

# Sustainable KTU

## SUSTAINABILITY REPORT 2025

### 6 CLEAN WATER AND SANITATION



[www.ktu.edu.tr/sustainability](http://www.ktu.edu.tr/sustainability)



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Sustainability is one of the most important areas of responsibility shaping our future through its environmental, economic, and social dimensions. Universities are not only institutions that produce knowledge, but also pioneering structures that guide sustainable development and contribute to social transformation.

In line with the United Nations Sustainable Development Goals (SDGs), the development objectives of our country, and the vision of sustainability in higher education, we, as Karadeniz Technical University, place sustainability at the core of our education, research, social contribution, and institutional governance processes.

Throughout 2025, our university carried out significant initiatives in many areas, including quality education, climate action, energy efficiency, scientific research, social inclusion, and regional development. Through projects focused on scientific knowledge production and societal contribution, we continued to support the achievement of sustainable development goals.

This report presents our university's activities in the field of sustainability and our commitment to the future. Guided by science and in collaboration with our stakeholders, we believe that we will continue working towards a more sustainable future.

Prof. Dr. Hamdullah ÇUVALCI  
**Rector, Karadeniz Technical University**



## 6 CLEAN WATER AND SANITATION



Access to clean water and adequate sanitation is essential for protecting human health, supporting environmental sustainability, and improving quality of life. Sustainable Development Goal 6 (SDG-6): Clean Water and Sanitation, adopted by the United Nations, aims to ensure the availability and sustainable management of water and sanitation for all by 2030. This goal encompasses multiple dimensions, including access to safe drinking water, wastewater management, protection of water resources, water efficiency, and the promotion of hygiene awareness. Higher education institutions play a critical role in achieving the targets of SDG-6 through scientific research, technological innovation, and community engagement activities. Universities contribute to both local and global water management policies through sustainable campus practices, interdisciplinary research initiatives, and public awareness programs.

Karadeniz Technical University places environmental and social sustainability among its institutional priorities and has implemented various policies and practices aligned with SDG-6 throughout 2025. These efforts include the improvement of campus water infrastructure, implementation of water-saving and efficiency practices, environmental and hygiene-oriented educational activities, scientific research on water management, and national and international collaborations.

This report aims to present the policies, practices, research activities, and societal contributions carried out by Karadeniz Technical University within the scope of SDG-6 during 2025. It also seeks to highlight the university's good practices in the field of clean water and sanitation while contributing to increased awareness and the dissemination of sustainable water management practices.



## Institutional Structure

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Karadeniz Technical University (KTÜ) has developed a multi-stakeholder institutional framework to support the United Nations Sustainable Development Goal “SDG-6: Clean Water and Sanitation” through sustainable water resource management, improved sanitation practices, and enhanced environmental awareness. Within this scope:

- The Center for Environmental and Climate Change Research and Application conducts interdisciplinary scientific research on issues such as water pollution, treatment technologies, and ecosystem health, while also producing regional solutions for sustainable environmental management.
- The Department of Construction and Technical Affairs is responsible for managing technical processes across the campus, including water infrastructure, drinking water systems, maintenance and repair operations, and digital monitoring systems. The department plays a critical role in ensuring the continuity of sustainable water supply and sanitation infrastructure throughout the university campus.

Through these institutional mechanisms, KTÜ not only carries out implementation and monitoring activities within the campus environment but also contributes to the promotion of sustainable water and sanitation management at the societal level.



# Environmental and Climate Change Research and Application Center

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Karadeniz Technical University (KTÜ) has a research center that coordinates its scientific activities in the fields of environment and sustainability: [KTÜ Environmental and Climate Change Research and Application Center](#). The Environmental and Climate Change Research and Application Center conducts interdisciplinary research and practical applications on environmental issues. Within the center, several thematic working groups have been established; for example, the Watershed and Water Resources Working Group focuses on water resource management and watershed planning.

The center carries out studies that directly contribute to the SDG-6 sub-targets of “improving water quality” and “ensuring sustainable management of water resources.” In particular, through the activities of the Watershed and Water Resources Working Group, topics such as the protection of water ecosystems, the impacts of urban infrastructure on water systems, and regional water scarcity are investigated. In this context, the center supports the technical foundation of SDG-6 implementation through scientific data, interdisciplinary research, and evidence-based environmental solutions.

