LIFE ON LAND

YILDIZ TECHNICAL UNIVERSITY

Events about sustainable use of land

Workshop on the design and application for sustainable lanscaping and infrastructure

Within the framework of smart and sustainable campus practices, a project on building a sustainable landscape and infrastructure on campus has been conducted and the project results have been shared with other stakeholders and in line with the project results also a training on sustainable landscaping and infrastructure has been offered to them. Within the framework of the program, the following subjects and project results have been shared, the subjects are world landscape standards, green infrastructure, sustainable water use in urban landscape areas, plant material and plant design in the sustainable landscaping, Dolmabahçe Palace landscape design, planting techniques, smart practices in landscaping, smart systems in landscaping, urban transportation grading, pedestrian focused cities and designs, accessibility, landscaping criteria and standards, The faculty members also shared their experiences on sustainable and smart systems design, the participants in the project training had chance to see the project results and also got information about designing sustainable infrastructure. The project program was three days and 10 participants attended; they were awarded with certificates.

YILDIZ TEKNİK ÜNİVERSİTESİ-ÇEVRE VE ŞEHİRCİLİK BAKANLIĞI

ETKINLIK BAHÇELERİ

1. EĞİTİM PROGRAMI

Eğitmenler

Prof.Dr.Mustafa VAR	YTÜ Mimarlık Fakültesi Şehir ve Bölge Planlama Bölümü
Prof.Dr.V.Engin GÜLAL	YTÜ İnşaat Fakültesi Dekanı
Prof.Dr.Şeref ENGİN	YTÜ Elektrik - Elektronik Fakültesi Kontrol ve Otomasyon Böl.
Doç.Dr.Senay OĞUZTEMUR	YTÜ Mimarlık Fakültesi Şehir ve Bölge Planlama Bölümü
Doç.Dr. Gülşen AYTAÇ	İTÜ Mimarlık Fak. Peyzaj Mimarlığı Bölümü
Dr. Öğr.Üy. H. Sanem ÇINAR	İÜ Cer. Orman Fakültesi Peyzaj Mimarlığı Bölümü
Dr.Sinan GENİM	TAÇ Vakfı Başkanı

PROGRAM

1.GÜN 08.01.2020 Çarşamba

08:45-09:45 Kahvaltı
09:45-10:00 Açılış Konuşmaları
10:00-10:50 Dünya Bahçe Sanatları(Fransız, İngiliz, Japon, Çin, İslam (İspanya, İran, Türk bahçe sanatı) hakkında sunum (Prof.Dr.Mustafa VAR)
10:50-11:00 Ara
11:00-11:50 Yeşilaltyapı, Kentsel Peyzaj Alanlarında Sürdürülebilir Su Kullanımı (Doç.Dr.Gülşen AYTAÇ) (10:00 yada 13:15 ile yer değiştirebiliriz)
12:00-13:00 Öğle yemeği
13:15-14:00 Etkinlik Bahçelerinde Bitki Materyali ve Bitkisel Tasarım (Prof.Dr.M.VAR)
14:00-14:30 Dolmabahçe Sarayına geçiş

2.GÜN 09.01.2020 Perşembe

08:45-09:30 Kahvaltı
09:30-10:30 İstanbul Üniversitesi Cerrahpaşa Orman Fakültesine geçiş
10:30-11:30 Türk Bahçeleri ve İstanbul Saray Bahçesi Örnekleri (Dr.Öğr.Üyesi Hande Sanem ÇINAR)
11:30-11:45 Çay /Kahve molası
11:45-12:00 Atatürk Arboretumuna Geçiş
12:00-12:30 Atatürk Arboretumunun gezilmesi
12:30-14:00 Öğle Yemeğine geçilmesi ve Öğle Yemeği (YTÜ Çatı Rest.)
14:00-15:15 Etkinlik Bahçeleri ve Tasarım Kriterleri (Prof.Dr.Mustafa VAR)
15:15-15:30 Yıldız Sarayı Bahçesine Geçiş
15:30-17:00: Yıldız Bahçelerinin gezilmesi
17:00-18:00 Akşam yemeğine geçiş(YTÜ Çatı Rest.)
18:00-20:30 Akşam Yemeği
20:30-21:00 Misafirhaneye Dönüş

3.Gün 10.01.2020 Cuma

09:00-09:45 Kahvaltı
10:00-10:30 Etkinlik Bahçesi Toplantısı (Katılımcılar/Üniversite/Müteahhit Firma)
10:40-11:15 Etkinlik Bahçelerinde Akıllı Sistemler (YTÜ Davutpaşa) (Prof.Dr.Prof.Dr.Şeref ENGİN -Prof.Dr.V.Engin GÜLAL)
11:15-11:25 Ara
11:25-12:05 Etkinlik Bahçelerinde Akıllı Sistemler (Prof.Dr.Prof.Dr.Şeref ENGİN -Prof.Dr.V.Engin GÜLAL)
12:05-12:35 YTÜ Etkinlik Bahçesi alanı ve tarihi dokusunun gezilmezi
12:40-13:40 Öğle Yemeği
13:40-14:10 Yıldız Kampüsüne Geçiş
14:10-15:00 Kentsel Ulaşım Kademelendirmesi,Yaya odaklı Kentler ve Tasarımlar,Erişilebilirlik (Doç.Dr.Senay OĞUZTEMUR)(YTÜ Yıldız)

Yildiz Recycling Project

The project was initiated by YTU Animal Rights Club, Social Responsibility Club, Economy Club and Environment Club. The project's aim was to decrease food, plastic and paper cups and helped them to be recycled. Leftovers from the food, water bottles and used napkins were thrown away without being classified as waste so in order to decrease waste the project was conducted. A team of 105 students from four student clubs and volunteers collected waste food, plastic and paper, with blue boxes and bags provided by Esenler Municipality, in the tray dropping area of Davutpaşa Campus cafeteria, on available days. The collected plastic and paper wastes are taken from our school every day by the Esenler Municipality waste vehicle in order to be recycled. The students wanted to raise environmental awareness and attracted attention to increased consumption and carbon emissions, so they were very proactive in protecting the environment in their daily activities. Within the framework of the project, 5845 kg waste food, 1934 kg plastic and 2183 kg paper cups were collected and recycled.

Tree Planting Events for Academic, Administrative Staff, and International Students

To cultivate a sense and awareness of environmental sustainability, YTU organised several tree planting events on Davutpasa Campus. This events were seperately held for administrative staff, academic staff, students for internal stakeholders.

Also, the same events were held for some external stakeholders such as kindergarten students and incoming Erasmus+ exchange students. This was done in an attempt to build community spirit and unity and to create a sense of belonging.

Other intended benefits were to engage different stakeholders to actively contribute to sustainable environment by reducing green-space maintenance costs, to prevent soil erosion, and to reduce carbon from the air. The trees planted were as many as 1000+ pinus pinea.

YTU is convinced of the fact that the involment of different parties in tree planting events encourages to grow more aware of their environment – both on campus and around them, to provide them with active learning experiences and with opportunity to become part of YTU's efforts for sustainable use of land on campus.


YILDIZ TEKNİK
ÜNİVERSİTESİ
PETA-FAKİSİ

Ecological mapping of Davutpasa Campus through species inventory for biodiversity protection

Under this general target of ecological mapping for biodiversity protection on campuses, during 2020, mapping of the tree species on campuses has been initiated. For this purpose, for 1300 trees and plants on Yildiz and Davutpasa Campuses, plant labels were prepared.

The labels contained information on the Turkish and Latin description of the plant, the size of the plant (form, diameter, and height), how much they rely on sunlight, origin, family, characteristic of their leaves and fruit, and location on campus.

