



2024 Sustainability Report **SDG 6**



CLEAN WATER AND SANITATION



LETTER FROM THE REPORT RECTOR



Ege University is a leading university, an example of the Turkish higher education system, which has received Turkey's first Institutional Full Accreditation Certificate and has the identity of a Student-Focused Research University.

Our University, with its 69-year deep-rooted history, strong academic staff, qualified scientific studies, distinguished students, and graduates, is to make a supreme effort to build a solid future for new generations by being sensitive to the realities of the world, our country and the society we live in. Ege University is a strong research institution with an entrepreneurship and innovation ecosystem where R&D, innovation, knowledge, and technology transfer take place between industry and university.

Ege University has adopted all the goals of eliminating inequalities, strengthening economic growth and employment, improving cities and residential areas, ensuring industrialization, protecting oceans and ecosystems, producing and consuming energy more sustainably, combating climate change, developing sustainable production and consumption, and empowering human rights. Our university operates within an adequate ultrastructure designable to implement all academic and operational activities within the SDGs framework.

We steadfastly persist in our pursuit of elevating Ege University into a vanguard research institution dedicated to pioneering technological advancements in support of sustainable development.

This report not only contains in-depth information about Ege University's remarkable efforts in each of the United Nations Sustainable Development Goals throughout 2024 but also reveals the key strategies of our institution. Moreover, it serves as a guiding compass, not only illuminating our efforts but also enabling a keener determination of our evolving needs and strategic plans.

In harmonious unity, we ardently endeavor to steer our institution towards a guiding and pioneering role by meticulously realizing our objectives through a management philosophy of fairness, equity, and accessibility.

I appreciate all my esteemed colleagues whose collective efforts have shaped this report.

With warm regards and respect..."

Prof. Dr. Necdet BUDAK
Rector



LETTER FROM THE REPORT TEAM

As the Sustainability Report Team, Ege University, we are proud and excited to present the third annual Sustainability Report of Ege University, one of Turkey's pioneering universities, prepared to concretize the University's commitment to sustainability and enable you to follow our sustainability-related efforts closely.

Sustainability lies at the heart of Ege University's main objectives. Besides, our university bears the responsibility of leaving a more livable world to future generations, and it emphasizes its determination to integrate sustainability principles in the fields of education, research, social contribution, and campus management. Over the years, Ege University has built a strong track record of offering sustainable solutions to address the challenges facing the university and society. In 2020, all these efforts culminated in establishing the Rankings Office. This move not only strengthened the university's commitment to sustainability but also led to the formation of sub-commissions focusing on various Sustainable Development Goals. These sub-working groups brought together academics and administrative staff from every faculty and the Rectorate, each contributing diverse perspectives and professional expertise.

What makes the Rankings Office even more dynamic is its inclusion of the Sustainability Report Team, which actively participates in all activities, thus enhancing the visibility of the office across the university.

Ege University aims to extend influence far beyond the boundaries of our institution. The EGE Sustainability Team seeks to be a trailblazer in instilling a culture of sustainability in other higher education institutions. Our Sustainability Team and its sub-working groups are going to serve as advisors to our university as well as to other universities, offering insights into Sustainable Development Goals and impact management. Furthermore, we are going to continue to be actively involved in educational initiatives that support schools on their sustainability journeys.

Beyond our campuses, we actively engage with local communities, businesses, and government entities to foster sustainable relationships, collaborate on solving common issues, and share our wealth of knowledge.

Ege University is unwavering in its commitment to the responsible management of resources to mitigate their impact on society, the environment, and the economy. This report offers a transparent and current source of information, providing valuable guidance to universities and stakeholders seeking to expand their knowledge on sustainability.

EGE University is actively dedicated to advancing sustainability through research, education, and innovation to become a leading institution in Turkey and worldwide. Our primary focus is on enhancing the accessibility, inclusivity, and affordability of our university for the benefit of our community. We cultivate positive partnerships with industry leaders to strengthen our engagement and ensure the use of environmentally sustainable practices that support innovation and research.

