

CLIMATE CHANGE ACTION PLAN 2024-2030



BILKENT UNIVERSTIY CLIMATE CHANGE ACTION PLAN

Table of Contents

1.	INTRO	DDUCTION	2
2.	ENER	GY	3
2.	.1.	ENERGY MANAGEMENT	4
2.	.2.	ENERGY EFFICIENCY	5
2.	.3.	BUILDING THERMAL INSULATION	9
2.	.4.	RENEWABLE ENERGY	10
3.	TRAN	SPORTATION	10
3.	.1.	ELECTRIC VEHICLES	12
4.	SMOK	E-FREE CAMPUS	13
5.	WAST	È MANAGEMENT	13
6.	MORE	E PARTICIPATION AND A SHARED FUTURE	18
7.	EDUC	ATION	19
8.	EVEN	TS	19
9.	TARG	ETS AND INDICATORS	20
9.	.1.	CARBON-NEUTRAL CAMPUS	20
9.	.2.	ZERO WASTE	25
9.	.3.	EFFECTIVE, EFFICIENT AND INTEGRATED WATER MANAGEMENT.	30



CLIMATE CHANGE ACTION PLAN

1. INTRODUCTION

In the 6th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), it is emphasized that climate change caused by greenhouse gas emissions poses irreversible risks to humans and the environment, and that any delay in combating climate change will threaten a livable and sustainable future for everyone. The Paris Agreement, adopted at the 21st Conference of the Parties to the UN Climate Change Conference in 2015, and enforced on November 4th, 2016, intends to continue global efforts to keep the global average temperature increase well below 2 °C by the end of this century (2100), and not exceed 1.5 °C. Following the Paris Agreement, the European Union published the European Green Deal (AYM) in December 2019 and set a target of 50-55% emission reduction by 2030 and net zero emissions by 2050. In our country, the law on the approval of the Paris Agreement was published in the Resmi Gazete (official gazette) on October 7, 2021, and inured. In addition, our President declared a net zero emission target for our country for 2053. The Paris Agreement aims to strengthen global socio-economic resilience against the threat of climate change. Within the scope of combating climate change, greenhouse gas reduction measures should be implemented in all activities, especially energy, transportation, industry, urbanization and agriculture. In this direction, reducing the use of fossil fuels and increasing the use of renewable energy, ensuring the transition to a circular economy model, carrying out agricultural activities within the framework of sustainability principles, and protecting the quantity and quality of water resources are among the preferential concerns. Bilkent University carries out studies to raise individuals who are useful to society and contribute to the development and progress of our country, as well as to protect the environment and increase environmental awareness with its education and training activities, research studies and industrial collaborations at national and international levels. Bilkent University has undertaken the mission of raising awareness about climate change and transforming it into a structure where resources, especially energy, are used efficiently, waste is reduced, waste is recycled, and carbon footprint is low. Our university aims to produce smart solutions for more efficient use of our national resources by expanding its actions on Zero Waste (Sufir Atuk), which has been ongoing since 2020.

In line with its goal of becoming an Eco-Friendly University, Bilkent University works to develop and implement policies on reducing greenhouse gas emissions, protecting and sustainably using natural resources, and combating climate change.



CLIMATE CHANGE ACTION PLAN

Bilkent University aims to protect regional and national welfare with low carbon density and an effective water management system with the prepared Climate Change Action Plan. In this context, short, medium and long-term planning and capacity development opportunities for adaptation to climate change in the areas of Energy, Transportation, Water Management, Waste Management, Land Management and Education and Awareness Raising have been investigated.

Bilkent University has a single campus on a large area considered as a suburban area on the 12th kilometer of the Ankara-Eskişehir highway; however, it has divided its campus into 3 parts: Main, East and Middle. The university, which is located on a total of 5000 acres of land, has a semi-arid climate.

The university, which has a very high forest and vegetation cover, has a total campus area of 2,954,109 m², and the area where academic activities are carried out on the campus is 1,381,494 m². The total area covered by the campus buildings is 537,778 m², and the total ground area of these buildings is 148,555 m².

<u>94.97% of the total campus area consists of the mentioned forest and vegetation</u>. The total forest cover area is 1,622,442 m², and its share in the total area is 54.92%. In the 795,000 m² area outside the forest area, there are different types of trees and flowers planted and maintained every year by the Environmental Arrangement and Protection Directorate. The share of these areas in the total area is 26.91%. There is approximately 331,230 m² of area within the campus borders where water absorption is provided.

2. ENERGY

Due to the increasing population, developing technology and production in the world, the need for energy is increasing and the energy need is largely met by fossil fuels. The increasing environmental impacts caused by the use of fossil fuels and the daily depletion of natural resources necessitate turning to renewable and clean energy sources, and in this context, a series of actions and plans are being made on international platforms such as the UN Sustainable Development Goals, the EU Green Deal and the EU Circular Economy Action Plan.

