CAPPADOCIA UNIVERSITY
Logic - Wisdom - Equality - Tradition

SUSTAINABLE DEVELOPMENT GOALS • ANNUAL REPORT

Climate action is local.
Our responsibility is collective.

SDG 13 / CLIMATE ACTION

13 CLIMATE ACTION	REPORTING PERIOD: 2025
Mitigation • Adaptation • Knowledge	2025



Community-based environmental education and sustainable production activities supported by our University.

2025 • CAPPADOCIA UNIVERSITY • ENGLISH EDITION

OUR 2025 CLIMATE STORY

Measured emissions, practical action and shared responsibility

We connect institutional carbon accounting with energy efficiency, environmental resilience, public knowledge and partnerships.

Our climate work during **2025** brought together the commitments of our **Climate Action Policy (KÜN.PB.014)**, greenhouse gas accounting, on-site solar systems, responsible management of water and material resources, and education extending from our campuses to local producers and national professional networks.

We commissioned professional carbon-footprint calculation and verification-related support in **June–August 2025**, maintained an inventory of energy and other emission-generating activities, and continued our low-carbon energy systems. Alongside these operational measures, we delivered climate-focused learning through international Slow Food programmes, sustainable tourism courses, environmental humanities and scientific projects.

Our **2024 calendar-year greenhouse gas inventory** was subsequently **independently verified at 8,747.29 tCO_2e**. We also calculated **5,790.62 tCO_2e for calendar-year 2025**, subject to the relevant review and assurance process. These inventory figures have different verification statuses and should not be treated as a verified emission-reduction series. Our separate **2024–2025 academic-year environmental reporting series** records **1,060 tonnes** of carbon footprint under its own method and **139,500 kWh** of on-site renewable solar electricity and heat. We identify this academic-year series separately from the organisational greenhouse gas inventories.

2025 climate-action evidence	Recorded result
Institutional carbon accounting	**5,790.62 tCO_2e** calculated for calendar-year 2025; verification status distinguished
Academic-year carbon reporting	**1,060 tonnes** recorded for 2024–2025 in a separate environmental indicator series
Renewable solar electricity and heat	**139,500 kWh / 502 GJ** for academic year 2024–2025
Sustainable tourism professional learning	**113 recorded participants** across three 2025 training programmes
Public engagement	Climate-change photography competition and community-facing learning
University–community collaboration	Cappadocia–Uçhisar Earth Market opened **24 May 2025**

A connected climate-action model

We organise our work around **institutional responsibility**, **measured operational performance**, **adaptation and environmental resilience**, **education and research**, and **local, national and international cooperation**. Each area supports the others: operational data help us identify priorities; research improves our understanding of risk; and public learning helps translate knowledge into practice.

OUR UNIVERSITY AND THE CLIMATE CONTEXT

A place-based response in Cappadocia

Regional climate pressures make water, land, energy and responsible tourism central to our institutional responsibilities.

Founded as a higher education institution in **2005** and established as **Cappadocia University in 2017**, we operate across campuses with different built environments and functions. Our regional setting combines semi-arid landscapes, important natural and cultural heritage, agricultural activity, and an economy strongly connected to tourism. Climate adaptation therefore concerns the interaction of energy, water, biodiversity, local livelihoods, mobility and historic places.

Through our **2023–2028 Strategic Plan** and **Environmental and Sustainability Policy**, we integrate resource efficiency, environmental management, education and community engagement into institutional planning. We connect these arrangements with our five thematic sustainability programmes: **Cappadocia Air, Water, Earth, Fire and Bio**, which provide accessible ways to communicate practical climate-related priorities.

Our **Climate Action Policy (KÜN.PB.014)**, first issued in **October 2024**, addresses greenhouse gas reductions, energy and water management, renewable energy, waste and natural resources, and protection of ecosystems. During **2025**, we strengthened the capacity needed to put these commitments into practice and track progress through consistent records.



Figure 1. Our Cappadocia Fire programme connects campus energy use and renewable energy with climate action.

Why climate action matters in Cappadocia

The semi-arid environment of **Cappadocia**, pressure on freshwater resources, the environmental demands of tourism and the conservation needs of our cultural landscapes make climate risk a regional concern. We therefore link operational carbon management with **water stewardship, climate-responsive tourism, biodiversity protection and community education**, while developing knowledge that supports public and local decision-making.

Across our institution, mitigation and adaptation require different forms of evidence. **Emissions inventories** describe sources within defined accounting boundaries; **energy and resource records** describe operational demand; **training participation** records learning delivered; and **research and collaboration** documents scientific and community engagement. We interpret these measures separately rather than merging them into a single unsupported impact total.

GOVERNANCE AND POLICY

Making climate action an institutional responsibility

A formal policy and assigned operational roles provide continuity beyond individual projects.

Our **Climate Action Policy** identifies the responsibilities of our **Rectorate, Sustainability Office, Sustainability Commission, Quality and Strategic Planning Department** and relevant academic and administrative units. We co-ordinate planning, implementation and follow-up across energy, water, procurement, facilities, transport and community activity. These responsibilities connect climate action to regular management rather than treating it as a stand-alone public campaign.

We pursued our **2030 climate and resource-efficiency objectives** through the framework already established by our 2024 policy and our strategic plan. Following the **2025** reporting year, we developed a **2026 policy-revision proposal** to express an explicit objective of **carbon neutrality by the end of 2030**, addressing **Scope 1, Scope 2 and selected Scope 3 categories**. The corresponding institutional approval process is distinct from the climate-management activities already implemented in **2025**.

Operational areas and responsible functions

Area	Our 2025 institutional approach
Carbon accounting	Activity-data collection; calculation; technical services and independent verification arrangements
Energy and buildings	Electricity use, solar systems, efficient lighting and facilities monitoring
Water and environmental protection	Consumption tracking, water-saving fixtures, drought-aware landscaping and wastewater management
Education and research	Climate literacy, professional courses, environmental humanities and ecological research
Partnerships	Public institutions, civil-society groups, sector organisations and local communities

OUR POLICY FOUNDATION

Climate commitments embedded in institutional governance

Our work builds on documented policies already established before and during 2025.

Climate Action Policy: our operational framework in force during 2025

We published our **Climate Action Policy Document (KÜN.PB.014)** in **October 2024**, with Turkish and English editions. Its foreword connects our educational, research and public responsibilities with a coherent institutional response to climate change. The policy identifies **energy efficiency, renewable energy, sustainable transport, waste reduction, water conservation, biodiversity, community partnerships and environmental monitoring** as areas for action. Our **Rectorate and Board of Trustees** support the implementation of this institutional framework.

We use this policy to guide action by our **Quality and Strategic Planning Department, Sustainability Office, Sustainability Commission** and relevant academic and operational units. The policy connects resource allocation with implementation and monitoring responsibilities, so that climate-related priorities can be addressed through regular planning, infrastructure, research and engagement rather than by occasional events alone.

Environmental policy, strategic planning and measurable objectives

Our **Environmental and Sustainability Policy**, published in **May 2024**, further establishes commitments concerning responsible resource use, pollution prevention and environmental performance. Our **2023–2028 Strategic Plan** identifies sustainability, local development, quality education and research as institutional priorities. Our **Climate Action Plan 2023–2030** sets longer-term improvement ambitions, including a **20% reduction in carbon footprint and electricity use by 2030** and progressive improvements in efficient lighting, renewable energy provision and environmentally responsible buildings. These are **targets**, not claims that the corresponding reductions were achieved in 2025.

The complementarity of these documents is important. Our Climate Action Policy states the institutional commitments; environmental management procedures help translate them into operations; strategic targets establish a direction of travel; and annual records enable us to monitor progress and identify corrective actions. During **2025**, we worked within this existing framework while strengthening carbon accounting and the technical evidence base for future decisions.