This report offers insight into EGE UNI's position in 2024 regarding enhancing sustainability in Turkey. We share our initiatives and commitments related to environmental, social, and economic sustainability, along with their corresponding impacts. We extend our gratitude to our sub-working groups, the Sustainability Report team, our dedicated students, EGE's esteemed academicians, and the Rectorate for their unwavering efforts this year to further our sustainable impact.

Our journey towards securing the sustainability of our world is an extensive and long way one. As the EGE Sustainability Team, we place our trust in the dedication of our university's staff and students to continue their improvements this year and sustain their endeavors well into the future.

We appreciate your interest in the Ege University Sustainability Report and eagerly welcome the feedback of our readers.

Prof. Dr. Göknur ŞİŞMAN AYDIN
Coordinator
EU Sustainability Office

A sustainable life is only possible with the presence of a sufficient and high-quality water supply. Of the 1.4 billion cubic kilometers of water on Earth, only 2.5% exists in the form of fresh water that is usable by humans. The amount of fresh water accessible to humans is even less, accounting for less than 1% of the total water resources on Earth.

By the year 2025, it is expected that 1.8 billion people on Earth will be living in countries or regions with absolute water scarcity (less than 500 m³/year per person), and two-thirds of the population will be living under water stress conditions (with 500-1000 m³/ year per person).

Our university provides support for global goals related to CLEAN WATER and SANITATION objectives through various research projects and activities of different kinds.



WASTE WATER TREATMENT

On the campus, there is one Olympic-sized swimming pool with a volume of 3660m³. The water in the pool is treated through sand filtration and disinfection methods, allowing it to be 100% reused.

In order to maintain the hygiene of the pool water, water analyses are conducted by the pool operator at least three times a day. Additionally, every month, water samples are sent to institutions and laboratories authorized by the Turkish Ministry of Health and the results are monitored by the Ministry of Health to ensure the water's quality.

Although there is no wastewater treatment plant for domestic wastewater on the campus, 100% of the generated wastewater is sent to Izmir Metropolitan Municipality's advanced biological wastewater treatment facility. The wastewater meets acceptance standards before being discharged into the municipal drainage network. A wastewater treatment contribution fee is paid to the Metropolitan Municipality for each unit of wastewater treated.



PREVENTION OF WATER SYSTEM CONTAMINATION

To address potential accidents, Ege University has a Maintenance and Repair Branch Directorate under the Technical Affairs Directorate. The Maintenance and Repair Branch Directorate has administrative personnel working 24/7, ready to respond immediately to any accidents. To prevent any pollutants from entering the water system, appropriate plumbing materials are used and replaced when necessary. The presence of any pollutants is continuously monitored in accordance with the regulations regarding waters intended for human consumption, as published in Official Gazette number 25730.

Ege University, within the Department of Public Health at the Faculty of Medicine, has a water hygiene laboratory where bacteriological, physical, and chemical analyses are conducted regularly.

PROVISION OF FREE DRINKING WATER

Spring water is treated to meet the standards specified in the "Regulation on Waters Intended for Human Consumption," and it is used as drinking and utility water across the entire campus. Water analyses are regularly monitored by the Public Health Unit of Ege University Medical Faculty. Outdoors, there are 45 filtered water dispensers providing free water for staff, students, and guests. Additionally, free drinking water is provided in staff and student cafeterias through water dispensers. The filters of these dispensers are replaced every 6 months.



WATER USE

To minimize water usage on the campus, some facilities are equipped with sensor-operated faucets and urinals. Effective irrigation methods are employed across the campus to prevent unnecessary water consumption, and watering is done during the early or late hours of the day rather than when the sun is at its peak. In addition, water-efficient plants are preferred in the selection of vegetation in green areas on the campus.



