Boğaziçi University Sustainable Development Goals Progress Report

November • 2026

14

Boğaziçi University

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Boğaziçi University

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Sustainable Development Goal 14:

Life Below Water



14

SDG 14: Life Below Water – Marine Ecosystems, Biodiversity and Coastal Protection

THE IMPACT RATINGS 2026

73.

World Rankings

Among the world's top 75 universities for the protection of marine and freshwater ecosystems, with a score of 79.0

30 Individuals

24/7 GPS Tracking

Tracking the marine migration routes of endangered Yelkouan shearwaters through a TÜBİTAK project

3 Tons of Waste

Marine Cleanup

Marine habitat cleanup and underwater ecosystem protection by BÜSAS divers

MARINE POLLUTION AND MICROPLASTIC PREVENTION R&D (MSCA-PF 2025)

Val-PLAS | Biorecovery

Preventing plastic waste from entering the marine environment by using artificial intelligence and synthetic biology to break down plastics at 30–40°C

NASA & Salda

Lake Microbial Ecology Database

İSKİ & Baltalimanı Integration

100% of campus wastewater is discharged after undergoing advanced biological treatment

MARINE BIODIVERSITY MONITORING

Yelkouan Shearwaters & CIESM

Mapping marine biodiversity through acoustic monitoring, next-generation genomics and GPS tracking

COASTAL ENGINEERING AND ALGBU

Advanced Treatment with Microalgae

Removal of toxins and heavy metals from wastewater through the INDEPENDENT facility; sustainable coastal hydrology

WATERSHED AND FRESHWATER HEALTH

Ergene Basin & Environment

TÜBİTAK water quality decision support system, pollutant fingerprint analysis and ultrasonic treatment

Marine Conservation Policies, Awareness Activities and Community Partnerships

100 Divers/Year	Act4Litter	Recovery	Water Academy	Safe Food
BÜSAS Training	WWF Coastal Analysis	Greywater Conservation	SDSN & TSKB	Sustainable Fishing

Freshwater Ecosystems Training Programmes

Boğaziçi University offers comprehensive educational programmes on freshwater ecosystems, irrigation practices and water management/conservation for local and national communities. Various departments and research centres of the university contribute to the conservation and sustainable management of aquatic ecosystems through education and awareness-raising activities in this field.

Academic Programmes

- Chemistry Department: CHEM 111 deals with topics such as water and environmental issues, while ESC 501 focuses on basic environmental topics such as water pollution, water and wastewater treatment.
- Chemical Engineering: ChE 476 examines water-related processes such as the design and integration of wastewater treatment systems
- Institute of Environmental Sciences: ESC 505 addresses water management issues related to drinking water quality, water pollution and public health.

Click here for course catalogues:
https://bogazici.edu.tr/tr-TR/Content/Akademik/Lisans_Katalogu

https://bogazici.edu.tr/tr_TR/Content/Akademik/Lisansustu_Katalogu

Practical Training

- On-site Training and Technical Trips: Within the scope of ESC 500 course, students gain practical knowledge by organising technical trips to water and wastewater treatment plants, landfills and places where environmental pollution control methods are applied.

Social Awareness Programmes

- ClimateBU Trainings: Boğaziçi University Climate Change and Policy Research and Application Centre (İklimBU) organises training programmes and public conferences on climate change, water management and aquatic ecosystems,

Click here to go to İklimBU web page:
https://climatechange.bogazici.edu.tr/







Freshwater Ecosystems Training Programmes

- BU+ Series: Free public lectures on water resources and ecosystems.
- Underwater Sports Club (BÜSAS): The club organises events to raise awareness about aquatic ecosystems and conservation of water resources.





In strong co-operation with local communities, Boğaziçi University continues its comprehensive education and awareness projects aiming to create a conscious and sensitive society on water management and protection of freshwater ecosystems.

Sustainable Fisheries and Aquaculture Training Programmes

Boğaziçi University organises various training programmes and awareness raising activities for local and national communities on sustainable fisheries, aquaculture and tourism management. These activities are carried out through trainings organised in cooperation with the UN Sustainable Development Solutions Network (SDSN) Turkey and the university's open lecture series.

UN SDSN Turkey Online Courses

Boğaziçi University, in collaboration with SDSN, organises online courses on marine and aquatic ecosystems, including topics such as marine ecosystems, fisheries management, marine pollution and sustainability. These trainings support the dissemination of sustainable methods, especially for small-scale fishing and aquaculture communities.

> **Click here to go to SDSN Turkey web page:**
> https://sdsnturkiye.bogazici.edu.tr/tr/

Sustainable Tourism Management Master Programme

The University offers a master's programme that promotes sustainability in the tourism sector. This programme aims to train manpower for sustainable tourism management by addressing the environmental, social and economic aspects of tourism in a balanced manner.

