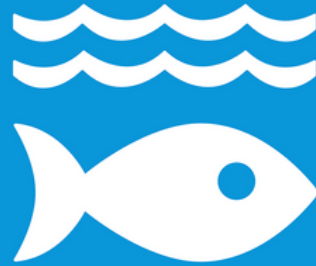


# Sustainable KTU

## SUSTAINABILITY REPORT 2024

**14** LIFE BELOW  
WATER



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



[surdurulebilirktu@ktu.edu.tr](mailto:surdurulebilirktu@ktu.edu.tr)



Sustainable development is not only a global vision, but also a shared responsibility that our country bears towards future generations. In this sense, the Sustainable Development Goals (SDGs) set by the United Nations, Turkey's 11th and 12th Development Plans, the Green Deal Action Plan, and the Higher Education Council's sustainability vision form a roadmap for higher education institutions.

As Karadeniz Technical University, we consider it our primary duty to contribute to these goals in line with our mission of education, research, and community service. Our university produces science-based knowledge, develops policies, and implements projects in interaction with the community across a wide range of areas, from quality education to climate action, from poverty reduction to the construction of innovative and sustainable cities.

In line with our country's national policies, our university leads regional development and assumes global responsibility through international collaborations, while also aiming to educate our students to become conscious individuals for a sustainable future. The report prepared in this context reflects not only the activities carried out but also our university's determination on its sustainability journey.

Our belief in the future is strengthened by the guidance of science and the dynamism of our youth. Karadeniz Technical University will continue to contribute to sustainable development goals and support our country's vision in this area.

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





Life Below Water aims to protect the world's oceans, seas, and coastal ecosystems, ensure their sustainable management, and secure the long-term use of resources in these areas. This goal is critical not only for the preservation of biodiversity but also for the billions of people who rely on oceans for food security, livelihoods, and climate regulation. Increasing threats such as plastic pollution, acidification, overfishing, eutrophication, and the loss of marine habitats pose a risk of irreversibly damaging marine ecosystems. SDG 14 seeks to provide an effective global response to these threats, aiming to restore the health of oceans through strategies such as science-based management plans, the expansion of protected areas, reduction of marine pollution, and promotion of sustainable fisheries.

In this context, SDG 14 presents a holistic and sustainable vision for marine management that supports both natural life and human well-being. Without healthy oceans, the sustainability of life on Earth is at risk.

Karadeniz Technical University (KTU) has carried out multifaceted activities throughout 2024 in line with United Nations Sustainable Development Goals (SDGs), specifically Target 14: Life Below Water. This goal aims to produce significant outcomes in the protection of marine ecosystems, sustainable use of marine resources, and reduction of marine pollution.

Through scientific research, regional and international collaborations, and environmental awareness initiatives, KTU has achieved impactful results at both regional and global levels.



# Institutional Structure

Karadeniz Technical University (KTU) conducts education, research, and societal contribution activities through its academic and research units specialized in water sciences to support Sustainable Development Goal 14: Life Below Water. Within this scope, studies are carried out on the protection of marine ecosystems, sustainable fishing practices, development of marine technologies, and climate-friendly management of marine resources.

The university's Sürmene Faculty of Marine Sciences provides undergraduate and graduate education in fields such as fisheries technology, marine sciences and technology, maritime business management, shipbuilding, and marine engineering, training qualified human resources for the sustainable management of marine ecosystems. The faculty conducts scientific projects at regional and national levels on the protection of marine life, sustainable fishing techniques, combating marine pollution, and the blue economy. Its academic departments include:

- Fisheries Technology Engineering
- Marine Sciences and Technology Engineering
- Maritime Transportation Management Engineering
- Maritime Business Management
- Shipbuilding and Marine Engineering
- Marine Engineering Operations





## Trabzon Province Marine Litter Action Plan (DCEP 2025-2029)

Our seas are vital not only for the preservation of biodiversity but also for the sustainability of economic, social, and cultural life. However, today, increasing pollution—particularly marine litter—has emerged as one of the most significant environmental issues threatening the integrity of these ecosystems.

Trabzon, with its strategic location on the Black Sea coast, strong fishing tradition, tourism potential, and rich natural resources, is one of the most important provinces in Turkey. Therefore, the protection of marine and coastal ecosystems is not only an environmental responsibility but also a duty to future generations. Prepared with this awareness, the Trabzon Province Marine Litter Action Plan (2025–2029) provides a comprehensive roadmap for the prevention, reduction, and management of marine litter.

