



Bilecik Şeyh Edebali University SUSTAINABILITY REPORT 2022





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❖ **Startups**

1. Setting and Infrastructure (SI)

Bilecik Şeyh Edebali University is located in the southeast of the Marmara Region; it is located in Bilecik Province, which is located on the cutting points of the Marmara, Black Sea, Central Anatolian Region and Aegean Regions. Center campus is located 6 km from Bilecik city center. Bilecik location and districts are shown on the map. University was established in 2007 and has modern and green campuses. Center campus has 46 ha area. There are also dormitory buildings on the central campus and it is a small city where students live 24 hours a day. It has 2 large parks. It also has waste water treatment plant.



The University Center Campus (BSEU) is located in a rural area with a high rate of forest cover. BSEU is established in the center district of which located in the West site of Bilecik City. The center district has a total area of 841 km² and a total population of 78,029. This means a low population density of 93 inhabitants per km².



General view from BSEU campus

The University Center Campus (BSEU) has Disabled parking areas for disabled people to park their car which located at the nearest space building and also Bilecik Seyh Edebali University has "Accessible universities certificate".



We received the 3rd prize in our country in the ranking of accessible universities.



Sample image of the roads prepared for the disabled in the campus

On the other hand, Activities are carried out by the Disabled Student Unit Coordinator at the University. Also there is a Kindergarten on University campus and Accessible hospital for public and students near the campus.



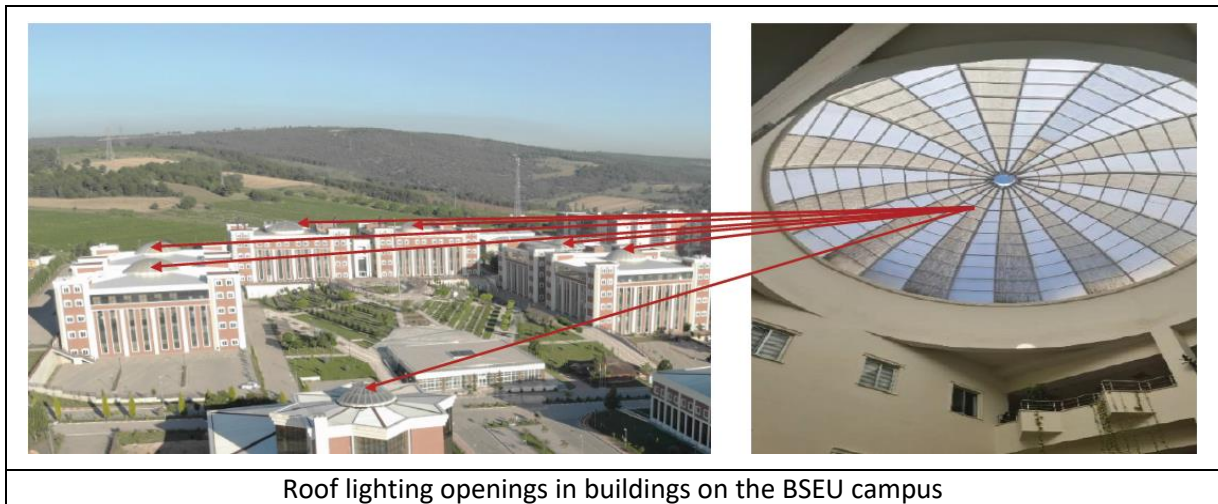
Research hospital near the campus



Kindergarten on campus

2. Energy and Climate Change (EC)

Since 2007, when our university was founded, roof lighting openings have been left in all buildings built with an innovative, environmentally friendly and sustainable architectural approach. Thus, maximum use of daylight is achieved and energy saving is achieved by using natural lighting to illuminate buildings.



The issue of supplying the electricity used in our university from renewable sources is taken into consideration. For this purpose, the electricity used in our university is certified with the renewable energy resource guarantee system (YEK-G), which is the national renewable energy certificate system. This document shows that some of the electricity used in our university is obtained from renewable energy sources. Certificates for year of 2022 were given below.



İtfa Delayları / Cancellation Details

İtfa Tipi / Cancellation Type	İtfa	Yararlanıcı Taraf Adı / Beneficiary Name	BLECK BEYH EDEBALI ÜNİVERSİTESİ
İtfa Tarihi / Cancellation Date	13/08/2022 14:07:07	Son Tüketim / End Consumer	Bon Tüketim
İtfa Numarası / Cancellation No	004092716	Yerleşim Numarası - TC Kimlik Numarası / Tax ID - Identity No	170020883
İtfa Durumu / Cancellation Status	Tamamlandı / Completed	İtfa Alanı / Cancellation Purpose	Hiç / None
Organizasyon Adı / Organization Name	ZORLU DOĞAL ELEKTRİK ÜRETİM A.Ş.	İtfa Bitiş / Consumption Period	Subat 2022 - Temmuz 2022 / February 2022 - July 2022
Organizasyon Hesap Numarası / Organization Account No	582	Adres / Address	Parklık Mah. Fahi Sultan Mehmet Bulvarı No:27 - 11100 Merkez/BLECK
Organizasyon Adresi / Organization Address	LEVENT 199, BÜYÜKÇERE CAD. NO:169	Şehir / City	ANKARA
Ölçe / Country	TURKEY		

İhraç Edilen YEK-G Belgelerinin Detayları / Details of Issued YEK-G Certificate

Toplam Miktar(MWh) / Total Amount(MWh)		Toplam YEK-G Belge Miktarı / Total Amount of YEK-G Certificates: 1539						
Belge Numarası / Document No	Miktar / Amount	Kaynak Tipi / Resource Type	Üretim Tesisi / Production Facility	Üretim Dönemi / Production Period	İhraç Dönemi / Issue Period	İhraç Tarihi / Issue Date	Sistem / System	
2100040996-2100040994	1539	Jenelmal / Geothermal	KIZILDERE-İB-3	Eylül 2021 / September 2021	Kasım 2021 / November 2021	05.11.2021 / 19.17.40	YEK-G	

Organizasyon ve Üretim Tesisi Detayları / Organization and Details of Production Facility

Organizasyon Adı / Organization Name	Organizasyon Etiler Kodu / Organization License Code	Üretim Tesisi Adı / Production Facility Name	Üretim Tesisi Lisans No / Production License No	Üretim Tesisi Konumu / Production Location	Üretim Tesisi Ölçümü / Production Capacity	Kaynak Tipi / Resource Type	Üretim Tesisi Türü / Production Facility Type	Üretim Tesisi Yürürlük Tarihi / Production Facility Validity Date	İsletmeye Alınma Tarihi / Commissioning Date	İsletmeye Alınma Mekanizması / Commissioning Mechanism	Destekleme Mekanizması / Support Mechanism
ZORLU DOĞAL ELEKTRİK ÜRETİM A.Ş.	40000000005-80	EÜRE237-200491	KIZILDERE-İB-3	DENİZLİ-MERKEZ	195	Jenelmal / Geothermal	Jenelmal / Geothermal	-	01.12.2019	YEKDEM	

İtfa bu belge, koruyucu YEK-G belgelerinde Piyasa İşletmecisi olan EPIAŞ tarafından İtfa edilmiş ve iptal edilmiştir. İtfa belgesinde yer alan YEK-G belgelerinde İhtilafın giderilmesi amacıyla gerekli belgeleri sunarak iptal edilmiş ve iptal edilmiştir. İtfa belgesinde yer alan YEK-G belgeleri derinlemesine ve adı konulara YEK-G belgelerinin başta bir tedbirliyle verilecek son itibarıyla İtfa münferid değildir. Bu İtfa belgesinin kopyalanması, değiştirilmesi ve başka amaçla satılması yasaktır.

This cancellation statement document confirms that YEK-G documents subjected to the cancellation statement have been cancelled by EPIAŞ, the Market Operator. The environmental quality 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 end consumer is prohibited. Any use, sale or cancellation of the cancellation statement is forbidden. It is forbidden to copy or amend the cancellation statement as well.



İtfa Delayları / Cancellation Details

İtfa Tipi / Cancellation Type	İtfa	Yararlanıcı Taraf Adı / Beneficiary Name	BLECK BEYH EDEBALI ÜNİVERSİTESİ
İtfa Tarihi / Cancellation Date	28/08/2022 14:53:55	Son Tüketim / End Consumer	Bon Tüketim
İtfa Numarası / Cancellation No	859724710	Yerleşim Numarası - TC Kimlik Numarası / Tax ID - Identity No	170020883
İtfa Durumu / Cancellation Status	Tamamlandı / Completed	İtfa Alanı / Cancellation Purpose	Hiç / None
Organizasyon Adı / Organization Name	ZORLU DOĞAL ELEKTRİK ÜRETİM A.Ş.	İtfa Bitiş / Consumption Period	Ağustos 2022 - Ağustos 2022 / August 2022 - August 2022
Organizasyon Hesap Numarası / Organization Account No	582	Adres / Address	Parklık Mah. Fahi Sultan Mehmet Bulvarı No:27 - 11100 Merkez/BLECK
Organizasyon Adresi / Organization Address	LEVENT 199, BÜYÜKÇERE CAD. NO:169	Şehir / City	ANKARA
Ölçe / Country	TURKEY		

İhraç Edilen YEK-G Belgelerinin Detayları / Details of Issued YEK-G Certificate

Toplam Miktar(MWh) / Total Amount(MWh)		Toplam YEK-G Belge Miktarı / Total Amount of YEK-G Certificates: 145						
Belge Numarası / Document No	Miktar / Amount	Kaynak Tipi / Resource Type	Üretim Tesisi / Production Facility	Üretim Dönemi / Production Period	İhraç Dönemi / Issue Period	İhraç Tarihi / Issue Date	Sistem / System	
2100040921-2100040995	145	Jenelmal / Geothermal	KIZILDERE-İB-3	Eylül 2021 / September 2021	Kasım 2021 / November 2021	05.11.2021 / 19.17.40	YEK-G	

Organizasyon ve Üretim Tesisi Detayları / Organization and Details of Production Facility

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YEK-G Certificates of the BSEU (for year of 2022)

More than 50% of the electricity consumed in BŞÜ is provided by Geothermal energy. BSEU attaches importance to the fact that a certain part of the electricity it purchases is produced from renewable resources. Also, researches and studies continue for the production of electricity from the solar power at BSEU.