The initial study was confined to certain areas on both campus and will be applied to all campus areas in the future. This was done in an attempt to raise awareness regarding the biological diversity on campus, the application of the sustainabile development principles, and the promotion of the idea of smart green campuses.

https://kampus.yildiz.edu.tr/atkestanesi


YILDIZ TEKNİK ÜNİVERSİTESİ
At Kestanesi
Aesculus hippocastanum
Hippocastanaceae 7
https://kampus.yildiz.edu.tr/atkestanesi
kampus.yildiz.edu.tr
AKILLI YEŞİL KAMPUS
Aesculus hippocastanum
(At Kestanesi)
Şekli
Boyu
Çapı
Işık
20-25 m
15-20 m
Yuvarlak Tepe
Güneş Sever
Yarı Gölge
Latince Adı
Aesculus hippocastanum
Türkçe Adı
At Kestanesi
Familyası
Hippocastanaceae
Anavatanı
Balkan yarımadası
Çiçek
Beyaz,sarı ve kırmızı nokta leke
Çiçeklenme Dönemi
Mayıs
Meyve
Etli, parçalı, kalın, dikenli ve kısa saplı ve içinde parlak koyu kahverengi kabuklu 1-2 kestane bulunur
Kampüs Konumu
Orta Bahçe ADA-9-25-25-27-#7
Balkan yarımadasında doğal olarak yetişir. Yuvarlak formlu, kalın dallı ve kaba dokulu bir ağaçtır. Yaprakları karşılıklı, işınsal olarak dizilmiş ve 25 cm uzunluğundadır, 5-7 yaprakçıktan oluşmuştur. Çiçekleri beyaz, sarı ve kırmızı noktalar şeklinde lekelidir. Başak formlu çiçek kanulu 20-30 cm uzunluğundadır. Arılar için önemli bir besin kaynağıdır. Meyveleri 3-4 cm çapında, üzeri etli, parçalı, kalın, dikenli ve kısa saplıdır. İçinde parlak koyu kahverengi kabuklu 1-2 tohum (kestane) bulunur.

Informative reports and presentations for students and staff regarding biodiversity on campuses

Withi the scope of the promotion of green campus and raising awareness regarding the biological diversity of campus, in addition to informing and educating campus residents regarding the natural characteristics of campus land ecosystem, we are also educating our staff and students regarding the poisonous species and plants or poisonous parts of plants such as leaves or fruit.

For this purpose, first an inventory was compiled regarding such plants on Yildiz and Davutpasa Campuses and then seminars and workshops have been organized for staff and students.

The seminars and workshops emphasized that some plants and trees are naturally used for their landscaping value and that their leaves or fruit may be poisonous to human health. Also, even the trees whose fruit are frequently consumed by people such as peach, the leaves of those are also poisonous and should not be eaten.

PEYZAJ DÜZENLEMELERİNDE KULLANILAN ZEHİRLİ BİTKİLER

No	Latince Adı	Türkçe Adı	Kullanıldığı Yer	Zehirli Organları
1	*Buxus sempervirens*	Şimşir	Çit, süs	Yaprakları
2	*Cotoneaster spp.*	Muşmula	Süs	Meyve, Çiçek
3	*Hedera helix*	Orman sarmaşığı	Yer örtücü, Sarmaşık	Bütün Organları
4	*Hydrangea spp.*	Ortanca	Süs	Çiçek
5	*Ilex aquifolium*	Çobanpüskülü	Süs	Meyve, yaprak
6	*Iris germenica*	Süsen	Kesme Çiçek	Bütün organları
7	*Ligustrum vulgare*	Kurtbağrı	Çit	Yaprak, Meyve
8	*Nerium oleander*	Zakkum	süs, Çalı	Bütün organları
9	*Prunus laurocerasus*	Karayemiş	Çit, Meyve	Yaprakları
10	*Prunus persica*	Şeftali Ağacı	Meyve, Süs Ağacı	Çekirdek, Çiçek, Yaprak
11	*Pyrus communis*	Armut Ağacı	Meyve, Ağaç	Tohum
12	*Robinia pseudoacacia*	Yalancı akasya	Alle, Yol	Bütün organları
13	*Taxus baccata*	Porsuk	Çit, Gölge, Solitер	Tohum
14	*Vinca spp.*	Cezayir menekşesi	Çiçek, Yer örtücü	Tüm organları
15	*Wisteria sinensis*	Mor salkım	Süs, sarmaşık	Tohum

Kaynak: ÖZGEN, Y., "Peyzaj Düzenlemelerinde Kullanılan İnsan Sağlığına Zararlı Bitkiler" İstanbul Üniversitesi Orman Fakültesi Dergisi, Seri A, Cilt 37,Sayı 1, 1987

Desteklerinden Dolayı **Peyzaj** Y. Mimarı Tülay TOZAR DOKTU'ya Teşekkür Ederiz

“1 Kapak 1 Kap (1 bottle cap 1 bowl)” Project by Animal Rights Club

YTU Animal Rights Club collected plastic bottles to be recycled into food bowls for dogs and cats living in the campus, the project was carried out in cooperation with Gultepe Vocational and Technical Anatolian High School under the Ministry of National Education.

The members of the club primarily aimed to draw attention to and raise an awareness regarding how much waste are polluting natural ecosystems. They organized waste (plastic waste especially bottle caps) drop points throughout campuses and they took them to the above-mentioned school. And, the students there turned them into food bowls for animals inhabiting YTU campus area.