Institutional instrument	Established / relevant date	Our role in climate action
Climate Action Policy — KÜN.PB.014	**October 2024**	Mitigation, adaptation, public engagement, governance and performance monitoring
Environmental and Sustainability Policy	**May 2024**	Environmental management, resource efficiency and pollution prevention
Strategic Plan 2023–2028	**2023–2028**	Institutional responsibilities, education, research and regional sustainability priorities
Climate Action Plan 2023–2030	**2030 targets**	Long-term carbon, energy, efficient infrastructure and renewable-energy ambitions
Environmental Management System — ISO 14001:2015	**20 August 2025** certification record	Management structures, assessment and continual improvement

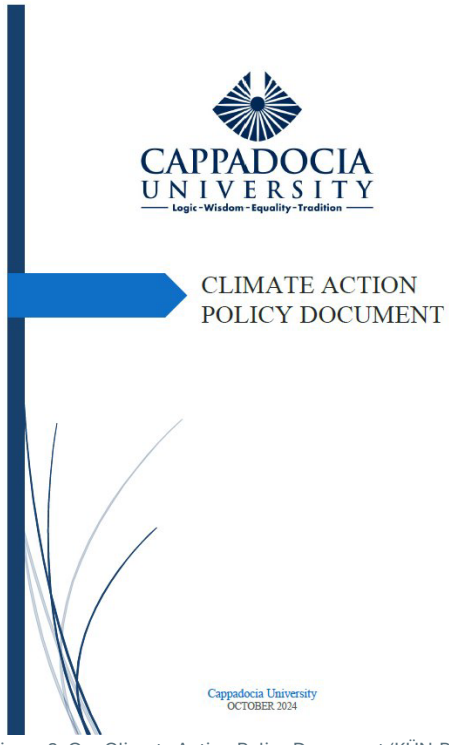
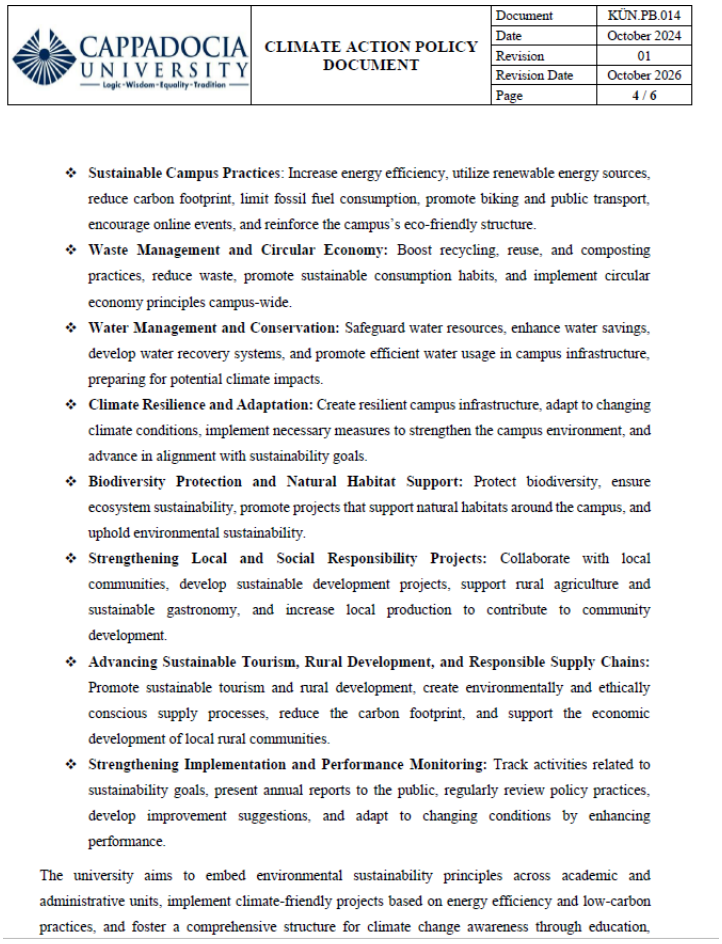


Figure 2. Our Climate Action Policy Document (KÜN.PB.014), first published in October 2024.



CAPPADOCIA UNIVERSITY — Logic-Wisdom-Equality-Tradition

CLIMATE ACTION POLICY DOCUMENT

Document	KÜN.PB.014
Date	October 2024
Revision	01
Revision Date	October 2026
Page	4 / 6

- **Sustainable Campus Practices**: Increase energy efficiency, utilize renewable energy sources, reduce carbon footprint, limit fossil fuel consumption, promote biking and public transport, encourage online events, and reinforce the campus's eco-friendly structure.
- **Waste Management and Circular Economy:** Boost recycling, reuse, and composting practices, reduce waste, promote sustainable consumption habits, and implement circular economy principles campus-wide.
- **Water Management and Conservation:** Safeguard water resources, enhance water savings, develop water recovery systems, and promote efficient water usage in campus infrastructure, preparing for potential climate impacts.
- **Climate Resilience and Adaptation:** Create resilient campus infrastructure, adapt to changing climate conditions, implement necessary measures to strengthen the campus environment, and advance in alignment with sustainability goals.
- **Biodiversity Protection and Natural Habitat Support:** Protect biodiversity, ensure ecosystem sustainability, promote projects that support natural habitats around the campus, and uphold environmental sustainability.
- **Strengthening Local and Social Responsibility Projects:** Collaborate with local communities, develop sustainable development projects, support rural agriculture and sustainable gastronomy, and increase local production to contribute to community development.
- **Advancing Sustainable Tourism, Rural Development, and Responsible Supply Chains:** Promote sustainable tourism and rural development, create environmentally and ethically conscious supply processes, reduce the carbon footprint, and support the economic development of local rural communities.
- **Strengthening Implementation and Performance Monitoring:** Track activities related to sustainability goals, present annual reports to the public, regularly review policy practices, develop improvement suggestions, and adapt to changing conditions by enhancing performance.

The university aims to embed environmental sustainability principles across academic and administrative units, implement climate-friendly projects based on energy efficiency and low-carbon practices, and foster a comprehensive structure for climate change awareness through education,

Figure 3. Key commitments in our Climate Action Policy concerning emissions, energy, water and institutional cooperation.

Our management systems and operational accountability

Our **ISO 14001:2015 Environmental Management System** provides an organised approach to identifying environmental aspects, monitoring performance and implementing continuous improvement. Our certification record dated **20 August 2025** (certificate **1278-01**) covers education, research and development, management and community engagement. We also documented implementation of a **Basic-Level Zero Waste Management System**, with a site-specific certificate issued **23 September 2025** (certificate **TS/50/B2/6/115**). The Zero Waste certification applies to the documented University facility and is not presented as a blanket certification of every campus.

We connect these systems with environmental responsibilities in our facilities and administrative operations: consumption and waste records, separation at source, procurement and maintenance decisions, student communication and periodic review. They support carbon management through better resource governance, without serving as direct substitutes for measured greenhouse gas reductions.



SERTİFİKA
CERTIFICATE

ZERTİFİKAT | CERTIFICATE | CERTIFICAT | CERTIFICADO | СЕРТИФИКАТ

TS EN ISO 14001:2015 Çevre Yönetim Sistemi
Environmental Management System as per TS EN ISO 14001:2015

In accordance with BBS procedures, it is hereby certified that

KAPADOKYA ÜNİVERSİTESİ
Akıl - Ahlak - Adalet - Adap

KAPADOKYA ÜNİVERSİTESİ
Mustafapaşa Yerleşkesi, 50420 – Mustafapaşa, Ürgüp / NEVŞEHİR

BBS prosedürlerine göre yukarıda belirtilen standart şartlarını karşıladığını kanıtlamıştır.
Applies a management system in line with the above standard for the following scope

Kapsam	Scope
Eğitim-öğretim, araştırma ve geliştirme, yönetim sistemi ve topluma katkı faaliyetleri.	Education-training, research and development, management system and community contribution activities.

Sertifika No / *Certificate No* 1278-01

İlk Belge Tarihi / *Initial Certification* 17.08.2022
Belge Geçerlilik Tarihi / *Valid Until* 16.08.2028

Belgelendirme Kuruluşu / *Certification Body*
BBS A.Ş.

Ankara, 20.08.2025

Belgelendirme BBS tetkik ve belgelendirme prosedürlerine uygun olarak gerçekleşmiştir ve düzenli gözetim tetkiklerine tabidir.
Certification was conducted in accordance with BBS auditing and certification procedures and is subject to regular surveillance audits.

TÜRKAK BDS NO
YS-5602-29A2

Bu sertifikanın geçerlilik durumu www.bbsas.com.tr ve tbds.turkak.org.tr adreslerinden doğrulanabilir.
Belge üzerindeki karekod QR okuyucu ile okutulmak suretiyle de doğrulama yapılabilir.
The authenticity of this certificate may be verified at www.bbsas.com.tr and tbds.turkak.org.tr.
The authenticity may also be checked with the QR Code above.

