



MUĞLA SITKI KOÇMAN UNIVERSITY

SUSTAINABLE CAMPUS REPORT

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PREFACE

Rapid urbanization, industrialization and population growth on a global scale result in serious environmental problems in recent years. The Sustainable Development Goals Report (2016), developed by the United Nations (UN), highlights the points, where measures should be taken for these sustainability-based environmental problems, but these measures have a positive widespread effect on a global scale only through individual awareness. As Muğla Sıtkı Koçman University, we know that this problem can be overcome through a scientific sustainability understanding and a comprehensive and planned cooperation. We work diligently to ensure that our campus settlement, infrastructure, energy, water resources and transportation are sustainable. For this reason, all the steps we take while making new plans get the speed from the understanding of sustainability and aim to be in harmony with nature. Today, our university has gained a significant momentum by creating an important infrastructure for its "Sustainable Green Campus" goals.

In this context, firstly; In 2018 – 2019 term, we opened our Temporary Storage Centre for Hazardous Waste and completed our Open-Air Cinema and recreation area in front of the Faculty of Engineering for the use of our students and staff. We established the Sustainable Green Campus Coordination Office, in line with the Sustainable Development Goals in September 2020. Subsequently, we published our “Sustainable Green Campus Policy” document in the fields of Energy and Climate Change, Water, Waste and Transportation to reduce our ecological footprint.

In order to achieve our **Zero Waste Goals**, we organize awareness trainings with the contribution of academicians working at our university and in different ones of our country and we inform our staff and students about the sustainable environment within the scope of our online **Sustainability Awareness Speeches** once a week. Following these events, we share the speeches on our website yesilkampus.mu.edu.tr and our *MSKU greencampus* YouTube channel. In order to reduce the amount of waste generated in the campus, we established the Zero Waste Management Unit under the Sustainable Green Campus Coordinatorship. In this sense, we see that the sustainable infrastructure required for UI Green Metric application, which is among the strategic targets of our university, has been established.

As a result of all these goals and activities, we believe that students, who graduate from our university will be a role model in their social lives as having environmental consciousness and being sensitive individuals. As Muğla Sıtkı Koçman University, we will keep to continue our motivation to leave an environmentally friendly campus heritage with a high quality of life to the next generations and to graduate with this consciousness by always moving one step further. As a matter of fact, the report you are reading now is a summary of the work we have carried out with great care so far and shed light on the steps we will take in the future.

Muğla Sıtkı Koçman University

Prof. Dr. Hüseyin Çiçek

Rector

ACKNOWLEDGEMENT

On behalf of Muğla Sıtkı Koçman University, I would like to express my gratitude to the members of the Sustainable Green Campus Commission who have worked hard in the preparation of this report and in the all steps of process reaching this point, to the Legal Consultancy and Legislation Commission which supports the establishment of the Sustainable Green Campus Coordinatorship, to Heads of the Construction and Technical Affairs and the Administrative and Financial Affairs and their teams who provide support at every point needed.

Muğla Sıtkı Koçman University
Prof. Dr. Hüseyin Çiçek
Rector

INTRODUCTION

Muğla Sıtkı Koçman University was established in 1992 as a state university with four proposed faculties: The Faculty of Arts & Sciences and Humanities, the Faculty of Economics and Administrative Sciences, the Faculty of Technical Education and the Faculty of Fisheries. Mugla School of Management, founded in 1975, originally affiliated with the Ankara Academy of Economics and Administrative Sciences, was the first higher education institution in Muğla. It then became the first faculty of Muğla Sıtkı Koçman University upon its establishment. In addition, Muğla Vocational School, founded in 1989 as part of Izmir Dokuz Eylül University, joined Muğla University.



Figure 1: The General View of Muğla Sıtkı Koçman University, Kötekli (Main) Campus

When first founded, the aim of the university was to support contemporary instruction and research in various areas of the social, natural, and pedagogical sciences, as well as the arts and humanities, in conjunction with vocational training. At that time, Muğla Sıtkı Koçman University had only 1,128 students in one department and three programmes. Over the past 20 years, the university has grown to include nine faculties, three graduate schools, four schools, nine vocational schools, and thirteen research and application centres:

1993: Muğla Sıtkı Koçman University officially initiated academic activities with two active faculties and one vocational school.

1994: Ula Vocational School and Ortaca Vocational School opened their doors.

1995: Milas Vocational School and the School of Physical Education and Sports joined the university.

1997: Muğla School of Health and the Faculty of Technical Education welcomed their first students.

1998: Fethiye Vocational School began academic activities.

1999: Dalaman Vocational School was founded.

2001: The Faculty of Education and School of Tourism and Hotel Management began academic activities.

2002: Fethiye School of Health opened its doors.

2004: The Faculty of Fine Arts, the Faculty of Fisheries, and Yatağan Vocational School were founded.

2005: The School of Foreign (add) Languages was founded.

2006: The Faculty of Engineering and Datça Vocational School were founded.

2007: The Faculty of Medicine joined the university.

2010: The Faculty of Arts & Sciences and Humanities was divided into two faculties: The Faculty of Science and the Faculty of Letters and Humanities.

2011: The Institute of Health Sciences, Bodrum Maritime Vocational School and İçmeler Tourism Vocational School were founded.

2012: The Faculty of Theology was founded.

2014: The Faculty of Business, Fethiye was founded.

2015: Milas Faculty of Veterinary Medicine and The Fethiye Faculty of Agriculture were founded.

2016: Kavaklıdere Şehit Mustafa Alper Vocational School was founded.

2017: Dalaman School of Civil Aviation and The Faculty of Dentistry were founded.

2018: The Faculty of Architecture and Seydikemer School of Applied Sciences were founded.

Since its establishment, Muğla Sıtkı Koçman University has been in pursuit of quality higher education and research in order to contribute to the sociocultural, scientific, and technological development of Turkey. Developing a systematic and comprehensive education programme for the thorough dissemination, discovery, and application of knowledge requires a competent infrastructure. As such, Muğla Sıtkı Koçman University embarked on a fast advancement and investment project in 1994. The benefactor of the university, Sıtkı Koçman, whose financial contributions to education deserve great admiration, has also supported this push for growth.

Today, Muğla Sıtkı Koçman University encompasses a two million square metre campus surrounded by a spectacular mountain view and smaller university sites and schools across the province. Currently, the university services over 32,000 students and employs over 1,300 full time academic staff. Due to the support of Sıtkı Koçman, the name of our institution, which was Muğla University until 2012, was changed to Muğla Sıtkı Koçman University with the decision published in the Legal Gazette dated 31 May 2012 and numbered 28309.

