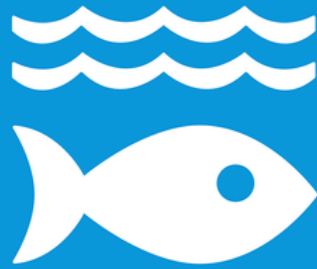


Sustainable KTU

SUSTAINABILITY REPORT 2025

14 LIFE BELOW
WATER



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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





Life Below Water is a critical sustainable development area that aims to protect oceans, seas, and coastal ecosystems, ensure their sustainable management, and preserve marine resources for future generations. This goal is important not only for the conservation of marine biodiversity, but also for global food security, climate balance, economic sustainability, and the overall well-being of societies.

Today, however, environmental threats such as plastic pollution, ocean acidification, overfishing, eutrophication, and habitat loss place significant pressure on marine ecosystems. Within the framework of the United Nations Sustainable Development Goals, SDG 14: Life Below Water seeks to protect marine ecosystems through reducing marine pollution, promoting sustainable fisheries, expanding protected marine areas, and developing science-based management models.

In this context, SDG 14 presents a holistic approach that addresses the sustainability of natural life together with human well-being. Healthy oceans and seas are among the fundamental components of ecological balance and the continuity of life on Earth.

Throughout 2025, Karadeniz Technical University (KTU) carried out multidimensional scientific, environmental, and societal contribution-oriented activities in line with SDG 14: Life Below Water under the framework of the United Nations Sustainable Development Goals. The university implemented significant initiatives focusing on the protection of marine ecosystems, reduction of marine pollution, sustainable management of water resources, and support for marine biodiversity.

With its strong academic infrastructure and research capacity, KTU continues to contribute both to the Black Sea region and to global sustainability goals through scientific research, regional and international collaborations, environmental awareness activities, and practice-oriented projects.



Institutional Structure

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 (SFMS) provides undergraduate and graduate education in fields such as fisheries technology, marine sciences and technology, maritime business administration, 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 Administration
- Shipbuilding and Marine Engineering
- Marine Engineering Operations



[KTU Sürmene Faculty of Marine Sciences](#)



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

Karadeniz Technical University (KTU) occupies an active and agenda-setting position within international collaborations and global research networks devoted to the conservation and sustainable governance of ecosystems shaped by marine stakeholders. KTU produces original, high-quality scholarly contributions at both theoretical and applied levels, particularly in the preservation of regional biodiversity, the mitigation of the adverse impacts of invasive species, and the safeguarding of the sustainability of marine ecosystem services.

Alongside previously approved and ongoing projects led by our researchers, this year's new initiatives further strengthen KTU's contributions to SDG 14. Among these efforts, the project entitled "Hydrogen Sulfide Collection System from the Seabed," developed by Prof. Dr. Betül Saraç, a faculty member at the Sürmene Faculty of Marine Sciences (SFMS), has been officially registered and granted a national patent by the Turkish Patent and Trademark Office (TÜRKPATENT). This project is recognised as a significant innovation, proposing an advanced system designed to extract hydrogen sulfide formed in seabed sediments and convert it into freshwater, hydrogen gas, and sulfur.

The proposal entitled "Data and Scenarios for a Sustainable Blue Economy in the Mediterranean," submitted by Prof. Dr. Ali Alkan, a faculty member of the Institute of Marine Sciences and Technology (IMST), under the 2023 call of the Sustainable Blue Economy Partnership (SBEP), has been selected for funding.

The project entitled "Increasing Knowledge and Awareness with Appropriate Changes in the University Curriculum to Ensure Sustainability of Reducing the Water Footprint Resulting from Maritime Activities" is being co-funded under the Erasmus+ Programme, Key Action 2: Cooperation Partnerships in Higher Education (KA220-HED), under the leadership of Prof. Dr. Hacer Sağlam, a faculty member of the SFMS. Within this framework, reducing the water footprint—one of the significant environmental impacts of the maritime sector—is of critical importance for sustainability. Accordingly, it is envisaged that academic curricula will be updated to incorporate water management and environmental sustainability perspectives, alongside the organization of targeted training activities for students and industry stakeholders.

In this way, it is envisaged that heightened awareness will be fostered across both academic and industrial domains, thereby paving the way for the establishment of new, environmentally responsible standards within the maritime sector.