BBS BELGELENDİRME EĞİTİM VE GÖZETİM HİZMETLERİ A.Ş.
Cevizlidere Mah. 1246 Sokak No: 4/20 P.K. 06520 ÇANKAYA / ANKARA / TÜRKİYE
www.bbsas.com.tr

TÜRKİYE CUMHURİYETİ
ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

SIFIR ATIK

T.C. NEVŞEHİR VALİLİĞİ ÇEVRE,ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ

SIFIR ATIK BELGESİ

(Temel Seviye)

Belge No: TS/50/B2/6/115 Tarih: 23.09.2025

Adı: KAPADOKYA ÜNİVERSİTESİ
Adresi: NEVŞEHİR,YENİ Mahallesi, ÜNİVERSİTE SOKAK, No: 1 -, ÜRGÜP,Türkiye
Vergi No: 8150402649
Türü: Bina/Yerleşke

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.

Yasemin DEMİRÖRS
Çevre,Şehircilik ve İklim Değişikliği İl Müdürü
E-İMZALIDIR

Belge Son Geçerlilik Tarihi:
23.09.2030

Doğrulama Kodu: 979EF590-3401-4C48-A076-78F463964F9B Doğrulama Adresi: https://www.turkiye.gov.tr

Figure 4. Our ISO 14001 environmental management certificate of 20 August 2025 and Basic-Level Zero Waste certificate of 23 September 2025.

Subsequent formalisation of the carbon neutrality pathway

Following our work in 2025, we developed a **2026 policy-revision process** intended to express an explicit **carbon-neutrality target for 2030**, covering direct emissions, purchased energy and selected indirect emission categories. We distinguish the **policy development and approval process in 2026** from the **October 2024 policy already in force during 2025**. The purpose of our 2025 activities was to build reliable inventories and management capacity for the longer-term climate objectives.

CARBON ACCOUNTING

Building a repeatable greenhouse gas inventory

We invest in evidence-based climate management, separating the year measured from the date of verification.

In **June 2025**, we defined the technical scope of institutional greenhouse gas accounting and related independent verification under **ISO 14064-1:2018**. A **14 August 2025** invoice recorded **TRY 80,000** in professional services for carbon-footprint calculation and verification consultancy. This investment supported the classification of emission sources, collection of activity data, preparation of inventory records and development of internal technical competence.

We drew upon information on **heating fuels, University vehicles, stationary and mobile combustion, refrigerants, purchased electricity, transport, business travel, purchased goods and services**. Maintaining a defined inventory boundary and documenting the underlying activity records helps us identify the sources most relevant to our reduction priorities.

We prepared the organisational inventory for **1 January–31 December 2024** and submitted it for independent assurance. **QSI** issued the verification statement on **7 May 2026**, confirming a **location-based total of 8,747.29 tCO_2e** for the **2024** inventory year. This verification date is subsequent to, and distinct from, the year in which the emissions arose.

Our 2024 verified emissions by source

ISO 14064-1 category	Verified 2024 emissions (tCO_2e)
Category 1 – direct emissions	**7,419.29**
Category 2 – purchased energy, location-based	**302.48**
Category 3 – transportation-related indirect emissions	**269.56**
Category 4 – indirect emissions from products and services	**755.97**
Verified location-based total	**8,747.29**



CERTIFICATION & INSPECTION

Greenhouse Gas Verification Statement

Sera Gazı Doğrulama Beyanı

KAPADOKYA ÜNİVERSİTESİ

Organizational Boundaries / Organizasyonel Sınırlar

Annex-1 / *Ek-1*

The Greenhouse Gas emissions inventory has been verified to meet the standard requirements specified below according to ISO 14064-3:2019 / *Sera Gazı emisyonları envanterinin, ISO 14064-3:2019'a göre aşağıda belirtilen standart gerekliliklerini karşıladığı doğrulanmıştır.*

ISO 14064-1:2018

Category 1- Direct emissions / *Doğrudan emisyonlar*	7.419,29	t CO_2 eq
Category 2- Purchased energy emissions (Location based) / *Satın alınan enerji emisyonlar (Lokasyon bazlı)*	302,48	t CO_2 eq
Category 3- Emissions from transportation / *Ulaşım kaynaklı emisyonlar*	269,56	t CO_2 eq
Category 4- Emissions from products, service used / *Kullanılan ürün - hizmet kaynaklı emisyonlar*	755,97	t CO_2 eq
Category 5- Emissions from associated with the use of the product / *Ürün kullanımı kaynaklı em.*	-	t CO_2 eq
Category 6- Other Emissions / *Diğer emisyonlar*	-	t CO_2 eq
Total Location Based Emissions / *Toplam Lokasyon Bazlı Emisyonlar*	**8.747,29**	**t CO_2 eq**
Total Market Based Emissions / *Toplam Market Bazlı Emisyonlar*	-	**t CO_2 eq**
Biogenic Emissions / *Biyojenik Emisyonlar*	-	t CO_2 eq
Purchased renewable energy emission allowance / *Satın alınan yenilenebilir enerji emisyon karşılığı*	-	t CO_2 eq
Category 2- Purchased energy emissions (Market based) / *Satın alınan enerji emisyonlar (Market bazlı)*	-	t CO_2 eq
Renewable energy references / *Yenilenebilir enerji referansları:*		
Credits from GHG Scheme / Satın alınan krediler	-	t CO_2 eq
Credits references / Kredi referansları		

Level of Assurance / *Güven Seviyesi* : Reasonable / Makul

Reporting Period / *Raporlama Periyodu* : 01.01.2024 – 31.12.2024

Verification Report Date / *Doğrulama Rapor Tarihi* : 07.05.2026

Statement No / *Beyan Numarası* : SG-GNL-490 / 2024

Approved by / Onaylayan

Okay Kayhanlı – Genel Müdür

Figure 5. Independent verification statement issued on 7 May 2026 for our 2024 organisational greenhouse gas inventory.

What we included in our activity-data inventory

We tracked **natural gas and other heating fuels**, fuels used in University-controlled vehicles, refrigerant gases, purchased electricity, staff travel and accommodation, logistics and procurement-related categories as permitted by our organisational boundary. We combined source invoices, facilities records and supporting documentation to organise calculations within the **ISO 14064-1:2018** categories. This structure helps identify priorities for operational improvement and for better data quality in succeeding reporting periods.

Our **2025 professional-services procurement** was a direct institutional implementation step: a **11 June 2025** service proposal specified greenhouse gas accounting and assurance-related activities, and our **14 August 2025** e-invoice recorded **TRY 80,000** of carbon-footprint calculation and verification consultancy. These dated records support the continuity of our emissions management process during the reporting year.

2025 EMISSIONS PROFILE

Understanding the footprint we calculated

The 2025 inventory is presented on its own terms, without claiming an independently verified year-on-year reduction.

For **calendar-year 2025**, we calculated **5,790.62 tCO_2e** across the four relevant emission categories. **Direct emissions amounted to 4,352.33 tCO_2e (75.2%)**, followed by **products and services used at 652.16 tCO_2e (11.3%)**, **purchased energy at 535.06 tCO_2e (9.2%)**, and **transportation-related indirect emissions at 251.07 tCO_2e (4.3%)**.

Our calculation highlights the importance of direct fuel and heating-related sources within our operational carbon management. We use this profile to direct attention to **building energy demand, heating systems, transport and purchasing decisions**. We are strengthening data-quality and assurance procedures to support a comparable assessment of progress across successive inventory years.

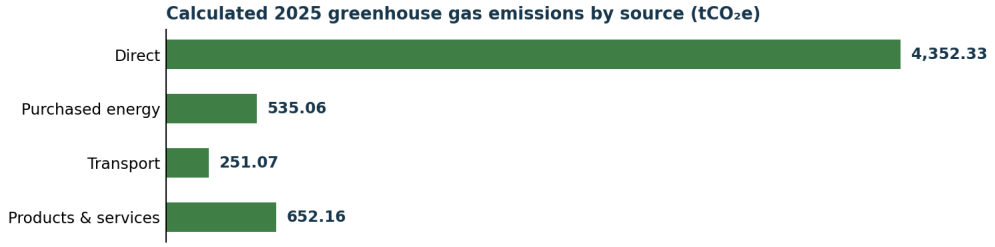


Figure 6. Calculated 2025 greenhouse gas emissions by source category. Values are also provided in our accompanying text and table.

