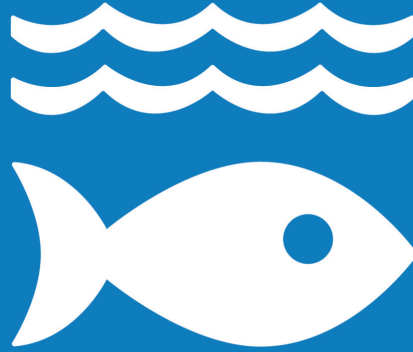




2021
Sustainability Report
SDG14

14 LIFE
BELOW WATER



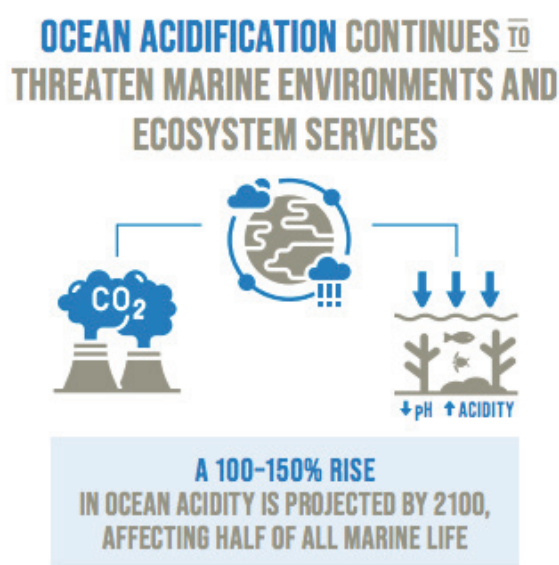


**SUSTAINABLE
DEVELOPMENT GOALS**



SDG 14 aims to conserve and sustainably use the oceans, seas and marine resources for sustainable development. Oceans and fisheries continued to support the global population's economic, social and environmental needs while suffering unsustainable depletion, environmental deterioration and carbon dioxide saturation and acidification. Current efforts to protect key marine environments and small-scale fishers and invest in ocean science are not yet meeting the urgent need to protect this vast, fragile resource.

The ocean absorbs around 23% of the annual emissions of anthropogenic carbon dioxide to the atmosphere, helping to alleviate the impacts of climate change on the planet, however, resulting in a decreasing pH and acidification of the ocean. According to report from ocean's observation stations, ocean acidification increased about twice from 178 in 2021 to 308 in 2022.



According to Food and Agriculture Organization of the United Nations, the sustainability of global fishery resources continues to decline, though at a reduced rate, with the proportion of fish stocks within biologically sustainable levels at 64.6 % in 2019, down from 90 % in 1974 and 1.2 percentage point lower than 2017 levels. The contribution of sustainable marine capture fisheries remained stable at the global level, with regional variation, representing the largest contribution to the GDP in Pacific small island developing States and least developed countries, averaging 1.55% and 0.90%, respectively, in 2011 to 2019.

The ocean drives global systems that make the Earth habitable for humankind. Our rainwater, drinking water, weather, climate, coastlines, much of our food, and even the oxygen in the air we breathe, are all ultimately provided and regulated by the sea. Careful management of this essential global resource is a key feature of a sustainable future. However, at the current time, there is a continuous deterioration of coastal waters owing to pollution, and ocean acidification is having an adversarial effect on the functioning of ecosystems and biodiversity. This is also negatively impacting small scale fisheries.

It is important to explore how universities are protecting and enhancing aquatic ecosystems like lakes, ponds, streams, wetlands, rivers, estuaries and the open ocean¹.

¹ <https://sdgs.un.org/goals/goal14>
<https://www.fao.org/3/cc0461en/online/sofia/2022/status-of-fishery-resources.html>
<https://www.un.org/sustainabledevelopment/oceans/>

AGU'S POLICIES AND PRACTICES

Marine biodiversity is critical to the health of people and our planet. Marine protected areas need to be effectively managed and well-resourced and regulations need to be put in place to reduce overfishing, marine pollution and ocean acidification. Therefore, Abdullah Gul University (AGU) gives importance to marine protection, although the region where AGU is located has no coast to the sea, by offering educational programs on water management, organizing events on the protection of the oceans and having policies on the usage of plastic wastes.