Example of Roof Mounted Solar Panels (Bilecik Seyh Edebali University, Turkey)

No	Renewable Energy	Production (in kWh)
1	Jeotermal power	1684000
2	Solar panel	8604
	Total	1692604

$$\frac{1692604}{3325165} (\text{Electricity usage}) * 100 = 50.90 \%$$

The buildings constructed in our university have energy identity certificate. According to the Energy Efficiency Law No. 5627 and the Energy Performance Regulation in Buildings issued accordingly; It is a document that contains information about the energy requirement and energy consumption classification of the building, the level of greenhouse gas emissions, insulation properties and the efficiency of heating and/or cooling systems at a minimum in order to ensure the effective and efficient use of energy and energy resources in buildings, prevention of energy waste and protection of the environment.

Binanın		Belgenin		Binanın Görüntüsü
Tipi:	Apartman	Verişiş Tarihi:	9.10.2021	
İnşaat Ruhsat Tarihi:	15.8.2014	Geçerlilik Tarihi:	9.10.2031	
Tadilat Tarihi:		Performans Sınıfı:	D	
Toplam Alan:	9.918,29	Emisyon Sınıfı:	E	
Ada/Parsel/Pafta:	0 / 0			
UAVT Bina No:	726054604			
Adı:	BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ E BLOK DERSLİK			
Adresi:	PELİTÖZÜ MAH. FATİH SULTAN MEHMET BULVARI SOK. NO: 27 /4 BİLECİK			
Sahibinin Adı Soyadı: BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ				

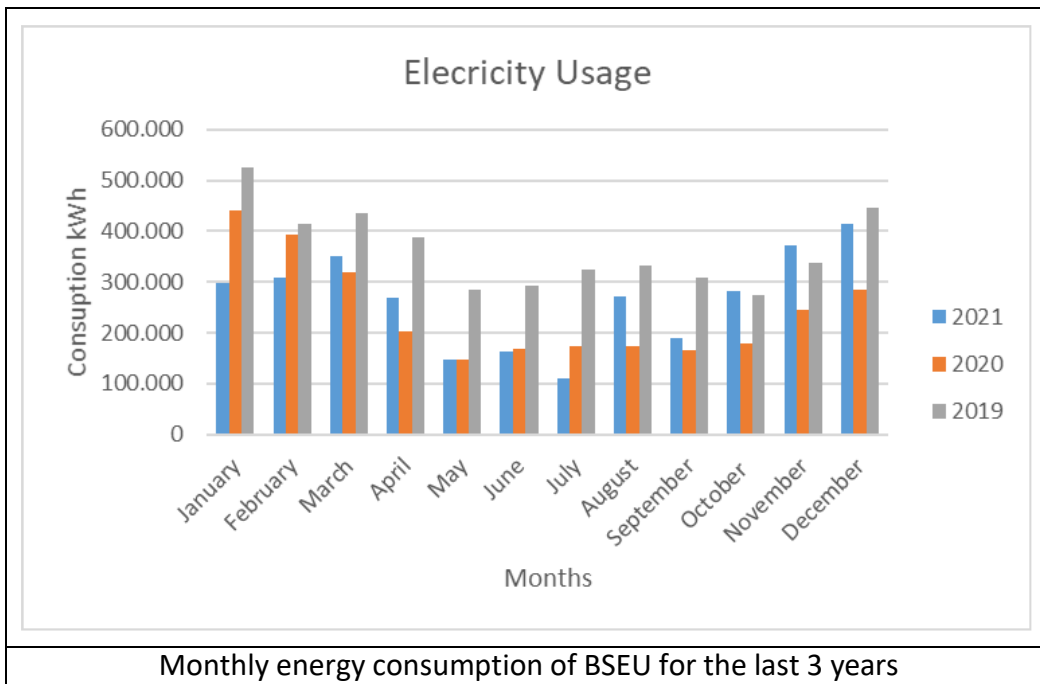


SİSTEMLER	YILLIK ENERJİ TÜKETİMLERİ		YENİLENEBİLİR ENERJİ/KOJEN. ENERJİ		SINIFI
	Birincil (kWh/yıl)	Birim Alan Başına (kWh/m ² .yıl)	Birincil (kWh/yıl)	Birim Alan Başına (kWh/m ² .yıl)	
Toplam	1.178.492,63	118,82	0,00	0,00	D
İstima	753.041,71	75,92	0,00	0,00	C
Sıhhi Sıcak Su	284.417,39	28,68	0,00	0,00	F
Soğutma	7.557,48	0,76	0,00	0,00	E
Havalandırma	0,00	0,00			D
Aydınlatma	133.476,04	13,46			G
Kojenarasyon	0,00	0,00	0,00	0,00	
Fotovoltaik			0,00	0,00	

Belgenin		Belge Düzenleyenin		Kare Kod
Numarası:	M12118DC79E08	Adı Soyadı:	KUTBETTİN ULUTAŞ	
Veriliş Tarihi:	9.10.2021	Firması:	TAŞYAPI DOĞALGAZ TAŞIMACILIK MÜHENDİSLİK İNŞAAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ	
Son Geçerlilik Tarihi:	9.10.2031	Sertifika No:	EVD-34-0153	
İptal Edilen EKB No:	M12110D49C198	İmza:		

Energy identity certificate of BSEU

The total electricity usage of Bilecik Seyh Edebali University Campus in 2021, 2020 and 2019 is 3,180,592,95 kWh, 2,893,120.00 kWh and 4,245,169.80 kWh respectively. On the central campus, electricity is used for lighting, cooling, heating and laboratory appliances. The monthly energy consumption of BSEU for the last 3 years is given in the graph given below



3. Waste

3.1. Recycling Program for University Waste

In Bilecik Şeyh Edebali University, wastes are collected separately according to their types. University staff and students were given the necessary training and then a zero waste system was established[a]. All buildings have bins for separate collection of glass, metal, paper, plastic, organic waste and other (non-recyclable) waste [b]. The collected wastes are taken and recycled by the Biosun Company with which the university has a contract. In addition, separate boxes are available for the collection of fluorescent lamps, electrical and electronic waste, and waste batteries [c]. These wastes are taken and evaluated by the Exitcom Company and TAP Association with which the university has a contract. Medical and hazardous wastes from laboratories are collected separately [d]. Medical wastes sterilized and disposed of by Biosun [e]. Hazardous wastes are disposed by İzaydaş company. Waste oils, oil filters and cooling liquids from the generators available at the university are also collected separately and disposed of [f]. [g] In our university, the collection of waste vegetable oils started at a pilot level.



[a] Waste information table



[b] separate collection boxes for wastes



[c] Separate boxes for lamps, electrical



[d] Medical and hazardous wastes electronic waste, and waste batteries



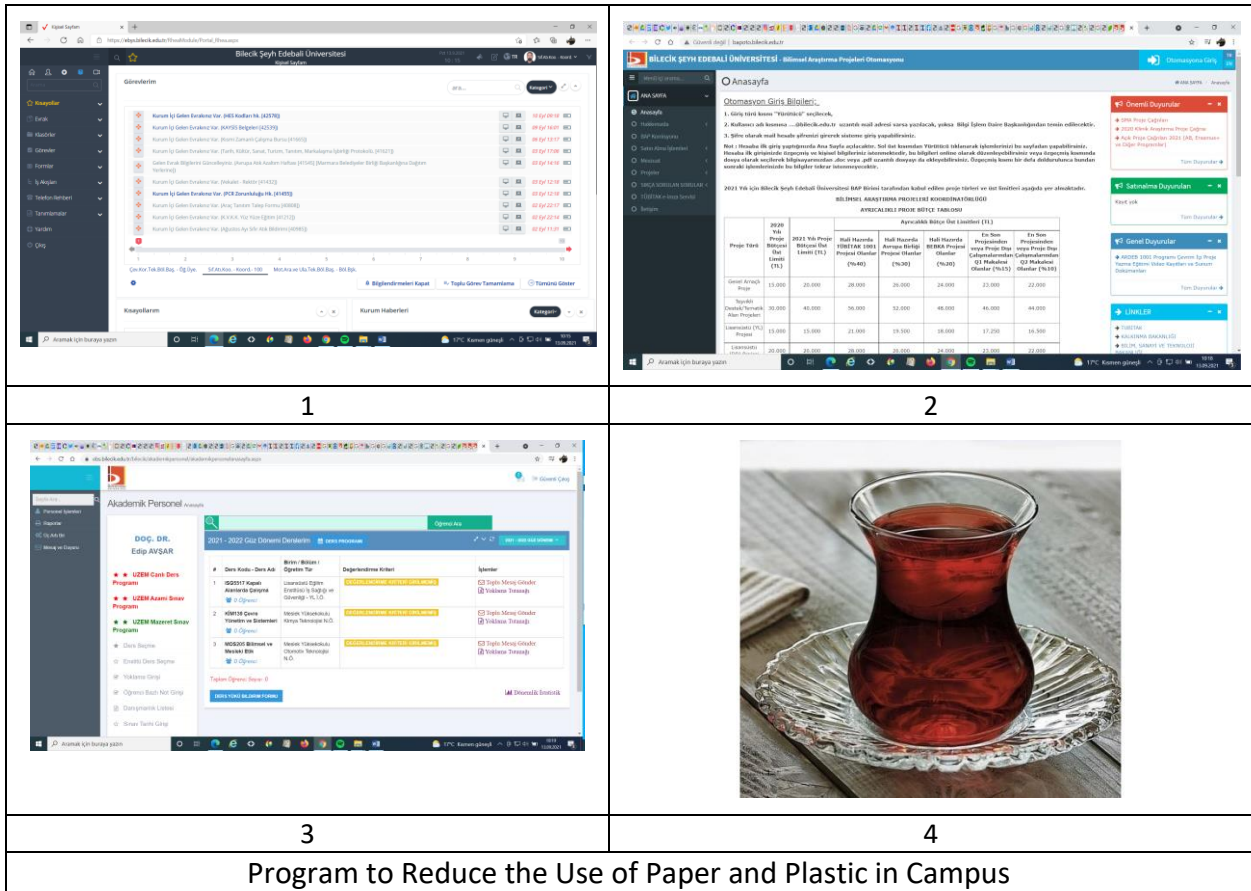
[e] medical waste sterilization



[f] collection of Waste oils, oil filters and cooling liquids

Recycling Program for University

3.2. Program to Reduce the Use of Paper and Plastic on Campus







In our campus, all administrative and academic correspondence and student applications (course registration, course materials, distance education, internship procedures, etc.) are made electronically in order to reduce waste. Our university has an Electronic Document Management System (EBYS) that enables official documents to be processed online. In scientific project studies, the project process management system, which enables the processing of official documents, is used. Student registrations and course procedures are also done online using the student information system (OBS) automation. In this way, both stationery costs and waste generation are saved, and correspondence and transactions are archived in a healthy way.