WATER-CONSCIOUS PLANTING

Within the campus grounds, apart from the experimental gardens of the Faculty of Agriculture, a significant portion of the trees consist of coniferous trees. These needle-leaved trees require less water and thrive primarily based on rainfall, making them crucial for substantial water conservation compared to deciduous trees. Of the total vegetation area within the campus, 18.45% is composed of olive trees, while 42.81% consists of pine trees. In total, 61.26% of the campus area is covered by drought-resistant trees that do not require irrigation.



Areas within the campus with drought-resistant trees.



WATER RECYCLE POLICY

Ege University pays attention to water harvesting and prioritizes using water-saving tools. In this scope, more than one study is being carried out, and more and more are being improved every day. Olympic-sized swimming pool is present on the campus with a water volume of 3660m³. The pool water is treated using sand filtration and disinfection methods, allowing it to be 100% reused.



Laundry Wastewater Treatment Plant



Treatment of Olympic-sized swimming pool

MEASURING WATER RECYCLING

As part of the İZKA project, which includes the installation of systems to harvest and make rooftop rainwater usable, initial efforts are planned for garden and tree irrigation. The project has determined that the total area identified for this purpose and the amount of rainwater that can be harvested from their rooftops amounts to approximately 165,000 m³. It is evident that the planned rainwater harvesting will significantly exceed the water requirement for irrigation.



Rain water harvesting from roof surface



Construction of rain water pool



Climate Change, Renewable Energy and Sustainable Development



Ege University hosted a seminar titled organised in cooperation with its Quality Coordination, Sustainability Office, the SDEWES Centre (International Energy-Water-Environment Systems & Sustainable Development), IPCC and TÜBİTAK.

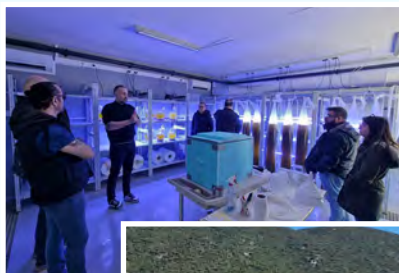
Young Ideas on Water and Climate Crisis

The workshop "Young Ideas on Water and Climate Crisis" was held at Ege University, organized by the Faculty of Science and the Biology Society. It brought together academics, students, and public officials to discuss the impacts of global warming on water resources, drought, and sustainability. Speakers emphasized youth engagement, renewable energy, circular bioeconomy, and emission reduction as key strategies for a livable future.

   	
SU VE İKLİM KRİZİNDE GENÇ FİKİRLER ÇALIŞTAYI 8 KASIM CUMA FEN FAKÜLTESİ A BLOK KONGERANS SALONU	
PROGRAM	
09.00-09.30	Kayıt
09.30-10.30	Açılış Konuşmaları Ege Üniversitesi Biyoloji Bölümü Başkanı Muhammet YILDIRIM Ege Üniversitesi Biyoloji Bölümü Başkanı Prof. Dr. Serdar Cihan ŞENOL Ege Üniversitesi Fen Fakültesi Dekanı Prof. Dr. Özgür AYAZ İlimler, Sürdürülebilirlik ve İktisat Halil ERGİN Ege Üniversitesi Rektörü Prof. Dr. Nurettin BUDAK
10.30-11.30	Öğrenci Sunumları İlker D. YILDIRIM: İklim Değişikliğinin Denizel Ekosistemler Üzerindeki Etkileri Eda DAYI: İklim ve Su Krizinin Deniz Çayırına Etkisi Melis ÖZEMİR: Su ve İklim Krizinin Kuyruk Üzerindeki Etkisi
11.30-11.45	Ara
11.45-12.30	Workshop: İklim ve Su Krizi Karşısında Gençler Savancı mı Kaldı mı? Öğle Arası
12.30-13.00	Münazara: İklim ve Su Krizi Karşısında Gençler Savancı mı Kaldı mı?
13.00-14.00	Ara
14.00-14.30	Öğrenci Sunumları Ferihan ÖZDOĞAN: Ege Gölü Yatağında İklim Değişikliğinin Su Kaynaklarına Etkisi Ayşe DÖNMEZ: İklim ve Su Krizinin Kuvvetli Etkisi Ayşe BALKAN: Su ve İklim Krizinin İktisadi Etkileri Muhammet YILDIRIM: İklim Krizinin Ülkemiz Üzerindeki Etkileri ve Önlemler
14.30-16.00	Kapanış Konuşmaları/Münazara ve Fotoğraf Yarışması Kazanışlarının Açıklanması