AGU has water quality standards and guidelines for water discharges. Water treatment is of utmost importance to the university, which uses different processes/systems in that regard:

- AGU sends the wastewater it could not reuse to the Kayseri Advanced Biological Wastewater Treatment Plant. Domestic and Industrial wastewater reaching the Treatment Plant is treated in a way that does not cause any environmental problems, and the sludge from the facility is safely removed. Kayseri Advanced Biological Wastewater Treatment Plant provides removal of nutrients such as nitrogen (N), phosphorus (P) that cause pollution in water resources, as well as carbon in wastewater.
- AGU Sümer Campus, is an exemplary university site that has been progressing towards being green and environmentally friendly since its foundation. AGU has also established a Grey Water Treatment system in order to clean waste water and reuse it in the WC flushing system. This system has contributed to cutting freshwater consumption in half and to seeing AGU being awarded the LEED Silver Award in 2015.



Leed Certificate

The Zero-Waste Regulation was introduced by the Turkish Ministry of Environment and Urbanization on July 12, 2019 regarding waste minimization in the country. In addition, a “Zero Waste” project has been started with the coordination of the Ministry. “Zero Waste” is defined as a waste management philosophy that involves using the resources more efficiently, reviewing the sources of waste formation, preventing and minimizing it, and collecting and recovering waste at its source separately. AGU

participated in the project through the Waste Management Committee and by applying the zero waste procedures at the university in 2019, it was awarded a zero-waste certificate in 2020. As of the date of the certificate, AGU is the first and only university in Kayseri to receive it.

	T.C. KAYSERİ VALİLİĞİ Çevre ve Şehircilik İl Müdürlüğü	
Belge No: TS/38/B2/6/7	SIFIR ATIK BELGESİ (Temel Seviye)	Tarih: 30/10/2020
Adı : ABDULLAH GÜL ÜNİVERSİTESİ	Adresi : BARBAROS Mahallesi, SÜMER YERLEŞKESİ KÜME EVLER, No: 8 -, KOCASINAN, KAYSERİ, Türkiye	
Vergi No : 5400387968	12/07/2019 tarihli ve 30829 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Sıfır Atık Yönetmeliği'nce Sıfır Atık Yönetim Sistemi'ni kurarak Sıfır Atık Belgesi 'ni almaya hak kazanmıştır.	
Belge Son Geçerlilik Tarihi: 30/10/2025	 e-İmzalıdır Sibel LİVDUMLU Çevre ve Şehircilik İl Müdürü	
<small>Bu belge, güvenli elektronik imzayla imzalanmıştır. Belge Doğrulama Adresi: https://www.natliye.gov.tr/ortre-ve-ekilim/il-belirli-belge-doğrulama Kodu: MEXW7YHX</small>		

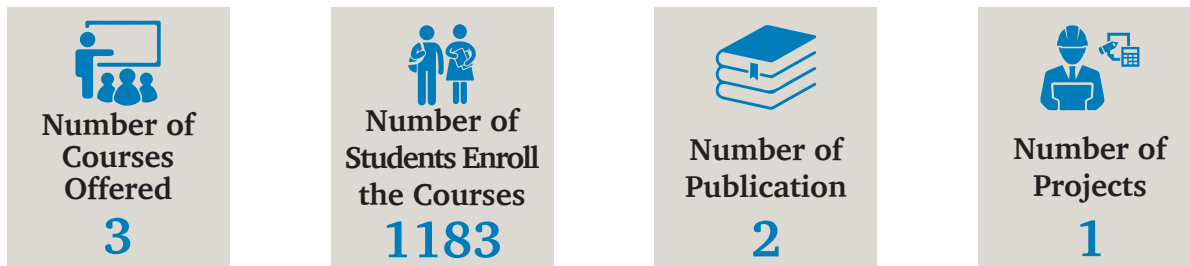
Zero-waste certificate

AGU aims to reduce plastic waste on campus. As part of its Strategic Plan, AGU committed to support the use of environmentally non-harmful and recyclable materials. Furthermore, the AGU Waste Management Directive and Application Principles document (part 2.1.3.) details processes for making use of waste collected on the campus. In order to collect waste at the source and in accordance with the standards, containers segregated into household, paper, metal, plastic, glass and battery are stationed at locations determined based on the number people using those locations within the university. Bag colors in the containers differ according to the types of waste. Cleaning staff working in the related areas ensure that wastes are delivered to the temporary storage area, paying attention to the colors of the bags. On top of internal regulations, AGU and all its suppliers also comply with the Turkish law on The Control of Packaging Wastes, which limits the use of plastic. AGU's objectives to reducing of plastic use and disposable items are defined in the AGU reducing of plastic use and disposable items policy.

Genç TEMA AGU, a student club in AGU, collaborate with TEMA Foundation (The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats) to increase awareness of environmental problems.

AGU PROGRESS

AGU tracks publications, projects, courses, theses, dissertations, congress and symposium participation for all SDGs through AVESIS (Academic Data Management System).