Sustainable Fisheries and Aquaculture Training Programmes

Click here to visit the web page of the programme:
https://strm.bogazici.edu.tr/

Open Lecture Series: BU+

Open lectures organised under theBU+ platform offer free training to the community on topics such as sustainable fisheries, water resources management and the protection of marine ecosystems. These events aim to raise awareness about aquaculture and the fishing industry and promote environmental sustainability.

Click here to visit the BU+ website:
https://buplus.bogazici.edu.tr/etkinlik-turu/acik-ders

Boğaziçi University contributes to the conservation of marine ecosystems and sustainable natural resource management by reaching out to both local and national communities through academic programmes, online courses and open courses in sustainable fisheries, aquaculture and tourism management.

Overfishing and Protection of Marine Ecosystems Training Programmes

Boğaziçi University, through the Boğaziçi University Climate Change and Policy Research Centre (İklimBU) , provides comprehensive awareness-raising education programmes for local and national communities on overfishing, illegal and unregulated fishing practices and the protection of marine ecosystems. Educational activities aim to promote sustainable practices by focusing on critical issues such as the devastating effects of climate change on marine ecosystems and aquaculture.

Awareness Raising Activities of Boğaziçi University

1. Open Lectures and Seminars

İklimBU organises public conferences and seminars addressing the impacts of overfishing, illegal fishing and destructive fishing practices on marine biodiversity. These events highlight the problems threatening fisheries in important seas of Turkey such as the Black Sea and the Sea of Marmara. These sessions function as an educational platform emphasising the need for sustainable fishing practices.

Overfishing and Protection of Marine Ecosystems Training Programmes

2. Awareness Articles

İklimBU publishes informative articles on marine ecosystems and sustainable fisheries that reach a wide audience. For example, the article 'The Climate Crisis That's Taking Fish Off My Table' comprehensively addresses key climate change-related issues such as overfishing, rising sea temperatures, ocean acidification and sea level rise.



The key points addressed are:

- The negative impacts of overfishing and illegal practices such as juvenile fish harvesting on marine ecosystems.
- The role of climate change in exacerbating these challenges, including habitat destruction and changing migration patterns.
- Potential long-term consequences for food security and local economies based on fisheries.

> **Click here to read the article:**
> https://climatechange.bogazici.edu.tr/soframdan-baligi-alan-iklim-krizi/

İklimBU combines scientific research with public events to help local communities become more aware and equipped to tackle key environmental issues such as overfishing, illegal fishing and climate change. You can join Boğaziçi University's work to protect our marine ecosystems and ensure a sustainable future, and discover the latest publications and events on İklimBU's website.

Conservation and Sustainable Use of Oceans and Water Resources

Boğaziçi University organises and supports various activities to promote the conservation and sustainable use of oceans, seas, lakes, rivers and other water resources. The University conducts research projects, awareness campaigns and educational programmes for the protection of aquatic ecosystems at both local and national levels.

Supported and Organised Activities:

1. Coastal Engineering Laboratory:

Boğaziçi University Coastal Engineering Laboratory carries out projects that develop engineering solutions for the sustainable management of coastal and marine ecosystems. Studies on maritime and water resources make important contributions to coastal protection policies.





Click here to go to Coastal Engineering Laboratory web page:
https://coastal.bogazici.edu.tr/

2. Act4Litter Research Project:

Boğaziçi University, in collaboration with WWF Turkey, has carried out a comprehensive analysis of marine pollution along the Turkish coast by applying the methodology of the Act4Litter Project in the Mediterranean Region. The project provides important contributions to sustainable water management and combating marine litter in the coastlines of the Black Sea, Marmara, Aegean and Mediterranean regions.

Click here to read the report of the study:



https://wwftr.awsassets.panda.org/downloads/atkanaliziraporweb.pdf

3. Salda Lake Research:

Boğaziçi University took part in a scientific project that analysed the microbial ecology of Salda Lake and presented the data obtained to NASA's Mars research. This study is of great importance in terms of discovering microbial species that play an important role in microbial evolution and identifying microbial sensitivity zones that need to be protected.

Click here to read the related news:

https://bogazicindebilim.bogazici.edu.tr/content/bogazicinin-yer-aldigi-salda-golu-arastirmasi-nasaya-nitelikli-veri-bankasi-sunacak

4. **Ergene River Study:**
   The University has participated in an international environmental study examining pharmaceutical pollution in the Ergene River. This project is a comprehensive study assessing the impacts of chemical pollution in the river on human health and the environment.

