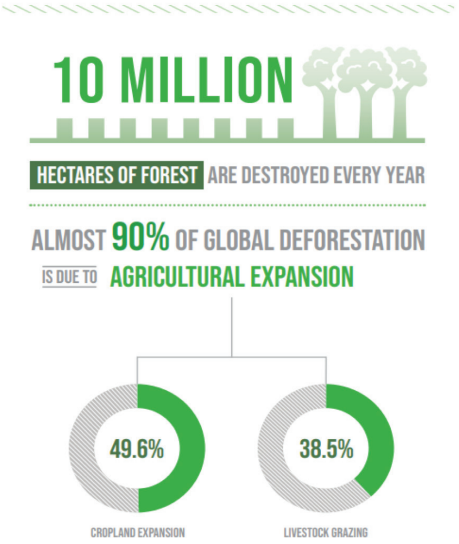
AGÜ

2021 Sustainability Report SDG15

ABDULLAH GÜL
UNIVERSITY

SUSTAINABLE DEVELOPMENT GOALS

SDG 15 aims to **protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**. Forest areas continued to decline, protected areas were not concentrated in areas of key biodiversity, and species remained threatened with extinction. However, efforts were gaining traction and having positive effects that could help to reverse those outcomes, such as increased progress towards sustainable forest management; gains in protected area coverage for terrestrial, freshwater, and mountain areas; and progress in implementing programs, legislation, and accounting principles to protect biodiversity and ecosystems.



Since 2000, forest area has increased in Asia, Europe, and Northern America, while significantly decreasing in Latin America, sub-Saharan Africa, and South-Eastern Asia, driven by land conversion to agriculture. Notwithstanding the overall loss, the 2017 data showed that the proportion of forests in protected areas and under long-term management plans, as well as certified forest area, increased or remained stable at the global level and in most regions of the world. Almost 90% of deforestation stems from agricultural expansion.

The average proportion of each key biodiversity area for terrestrial, freshwater, and mountain biodiversity within protected areas was 44, 41 and 41%, respectively, an increase of around 12 to 13 percentage points since 2000. However, most key biodiversity areas still have incomplete or no coverage by protected areas.

In 2022, 133 countries ratified The Nagoya Protocol to the Convention on Biological Diversity which provides a transparent legal framework for the implementation of the fair and equitable sharing of benefits resulting from the use of genetic resources.

Species extinction, which threatens sustainable development and compromises global heritage, is driven primarily through habitat loss from unsustainable agriculture, harvest, and trade; deforestation; and invasive alien species.

Nature is critical to our survival: nature provides us with our oxygen, regulates our weather patterns, pollinates our crops, produces our food, feed and fibre. But it is under increasing stress. Human activity has altered almost 75% of the Earth's surface, squeezing wildlife and nature into an ever-smaller corner of the planet. As a result, about 40,000 species are threatened with extinction.

Deforestation and desertification – caused by human activities and climate change – pose major challenges to sustainable development and have affected the lives and livelihoods of millions of people. Forests are vitally important for sustaining life on Earth and play a major role in the fight against climate change. Moreover, investing in land restoration is critical for improving livelihoods, reducing vulnerabilities, and reducing risks for the economy.

The health of our planet also plays an important role in the emergence of zoonotic diseases, i.e. diseases that are transmissible between animals and humans. As we continue to encroach on fragile ecosystems, we bring humans into ever-greater contact with wildlife, enabling pathogens in wildlife to spill over to livestock and humans, increasing the risk of disease emergence and amplification.

Life on land is a precious resource – we need to ensure that it is passed on to future generations, at a time when loss of biodiversity is an increasing concern. Different universities will have responsibility for very different landscapes and the life within, but all have a responsibility as stewards of their environment. Therefore, it is important to explore how universities contribute to sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.[1]

AGU POLICIES AND PRACTICES

Number of Theses	Number of Courses Offered	Number of Students Enroll the Courses	Number of Publications
1	3	1172	4

[1] *https://sdgs.un.org/goals/goal15*
https://unstats.un.org/sdgs/report/2022/Goal-15/
https://www.un.org/sustainabledevelopment/biodiversity/

According to the Turkish Ministry of Culture and Tourism, Abdullah Gül University (AGU) is located on a protected site (historical heritage of Sümerbank Textile Factory) and declared as a 1st Group Immovable Cultural Property. Thus, most of the buildings located on the factory land have been registered as 1st or 2nd group buildings as a result of the decisions taken. In this direction, the Sümer Campus continues to be protected and repaired in accordance with Law No. 2863 on the Protection of Cultural and Natural Assets.