A Sustainable Green Campus Coordinatorship has been established throughout the University in line with the Sustainable Green Campus studies, and the relevant management board is in Figure 2. A Zero Waste Management Unit has been established under the Sustainable Green Campus Coordinatorship, and this unit coordinates subgroups of 1 Academic and 1 permanent / contracted staff responsible for waste collection, together with the Waste Managers assigned in each building within the campus.

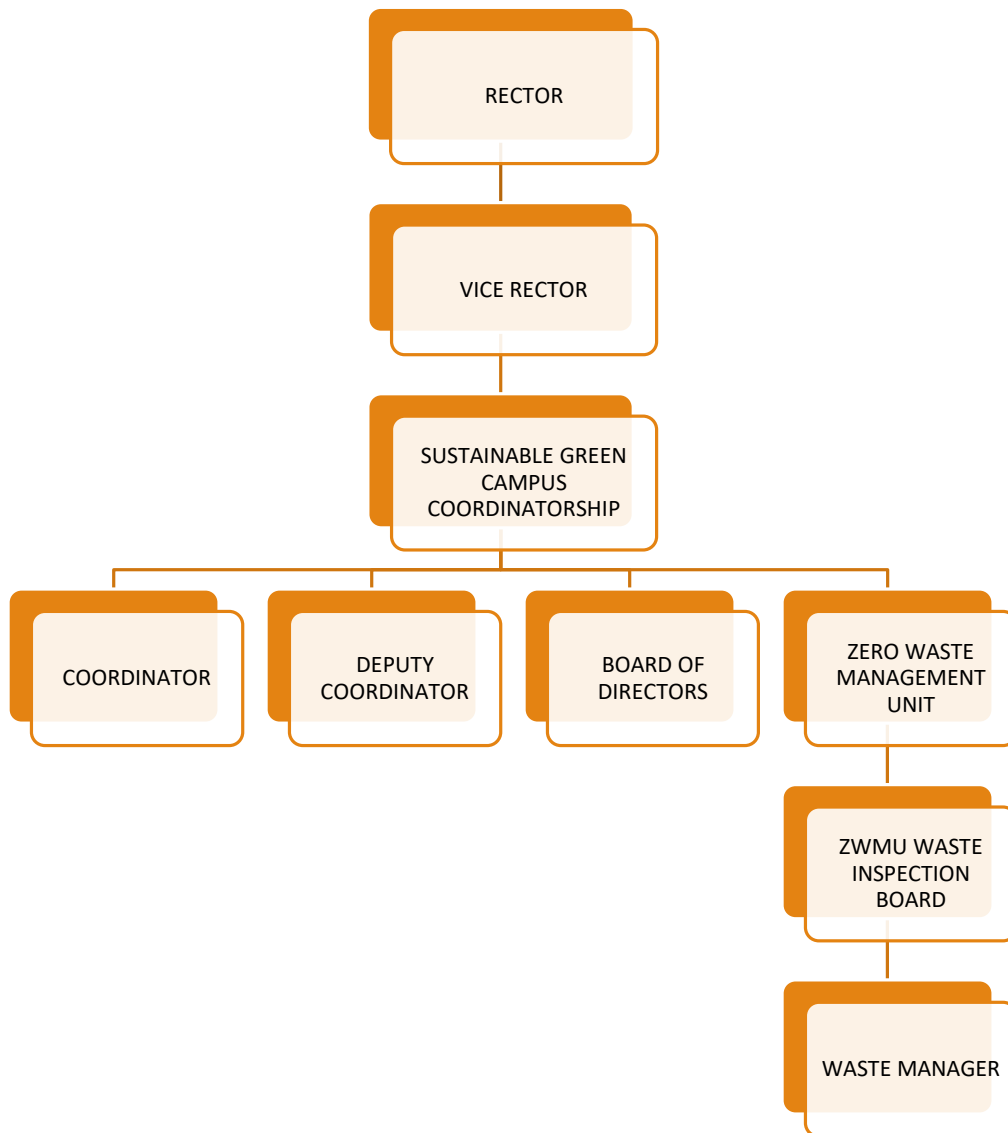


Figure 2: Sustainable Green Campus Coordinatorship and Management Board

1. THE CAMPUS SETTLEMENT and INFRASTRUCTURE

As of 2020, there are **22,887** enrolled students, **871** academic staff and **773** administrative staff on the Main (Kötekli) Campus of our university in Muğla Menteşe, Kötekli, and its academic buildings on campus is built on a closed area of **70,141 m²**. The map of Kötekli Campus is given in Figure 3. The data in this report has been prepared with a focus on the Main Campus.

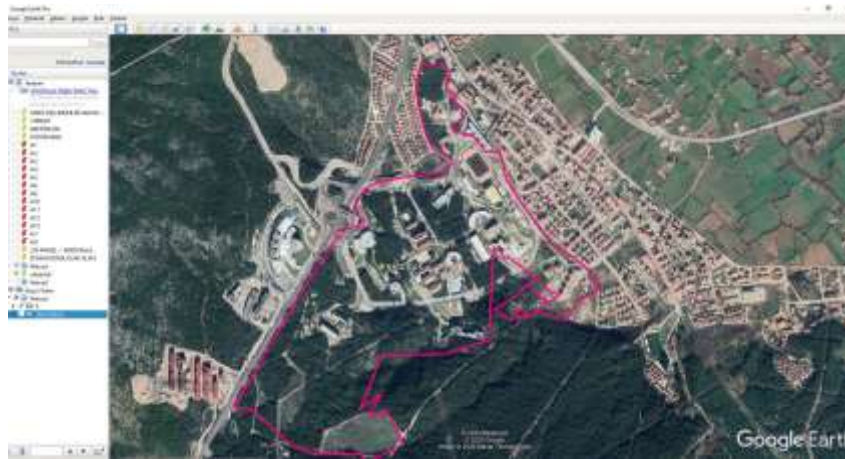


Figure 3: Muğla Sıtkı Koçman University, Kötekli (Main) Campus
(<https://harita.mu.edu.tr/>)

Muğla Sıtkı Koçman University is currently serving with 21 faculties, 4 institutes, 3 colleges, 16 vocational schools, 48 research and application centres and 44,607 students, 1608 teaching staff and 827 administrative staff on a 208,000 square meter closed area (Figure 4).