Click here to read the related news:

https://bogazicindebilim.bogazici.edu.tr/content/bogazici-universitesinin-de-katki-sagladigi-dunya-capinda-arastirma-gosterdi-ergene-dunyanin



Training and Awareness Events:

Open Lecture Series:

Boğaziçi University organises public lectures on the protection and sustainable use of water resources. These courses, which cover topics such as marine pollution, water management and sustainable tourism, aim to raise environmental awareness and increase community involvement.

Click here to visit the open lecture series:
https://buplus.bogazici.edu.tr/etkinlik-turu/acik-ders

Academic Contributions:

Dr. Akgün İlhan, who works on sustainability at Boğaziçi University Department of Tourism Management, organises trainings, seminars and radio programmes on water management, water crisis and climate change. These activities support the dissemination of academic knowledge on the protection of water resources to the society.

Click here to read the related news:
https://bogazicindebilim.bogazici.edu.tr/content/su-fakiri-bir-ulke-olma-riskiyle-karsi-karsiyayiz

Sustainable Harvest Policy for Foods from Aquatic Ecosystems

Boğaziçi University has a Safe and Sustainable Food Management Directive to ensure the sustainable harvesting of food from aquatic ecosystems on campus. This directive aims to ensure that the principles of social, economic and environmental sustainability are observed while meeting current food needs and ensuring access to food and nutrition needs of future generations.

> **Click here to read the Safe and Sustainable Food Management Directive:**
> https://kurumsalveri.bogazici.edu.tr/tr/pages/1522-sustainably-farmed-food-on-campus/1958

Implementation Process of the Directive

The Directive is administered by the Boğaziçi University Safe and Sustainable Food Commission. The Commission manages all food establishments within the responsibility and jurisdiction of the university in accordance with the following principles:

a) Access to Safe and Healthy Food:

- It is essential to ensure that all stakeholders have access to safe and healthy food.

b) Sustainable Food Policy:

- Within the framework of sustainable food policy, strategies that support achieving zero waste and zero hunger targets are determined and implemented to ensure continuous, sustainable access to food for all stakeholders.

Based on these principles, Boğaziçi University is committed to ensuring the environmental, social and economic sustainability of food systems on campus.

Conservation of Ecosystems and Biodiversity

Boğaziçi University actively works to expand threatened ecosystems and contribute to sustainability goals by conducting direct studies on the conservation of plant and animal ecosystems and the maintenance of biodiversity. These efforts are carried out through research projects, industry collaborations and applied environmental projects.

Conservation of Ecosystems and Biodiversity

Direct Activities of Boğaziçi University:

1. **Wildlife Conservation Commission:** Boğaziçi University Wildlife Conservation Commission aims to protect ecosystems and increase biodiversity by conducting studies on local flora and fauna on campuses. The Commission develops monitoring and improvement projects for the protection of habitats.

> **Click here to go to the web page of the Wildlife Conservation Commission:**
> https://bogazici.edu.tr/tr_TR/Content/Genel/Yonetim/Kurul_ve_KOmisyonlar/Dogal_Hayati_Koruma_Komisyonu

2. **Sustainable Green Campus Practices Commission:** It promotes sustainable environmental practices on university campuses and carries out regular activities for the protection of natural habitats. These activities contribute to the protection and improvement of environmentally friendly campus areas.

> **Click here to go to the Sustainable Green Campus Practices Commission web page:**
> https://bogazici.edu.tr/tr_TR/Content/Genel/Yonetim/Kurul_ve_KOmisyonlar/Surdurulebilir_Yesil_Kampus_Uygulamalari_Komisyonu

Conservation of Yelkouan Shearwaters Under 7/24 Surveillance

Led by Boğaziçi University's Institute of Environmental Sciences and supported by TÜBİTAK, the project **"Conservation of Yelkouan Shearwaters in the Mediterranean Basin and the Black Sea Using Next-Generation Genomic, Acoustic and GPS-GSM Tracking Methods"** aimed to generate essential scientific evidence to support the conservation of this threatened seabird species. Completed in 2025, the project was conducted in collaboration with Ege University, Istanbul Technical University, the Mediterranean Science Commission (CIESM), the Turkish Marine Research Foundation and Istanbul University. It focused on Yelkouan shearwater populations moving between the Mediterranean, the Aegean Sea, the Bosphorus and the Black Sea.

Conservation of Ecosystems and Biodiversity





As part of the project, 30 Yelkouan shearwaters were captured without harm in the Bosphorus and fitted with GPS-GSM transmitters, enabling continuous monitoring of their locations, migration routes, feeding grounds and other behavioural patterns. The researchers also used acoustic monitoring to identify potential breeding sites and analysed genetic samples from different regions to determine the connections between Yelkouan shearwater populations. By integrating genomic, acoustic and remote-tracking methods, this direct conservation research improved understanding of the habitats, movement patterns and genetic diversity of a threatened marine species. The findings provide an evidence base for developing science-based strategies to protect Yelkouan shearwaters and the marine ecosystems on which they depend.