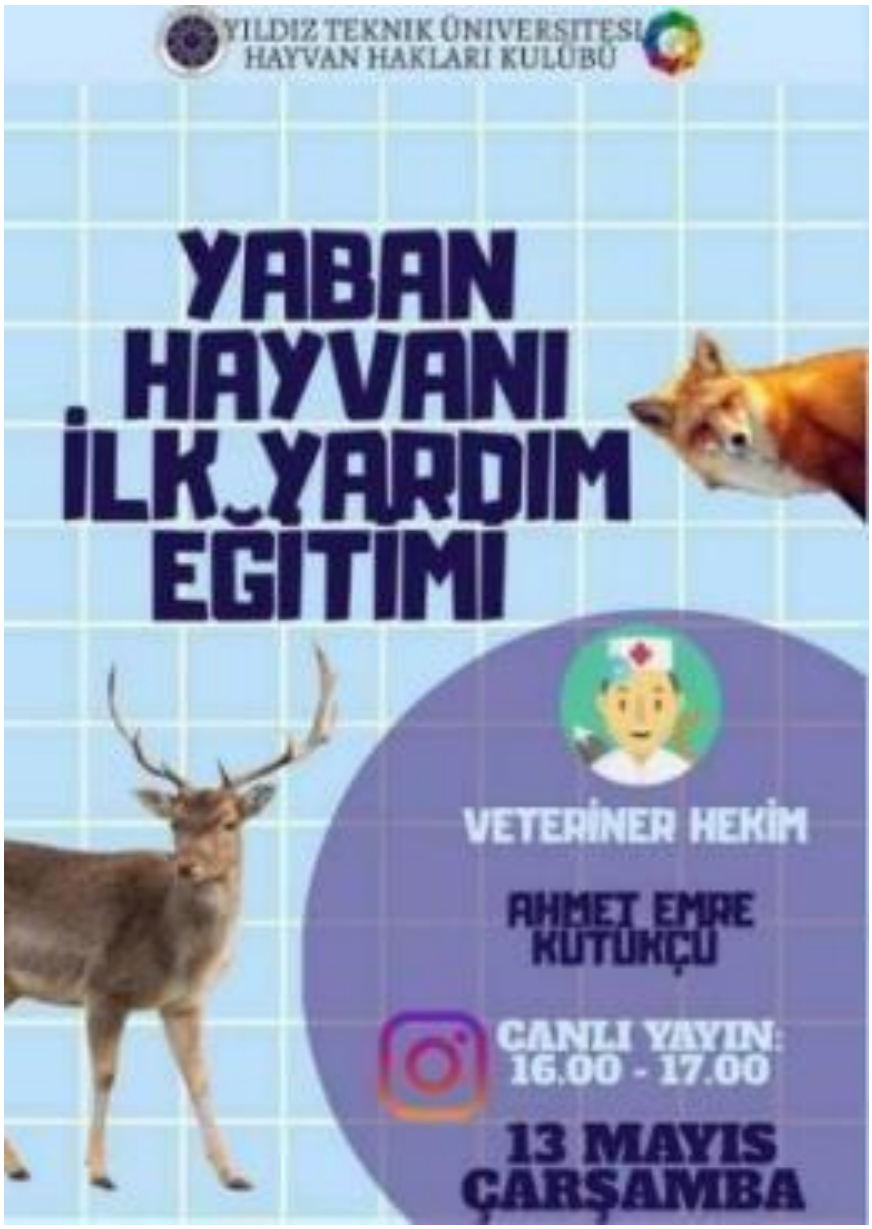
“Umut (Hope)” Awards Ceremony

This is an annual awards ceremony organized by the Animal Rights Club Students. The individuals and organizations working to help animals in need throughout the country and become an hope for the animals are rewarded annually.
The awards are given to the individuals, organizations, municipalities and companies that are working to raise awareness regarding the natural ecosystems of animals are being gradually destroyed by the cities thus drawing attention to the fact that we need to become more sensitive about the environment.


UMUT ÖDÜLLERİ
TÖRENİ

Seminar on first aid for wild animals

YTU Animal Rights Club organized a seminar on helping wild animals in an emergency, the seminar was carried out in cooperation with Vet. Ahmet Emre Kutukcu.



Green Reading Days by Environmental Club Students

Environment Student Club organized a reading day focusing on zero waste consumption culture and food waste in order to raise awareness about zero waste and food waste, the students had chance to discuss about zero waste and learn more about food waste and consumption culture.

Environment Student Club organized another reading day on sustainable life and climate where the participants had chances to exchange ideas on sustainability and its importance for future generations.

Sustainably farmed food on campus

Harvest of linden trees on Campuses to serve hot linden tea as an alternative to traditional tea leaves

There are annually around a thousand kilogram of linden flower harvest througout the campus. They are dried and distributed to the academic and administrative units of the university to draw attention to the fact and to show that harvesting trees and linden tree flowers contribute to immune system along with the promotion of the benefits of organic agriculture without the use of any pesticides.

This is done in an attempt to create an environmental awareness among staff through utilizing the leaves and blossoms of linden to to make herbal tea for its medicinal benefits.

Also, linden trees cover a vast amount of land on campuses contributing to natural beauty on our campuses with their sunny and brilliant scent and aromatic aura.

Strawberry harvest and strawberry picking

On Davutpasa Campus, we grow strawberry on several spots corresponding to an area of two thousand square meters. Although they are not much, strawberry grown on campus are harvested at differing amounts between 50-100 kilograms and they are distributed to the kindergarden students. Sometimes, kindergarden students go to the land on environmental activities and they pick the strawberries themselves.

Fruit trees and the harvests of fruit such as peaches, quinces, pears, cherries, persimmons, etc.

As well as having vast areas of forest ecosystems on campus, YTU has adopted the principle of continuously planting fruit trees and plants on campuses. From the different parts of the country, fruit trees and plants are brought to the campus and planted at different intervals, sometimes as part of tree planting events and sometimes on a regular basis.

The fruit trees also help lower green maintenance costs from the perspective that they contribute to the landscaping of our campuses.

Allotment gardening for staff

Allotment gardens are 24 individual areas of 36 square meters with a closed area of 5 square meters each.Every garden has a water resource. The academic and administrative staff take turns for planting vegetables, seasonal flowers, and such. This was done in an attempt to cultivate a sense of sustainable environment in staff throughout the campus. The staff are education with leaflets and other informative content regarding how to grow decoration plants, seasonal vegetables, how to plant seeds, fertilization, watering, and garden planning.

As well as knowdge and information for the staff along with the examples of concious and sustainable farming, the staff are frequently given information on when and how to grow specific vegetables, etc.

Within the scope of the allotment gardening, the staff were served with grapes and watermelons at dinners during special occasions for the promotion of the idea of sustainable and concious farming.

Maintain and extend current ecosystems' biodiversity

The widespread use of species in line with the natural flora of Istanbul and historically promoted plant species in landscaping

Yildiz Technical University's policy is to provide different stakeholders of the university with examples of the natural habitat of the city. Also, we promote and prioritize the use of historically grown species such as judas trees, magnolia trees, wisterias, genisteaes, white birches.

It is important for us to ensure that our staff and students enjoy a natural habitat on our campuses at the heart of a metropolitan Istanbul area.