Figure 4: Muğla Sıtkı Koçman university Campuses (<https://harita.mu.edu.tr/>)

Muğla Sıtkı Koçman University is a comprehensive institution that provides undergraduate, master and doctoral education. The region where the university is located is in the Mediterranean climate zone. There are 18 campuses in different locations. The Main (Kötekli) Campus is located in Menteşe district (City Centre), Kötekli neighbourhood.

The residential area information of our university's central campus in Muğla Menteşe, Kötekli is given in Table 1. Within the framework of this information, the total area where education and training activities are carried out (including buildings such as rectorate, administrative, student and personnel affairs) is 366,440 m² (excluding the Forest Area). The total campus area is 1,224,169 m². The total open area on the campus is 296,298 m², and the ratio of the open area to the total area is 81%. The ratio of forest area to campus area is %64. The ratio of the landscape area on the campus to the campus area is 19.8%. The area inside the campus, excluding forest and landscape areas, where rainwater is absorbed, is 296,298 m² and represents a rate of 24 %. The total open area per person is 12,1 m².

Table 1: MSKU Campus Area Info (m²)

Campus Area	1,224,169
Total Closed Area	165,077
Total Ground Floor Area	70,141
Forest Area	785,289
Landscape Area	72,440
Total Road and Parking Lot Area	168,652
Others	130,646

The 3-year average budget of our university, including the infrastructure, construction, maintenance and employee salaries for sustainability related works, is \$ 419.887. The total 3-year average budget, given in the 2019 annual report, is \$ 35.135.000. The budget rate spent for sustainability studies is 1,2% for the last 3-year average.

2. THE CURRENT STATE OF THE UNIVERSITY

In this section, the current situation of our university in terms of UI GreenMetric parameters is investigated.

2.1 Energy and Climate Changes

Muğla Sıtkı Koçman University evaluates energy and climate change issues from various perspectives. Over the years, by replacing existing lighting elements with energy efficient lighting systems and replacing office equipment with energy efficient equipment with *Energy Star* rating, our electricity consumption has been reduced with our transmission infrastructure, developed for higher efficiency. The inventory information of the total and energy efficient devices on the campus is given in Table 2.

Table 2: The inventory information of the total and energy efficient devices on campus

Appliances	Total Number	Total number of energy efficient appliances	Percentage
Led	26,179	6,223	23.8
Air conditioners	291	69	2.7
Office equipments	2,694	2,402	89.2
		Total percentage	%29.8

We are aware that another aspect of addressing energy and climate change is not just how we use energy, but also how energy is produced. Thus, we installed a fixed PV system in one of our main campus buildings and a restaurant within the main campus. Over the years, we have increased their capacities by replacing them with higher capacity PV panels. In addition, we have diversified our renewable energy generation by installing a wind turbine system whose capacity will be increased in the near future. Photographs of the solar panels and wind tribune in the campus are given in Figure 5. Our annual energy amount generated from renewable energy in the campus is 152,523 kW-hour.

We are aware of the fact that in order to help our planet to battle against climate change we must also consider diminishing our carbon footprint as much as we can. In this regard, we made improvements in the thermal insulation of our building so that we can reduce the amount of

fossil-fuel consumption, added speed bumps to slow down speed on our campus, replaced old heating systems with efficient ones. In Figure 6, examples of buildings that have Energy Efficiency Certificate are given on the campus. This certificate has been received at our five campus buildings.



Figure 5: PV and Wind Energy Systems

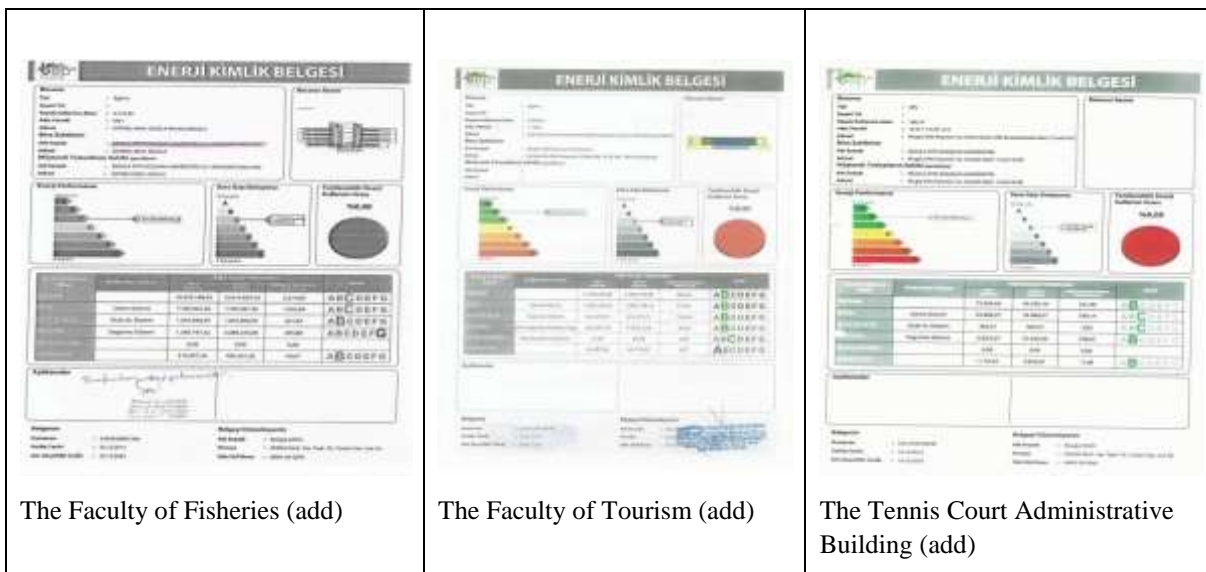


Figure 6: Energy Efficiency Certificates of Some Buildings on Campus

We improved our bicycle roads within our campus and we constantly encourage our students and staff to use bicycle in commuting within and outside of campus so that each and every one of us can contribute to this effort. (Figure 7).



Figure 7: Bicycle Path on Campus and Cycling for a Healthy Life

Details of the buildings with smart building applications in our campus are given in Table 3. The total area of the buildings with smart building equipment in the campus is 48,522 m². The ratio of buildings with smart building applications to total building areas is 29.4%.

The calculated carbon footprints of Kötekli Campus for electricity, cars, shuttles and motorcycles are 5021.0, 3.5, 361.9 and 16.7 metric tons and the total is 5403 metric tons. The carbon footprint of a person on the Kötekli campus is 0.22 metric tons/person.