The full news article is available here.

3. **INDEPENDENT Project:** The INDEPENDENT Project, led by Boğaziçi University, aims to develop microalgae-based sustainable solutions in various fields such as energy, food, health, agriculture, animal husbandry and environmental technologies. The project covers advanced wastewater treatment and environmentally friendly technology studies, especially to protect threatened ecosystems and support biodiversity.





4- Sustainable Agriculture and Food Summit: The Sustainable Agriculture and Food Summit, organized by Boğaziçi University, aims to promote environmentally friendly production practices in the sector by addressing the issues of sustainable agriculture, increasing productivity and protecting ecosystems.



To read the related news:
https://haberler.bogazici.edu.tr/tr/news/kampus/2/boun-tarimin-ev-sahipliginde-surdurulebilir-t/2586

Academic and Research Studies:

Microalgae Biorafinery Research: Boğaziçi University conducts innovative research in the fields of microalgae biorefinery and biotechnology. These studies enable the development of environmentally friendly products, sustainable agricultural methods and bio-fertilizers. Thus, sustainable solutions are offered for the food, agriculture and environment sectors.



Technologies for the Prevention of Aquatic Ecosystem Damage

Boğaziçi University conducts direct studies on technologies and practices that will minimise or prevent the damage caused by the maritime industry to aquatic ecosystems. The university plays an active role for the protection of aquatic ecosystems in co-operation with the sectors.

INDEPENDENT Project

This project, led by Boğaziçi University, aims to develop sustainable solutions within the framework of a bioeconomy-oriented growth model. The project aims to ensure that products produced from micro- and macroalgae-based natural resources reduce dependence on fossil fuels and mitigate negative impacts on aquatic ecosystems. Working with the goal of zero waste, the project aims to be the first carbon-negative integrated biorefinery in Turkey and Europe when it starts operating at full capacity.



Coastal Engineering Laboratory

Boğaziçi University researches and develops sustainable engineering solutions for coastal waters and marine ecosystems through the Coastal Engineering Laboratory. This laboratory contributes to the development of sustainable technologies to reduce the damage caused by the maritime industry to aquatic ecosystems.





Technologies for the Prevention of Aquatic Ecosystem Damage

Climate Change and Water Management

Boğaziçi University develops strategies for the protection of water resources and sustainable water management by analysing the impacts of climate change on the water cycle. These studies produce important solutions to prevent and mitigate damage to aquatic ecosystems.

iklimBU
Boğaziçi Üniversitesi
İklim Değişikliği ve Politikaları
Uygulama ve Araştırma Merkezi

Innovative Biotechnological Approaches to Prevent Plastic Pollution in Aquatic Ecosystems: AI and Synthetic Biology-Driven Val-PLAS Project

The “Intelligent Microbial Platform for Plastic Valorisation via AI-guided Synthetic Biology” (Val-PLAS) project, developed by Assistant Professor Koray Malcı of Boğaziçi University’s Department of Molecular Biology and Genetics under the supervision of Associate Professor Ulaş Tezel of the Institute of Environmental Sciences, was awarded funding under the Horizon Europe Marie Skłodowska-Curie Actions Postdoctoral Fellowships 2025 call (MSCA-PF 2025). The project focuses on using AI-guided synthetic biology methods and intelligent microbial platforms for plastic waste treatment and valorisation. It offers an innovative biotechnological solution to plastic leakage and microplastic pollution, which threaten marine and freshwater ecosystems as well as human health.



Unlike conventional recycling methods that require substantial amounts of energy, Val-PLAS uses AI-assisted enzyme engineering and synthetic biology platforms to break down PET- and PLA-based plastics under mild, near-ambient conditions of 30–40°C.

The intelligent microbial co-cultures developed through the project convert plastic monomers into high-value molecules such as naringenin and hydroxytyrosol, which are used in the cosmetics, dietary supplements and pharmaceutical industries. By enabling land-based plastic waste to be valorised at source with a low carbon footprint, the project contributes to reducing the risk of inadequately managed plastics entering rivers, lakes, coastal areas and marine ecosystems, while directly supporting the objectives of the European Green Deal and the Circular Economy Action Plan.

The full news article is available here.

Boğaziçi University's efforts to protect aquatic ecosystems are carried out with the aim of developing technological solutions to minimise the damage caused by the maritime industry to ecosystems.

Water Discharge Standards and Good Water Management Practices

Boğaziçi University carries out sustainable water management practices that aim to protect ecosystems, wildlife, human health and welfare by adopting water quality standards and water discharge guidelines. Various projects promoting efficient and environmentally friendly use of water are actively implemented on university campuses.