Bilkent University has assessed its energy efficiency policy in order to contribute to the reduction of national energy intensity indexes and the increase of energy efficiency indexes and to meet more of its energy needs from renewable energy.



2.1. ENERGY MANAGEMENT

The main energy needs of Bilkent University, both in its buildings and in its large gardens and parks, are heating-cooling and lighting. Some of the energy needs are met by natural gas and some by electricity.



Figure 1: Data in 2023 for Bilkent University's Energy Consumption

The annual electrical energy requirement is approximately 26,500.00 MW (26,500,000.00 kWh), while the natural gas requirement is around 2,251.572 m³ (equivalent to 20,072,764.00 kWh). Also, as recorded in 2023, steam is imported for energy use at the university. Steam consumption in 2023 was 44,000,000.00 kWh. The energy consumption data of the university in 2023 is shown in Figure 1. In 2023, total consumption was met by natural gas with 22%, while 29% was met by electricity. Steam import is one of the highest energy items, meeting 49% of the total consumption. It also serves as an example of symbiosis work by using the waste heat of the energy facility that produces energy within the campus borders. It is aimed to continue to decrease total energy consumption with the energy efficiency measures taken at the university. On the other hand, the effects of the installation of a solar energy system, which will be discussed in detail under the heading of "Renewable Energy", will also contribute to the reduction of total consumption.



CLIMATE CHANGE ACTION PLAN

Energy-related emissions have a significant place among the emissions resulting from Bilkent University's activities. In 2023, total energy-related emissions were 27,498 tons of CO₂e (approximately 80% of total emissions), as summarized in Figure 2.



Figure 2: Distribution of Energy-Related Emissions in Bilkent University (2023)

Monitoring energy consumption is a critical first step in implementing energy management policies and determining the necessary actions to achieve the targeted goals. Thus, Bilkent University continues to implement strategies aimed to reduce energy consumption year after year.

2.2. ENERGY EFFICIENCY

In Bilkent University buildings, lighting systems and electronic devices used by stakeholders are being gradually replaced with high-efficiency models to provide energy savings. In the 2022-23 academic year, the use of energy-saving devices led to energy savings of between 25% and 50%.



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Picture 1: Energy Saving Devices in Dormitories

Energy-efficient products are preferred for electrical and electronic devices, and automatic systems are used to save energy in lighting. A full LED transformation has been completed, and the target is to convert all lighting in the buildings to energy-saving systems.



Picture 2. Admin Building Toilet Lighting



Picture 3. Admin Office Lighting

Energy-saving LED lighting has been used in the dormitories, outdoor sports facilities, parking lots and road lighting at Bilkent University.



CLIMATE CHANGE ACTION PLAN





Picture 4. LED Lighting in the Campus





Picture 5. Lighting on Campus Roads

The total area of smart buildings at Bilkent University is 54,734 m². The share of campus buildings in the total area is 10.17%. The smart buildings on campus and their features are as follows;



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81-82. Dormitories (24.144 m²)

- **4** Common areas automatic heating-cooling system
- 4 Automation lighting system (synchronous) LED, sensor and passive lighting
- Security surveillance system
- **4** Fire detection system

Marmara Restoran (3.715 m²)

- Security surveillance system
- Fire detection system
- 4 Automated heating and ventilation heat systems
- ₄ Automated lighting system (synchronous) LED, sensor

UN MikroNano Research Center (3.766 m²)

- Security surveillance system
- Fire detection system
- Air quality monitoring system
- 4 Automation heating and ventilation heat systems
- ₄ Automation lighting system (synchronous) LED,

170th Housing Building (8.555 m²)

- Security surveillance system
- Fire detection system
- Common areas automation lighting system (synchronous) LED, sensor

BLIS-Bilkent Laboratory & International School (12.080 m²)



CLIMATE CHANGE ACTION PLAN

- Security surveillance system
- Fire detection system
- 4 Automation heating and ventilation heat systems
- ₄ Automation lighting system (synchronous) LED, sensor

Indoor Swimming Pool (2.474 m²)

- 4 Automation heating and ventilation heat systems
- ₄ Automation lighting system (synchronous) LED, sensor
- Security surveillance system
- Fire detection system
- Solar water heating system

2.3. BUILDING THERMAL INSULATION

In newly constructed buildings, thicker insulation is used than legally required. Although the minimum required rock wool insulation thickness for Ankara is around 8 cm, Bilkent University applies 20 cm thick rock wool insulation. Additionally, highly insulated joinery and glass products are selected. In line with Passive House principles, new buildings are designed with extremely low thermal losses, ensuring significant energy savings

The energy savings from buildings and the university's smart energy use, combined with energy efficiency initiatives, are significantly driving progress toward the "100% clean energy" target by 2030 and helping to reduce energy-related emissions. In addition, the renewable energy systems implemented at the University play an important role in reducing these emissions to zero.