The WANTOFISH Project



(Developing a digital-based curriculum of Water Footprint awareness in Mediterranean FISHerries for sustainable resources in Europe) is coordinated by Ege University with partners from Spain, Italy, Croatia, and Greece under the Erasmus+ KA220-HED framework. The project focuses on assessing and reducing the water footprint of Mediterranean fisheries by developing a digital curriculum to increase awareness among students, researchers, and industry stakeholders. Through quantifying water use across fishing, aquaculture, and processing stages, WANTOFISH aims to promote efficient water management and sustainable resource use in seafood production.



COOPERATION FOR NGOs

University, Assoc. Prof. Dr. İnci Tüney Kızılkaya, in collaboration with the Mediterranean Conservation Association, analyses the impact of climate change on marine ecosystems and living life in detail. In this context, the project team carries out studies on the potential effects of climate change on marine biodiversity, strategic planning on the importance of protecting marine areas and

Gökova Bay to Cape Gelidonya Turkey Project

Restoring marine ecosystem connectivity in south western Turkey. This project is removing barriers to the recovery of marine ecosystem from Gökova Bay to Cape Gelidonya, triggering the revival of healthy ecosystem processes. A fully functioning ecosystem which keeps invasive species in check will generate sustainable benefits for local people and increase resilience to climate change.



SUSTAINABLE WATER EXTRACTION ON CAMPUS

On the campus, water-efficient irrigation methods such as drip and sprinkler irrigation are employed for the watering of green areas, promoting effective water utilization.

Furthermore, in the management of irrigation for green areas, technologies have been implemented that can monitor real-time soil moisture levels and capillary water movement in the soil profile, and manage irrigation systems using artificial intelligence.

The campus utilizes groundwater and does not rely on fossil water sources.

PRODUCT	SAMPLE VISUAL
Capillary Water Movement Detection Sensor	
Sensor, Power, Communication and Energy Unit	
Valve Control Unit	
Central Control Unit	
Cloud-Based Centralized Management	



COLLABORATION ON WATER SECURITY

Ege University has been supporting the preservation and security of both freshwater and seawater resources for many years and has been collaborating with relevant ministries at the local, regional, and national levels. Ege University actively participates in the "Management Committee for the Küçük Menderes Basin" established by the Turkish Ministry of Agriculture and Forestry's General Directorate of Water Management, the "İzmir Provincial Water Management Coordination Committee," as well as the "Management Committee for the Gediz Basin" and "Manisa Provincial Water Management Coordination Committee" formed by the Manisa Governorship. They have contributed as long-term partners in the conservation and security of water resources.

Researchers from Faculty of Agriculture is leading a national project titled "Evaluation of the Potential Use of Different Rainwater Harvesting Methods Monitored with Smart Digital Soil Moisture Sensors in Sustainable Olive Production in terms of Soil and Plant Characteristics as well as Socioeconomic Aspects"





A collaborative project between the Ege Agricultural Research Institute and International Agricultural Research and Training Center successfully completed. The project aimed to improve water-use efficiency and promote sustainable agricultural practices in drought-prone areas. It was found that the AI-assisted irrigation system achieved the same productivity as traditional farmers while using up to 80% less water.