The plan includes concrete steps to be implemented through the collaboration of local governments, public institutions, universities, non-governmental organizations, and the public. It aims to reach all segments of society through education and awareness-raising activities, protect the seas through coastal cleanup initiatives, and achieve lasting results through monitoring and evaluation processes.





## KTU's Role in International Projects within the Scope of SDG-14

KTU actively participates in international research projects aimed at the protection, sustainable management, and cross-border cooperation of marine ecosystems. The university particularly contributes to the preservation of the Black Sea's biodiversity, the mitigation of invasive species impacts, and the sustainable management of marine ecosystem services. One of the projects conducted in this context is the “BlackNETs: Saving the Black Sea from Silent Killers” (BSB00164) project under the Interreg-NEXT program (2021–2027). Launched on June 27, 2024, the project is coordinated by the Mare Nostrum Ecological NGO in Romania and involves institutions from Bulgaria and Georgia, aiming to develop solutions for the “silent killers” threatening marine ecosystems in the Black Sea. Through this project, KTU contributes to regional scientific knowledge production, data sharing, and the development of solution-oriented approaches.

Another notable collaboration is the “IASON+: Assessing the Impacts of Climate Change on Invasive Alien Species and Developing Observatory and Network for Contextual Ecosystem Services Analysis in Karasam-Delta Protected Areas” (BSB00174) project, also supported by Interreg-NEXT. Conducted in some of the Black Sea's most sensitive ecosystems, including the Danube, Nestos, Kızılırmak, Çoruh, and Kolkheti deltas, this project analyzes the impacts of invasive alien species (IAS) on ecosystem services.

In addition, KTU contributes to the European Union-funded DOORS (Developing Optimal and Open Research Support for the Black Sea) project, with a budget of €9 million. Implemented with the participation of 35 institutions, this project aims to develop comprehensive solutions to protect the Black Sea against pressures from human activities, climate change, and geopolitical developments. Within this project, KTU strengthens bridges between science, society, and industry, while contributing to the knowledge infrastructure for marine research in the region.





## KTU Sürmene Faculty of Marine Sciences Studies and Activities

The Sürmene Faculty of Marine Sciences has undertaken numerous significant national and international projects throughout 2024 to protect marine ecosystems, advance scientific research, and raise public awareness.

Prof. Dr. Ersan Başar, a faculty member at our university, was appointed expedition leader for the Eighth National Antarctic Scientific Expedition (TAE VIII), organized as part of the National Polar Scientific Expeditions under the auspices of the Presidency, the auspices of the Ministry of Industry and Technology, and the coordination of TÜBİTAK MAM KARE. The scientific team departed for Antarctica.



[8th National Antarctic Scientific Expedition](#)





As part of international collaborations, our university faculty members Prof. Dr. Coşkun Erüz, Prof. Dr. Fatma Telli Karakoç, Prof. Dr. Hacer Sağlam, and Assoc. Prof. Dr. Yahya Terzi participated in the Interreg NEXT Black Sea Basin Cross-Border Cooperation Program Project Preparation Workshop and contributed to the development of new projects aimed at protecting marine ecosystems. The Raising Public Awareness and Reducing Marine Litter for the Protection of the Black Sea Ecosystem (LitterOUTer) project, implemented by our university, also raised public awareness of the marine litter problem in the Black Sea.

Within the framework of the protocol signed with the General Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forestry, studies on broodstock management and larval quality continue as part of the “Natural Trout Production and Stocking of Forest Streams Project,” which has reached its 10th year. In this context, our faculty members Prof. Dr. Nadir BAŞÇINAR and Prof. Dr. İlhan ALTINOK provide scientific support for field applications and fish health.



[Project Preparation Workshop](#)





On March 6, 2024, as part of the Population Dynamics course, students, under the guidance of Dr. Ahmet ŞAHİN, went out to sea to conduct egg-larvae sampling and water analysis activities. These exercises provided students with field experience in addition to theoretical knowledge.

Within the scope of international research collaborations, underwater observation studies were conducted for three months in Antalya Demre and Trabzon Sürmene as part of the EURockFish project, supported by the European Union Biodiversa+ program. Dr. Ahmet Şahin and Assoc. Prof. Dr. Rafet Çağrı Öztürk participated as experts in this project.