KARADENİZ TEKNİK ÜNİVERSİTESİ
REKTÖRLÜĞÜ



PROJE YÜRÜTÜCÜSÜ
PROF. DR. HACER SAĞLAM
SÜRMENE DENİZ BİLİMLERİ FAKÜLTESİ
DENİZ BİLİMLERİ VE TEKNOLOJİSİ MÜHENDİSLİĞİ
BÖLÜMÜ

TEBRİKLER

ERASMUS+ PROGRAMI KA2 YÜKSEKÖĞRETİMDE İŞ BİRLİĞİ ORTAKLIKLARI (KA220-HED) PROJE DESTEĞİ

Proje Adı: Increasing Knowledge and Awareness with Appropriate Changes in the University Curriculum to Ensure Sustainability of Reducing the Water Footprint Resulting from Maritime Activities

Proje Ekibi:
Prof. Dr. Betül SARAC – Araştırmacı (KTÜ)
Prof. Dr. Coşkun ERÜZ – Araştırmacı (KTÜ)
Prof. Dr. Ersan BAŞAR – Araştırmacı (KTÜ)
Prof. Dr. Fatma TELLİ KARAKOÇ – Araştırmacı (KTÜ)
Prof. Dr. Muzaffer FEYZİOĞLU – Araştırmacı (KTÜ)
Prof. Dr. Sevim KÖSE – Araştırmacı (KTÜ)
Doç. Dr. Beste ÜSTÜBİOĞLU – Araştırmacı (KTÜ)
Doç. Dr. Emre PEŞMAN – Araştırmacı (KTÜ)
Doç. Dr. Rafet Çağrı ÖZTÜRK – Araştırmacı (KTÜ)
Doç. Dr. Umut YILDIRIM – Araştırmacı (KTÜ)



[Hydrogen Sulfide Collection System](#)

[Sustainable Blue Economy in the Mediterranean](#)

[DirtyFOOT](#)



Among the projects supported under the Interreg NEXT Black Sea Basin Cross-Border Cooperation Programme, the project entitled “Raising Awareness for the Black Sea People to Recognize and Protect Black Sea Biodiversity,” coordinated by Prof. Dr. Hacer Sağlam, a faculty member of the SFMS, aims to promote the conservation of Black Sea biodiversity and to enhance public awareness in this regard. Within the scope of the project, native, invasive, and endangered species of the Black Sea will be introduced to relevant stakeholders in Türkiye, Bulgaria, and Romania. Public engagement will be fostered through the use of 3D aquatic organism models, educational materials, and a dedicated mobile application (BLACKPYRAMID), while the development of conservation measures is envisaged through strengthened local and international collaborations.



KARADENİZ TEKNİK ÜNİVERSİTESİ
REKTÖRLÜĞÜ



TEBRİKLER

SINIR ÖTESİ İŞ BİRLİĞİ PROGRAMI (INTERREG NEXT BLACK SEA BASIN PROGRAMME)

Proje Adı: Non-Invasive Fish Monitoring Network for Reef Fishes in the Black Sea Basin - WatchReefFish

Proje Ekibi:
Doç. Dr. Yahya TERZİ-Araştırmacı (KTÜ)
Prof. Dr. Coşkun ERÜZ-Araştırmacı (KTÜ)
Prof. Dr. Fatma Telli Karakoç-Araştırmacı (KTÜ)
Prof. Dr. İlhan ALTINOK-Araştırmacı (KTÜ)
Doç. Dr. Dursun Murat SEKBAN-Araştırmacı (KTÜ)
Dr. Öğr. Üyesi- İshak ALTINPINAR-Araştırmacı (KTÜ)
Dr. Öğr. Üyesi-Ahmet ŞAHİN-Araştırmacı (KTÜ)
Arş. Gör. Dilek USTAÖĞLU-Araştırmacı (KTÜ)

PROJE YÜRÜTÜCÜSÜ
DOÇ. DR. RAFET ÇAĞRI ÖZTÜRK
SÜRMENE DENİZ BİLİMLERİ FAKÜLTESİ
BALIKÇILIK TEKNOLOJİSİ MÜHENDİSLİĞİ
BÖLÜMÜ

The project proposal entitled “Non-Invasive Fish Monitoring Network for Reef Fishes in the Black Sea Basin - WatchReefFish,” submitted under the Interreg NEXT Black Sea Basin Programme and led by Assoc. Prof. Dr. Rafet Çağrı Öztürk, a faculty member of the Sürmene Faculty of Marine Sciences (SDBF), has been selected for funding. The project aims to standardize, establish, implement, and further develop a cross-border, non-invasive fish monitoring network (covering both native and non-native species) for reef ecosystems in the Black Sea.