Effort on Conscious Water

Bilateral Project with Japan

An international project led by a researcher at Ege University, has received support of 13.5 million Yen from Japan. Within the scope of this project, artificial intelligence algorithms will be applied to develop a new method for detecting damages that may occur due to environmental effects or dynamic loads like earthquakes throughout the service life of water infrastructure such as water storage structures, dams, reservoirs, water transport structures, coastal and port facilities.



Ege University and Tokyo University of Agriculture and Technology join forces for smart agriculture



Ege University and the Tokyo University of Agriculture and Technology have partnered to advance smart agriculture technologies with a strong focus on efficient water management. The initiative aims to develop digital monitoring systems and sensor-based irrigation methods to optimize water use, improve crop yields, and support sustainable farming under changing climate conditions.

An academican from Ege University's Department of Chemical Engineering has joined the "Desalination Technologies Technology Roadmap" working group, created by the Presidency of the Science, Technology, and Innovation Policies Council. The working group will engage in efforts to make groundwater and surface water sources usable by purifying them from salt content after specific processes



*Prof. Nalan Kabay
from Department of Chemical Engineering*

COLLABORATION ON WATER SECURITY

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Project on Water Use

As part of the agreement between Ege University and Tokyo University of Agriculture and Technology (TUAT), Ege University and TUAT jointly developed a project for the Izmir Agricultural Technology Center (ITC), also known as the "Silicon Valley of Agriculture," initiated by ITC. The project aims to implement smart agriculture technologies for cotton cultivation in the Ege Region, starting from the Menemen plain. Ege University, TUAT, and ITC simultaneously signed a project protocol for this endeavor.



Project on Wastewater Treatment Solutions

Ege University's retired faculty members, Prof. Dr. Süheyda Atalay and Prof. Dr. Ferhan Sami Atalay, from the Department of Chemical Engineering at the Faculty of Engineering, have developed a four-stage treatment system that allows wastewater from textile factories to be used in agriculture. This achievement comes as a result of their work initiated two years ago.



Projects on Water Treatment



Two projects are supported by YÖK(Council of Higher Education) Research Universities Support Program by aiming "Development of Adsorbents to Remove heavy metals from wastewater" and "Recovery of Lithium from Boron Mining Wastewater by Bipolar Membrane Electrodialysis and Its Use in the Preparation of Cathode Materials for Lithium-Ion Battery Production."

Project on Sustainable Marine Ecosystems and Seabed Waste Reduction

Researchers at Ege Üniversitesi's Faculty of Fisheries have launched a project titled "Targeted Innovative Modifications to Trawl Fishing Gear and Dual-Area Waste Analysis on the Sea Floor", supported under the TÜBİTAK 1001 programme. The project targets macro-litter on the seabed - especially plastics that evade surface collection - by engineering modified trawl gear for deep-sea waste retrieval and conducting field trials with fishers to test design variants and collect sediment samples pre-and post-deployment.



A Solution to the Microplastic Problem in the Seas



For the first time, innovative radiolabeling and positron emission tomography (PET) imaging methods will be used to study the effects of microplastics in marine organisms. The project aims to reduce threats to marine ecosystems by investigating the biodistribution and biotoxicity of microplastics under more precise and realistic conditions.

Diving activity for cleaning sediment layer of the sea was organized by Faculty of Fisheries and Urla Maritime Vocational School.

Protection Of Water Systems



Ege University Özdere Recreation Facility was awarded the Blue Flag.