CLIMATE CHANGE ACTION PLAN

2.4. RENEWABLE ENERGY

As of the 2022-2023 academic year, Bilkent University has started to install solar panels in designated areas within the campus and generate electricity from these panels. The electricity obtained from solar panels installed in the relevant year was 2,764,880 kWh, covering 10.27% of the total electricity consumption.



Picture 6. Solar Panels

3. TRANSPORTATION

In order to minimize carbon emissions on the Bilkent University campus and achieve the "Zero Carbon" target by 2050, in addition to investments in infrastructure and energy, it also aims to reduce and eliminate emissions in the field of transportation.

The university provides regular shuttle services both within the campus and between the campus and metro stations, facilitating convenient transportation. The use of individual vehicles is reduced with personnel shuttles between residences and campuses. Because the Bilkent University campus is easily accessible by public transportation, students, staff, and other stakeholders are encouraged to use it.

On-campus transportation emissions were 260 tons of CO_2e in 2023, and the distribution is shown in Figure 3. Since vehicle type and km data were not kept in visitor records, emission data could not be calculated clearly. In the following years, data will be regularly recorded to assess the current situation. Carbon footprint calculations were made for transportation data recorded on campus in 2023.



CLIMATE CHANGE ACTION PLAN



Figure 3: On-Campus Transportation Emissions in 2023

Within the scope of Bilkent University, measures are being taken to reduce on-campus emissions with the improved pedestrian and bicycle path infrastructure and regular bicycle parking areas, examples of which can be seen in Picture 7. In addition, within the scope of the barrier-free campus, accessible transportation is being provided by rearranging building entrances, pedestrian paths and parking lots.



Picture 7: Marmara Restaurant Bicycle Parking Area



CLIMATE CHANGE ACTION PLAN

3.1. ELECTRIC VEHICLES

To support the reduction of fossil fuel use and transportation-related emissions, Bilkent University is establishing electric vehicle charging stations, as shown in Picture 8. Not only investments, but research-development studies are also carried out on transportation, such as electric vehicles and vehicles with less energy consumption, and innovative technologies are being developed.



Picture 8: Electric Vehicle Charging Station



Picture 9: BIL-CAR, Electric Car Designed by Engineering Faculty Students



4. SMOKE-FREE CAMPUS

Bilkent University has implemented a Smoke-Free Campus Policy to create a healthy and respectful university environment for all stakeholders. In accordance with the "Smoke-Free Campus Policy", Bilkent University has designed 99.00% smoke-free areas on all campuses. This policy protects the health of all stakeholders and reduces air pollution. Greenhouse gas emission reduction efforts from the Smoke-Free Campus policy are complemented by a recycling program, and an integrated waste management system has been established for waste recovery and storage.

5. WASTE MANAGEMENT

With increasing population and consumption, the amount of waste generated is increasing and the environmental effects caused by waste are becoming more apparent. Protecting natural resources, which are being depleted daily, requires using alternative resources and increasing waste recycling through innovative material design. In this context, international actions such as the EU Circular Economy Action Plan and the EU Green Deal, as well as national regulations such as Zero Waste and the National Waste Action Plan, are important steps taken to reduce waste generation, recycle more waste and contribute to the economy. Bilkent University, which addresses all of its scientific, technological, and social activities within the framework of environmental sustainability, is focused on circular solutions that protect the environment and human health. The university has implemented a highly participatory, effective, accurate, comprehensive, and efficient waste management model on campus. This system, supported by appropriate infrastructure and technologies, aligns its waste policies with a "zero waste" vision. An effective waste generation and to ensure that waste is collected separately at source and recycled in the event of its generation.

For the separate collection of all recyclable wastes resulting from education, training, research, production, and service activities at source;

- Waste transfer stations at the entrance of each faculty, in the lodging areas and administrative units,
- Packaging waste collection boxes inside the buildings, considering the person/waste density,

There are dual collection containers and waste centers that allow separate collection of packaging waste and household waste in open areas. For increasing recycling and current data analysis;



CLIMATE CHANGE ACTION PLAN

- Waste collection points in open areas (garbage cages, glass bins, etc.) are numbered and named with photographs and coordinates in accordance with the geographical information system,
- A Second-Hand Module has been created so that reusable office supplies and educational materials are not considered waste and can be reused in departments that need them,
- By making an annual contract with a recycling company for the sale of packaging waste, both routine collection of waste and budgetary contribution to the university are provided according to the tonnage collected.



Picture 10: Waste Collection Boxes Examples in Bilkent University

In order to raise awareness for Zero Waste, training is provided; Bilkent University-specific recycling logo, labels and posters have been designed by the Faculty of Fine Arts, Design and Architecture / Urban Design and Landscape Architecture (LAUD), and waste transfer stations have been established inside the buildings.