The project seeks to contribute to biodiversity conservation by enhancing the understanding of reef fish diversity, promoting sustainable management practices, and driving standardized, positive advancements in fish stock assessment, conservation, and management.

The project entitled “Quadruple Helix-Based Enhancement of Stakeholders at Black Sea Territory - QUEST,” submitted under the Interreg NEXT Black Sea Basin Cross-Border Cooperation Programme and coordinated by Emrah Ayyaz, Director of KTU TTC, aims to enhance stakeholders’ capacities in partner countries to access open funding schemes and to develop project applications related to the blue economy. This objective will be achieved through a series of planned actions designed to strengthen institutional capacities and establish sustainable partnerships across relevant stakeholder groups.



KARADENİZ TEKNİK ÜNİVERSİTESİ
REKTÖRLÜĞÜ



TEBRİKLER

SINIR ÖTESİ İŞ BİRLİĞİ PROGRAMI (INTERREG NEXT BLACK SEA BASIN PROGRAMME)

Proje Adı: Quadruple Helix-Based Enhancement of Stakeholders at Black Sea Territory - QUEST

Proje Ekibi:
Öğr. Gör. Sedat KALYONCU - Araştırmacı (KTÜ)
Öğr. Gör. İsmail YILDIZ - Araştırmacı (KTÜ)
Öğr. Gör. Gökçe SAĞLAM - Araştırmacı (KTÜ)
Öğr. Gör. M. Serhat UNVER - Araştırmacı (KTÜ)
Öğr. Gör. Beir DEĞERMEÇİ - Araştırmacı (KTÜ)
Öğr. Gör. Hülya SABİR - Araştırmacı (KTÜ)
Öğr. Gör. Kerem ŞİMŞEK - Araştırmacı (KTÜ)
Proje Uzmanı Eren YILMAZ - Araştırmacı (KTÜ)
Proje Uzmanı Güler Tuğba GÜLTEKİN - Araştırmacı (KTÜ)
Proje Uzmanı Dilek İSKENDER BALABAN - Araştırmacı (KTÜ)
Proje Uzmanı Aleyha AYDIN - Araştırmacı (KTÜ)
Proje Uzmanı Yalçın AYKUL - Araştırmacı (KTÜ)

PROJE YÜRÜTÜCÜSÜ
ÖĞR. GÖR. EMRAH AYVAZ
KTÜ TEKNOLOJİ TRANSFERİ
UYGULAMA VE ARAŞTIRMA MERKEZİ

The project entitled **“Invasive Alien Species Observatory and Network Development for the Assessment of Climate Change Impacts and Contextual Ecosystem Services Evaluation in Black Sea Deltaic Protected Areas (BSB00174 – IASON+)”** has been awarded funding under the **Interreg NEXT Programme**. The **IASON+ Project** focuses on the impacts of Invasive Alien Species (IAS) on Ecosystem Services (ES) within the Black Sea Basin (BSB) region, aiming in particular to address the shared challenges they pose and their effects on ecosystem services across key deltaic protected areas, including the Danube Delta, Nestos Delta, Kızılırmak Delta, and the Çoruh and Kolheti deltas.

The **BlackNETs Project**, funded by the European Union, has implemented an important environmental protection initiative aimed at combating ghost nets that threaten the marine environment. This activity, conducted along the Black Sea coasts, was successfully carried out by the SFMS using KTÜ’s research vessel **R/V Yakamoz**. Within the scope of the study, a remotely operated underwater vehicle (ROV) developed by Degz Company was deployed from R/V Yakamoz, enabling seabed mapping and the identification of ghost nets. The detected nets were subsequently removed from the marine environment using appropriate methods.



The project, titled **“Evaluation of Seafood Discards, Residues, and Unwanted Catches for the Production of Bioactive Protein Hydrolysates and High Value-Added Biomolecules (VASEACAD)”**, has been selected for funding as part of the prestigious **SBEP Horizon Partnership Programme**. Representing our university as the project coordinator, Prof. Dr. Fatma TELLİ KARAKOÇ will lead the research efforts focused on developing innovative and sustainable solutions for utilizing seafood processing waste and by-products.