2025 source category	tCO_2e	Share
Direct emissions	**4,352.33**	**75.2%**
Purchased energy	**535.06**	**9.2%**
Transport-related indirect emissions	**251.07**	**4.3%**
Products and services	**652.16**	**11.3%**
Calculated 2025 total	**5,790.62**	**100%**

Keeping different measurement series transparent

We also maintain an **academic-year environmental performance series** in our broader sustainability monitoring. That series records **1,331 tonnes in 2023–2024** and **1,060 tonnes in 2024–2025** under its own reporting approach. We do not substitute these academic-year operational indicators for our **ISO 14064 organisational inventories**, because reporting periods, covered sources and calculation approaches must be aligned before any direct comparison.

Why our 2025 calculation matters for climate decisions

Our calculated **2025 direct-emissions share of 75.2%** directs our attention towards fuel and heating systems, maintenance, building use and the choice of equipment. The **9.2% purchased-energy component** relates to purchased energy within the calculated inventory, while the categories for transport and products and services reflect additional indirect impacts. The absolute totals depend on defined data, emission factors and reporting boundaries; our improvement agenda therefore includes **source-data quality, transparent methodological documentation and continuing external assurance**.

Our independently verified **2024** value and calculated **2025** value provide complementary information about emission sources and accounting development. Differences in assurance status and the need for scope comparability require careful interpretation of trends. We use the results to establish **targeted emissions-management priorities** and to guide future assessment of independently assured performance.

RENEWABLE ENERGY

Solar electricity and solar-derived heat

We quantify two different energy forms and retain their technical identities in our records.

Our **Oktay Sinanoğlu Building** has a rooftop photovoltaic installation comprising **144 monocrystalline panels** with an installed capacity of approximately **48.24 kWp**. Our **2024–2025 academic-year reporting** attributes **74,400 kWh** of annual renewable electricity to this system. Generation monitoring is supported by **Huawei SUN2000** communication arrangements and our technical documentation.

At our **Mustafapaşa student dormitories**, solar collectors provide heat for water heating. The installation has a documented thermal capacity of **42 kW** and an attributed annual energy contribution of **65,100 kWh**. We distinguish the latter from photovoltaic electricity because it represents **renewable thermal energy** used for water heating rather than electrical generation.

Together, these two contributions amount to **139,500 kWh** of on-site renewable solar energy in our **2024–2025 institutional energy reporting**. They document the role of solar electricity and heat in meeting campus energy needs; our renewable energy records remain separate from emissions avoided, which require additional calculation assumptions. **Converted at 1 kWh = 0.0036 GJ, 139,500 kWh corresponds to 502.2 GJ (502 GJ rounded)** of low-carbon energy.

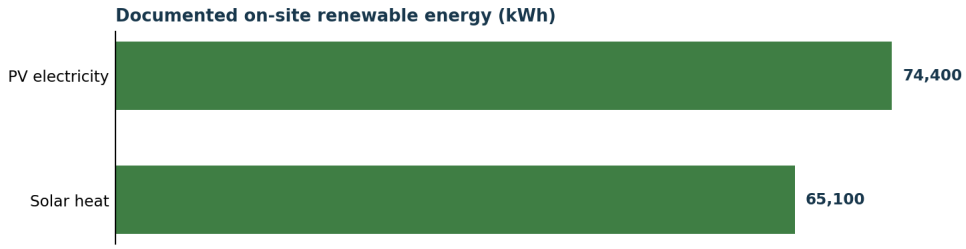


Figure 7. Documented annual renewable energy contributions from photovoltaic electricity and solar water heating, 2024–2025.

Renewable source	Location	Annual contribution
Photovoltaic electricity	Oktay Sinanoğlu Building; **144 panels**, **48.24 kWp**	**74,400 kWh**
Solar thermal heat	Mustafapaşa student dormitories; **42 kW**	**65,100 kWh**
Combined documented solar contribution	Electricity and useful thermal heat	**139,500 kWh** (approx. **502 GJ**)



Figure 8. Our rooftop photovoltaic system at the Oktay Sinanoğlu Building and solar water-heating collectors at Mustafapaşa student dormitories.

Measurement boundaries and the wider energy balance

Our **2025 institutional energy accounting** includes a broader **73,638 GJ** total-energy entry and **502 GJ** from low-carbon sources. The latter corresponds, after rounding, to our documented **139,500 kWh** of photovoltaic electricity and solar-derived thermal energy. Our other operational monitoring tables present individual energy carriers or academic-year series separately. We do not treat **electricity consumption alone** as the same measure as the wider total-energy entry, nor derive avoided emissions directly from the renewable-energy figure.

Reliable measurement also requires distinguishing **installed capacity** from **recorded energy delivered**. Our **144 photovoltaic panels and approximately 48.24 kWp** describe the available solar-electricity installation, while our **74,400 kWh** annual record relates to the corresponding electricity contribution. Likewise, our **42 kW** solar thermal system capacity is not interchangeable with the **65,100 kWh** attributed annual useful heat.

OPERATIONAL EFFICIENCY

Reducing demand through buildings and systems

Energy efficiency is part of our daily campus operation as well as our long-term infrastructure planning.

Our electricity-monitoring records show **1,180,132 kWh** of recorded electricity consumption during **2024–2025**, compared with **1,569,072 kWh in 2023–2024**. Expressed in the common energy unit, **1,180,132 kWh equals 4,248.48 GJ (4,248 GJ rounded)** for this electricity-specific record. This represents a reduction of approximately **24.8%** in that particular academic-year reporting series. We interpret the recorded change within the wider context of building use, operating conditions and conservation measures; it is not itself a verified estimate of greenhouse gas emissions avoided.

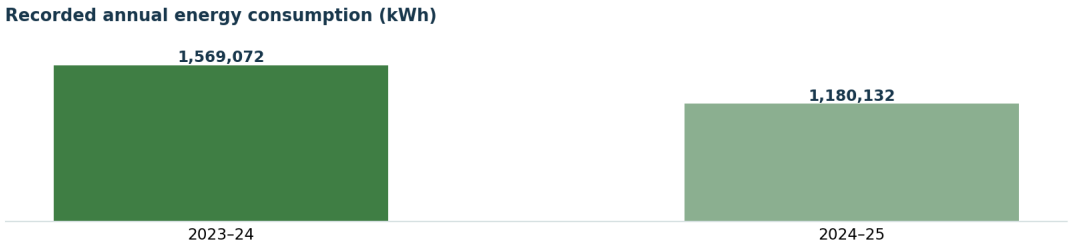


Figure 9. Electricity consumption recorded in our academic-year environmental monitoring, 2023–2024 and 2024–2025.

We continue to use **LED lighting, motion-sensitive lighting and other efficiency-focused building equipment** across our campuses. Our 2024–2025 facilities record identifies **4,643 LED lighting units** and **76 motion-sensitive lighting units**. We combine technical improvements with monitoring, routine maintenance and staff awareness, while retaining separate records for newly installed equipment in later years.

Our climate-management approach also addresses operational mobility and purchasing. We promote shared transport and cycling opportunities and use our procurement arrangements to encourage lower-impact choices. We treat transport-fleet and infrastructure inventories as descriptions of the available provision rather than direct proof of annual emission savings.

2025 practices in buildings, maintenance and mobility

Our **2024–2025 lighting inventory** records **4,643 LED units** and **76 motion-sensitive units**, helping us describe equipment available in the period. Maintenance and replacement decisions also consider equipment efficiency, safe operation, internal controls and suitable working conditions. We combine the technical record with the energy-consumption trend rather than treating a count of LED fittings as an independently quantified carbon saving.

Our campus transport provisions included shared **shuttle arrangements** and **90 bicycles available for free use**, supporting alternatives to single-occupancy travel on relevant journeys. These are service and equipment provisions, not a measured reduction in travel-related greenhouse gases. Transport-related emissions are calculated separately within the appropriate emissions categories.

WATER AND CLIMATE RESILIENCE

Conserving water in a semi-arid landscape

Adaptation includes resource monitoring, rainwater management and the protection of aquatic environments.

Through our **Cappadocia Water programme**, we monitor campus water consumption, promote efficient fixtures, encourage rainwater harvesting and support drought-aware landscaping. We use our **Natural Resource Consumption Monitoring List (Mİ.LS.005)** to compare monthly records and identify areas where more efficient infrastructure and operational practice are needed.