As of being a higher education institute we realize that the students must be an essential part of any energy and climate change effort. Hence, by student organizations and clubs they reach to public, socialize and foster the understanding of energy and climate change on a wider scale.

The total electricity usage on the main campus is 5,976,986 kW-hours, and the electricity consumption per capita is 243.65 kW-hour.

The amount of energy obtained from renewable energy is 152,523 kW-hour, corresponding to 2.6% of the total energy consumption.

Table 3: MSKU SMART Building Implementations

No	Name	Automation		Safety				Energy		Water		Indoor Environment				Lightning				Building area (from 1.6&1.7) (m ²)
		B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	Rectorate Building	X	-	X	X	X	-	-	-	-	-	-	-	-	-	X	X	X	X	7,721
2	Main Library	-	-	-	X	X	-	-	-	-	-	X	-	-	-	X	X	-	X	6,770
3	Atatürk Cultural Center	X	-	X	-	X	-	X	X	-	-	X	-	-	-	X	-	-	X	7,336
4	Research and Application Centre for Research Laboratories	X	-	-	X	X	-	-	X	-	-	X	-	-	-	X	-	X	X	16,178
5	Fine Arts Education Faculty	X	-	-	X	X	-	-	-	-	-	-	-	-	-	X	-	X	X	4,642
6	Tourism Faculty	-	-	-	X	X	-	-	-	-	-	-	-	-	-	X	X	X	X	5,875
7	All Other (non-smart) buildings																			116,555

At the Muğla Sıtkı Koçman University we aim to apply strict formal programs to further reduce greenhouse gases emissions in all scopes of UI GreenMetric greenhouse gas reduction program section. All academic and administrative personnel of the university have been formally informed by the Rectorate about reducing the use of university-owned vehicles and maximizing the number of occupancies in the need of using one. Over the years we reduced the amount of purchased (fossil-fuel based) electricity by increasing the capacity of PV systems in our campus. University has ‘0 waste’ policy, ‘Paper and Plastic reduction program’. The university has signed waste purchasing agreement with municipality of Muğla. We constantly encourage our students and all university personnel to prefer bicycle within our campus and city by forming activities such as giving-away free bicycles and participating bicycle tournaments. We also improved our bicycle road infrastructure in our main campus. All personnel of the university have been formally informed by the Rectorate not to prefer air travel unless necessary.

2.2 Waste

In line with the Zero Waste Regulation, a Sustainable Green Campus Coordinatorship has been established to reduce our ecological footprint and a Zero Waste Management Unit has been created under the Coordinatorship. The Zero Waste Management Unit coordinates subgroups

consisting of an Academic / Administrative and a permanent / contracted staff responsible for the collection of waste, together with Waste Manager assigned at each unit. Coordinatorship Directive is given in Appendix-1.

During the transition to the zero waste management system, a feasibility study was carried out in order to know the current situation in waste management throughout the university and to determine the needs required for the establishment of the system. The lack of the Zero Waste bins in the units have been reviewed. Works have been initiated to place new waste bins where there is a lack of them. In Figure 8, a sample photograph of the Zero Waste Bins placed in the Campus is given.



Figure 8: Example of Zero Waste Bins Placed on Campus

Information on 1-year waste amount and its characterization in the campus is given in Table 4. In addition to this table, 27.9 tons of used paper was given to the licensed recycling company this year. The amount of paper recycled is 3.6%.

Our programmes aiming to reduce the paper and plastic consumption in the campus are given in Figure 9 and Figure 10. Printers that operate over the network and whose use is restricted to reduce paper consumption, electronic document management system for official correspondence, course management platform that enables lessons to be conducted with less output, informative posters for reducing paper and plastic consumption, and MSKU Sustainable Campus Policy document adopted to reduce our ecological footprint, are programmes that aim to reduce the consumption of paper and plastic waste within the campus.







 	
<p>1 – EBSY (Electronic Correspondence Management System) DYS (Course Management System)</p>	<p>2- Network Printers and Limited Use Program for Staff</p>

Figure 9: Examples of programmes for Reducing Paper Waste Consumption on Campus

	
<p>3 – Poster for Plastic Consumption Reduction</p>	<p>4 – Poster for Paper Consumption Reduction</p>
	

5- Muğla Sıtkı Koçman University Sustainable Campus Policy Document

Figure 10 : Examples of Programmes for Reducing Paper and Plastic Waste Consumption on Campus

A study has been carried out on the amount and characterization of waste in order to be able to realize the Waste Management within the campus in a planned manner and to be able to obtain the Zero Waste Certificate issued by the Provincial Directorate of Environment and Urban Planning. Table 4 was obtained as a result of this study.

In order to achieve our Zero Waste goals, we organize awareness trainings with the support of our professors both inside and outside the campus. We inform both our staff and students about the sustainable environment through our online Sustainability Awareness Speech held once a week. We share these events on our website (yesilkampus.mu.edu.tr) and YouTube channel (MSKU greencampus). The sustainable infrastructure required for UI GreenMetric applications, which is among our strategic goals, has been established.

Table 4: Waste Amount and Characterization (ton/month)

Waste Characterization		Summer	Winter
Recyclable Wastes (%)	Glass	4.17	6.67
	Metal	4.17	6.67
	Paper / cardboard	12.50	15.80
	Plastic	16.70	37.50
	Sum	37.50	66.70
Other Wastes (%)	Medicine Waste		
	Vegetable Oil Waste	0.33	0.83
	Battery Waste	0.17	0.34
	Textile Waste	-	-
	Electrical and Electronic Equipment	1.00	1.00
	Bulky Waste	2.00	2.00
Biodegradable Waste (Kitchen waste, garden waste) (%)		5.83	6.67
SUM		44.83	75.5

The corridor lengths of the buildings in the campus were calculated, and with this preliminary study, the number of Zero Waste bins and m² of the Temporary Waste Warehouse closed area were decided. The layout plan and architectural details of the temporary waste warehouse planned to be built are given in Figure 11. License studies are about to be completed.