The VASEACAD project aims to transform seafood discards and residues into bioactive protein hydrolysates and high-value biomolecules, contributing to waste reduction, sustainable resource use, and the advancement of the circular economy in the marine sector.



[IASON+](#)

[KTÜ R/V Yakamoz Ghost Net Cleanup](#)

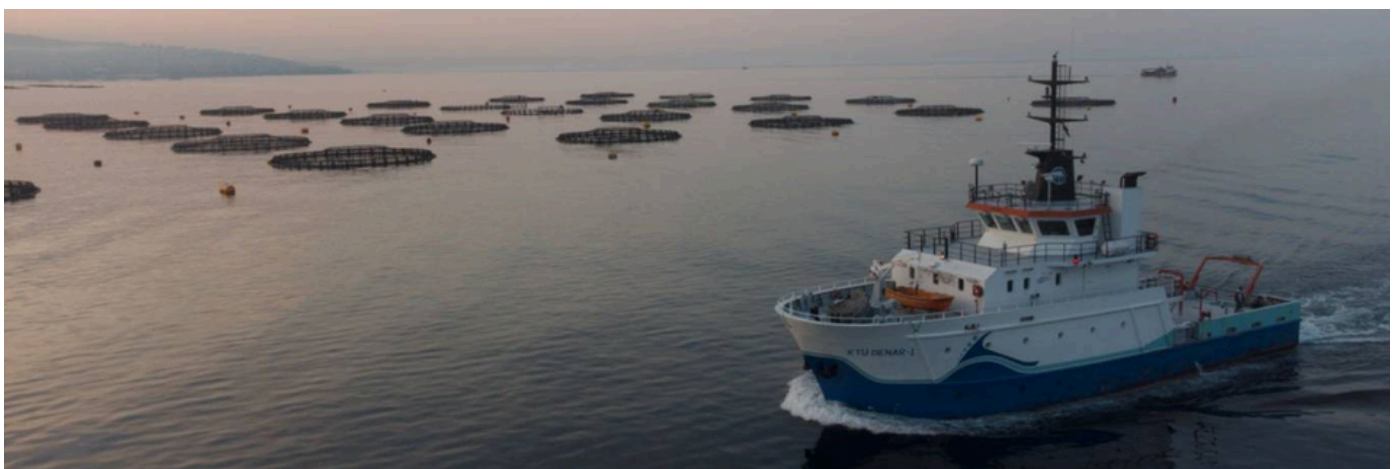
[VASEACAD](#)





Within the scope of the “Cooperation and Awareness for Pollution-free and Environmentally Sustainable Black Sea - CARESEA” project, led by Prof. Dr. Kadir Seyhan, a faculty member of the SFMS, an initiative has been undertaken to investigate pollution in the Black Sea. As part of this project, academics from Georgia, Greece, Moldova, and Romania have convened in Trabzon and continue their collaborative work aimed at addressing marine pollution and promoting environmental sustainability in the Black Sea region.

Among the ongoing projects within the SFMS, the BAP-13 2EKO Project entitled The “Ecological and Economical Evaluation of Fish Culture in Black Sea Trout Marine Cages” is being implemented through systematic, year-round offshore field operations conducted by the project team at regular intervals. Within this scope, the team has successfully carried out scheduled research voyages aboard KTU research vessel R/V DENAR 1, conducted in May, August, and November 2025, supporting continuous in situ data acquisition and environmental monitoring activities throughout the project period.



[CARESEA Meeting](#)

[KTU R/V DENAR 1 - May Expedition](#)

[KTU R/V DENAR 1 - August Expedition](#)

[KTU R/V DENAR 1 - November Expedition](#)



KTU's Awareness and Public Outreach Activities within the Scope of SDG -14

Within KTU's mission and vision, a key strategic priority is the enhancement of effective stakeholder engagement and the generation of societal impact. In this regard, it is aimed that the scientific knowledge, technologies, and applied outputs produced by its academic units are disseminated through national and international interactions, thereby contributing to the transformation of knowledge and innovation into tangible social and economic value. In this context, strengthening university-industry collaborations and fostering interdisciplinary research are regarded as essential mechanisms for advancing these objectives. Furthermore, it is intended that such processes evolve into structured awareness-raising initiatives, reaching broader audiences and thereby generating sustained societal benefit.