Our recorded water consumption rose from **20,868.23 m^3 in 2024** to **25,885 m^3 in 2025**. The absolute increase of **5,016.77 m^3 (24.0%)** is a management issue that we report openly. We use the records to prioritise **leakage prevention, targeted maintenance, efficient irrigation, awareness and continued monitoring**, rather than representing the existence of water-saving equipment as evidence that consumption necessarily fell.



Figure 10. Water consumption recorded across our University in 2024 and 2025.

Our **2024–2025 equipment inventory** includes **74 dual-flush cisterns, 12 pedal-operated taps, 120 pressure-reducing fittings and 13 water-efficient washing machines**. Rainwater storage and sustainable landscape irrigation complement these measures. The further equipment additions and formal water-efficiency policy documents recorded in **2026** are not represented as completed 2025 actions.

Water and environmental research

Water quality is an essential dimension of climate adaptation. During **2025**, we carried forward research on the **Kızılırmak River and its tributaries**, alongside scientific studies of aquatic biodiversity, physicochemical variables and diatom-based ecological indicators. This work supports the evidence base for protecting freshwater ecosystems in the face of environmental change.

Connecting water efficiency with climate adaptation

In **2025**, we maintained **monthly water consumption monitoring**, addressed maintenance and leakage concerns, and used **water-efficient campus fixtures** and water-sensitive landscape practices. Our recorded **74 dual-flush cisterns, 12 pedal-operated taps, 120 pressure-reducing fittings and 13 water-efficient washing machines** illustrate specific conservation-oriented infrastructure. Existing rainwater systems provide an additional option for irrigation and reduce reliance on potable supplies for suitable non-drinking applications.

We also began preparing a more dedicated institutional water-efficiency framework in **2025**. The later **Water Efficiency Policy (KÜN.PB.016)** and **Water Efficiency Target and Action Plan (KSP.PL.022)** were **published in August 2026** and therefore are not represented as policies formally in force during 2025. Their **2025 baseline** (including **2.37 m^3 per person per year** and water-efficient equipment and landscape indicators) supports a traceable planning process for the following years. We distinguish established 2025 practices from later formal targets and certification plans.

Environmental research and protection of water systems

Our ecological monitoring and water-quality research extends climate adaptation beyond campus facilities. Our **Kızılırmak River water-quality research project (KÜN.2025-BAGP-002)** examines environmental pressures on local streams and waterways using physicochemical measures. We also contributed **2025 scientific publications** on Ephemeroptera biodiversity in the Eastern Mediterranean Basin, human–aquifer interactions in the Palas Basin, and diatom-based water-quality indices for the Köprüçay River. Together, these studies support knowledge needed to assess water-resource vulnerability, ecosystem condition and management choices.

CLIMATE EDUCATION

Making climate knowledge accessible

We use classrooms, public events and digital resources to connect scientific understanding with everyday decisions.

Our **Sustainability Office** launched the **Global Climate Change Photography Competition** on **17 March 2025**, with submissions open until **17 April 2025**. The theme, **“Global Climate Change and Environmental Impacts”**, invited students to observe and communicate environmental change through photographs. We treat the published competition as an educational and awareness initiative without assigning an unsupported participation total.

Our **Environmental Humanities Research and Application Centre** developed and maintained the **Climate Crisis Awareness Database**, an openly accessible resource addressing climate-related concepts, impacts and community understanding. Digital infographics and accompanying explanations support learning beyond our formal courses, connecting climate science with environmental communication.



Figure 11. Climate literacy and environmental communication resources developed within our public-learning programmes.

We also connected climate concerns to education on **gastronomy, energy efficiency, waste reduction and carbon-aware management**. On **23 May 2025**, our **Gastronomy, Tourism and Sustainability Conversation** brought together sector-relevant discussions of energy, environmental responsibility and sustainable regional development. Public discussions and recorded learning resources extended access beyond the participants attending in person.

Our public climate knowledge and digital learning materials

Our **Climate Crisis Awareness Database** is an openly accessible Turkish-language educational platform, first launched in **2023** after a University-supported research initiative. Its initial collection included **95 translated infographics** drawing on scientific and international environmental sources. We continued to maintain and use the resource in **2025**, with further dated educational material addressing extreme weather, changing climate risks and the vulnerability of local communities. Its earlier launch and the 2025 availability of materials are distinct milestones in the same public learning programme.

For public engagement in **2025**, we also developed **QR-enabled communications** connecting participants to our thematic sustainability programmes. Our initiatives on **Cappadocia Water, Cappadocia Earth, Cappadocia Air, Cappadocia Fire and Cappadocia Bio** helped make programmes concerning water, agriculture and food, sustainable mobility, energy and ecosystems easier to locate. We used explanatory content and promotional materials to connect people with more detailed information beyond an individual talk.

Public talks and participatory climate learning

On **5 March 2025**, our public **Sustainability Conversation** on environmental problems and leading environmental thinkers brought together **62 student participants**, with researcher and author **Metin Erdoğan** and moderators **Sinan Akıllı and Selda Öztürk**. We also announced a **21 March 2025** online discussion on urbanisation and preventing natural hazards from becoming disasters, involving **Candan Gökçeoğlu and Leila Akbarishahabi**. We distinguish the attendance record for the first session from the announced content of the second.

Our **Global Climate Change Photography Competition** ran from **17 March to 17 April 2025**, inviting students to document **global climate change and environmental impacts** through visual interpretation. We also promoted an **Environmental Sustainability Leadership Award** in 2025, recognising the value of student projects, ecological awareness, and responsible everyday practices. These initiatives broadened how climate change could be discussed and communicated beyond conventional lectures.



Figure 12. Climate-change awareness and student participation in our educational activities during March–April 2025.

PROFESSIONAL CAPACITY

Sustainable tourism training with measurable participation

We connect international sustainability criteria with the skills required by tourism and hospitality professionals.

Through our **Global Sustainable Tourism Council (GSTC)** partnership and our continuing education provision, we support the adoption of sustainability criteria in tourism. These criteria include **energy and water management, waste and pollution prevention, ecosystem conservation, climate-resilient operations and transparent management**. Our programmes engage managers and other sector professionals in practical approaches to environmental responsibilities.

Our verified **2025 programme records** identify **three documented training streams with 113 participant registrations in total**: **9 participants** in GSTC Sustainable Hotel online training on **7–14 July 2025**; **47 participants** in GSTC Sustainable Tourism distance training across **January and June–July 2025**; and **57 participants** in a **16-hour Sustainable Tourism Management programme on 17–18 February 2025**. The figures represent the stated programme participant totals and are not assumed to be 113 distinct individuals across all learning activities.

2025 training	Dates	Documented participants
GSTC Sustainable Hotel – online	**7–14 July 2025**	**9**
GSTC Sustainable Tourism – distance	**January; June–July 2025**	**47**
Sustainable Tourism Management – 16 hours	**17–18 February 2025**	**57**
Total programme participation records	Across the above 2025 courses	**113**

This training is relevant to climate action because tourism establishments are exposed to changing resource demands, weather-related disruption, waste management pressures and the need for more efficient operations. We provide an educational route for professionals to interpret sustainability requirements and incorporate responsible environmental practices into their organisational decision-making.

Sustainability standards in hospitality and professional practice

Our GSTC-related education creates a bridge between **international sustainability standards** and the operational decisions made by hospitality organisations. We addressed subjects relevant to climate mitigation and adaptation, including **resource consumption, water efficiency, energy use, waste generation, protection of natural and cultural heritage, and stakeholder engagement**. Our training programmes reached **9, 47 and 57 recorded participants** across the three specified 2025 courses; these figures refer to separate course records and are not merged into a single unique-person count.

We also collaborated on the development of sustainability criteria and training for **meetings, incentives, conferences and exhibitions (MICE)**. Work in **November 2025** connected **GSTC sustainability criteria** with professional learning opportunities and sector dialogue. Our cooperation with tourism and public-sector partners, including **Türkiye Tourism Promotion and Development Agency (TGA)**, supported discussion of criteria applicable to events and destinations. These links strengthen the transmission of climate-relevant practice from university education to professional tourism.



Figure 13. Professional training on sustainable tourism and climate-related practice delivered with GSTC and tourism-sector partners in 2025.

COMMUNITY-BASED ADAPTATION

Local food, agroecology and producer knowledge

Environmental resilience depends on farming practices, biodiversity and viable local livelihoods.