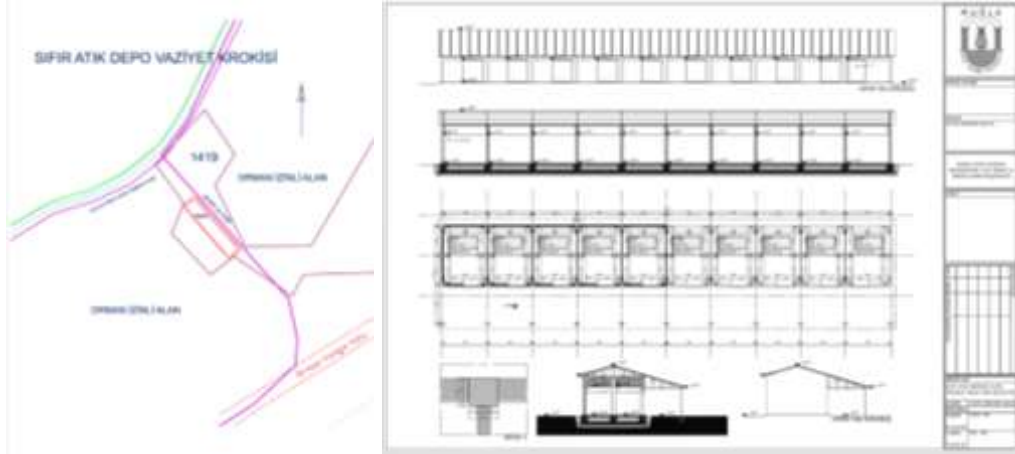


Figure 11: Temporary Waste Storage Layout Plan and Architectural Details

Hazardous wastes, which are not managed, are disposed of through certified companies. The photo of the Hazardous Waste Warehouse is given in Figure 12. Hazardous wastes are classified in this warehouse and stored in a way to eliminate the possibility of any flow and leakage, and they are disposed of through companies that have agreements with the Ministry of Environment and Urbanization approved certificates.



Figure 12: Hazardous Waste Warehouse

Muğla Metropolitan Municipality is responsible for the treatment and disposal of sewage and the university does not have its own waste water treatment facility. Conventional Wastewater Treatment Facility belonging to the municipality is given in Figure 13.



Figure 13: Muğla Conventional Wastewater Treatment Facility

Feasibility studies and soil and material analyzes were carried out in order to convert the wastes obtained from pruning, lawn mowing and landscaping within the campus into compost and reuse them as fertilizers. Compost production will be started within the campus together with the shredder and mixer equipment to be purchased. Around 60 tons of plant waste is generated annually.

2.3 Water

We are aware that water resources should be protected and used sparingly throughout the university, and for this reason, rain water collected within the University reaches the groundwater through a separate channel. There is no Waste Water Treatment Facility belonging to the University, however, correspondence is being made with the Municipality to use the treated greywater for irrigation of the landscapes in the campus. There are a total of 1219 taps in the lavatories and 1356 taps in the toilets, and 160 of these taps are energy efficient (Figure 14). We use 6.6% efficient taps. We have started feasibility studies for water harvesting. Due to the permeability of the area where the university is located, rain water easily reaches underground waters. In Figure 15, there is a photograph of the drainage system that enables rain water to reach groundwater without joining the sewage. Water-saving irrigation methods are used in irrigation.



Figure 14: Water Saving Taps and Irrigation System on Campus



Figure 15: The Drainage System Separating the Rain Water from the Sewage on the Main (Kötekli) Campus

2.4 Transportation

We also examined the current situation in the field of transportation to reduce our carbon footprint in order to become a sustainable campus. The total number of vehicles belonging to the university in the Central (Kötekli) Campus is 44. The daily number of vehicles entering the Main (Kötekli) Campus is 1300 and the number of motorcycles entering daily is 120. Total vehicle per person is 0.06. This is a value that shows that our carbon footprint is low. Muğla Metropolitan Municipality organizes shuttle services to the university and increases the number when needed. There are currently 5 lines / 140 trips. Average number of passengers per trip is 23. Each service makes 28 trips a day. There are zero emission vehicles supported on campus and the average number of vehicles entering the Main (Kötekli) Campus is 50 per day. The rate of the total number of zero emission vehicles per person is 0.0021. Except for the staff, those who want to enter the campus use Gate 'A'. In our Main (Kötekli) Campus, there is pedestrian and bicycle passenger priority (Figure 16). We have bumps that keep the speed limit at 30 m/s in places, where we have bicycle paths and pedestrian priority. It is compulsory on campus to give way to pedestrians and to wear seat belts. Parking of vehicles on sidewalks is prohibited and drivers must obey the rules. Our total parking area is approximately 8000 m². Total parking area is less than 1% of the total campus area. The programme to limit and reduce the parking

areas is under preparation. Measures have been taken to consider disabled passengers on pedestrian roads. The approximate daily travel distance of a vehicle within the campus has been calculated as 2 km.

	
New Service Line	Free bike for students
	
Speed bump	Warning sign for guest vehicles
	
Bicycle path	Pedestrian path

Figure 16: Examples of transportation arrangements within the Main (Kötekli) Campus

2.5 Education and Research

Ensuring the continuity of sustainability activities in the Main (Kötekli) Campus will only be possible with the positive contributions and awareness of staff and students. In this context, the content and continuity of training activities are important to increase the level of awareness. Therefore, the first training about waste management was carried out by the Provincial Directorate of Environment and Urbanization on September 1, 2020 at the beginning of this period. Waste Managers, consisting of a total of 110 people assigned to each building,

participated in this event. (Table 5). Table 5 shows the activities carried out since the beginning of the term and the number of participants.

The number of courses about sustainability opened in the Main (Kötekli) Campus is 1192. Total number of courses is 34816. The total budget for sustainability studies within the research budgets is \$ 231600 and it is 9.54% of the total research budget. The average of the publications related to sustainability studies published with the support of research published in 3 years is more than 300. The annual average of the activities carried out in the last 3 years is 28.33. We have an active web page of our university (yesilkampus.mu.edu.tr, Figure 17). The posters of some of these activities are given in Figure 18. Research and studies related to Sustainability activities carried out on campus are reported annually on our website. The total number of student clubs established related to Sustainability and Environment is 29. In the regard of this report, the process is monitored, the problems are identified and the strategy to be followed for the next year, the targets to be achieved and the implementation policies are determined.