SFMS member Prof. Dr. Coşkun Erüz participated in TRT Trabzon Radio's programme "Hayatın İçinden - From Life", where he provided an in-depth analysis of the impacts of rising sea surface temperatures on marine organisms and ecosystem dynamics. The programme aimed to enhance public awareness by addressing critical issues such as marine sciences, environmental consciousness, and climate change.

Within the scope of the DOORS Project, he also contributed to the "Love the Ocean" workshop organised in collaboration between KTU SFMS and Dokuz Eylül University, where comprehensive insights into the geology and oceanography of the Black Sea were shared, alongside presentations on Ocean Literacy. In addition, interactive surveys were conducted with students to assess their knowledge, perceptions, and priorities regarding the Black Sea and broader environmental challenges.



[TRT Trabzon Radio - From Life](#)
[Love the Ocean Workshop](#)



Between May 12-14, Prof. İhsan Koz Primary School proudly hosted the project exhibition for the “Northern Kids Love Fish” initiative, part of the “Every School Should Have a Project” (HOPO) program coordinated by the Trabzon Provincial Directorate of National Education.



This exhibition highlighted the collaboration between two impactful projects: the BlackNETs Exorcising the Black Sea Silent Killers Project and the LitOUTer Project. Students showcased interactive displays featuring marine litter awareness materials produced by LitOUTer, alongside vital content from BlackNETs on ghost nets and their harmful effects on marine ecosystems. The activities were conducted at the SFMS and Prof. İhsan Koz Primary School.



An environmental awareness workshop was organised in collaboration with Ortahisar Municipality, Yomra Municipality, and faculty members of KTU SFMS.

The event to address pollution caused by fishing nets, household packaging waste, and waste oils, which pose a threat to the Black Sea ecosystem, and to promote regional environmental sustainability. The event, hosted by the Yomra Fisheries Cooperative, facilitated the development of concrete solution-oriented approaches aimed at protecting marine life, reducing pollution in the region, and contributing to long-term sustainability objectives.



[Every School Should Have a Project - HOPO](#)

[Yomra Environmental Awareness Meeting](#)





Students from Sürmene Şehit Kaymakam Muhammet Fatih Safitürk Primary School visited the KTU SFMS Çamburnu Campus, where they received comprehensive information on environmental and ecological topics, including ghost nets, fish ecology, the sustainable use of fishing gear, water footprint, and carbon footprint.

Another significant public outreach and awareness-raising activity was the visit to Trabzon Hami Yıldırım Primary School, carried out by academics within the scope of the BlackNETs Project and the previously implemented LitOUTer Project. During this engagement, SFMS faculty member Prof. Dr. Fatma Telli Karakoç delivered an educational session on the concept of the water footprint, while Prof. Dr. Hacer Sağlam provided training on fishing gear and fishing operations. In addition, Prof. Dr. Coşkun Erüz gave a presentation on ghost nets and the ecological threats posed by marine litter.

In alignment with KTU's mission and vision, another exemplary contribution to public awareness activities is the interview published in the Turkish Agriculture and Forestry Journal featuring SFMS faculty member Prof. Dr. Coşkun Erüz, in which he provides a comprehensive assessment of the threats facing Türkiye's marine ecosystems.

In addition, Assoc. Prof. Dr. Yahya Terzi, a faculty member of SFMS, shared his work with the national press in an interview on "The Pollution of Black Sea Beaches," in which he presented awareness-raising and public information activities conducted across 37 different locations along the entire Black Sea coastline.

Another initiative was carried out within the scope of the "Blue Gates Project" during the "Blue Economy and Blue Future Workshop" where SDBF faculty member Prof. Dr. Coşkun Erüz delivered a presentation on the impacts of marine litter, ghost nets, and abandoned, lost, or otherwise discarded fishing gear (ALDFG) on the Black Sea ecosystem.



[Şehit Kaymakam Muhammet Fatih Safitürk Primary School Visit](#)

[Trabzon Hami Yıldırım Primary School Visit](#)





On the occasion of World Environment Day and Türkiye Environment Week, faculty members of SFMS Prof. Dr. Coşkun Erüz, Prof. Dr. Fatma Telli Karakoç, Prof. Dr. Hacer Sağlam, and Assoc. Prof. Dr. Rafet Çağrı Öztürk—together with Assoc. Prof. Dr. Koray Özşeker from the IMST participated in an environmental event organised by the Climate Change and Zero Waste Directorate of Ortahisar Municipality within the scope of the BlackNETs Project. As part of the event, an exhibition stand was set up featuring visual materials on ghost nets and marine litter pollution, informative short films, interactive educational tools, marine litter-themed educational card games, and instructional toys. These materials attracted significant interest, particularly from children, and contributed to raising environmental awareness by making complex ecological issues more accessible and engaging.