Metal forks, metal spoons and metal knives are used in cafeterias to reduce disposable plastic consumption. Tea and coffee are served to the personnel in the offices with glass cups.

3.3. Organic Waste Treatment

There are waste bins for the collection of organic waste in all our buildings in our university (a). The collected wastes are given to Bilecik Municipalities Union. Bilecik Municipalities Union signed a 29-year agreement with Biosun Company within the scope of domestic solid waste management. Bilecik Integrated Solid Waste Facility, owned by the company, has the capacity to process 120 thousand tons of domestic, agricultural and industrial waste and produce 15 thousand tons of compost annually from these wastes (b). The compost from this facility is the

most important raw material of the organomineral fertilizer produced in Pazaryeri Organomineral Fertilizer Production Facility (c-d).

	
<p>a. organic waste bins</p>	<p>b. Bilecik Integrated Solid Waste Facility</p>
	
<p>c. Pazaryeri Organomineral Fertilizer Production Facility</p>	<p>d. Compost and fertilizer products</p>
<p>Organic Waste Treatment</p>	

A project is being prepared to be given to the Ministry of Environment and Urbanization in order to produce compost by providing a compost machine for solid waste management in our campus. If the project is approved by the ministry, organic wastes and park and garden wastes originating from our campus will be evaluated within our own campus.

[1] <https://bilecik.csb.gov.tr/biosun-bilecik-entegre-kati-atik-tesisine-teknik-gezi.-etkinlik>

[2] <http://www.hexafermgubre.com/index.asp?sec=1&menuid=191>

[3] <https://www.youtube.com/watch?v=27OGbADonmM>





3.4. Inorganic Waste Treatment

Our university works with TAP Association, which is authorized by the Ministry of Environment and Urbanization, for the recycling of waste batteries. Waste batteries are collected in all buildings throughout the university and sent to the TAP association for recycling (a-b).

An agreement has been made with the AGID Association for the recycling of waste fluorescent, light bulb and electrical and electronic wastes at our university. Electrical and electronic wastes, fluorescent lamps and light bulbs are collected in all buildings throughout the university and sent to AGID for recycling (c-d).

<p>a. Waste battery collection</p>	<p>b. waste battery sent to TAP for recycling</p>
<p>c. waste fluorescent, light bulb, electrical and electronic waste boxes</p>	<p>d. sending waste fluorescents to recycling</p>
<p>Inorganic Waste Treatment</p>	

3.5. Toxic Waste Treatment

	
<p>a. Waste battery collection</p>	<p>b. waste battery sent to TAP</p>
	
<p>c. waste fluorescent, light bulb, electrical and electronic waste boxes</p>	<p>d. sending waste fluorescents to recycling</p>
	
<p>e. storage of waste mineral oils</p>	<p>f. sending waste mineral oils to recycling</p>
	
<p>g. collection of medical and hazardous waste</p>	<p>h. sterilization of medical waste</p>
<p>Toxic Waste Treatment</p>	

3.6. Sewage Disposal



Wastewater treatment plant location





WWT Units, six packs total 900 m³/day
Wastewater Treatment

All of the wastewater resulting from the activities carried out in the university central campus is collected through the sewer system. All of the wastewater is treated at the biological wastewater treatment plant of our university. The treatment plant consists of 9 package units and each one is 100 m³/day treatment capacity. The treated water, which meets the limit values specified in the Turkish Water Pollution Control Regulation, is discharged to the receiving environment. Rain water is collected by separate canal lines in our center campus. Project studies are continuing for the collection and use of rain water. In our other campuses, the wastewater generated is given to the municipal sewer system with the infrastructure.

4. Water

4.1. Water Conservation Program Implementation



	
Wastewater treatment plant	Example of Water Conservation – Rain Water Collection
Water Conservation Program Implementation	



In the infrastructure of our university, rain water and wastewater infrastructure are designed separately. Wastewater is collected and treated in our university's biological treatment plant with a capacity of 900 m³/day. Rain water is collected from the campus by taking it into a separate channel. Treated water and collected rain water are combined in the same channel. Afterwards, it is fed into the stream passing through Değirmendere locality under Gülümbe village at a distance of 2.3 km.

Rainwater on the roof of our university's waste storage area is collected in a 1m³ tank placed here. The rain water collected in the tank is used to meet the need for surface washing. A 1 m³ tank was placed. The tank storage area is filled with rain water coming from the roof and is used for surface washing.

Studies on the more effective use of treated water and rain water are ongoing, and these issues

4.2. Water Efficient Appliances Usage

	
¹ Waterless urinal application	² Photocell faucet application

	
<p>³ The amount of water flowing in 9 seconds (approximately 1100 mL) without the saving device</p>	<p>⁴ The amount of water flowing in 9 seconds with the saving device (approximately 540 mL)</p>
<p style="text-align: center;">Example of Water Efficient Appliances Usage</p>	

¹In order to reduce water use in our university, the application of waterless urinals has started to be tested on a pilot scale. For this purpose, 2 waterless urinals were purchased and installed. Waterless urinal systems contain membrane filters. Thus, the odoriferous components in the urine are filtered out. Since there is no odor formation, there is no need for cleaning after urination.

It has been determined that an average urinal is used 150 times a day.

A urinal with a sensor or a manual siphon system consumes 3 liters of water in each use, according to Turkish plumbing regulations.

In this situation:

1 urinal consumes: 150 uses x 3 liters = 450 liters of water in 1 day.

1 urinal consumes in 1 year: 450 liters x 365 days = 164250 liters of water (ie 164.25 m³) [1].

² In order to reduce water use, photocell faucet application has been started on a pilot scale. For this purpose, 2 photocell faucets were purchased and mounted and tested on a pilot scale. It is planned to replace the existing faucets with photocell faucets as they deteriorate.

^{3,4} Another application for water saving is the application of saving apparatus to the taps. In the experiments, it was determined that the flow rate of the water flowing from the tap was reduced by 50% without pressure loss by using this apparatus. These apparatus were installed fully in 2 buildings all toilets.

[1] https://www.susuzpisuvar.com.tr/sayfa-detay/Susuz-Pisuvar.html?gclid=Cj0KQCQjw5JSLBhCxARIsAHgO2Sctc5eQP5PINthhpdDEa83aGMGvTkCz31h8BTdMT5JsMgP-q-X3qP8aAjAwEALw_wcB

4.4. Consumption of treated water

	
<p>Car washing</p>	<p>Surface washing</p>
	
<p>Irrigation</p>	<p>siphon water</p>
<p>Planned alternatives for the use of treated water (implementations are still in the planning stage)</p>	

Wastewater from the activities in our university is treated in a biological treatment plant with a capacity of 900 m³/day. Currently, there is no recovery of treated water. However, studies are continuing for the use of treated water as water for park and garden irrigation, vehicle washing, surface washing, and toilet flushing.

4.5. Water pollution control in campus area

As a policy at our university, all wastewater is collected and treated separately. In this context, the necessary infrastructure is available. As a matter of fact, the treatment of wastewater in Turkey is a legal obligation and an obligation arising from the laws of the country.

According to the Water Pollution and Control Regulation (Official Gazette Date and Number: 31.12.2014; 25687) issued by the Ministry of Environment, Urbanization and Climate Change, which is valid in our country, our university is evaluated according to the criteria of Table 21.2-Sector: Domestic Wastewater.