Figure 17: Our Sustainable Green Campus website (yesilkampus.mu.edu.tr)



Figure 18: Some of the events held between 2019-2020

Table 5: Sustainable Green Campus Coordinatorship Events Calendar

Muğla Sıtkı Koçman University					
Sustainable Green Campus 2020 Events Calendar					
Tarih	Gün	Saat	Konu /Başlık	Etkinlik Türü	Kişi / Kişiler
1.09.2020	Tuesday	13:30	Zero Waste Training	Webinar	Çevre ve Şehircilik İl Müdürlüğü
9.09.2020	Wednesday	13:00	Sustainability	Webinar	Araş. Gör. Dr. Vesile Hatun Akansel
9.09.2020	Wednesday	13:15	Carbon Footprint Application	Webinar	Çağrı ÇiftçiHande HayranHalil Ceylan
18.09.2020	Friday	13:00	Byqee - Electrical Bicycle	Webinar	Emine İlhan
22.09.2020	Tuesday	13:00	Sustainable Development	Webinar	Dr. Onur Yıldız
6.10.2020	Tuesday	13:00	Sustainable Tourism	Webinar	Araş. Gör. Dr. Nur Çelik İlal
16.10.2020	Friday	13:00	Turkey's Eco Efficiency	Webinar	Prof. Dr. Aylin Çiğdem Köne
23.10.2020	Friday	13:00	What is Sustainable University? UK Examples	Webinar	Dr. Öğr.Üyesi Güliz Karaarslan Semiz
26.10.2020	Monday	13:00	Consumption in Sustainable Life and Critical Approaches	Webinar	Dr. Öğr.Üyesi Damla Özer
3.11.2020	Tuesday	13:00	Carbon Footprint	Webinar	Doç.Dr. Oğuz Özdemir
09.11.2020	Monday	13.00	Mugla Pollution Map	Webinar	Doç. Dr. Muhammet Mustafa ALPARSLAN
13.11.2020	Friday	11:00	Eco Villages	Webinar	Dr. Deniz Dinçel
16.11.2020	Monday	13.00	MSKU Campus Garden	Webinar	Arş. Gör. Naz Fulya ÖZKARABACAK
24.11.2020	Tuesday	13:00	Sustainablity and Organic Agriculture	Webinar	Prof. Dr. Mehmet Marangoz
8.12.2020	Tuesday	13:00	Sustainable Cities	Webinar	Doç. Dr. Doğan BIÇKI
Event Details:					
Website:	yesilkampus.mu.edu.tr				
Youtube:	MSKU greencampus				
	https://www.youtube.com/channel/UCdxS_dqJYciWAOglupTxQkA				

3. STRATEGY, TARGET AND POLICIES

In this part, activities and actions related to sustainability sub-items are planned regarding the current situation in the Main (Kötekli) Campus.

3.1 Energy and Climate Changes

Research projects will be carried out in order to make more use of renewable energy sources to reduce our carbon footprint. The policies stated in the Sustainable Campus Policy Document have started to be implemented as programmes and their widespread impact will be observed in the next year. The section on Energy and Climate Change in the Policy Document is given below. In addition to these policies, an informative and recommendative programme will be handled to encourage the University staff to prefer other alternatives instead of air travel unless it is mandatory.

In this context, the relevant articles in the Policy Document are given below and each item will be an implementation programme.

The policy on reduction of energy consumption and meeting energy needs through renewable resources

Article – (1) Office computers and office equipment such as printer scanners, lighting and air conditioning devices are to be switched off when not in use.

Article – (2) Power management features of all compatible devices shall be enabled.

Article – (3) International energy efficiency standards shall be complied with in the construction and management of buildings.

Article – (4) The design of new buildings shall include an energy life cycle assessment.

Article – (5) Energy measurement and monitoring systems shall be taken into consideration in the design of new buildings.

Article – (6) If budget and time constraints permit, the energy needs of buildings and mechanical systems shall be provided through on-campus production.

Article – (7) In meeting the energy needs on campus; alternative sources such as solar (thermal and photovoltaic), wind, biomass and methods such as cogeneration and energy recovery shall be used when and where possible.

Article – (8) As far as budget and time constraints permit, on-campus lighting elements shall be replaced by energy efficient technologies.

Article – (9) Lighting levels should be at the minimum comfort level condition determined by international standards.

3.2 Waste

Although it is our priority strategy to create an inventory of the wastes generated in the campus, the studies of Zero Waste Certificate required by the Ministry of Environment and Urbanisation will be used to achieve this. A work schedule focused on separation at source, reducing usage and recycling is created. This work schedule will be supported by awareness trainings and consumption reduction programmes.

As a result of all these goals and activities, it is aimed that students_who graduate from our university_will be role models as sensitive individuals with high environmental awareness in their social life.

Table 6: Short and Long Term Goals

	Goals Through Transfer to the Zero Waste System (%)			
Years	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2020	-	-	-	10%
2021	20%	30%	40%	50%
2022	60%	65%	70%	75%
2023	80%	85%	90%	100%

In this context, the relevant articles in the Policy Document are given below and each item will be an implementation programme.

The policy to stop the consumption of paper / foam / plastic / aluminum disposables and plastic bags within the Campus

Article – (1) The use and sale of disposable foam / plastic plates, forks, spoons, knives in canteens, restaurants and kiosks in Muğla Sıtkı Koçman University Campus (except in unavoidable situations such as epidemics or pandemics) has been terminated.

Article – (2) Informative and encouraging training is provided to university staff and students for the use of containers that do not harm the environment and human health.

Article – (3) Each unit should encourage its staff, students, and customers to use their own reusable thermos, glass and storage containers and tote bags.

Article – (4) All correspondence is conducted through the "Electronic Document Management System" and unofficial correspondence or documents are printed double-sided.

Article – (5) Course documents to be shared with students are shared through the University's "Course Management System" or other online methods. Lessons are taught in a way that students need minimum printed output.

Article – (6) At any meetings to be held at the university, food and beverage refreshments are provided in reusable and refillable utensils instead of disposable plastic containers (except in unavoidable situations such as epidemic or pandemic diseases).

3.3 Water

It is planned to allocate a budget for the use of water-saving devices to reduce water consumption and to replace them when necessary. A protocol will be signed with Muğla Menteşe Municipality for the irrigation of the landscape areas with the greywater obtained by the treatment of the sewage by the municipality. In this context, the relevant articles in the Policy Document are given below and each article will be an implementation programme.

The policy on reducing water consumption and meeting water needs through renewable resources

Article – (1) The regular maintenance of water installations shall be carried out to detect and repair leaks.

Article – (2) The necessary jobs of work shall be carried out to save water in on-campus water consumption by using greywater.

Article – (3) The necessary work shall be carried out for the use and preference of taps that will reduce water consumption.