With the Zero Waste Regulation published in the *Resmi Gazete* (official gazette) numbered 02/07/2019-30829; Universities were required to obtain a "Zero Waste Certificate (Basic Level)" by December 31, 2020, and İhsan Doğramacı Bilkent University was the first campus in Ankara to receive this certification on April 20, 2020.



On 16.10.2020, the Ministry of Environment, Urbanisation, and Climate Change issued an opinion on the completeness of the management system and applications as a result of the inspection.

Bilkent University was one of three universities to receive the "Zero Waste Best Practice Award" in the University category at the "Zero-Waste Summit and Award Ceremony" organized by the Turkish Ministry of Environment, Urbanization and Climate Change at the Haliç Congress Center in Istanbul during the 2022-2023 academic year.

The local government collects domestic waste generated on the Bilkent University campus. Domestic waste is collected separately as mixed waste and packaging waste, and an average of 2,250 tons of domestic waste is generated annually.

The amount of packaging waste collected at Bilkent University for 2023 is 148,690 kg. Recyclable waste collected separately is sent to processing facilities in the relevant sector to be separated and added to the economy.



Chart 1: Packaging Waste Quantities for 2023

Branch and branch wastes from campus gardens and parks are collected in the grass waste collection area and used as soil additives.

Vegetable waste oils from the dining halls, cafeterias and restaurants on campus are delivered to licensed companies.

Bilkent University's domestic waste, as well as hazardous waste resulting from laboratory and



CLIMATE CHANGE ACTION PLAN

research-development activities, are collected and managed separately from other wastes.

With the sub-structured hazardous waste management workflow, units are informed about the collection method of hazardous waste and hazardous waste is sent to the disposal facility without adversely affecting human and environmental health. A licensed hazardous waste collector disposes of hazardous waste at a licensed recovery facility.



Picture 11: Hazardous Waste Temporary Storage Area

Like hazardous waste, waste electrical and electronic equipment (WEEE), waste batteries, and vegetable waste oils are also collected separately. Separate collection boxes for waste batteries are placed at busy points such as dining hall entrances, cafeterias, and main entrances, and are collected by the local government and delivered to the *TAP* Association, an authorized organization for waste batteries. WEEEs are collected separately and sent to licensed recycling companies. Vegetable waste oils are collected in appropriate barrels and sent to licensed recycling facilities.

Approximately 94% of Bilkent University's 5000-acre land consists of park and garden waste from green area maintenance. Using this waste as soil additives reduces its environmental impact to zero. Since other waste types contribute to the economy through material and energy recovery, the environmental impacts of mixed household waste require further evaluation.



CLIMATE CHANGE ACTION PLAN

WATER MANAGEMENT

According to UN data, 55% of the world's population lives in urban areas, and this is projected to reach 68% by 2050. Due to the increase in population, urbanization and greenhouse gas emissions, the world temperature has increased by 1.5 degrees, causing a change in the water balance and cycle in cities and increasing water-related disasters. Since Türkiye is located in the Mediterranean basin, which has been identified as a climate change hotspot of climate change by the International Panel on Climate Change, the impact of climate change is expected to be in the form of heat and drought.

Bilkent University operates under environmental sustainability principles, promoting the effective and efficient use of water to combat global warming and drought. The university prioritizes maintaining the natural water cycle to protect natural water areas and its unique green spaces. In particular, it is aimed to prevent all kinds of marine pollution originating from terrestrial activities and to reduce their negative effects, to support marine and coastal ecosystems in increasing their resilience, and to "design and implement effective, efficient and inclusive water management" to manage and protect their existing ecosystems in a sustainable manner. In this context, the basic water management policies established are as follows;

- Designing activities in a way that will not cause pollution, protect existing water resources, and ensure the continuation of biodiversity,
- Planning effective, efficient, inclusive and sustainable water management and increasing awareness and participation in water management, protection and sustainable use of oceans, seas, lakes, rivers and marine resources,
- To disseminate good practices in preventing water pollution by developing collaborations and projects in national and international areas,
- To prefer water and energy efficient technologies as much as possible in water management,
- Prioritizing the most environmentally friendly technologies and the use of surface water resources,
- Using methods that will prevent the negative impact on the natural environment and water areas and will not harm the environment and human health,
- To reduce wastewater generation and minimize processes that may cause pollution in water,
- To adopt water recycling and reuse as core principles,



- To prefer options that minimize energy use and costs arising from water management,
- To monitor the aquatic and environmental impacts—such as eutrophication and resource depletion—of waste, water, and energy management activities by measuring them.

Bilkent University, located in a large metropolis like Ankara, one of the most densely populated cities in Turkey, and in a semi-arid climate region, contributes to the efficient use of water in Turkey, the protection of water resources and the minimal impact on water cycles through sustainable water management with the policies it has determined.