Water Management Practices

1. Water Network and Legal Compliance:

- Boğaziçi University's water network is connected to the Istanbul Water and Sewerage Administration (ISKI) and is in full compliance with the legal regulations that set water quality protection standards in Turkey.
- Wastewater from the Beşiktaş district, where the university is located, is treated at the Baltalimanı Biological Waste Water Treatment Plant.



Water Discharge Standards and Good Water Management Practices



2. Water Discharge Management:

- Water is discharged in accordance with the water quality standards determined by ISKI and the quality of water before discharge is continuously monitored in accordance with environmental standards.
- This process is meticulously implemented in order to protect the sustainability of water resources, minimise environmental impacts and ensure that water is suitable for reuse.

3. Legal Legislation:

- National regulations such as Water Pollution Control Regulation, ISKI Regulation on Discharge of Wastewater to Sewerage and ISKI Clean Water Laboratory Accreditation Certificate require water to be of appropriate quality before being discharged into the environment. This legal framework guarantees the protection of ecosystems, natural habitats and human health.

Click here for the relevant legislation:



1) https://kurumsalveri.bogazici.edu.tr/tr/pages/1443-reducing-marine-pollution-policy/1445

2) https://www.iski.gov.tr/web/assets/SayfalarDocs/Mevzuat%20ve%20Y%C3%B6netmelikler/%C4%B0SK%C4%B0%20ATIKSULARIN%20KANAL%C4%B0ZASYONA%20DE%C5%9EARJ%20Y%C3%96NETMEL%C4%B0%C4%9E%C4%B0.pdf#page=1.00&gsr=0

3) https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=23214&MevzuatTur=7&MevzuatTertip=5

Water Discharge Standards and Good Water Management Practices

4. Grey Water Recovery Systems:

- Grey water recovery systems were commissioned in South Campus 1st Male Student Dormitory (2010) and North Campus 4th Male Student Dormitory (2014) buildings.
- With these systems, 16 m³ of grey water is recovered daily and reused in processes such as garden irrigation, cleaning and reservoir use.



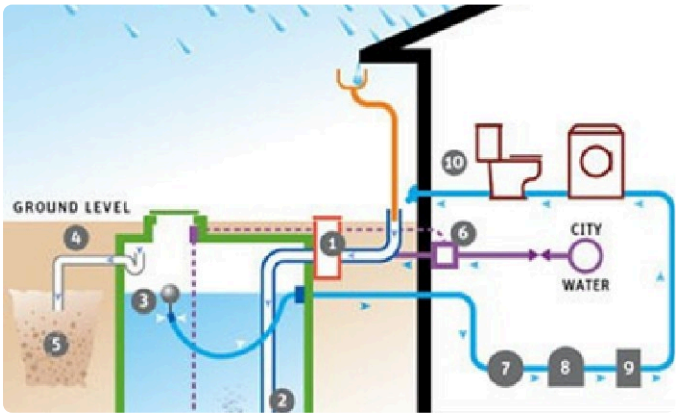
15%

Water Recovery Rate

Click here to go to Green Campus waste water management page:
https://yesilkampus.bogazici.edu.tr/tr/pages/atik-su-yonetimi/6925

5. Rainwater Recovery Systems:

- Kandilli Campus National Earthquake Monitoring Centre (UDIM) and North Campus ETA Building collect rainwater in 46 m³ and 20 m³ capacity tanks and use it for garden irrigation and cleaning purposes.
- In Hisar Campus, it has been calculated that 1747 m³ of rainwater can be collected annually and projects have been developed to purify this water and use it for cleaning and reservoir use.



Water Discharge Standards and Good Water Management Practices



Click here for information about the technical applications of Green Campus:
https://bogazici.edu.tr/tr_TR/Content/Kampus_Yasami/KampusYesilKampus/TeknikUygulamalar/SuGeriKazanim

These comprehensive water management projects aim to protect water quality, manage water resources sustainably and protect ecosystems, wildlife and human health. Boğaziçi University contributes to environmental sustainability and ensures full compliance with water discharge standards and water quality guidelines.

Action Plan for Reduction of Plastic Waste

Boğaziçi University carries out active practices on reducing plastic waste and sustainable waste management on its campuses. The University aims to contribute to the protection of aquatic ecosystems and environmental sustainability goals by promoting environmentally friendly practices.