Studies conducted with underwater cameras in over 100 sites in the Mediterranean and Black Seas have provided important data on fish diversity, abundance, and the presence of invasive species.



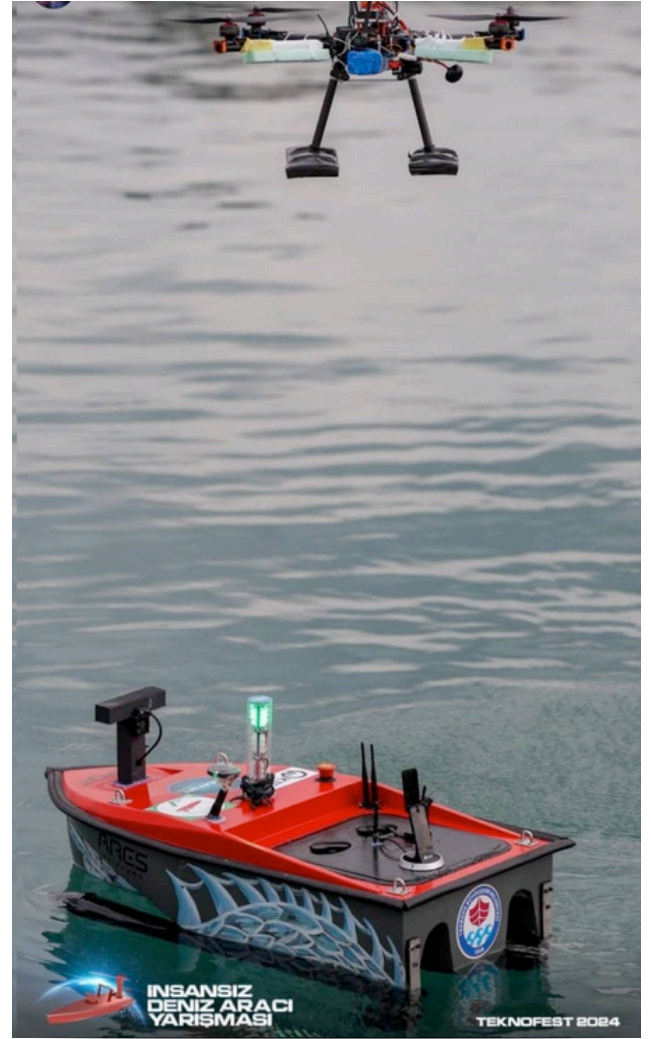
[Population Dynamics Learning Activity](#)

[Monitoring Fish Diversity in the Mediterranean and Black Seas](#)





The 3rd International Ship and Marine Technology Congress (GMO-SHIPMAR 2024) was held at our university on December 10-12, 2024, at the Osman Turan Congress Center. The Trabzon KTU Creatiny Surface Team won first place in the TEKNOFEST 2024 Unmanned Marine Vehicle Competition held on September 24, 2024.



[3rd International Ship and Marine Technology Congress](#)  
[Teknofest Event](#)





## Academic Contributions

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KTU continues to carry out high-quality work under the theme of Life Below Water. According to the Scopus database, the university produced 28 scientific publications related to this Sustainable Development Goal in 2024. National and international scientific projects aimed at this goal at both undergraduate and graduate levels are also actively ongoing.

According to THE Impact Ranking data, our university ranked within the 401–600 band under the No Poverty goal in the 2025 results (based on 2024 data). In THE Impact Ranking 2025, KTU received an indicator score of 64.2 for SDG 14: Life Below Water, based on the evaluation of scientific studies and their impact (publications, citations, and Field-Weighted Citation Impact (FWCI)) from 2024. The indicator score for the number of publications was determined as 86.8.

KTU fulfills its responsibility for the protection of marine and aquatic ecosystems through its academic contributions to the Trabzon Province Marine Litter Action Plan, as well as seminars organized within the university, national and international projects, field studies, and scientific expeditions. Through research projects conducted by faculty members, innovative initiatives by student clubs, and collaborations developed with public institutions, the university generates lasting impacts that serve the conservation of aquatic life not only regionally but also globally. These comprehensive efforts represent a concrete demonstration of KTU's sustainability vision and reflect a strong institutional commitment to the achievement of SDG 14.



[Academic Publications-2024](#)





# Sustainable KTU

This publication has been prepared by KTU Office of  
Research Coordination



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[surdurulebilirktu@ktu.edu.tr](mailto:surdurulebilirktu@ktu.edu.tr)