Water supply on the Bilkent University campus is provided via the city's mains water. City mains water is mostly used in wet areas of buildings and campuses. Rainwater that cannot be absorbed is directed to collection channels. Wastewater from the entire campus is collected by sewage and treated in the city wastewater treatment plant.

In addition to irrigation, which is a significant part of Bilkent University's water consumption, it is important to reduce building consumption with smart water meters and monitoring systems. On the other hand, studies are planned for the use of gray water and the on-site treatment of wastewater and its use as recycling water.

6. MORE PARTICIPATION AND A SHARED FUTURE

Multistakeholder partnerships and collaborations, which are key components of sustainable development, aim to contribute not only to institutional development but also to regional and, ultimately global development. One of the most critical actions for collective progress is the sharing and dissemination of knowledge, expertise, technology, and financial resources that institutions acquire while pursuing their development goals. This includes joint projects and business development activities, as well as the communication of experiences and outcomes of partnerships. In this context, the promotion and support of public-private and civil society partnerships in both Turkey and around the world have gained significance. Universities—being centers of research, innovation, and education—are often assigned a leading role in these structures.

With the Paris Agreement, which is a worldwide joint movement against climate change and global warming, which are the biggest problems facing global development, it has been emphasized that the future is common and that all countries of the world should act together on this issue. In this



CLIMATE CHANGE ACTION PLAN

context, Turkey, which signed the Agreement in 2021, declared that it will contribute to reducing emissions and keeping the temperature increase below 1.5 degrees together with other countries in the world and has started working to determine its actions with the target of net zero emissions by 2053.

While determining its own climate change adaptation, mitigation and resistance actions, Bilkent University is working to develop the necessary cooperation and partnerships to keep global warming below 1.5 C^o degrees, which is a common future, and for Turkey to achieve this goal. New models are being created to act jointly not only with their own employees, students and stakeholders, but also with stakeholders and potential stakeholders in all areas where it is effective, and to ensure that everyone can contribute to environmental sustainability.

7. EDUCATION

As of the end of 2023, 316 blue-collar personnel were given training on various topics such as waste management, zero waste, water saving and energy efficiency.

Annually, 11,519 students and other stakeholders on campus are provided with awareness-raising and informative activities on environmental management issues. Various training, information and awareness-raising activities are planned to increase the knowledge level of more employees, students and stakeholders on environmental issues such as climate change, energy, waste management, and water management.

8. EVENTS

Among the major environmental events organized at Bilkent University is 30th March Zero-Waste Day. Furthermore, with 116 student clubs and societies, the University hosts various activities related to environmental protection, climate change, and energy.

Studies are carried out to develop cooperation, events and joint projects with stakeholders, which is the most important element of Bilkent University's environmental sustainability policies. Collaboration and projects are being developed with industry and other stakeholders on climate change adaptation, mitigation, technology transfer, clean production and energy issues, and it is planned to organize information, awareness and events to encourage efficient and smart use of energy, waste reduction, water saving and protection of water resources on issues such as reduction, adaptation, impact reduction and early warning within the scope of climate change.



9. TARGETS AND INDICATORS9.1. CARBON-NEUTRAL CAMPUS

Through investments and activities such as solar energy systems (*GES*), waste reduction, and other initiatives to decrease emissions, Bilkent University aims to reduce its carbon emissions and achieve a carbon-neutral campus by 2030. As the Bilkent University campus area has the potential to be a net carbon sink for Ankara, we will continue to reduce on-campus emissions and develop a diversified portfolio of climate change actions. We will continue to focus on carbon offsetting and partnerships with other stakeholders to meet Ankara's and Turkey's climate change goals. The goal for 2030 is to achieve "zero carbon" not only in the University's own emissions but also in collaborations with stakeholders, suppliers, and directly related partners and collaborations. By 2050, the university aims to achieve zero emissions in all its activities with all its direct and indirect stakeholders.

Proposals such as planning for the more widespread use of public transport in order to reduce emissions from transport, creating the necessary infrastructure for electric vehicles, arranging infrastructure for bicycle use, planning to ensure continuity in traffic flow and planning parking areas have been developed.

TARGET 1: Optimizing Public Transportation Capacity by Adjusting Service Frequency Based on Passenger Volume.

OBJECTIVE 1: Regulation of bus service frequency by means of appropriate software					
Actions	Period	Responsible Unit	Performance Indicator		
Act 1: Regulation of the frequency of bus service to the university in proportion to the passenger frequency	12 months	Support And Transportation Services	Number of public transport users (to be monitored via software)		



CLIMATE CHANGE ACTION PLAN

TARGET 2: Re-Planning of On-Campus Transportation in Accordance with The Principles of Sustainable Transportation

OBJECTIVE 1: Limiting emissions from transportation					
Actions	Time	Administrative Unit	Performance Indicator		
Act 1: The implementation of electric bus transportation on the campus	60 months	Construction And Maintenance	Number Of Electric Buses		