EDUCATIONAL PROGRAMS, RESEARCHES, AND PROJECTS

AGU opened a graduate program in Sustainable Urban Infrastructure Engineering. Within this program there is a course named “Clean Water Access Infrastructure in Developing Countries” In this course, students focus on clean water access infrastructure planning in developing countries. The clean water problem will be examined from a multidisciplinary perspective. AGU, as a research university seeking solutions to global challenges and aiming at developing citizens who can contribute to societies and shape the future developed an innovative Global Challenge Curriculum (GLB) composed of one mandatory course and several elective courses taught throughout the four Undergraduate academic years. These courses focus on global topics such as the ones tackled by the United Nations Sustainable Development Goals. In addition to these courses, AGU Civil Engineering Department has courses such as Sustainable Concrete Technology, Hydrology and Water Resources Engineering, Water and Wastewater Treatment Engineering. Within the frame of this course, AGU teaches good water and waste water management systems to be applied by AGU graduates off-campus.

AGU academician published two research articles in 2021 related to SDG 14. Those articles are:

1. “Optical Detection of Microplastics in Water”, Article in Environmental Science and Pollution Research Journal, Talha ERDEM.
2. “Investigation of the treatability of pre-coagulated slaughterhouse wastewater using dead-end filtration”, Article in Chemical Technology and Biotechnology Journal, Nigmet Uzal.

AGU academician has been working on a research project related to SDG14. This project is:

3. “Development of an Innovative Hybrid Membrane Process for Energy, Nutrient and Water Recovery from Domestic Wastewater”, TUBİTAK Project, Nigmet UZAL.

COOPERATION AND EVENTS

European Union – Turkey Youth Climate Forum was held in Istanbul on October 26, 2021, where Prof. Dr. Niğmet Uzal touched on life below water in her presentation on “Climate Change and Water”. (<https://twitter.com/GulcimenSedat/status/1465956742962061313>)



SDG student hub at AGU organized three different webinar activities in which Prof. Dr. Niğmet Uzal from the department of civil engineering at AGU, Bahar Özay, the Coordinator of UN SDSN Turkey and Suat Mumcu, research assistant from the department of economics at AGU gave a presentation on “Water Reuse and Recovery”, “Climate Change and Water” and “Virtual Water” respectively to give information about SDGs especially Goal 6, 13 and 14. At the end of the webinar activities workshop were organized by SDG student hub at AGU where participants measured their water footprint and also learned to protect water in daily life

<p>SDG Student Hub Abdullah Gül University</p> <p>6 CLEAN WATER AND SANITATION</p> <p>Webinar Series 1: VIRTUAL WATER</p>  <p>Suat Mumcu Research Assistant from the Department of Economics, AGU</p> <p>30 May 08:00 PM</p> <p>Event will be held in Turkish. @sdgstudenthub_agu fejzamar.anilam@sdgnyouth.org</p>	<p>SDG Student Hub Abdullah Gül University</p> <p>6 CLEAN WATER AND SANITATION</p> <p>Webinar Series 2: WATER REUSE AND RECOVERY</p>  <p>Assoc. Prof. Dr. Niğmet Uzal from the Department of Civil Engineering, AGU</p> <p>3 June 08:00 PM</p> <p>fejzamar.anilam@sdgnyouth.org @sdgstudenthub_agu</p>	<p>SDG Student Hub Abdullah Gül University</p> <p>6 CLEAN WATER AND SANITATION</p> <p>Webinar Series 3: CLIMATE CHANGE AND WATER</p>  <p>Bahar Özay (PhD) Coordinator of UN SDSN Turkey</p> <p>20 June 08:00 PM</p> <p>Event will be held in Turkish. @sdgstudenthub_agu fejzamar.anilam@sdgnyouth.org</p>
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AGU students exhibited the projects they prepared as a part of the “GLB 301 Sustainability” course. The students worked on these projects in order to understand the concept of sustainability, to have knowledge, to identify and evaluate problems related to sustainability, and to develop their critical thinking skills.



Sustainability Projects presented by AGU Students

AGU organized the Sustainability Panel and this shed light on sustainability concepts in Kayseri business, city and industry with speaker experiences. As part of the GLB301 Sustainability course, the panel hosted Koray Kök, Environmental Engineer at the Environmental Services of the Kayseri Municipality, Mustafa Nebi Doğan, Board Member of



Sustainability Panel

the Kayseri Chamber of Industry, and Ömer Yasin Arık, President of the Kayseri Chamber of City Planners, as speakers at the Rectorate Conference Hall. The discussions covered sustainability concepts in Kayseri business, city and industry.