Sümerbank Factory

The Turkish Ministry of Environment and Urbanization introduced the Zero-Waste Regulation on July 12, 2019, regarding waste minimization in our country. In this direction, a "Zero Waste" project has been launched in coordination with the Ministry of Environment and Urbanization. Furthermore, AGU's Strategic Plan 2017-2021 contains a policy on reducing AGU's environmental footprint and hazardous materials on campus and establishing recycling systems. With this in mind, the AGU Waste Management Committee was established and introduced several directives and principles towards those targets. AGU Technology Transfer Office (TTO) and Waste Management Committee have also published Carbon Footprint, and Waste Management Reports. As a result of its efforts, AGU was awarded a Zero-Waste Certificate in 2020. As of the certificate date, AGU is the first university in Kayseri to receive a zero-waste certificate.

AGU has a Reducing the Use of Plastics and Disposable Items Policy. With this policy, AGU is committed to reducing the amount of plastic and disposable (single-use) products on its campus. It continues its efforts to reduce the use of plastic and disposable materials instead of plastic cups in all its activities and services and to find positive solutions to reduce unnecessary waste on its campus. For this purpose, the AGU Waste Management Committee carries out annual monitoring and reporting of plastic consumption in accordance with the Control of Packaging Waste Regulation No. 38745 and the AGU Waste Management Directive and Implementation Principles.

AGU uses a precise system to treat wastewater and reuse the purified end product in its toilet flushing system in order to reduce its consumption of drinking quality water. The usage of this Grey Water Treatment System has contributed to AGU's being awarded the LEED Silver Award in 2015. Moreover, all tap water on campus is potable, and water quality checks are conducted regularly. AGU sends its wastewater to Kayseri Advanced Biological Wastewater Treatment Plant. Domestic and Industrial wastewater reaching the KASKI's (Kayseri Water and Sewage Administration) 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 the removal of nutrients such as nitrogen (N) and phosphorus (P) that cause pollution in water resources, as well as carbon in wastewater.

AGU's technical procurement and contract with a private company include combating pests on campus, checking conditions of chemicals used on campus (once a month), and regulations to preserve campus from harmful species. In addition, food is purchased from trusted, local companies, which partner with suppliers working with farmers and producers.

Educational Programs, Research, and Projects

As a research university seeking solutions to global challenges and aiming at educating citizens who can contribute to societies and shape the future, AGU developed an innovative Global Challenge Curriculum (GLB) composed of one mandatory course and several elective courses taught throughout the four academic years at the undergraduate level. For example, in AGU's GLB301 (Global Challenges) course on sustainability, the bio-based economy is explored with students. In the Civil Engineering CE 474 course, students also explore "Engineering for Sustainability." In CE 475, they study "Water and Wastewater Treatment Engineering." Moreover, all UG courses are open to non-AGU community members.

AGU students also exhibited their projects as a part of the "GLB 301 Sustainability" course. The students worked on these projects to understand the concept of sustainability, become knowledgeable on the topic, identify and evaluate sustainability-related problems, and develop critical thinking skills.

Sustainability Projects presented by AGU Students

AGU has been involved in various sustainability projects, including "AGU Bostan" (AGU Garden). The main target of the project, to be realized on an 800-square-meter area on the Sümer Campus, is designing an ecological, sustainable, and public campus experience. The project's originality lies in the desire to continue the production tradition on the AGU Sümer Campus. In order to protect and expand the existing ecosystems and biodiversity of threatened ecosystems, activities are carried out by planting ancestral seeds as part of the AGU Garden Project. Ancestor seeds have been used since ancient times and enable the products obtained from the field to be used again as seeds the following year. Clustered around the principles of green campus and neighborhood, the project is to be realized in collaboration with the Kayseri Kocasinan District Municipality and aims to include residents, students, civil society organizations, and AGU members for a participatory designing experience. During the implementation of this project, AGU disseminates knowledge on sustainable and ecological design via training and workshops to the local community.

In addition, AGU's Department of Architecture has an environment-oriented platform for alternative architectural experiences known as "Arch | for | Earth." The platform features a series of workshops and seminars, where local/natural/waste materials and components are handled within the scope of traditional/contemporary construction and construction technologies focusing on environmentally friendly design, and on-site construction practices based on co-production and discussion.