Social Responsible Projects focusing on Conscious Water and Preservation of Natural Resources

Presentation on

“Importance of Water”

Raising awareness about using water efficiently and understanding of the importance of water in human life

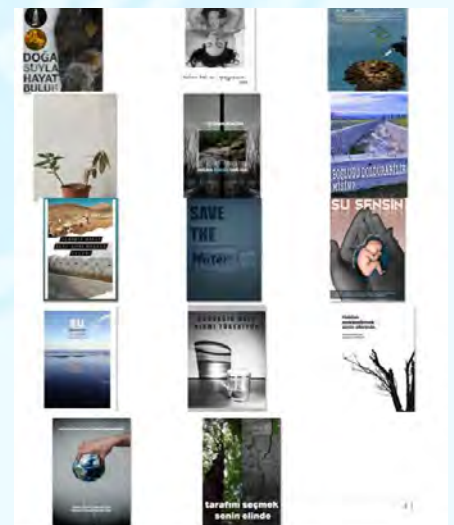
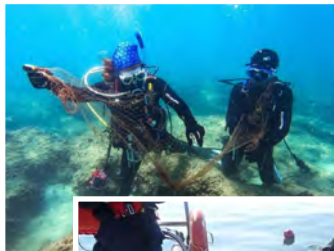


Clean Sea, Clean Environment

Using the EGEDERİN diving vessel, the Underwater Technology students collected waste materials from the sea floor, while Maritime students removed litter from the shoreline.



To raise awareness among university students, academics, and administrative staff about the importance of water for life and its conscious use.



WE LOVE THE BLUE, WE PROTECT THE SEA

Collecting and recycling trash and plastics from the sea and beaches in swimming areas, with collaboration from local volunteers and non-governmental organizations.



THE Impact Rankings Methodology 2026 & GRI Index Matrix

THE	Impact Rankings Methodology 2026 Version 1.1	GRI	Disclosure	Reported	Page
6.1	Research on water			Fully	
6.2	Water consumption per person			Fully	
6.2.1	Measure the total volume of water used in the university that is taken from mains supply, desalinated, or extracted from rivers, lakes, or aquifers?	GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared Fully resource 303-3 Water withdrawal 303-5 Water consumption	Fully	
6.2.2	Water consumption per person		303-3 Water withdrawal 303-5 Water consumption	Fully	
	Volume of water used in the university: Inbound (treated/extracted water)			Fully	
	Number of campus population			Fully	
6.3	Water usage and care			Fully	
6.3.1	Wastewater treatment A process in place to treat wastewater.	GRI 303: Water and Effluents 2018	303-4 Water discharge	Fully	4
6.3.2	Preventing water system pollution Processes to prevent polluted water entering the water system, including pollution caused by accidents and incidents at the university.			Fully	4
6.3.3	Free drinking water provided. Provide free drinking water for students, staff and visitors (e.g., drinking water fountains).		303-1 Interactions with water as a shared Fully resource	Fully	5
6.3.4	Water-conscious building standards Apply building standards to minimise water use			Fully	5,6
6.3.5	Water-conscious planting Plant landscapes to minimise water usage. (e.g. use drought- tolerant plants)			Fully	5
6.4	Water reuse			Fully	
6.4.1	Water reuse policy Have a policy to maximise water reuse across the university?	GRI 303: Water and Effluents 2018	303-3 Water withdrawal 303-5 Water consumption	Fully	5
6.4.2	Water reuse measurement Measure the reuse of water across the university?			Fully	4, 6
6.5	Water in the community			Fully	
6.5.1	Water management educational opportunities Provide educational opportunities for local communities to learn about good water management Promoting conscious water usage Actively promote conscious water usage on campus, and in the wider community			Fully	5,6,8,10
6.5.2	Off-campus water conservation support Support water conservation off campus			Fully	7,8,9
6.5.3	Sustainable water extraction on campus Where water is extracted (for example from aquifers, lakes or rivers) utilise sustainable water extraction technologies on associated university grounds on and off campus.	GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared 303-3 Water withdrawal	Fully	7
6.5.4	Cooperation on water security Cooperate with local, regional, national, or global governments on water security. Local Regional National	GRI 304: Biodiversity 2016	304-3-a	Fully	7,8, 10
6.5.5	Promoting conscious water usage on campus Actively promote conscious water usage on the wider community				8,10
6.5.6	Promoting conscious water usage in the wider community Actively promote conscious water usage in the wider community				6

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