TARGET 3: Expanding the Use of Alternative Fuels and Clean Vehicle Technologies to

Ensure Access to Campus

OBJECTIVE 1: Taking encouraging measures to increase the use of alternative fuels and clean vehicles				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Installation of electric charging stations in the parking areas located within the scope of the university in the amount stipulated by the current parking regulation	24 months	Construction And Maintenance	Number of electric charging stations	
Act 2: Preference of electric vehicles in vehicle purchases and leases made by the university	24 months	Procurement Office, Support and Transportation Services	The number of electric vehicles in the vehicle fleet	
Act 3: Replacement of old model vehicles registered to the university's vehicle fleet with new electric/fuel efficient vehicles due to high maintenance and repair costs	48 months	Procurement Office, Support and Transportation Services	The number of old model vehicles	
Act 4: Providing car sharing for transportation requests on the same route in case of private vehicle requests	72 months	Support And Transportation Services	Number of vehicles and sharers going on the same route	



CLIMATE CHANGE ACTION PLAN

TARGET 4: Increasing Efficiency in Energy Consumption in Campus Transportation

OBJECTIVE 1: Taking measures to increase energy consumption efficiency in transportation				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Correction of damaged or excessively high speed bumps	12 months	Construction And Maintenance	Stability of traffic flow	
Act 2: Activating the average speed detection system within the campus by re-determining the speed limits so that it does not slow down the traffic flow.	12 months	Civil Defense and Security Office (SSGM)	Stability of traffic flow	
Act 3: Covering the parking areas with solar energy panels and creating the infrastructure for using the generated electrical energy in charging stations	36 months	Construction And Maintenance	Electrical energy obtained from solar panels	

TARGET 5: Developing an Information System in Which Information on All Transportation Systems Used in the Campus Can Be Collected in the Same Infrastructure

OBJECTIVE 1: Carrying out actions to create an information system that includes information on all transportation systems.				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Combining databases related to transportation activities into a common cloud system that can be accessed by different units	12 months	Support And Transportation Services, Computer Center	Institutional Repository	
Act 2: Developing software infrastructures that can produce useful results by evaluating the data in the system envisaged in Act 1.	12 months	Computer Center	Software Infrastructure	



TARGET 6: Ensuring sustainability by collecting data within the University Campus Boundaries within the scope of the determined frameworks.

OBJECTIVE 1: Ensuring the sustainability of the data collection standard in carbon and water footprint reporting over the years

Actions	Period	Administrative Unit	Performance
Act 1: Ensuring that the data needed for carbon and water footprint reporting are collected regularly from the relevant units throughout the year	12 months	Computer Center	Institutional Repository
Act 2: Development of software infrastructures where useful results can be produced by evaluating the data in the system envisaged in Act 1	12 months	Computer Center	Software Infrastructure

OBJECTIVE 2: Ensuring the reduction of carbon footprint

		_	
Actions	Period	Administrative Unit	Performance Indicator
Act 1: Reducing the carbon footprint within the scope of category 1 by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Carbon Footprint Report
Act 2: Reducing the carbon footprint within the scope of category 2 by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Carbon Footprint Report
Act 3: Reducing the carbon footprint within the scope of category 3 by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Carbon Footprint Report
Act 4: Reducing the carbon footprint within the scope of category 4 by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Carbon Footprint Report
Act 5: Reducing the carbon footprint within the scope of category 6 by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Carbon Footprint Report



CLIMATE CHANGE ACTION PLAN

OBJECTIVE 3: Ensuring the reduction of the water footprint					
Actions	Time	Administrative Unit	Performance Indicator		
Act 1: Reducing the water footprint by at least 5% every year compared to the previous year	72 months	Sustainability Committee	Water Footprint Report		
OBJECTIVE 4: Reducing and controlling	indirect emis	ssions by creating supply	v chain control		
Actions	Time	Administrative Unit	Performance Indicator		
Act 1: To determine the environmental policies by which the supply chain will be controlled	12 months	Administrative And Financial Affairs, Sustainability Committee	Corporate Policy		
Act 2: To establish in-house instructions and procedures for the implementation of the policies to be determined in Act 1	12 months	Administrative And Financial Affairs	Directive		
OBJECTIVE 5: Ensuring the monitoring creation	OBJECTIVE 5: Ensuring the monitoring of carbon and water footprint reduction efforts and creation of new projects				
Actions	Time	Administrative Unit	Performance Indicator		
Act 1: Holding meetings at least twice a year to evaluate carbon and water footprint reduction studies	72 months	Sustainability Committee	Sustainability Committee Meeting Records		
OBJECTIVE 6: Ensuring the monitoring of carbon and water footprint reduction efforts and creation of new projects					
Actions Time Administrative Unit Perform Indica					

			multator
Act 1: Preparation of sustainability reporting in accordance with the standards	12 months	Sustainability Committee	Sustainability Report