The BlackNETs “Exorcising the BLACK Sea’s Silent Killers” project, funded through the Interreg NEXT Black Sea Basin Programme and co-financed by the European Union, has reached the end of the period. Over the 18 months of implementation, 9,344.9 kg of fishing gear were removed, and areas with significant net accumulations were mapped.

Within the project, over 15 educational workshops for young people from all partner countries were organised, aiming to raise awareness of the importance of protecting the marine environment. In addition, four national workshops were held, one in each of the four Black Sea countries.



A regional workshop entitled “From Awareness to Action: A Regional Approach to Tackling Abandoned, Lost or Discarded Fishing Gear”. The purpose of these workshops was to strengthen dialogue and cooperation at bilateral, sub-regional, and regional levels, in line with the objectives of the Common Maritime Agenda for the Black Sea. Approximately 150 representatives from various fields participated in these events, including national and regional authorities, non-governmental organisations, and researchers. Throughout the project, public community events were also organised, one in each partner country, with attendance exceeding 1,000 participants per event.



[World Environment Day and Türkiye Environment Week](#)
[BlackNETs](#)



In an interview published in the November-December 2025 issue of Sea Business World magazine, KTU Rector, Prof. Dr. Hamdullah Çuvalcı, addressed key themes including the maritime ecosystem, university-industry collaboration, the development of qualified human capital and academic capacity, maritime education, and, in particular, sustainability-oriented approaches.

The Dean of the SFMS Prof. Dr. Ali Muzaffer Feyzioğlu, delivered a seminar entitled “Phytoplankton Awareness” at Akçaabat Anatolian High School. During the seminar, students were introduced to the fundamental functions of phytoplankton within marine ecosystems, their role in maintaining global environmental balance, and their significance for biodiversity. The event aimed to enhance high school students’ awareness of marine sciences.

Under the leadership of faculty members of KTU SFMS, a project film for the BlackNETs Project, prepared by Interreg NEXT TESIM, has been produced with the aim of raising global awareness.

On 31 December 2025, faculty members of KTU SFMS conducted a visit to a local kindergarten, where they shared their academic knowledge with young children and took an important step toward nurturing “marine protectors”



A programme entitled “Scientific Research in the Polar Regions and Climate Change,” which also addressed marine ecosystems, was broadcast on KTU TV with the participation of Prof. Dr. Ersan Başar, a faculty member of KTÜ SDBF.

In addition, Prof. Dr. Kadir Seyhan, a faculty member of KTU SFMS, gave a statement on “Solid Waste Pollution in the Black Sea” on TVNET.

[Sea Business World Interview](#)

[Akçaabat Anatolian High School Phytoplankton Awareness](#)

[BlackNETs Movie](#)

[Marine Protectors](#)

[KTU TV Interview](#)

[TVNET Interview](#)



KTU's Student Activities within the Scope of SDG 14

In line with KTÜ's mission and vision to cultivate inquisitive, entrepreneurial individuals capable of managing change, one of the most prominent student-oriented activities carried out within the scope of SDG 14 was the participation of SFMS students in the 24th National Denizkızı Congress, representing one of the broadest forms of national stakeholder engagement. One of the core missions of the Denizkızı Congresses is to bring together future maritime leaders with all relevant stakeholders, guided by up-to-date scientific knowledge that will shape the maritime sector.

In addition, a "Coastal Marine Ecosystem Field Practice" was conducted with students under the guidance of Prof. Dr. Şağdan Başkaya, a faculty member of KTU Faculty of Forestry.

Under the leadership of Lecturer Dr. Emre Özaydın and Lecturer Onur Özkaya, students from KTU Sürmene Abdullah Kanca Vocational School carried out a technical field visit. Within this scope, the students gained comprehensive insights into scientific activities related to fisheries research, sustainable fisheries, aquaculture practices, environmental pollution, and the conservation of marine ecosystems.



Within the scope of the "Community Service Practices" course offered by the Department of Biology, the social responsibility project entitled "Touch the Blue, Protect the Future" was successfully implemented by senior students. In this context, an environmental clean-up activity conducted along the Trabzon coastline drew attention to pollution issues and contributed to raising environmental awareness within the community.