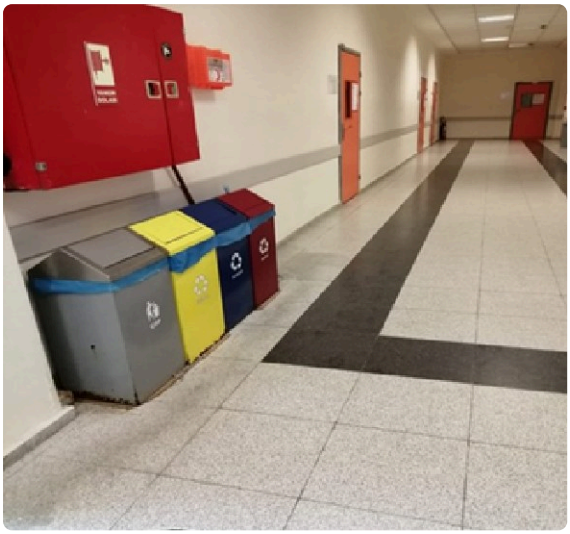
Practices within the Scope of the Action Plan

1. **Recycling and Waste Separation:**

- All plastic, paper, glass and metal wastes on campus are collected separately and directed to recycling points.
- Waste collection and recycling systems are regularly checked and improved throughout the campus. With these practices, it is aimed to minimise the amount of waste and reduce the use of plastic.

Click here to see Green Campus applications:
https://yesilkampus.bogazici.edu.tr/tr/pages/uygulamalarimiz/6936

Action Plan for Reduction of Plastic Waste





2. Research and Collaborations:

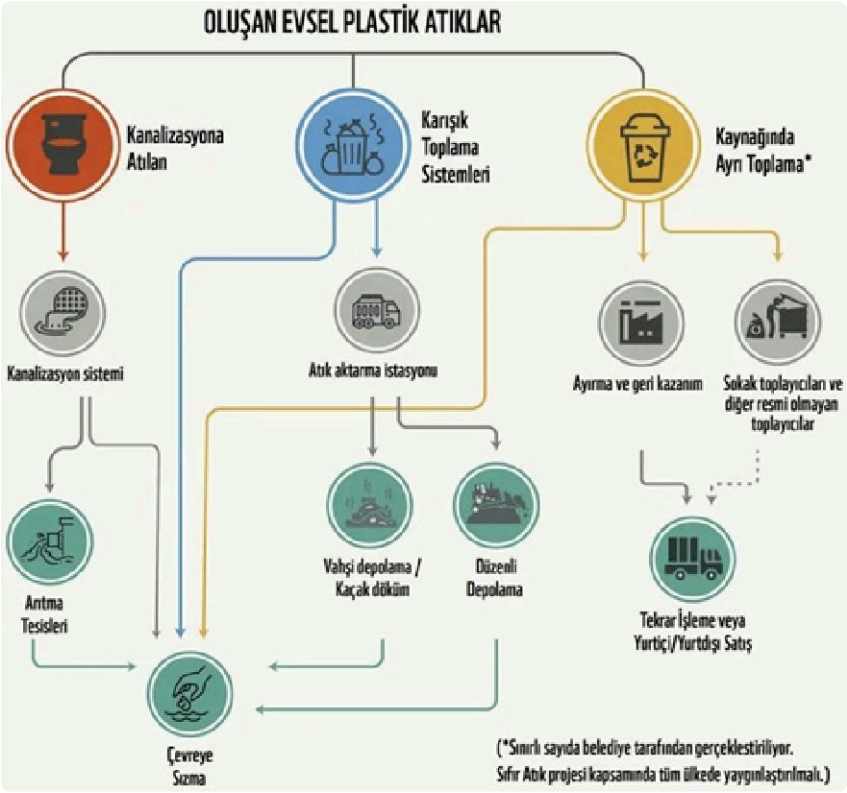
- Boğaziçi University, in collaboration with WWF Turkey, has published an important report titled 'Plastic Waste Problem in Turkey and Policy Recommendations'. This report provides policy recommendations for reducing plastic waste in Turkey and emphasises that the country can assume a leading role in plastic waste management.



Click here to read the report:
https://wwftr.awsassets.panda.org/downloads/plastikwebkucuk_1.pdf

3. Promotion of Sustainable Products:

- Within the framework of the European Green Deal and the Circular Economy Action Plan, the use of environmentally friendly products is encouraged and the reduction of products containing plastic is aimed.



These initiatives of Boğaziçi University demonstrate a comprehensive and sustainable strategy to reduce plastic use and improve waste management on campuses. These activities strongly reflect the university's commitment to sustainability and protection of aquatic ecosystems.

Marine Pollution Abatement Policy

Boğaziçi University develops and implements various policies to prevent and reduce marine pollution. These policies aim to contribute to the protection of aquatic ecosystems by specifically targeting marine pollution from land-based pollution sources.

Policy Implementation Process

Water Discharge and Waste Water Management:

- Boğaziçi University operates in accordance with water discharge standards and guidelines in cooperation with Istanbul Water and Sewerage Administration (ISKI).