We worked with the **Slow Food** movement, **Uçhisar Kadıneli Development Association**, producers and other partners to strengthen community learning about sustainable food systems. Producer-facing education in **March 2025** addressed **seasonality, responsible resource use, food hygiene and environmentally conscious production**. An **April 2025** exchange with the **Tarsus Slow Food Earth Market** community supported peer learning among local producer networks.

Our **Cappadocia–Uçhisar Slow Food Earth Market** opened on **24 May 2025** with regional and international participation. During the wider May programme, we hosted approximately **50 Slow Food representatives from 23 countries**, and public seminars explored **agroecology, biodiversity, local food systems, climate-sensitive production and fair access to markets**. The market connected producers with consumers and provided a continuing community-learning setting.



Figure 14. The Cappadocia–Uçhisar Earth Market programme connects local food systems with biodiversity and sustainable production.

We regard these activities as contributions to **community adaptive capacity and environmental awareness**, not as direct measurements of tonnes of emissions avoided. Their value lies in practical knowledge, partnerships and the development of local production networks able to respond to environmental and economic pressures.

From producer training to an operating community market

Our **24 March 2025** local-producer education, led by **Chef Yasemin Güzel**, covered **seasonal production, responsible packaging, reduction of plastic use, waste management, food safety, storage and lower-carbon logistics**. We reinforced this learning through peer exchange with the **Tarsus Slow Food Earth Market** community in **April 2025**, so that producers could learn from practical market arrangements and established community experience.

During **22–24 May 2025**, our international Slow Food programme hosted speakers and partners including **Slow Food President Edward Mukiibi** and **Secretary-General Marta Messa**, with approximately **50 representatives from 23 countries** involved in the wider programme. Sessions addressed **agroecology, farmer livelihoods, food sovereignty, biodiversity and the relationships between healthy ecosystems and sustainable local economies**. We opened the **Cappadocia–Uçhisar Earth Market on 24 May 2025**, with collaboration involving **Uçhisar Kadıneli Development Association** and local stakeholders.

Subsequently, our Earth Market education calendar included **regenerative agriculture (27 September 2025)**, **the water cycle and water conservation (25 October 2025)** and **introductory agroecology (22 November 2025)**. Where the accessible record is a dated programme announcement, we present it as a documented educational offering rather than assign a specific attendance or achieved learning outcome that has not been measured.

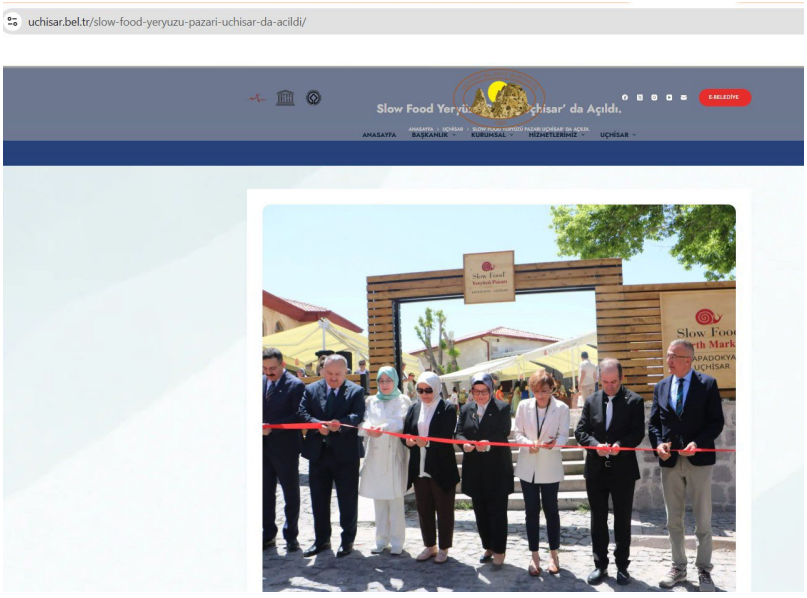


Figure 15. The Cappadocia–Uçhisar Earth Market opening connected University partners, local authorities and producer communities in May 2025.

CIVIL-SOCIETY PARTNERSHIPS

Working with organisations that extend our reach

NGO collaboration enables climate education and community action to operate beyond campus boundaries.

In partnership with **Yuvam Dünya Association** and other organisations involved in the **EkoFilm: Sustainable Production Platform**, we supported public learning on ecological responsibility in film and media. The **January–February 2025** programme included moderated public discussions on **21 and 28 January** and **6 February 2025**, exploring environmental storytelling and responsible creative practice.

Our **2025 Content Creation Guide** provided a further public educational resource connected with sustainable filmmaking and responsible production. We distinguish the contribution of partners in named events and publications from more general assertions of ongoing cooperation. These activities demonstrate how cultural communication can make climate issues accessible to professionals and wider audiences.

We also worked with the **Global Sustainable Tourism Council**, Slow Food organisations, regional producer associations and professional networks. Our **Genç TEMA** student community announced a tree-planting activity for **11 November 2025**; where an implementation record is not separately available, we report the announcement and its conservation purpose without presenting planting counts as verified outcomes.

Agriculture and responsible innovation with NGO partners

On **18 April 2025**, we participated in a joint scientific forum with **TARGET** and the **Agriculture 4.0 Association**, linking modern agricultural knowledge with resource stewardship and responsible innovation. By discussing sustainable agriculture, technological change and environmental pressures in production, we expanded the climate relevance of civil-society co-operation beyond conventional awareness campaigns.

Cultural communication with Yuvam Dünya and EkoFilm

Within **EkoFilm: Sustainable Production Platform**, developed with **Brunel University London**, **YAPIMLAB**, **Atlantik Film** and **Yuvam Dünya Association**, our environmental humanities specialists supported education on sustainable production in the film and media industries. The **January–February 2025** programme included public discussions on **21 January, 28 January and 6 February**, while a **2025 content-creation guide** brought practical environmental considerations into public educational material for film and media professionals.

The distinct roles of these partners matter: **Yuvam Dünya** contributes climate communication expertise; industry participants contribute production practice; and our academic researchers provide environmental humanities and educational perspectives. We thereby connect **cultural storytelling, climate literacy and responsible sector practice** in a partnership that reaches beyond our students and campuses.

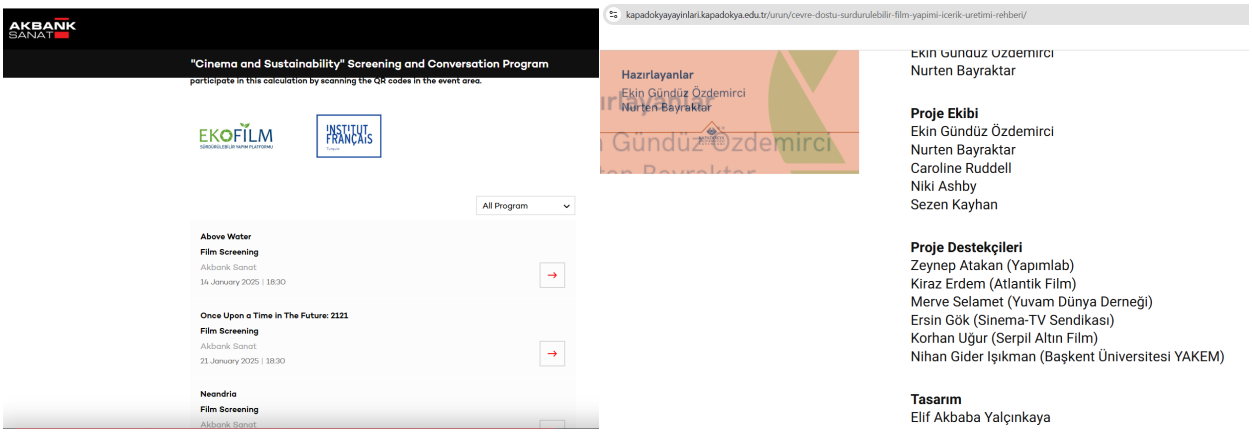


Figure 16. Our EkoFilm public-learning activities and Yuvam Dünya Association's contribution to climate communication in 2025.

Volunteer environmental action and land stewardship

Our **Genç TEMA** student community also announced an environmental tree-planting initiative for **11 November 2025** in **Boğazköy**. We record this as an engagement and conservation-awareness activity as documented; absent a completed-planting register, we do not ascribe a verified seedling count or carbon-sequestration result to the event. The initiative complements our education and producer-based environmental work without replacing the evidence of operational carbon management.