AGU Bostan

The Department of Architecture also has an ongoing project, “Rural Architectural Heritage Sites and Cultural Landscape of Kayseri: Neighborhoods of Karahüyük, Mancusun, and Ispidin,” running since 2019. Led by Prof. Dr. Nilüfer Yöney, Bahar Elagöz Timur, Özlem Durmuş Kevseroğlu, and Gülsüm Oygur, the project is within the category of Projects Supported by Higher Education Institutions.

AGU is also involved in the archeological “Kerkenes Project.” Kerkenes Dağı in Yozgat Province of Central Turkey was briefly the subject of archaeological investigations by the University of Chicago in the 1920s. In 1993, Geoffrey and Françoise Summers began a new research program, including excavations and geophysical surveys. The current project has continued and expanded upon this work, revolutionizing researchers’ understanding of this important ancient city. This project aims at conducting excavations and geophysical surveys on the remains of this major Iron Age city.

Within the scope of the “Sustainable Soil Fertilizer Project”, carried out by AGU students, compost, which is an organic fertilizer, is produced by converting organic wastes such as coffee and tea pulp, fruit peels, and egg shells from the kitchens. The first step in the project was to place the waste bins by holding an awareness meeting at the school cafes and Starbucks Cafes in the city. Afterwards, soil worms were provided to speed up the composting process. The first product was generated by feeding the worms with the collected wastes.

Sustainable Soil Fertilizer Project

Türkiye became a party to the Paris Agreement in the second half of 2021 to strengthen national contributions to the fight against global climate change. Türkiye also announced its 2053 net-zero emission target and green development policy. In this context, the Ministry of Environment, Urbanization and Climate Change also declared that young people should be a part of Türkiye's green transformation, and the "Climate Ambassadors Movement Project" was implemented by establishing official contacts with all national universities. Yunus Yıldız, one of AGU's students, was chosen as the Climate Ambassador for this project.

Climate Ambassadors Movement Project

Cooperation and Events

AGU organized several events and activities as part of its "AGU Bostan" project to promote and reproduce a specific organic type of seed. Fertilizing, hoeing, and planting seedlings were among the activities of AGU Bostan in 2021.

AGU Bostan's activities

In addition, AGU signed a protocol with Kayseri Talas Municipality to grow crops on the 200 decares of unused land belonging to AGU. The grown products were distributed to people in need within the scope of social support.

In order to foster environmental awareness of future generations and make Türkiye greener, an event called "11 Million Trees: With One Sapling Today, Breathe For Tomorrow" was realized simultaneously in 81 cities of Türkiye. Many saplings were also planted at AGU within the scope of the event. Planting took place on the Sümer Campus, where 350 walnut, cedar, and pine saplings met the soil at designated areas.

11 Million Trees Campaign

AGUTEMA is a club that AGU students have established with a responsibility towards nature. In this context, AGU students first receive training on sustainable activities for the environment and then provide training themselves to transfer their knowledge in these areas. An example is the acorn tubing, carried out by the AGUTEMA and Youth Red Crescent AGU clubs. They also offer their training to students in different educational institutions.

AGUTEMA's Activities

In addition, the dogwood and maple planting events carried out with the University staff and AGUTEMA students were held as part of the "November 11 National Reforestation Day."

November 11 National Reforestation Day

November 11 National Reforestation Day

Last but not least, an afforestation event was carried out on the Sümer Campus and Student Village by the Kayseri Anti-Erosion and Afforestation Foundation (KAYEMA) and AGU. Rector Prof. Dr. Cengiz Yılmaz, AGU administrators, staff, and KAYEMA managers attended the event, and 500 saplings were planted.

In the AGU School of Foreign Languages, the "The World Around Us" course is taught to help students learn more about the world and the nature in which they live. Within the scope of the course, students are expected to understand the world and the nature they live in within the framework of the target subjects. These target topics are Continents and Countries, Flora and Fauna, Food Products, Geographical Features, People, Population and Demography, Regions, Provinces and States, Transportation, Resources, and School and University Subjects.

The AGU Youth Factory organizes informative events and workshops to raise responsible generations. In this direction, AGU brings its students together with other primary and high school students. During such events, AGU students provide training on planting trees, water use, and sustainable soil fertilizer production to primary and high school students.

"O Piti Piti" Event

"A Drop for the Future" Event

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