Biological Wastewater treatment plant with 900 m³ /day capacity

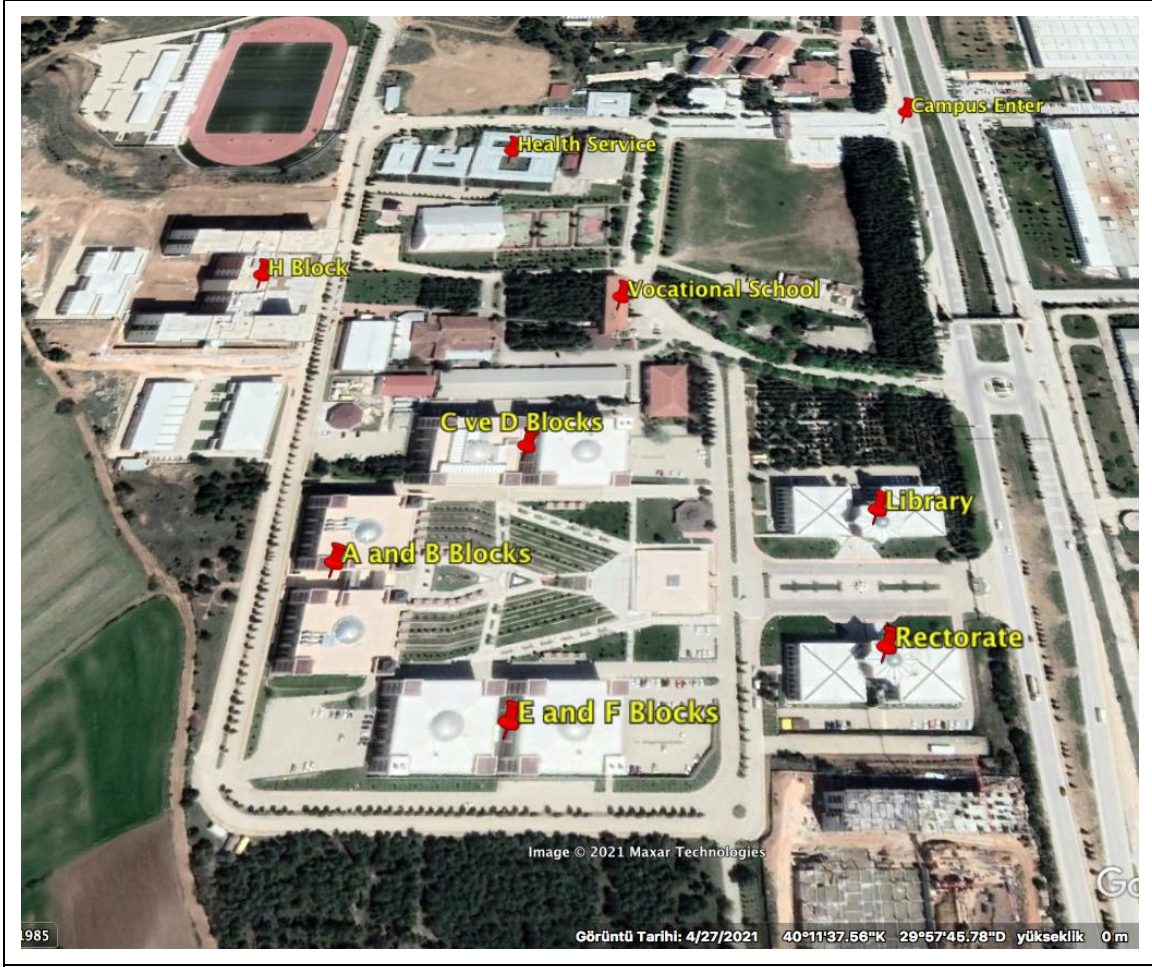
In the infrastructure of our university, rain water and wastewater infrastructure were designed separately. All of the wastewater originated from our campus is collected and treated in our university's biological treatment plant with a capacity of 900 m³/day. Rain water is collected from the campus by taking it into a separate channel. Treated water and collected rain water are combined in the same channel after treatment. Afterwards, it is fed into the stream passing through Değirmendere locality under Gülümbe village at a distance of 2.3 km.

Wastewater samples are taken from the facility by accredited measurement and analysis laboratories in the process deemed appropriate by the Ministry within the scope of legal legislation. In the sample taken, pH, TSS COD and BOD parameters are analyzed and the results of the analysis are reported to the Ministry.

5. Transportation (TR)

Since the central campus area is flat and small, the distance between the campus entrance and the farthest building is 670.35 meters. This is walking distance. Therefore, the campus is not suitable for using the shuttle.

Campus enter – Rectorate: 637.8 meter
Campus enter – Library: 606.88 meter
Campus enter – E and F Blocks: 650.44 meter
Campus enter – A and B Blocks: 670.35 meter
Campus enter – C and D Blocks: 538.24 meter
Campus enter – H Blocks: 545.02 meter
Campus enter – Vocational School: 337.35 meter
Campus enter – Health Service: 330.13 meter



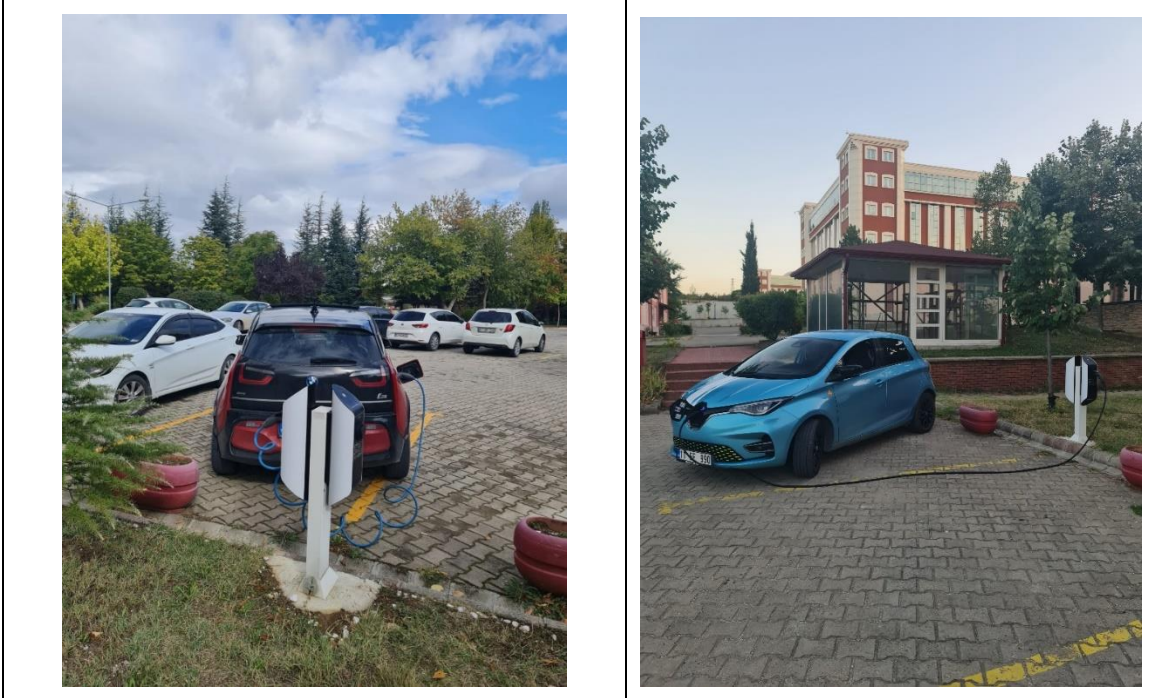
Walking distances of the campus (Bilecik Seyh Edebali University, Turkey)



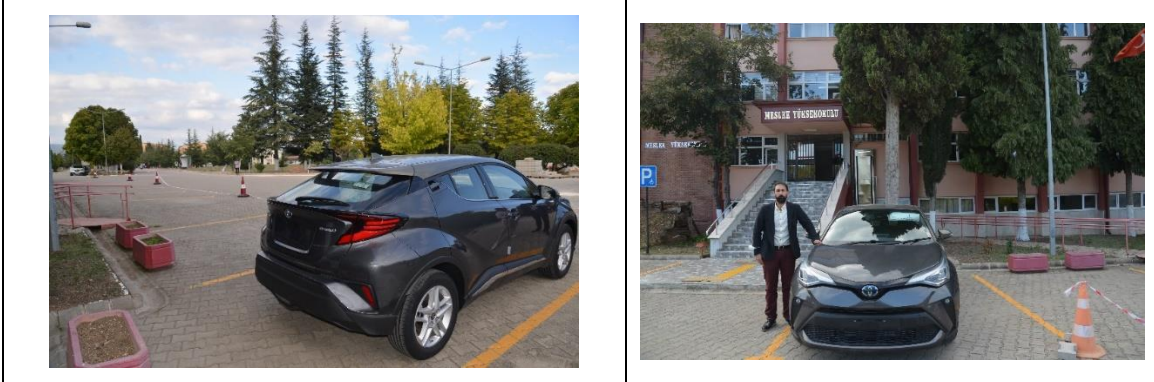
Example of sidewalks and bike paths¹



Example of Campus Bikes²



dual AC charging point and sample electrical vehicles³



Toyota CHR Hybrid vehicle was donated by TOYOTA Motor Turkey A.Ş⁴

¹Our university areas are bicycle and pedestrian friendly. Sidewalks and bike paths have also been established for pedestrians and cyclists. The speed limit within the campus is 30 km. Pedestrians have the right of way within the campus.

²There are a total of 100 bicycles given by the Ministry of Health in our university. These bikes are kept in the gym of our university. Bicycles are available for free use of students and staff on the central campus. Cyclists can take the bikes from the gym by providing the desired information and use them all day long. There is a lock system on the bicycles and students can park their bicycles in the parking areas within the campus. The bicycle, which is out of use, is taken to the gym by the cyclist and left.

³There are dual AC charging points on the campus of our university where electric vehicles can be charged. Within the scope of the agreement with ZES Energy solutions company, 2 electric Renault ZOE vehicles will be brought to the campus and made available to staff and students.

⁴1 Toyota CHR Hybrid vehicle was donated by TOYOTA Motor Turkey A.Ş to reduce emissions within the scope of support for green campus studies and to support the education and training activities of students in automotive and electric hybrid vehicle technologies departments.

Free to rent bicycle on campus. Not taking public transportation vehicles to campus in order to reduce vehicles on campus. Since the campus is within walking distance, it is not suitable for shuttle use so there aren't the shuttle services on our campus. In order to reduce the number of vehicles on the campus, free bicycles were provided to students instead of student vehicles, public transportation and shuttle services.

No.	Vehicle	Total Number
1	Car managed by the university	18
2	Cars entering the university	800
3	Motorcycles entering the university	20
	Total	838

$$5.4 = 838 / 1245 \text{ (population)} = 0.68$$



Example of Ratio of Parking Area to Total Campus Area (Bilecik Seyh Edebali University, Bilecik)

Total main campus area: 468025 m²

Total parking area = 18000 m²

Ratio = 3.84%

This year, 1 parking area (pointed with red block in the Picture and the area is approximately 776 m²) was removed and a student cafeteria was built instead. Thus, the parking space is reduced.