On 12 November 2025, a seminar entitled "Science in the Polar Regions - Antarctica and the Arctic" was delivered by SFMS faculty member Prof. Dr. Ersan Başar to primary, secondary, and high school students residing at the Trabzon Fatih Children's Homes Complex. The seminar aimed to enhance students' awareness by introducing the significance of polar regions, marine ecosystems, and fundamental scientific knowledge related to these areas.

Furthermore, within the scope of the "Fisheries Management and Organization" course conducted by SFMS faculty member Prof. Dr. Sevim Köse, a technical visit to a fish farm in Maçka was organised with students. During this practice-oriented activity, the facility was examined on-site as part of applied training.

[Deniz Kızı Congress](#)

[Coastal Marine Ecosystem Field Practice](#)

[Touch the Blue, Protect the Future](#)

[Kutuplarda Bilim Semineri](#)

[Sürmene Abdullah Kanca Vocational School Technical Field](#)

[Fisheries Management and Organization Field Practice](#)



Organised within SFMS by the KTU Naval Architecture and Marine Technology Club, and to establish a flagship maritime forum in the Black Sea region, the industry-student engagement event entitled "Rotamız Ufkun Ötesi" was held on 24 December 2025 at the Osman Turan Congress Centre. The event, comprising four thematic panel sessions, brought together prominent figures from various sectors of the maritime industry and provided a platform for direct engagement and knowledge exchange with students.



Within the framework of the 2025 Science, Culture and Arts Week organised to commemorate the 70th Anniversary of our University, SFMS faculty member Prof. Dr. Ersan Başar met with students through a lecture entitled "Science in the Polar Regions." The presentation provided students with comprehensive insights into marine ecosystems, scientific research conducted in polar regions, and Türkiye's activities in this field.



[Rotamız Ufkun Ötesi](#)

[BKS 2025 Science in the Polar Regions](#)



KTU's Stakeholder Engagement Activities Carried Out within the Scope of SDG 14

Within KTU's mission and vision, collaboration and engagement with stakeholders constitute a core strategic priority. In this context, throughout 2025, a range of activities were carried out within the scope of SDG 14 to facilitate the sharing, advancement, and global dissemination of scientific knowledge among maritime students and academics. Accordingly, efforts to strengthen an effective and robust network of relations among international maritime stakeholders have been sustained, thereby generating enhanced opportunities for global engagement for both students and academics who will contribute across all domains of the maritime ecosystem.

An Erasmus+ KA171 agreement has been signed with Osaka Metropolitan University, Japan, thereby creating new opportunities for the international exchange and dissemination of scientific knowledge for students and academics of the KTU SFMS Department of Naval Architecture and Marine Engineering, who are expected to contribute to the maritime ecosystem.

A bilateral cooperation process has been initiated between KTU and Mokpo National University, South Korea, leading to the establishment of a dual degree programme between two complementary maritime disciplines: the SFMS Department of Fisheries Technology Engineering and the SDBF Department of Naval Architecture and Marine Engineering. This collaboration has created enhanced opportunities for the international exchange and dissemination of scientific knowledge for students who are expected to contribute to the maritime ecosystem.



[Osaka Metropolitan University - Japan](#)

[Mokpo National University - South Korea](#)



Among national stakeholder engagement activities within the maritime ecosystem, knowledge exchange was facilitated through the participation of Assoc. Prof. Dr. Umut Yıldırım, a faculty member of SFMS, participated in the 4th “Turkish Maritime Summit” organised by the Directorate General of Maritime Affairs under the Ministry of Transport and Infrastructure of the Republic of Türkiye. The summit addressed a range of critical and contemporary issues, including the future vision of Turkish shipping, the impacts of global developments on the maritime sector, innovative ship designs for decarbonisation, emerging approaches to port state control, and opportunities in cruise tourism, all of which were evaluated by expert speakers and panellists.

In parallel, within the scope of university–industry collaboration activities, bilateral consultations have been conducted with a focus on ensuring the sustainable management of marine resources and securing their long-term utilisation, as well as addressing issues such as food security in light of scientific advancements. In this context, KTU TTC University–Industry Cooperation Module Coordinator Lecturer Beril Değermenci and Project Specialist Dilek İskender Balaban carried out an on-site visit to Polifish Marine and Aquaculture Company, aiming to develop value-added solutions tailored to sectoral needs.