CLIMATE CHANGE ACTION PLAN

9.2. ZERO WASTE

Bilkent University's goals for bringing more waste into the economy and preventing waste generation have been established within the framework of "zero waste", and it is aimed to reduce and reset waste-related emissions with actions and indicators created according to the strategic plan year. Reducing and preventing the formation of all wastes, especially plastic wastes and organic wastes, are considered as a priority. In this context, it is aimed to obtain a "qualified zero waste" certificate and to reduce the proportion of foreign substances in the content of organic wastes below 10% by 2030. In addition, regulations are being planned to prevent the formation of plastic waste, and projects are envisaged to reduce such waste by 20% by 2030. it is aimed that the total recycling rate of waste will reach 95% by 2030 and that all processes and supply chains of Bilkent University will be carried out in the context of "zero waste" by 2050.

OBJECTIVE 1: Conducting studies to make the Zero Waste System established at the university more effective.				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: To determine the deficiencies in waste management within the campus and planning activities to eliminate the deficiencies.	12 months	Support And Transportation Services	Fact finding report	
Act 2: To out necessary studies to make Waste Management Sustainable	24 months	Support And Transportation Services	Fact finding report	
Act 3: To define unit managers in the currently established Zero Waste System and determining and updating their responsibilities and job descriptions.	24 months	Support And Transportation Services	Fact finding report	
Act 4: To arrange the area currently used as a scrap warehouse and make a list of materials that can be reused and report it.	12 months	Support And Transportation Services	Fixture and scarp list	

TARGET 1: Improving Existing Waste Management Services



CLIMATE CHANGE ACTION PLAN

Act 5: To adapt the garbage bins in classrooms and administrative offices to a dual collection system so that recyclable and non-recyclable waste is collected separately at source throughout the campus.

Support And Transportation months Services

Number of garbage bags used monthly

OBJECTIVE 2: To expand the existing Waste Collection Centers and increasing their functionality

24

Actions	Period	Administrative Unit	Performance Indicator
Act 1: Increasing the number of Waste Collection Centers	24 months	Support And Transportation Services, Construction and Maintenance	Change in the number of waste collection centers
Act 2: Determination of the responsible persons who will monitor the Waste Collection Centers.	24 months	Support And Transportation Services	Number of personnel to monitor waste collection centers
Act 3: Purchase of a deposit return machine on campus to encourage collection of packaging waste	24 months	Administrative And Financial Affairs	

OBJECTIVE 3: Carrying out studies to increase recyclable waste collection and evaluation rates by working in collaboration with the existing Authorized Recycling Company.

Actions	Period	Administrative Unit	Performance Indicator
Act 1: Developing a joint project with a licensed authorized company on waste collection issues	24 months	Support And Transportation Services	Number of projects developed with authorized companies



CLIMATE CHANGE ACTION PLAN

TARGET 2: Ensuring Effective Waste Management

OBJECTIVE 1: Determining the amount and composition of solid waste produced within the university campus and creating a waste profile

Actions	Period	Administrative Unit	Performance Indicator
Act 1: Reviewing the operation of the system through detailed evaluations provided by Zero Waste Officers of each unit.	12 Months	Support And Transportation Services, Zero Waste Committee	Fact finding report
Act 2: Waste Profile Preparation by Units	24 Months	Support And Transportation Services, Zero Waste Committee	Fact finding report

OBJECTIVE 2: Taking measures to reduce the amount of biodegradable waste to be accepted into landfills

Actions	Period	Administrative Unit	Performance Indicator
Act 1: To carry out studies to bring 95% of the recyclable waste into the system with the Integrated Waste Management approach.	24 Months	Support And Transportation Services, Zero Waste Committee	Proportional alteration of recycled waste
Act 2: To carry out studies for composting of cafeteria and canteen waste	36 Months	Support And Transportation Services, Cafeterias Management	The amount of cafeteria and canteen waste that is composted



CLIMATE CHANGE ACTION PLAN

OBJECTIVE 3: Assigning a sufficient number of technical personnel for the effective implementation of Integrated Waste Management, providing training to strengthen technical capacity (personnel and technological infrastructure) and purchasing machinery and equipment.

Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Establishment of a unit authorized to collect data and implement waste collection, transportation, separation, characterization and evaluation within the university.	24 Months	Administrative And Financial Affairs	To establish Zero Waste Committee	
ACT 2: To plan training activities for the unit to be established	24 Months	Support And Transportation Services	Fact finding report	

TARGET 3: Productive implementation of separate collection of waste at source

OBJECTIVE 1: Conducting research and development studies on practices for separate collection of waste at source			
Actions	Period	Administrative Unit	Performance Indicator
Act 1: Carrying out studies such as Graduation Project etc. to expand the collection of waste separately at source.	24 months	Office of Vice Rector for Student Affairs	Number of completion projects regarding the separate collection of waste at source
Act 2: Supporting R&D projects that will expand the separate collection of waste at source	24 months	Vice Rector for Academic Affairs	Number of R&D projects on separate collection of waste at source