-The University has a Water Management Directive prepared based on the Regulation on Waste Water Collection and Disposal Systems and other relevant legislation in Turkey.

Click here to read Boğaziçi University Water Management Directive:
https://kurumsalveri.bogazici.edu.tr/tr/pages/1441-water-discharge-guidelines-and-standards/1443

Activities to Prevent Marine Pollution

Boğaziçi University Coastal Engineering Laboratory:
- The Coastal Engineering Laboratory is an important research centre that develops sustainable engineering solutions to prevent marine pollution. This laboratory carries out projects on the protection of coastal areas and reduction of marine pollution.





Click here to go to Coastal Engineering Laboratory web page:
https://coastal.bogazici.edu.tr/

Marine Pollution Abatement Policy

Boğaziçi University Underwater Sports Club (BÜSAS):

- BÜSAS is a student club that trains approximately 100 new divers every year through scuba diving and freediving training.
- BÜSAS carries out activities to protect marine ecosystems, marine cleanliness and raise environmental awareness.
- In 2016, approximately 3 tonnes of garbage waste was removed from the sea during a sea cleaning dive organised at Bodrum Halicarnassus Pier and received wide media coverage.





Boğaziçi University plays an important role in the field of sustainable marine and coastal management with its projects aimed at preventing and reducing marine pollution. These efforts, which support the protection of aquatic ecosystems, are a strong reflection of the university's environmentally sensitive policies.

Click here to read the related news:
https://haberler.bogazici.edu.tr/tr/news/kampus/2/bogazicili-dalgiclar-bodrum-limanini-temizled/483

Marine Pollution Abatement Policy

Main Objectives of the Project:

- Water Treatment: The utilisation of microalgae in water purification processes enables the cleaning and recovery of water resources.
- Bioeconomy Products: Sustainable applications in energy, health and environment sectors are supported by producing algae-based biofuels, animal feed and biotechnology products.
- Biodiversity Conservation: Technologies that promote the biodiversity of aquatic ecosystems are being developed.

Click here to go to INDEPENDENT Project web page:
https://independent.bogazici.edu.tr/

2. Monitoring of Aquatic Ecosystems:

Boğaziçi University uses advanced technologies and research infrastructure to continuously monitor the state of aquatic ecosystems and detect physical, chemical and biological changes.

Applications:

- Water Quality Monitoring: Regular monitoring and assessment is carried out to monitor the health of aquatic ecosystems and improve water quality.
- Ecosystem Health Monitoring: In order to prevent physical degradation, the Coastal Engineering Laboratory develops sustainable engineering solutions to control negative impacts on coastal areas.

Click here to visit the Coastal Engineering Laboratory web page:
https://coastal.bogazici.edu.tr/

3. Sustainable Water Management:

Boğaziçi University develops advanced water management practices to ensure that water resources are managed efficiently and sustainably.

Water Management Strategies:

- Water Recovery: With the grey water recovery system, Boğaziçi University ensures that wastewater is treated with environmentally friendly methods and reused in toilet reservoirs and cleaning works. At the same time, with the rainwater recovery system, rainwater collected from the roof areas of the building can be used as garden irrigation and cleaning water. These practices make significant contributions to the protection of water resources and ecosystems by reducing the amount of clean water drawn from water resources and the amount of wastewater discharged.

Community Partnerships: Protection and sustainable use of water resources are encouraged through co-operation with local communities.

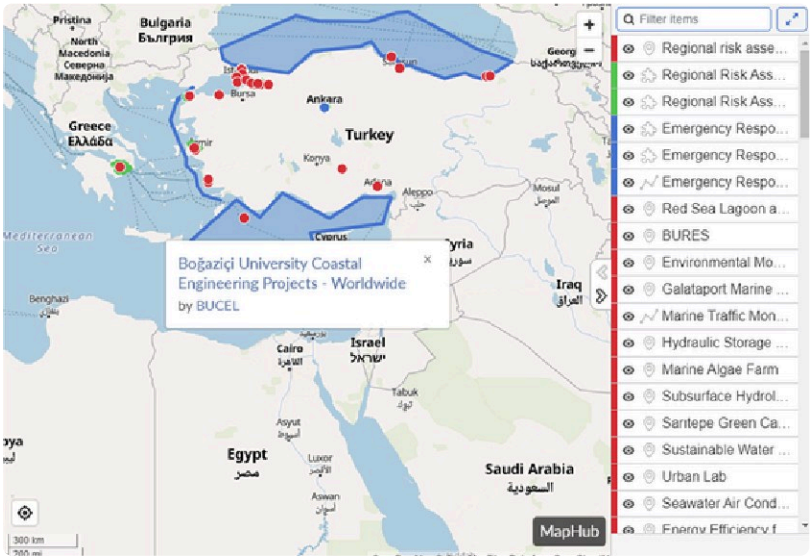


Boğaziçi University implements a holistic plan that minimises negative impacts on aquatic ecosystems and adopts environmentally friendly technologies and environmentally focused management strategies. The University's research and projects represent an innovative approach that promotes the sustainable use of water resources, the protection of ecosystem health and the participation of local communities. These endeavours are a concrete demonstration of the commitment to a sustainable environmental management that respects nature.