PUBLIC INSTITUTIONS AND ENVIRONMENTAL PLANNING

Connecting scientific evidence with public decision-making

Government-facing dialogue includes environmental monitoring, local development and risk-aware planning.

We maintained institutional dialogue and cooperation with local government partners, including **Mustafapaşa Municipality**, to support environmental responsibilities relevant to the built environment and community resilience. Our **2025 municipal partnership records** describe the sharing of our climate-action framework and implementation discussions rather than a single stand-alone event.

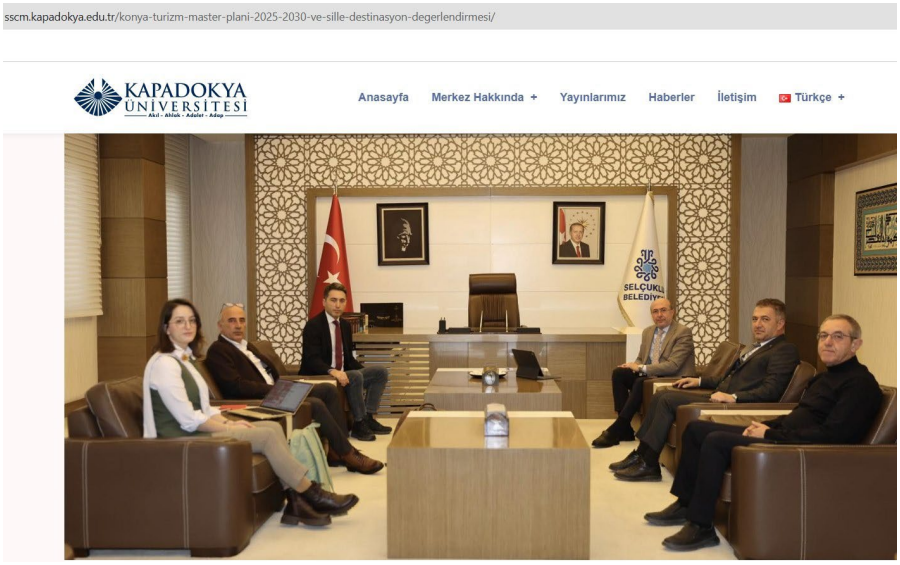


Figure 17. Our environmental and community-facing dialogue with local and regional public partners.

At the **First International Conference on Green Digital Governance**, held on **20 September 2025**, we contributed to discussion of digital governance and environmental decision-making. We also supported planning and technical dialogue around **Konya's 2025–2030 tourism master planning**, the **Sille destination**, **Hürmetçi Wetland** and water-quality monitoring. These activities help connect academic research and public-sector planning with questions of environmental resilience.

Our **Kızılırmak River water-quality project (KÜN.2025-BAGP-002)** represents an applied research contribution to monitoring environmental pressures on aquatic systems. We regard field measurements and scientific interpretation as part of the evidence base that public authorities and communities can use to better understand environmental risks.

A documented 2025 local-government co-operation pathway

On **30 April 2025**, we signed a **12-month co-operation protocol with Mustafapaşa Municipality** to support the development of our **Zero Waste Management System**, technical information exchange and public environmental awareness. The agreement establishes a formal channel between our University and the Municipality for **waste separation, environmental management and community education**.

The partnership progressed beyond the signature stage. Our municipal records document a **7 October 2025** equipment tender, a **3 November 2025** supply contract and a **19 November 2025** invoice for waste separation and collection equipment. The Municipality subsequently requested University technical participation in equipment acceptance checks. These dates describe **procurement and technical coordination milestones**; they do not demonstrate that all planned public education activities were delivered during the same year.

MUSTAFAPAŞA BELEDİYESİ İLE KAPADOKYA ÜNİVERSİTESİ

İŞ BİRLİĞİ PROTOKOLÜ

MADDE 1: TARAFLAR

İşbu iş birliği protokolü;

a) Yeni Mahalle Mehmet Şakirpaşa Caddesi No:3 Mustafapaşa Kasabası/Ürgüp/Nevşehir adresinde mukim Mustafapaşa Belediyesi (bundan sonra **Belediye** olarak anılacaktır) ve

b) Mustafapaşa, Ürgüp, Pk:50420/Nevşehir adresinde mukim Kapadokya Üniversitesi (bundan sonra **Üniversite** olarak anılacaktır)

arasında aşağıda açıklanan hususlarda düzenlenerek imzalanmıştır.

MADDE 2: AMAÇ VE KAPSAM

2.1. İşbu protokolün amacı, Belediye ile Üniversite arasında Kapadokya Üniversitesi sıfır atık yönetim sisteminin geliştirilmesi kapsamında TÜÇA tarafından verilen hibe desteğine yönelik yapılacak iş birliğine ilişkin esasları belirlemektir.

2.2. İşbu protokol, Belediye ile Üniversite arasında Kapadokya Üniversitesi sıfır atık yönetim sisteminin geliştirilmesi kapsamında yapılacak iş birliğinin usul ve esaslarını kapsamaktadır.

MADDE 3: DAYANAK

İşbu protokol,

3.1. 11/8/1983 tarihli 2872 Sayılı Çevre Kanunu,
3.2. 12/07/2019 tarihli 30829 Sayılı Sıfır Atık Yönetmeliğinin 12. Maddesi,
3.3. 13/07/2005 tarihli ve 5393 sayılı Belediye Kanunun 75. Maddesi,

hükümlerine dayanılarak hazırlanmıştır.

MADDE 4: KISALTMALAR

İşbu protokolde geçen;

4.1. Belediye: Mustafapaşa Belediye Başkanlığını,
4.2. Üniversite: Kapadokya Üniversitesini,
4.3. TÜÇA: Türkiye Çevre Ajansını,
4.4. Sıfır Atık Sistemi: Kapadokya Üniversitesinde kurulması planlanan Sıfır Atık Sisteminin alt yapısını, sistem ekipmanlarını, izleme/takip süreçlerini ve raporlama süreçlerini,
4.5. Faaliyet: Sıfır Atık Sistemi kurulumu için gerekli olan ekipman, teçhizat ve malların tespit, temin, tedarik süreçleri ile takip, inşa, rutin bakım ve onarımını,
4.6. Eğitim: Topluma Hizmet Projeleri kapsamında Belediye sınırları içerisinde kalan yerleşimlerde bulunan halkın sıfır atık farkındalığını artıracak eğitim faaliyetlerini

T.C.
MUSTAFAPAŞA BELEDİYE BAŞKANLIĞI
Fen İşleri Birimi

Sayı : E-79462516-000-342
Konu : Sıfır Atık Ekipmanları İhalesi Hk.

KAPADOKYA ÜNİVERSİTESİ REKTÖRLÜĞÜNE

Mustafapaşa Belediyesi tarafından 07.10.2025 tarihinde ihalesi yapılan Sıfır Atık Ekipmanları Alım İşi 03.11.2025 tarihinde Akpaya Teknoloji Makine Hırdavat Bilgisayar İnşaat Sanayi ve Ticaret Limited Şirketi ile karşılıklı sözleşmeye bağlanmıştır. Söz konusu mal alım işinin teslimi aşamasında gerekli kontroller ve incelemelerin eksiksizce yapılabilmesi için Belediyemiz bünyesinde yeterli personel yer almadığından, tarafınızca belirlenecek personellerin mal alımlarının kabul komisyonunda yetkilendirilmesi hususunda;

Gereğini arz ederim.

Bekir AÇIKGÖZ
Belediye Başkan V.

Figure 18. Our 30 April 2025 cooperation protocol with Mustafapaşa Municipality and records of its subsequent implementation.

Regional recovery, environmental planning and science–policy dialogue

Our **Hatay Tourism Master Plan 2025–2030** supported strategic recovery planning after the **2023 earthquakes**, with a framework containing **58 policies and 12 vision projects**. We also took part in the **ELEVATE project**, beginning a first training group with **20 women entrepreneurs in Hatay on 7 October 2025** to support digital business capacity and post-disaster livelihoods. These activities strengthen **disaster resilience and community recovery**, complementing our separate work on climate-related adaptation and environmental risk.

Our additional government-facing work addressed regional development and environmental planning, including **Konya's 2025–2030 tourism planning and the Sille destination**, as well as **Hürmetçi Wetland** and the consequences of nearby land-use decisions. We also held an **Amasya Tourism Master Plan workshop on 21 July 2025**. Where work involved planning proposals and technical exchange, we distinguish these from policy decisions already adopted by the public authorities.