BILKENT UNIVERSTIY CLIMATE CHANGE ACTION PLAN

OBJECTIVE 2: Carrying out training, promotion and awareness-raising activities on source-			
separate collection within the framework of a plan			
Actions	Period	Administrative Unit	Performance
Actions			Indicator
			Change in the
Act 1: Providing training to expand	24	Support and	amount of waste
source-based separate collection on a unit	24 months	Transportation	collected
basis	monuis	Services Directorate	separately at
			source
		Vice Rector for	
Act 2: Increasing the work of the		Administrative and	Number of
relevant Licensed Company within the	24	Financial Affairs,	waste bins
university. (Publication of waste bins	months	Support and	within the
within the campus, etc.)		Transportation	university
		Services Directorate	
		Vice Destaufen	
		Vice Rector for	
Act 3: Increasing incentives for bringing	24	Administrative and	
waste (organizing concerts, gifts, raffles,	24	Financial Affairs,	Number of events
etc.)	months	Support and	performed
,		Transportation	
		Services Directorate	

TARGET 4: Supporting waste reduction policy

OBJECTIVE 1: Conducting awareness raising activities and organizing campaigns for University Staff and students regarding waste reduction				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Within the scope of Elective Courses, departments that request it define a pool of elective courses consisting of sustainability- themed courses and require students to take at least one course from this pool throughout their education life	24 months	Office of Vice Rector for Student Affairs	Number of students taking courses such as Environmental Protection, Recycling etc.	
Act 2: Providing a deposit box system for separate waste collection (especially for plastic waste)	24 months	Vice Rector for Administrative and Financial Affairs	Amount of waste in waste bins	



CLIMATE CHANGE ACTION PLAN

OBJECTIVE 2: Limiting single-use materials to reduce waste and ensuring the use of long-lasting materials instead			
Actions	Period	Administrative Unit	Performance Indicator
Act 1: Preferring long-lasting materials when purchasing – (Instead of cheap and continuous purchases, if necessary, expensive but fewer purchases)	24 months	Procurement Office	Fact finding report

9.3. EFFECTIVE, EFFICIENT AND INTEGRATED WATER MANAGEMENT

To reduce the effects of climate change on Ankara and Turkey and to prevent the temperature increases caused by drought, Bilkent University aims to use efficient methods in water consumption for both itself and its stakeholders, to ensure the effective use of water and to prevent the impact on water resources. It will take the necessary measures for the smart use and monitoring of water in buildings and campuses until 2030. Bilkent University aims to reach 2030 as a university that is self-sufficient, compatible with climate change, protects its natural resources and sets an example for the region with its R&D studies and collaborations, and to directly contribute to the reduction of resource consumption in its region by 2050, and to increase the effectiveness of its stakeholders in this regard with collaborations and partnerships, and to serve as an emission sink in its region.

TARGET 1: Implementation of sustainable water use

instead of tap water.				
Actions	Period	Administrative Unit	Performance Indicator	
Act 1: Investigating the existence of easily and readily accessible groundwater	60 months	Directorate of construction and technical works	Amount of groundwater available for use	
Act 2: Carrying out the necessary studies to make usable water supply processes from alternative water sources sustainable	36 months	Directorate of construction and technical works	Amount of alternative water sources available for use	

OBJECTIVE 1: Conducting studies on searching for alternative water sources that can be used instead of tap water.



BILKENT UNIVERSTIY

CLIMATE CHANGE ACTION PLAN

OBJECTIVE 2: Conducting studies to use resources that cannot be used directly as alternative water sources.			
Actions	Period	Administrative Unit	Performance Indicator
Act 1: A special water channel will be built on the campus to store rainwater and provide it for use.	24 months	Directorate of construction and technical works	Amount of rainwater collected
Act 2: Meeting the campus's water needs for use (irrigation, etc.) by processing the collected rainwater through special processes.	60 months	Directorate of construction and technical works	Amount of purified rainwater

TARGET 2: Increasing the efficient use of water and reducing water loss

OBJECTIVE 1: Taking necessary precautions for the economic use of hygienic water provided through water resources			
Actions	Period	Administrative Unit	Performance Indicator
Act 1: Conducting studies to identify water losses and leakages	12 months	Directorate of construction and technical works	Water bill
Act 2: Making water distribution and use economically by carrying out on-campus network maintenance and repairs in advance	12 months	Directorate of construction and technical works	Water volume consumed after maintenance and repair
Act 3: Use of more hygienic and durable plastic pipes instead of iron pipes used in the network.	24 months	Directorate of construction and technical works	Maintenance and repair period and counts
Act 4: Switching from liquid soap to foam soap to reduce water consumption	12 months	Support and Transportation Services Directorate	Liquid soap usage amount and bills