3.4 Transportation

Research, development and feasibility studies will be carried out for transportation alternatives using renewable energy sources to increase the number of zero emission vehicles in order to increase the number of zero emission vehicles per person within the campus. Awareness and information programme will be held for staff and students to use shuttle vehicles and buses. The precautions to limit the use of private cars on campus will be determined and their applicability will be investigated. In this context, the relevant articles in the Policy Document are given below and each article will be an implementation programme.

The policy for sustainable transportation

Article – (1) The traffic within the campus shall give priority to the right of way of pedestrians. The necessary improvements shall be made to ensure that pedestrian paths and pavements are safe, comfortable and disabled-friendly.

Article – (2) The necessary infrastructure improvements shall be carried out to expand the use of bicycles and other zero-emission vehicles within the campus.

Article – (3) Necessary studies shall be carried out to make physical arrangements in order to restrict and limit the parking space for private vehicles on campus.

Article – (4) Informative and encouraging events shall be organized for university staff and students regarding sustainable transportation.

Article – (5) Effective measures to reduce the use of private cars on campus shall be determined and implemented.

Article – (6) Efforts shall be made in collaboration with stakeholder organizations to improve the quality of public transport on campus.

3.5 Education and Research

Training and event activities will be organized in order to increase the awareness of students and staff about sustainability. By incorporating the undergraduate students in the research projects, they will be in the solution evaluation of environmental, waste and energy related problems. Regarding the Zero Waste Management, the events will be organized related to the understanding of Reduce, Reuse and Recycle cycle by the university staff and students. These events will be carried out with the support of student communities. For the Sustainable Campus Policy, the university's education and research policies will be determined for the next year.

4. RESULTS

Muğla Sıtkı Koçman University has been carrying out many activities in an environment friendly way due to the nature it has been in since its establishment. Through our sustainability activities, this environmentalist vision will have a permanent and widespread impact. In order to achieve our Zero Waste Goals, we will carry out Energy and Climate Change, Waste, Water, Transportation and Education and Research activities with measurable activities, research and infrastructure improvements.

APPENDICES

Appendix-1 Sustainable Green Campus Coordinatorship Directive

MUĞLA SITKI KOÇMAN UNIVERSITY SUSTAINABLE GREEN CAMPUS COORDINATORSHIP DIRECTIVE

SECTION ONE

Purpose, Scope, Basis, Definitions and Abbreviations

Purpose

ARTICLE 1 – (1) The purpose of this directive is to regulate the principles and procedures regarding the purpose, fields of activity, working style, duties, powers and responsibilities of the Sustainable Green Campus Coordinatorship which was established so that Muğla Sıtkı Koçman University staff and students can live in a sustainable environment.

Scope

ARTICLE 2 – (1) This Directive covers provisions regarding the formation of the university policies and their implementation concerning matters such as waste, energy, water, and transportation management within the Sustainable Green Campus and the University.

Basis

ARTICLE 3 – (1) This Directive was issued based on 14th article of Higher Education Law number 2547 and on the 12th article of the Zero Waste Regulation published in the Official Gazette dated 12/07/2019 and numbered 30829.

Definitions and abbreviations

ARTICLE 4 – (1) Terms contained in this Directive are explained as follows:

- a) Academic and Administrative Units (AAU): All academic and administrative units of the university,
- b) Waste: Any substance or material discarded or left to the environment by the producer or the real or legal person that actually owns it, or must be disposed of,
- c) Waste Officer: The person assigned as waste responsible for the buildings used by the units and student laboratories, research laboratories, other laboratories and other waste generating facilities in these units,
- ç) Waste Generator: The person causing waste generation as a result of their activities and / or any natural and / or legal person who performs pre-treatment, mixing or other operations that will cause a change in the composition or structure of the waste. Personnel engaged in education, research, production and service activities in the AAU),
- d) Ministry: Ministry of Environment and Urbanization,
- e) Campus: University Centre and district settlements and usage areas,
- f) Commission: Muğla Sıtkı Koçman University Sustainable Green Campus Commission,
- g) Coordinator: Muğla Sıtkı Koçman University Sustainable Green Campus Coordinator,
- ğ) Coordinatorship: Muğla Sıtkı Koçman University Sustainable Green Campus Coordinatorship,
- i) Student: Muğla Sıtkı Koçman University Students,
- j) Rector: Rector of Muğla Sıtkı Koçman University,
- k) Vice Rector: Muğla Sıtkı Koçman University Vice Rector for Sustainable Green Campus Coordination,

1) University: Muğla Sıtkı Koçman University.

SECTION TWO

Purpose and Activity Areas of the Coordinatorship

The purpose of the coordinatorship

ARTICLE 5 – (1) The purpose of the coordinatorship is contributing to the creation and implementation of the University's policies on sustainable green campus, waste, energy, water, transportation management and similar issues for the campus; to carry out studies to plan the university activities in a sustainable way with reduced ecological footprint and the transfer of limited resources to future generations; and To organize activities and events that will increase the environmental awareness of the university staff and students.

Fields of activity of the coordinatorship

ARTICLE 6 – (1) The fields of activity of the coordinatorship are:

- a) To organize sustainability activities on campus.
- b) To carry out awareness activities on campus and to create a sustainable environment; to guide the establishment of water, waste, energy management and transportation policies.
- c) Providing support for the establishment and operation of the university's zero waste management system.
- ç) To increase the awareness of university staff and students about sustainability practices such as "reduce, reuse, recycle" and to support the formation of habits in this regard.
- d) To organize academic activities related to sustainability.
- e) To organize awareness activities with student communities.
- f) To inform the university staff and students about the activities to be carried out for sustainability.

SECTION THREE

Structure, Duties, Authorities and Responsibilities of the Coordinatorship

Structure of the coordinatorship

ARTICLE 7 – (1) Coordinator: She is appointed by the Rector for three years among university lecturers specialized in the fields of environment and sustainability. The expired Coordinator can be re-appointed with the same procedure. (2) The Coordinatorship conducts its activities jointly with the Commission.

(3) The coordinator proposes a person from among the university lecturers to be appointed by the Rector as Deputy Coordinator for three years to assist her in her studies. When the coordinator is not on duty, her assistant acts as proxy. In case the mandate lasts longer than six months, a new Coordinator is appointed with the same procedure. If the term of office of the coordinator expires or leaves her job for any reason, the duty of the Assistant Coordinator ends.

Tasks of the coordinator

ARTICLE 8 - (1) The duties of the coordinator are as follows:

- a) To represent the Coordinatorship.
- b) To form the agenda of the commission and to implement the decisions taken.
- c) To do the necessary work to achieve the goals of the Coordinatorship.
- ç) To present the annual activity report of the Coordinatorship to the Rectorate.
- d) To prepare the next year's work programme in line with the opinion of the Commission regarding the coordination activities.
- e) Supervising the work of part-time and volunteer students working in the coordinatorship and directing them.
- f) To establish and operate the University's waste management policies and "Zero Waste

Management System".

g) To contribute to the correct implementation of this Directive and the University's waste management plan and policies.

ğ) To contribute to the regular and effective work of all units, boards and administrative staff involved in the waste management process.

h) To carry out information activities in the AAU and to plan training activities related to its field of activity and to submit it to the Rectorate for approval, to organize approved training and seminar activities.

i) When necessary, to provide information, technical support and consultancy services to the Rectorate and the AAU on waste and waste management.

j) To propose to the Rectorate the waste responsible persons to be determined for each building on the campus.

k) To monitor the changes in the laws and regulations related to his / her field of duty and to work on them.

l) To work with the Department of Administrative and Financial Affairs and the Department of Construction and Technical Affairs on the recycling and reuse of the wastes in the campus when necessary.

m) To carry out studies for the inventory and documentation processes that will be required within the scope of sustainability studies in coordination with the Administrative and Financial Affairs Department and the Construction Works and Technical Department.

n) To work in cooperation with the Construction Affairs and Technical Department and other AİB in order to take and implement measures to reduce waste, water and energy consumption.

o) To support the relevant units for the fulfillment of the obligations imposed on the University by the Environmental Law No.2872, Zero Waste Regulation and other relevant legislation in the collection, management and removal of wastes.

ö) To implement waste management in a way that minimizes the harmful effects of wastes on human health and the environment.

p) To make necessary information activities to inform the staff about the University's sustainable green campus policies and practices based on them.

SECTION FOUR

Formation of the Sustainable Green Campus Commission and Working Procedures and Principles

Sustainable Green Campus Commission

ARTICLE 9 - (1) The Commission; Under the chairmanship of the coordinator, it consists of at least nine members, including the Deputy Coordinator, the Head of Administrative and Financial Affairs, the Head of the Construction and Technical Department, and five members selected from among the University academic / administrative staff who are working on the field of duty of the Coordinator or want to contribute voluntarily. The term of office of elected members is three years. Expired members can be re-elected.

(2) The duties of the commission are as follows:

a) To make decisions regarding the work of the coordinatorship.

b) To discuss and decide on the proposals of the Coordinator and Commission members.

c) Establishing project groups and similar sub-units, determining the working principles and making decisions regarding the realization of the Works

ç) To determine the principles of cooperation for joint work with national and international institutions and organizations, to examine the protocols prepared and to express their opinions.

Meeting

ARTICLE 10 - (1) The commission convenes ordinarily and extraordinarily when necessary at the beginning of each semester.

(2) Meeting quorum is more than half of the total number of members. Decisions are taken by simple majority of those present. Abstaining votes cannot be used in the voting held at the meetings.

(3) Commission meetings are open to all students and interested staff members of the University's environmental and sustainability communities. The commission can also hold a closed session when needed.

ARTICLE 11 - (1) The meeting agenda is prepared by the Coordinator, taking into account the requests from the members of the Commission. Decisions must be taken in the meeting to discuss matters outside the agenda.

Meeting report

ARTICLE 12 - (1) At the end of the meeting, the decisions taken regarding the matters discussed are recorded in a minute signed by all members.

SECTION FIVE

Establishment of a Zero Waste Management System and Waste Officers

Establishment of the Zero Waste Management Unit

ARTICLE 13 - (1) A "Zero Waste Management Unit" is established within the Coordinatorship.

(2) Activities required to be carried out within the scope of the Zero Waste Regulation and other relevant legislation are carried out in cooperation with the Coordinatorship, Administrative and Financial Affairs Department and the Construction and Technical Department.

Waste Managers and their duties

ARTICLE 14 - (1) The responsible of waste in academic units is the secretary of the Institute / Faculty / School. For other units, the responsible of waste is determined by the Rectorate upon the recommendation of the Coordinator.

(2) The duties of the Waste Officers are as follows:

a) To identify and follow up activities with potential to generate waste in the units under his / her responsibility.

b) To take the necessary measures to minimize waste generation in the unit he is responsible for, in cooperation with the Coordinatorship and the relevant departments.

c) Ensuring that the wastes are packed and labeled in a way that eliminates or minimizes the harmful effects on human health and the environment.

ç) To ensure that the wastes are stored in the temporary waste storage areas to be created and transported from there to the central temporary storage area belonging to the Campus.

d) Keeping records regarding the wastes produced in the unit, and conveying all information and statistics to the Coordinatorship when necessary.

e) To announce the details of waste management stipulated in this Directive, including waste collection dates, in its own unit.

f) To cooperate with the University's Occupational Health and Safety Coordinatorship in the storage / storage of wastes at the production site.

Waste Producers

ARTICLE 15 - (1) Responsibilities of Waste Generators are as follows:

- a) To be sensitive to fulfill the obligations imposed on waste producers by the relevant legislation and this Directive.
- b) To prevent waste generation, if this is not possible, to minimize waste generation.
- c) If possible, to recycle the waste content, to reduce / eliminate the hazard content, and finally to ensure proper storage and storage.

SECTION SIX

Miscellaneous and Final Provisions

Personnel Needs

ARTICLE 16 - (1) The staff requirement of the Coordinatorship is met by the academic and / or administrative staff to be appointed by the Rector in accordance with Article 13 of the Law No. 2547.

(2) In addition to the staff, part-time students and volunteer students can also take part in the coordinatorship.

Cases with no provisions

ARTICLE 17 - (1) In cases where there are no provisions in this Directive, other relevant legislation provisions and the decisions of the Senate and the University Administrative Board are applied.

Force

ARTICLE 18 - (1) This Directive takes effect on the date of its approval by the Muğla Sıtkı Koçman University Senate.

Executive

ARTICLE 19 - (1) The provisions of this Directive are executed by the Rector of Muğla Sıtkı Koçman University.

Senate Decision Accepting the Directive	
Date	Number
24/09/2020	584/4

Appendix-2: 330 m2 - Temporary Waste Storage Architectural Plan and Details