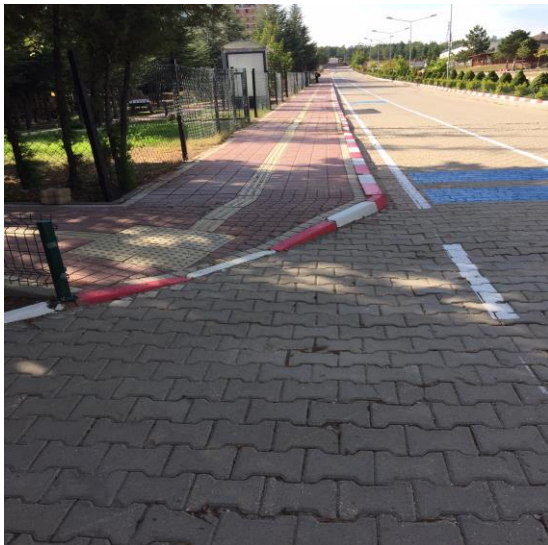


Limiting parking zone (Bilecik Seyh Edebali University, Turkey)



Public transportation (Bilecik Seyh Edebali University, Turkey)

- Limiting parking zone for students as done new campus enter gate. After this park is full, student vehicles are taken into the campus.
- Not taking public transportation vehicles to campus in order to reduce vehicles on campus
- This year, 1 parking area (pointed with red block in the Picture and the area is approximately 776 m²) was removed and a student cafeteria was built instead. Thus, the parking space is reduced.

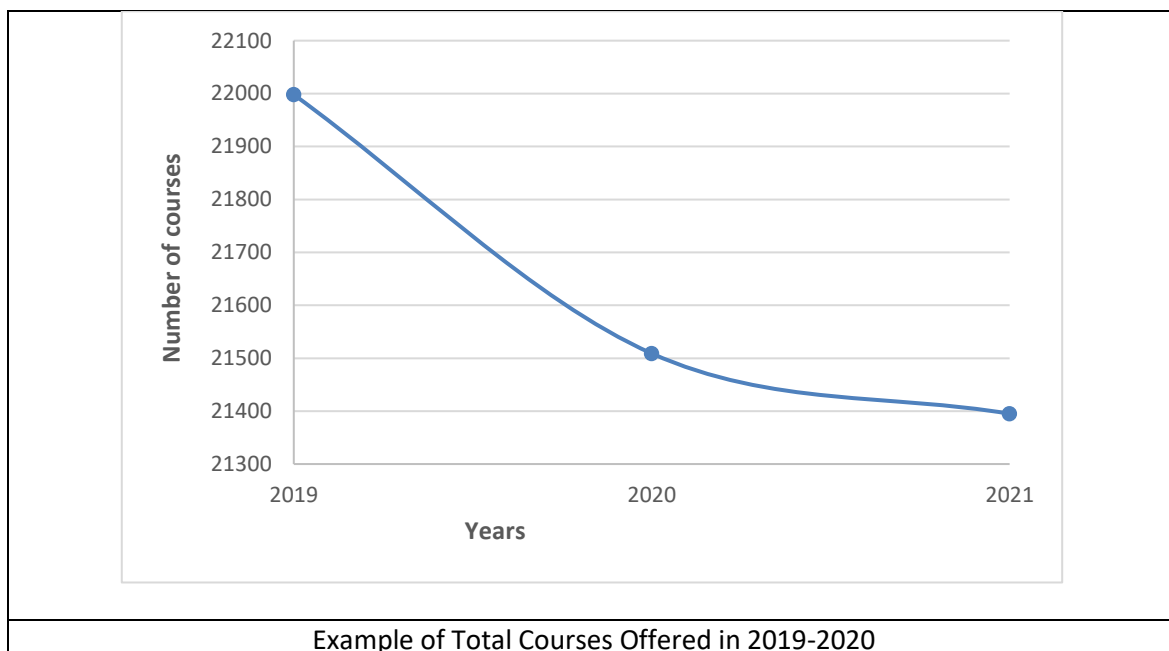


Example of pedestrian path (Bilecik Seyh Edebali University, Turkey)

- Separator between road for vehicle and pedestrian path.
- Ramps and guiding blocks which have suitable design for pedestrian having physical disabilities.
- Street lamp for pedestrian in night. Lishan College has LED lamps, which control the solar street lights automatically through the intensity of light.

6. Education (ED)

In BSEU's Curriculum Refresh programme which aims to embed sustainability into all course and module content offered by the University. Total number of courses with sustainability embedded for courses running in 2020/2021: about 5000.



2018	20166
2019	21998
2020	21509
2021	21395
2022	21395

Total number of courses offered in 2022 = 21395 courses (not modules)

A total of 36 projects were supported in our university in 2021. The total support given by the university for these projects is US\$ 108108. A total of 105 projects were supported in our university in 2020. The total support given by the university for these projects is US\$ 194030. In 2019, US\$ 369593 support was given to the projects. Since 2022 continues, no reporting has been made yet. For this reason, the data for 2022 will be included later.

Total research fund in 2019 = 369593 US Dollars

Total research fund in 2020 = 194030 US Dollars

Total research fund in 2021 = 108108 US Dollars

The averaged annum las t3 years of research fund = 223910 US Dollars

More over research funding in the Annual report 2021:

<http://w3.bilecik.edu.tr/strateji/2022/03/16/2021-yili-idare-faaliyet-raporu-yayinlanmistir/>

BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ - Bilimsel Araştırma Projeleri Otomasyonu

Otomasyona Giriş

ANA SAYFA - Anasayfa

Otomasyon Giriş Bilgileri;

- Giriş türü kısmı "Yürütücü" seçilecek,
- Kullanıcı adı kısmına ...@bilecik.edu.tr uzantılı mail adresi varsa yazılacak, yoksa Bilgi İşlem Daire Başkanlığından temin edilecektir.
- Şifre olarak mail hesabı şifrenizi girerek sisteme giriş yapabilirsiniz.

Not : Hesaba ilk giriş yaptığınızda Ana Sayfa açılacaktır. Sol üst kısımdan Yürütücü tıklararak işlemlerinizi bu sayfadan yapabilirsiniz. Hesaba ilk girişinizde özgeçmiş ve kişisel bilgileriniz istenmektedir, bu bilgileri online olarak düzenleyebilirsiniz veya özgeçmiş kısmında dosya olarak seçilerek bilgisayarınızdan .doc veya .pdf uzantılı dosyayı da ekleyebilirsiniz. Özgeçmiş kısmı bir defa doldurulunca bundan sonraki işlemlerinizi bu bilgiler tekrar istenmeyecektir.

2021 Yılı için Bilecik Şeyh Edebali Üniversitesi BAP Birimi tarafından kabul edilen proje türleri ve üst limitleri aşağıda yer almaktadır.

BİLİMSEL ARAŞTIRMA PROJELERİ KOORDİNATÖRLÜĞÜ
AYRICALIKLI PROJE BÜTÇE TABLOSU

Proje Türü	2020 Yılı Proje Bütçesi Üst Limiti (TL)	2021 Yılı Proje Bütçesi Üst Limiti (TL)	Ayrıcalıklı Bütçe Üst Limitleri (TL)				
			Hali Hazırda TÜBİTAK 1001 Projesi Olanlar (%40)	Hali Hazırda Avrupa Birliği Projesi Olanlar (%30)	Hali Hazırda BEBKA Projesi Olanlar (%20)	En Son Projesinden veya Proje Dışı Çalışmalarından Q1 Makalesi Olanlar (%15)	En Son Projesinden veya Proje Dışı Çalışmalarından Q2 Makalesi Olanlar (%10)
Genel Amaçlı Proje	15.000	20.000	28.000	26.000	24.000	23.000	22.000
Tesvikli Destek/Tematik Alan Projeleri	30.000	40.000	56.000	52.000	48.000	46.000	44.000

Önemli Duyurular

- SMA Proje Çağrısı
- 2020 Klinik Araştırma Proje Çağrısı
- Açık Proje Çağrısı 2021 (AB, Erasmus+ ve Diğer Programlar)

Satınalma Duyuruları

Kayıt yok

Genel Duyurular

- ARDEB 1001 Programı Çevrim İçi Proje Yazma Eğitimi Video Kayıtları ve Sunum Dokümanları