## Department of Construction and Technical Affairs

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The Department of Construction and Technical Affairs is the technical unit responsible for the planning, construction, maintenance, and operation of KTU campus infrastructure. Within the framework of SDG 6, this unit carries out critical tasks, including:

- Operating water wells and performing maintenance and repairs on piping systems,
- Maintaining and repairing water reservoirs, pumping stations, and distribution lines,
- Conducting maintenance and repairs of water and sanitary installations in buildings,
- Monitoring and controlling water tanks, chlorination units, chlorine levels, and chlorine dosing,
- Inspecting and monitoring water wells,
- Maintaining and repairing taps, toilets, and sinks in campus buildings,
- Identifying, procuring, delivering, and tracking materials and equipment required for operations,
- Repairing malfunctions in the central campus wastewater systems.

By ensuring that the campus has a safe and sustainable water and sanitation infrastructure, the unit directly contributes to the technical infrastructure components of SDG 6.

As of 2024, KTU has implemented a digital Fault and Maintenance Monitoring System called the Support Management System (DYS) in line with its goal of establishing a sustainable campus infrastructure. This system allows rapid and systematic detection, recording, and management of faults related to campus water installations, hygiene infrastructure, wastewater systems, taps, toilets, and cleaning areas, thereby ensuring the continuity of water and sanitation services.



[KTU Environmental Problems Application and Research Center](#)

[KTU Basin and Water Resources Working Group](#)

[Plumbing Repair Unit](#)



# Clean Water and Sanitation Event

The “Clean Water and Sanitation Event”, organized by the Health Services Vocational School of Karadeniz Technical University, is an important awareness activity aimed at increasing students’ understanding of access to clean water, protection of water resources, and sanitation awareness within the framework of the Sustainable Development Goals. As part of the event, poster presentations prepared by students were exhibited, addressing topics such as the sustainable use of water resources, the importance of hygiene practices, and environmental sustainability.

The event was carried out with the active participation of students from the Health Services Vocational School, and the scientific and awareness-oriented poster presentations prepared by the students were shared with academic staff and participants. In this respect, the event provided not only theoretical knowledge transfer but also a student-centered sustainability education model. Students prepared studies focusing on the impacts of access to clean water on human health, the importance of sanitation practices for public health, and solution proposals for the protection of water resources.

Throughout the event, the environmental and social impacts of the unconscious consumption of water resources were discussed, and the importance of developing sustainable water-use habits was emphasized. In addition, the critical role of sanitation practices in preventing infectious diseases was highlighted, and clean water was recognized as a fundamental human right. Within this framework, the event aimed to increase students’ environmental awareness and enhance their solution-oriented thinking skills.

Through this event, Karadeniz Technical University aimed to contribute to SDG-6: Clean Water and Sanitation. The university continues to support the promotion of environmental awareness in society through sustainability activities that place student participation at the center.



[KTU Event](#)



# Panel on Water and Forest Management in the Process of Climate Change

The “Panel on Water and Forest Management under Climate Change”, organized by the Faculty of Forestry of Karadeniz Technical University, was held to evaluate the impacts of climate change on water resources and forest ecosystems. During the panel, the importance of sustainable natural resource management for environmental resilience was emphasized, and it was highlighted that water and forest ecosystems are directly interconnected.

The event was conducted by expert academics and researchers in the field, providing participants with scientific information on the impacts of climate change on precipitation patterns, drought risks, decreasing water resources, and forest ecosystems. In particular, the panel addressed the role of forests in the water cycle, their contribution to erosion prevention, carbon storage capacity, and the protection of water quality.

Throughout the panel, interdisciplinary evaluations were carried out on sustainable forest management practices, the protection of water resources, and climate change adaptation policies. Participants had the opportunity to gain insight into current scientific approaches related to environmental sustainability, ecosystem services, and natural resource management. In addition, solution-oriented academic discussions on environmental challenges were encouraged among students and academics.



The poster features a scenic image of a river flowing through a forest. The text on the poster includes the KTÜ logo, the title "İKLİM DEĞİŞİKLİĞİ SÜRECİNDE SU VE ORMAN YÖNETİMİ", the dates "16-17 Ekim 2025", the time "09.30", and the location "Prof. Dr. Osman Turan Kültür ve Kongre Merkezi". A QR code is also present. At the bottom, there are logos for the Faculty of Forestry, the Ministry of Forestry, and the Meteorology and Climate Change Institute.