Monitoring the Health of Aquatic Ecosystems

Boğaziçi University carries out extensive studies to monitor and protect the health of aquatic ecosystems. The University's Coastal Engineering Laboratory develops sustainable engineering solutions for coastal areas and water resources and provides regular monitoring of aquatic ecosystems.

Click here to see the Coastal Engineering Laboratory projects:



https://coastal.bogazici.edu.tr/content/projects

Monitoring the Health of Aquatic Ecosystems

In addition, the Wildlife Conservation Commission carries out various activities to support biodiversity in aquatic ecosystems and maintain ecosystem health. These studies are vital for identifying environmental factors that threaten ecosystems and developing appropriate intervention strategies.

Boğaziçi University plays a leading role in monitoring the health and sustainable management of aquatic ecosystems by combining scientific research with practical solutions. These initiatives make critical contributions to protecting water resources, ensuring the sustainability of ecosystems and preventing damage to natural habitats.

Cooperation for Shared Water Ecosystems

Boğaziçi University carries out projects and research that support the conservation and sustainable management of shared aquatic ecosystems in cooperation with local communities. The studies carried out by the University make important contributions to the protection of water resources, ensuring the continuity of aquatic ecosystems and raising social awareness.

Studies on the Conservation of Common Water Ecosystems

1. **Tomorrow's Water Project:**

- ‘Tomorrow's Water’ project, one of the leading cooperation projects of Boğaziçi University, aims to raise social awareness on the protection of water resources and water conservation.
- Throughvideos, documentaries and educational content, the society is informed about the sustainable use of water.
- In co-operation with local communities, the project encourages raising awareness of water consumption and protecting natural water resources.





Cooperation for Shared Water Ecosystems

2. Coastal Engineering Laboratory Collaborations:

- Coastal Engineering Laboratory operates as a leading centre conducting scientific research and environmental projects on aquatic ecosystems.
- In cooperation with local communities, it carries out solution-oriented research in areas such as protection of water resources, sustainable management of coastal areas and monitoring of ecosystem health.
- These scientific studies provide technical and scientific support to social cooperation for the protection of local ecosystems.



Boğaziçi University maintains a strong collaboration with local communities through projects that support the conservation and sustainable management of shared water ecosystems. It continues to contribute to the protection of water resources through research projects, public awareness campaigns and scientific collaborations. The University's efforts demonstrate its commitment to protecting ecosystem health, supporting environmental sustainability and ensuring that water resources are carried safely into the future.

Watershed Management Strategy

Boğaziçi University is actively involved in various projects that develop catchment management strategies based on region-specific aquatic species diversity. These strategies are vital for the conservation of aquatic ecosystems, sustainable management of biodiversity and improvement of water quality.

Projects and Studies Carried Out

1. **Ergene Basin Water Quality Management Project:**

- This TUBITAK-funded project, led by Boğaziçi University Institute of Environmental Sciences, aims to monitor pollution sources in the Ergene Basin and develop solutions to improve water quality.
- The project aims to analyse the impacts of pollution sources and develop software for water quality management. This project is an important step for the protection of aquatic species diversity specific to the region and the continuity of ecosystem health.





Plan to Minimise the Change of Aquatic Ecosystems

2. Wildlife Conservation Commission:

- Boğaziçi University's Wildlife Conservation Commission implements a comprehensive strategy to protect plant and animal populations on campus.
- Its main responsibilities include inventorying natural assets, protecting endemic plant species, caring for monumental trees, and balancing animal-human interactions.
- This policy promotes the conservation of biodiversity and supports the sustainable management of terrestrial and aquatic ecosystems.

> **Click here to go to the Commission page:**
> https://bogazici.edu.tr/tr/pages/universite-yonetim-kurulu-kurul-ve-komisyonla/246

These projects carried out by Boğaziçi University successfully implement watershed management strategies by producing scientifically based and sustainable solutions. The University continues to work in line with the objectives of protecting regional aquatic species diversity, improving the health of aquatic ecosystems and supporting biodiversity.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To conserve and sustainably use the world's oceans, seas and marine resources
SUSTAINABLE DEVELOPMENT GOALS