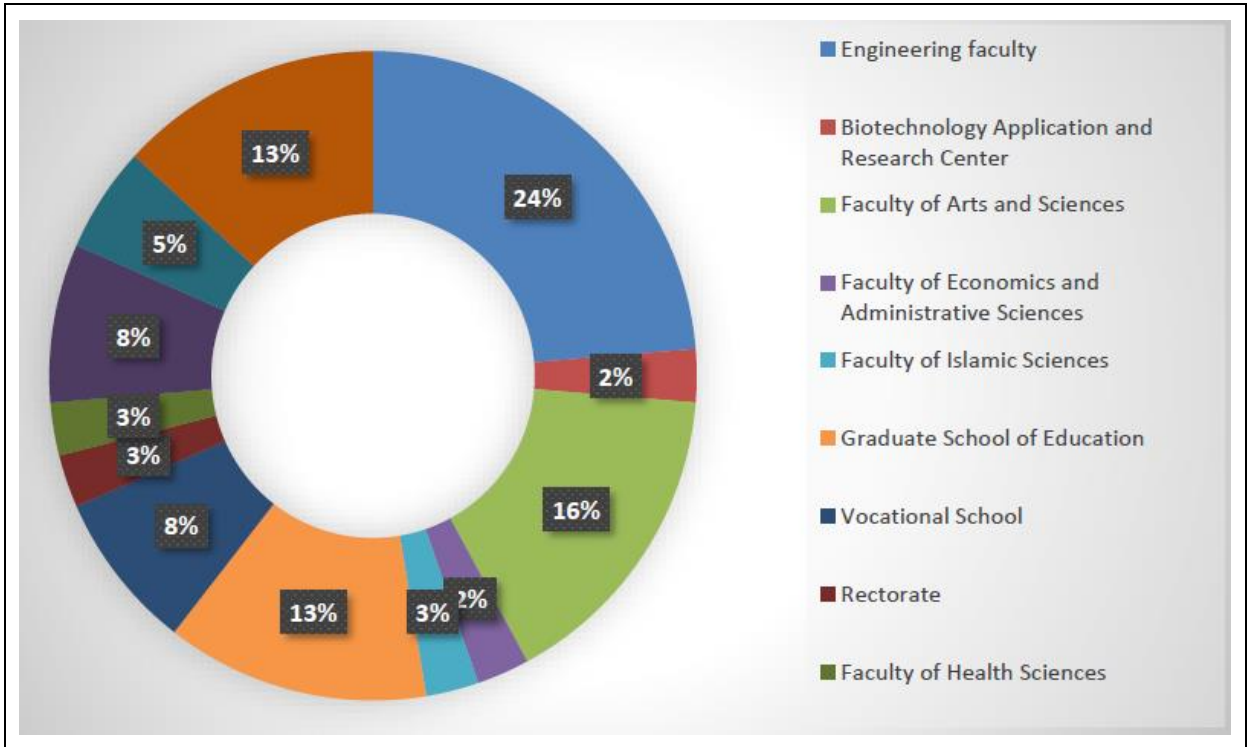
LINKLER

- TUBİTAK
- KALKINMA BAKANLIĞI

Example of Sustainability Research Fund (Bilecik Seyh Edebali University, Turkey)

Total research fund dedicated to sustainability research in 2020 = 18330 US Dollars
 Total research fund dedicated to sustainability research in 2021 = 33917 US Dollars
 Total research fund dedicated to sustainability research in 2022 = 35315 US Dollars

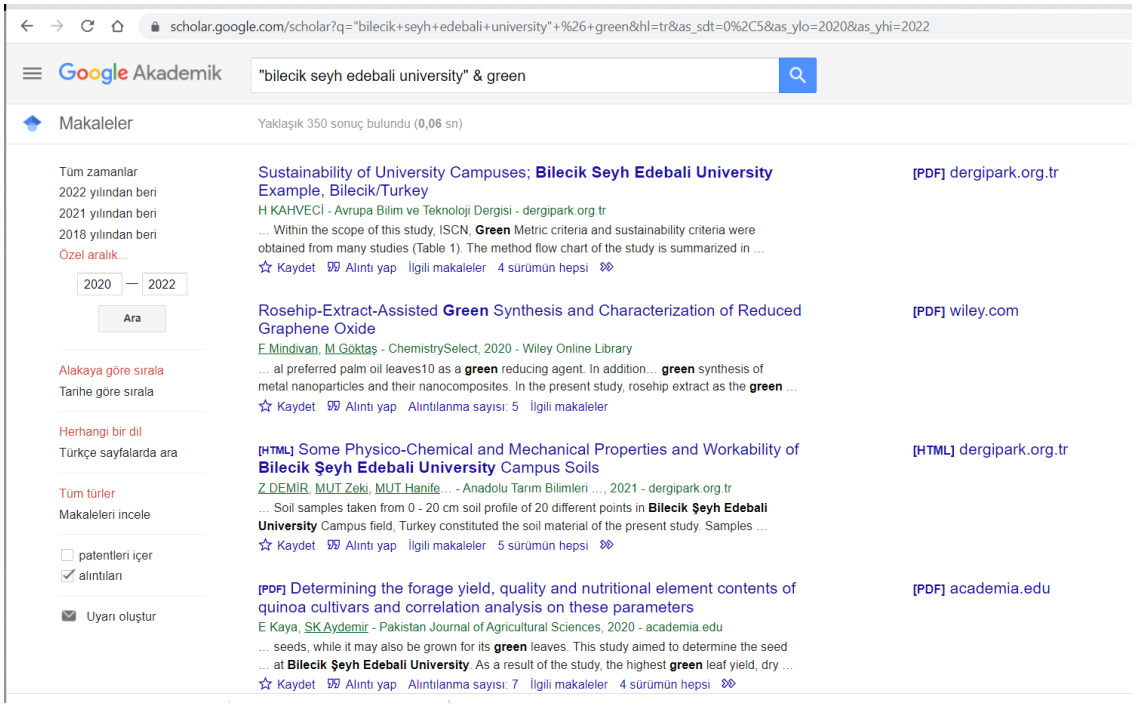
The averaged annum last 3 years of research fund dedicated to sustainability research = 29187 US Dollars



Distribution of research Project on the basis of units (Bilecik Seyh Edebali University, Turkey)

Example of events scholarly publications on sustainability in the academic year 2020-2022.

A total average per annum over the last 3 years of 116 publications



The screenshot shows a Google Scholar search for "bilecik seyh edebali university" & green. The search results are displayed in a table format. The first result is "Sustainability of University Campuses; Bilecik Seyh Edebali University Example, Bilecik/Turkey" by H. KAHRİVECİ, published in "Avrupa Bilim ve Teknoloji Dergisi" in 2020. The second result is "Rosehip-Extract-Assisted Green Synthesis and Characterization of Reduced Graphene Oxide" by F. MİNDİVAN and M. GÖKTAŞ, published in "ChemistrySelect" in 2020. The third result is "Some Physico-Chemical and Mechanical Properties and Workability of Bilecik Şeyh Edebali University Campus Soils" by Z. DEMİR, M.UT ZEKİ, and M.UT HANİFE, published in "Anadolu Tarım Bilimleri" in 2021. The fourth result is "Determining the forage yield, quality and nutritional element contents of quinoa cultivars and correlation analysis on these parameters" by E. KAYA and S.K. AYDEMİR, published in "Pakistan Journal of Agricultural Sciences" in 2020. The search interface includes a sidebar with filters for date range (2020-2022), sorting options, and language selection.

Examples of scholarly publications on sustainability (Bilecik Seyh Edebali University, Turkey)

Example of events related to environment and sustainability hosted or organized by the University in the academic year 2020-2022.

Total number of sustainability/environment related events in:

2020: 1

2021: 6

2022: 14

A total average per annum over the last 3 years of **7 events** (e.g. conferences, workshops, awareness raising, practical training, etc.).



34. National Agricultural Mechanization and Energy Congress 2022



Bilecik Industry Vision Meeting 2022



Environment Week Events 2022



One Drop of Health-1-2022



Exhibition Selection 2-2022



Career Day Event 2022



Future Business Model: Entrepreneurship Panel 2022



Breastmilk Webinar with Current Evidence 2022



Europass Access to European Opportunities Event 2022



Turkology Conferences - Journalism in 20th Century Turkey-2022



History and Culture Talks – 118-2022



Entrepreneurship summit-2022



R&D Projects Writing Training 2022



Covid-19 with Yesterday, Today and Tomorrow 2022



Women's cooperatives and associations in rural development of our province (2021)



The role of chambers of agriculture in the development of agriculture and animal husbandry in our province (2021)



World environment day event. environment and zero waste (2021)



Zero waste information presentation (2021)



Nursing during the pandemic (2021)





Protect water and health on world water day (2021)



TUBITAK project information and training day(2020)

There are 28 active student clubs in our university. Some of the students who started the university this semester are continuing to establish clubs. Some of the events organized/contributed by these clubs are given above.

<p>Career Day Event 2022</p>	<p>"I graduated, after?" Activity 2022</p>
<p>Student projects exhibition (2019)</p>	<p>Faculty of fine arts and design year-end student exhibition (2019)</p>

	
<p>Turkish voice competition among youth (2021)</p>	<p>Youth poetry competition</p>
	
<p>Mechanical engineering project presentation (2019)</p>	<p>Youth drama competition (2021)</p>
	
<p>Engineering, entrepreneurship and business life (2019)</p>	<p>Lean manufacturing 7 essential wastes and 5s</p>
	
<p>Port catheter care in children (2021)</p>	<p>Zero waste information presentation (2021)</p>

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

file:///Users/apple/Desktop/Yap%C4%B1lacak%20i%CC%87s%CC%A7ler/Yes%CC%A7il%20Kam pu%CC%88s/Kriter%20dosyalar%C4%B1/Aktif-Kulu%CC%88pler-2019-web.pdf

-<http://www.bilecik.edu.tr/AnaSayfa/Icerik/8411>

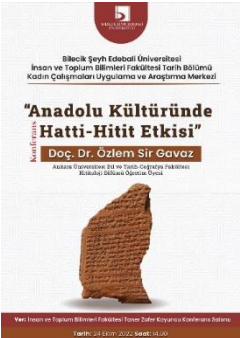





-<http://www.bilecik.edu.tr/AnaSayfa/Icerik/8418>

-<http://www.bilecik.edu.tr/AnaSayfa/Icerik/8417>

Example of Total number **cultural activities on campus** organized by the University : more than **3 events (27 events)**

Additional evidence link (e.g. for videos, more images, or other files that are not included in this file):




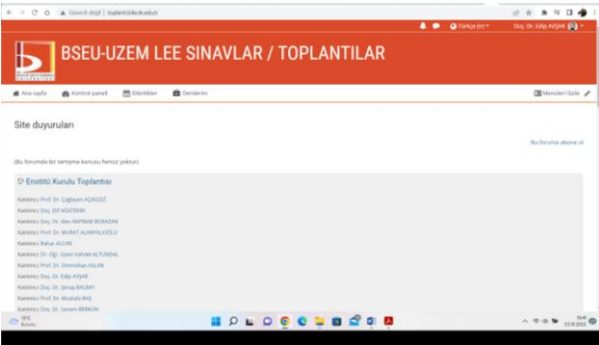
More information can be found from web page : <https://www.bilecik.edu.tr/main/arama/2>

	
Hatti-Hittite Effect in Anatolian Culture-2022	I graduated, what about later?" Event-2022
	
International Culture Days-2022	Exhibition Selection 2-2022
	
15 July Democracy and National Unity Day Commemoration Event-2022	Year-end Student Exhibition-2022

<p>Military History Student Symposium on the 100th Anniversary of the Great Offensive-2022</p>	<p>Career Day Event 2022</p>

In our university several lessons (English, history, Turkish, etc.) are carried out using Online Teaching Methods. Students continued their education by participating in live lessons. In addition, informative meetings were held on the measurement and evaluation of the courses by effectively conducting the courses on the same platform. Online meetings, symposiums and events were realized via university meeting platform, ZOOM and TMS webinars. Some of these tutorials have been shared on YOUTUBE.