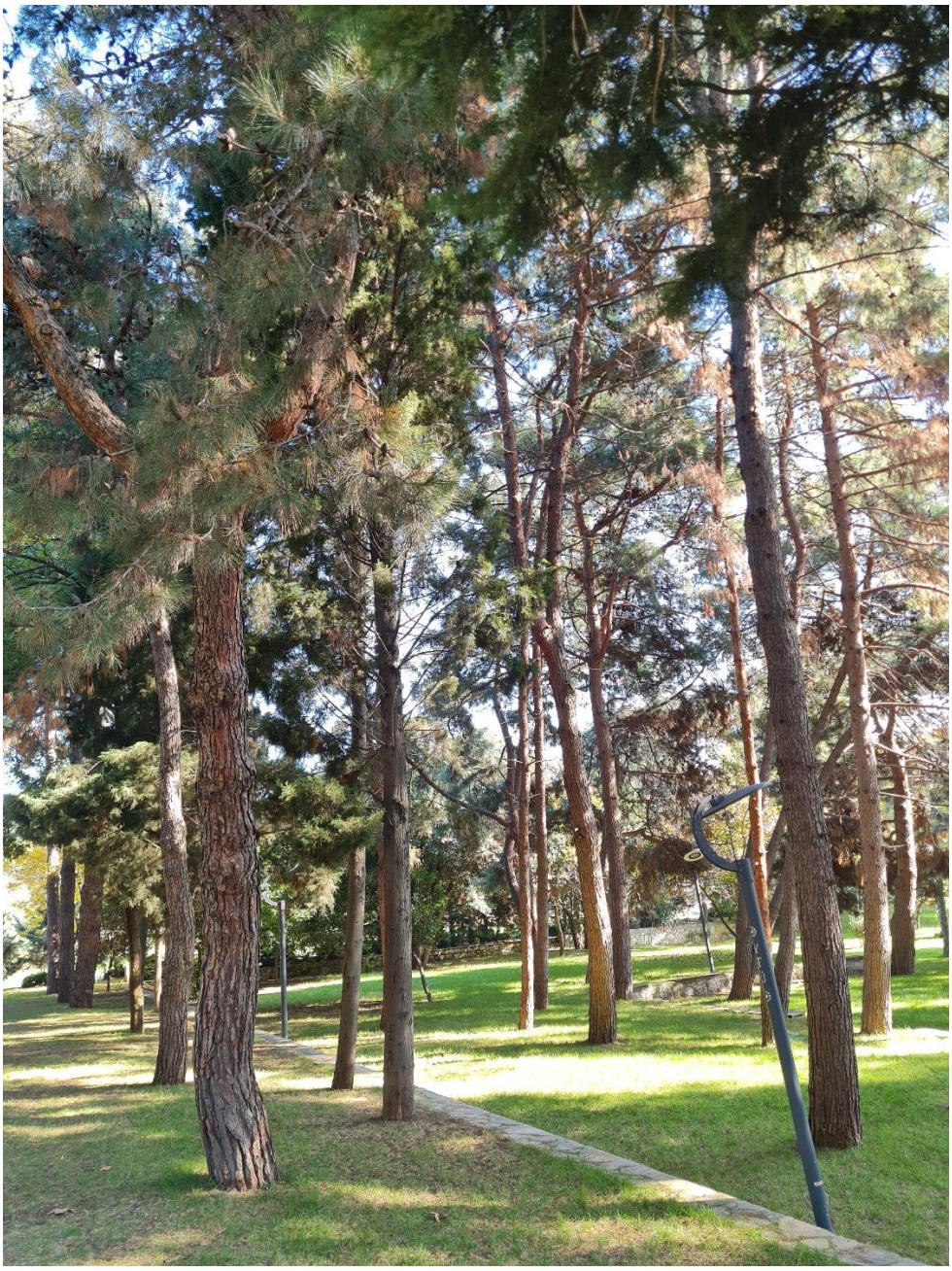
Creating shelters for bird species

To provide shelter for bird species such as woodpeckers, sparrows, and starlings against some dominant species such as crows, and pied crows; and to prevent the undesired effects of harsh weather conditions, we place wooden bird nests on trees.
Also, to serve the same purpose, we leave the dried old trees which have completed their life spans on the ground unless they present the danger to their surroundings, animals, people, and such. Those trees are also natural wildlife reserves. This also prevents any biodiversity elements from losing their natural habitats and is a natural way for the preservation and continuance of natural life.

The protection of evergreen and old species on campus

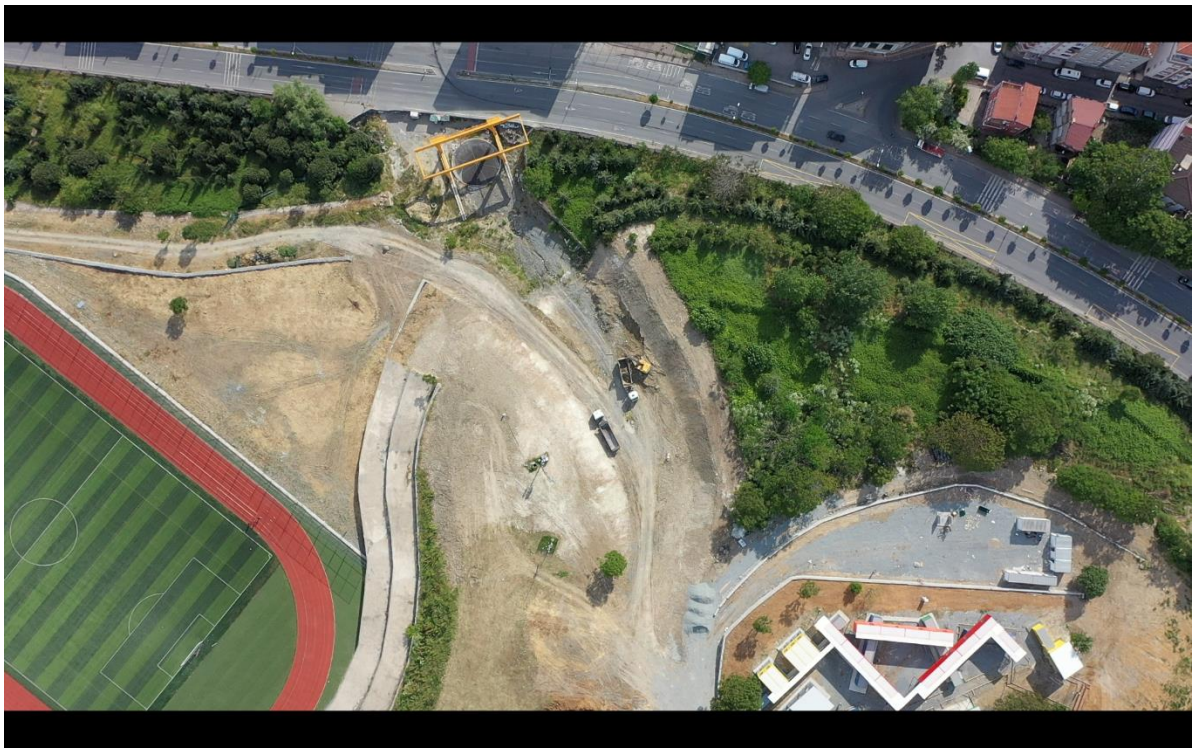
The age average of the trees on our campuses is between 20 and 30 years. However, we take special care in the care of the old evergreen trees, which are 100-120 old. Restoration of those trees are carried out whenever necessary. Cavity filling procedures are applied and we fight againts fungus and other bacteria invasion. Pruning activities are made with extensive care because to protect those trees from athmospheric conditions.

Also, the ecosytem of evergreen trees on campus are closely monitored and we continue to plant evergreen trees as landscaping enhancers.



Green Border Ecosystem

We built green borders on the northwest border of Davutpasa campus. It covers a total area of 28000 square meters. We are planning to announce this area as a natural bioreserve area as it is home to many reptiles including toroise, and mammals such as moles and hedgehogs.



Also, we have covering our borders with tree lines of evergreen species. These roadside vegetation barriers provide reducing near-road air pollution concentrations and traffic-related noise. In our action plan, we have aldready planned to cover all the borders with roadside evergreen barriers.

Sustainable management of land for agriculture and tourism (educational outreach)

Boutique Hotel Construction for educational outreach

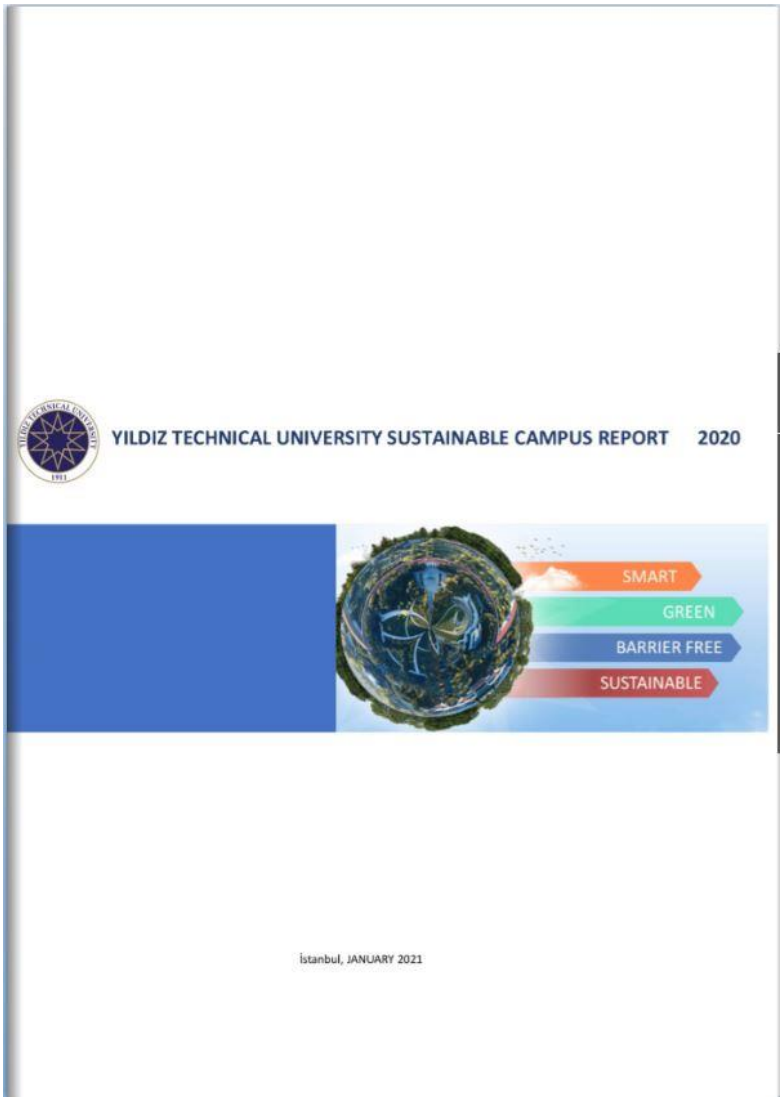
We are finishing the restoration of one of our historical buildings to serve as a boutique hotel. It is located near one of our bioreserve areas on Davutpasa Campus. It is next to a forest area along with spring water. We are planning to organize conferences and workshops on sustainable farming and campus in this area where applied practices can be promoted.

Sustainable use, conservation and restoration of land (policy)

Sustainable campus report

A comprehensive sustainable campus report was published in 2020. It was an extensive joint effort by the sustainable campus commision focusing on sustainable campus elements under the headings of management, site selection and landuse, transportation, resource management, waste management, building management, ecosystem, health and wellbeing, and education and research.

The report is available at https://kampus.yildiz.edu.tr/report/

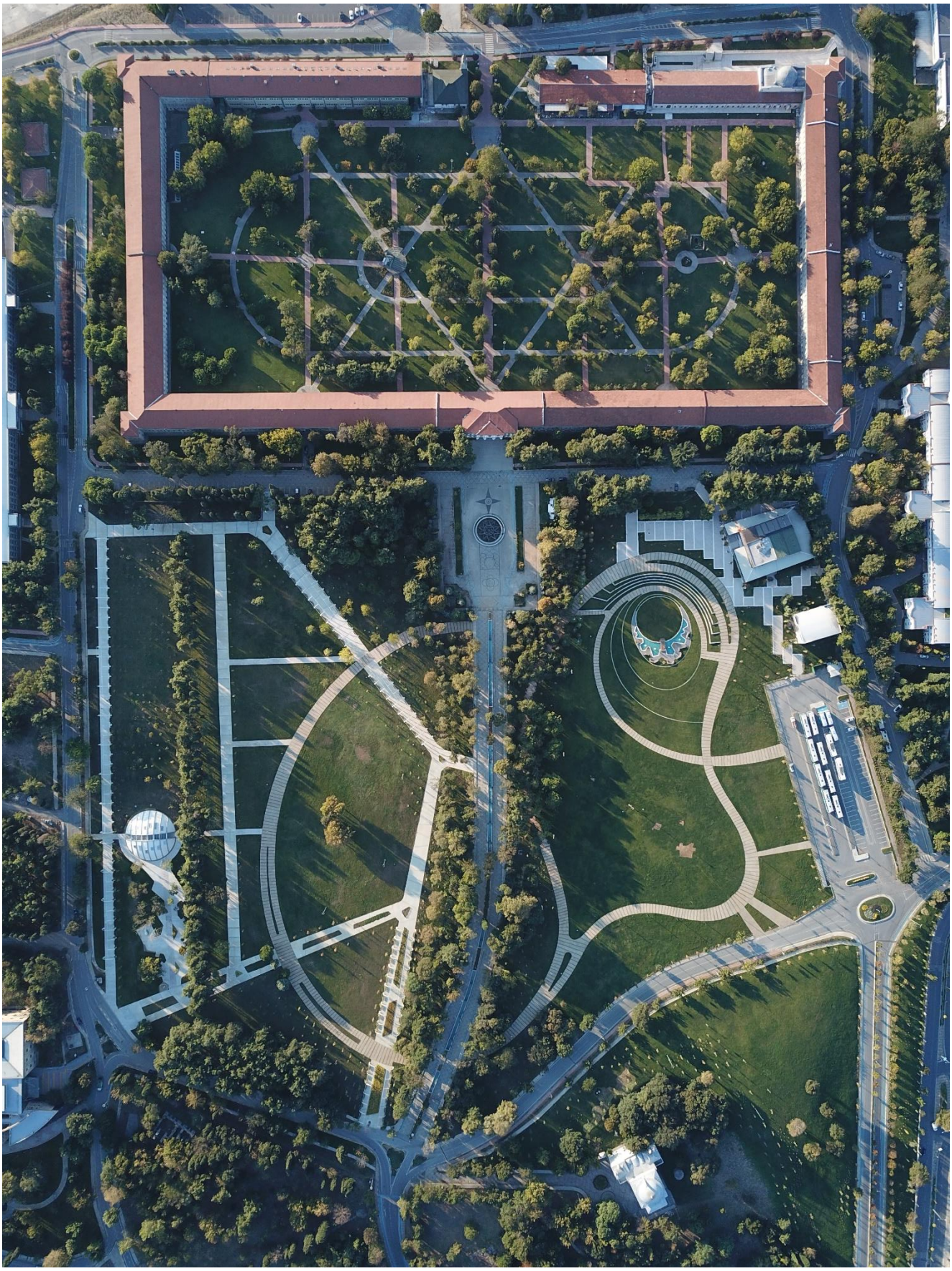


Slope stabilization

Zerophytic plants were used on slopes throughout the campus for slope stabilization both to hold topsoil place and to reduce watering needs on slopes. Also, erosion control plants were planted on slope to hold topsoil in place and to compete with weeds to make the fight against invasive species easier and sustainable.
Applications of Persian Rug and Hedera Helix Hibernica were especially successful for this matter over the slopes next the central laboratory, faculty of electrical and electronics engineering and sports hall.

Enhancing Biodiversity through Plantation and Vegetation

Within the scope a special project for landscaping with the Ministry of Environment and Urbanization, a total of 1100 trees, 5750 bushes and 26500 perennial plants and flowers were planted on Davutpasa Campus. Within the context of the project, natural species such as Cinar, Linden and Redbuds, which are naturally found in the flora of Istanbul, and species such as Magnolia, Marshmallow, Wisteria and Sarısalkım, which have been frequently seen in our green areas for the last 200 years, even if they are not natural, have been provided. The plantation and vegetation applications within this context provided a mixture of historical standings and cultural texture.



Also the same project involved plant tunnels for raising environmental awareness, recreational value, and increasing biodiversity on campus.

Tree-planting for landscaping and recreational areas

About 2000 trees, shrubs, and bushes were planted in our campus with the contributions by the General Directorate of Forestry within the framework of the 4122 National Afforestation and Erosion Control Mobilization Law. This tree-planting activity was carried out outside the scope of rasing awareness, and the activities with staff are not included here.

Surface Water Flow Reduction for Land and Soil Protection

A sample of rainwater harvesting system, smart irrigation, lighting and fertilization, as well as zero waste systems have been put into use in the campus parts which were completed as part of a project with the Ministry of Environment and Urbanization.

Mulching the Soil and Parts around the Trees for the Prevention of Soil Erosion

Organic fertilizers are obtained from branches, barks, leaves, and grass waste collected from the entire campus, which are later used for the plants. Therefore, the amount of chemical fertilizers used in the campus has been decreasing recently. The amount of irrigation has also been reduced by covering the soil with the mulch obtained from plant waste. Due to the location of our Davutpasa campus and the vast amount of land it covers, strong winds become dominant at times. Mulching is also beneficial in protecting soil from wind erosion as well as erosion resulting from surface waters and sloping land.

Monitoring IUCN and other conservation species (policies)

Monitoring and Helping White Storks on Campus

As well as other parts in Istanbul and Turkey, Davutpasa Campus is located on the migration route of the white storks on their way back to Africa. Although white storks are catagorized as “Least Concern” on the IUCN Red List, this stage is before near threatened and we are aware of the fact that white storks, as well as many other migrating species, are having difficulty on their migration routes. Therefore, we monitor and calculate the times during which they stop to rest on campus. They spend a few days refueling and resting. Although they are able to find food thanks to our rich land ecosystem on Davutpasa Campus, We provide food such as fish. Campus residents and staff from the Directorate of Health, Culture, and Sports closely monitor their time on campus. If they notice unusual situations such limping, broken wings, being unable to fly, the university reports these kinds of situations to the General Directorate of Nature Conservation and National Parks, Ministry of Agriculture and Forestry.

Providing Shelter and Feeding Psittacula eupatrias on Campus

(Alexandrine Parakeets)

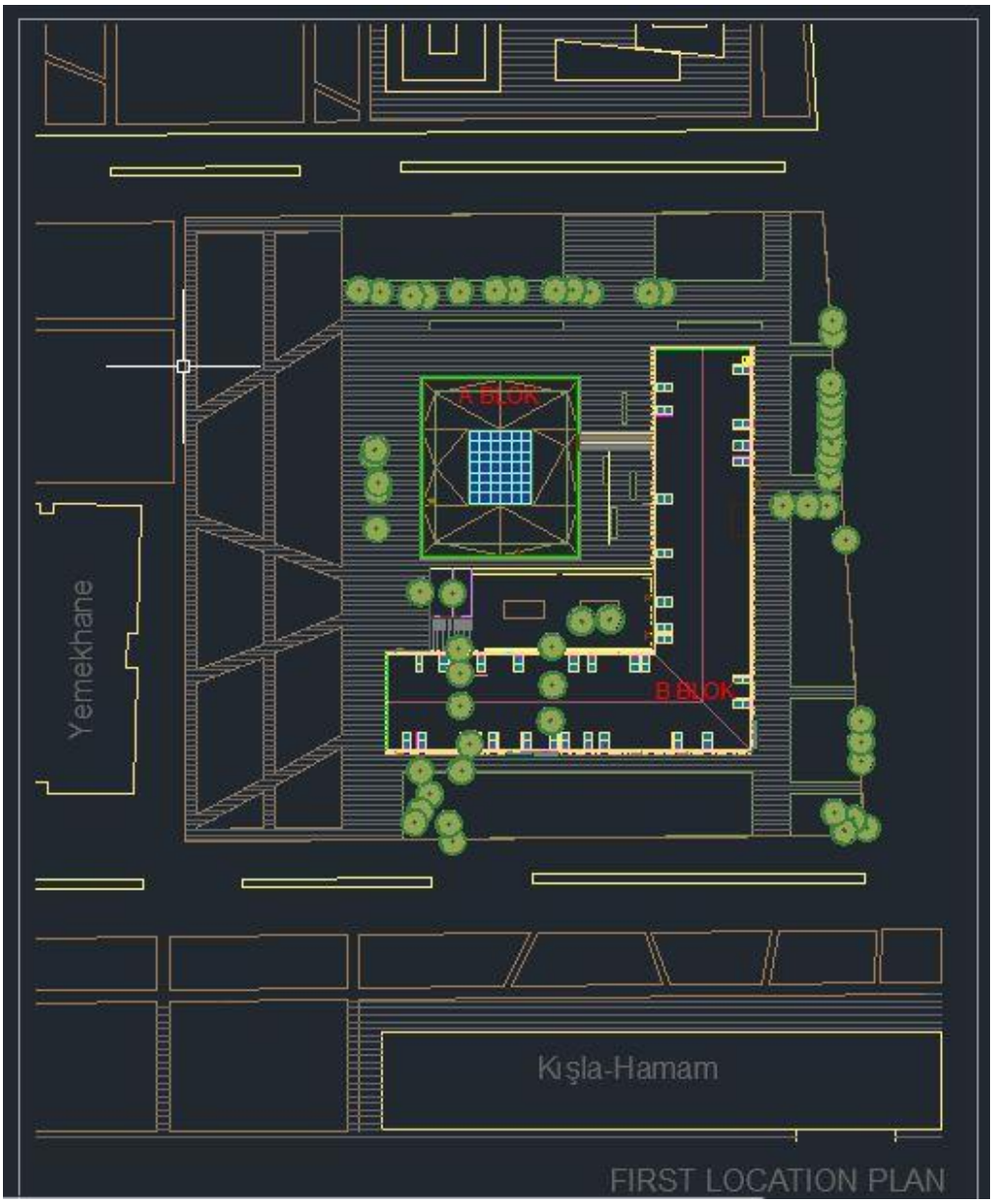
Because they are categorized as “Near Threatened” on the IUCN Red List, we have taken steps to help Alexandrine Parakeets find nests and shelters on trees througout the campus. Fruit trees being a natural food source for them, when there are not fruits developed on the trees, we are placing food and vitamin block on trees where they are frequently seen for them to eat.

The Alexandrine Parakeets are also part of our campuses’ natural beauty. We are planning to create conservation areas for them next year.

Local biodiversity included in planning and development

The Location Plan of the New Library Building has been altered

The first location plan was drafted with the initial metrical information of the construction site. After the construction bidding, it was seen that old evergreen trees scuh as pine trees had to be cut down, the location plan was changed. The location of the bulding was changes and with the altered plan only some of the trees were moved to another location on campus.



The construction is planned for initiation in the first months of 2021.

Evergreen Trees have been Transplanted Safely away from the Construction Site of the New Library Building

Although the location plan of the new library building has been altered and updated for the purpose of preventing the loss of biodiversity and cutting down trees. The new location plan had included several trees. Nevertheless, we did not cut them down.

We came in contact with the Istanbul Metropolitan Municipality and their staff have taken on the safe transplanting the trees falling into the new location plan of the library construction.

Alien species impact reduction

Managing Ailanthus Altissima and Root Sprout Treatments

Annualy, YTU Landscaping Unit, along with their daily landscaping and maintenance activities, closely monitor ailanthus altissima and other trees and plants on campuses to manage root sprouts which pose several threats to the parent or neighboring trees and plants. Aailanthus Altissima species are also a special concern of the unit as they require an effective management for root sprouts.

Managing the Invasive Behavior of Hedera Helix Hibernica

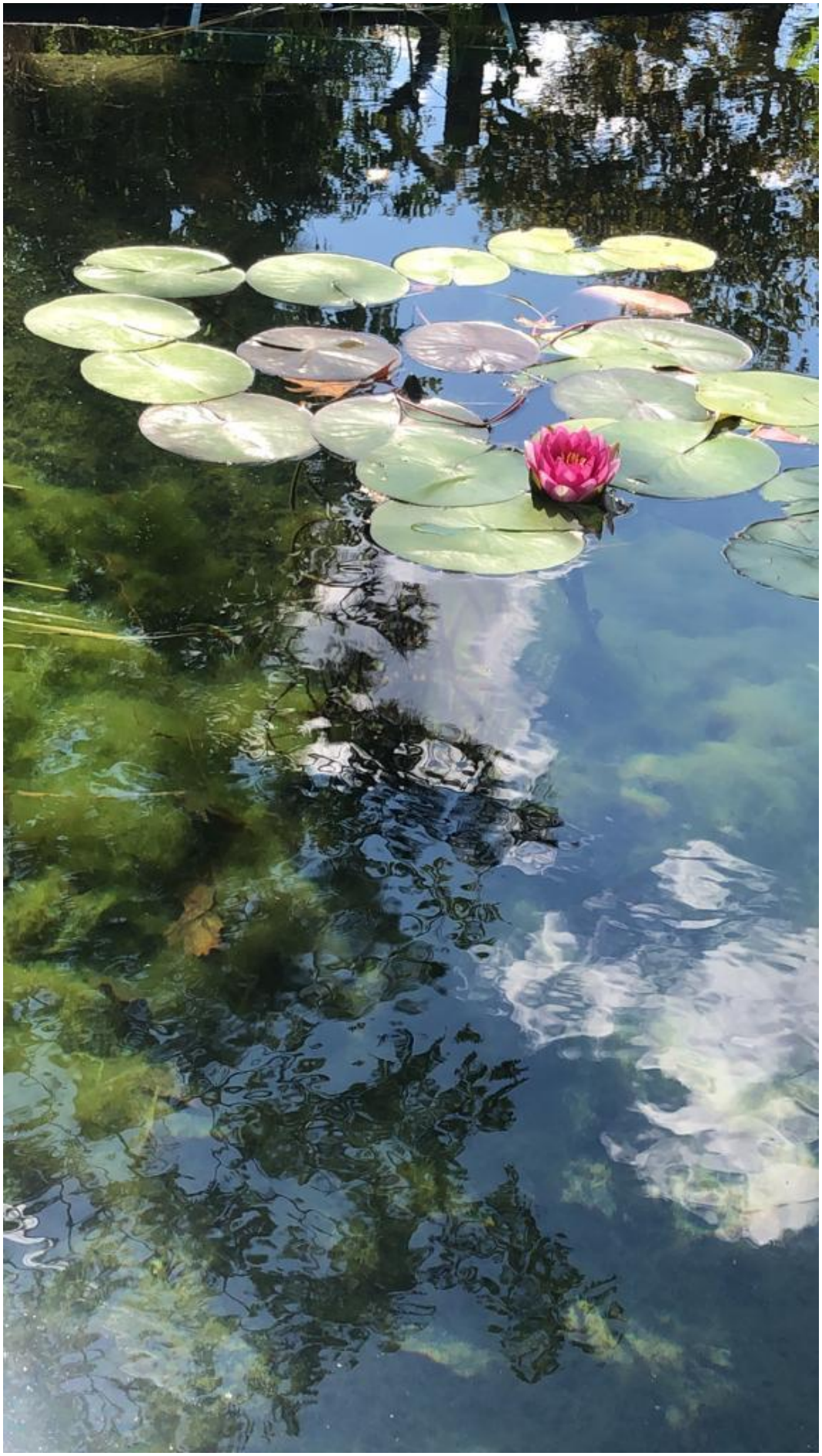
(Pine Tree Case)

Although we prefer Hedera Helix Hibernica for landscaping, slope stabilization througout campuses, Hedera Helix Hibernica can sometimes tend to invade some other species on campus. We closely monitor and evaluate cases where Hedera Helix Hibernica invaded trees especially old ones. The example below shows invasion a pine tree from bottom to top. However, we are taking care of the pine tree by mulching the soil, by pruning the Hedera Helix Hibernica, and by plowing the soil near the root. However, if the Landscaping Unit decides that Hedera is damaging the tree, it will be removed away from the tree.

In the case below, Hedera has not been removed away from the pine tree because it created a natural environment obviously beneficial to bees and butterflies. At times, great crowds of bees and butterflies are inhabiting the tree for reproductive purposes.

Fighting mosquitos with Gambusia affinis on campuses

On our natural campus ecosystem, wet weather and high humidity caused by warm weather conditions accompanied by watering of the land and plants enable optimum conditions for increased levels of mosquito populations. For this purpose, in cooperation with Istanbul Metropolitan University, Gambusia affinis (mosquitofish) have been released in one of our ecological ponds on campus. Although mosquiotfish are known as alien species, our ecological pond has a closed system where they do not have the advantage to access other water sources to invade other species.



Collaboration for shared land ecosytems

Hydroponic Greenhouse Farming with Istanbul Metropolitan Municipality

On Davutpaşa Campus, a joint project initiated with Istanbul Metropolitan Municipality to create an awarness regarding the importance organic agriculture on the urban premises. With the first crops as a result of hyroponic operations in 2019, the project had widespread media coverage in Turkey. Another important aspect of the project was the involvement of bees for pollination, which is an essential part of plant reproduction. This project involved 100% organic farming and aimed at creating public awareness about the issues in agriculture and natural ecosystems.

Water discharge guidelines and standards

Water Conservation Program at YTU

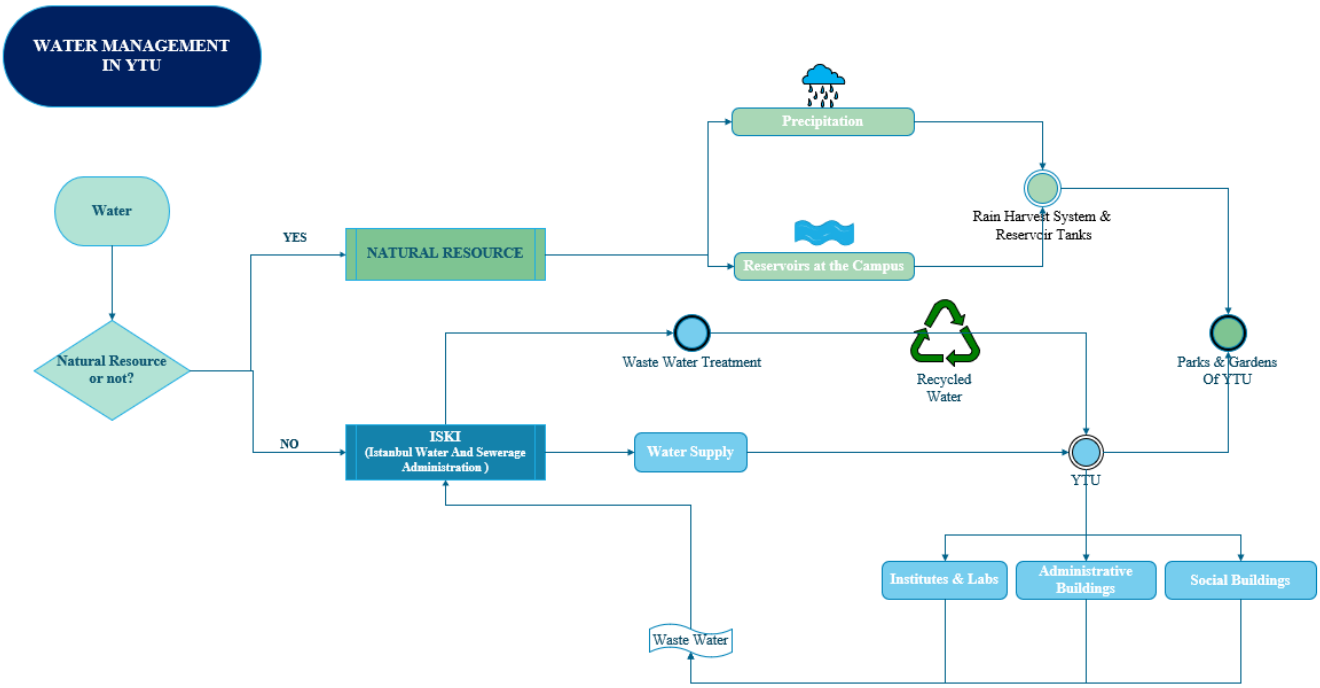
All buildings of the Yildiz Technical University have a separated sewerage system for wastewater and rainwater. Rainwater is thus collected from the roofs of the buildings and is then discharged into the local tanks and canals around the buildings. In 2020, we also collected rainwater for organic farming. The collected rainwater in tanks has been used to irrigate open green space.

All buildings in YTU campus have drainage systems. See the drainage water from one of our buildings under construction. We drain ground water to existing underground tanks and then use it for irritation in our garden. We transport recycled water from Ataköy Advanced Biological Wastewater Treatment Plant of ISKI where our wastewater has been treated. We use recycled water for irritation of trees. We collect consumption data in our software for water use. The smart irrigation system whose project is shown in photographic evidence, is used for water use on the campus. The water consumed for irritation is controlled by smart irrigation timer with a human density sensor, which has weather forecast, rain, and wind sensor. 5. All wastewater systems of our buildings are connected with our wastewater canals. All wastewater canals are connected with ISKI main canals at the exit of our campus.

We collect consumption data in our software for water use. The smart irrigation system whose project is in photographic evidence, is used for water use on the campus. The water consumed for irritation is controlled by smart irrigation timer with a human density sensor, which has weather forecast, rain and wind sensor.

A drip irrigation system as seen below, which is an economical one, is used for irrigating the plants on the campus. This system, which can meet the water needs of the plant, uses the water obtained from the rain harvest.

For further information refarding water management in YTU, please follow the link below: https://www.youtube.com/watch?v=yGvwxdiJHTI


WATER MANAGEMENT IN YTU
Water
Natural Resource or not?
YES
NO
NATURAL RESOURCE
ISKI
(Istanbul Water And Sewerage Administration)
Precipitation
Reservoirs at the Campus
Rain Harvest System & Reservoir Tanks
Waste Water Treatment
Recycled Water
Parks & Gardens Of YTU
Water Supply
YTU
Institutes & Labs
Administrative Buildings
Social Buildings
Waste Water

Policy on plastic waste reduction

Zero Waste Program and Reduction Policies

In YTU, our zero-waste management system cover all activities over the campus. We have analyzed which kind of waste come out through the processes and classified waste species. Each waste sort has been treated in the frame of its own legal framework. Our zero-waste management system has been certificated with “Zero Waste Certificate”. YTU is the first state university zero waste certificated campus in Istanbul.

Please see the video where YTU waste reduction and treatment practices are depicted in the link below:

https://www.youtube.com/watch?v=BWdXp5PfVQ0&t=10s

T.C.
İSTANBUL VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

SIFIR ATIK

Belge No: TS/34/B2/6/119

Tarih: 28/10/2020

SIFIR ATIK BELGESİ
(Temel Seviye)

Adı : **YILDIZ TEKNİK ÜNİVERSİTESİ DAVUTPAŞA KAMPÜSÜ**

Adresi : **İSTANBUL,ÇİFTE HAVUZLAR Mahallesi, ESKİ LONDRA ASFALTI CADDE, No: 149-1, ESENLER,Türkiye**

Vergi No : **9650041985**

12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak **Sıfır Atık Belgesi**'ni almaya hak kazanmıştır.

e-imzalıdır
Hacı Mehmet GÜNER
Çevre ve Şehircilik İl Müdürü

Belge Son Geçerlilik Tarihi: 28/10/2025

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Adresi: https://www.turkiye.gov.tr/cevre-ve-sehircilik-bakanligiBelge Doğrulama Kodu : BSJFUIHF

Policy on hazardous waste disposal

Policies, practices, and work flows regarding hazardous and toxic waste disposal

Management of (solid/liquid/gaseous) hazardous waste from 297 laboratories and other units in 16 buildings of YTU is directed by IA-399-Hazardous Waste Management Work Flow. Every laboratory unit has own responsible person to prepare hazardous waste to collect. Each building has a waste management manager, and they organize suitable collecting data to provide collecting of hazardous waste from units.

When they inform the dates to related department, authorized person makes appointment with licensed hazardous waste transport company and declare the appointment's detail to the MOTAT System (Mobile Waste Tracking System, which is controlled by Ministry). When the transport request accepted by the licensed recovery company, our hazardous waste transport to energy recovery plant.

Within the scope of medical waste disposal, all medical waste generating points must make a contract with Istanbul Metropolitan Municipality, which is responsible to collect and treat the medical waste legally. In Medico Health Center, medical waste are collected separately from household waste in red containers. Sharp medical waste are collected in specially designed boxes. This seperately collected medical waste are transported into Medical Waste Sterilization Plant or if it is pathological waste into Medical Waste İncineration Plant by IMM.

Taşıma Numarası	Yükleme Noktası	Boşaltma Noktası	Atık	Üretilen Miktar (kg)	Taşıyıcı	Plaka
E2307409			200121	225	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2307392			160213	292	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2307341			150110	139	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2304612			160305	580	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2304594			080317	20	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2304585			150202	100	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2304573			150110	250	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2307497			080111	35	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945
E2307333			160305	647	ATA-34-118 - PRİZMA GENEL KİMYASAL TEMİZLİK VE ATIK NAKLİYAT PETROL İNŞAAT SANAYİ VE TİCARETLİMİTED ŞİF	34SJ5945

Alıcı	Boşaltma Zamanı	Durum	Açıklama
196468 - DUPOLL ENERJİ ENTEGRE ATIK YÖNETİMİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ (ÇKN: 233134624)	24.11.2020 17:16		
196468 - DUPOLL ENERJİ ENTEGRE ATIK YÖNETİMİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ (ÇKN: 233134624)	24.11.2020 17:16		
196468 - DUPOLL ENERJİ ENTEGRE ATIK YÖNETİMİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ (ÇKN: 233134624)	24.11.2020 17:16		
196468 - DUPOLL ENERJİ ENTEGRE ATIK YÖNETİMİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ (ÇKN: 233134624)	23.11.2020 16:48		
196468 - DUPOLL ENERJİ ENTEGRE ATIK YÖNETİMİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ (ÇKN: 233134624)	23.11.2020 16:48		
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İSG TEHLİKELİ ATIK YÖNETİMİ İŞ AKIŞI	Doküman No	İA-399
	İlk Yayın Tarihi	04.06.2018
	Revizyon Tarihi	06.03.2020
	Revizyon No	01
	Sayfa	1/1

Süreç Adımları	Sorumlu	İlgili Dokümanlar
Atıkların Yılda İki Kez Toplatılması Sürecinin Başlaması (tahmini teslim tarihinden 3 ay önce)	İSG Koordinatörlüğü, Atık Yönetimi Komisyonu	DŞ-151 Atık Yönetimi Yönetmeliği
Birimlerden Atık Sarf Malzeme İsteklerinin Alınması (tahmini teslim tarihinden 3 ay önce)	İSG Koordinatörlüğü	EBYS
İhtiyaç Belgesi Oluşturularak Gerekli Malzemelerin Alınması İçin İMİD'e İstek Yapılması (tahmini teslim tarihinden 2 ay önce)	İSG Koordinatörlüğü	FR-0217 İhtiyaç Belgesi Formu
Malzeme temini, ilgili birimlere dağıtılması (tahmini teslim tarihinden 1 ay önce)	İSG Koordinatörlüğü, işi alan firma	Sözlü ya da yazılı dağıtım planı
Atıkların kabul koşullarına uygun hazırlanması (tahmini teslim tarihinden 2 hafta önce)	Atık Sorumluları	FR-1220 İSG Tehlikeli Atık formu
Yetkilendirilmiş taşımacıdan atık teslimi için gün alınması	İSG Koordinatörlüğü	Telefon ve/veya web sitesi
Belirlenen günün ilgili birimlere duyurulması	İSG Koordinatörlüğü	EBYS
Atıkların ekiplere teslim edilmesi	İSG Koordinatörlüğü, Atık Yönetimi Komisyonu, Atık Sorumluları	Taşıma İrsaliyesi, Ulusal Atık Taşıma Formu

Hazırlayan	Sistem Onayı	Yürürlük Onayı
Merve KARAMUSTAFA	Prof. Dr. İhsan KAYA	Prof. Dr. Umut Rıfat TUZKAYA