KTU Event



# Çevresel Sürdürülebilirliğe Bütünleşik Yaklaşımlar: Su, Atık ve İklim Değişikliğine Karşı Direnç

Karadeniz Teknik Üniversitesi tarafından düzenlenen "Integrated Approaches to Environmental Sustainability: Water, Waste, and Climate Change Resilience" başlıklı etkinlik, çevresel sürdürülebilirlik konularını disiplinlerarası bir yaklaşımla ele alan önemli bir akademik organizasyondur. Etkinlikte su yönetimi, atık yönetimi ve iklim değişikliğine karşı dayanıklılık konularının birbiriyle ilişkili olduğu vurgulanmış; sürdürülebilir çözümlerin bütüncül politikalarla geliştirilebileceği değerlendirilmiştir.

Etkinlik, çevre ve sürdürülebilirlik alanında çalışan akademisyenler ve uzman konuşmacılar tarafından yürütülmüş; katılımcılara sürdürülebilir su yönetimi, atıkların azaltılması, geri dönüşüm uygulamaları ve iklim değişikliğinin çevresel etkileri hakkında bilimsel bilgiler sunulmuştur. Program kapsamında özellikle su kaynaklarının korunmasının iklim değişikliğine uyum stratejilerindeki kritik rolü üzerinde durulmuştur.

Akademik sunumlar ve tartışmalar aracılığıyla katılımcılar çevresel sürdürülebilirlik konusunda farkındalık kazanmış; küresel çevre sorunlarına yönelik çözüm odaklı düşünme becerileri desteklenmiştir. Ayrıca etkinlik, farklı disiplinlerden akademisyenleri ve öğrencileri bir araya getirerek bilgi paylaşımını teşvik etmiş ve sürdürülebilir kalkınma hedefleri doğrultusunda iş birliği kültürünü güçlendirmiştir.



# Sustainable Living for Reducing Carbon and Water Footprints in Combating the Effects of Climate Change

The “Sustainable Living to Reduce Carbon and Water Footprints in the Fight Against Climate Change” event, organized by the Technology Transfer Office of Karadeniz Technical University, is an important awareness initiative aimed at increasing individual environmental responsibility and promoting sustainable lifestyle habits. During the event, it was emphasized that reducing carbon and water footprints plays a critical role in combating climate change.

The program was conducted by expert academics and speakers in the fields of sustainable living and environmental awareness. Participants were informed about energy conservation, reducing water consumption, sustainable consumption habits, and environmentally friendly lifestyle practices. In particular, the contributions that individual behavioral changes can make to environmental sustainability were explained through practical examples.

Throughout the event, the long-term environmental impacts of the unconscious use of water resources were evaluated, and practical water-saving methods and sustainable consumption models that can be applied in daily life were shared. In addition, it was emphasized that reducing carbon emissions and protecting water resources are complementary environmental processes. Participants gained greater awareness of sustainable living culture and had the opportunity to better understand the importance of individual contributions to reducing environmental impacts.



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## GRAND BLACK SEA FORUM

İklim Değişikliği Etkileri ile  
Mücadelede Karbon ve Su Ayak  
İzini Azaltmak için Sürdürülebilir  
Yaşam İpuçları

DOÇ. DR. NAZİHAN URSAVAŞ

Trabzon Üniversitesi

10 Aralık 2025  
13.30-14.30  
Prof. Dr. Osman Turan  
Kültür ve Kongre Merkezi  
Fahri Kuran Salonu





## Academic Contributions

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Karadeniz Technical University (KTÜ) continues to carry out its multidimensional efforts in line with SDG-6: Clean Water and Sanitation through education, research, social contribution, and institutional collaborations. The university conducts significant academic and community-based activities focusing on the protection of clean water resources, sustainable water management, hygiene awareness, and environmental sustainability.

According to the Scopus database, the number of KTÜ's scientific publications related to SDG-6 increased from 27 in 2023 to 31 in 2024, while 29 scientific publications were produced in 2025. These figures demonstrate the university's sustained academic productivity in the fields of clean water and sanitation. In addition, through undergraduate and graduate-level research projects, students are actively encouraged to participate in scientific studies on water management, environmental sustainability, climate change, and sanitation.

KTÜ's approach to SDG-6 is based on a holistic structure that includes policy and strategy documents, sustainability reporting, educational programs, public awareness activities, scientific research, data monitoring processes, and national/international collaborations. While raising awareness about hygiene and sustainable water use within the campus, the university also collaborates with regional stakeholders on issues such as clean coasts, the protection of water resources, and environmental resilience.



[Academic Publications-2025](#)





# Sustainable KTU

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This publication has been prepared by KTU Office of  
Research Coordination