<p>Interview Simulation-2022</p>	<p>"I graduated, after?" Activity-2022</p>
<p>Working as a Medical Personnel in Germany</p>	<p>Breastmilk Webinar with Current Evidence-2022</p>


	
<p>Europass Access to European Opportunities Event</p>	<p>Covid-19 with Yesterday, Today and Tomorrow online symposium -2022</p>
	
<p>Online Teaching Methods (http://w3.bilecik.edu.tr/ue/) (Bilecik Seyh Edebali University, Turkey)</p>	
	
<p>Remote meeting platform (http://toplanti.bilecik.edu.tr/) (Bilecik Seyh Edebali University, Turkey)</p>	

Additional evidence link (e.g. for videos, more images, or other files that are not included in this file):

- <http://w3.bilecik.edu.tr/ue/>
- <http://toplanti.bilecik.edu.tr/>
- <https://www.youtube.com/c/SigortaStrateji>

❖ Startups

Sustainability-related startups

No.	Information																																																																	
1	<p>Startup name: Recovery of treatment plant water Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): WR URL: Description:</p> <table border="1" data-bbox="276 548 1406 996"> <thead> <tr> <th colspan="5">START-UP-01</th> </tr> </thead> <tbody> <tr> <td>Start-up Name:</td> <td colspan="3">Recovery of treatment plant water</td> <td>Responsible:</td> </tr> <tr> <td>Problem Detection:</td> <td colspan="3">A total of 350 m³/day of treated water is discharged daily from our wastewater treatment plant, which was established in 2019. It aims to save domestic water by using the discharge water for irrigation purposes within the campus.</td> <td>Leader: Asos. Dr. Edip Avşar</td> </tr> <tr> <td>Project Purpose and Scope:</td> <td colspan="3">It is aimed to reduce the cost of well water by using the discharged water for irrigation. The scope of the project is to treat 5% of the daily discharged water and use it for irrigation purposes.</td> <td>Team Members: Eng. Faruk Ünlü, Asist. Dr. Adem Sarıhan, Asos. Dr. Şenay Balbay</td> </tr> <tr> <td>Goal and Benefits:</td> <td colspan="4">1- Discharge water will be recovered at a rate of 5%. 2- Water footprint will be reduced. 3- The cost of well water will be reduced by 1%.</td> </tr> <tr> <td>Cost:</td> <td colspan="4">calculating</td> </tr> <tr> <td>Earning:</td> <td colspan="4">calculating</td> </tr> <tr> <td>Activity Steps:</td> <td>Task/Activity</td> <td>Start</td> <td>End</td> <td>Actual</td> </tr> <tr> <td>1- Expanding and updating analysis parameters</td> <td>Planning</td> <td>1.9.21</td> <td>1.6.22</td> <td>10 Months</td> </tr> <tr> <td>2- Determining and supplying the equipment</td> <td>Preparation</td> <td>1.1.22</td> <td>1.6.22</td> <td>6 Months</td> </tr> <tr> <td>3-Integration of the filtration system into the treatment system</td> <td>Pilot Application</td> <td>1.6.22</td> <td>1.6.23</td> <td>12 Months</td> </tr> <tr> <td>4- Determination of usability by examining the quality of the filtered water</td> <td>Spread</td> <td>1.6.23</td> <td>1.6.24</td> <td>12 Months</td> </tr> <tr> <td>5- Use of water in line with the determined purposes</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Photos:</p> 	START-UP-01					Start-up Name:	Recovery of treatment plant water			Responsible:	Problem Detection:	A total of 350 m ³ /day of treated water is discharged daily from our wastewater treatment plant, which was established in 2019. It aims to save domestic water by using the discharge water for irrigation purposes within the campus.			Leader: Asos. Dr. Edip Avşar	Project Purpose and Scope:	It is aimed to reduce the cost of well water by using the discharged water for irrigation. The scope of the project is to treat 5% of the daily discharged water and use it for irrigation purposes.			Team Members: Eng. Faruk Ünlü, Asist. Dr. Adem Sarıhan, Asos. Dr. Şenay Balbay	Goal and Benefits:	1- Discharge water will be recovered at a rate of 5%. 2- Water footprint will be reduced. 3- The cost of well water will be reduced by 1%.				Cost:	calculating				Earning:	calculating				Activity Steps:	Task/Activity	Start	End	Actual	1- Expanding and updating analysis parameters	Planning	1.9.21	1.6.22	10 Months	2- Determining and supplying the equipment	Preparation	1.1.22	1.6.22	6 Months	3-Integration of the filtration system into the treatment system	Pilot Application	1.6.22	1.6.23	12 Months	4- Determination of usability by examining the quality of the filtered water	Spread	1.6.23	1.6.24	12 Months	5- Use of water in line with the determined purposes				
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2	<p>Startup name: Collection and evaluation of rainwater Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): WR URL: Description:</p>																																																																	

START-UP-02			
Start-up Name:	Collection and evaluation of rainwater	Responsible:	
Problem Detection:	The water requirement in our campus is met from groundwater. Problems that may occur by using rain water will be prevented in case the water table drops due to excessive withdrawal of groundwater.	Leader:	Asos. Dr. Edip Avşar
Project Purpose and Scope:	It is aimed to reduce the amount of groundwater use by harvesting rainwater. Determining the rain water potential, determining the water quality and determining the irrigation water usage rate are the scope of the project.	Team Members:	Eng. Faruk Ünlü, Asist. Dr. Adem Sarihan, Asos. Dr. Şenay Balbay
		Goal and Benefits:	
			1- Using 100% of rain water
			2- Contributing to the solution of water scarcity
			3- Water footprint reduction
			4- Reducing the amount of groundwater use by 10%
		Cost:	calculating
		Earning:	calculating
Activity Steps:		Task/Activity	Start End Actual
1- Storing rainwater by simple filtration		Planning	1.12.21 1.3.22 4 Months
2- Determination of the quality of rain water		Preparation	1.1.22 1.3.22 3 Months
3- Determination of the amount of collection in rain water		Pilot Application	1.3.22 1.6.23 15 Months
4- Ensuring the use of rain water as irrigation water		Spread	1.9.23 1.6.24 21 Months

Photos:



3 **Startup name:** Improvement of pet shelters on campus
Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): SI
URL:

Description:

START-UP-03			
Start-up Name:	Improvement of pet shelters on campus	Responsible:	
Problem Detection:	Our campus is a natural habitat for cats, dogs, squirrels and various bird species. It has been determined that the living and feeding areas of these animals in the campus are inadequate and not in accordance with the standards.	Leader:	Asist. Dr. Adem Sarihan
Project Purpose and Scope:	It is aimed to make the housing and feeding environments that are not suitable for the living standards of the animals adequate and optimum. The scope of the project is to determine suitable feeding points, to create and control feeding environments.	Team Members:	Technician Meral Yurt Asos. Dr. Şenay Balbay, Asos. Dr. Edip Avşar
		Goal and Benefits:	
			1- Maintaining the health of the animal population
			2- Raising awareness and raising awareness of people
		Cost:	calculating
		Earning:	calculating
Activity Steps:		Task/Activity	Start End Actual
1- Determination of nutrition points and determination of needs		Planning	1.11.21 1.2.22 4 Months
2- Procurement of necessary materials		Preparation	1.2.22 1.7.22 6 Months
3- Establishing feeding places by separating environments according to animal species		Pilot Application	1.8.22 1.11.22 4 Months
4- Health control and vaccinations		Spread	1.12.22 1.7.23 19 Months

Photos:



4

Startup name: Increasing the use of energy efficient LED lamps
Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): EC
URL:

Description:

START-UP-04			
Start-up Name:	Increasing the use of energy efficient LED lamps		Responsible:
Problem Detection:	It is to reduce energy consumption by replacing the lighting in existing buildings in our university with LED systems that consume less energy.		Leader: Eng. Harun Çınar
Project Purpose and Scope:	The aim of the project is to reduce the electricity consumption of our university. In this context, the rectorate and library buildings were selected for the pilot application. The scope of the project consists of making the lighting more ergonomic and reducing the cost of lighting by converting the lighting system to LED (36 W) in buildings.		Team Members: Eng. Özgür Çevik, Asist. Dr. Adem Sarihan Asos. Dr. Şenay Balbay, Asos. Dr. Edip Aşşar
Activity Steps:	1-Making measurements in buildings 2-Preparation of the business plan 3-Procurement of products 4- Changing the luminaires		Goal and Benefits: 1- Starting from the pilot buildings and applying it to other buildings 2-Reducing electricity consumption on campus 3-Longer life of the lighting system 4- Reducing the amount of waste lighting Cost: 3500 \$ Earning: Saving 162500W/year, aprox. 5000 \$
	Task/Activity	Start	End
	Planning	1.8.21	1.2.22
	Preparation	1.2.22	1.2.23
	Pilot Application	1.2.23	1.2.24
	Spread	1.2.24	1.2.25
			Actual
			6 Months
			12 Months
			12 Months
			12 Months

Photos:



5

Startup name: Dissemination of ecological fonts
Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): ED
URL:
Description:

START-UP-05			
Start-up Name:	Dissemination of ecological fonts	Responsible:	
Problem Detection:	In our university, exams are held in order to evaluate the knowledge of the students. Most paper and toner usage occurs in exams. Exam questions are given to the students in hard copy.	Leader:	Instructor Dr. Secil Demiray,
Project Purpose and Scope:	It is aimed to reduce the amount of paper and toner used in student information evaluation at our university. The scope of the study is to provide savings in paper and toner usage by using ecofont software in the unit where the exam papers are printed.	Team Members:	Asist. Dr. Adem Sarihan Asos. Dr. Şenay Balbay, Asos. Dr. Edip Aşar
		Goal and Benefits:	1- Saving about 10% in toner usage 2- Saving about 5% in paper usage 3- Raising awareness of people by raising awareness
		Cost:	No cost or 10-15 \$
		Earning:	At least 10% toner and 5% paper
Activity Steps:		Task/Activity	Start End Actual
1- Conducting surveys on students and staff		Planning	1.1.22 1.1.23 12 Months
2- Preparing with the exam questions printing unit		Preparation	1.1.23 1.1.24 12 Months
3- Performing the printing processes		Pilot Application	1.1.25 1.1.26 12 Months
		Spread	1.1.26 1.1.27 12 Months

Photos:



6 **Startup name:** Reducing the use of single-use plastic materials
Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): WS
URL:

Description:

START-UP-06			
Start-up Name:	Reducing the use of single-use plastic materials	Responsible:	
Problem Detection:	It is the reduction of disposable plastic cups used extensively by staff and students on campus.	Leader:	Asos. Dr. Edip Aşar
Project Purpose and Scope:	The aim of the study is to reduce the use of plastic cups by staff and students, to raise awareness about this issue and to make it a way of life.	Team Members:	Asist. Dr. Adem Sarihan Asos. Dr. Şenay Balbay, Instructor Dr. Secil Demiray
		Goal and Benefits:	1-Reducing the amount of plastic waste originating from the campus 2-raising awareness about the environmental damage of plastics 3-recovery of used glass 4-raising awareness of the zero waste system
		Cost:	3000 \$ (7000 glass cups)
		Earning:	The plastic waste will be reduced. Used glass will be recycle
Activity Steps:		Task/Activity	Start End Actual
1- Meeting with the company and determining the activity steps		Planning	1.10.21 1.10.22 12 Months
2-Preparation of necessary visual materials		Preparation	1.10.22 1.10.23 12 Months
3-Provision of promotional materials		Pilot Application	1.10.23 1.10.24 12 Months
4-Installing the stand		Spread	1.10.24 1.10.25 12 Months
5-The realization of the activity			

Photos:



7

Startup name: Raising awareness by collecting plastic caps**Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED):** WS, ED**URL:****Description:**

START-UP-07				
Start-up Name:	Raising awareness by collecting plastic caps	Responsible:		
Problem Detection:	The aim of the ongoing zero waste project in Turkey is to raise awareness for plastic waste in our university.	Leader:	Asos. Dr. Edip Avşar	
		Team Members:	Technician Hüseyin Temel, Asist. Dr. Adem Sarıhan Asos. Dr. Şenay Balbay	
Project Purpose and Scope:	The aim of the project is to disseminate zero waste practices in the university, to increase awareness and to realize social responsibility projects. For this purpose, plastic bottle caps will be collected and wheelchairs will be provided for those in need.	Goal and Benefits:	1- Providing wheelchairs within the scope of social responsibility 2- Raising awareness about the zero waste project 3- Ensuring waste disposal without harming the environment 4- Increasing awareness of green campus studies	
		Cost:	No cost	
		Earning:	A wheelchair	
Activity Steps:	1- Making plastic cap collection announcements 2- Collection of caps by club members at one point 3- Taking the collected covers to the wheelchair change point 4- Delivering the wheelchair to the needy	Task/Activity	Start	End
		Planning	6.1.00	1.7.21
		Preparation	1.7.21	1.9.21
		Pilot Application	1.9.21	1.9.22
		Spread	1.9.22	1.9.23
				Actual
				1 Months
				2 Months
				12 Months
				12 Months

Photos:

8

Startup name: Raising awareness by collecting waste oils**Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED):** WS, ED**URL:****Description:**

START-UP-08				
Start-up Name:	Raising awareness by collecting waste oils	Responsible:		
Problem Detection:	The aim of the ongoing zero waste project in Turkey is to raise awareness in our university for waste oils.	Leader:	Asos. Dr. Edip Avşar	
		Team Members:	Asist. Dr. Adem Sarıhan Asos. Dr. Şenay Balbay	
Project Purpose and Scope:	The aim of the project is to disseminate zero waste practices in the university, to increase awareness and to realize social responsibility projects. For this purpose, waste oil will be collected and a budget will be provided for green campus studies.	Goal and Benefits:	1- Raising awareness about the zero waste project 2- Ensuring the disposal of wastes without harming the environment 3- Providing financial financing for green campus studies	
		Cost:	No cost	
		Earning:	Calculating	
Activity Steps:	1- Making agreements with the waste oil collector company 2- Announcement of waste oil collection at the university 3- Collection of waste oils 4- Delivery of the collected oils to the waste oil collector	Task/Activity	Start	End
		Planning	1.9.21	1.6.22
		Preparation	1.1.22	1.6.22
		Pilot Application	1.6.22	1.6.23
		Spread	1.6.23	1.6.24
				Actual
				10 Months
				6 Months
				12 Months
				12 Months

Photos:



9

Start-up Name: Reducing the energy consumption of facade lighting

START-UP-09

Start-up Name:	Reducing the energy consumption of facade lighting	Responsible:	
Problem Detection:	A total of 108 wall washer fixtures are used in Bilecik Şeyh Edebali University. The power consumption of each luminaire is 65 watts. Considering that the system operates for 4380 hours per year, its annual consumption is 30,747.6 kW/hour.	Leader:	Assoc. Dr. Edip Aşar
Project Purpose and Scope:	In order to save energy, the luminaires will be disassembled and replaced with luminaires corresponding to the facades of the buildings. There are 24 luminaires, 12+12, on the front of the building. In its new state, when it is predicted that the system operates for 4380 hours a year, there will be a consumption of 3,784.32 kW/hour per year. The amount of energy savings to be achieved in a year as a result of the change is 26,963,28 kW/hour.	Team Members:	Eng. Harun CINAR, Assoc. Prof. Adem SARIHAN
Activity Steps:	1- Disassembly of materials 2- Supply and installation of new materials 3- Commissioning the system	Goal and Benefits:	1- Electricity consumption will decrease approximately 90%. 2- Carbon footprint will decrease 3- Depreciation period is calculated as 548 hours (1.5 months)
		Cost:	808 \$
		Earning:	6468.28 \$ (for 1 month)
		Task/Activity	Start End Actual
		Planning	1.11.22 1.6.23 7 Months
		Preparation	1.6.23 1.12.23 6 Months
		Application	1.12.23 1.6.24 7 Months

Photos:



10

Start-up Name: Separate collection of electrical and electronic wastes of students and staff on campus

START-UP-10							
Start-up Name:	Separate collection of electrical and electronic wastes of students and staff	Responsible:					
Problem Detection:	Collecting and recycling electrical and electronic wastes from the homes of students and staff outside the university	Leader:	Assoc. Dr. Edip Avsar				
		Team Members:	Eng. Harun CINAR, Assoc. Prof. Adem SARIHAN				
Project Purpose and Scope:	The bulbs and fluorescents used in our university, and electrical and electronic wastes are collected separately on campus; however, there is no such order in our city. For this reason, it is aimed to bring these wastes generated in the homes of the staff and students to the school and ensure their recycling.	Goal and Benefits:					
			1- Collection of household waste outside of school and disposal in an environmentally friendly manner.				
			2- Income from wastes other than fluorescent and light bulbs				
			3- Using the income obtained in other activities that will increase recycling				
		Cost:	0 \$ (Necessary materials will be obtained from AGID association)				
		Earning:	500 \$ (electricity will be earned from the sale of electronic waste)				
Activity Steps:		Task/Activity	Start	End	Actual		
1- Preparation and announcement of the project		Planning	1.11.22	1.6.23	7 Months		
2- Reviewing the boxes in the units, completing the deficiencies		Preparation	1.6.23	1.12.23	6 Months		
3- Collection of waste and sending it to contracted companies for recycling		Application	1.12.23	1.6.24	7 Months		

Photos:



11

Start-up Name: Reducing carbon footprint by increasing combustion efficiency in university boilers

START-UP-11							
Start-up Name:	Reducing carbon footprint by increasing combustion efficiency in university boilers	Responsible:					
Problem Detection:	There is fuel consumption in the boilers of our university for heating purposes. When boilers do not burn efficiently, fuel consumption and carbon footprint increase.	Leader:	Assoc. Dr. Edip Avsar				
		Team Members:	Eng. Faruk ÜNLÜ, Lecturer Seher SARI, Eng. Veli ARSLAN				
Project Purpose and Scope:	The aim of the project is to regularly monitor combustion efficiency by regular flue gas measurements in boilers. In this context, the factors that may cause low efficiency will be determined and the boilers will be burned more efficiently. Thus, fuel consumption and heating costs will decrease. In addition, air quality modeling will be made with the data obtained, and the effect of heating activities on campus air quality will be investigated.	Goal and Benefits:					
			1- Kazanlar daha verimli yanacaktır				
			2- Karbon ayakizi azalacaktır				
			3- Yakıt miktarı azalacak, kampüs hava kalitesi artacaktır				
		Cost:	1100 \$				
		Earning:	10000 \$ (for 1 year)				
Activity Steps:		Task/Activity	Start	End	Actual		
1- Supply of necessary materials and air quality modeling program		Planning	1.11.22	1.6.23	7 Months		
2- Maintenance and calibration of the flue gas measurement device		Preparation	1.6.23	1.12.23	6 Months		
3- Measurement, data acquisition and modeling work		Application	1.12.23	1.6.24	7 Months		
4- Interpreting the obtained data, detecting the faults and applying corrective and preventive measures							

Photos:

