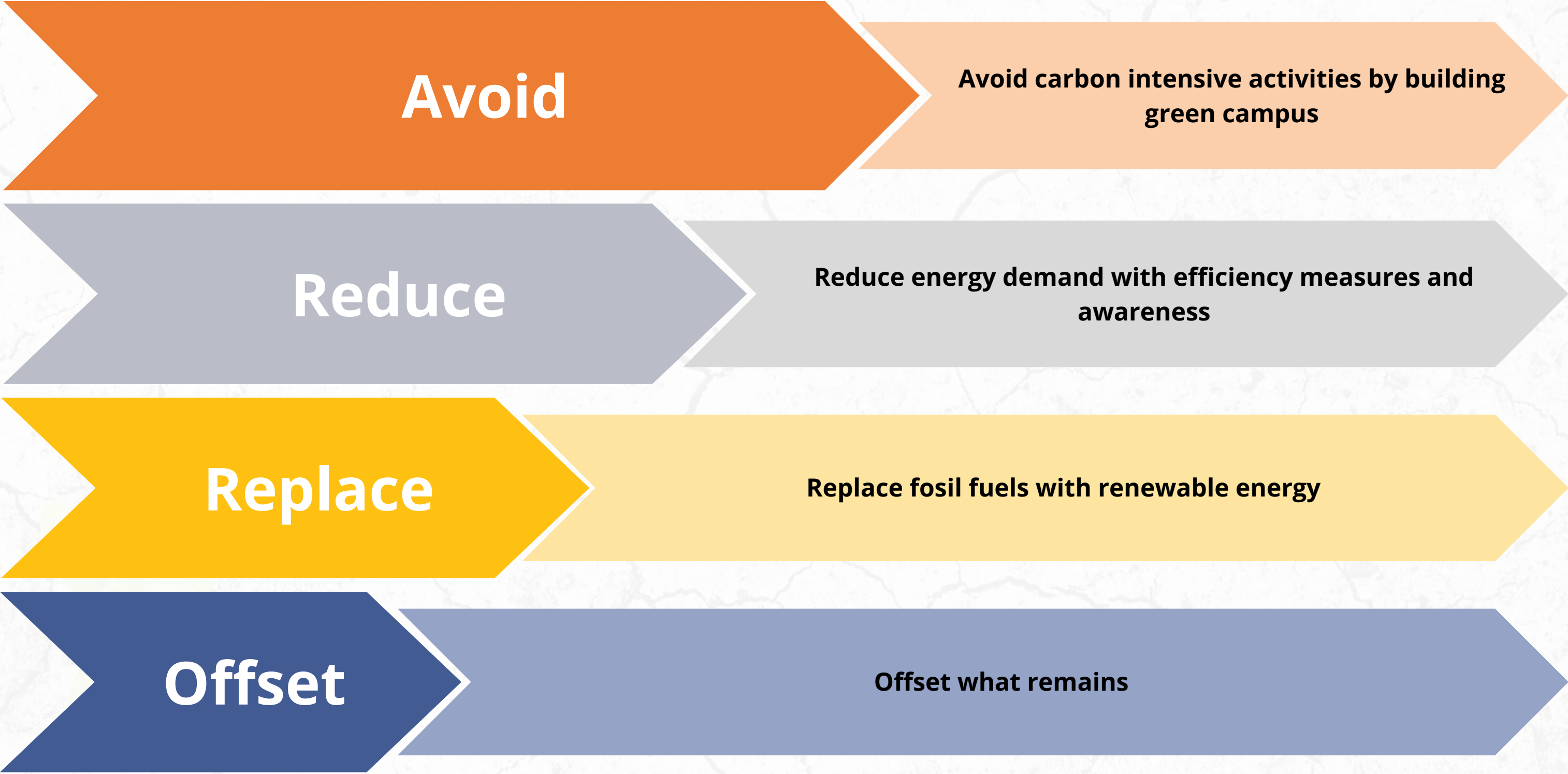
Many studies are carried out to reduce the carbon footprint on our campuses and it has become one of the main targets. To reduce carbon footprint: It is aimed to reduce the use of vehicles on campus and switch to environmentally friendly transportation systems. It is aimed to reduce waste, recycle it, not use packaging that does not degrade in nature, and turn plant and animal waste into nature and turn it into fertilizer instead of throwing it away. It is aimed to benefit from sustainable and nature-friendly energy sources instead of fossil fuels. It is aimed to ensure energy efficiency by increasing heat insulation in buildings. It is aimed to reduce the carbon footprint by providing adequate ventilation in buildings. The use of energy efficient devices is encouraged. It is aimed to use environmentally friendly and low-emission public transportation vehicles instead of individual vehicles for transportation of employees. Total Carbon Footprint (Marmara University) are as follows:

Sustainability Office

a. Electricity usage per year CO_2 (electricity)
=electricity usage per year (kWh)1000×0,84
=16.539.420 kWh1000×0,84
= 13.893,11 metric tons

b. Transportation per year (Shuttle)
=((9*72*1,5*240)/100)*0,01

c. Transportation per year (Car)
=((600*2*1,5*240)/100)*0,01

d. Transportation per year (Motorcycle)
=((55*2*1,5*240)/100)*0,02

e. Total emission per year
= total emission from electricity usage + transportation (bus, car, motorcycle)
=13.968

Our targets and implementation timeline are showed in the Table 10.

Table 10. Implementation timeline towards carbon neutral

Strategy/Time Period	2023–2025	2026–2028
Building efficiency increase	45%	75%
Renewable energy use	40%	90%
Transportation carbon emission	55%	70%
Forestation	50%	75%

Our action plan details the progress we have made in energy efficiency, waste and water management and our future environmental goals. In conclusion, Marmara University is committed to achieve its sustainability goals and developing innovative solutions to minimize our environmental impact.

Sustainability Office

6. CONCLUSION

Marmara University develops many policies and strategies to create a carbon neutral environment and combat climate change. It shares these policies and strategies with the society. Marmara University attaches importance to many renewable energy sources, especially solar and wind. In this context, renewable energy sources are used on campus and sustainability courses are also given. In addition, it has carried out many projects and activities to develop renewable energy sources and become carbon neutral. Marmara University aims to increase energy efficiency and reduce carbon footprint by using systems such as thermal insulation, efficient lighting, and effective ventilation in buildings. The university also encourages the use of sustainable energy sources and raises public awareness through solar and wind energy systems.

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The university also implements sustainable transportation methods and projects to reduce carbon emissions. The most important of these solutions are using public transportation instead of individual vehicles, transportation by bicycle, limited vehicle access on campus, electric vehicle stations. In addition, many activities are organized to promote sustainable transportation at the university. The university follows a zero waste policy and waste separation and recycling bins are located in every area. The zero waste policy is one of the most important steps of the university for a sustainable environment. In addition, the separation of organic and inorganic waste is encouraged. Many activities are carried out for composting of organic waste.

Marmara University implements various educational programs, workshops, activities, seminars and projects to create a sustainable environment, combat climate change, increase energy efficiency, provide sustainable transportation and reduce carbon emissions. These activities are organized not only for students but also for staff. In addition, it continues to raise awareness in society by cooperating with NGOs. Marmara University also continues its research on the importance of renewable energy for a sustainable green world and combating climate change. In this context, the university also cooperates with international organizations. For the carbon neutrality target, which is one of the main goals of Marmara University, many activities are carried out such as increasing green areas on campus, collecting waste in separate bins, maintaining zero waste policy, reducing fossil fuel vehicles. It is reported that they will make this commitment until 2028 within the scope of this report.

Marmara University aims to achieve carbon neutrality and create a sustainable world in line with the United Nations Sustainable Development Goals. In carbon emission analyses, Marmara University used Scope 1 for calculations related to natural gas use, Scope 2 for electricity consumption, and Scope 3 for water, waste, and transportation. All efforts demonstrate the university's environmental sensitivity and commitment to combating climate change.

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7. IMPACTFUL UNIVERSITY PROGRAMS ON CLIMATE CHANGE

1- International Conference on Climate Change, Energy Transition and Sustainability

The International Conference on Climate Change, Energy Transition and Sustainability began with the opening speech of Assoc. Prof. Dr. Gamze Sart on September 29, 2023. Then, Pauline Seyfert from the German-Turkish Chamber of Commerce and Industry, Tamer Atabarut, Director of BÜYEM, and Yael Taranto from the SHURA Energy Transition Center made presentations on climate change and energy transition. In the afternoon panel, "Green Agreement" was discussed under the moderation of Prof. Dr. Esra Yüksel Acı, Director of Marmara University STKAM. Onur Ünlü and Kubilay Kavak made important speeches on green transition and energy efficiency.

2-Climate Change and Finance Summit in the 100th Year of the Republic

As Marmara University we organized the "Climate Change and Sustainable Finance Summit on the Centennial of the Republic" on October 25, 2023, at the Dr. İbrahim Üzümcü Conference Hall on Göztepe Campus. The event was financially supported by Smart Solar Technologies Inc. and Hydrogenix Hydrogen and Energy Storage Technologies Inc., with media sponsorship from the Turkuvaz Group.

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3-Environment Festival

On June 2, 2023, as STKAM, we participated in the Kadıköy Municipality Environment Festival, held at Selamiçeşme Freedom Park, under the slogan "give effort to nature" and the theme of "urban resilience." The festival featured various activities over three days, and we provided voluntary support along with our students. As a stakeholder of the Kadıköy City Council Climate Action Working Group, we delivered a presentation titled "17 Steps Towards a Sustainable Future and Climate Change" and conducted a workshop called "Our Footprints on the Planet."

4- Restoring Nature and Green Space Strategy Panel

As Marmara University's Civil Society Organizations Application and Research Center (STKAM), in collaboration with the Kadıköy City Council Climate Working Group and the 118-Y Anatolian Side Lions Clubs Federation, we organized the "Restoring Nature and Green Space Strategy Panel" on Friday, October 27, 2023, from 13:00 to 17:00 at Tasarım Atölyesi Kadıköy. The panel was moderated by Prof. Dr. Esra Yüksel Acı, and the speakers included Prof. Dr. Ayşe Uyduranoğlu, Assoc. Prof. Dr. Melih Birik, and Kadriye Temircan.

APPENDICES

Green Energy Certificate

Verified Carbon Standard (VCS) Certificate

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We thank you for your continued support in our efforts to contribute to the climate action plan.

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