Furthermore, the “Grand Black Sea Forum,” hosted by KTU on 10–12 December 2025, brought together representatives from academia, industry, entrepreneurship, and public institutions across the Black Sea Basin, with the aim of strengthening regional cooperation and contributing to sustainable development goals. Within this framework and under SDG 14, SFMS faculty member Prof. Dr. Fatma Telli Karakoç participated in the panel titled “Blue Economy, Climate Change Impacts and Adaptation: Low-Carbon and Clean Energy Solutions” on the third day of the forum, where she presented information on completed projects such as IASON, LitOUTer, and BlackNETs, as well as ongoing initiatives including IASON+ and VASEACAD.



The “Stock Enhancement Scientific and Advisory Commission Meeting” organised by the Türkiye General Directorate of Fisheries and Aquaculture under the Ministry of Agriculture and Forestry, was held in Ankara on 10-11 December 2025. SFMS faculty member Prof. Dr. Nadir Başçınar participated in the meeting, where he contributed to the evaluation of the draft Regulation on Stock Enhancement and shared his expert opinions.



The “Provincial Agricultural Production Planning Board Meeting” held on 12 December 2025 under the chairmanship of the Deputy Governor of Trabzon, was attended by SFMS faculty member Prof. Dr. Nadir Başçınar. During the meeting, where animal and aquaculture production plans for the province of Trabzon covering the period 2026-2028 were discussed, he presented his expert opinions and contributions.

In addition, SFMS faculty member Prof. Dr. Coşkun Erüz participated in the “Blue Economy Experience Sharing Workshop” hosted by the Eastern Black Sea Development Agency (DOKA), where he delivered a presentation on the blue economy, regional potential, opportunities, and threats. The workshop also included contributions from Prof. Dr. Sercan Erol and Dr. Neira Purwanti Ismail, who shared their insights and expertise.

A seminar entitled “Assessment of Biodiversity: Arctic and Mediterranean Case Studies” was delivered by Assoc. Prof. Dr. Rafet Çağrı Öztürk, with the participation of SFMS academics and students. The seminar addressed biodiversity examples from different geographical regions, highlighting the importance of ecosystem conservation and scientific research through comparative analyses.



Biyocoşunluluğun Değerlendirilmesi: Arktik ve Akdeniz Seferleri

Doç. Dr. Rafet Çağrı ÖZTÜRK
18.12.2025 Saat: 15:00
Konferans Salonu



[Stock Enhancement Scientific and Advisory Commission Meeting](#)
[Provincial Agricultural Production Planning Board Meeting](#)
[Blue Economy Experience Sharing Workshop](#)
[Assessment of Biodiversity: Arctic and Mediterranean Case](#)



Within the framework of the cooperation protocol signed between KTU and the General Directorate of Nature Conservation and National Parks (DKMP) for the “Native Trout Production, Rearing and Stocking of Forest Inland Waters Project” an on-site inspection and implementation meeting was conducted at the production station located in Maçka-Altındere under the leadership of SFMS faculty member Prof. Dr. Nadir Başçınar.



The Trabzon session of the 7th Aquaculture Seminars of Türkiye, organised under the leadership of Aqua Life of Türkiye, was held at KTU.



[Native Trout Production, Rearing and Stocking of Forest Inland Waters Project](#)

[7th Aquaculture Seminars of Türkiye](#)





Academic Contributions

KTU plays an active and leading role in international research collaborations on the sustainable management of marine ecosystems, contributing significant theoretical and applied work on biodiversity conservation, invasive species control, and marine ecosystem services. It aims to transform scientific outputs into societal and economic value through dissemination, strengthened industry–university collaboration, interdisciplinary research, and public engagement.

In 2025, within the scope of SDG 14 Life Below Water, the university implemented initiatives to enhance maritime knowledge exchange, expand stakeholder networks, and increase opportunities for international academic cooperation.

KTU continues to advance high-quality scholarly outputs under the framework of Sustainable Development Goal 14 Life Below Water. In this context, while the number of publications was 28 in 2024, a total of 42 outputs were produced in 2025, comprising 33 journal articles, 7 conference papers, and 2 review articles. In addition, one master’s thesis and one doctoral dissertation related to SDG 14 were completed in 2025.

In parallel with increasing awareness-raising activities, SDG 14-oriented course contents were developed in 2025, and within this scope, two undergraduate courses and one doctoral-level course were incorporated into the curriculum.



[Academic Publications-2025](#)





Sustainable KTU

Prepared by

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