Through the **First International Conference on Green Digital Governance on 20 September 2025**, we contributed to scientific exchange on environmental monitoring, climate change impacts, digital public decision-making and the potential of **artificial intelligence for prediction and early warning**. The conference provided interdisciplinary knowledge exchange on environmental monitoring and early-warning approaches, alongside our broader research and public-sector dialogue.

2.5. Hatay Turizm Master Planı

SSÇM tarafından hazırlanan Hatay Turizm Master Planı, ilin 2023 depremleri sonrasında turizmde toparlanma ve yeniden yapılanma sürecine stratejik bir yol haritası sunmuştur. Plan, Hatay'ın sahip olduğu benzersiz gastronomi, inanç ve kültürel miras değerlerini sürdürülebilir turizm çerçevesinde geliştirmeyi hedeflemiş; kıyı, termal, macera ve kırsal turizm gibi farklı ürün çeşitlerini kapsayan bütüncül bir vizyon ortaya koymuştur. Çalışma kapsamında 58 politika ve 12 vizyon projesi tanımlanmış, bunlar "Yeni Hatay" mottosu etrafında il turizminin marka değerini güçlendirmeye, yabancı ziyaretçi oranını artırmaya ve yerli ziyaretçilerin konaklama süresini uzatmaya yönelik tasarlanmıştır. Paydaş katılımı ile geliştirilen plan, turizmin bölgesel kalkınmaya katkısını artırmayı, afet sonrası ekonomik ve sosyal iyileşmeyi desteklemeyi ve 2030 yılına kadar ölçülebilir hedeflerle Hatay'ı ulusal ve uluslararası turizmde rekabetçi bir destinasyon konumuna taşımayı amaçlamaktadır.



2.10. Hürmetçi Sazlığını Turizme Kazandırma Eylem Planı Projesi

Proje kapsamında yürütülecek danışmanlık faaliyeti ile Hacılar Kaymakamlığı'nın veri toplama, analiz etme ve raporlama konularında kurumsal becerilerinin geliştirilmesi hedeflenmektedir. Buna ek olarak Hacılar Kaymakamlığı'nın planlama, proje yönetimi, turizm, sürdürülebilirlik hususlarında bilgi birikimi ve farkındalık düzeyinin arttırılması amaçlanmaktadır. Ayrıca danışmanlık faaliyeti yürütülecek turizme kazandırma yol haritası bölge sürdürülebilirlik anlayışının sağlamlaşmasına katkı sunacaktır.



Figure 19. Selected public-sector partnerships and regional environmental planning activities supporting resilience in 2025.

RESEARCH FOR RESILIENCE

From water ecosystems to climate-responsive policy

Our 2025 academic contributions help interpret environmental change and guide evidence-led practice.

We produced and disseminated research on freshwater ecosystems, watershed management and environmental governance. Our publications include **Öztürk, Çiçek and Negiz (2025)** on **Ephemeroptera fauna and water quality in the Eastern Mediterranean Basin** (*Ecohydrology*, **18(3)**), and **Soylu and Dadaşer-Çelik (2025)** on **human–aquifer interactions at the Palas Basin** (*Landscape and Ecological Engineering*). These studies analyse natural systems and the interaction of human decisions with water-resource pressures.

We also contributed research on **epilithic diatoms and water-quality indices in the Köprüçay River**. Such work strengthens the scientific basis for monitoring ecosystems affected by water use, climate variability and land-management decisions. Our findings add to regional environmental knowledge and support the long-term planning of freshwater resources.

We complemented ecological research with social-science and environmental-humanities work on climate communication, sustainable tourism, biodiversity, green digital governance and the cultural dimensions of environmental responsibility. This interdisciplinary approach is important because climate impacts cannot be addressed through technical measures alone.

2025 research / knowledge contribution	Relevance to climate resilience
Öztürk, Çiçek & Negiz – Eastern Mediterranean Ephemeroptera and water quality	Biomonitoring and aquatic ecosystem assessment
Soylu & Dadaşer-Çelik – Human–aquifer interactions in the Palas Basin	Water governance and stakeholder perceptions
Köprüçay River epilithic diatom and water-quality indices	Ecological water-quality monitoring
KÜN.2025-BAGP-002 – Kızılırmak water-quality project	Research-based monitoring of freshwater pressures
Climate Crisis Awareness Database / EkoFilm resources	Open environmental knowledge and public communication

Ecological indicators and the management of environmental change

Our **2025 Ecohydrology publication** — **Öztürk, Çiçek and Negiz**, *Seasonal Evaluation of Ephemeroptera (Insecta) Fauna of Eastern Mediterranean Basin and Determination of Water Quality with Physicochemical Parameters and Benthic Metrics* — assessed **20 localities**, identifying **965 specimens belonging to 17 species** and providing biological and physicochemical interpretations of water conditions. We use this research to strengthen the ecological evidence base relevant to watershed protection; we do not present field observations from earlier sampling campaigns as new 2025 field measurements.

In **Landscape and Ecological Engineering**, **Soylu and Dadaşer-Çelik (2025)** applied **fuzzy cognitive mapping** to the **Palas Basin**, examining how farmers and public officials perceive groundwater use, irrigation and environmental pressures. Their work illustrates the need to integrate community priorities and decision-making with scientific understanding of groundwater systems. Our study of **Köprüçay River epilithic diatoms**, published in **2025**, provides further ecological monitoring approaches based on biological assemblages and water-quality indices.

Research on **Hürmetçi Wetland and land-use decisions** added a planning dimension to our ecological work. A **15 March 2025** contribution, *Environmental Sustainability and Land Use Decisions: Hürmetçi and KOIZ*, examined development pressures, protective approaches and environmental governance in relation to a vulnerable wetland. We connect findings such as these with the demands of sustainable regional planning and risk-informed environmental management.

Knowledge that can support practical adaptation

Across these projects, our contribution is to make **ecological condition, stakeholder perceptions and environmental pressures** more visible to decision-makers. Such research provides information relevant to climate adaptation, but it does not in itself establish a quantified reduction in climate hazards or water-related losses. We therefore present our **2025 publications and projects** as research outputs and knowledge resources supporting future action.



YAYINLAR

- Soylu, M., & Dadaşer-Çelik, F. (2025). Understanding human–aquifer interactions using fuzzy cognitive mapping approach at the Palas Basin. Landscape and Ecological Engineering, 1–16.
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- Özel, T. E., & Tekin-Özan, S. (2025). Determination of water quality in the Köprüçay River (Antalya–Türkiye) using various epilithic diatom and water quality indices. Aquatic Ecology, 59, 877–906. https://doi.org/10.1007/s10452-025-10202-0
- Soylu, M., Kaçıkoç, M., & Dadaşer-Çelik, F. (2024). Modelling Burdur Lake Water Level Dynamics Using Artificial Neural Networks (Multi-Layer Perceptron Approach). 4th International Conference on Energy Environment and Storage of Energy, Nevşehir, Türkiye.
- Öztürk, S., Çiçek, E., & Negiz, M. G. (2025, July 29–30). Seasonal evaluation of Ephemeroptera (Insecta) fauna of Eastern Mediterranean Basin and determination of water quality with physicochemical parameters and benthic metrics [Conference presentation]. 1st International Data Analytics Congress, İzmir Katip Çelebi University, İzmir, Türkiye.

arastirma.kapadokya.edu.tr/proje/nevsehir-ilinin-kizilirmak-nehri-su-kalitesine-etkilerinin-cesitli-indekslerle-degerlendirilmesi/

KAPADOKYA ÜNİVERSİTESİ

Hakkımızda | İlgili Birimler | Araştırma Altyapısı | Araştırma Olanakları | Araştırma Faaliyetleri | İletişim

Nevşehir İlinin Kızılırmak Nehri Su Kalitesine Etkilerinin Çeşitli İndekslerle Değerlendirilmesi

Ağustos 30, 2025

Proje No	KÜN.2025-BAGP-002
Projenin Adı	Nevşehir İlinin Kızılırmak Nehri Su Kalitesine Etkilerinin Çeşitli İndekslerle Değerlendirilmesi
Proje Yürütücüsü	Öğr. Gör. Dr. Tuba Elif Özel
Araştırmacılar	Öğr. Gör. Mehmet Soylu Öğr. Gör. Bahadır Özel
Proje Türü	Bilimsel Araştırma ve Geliştirme Projesi (BAGP)
Ait Olduğu Birim	Kapadokya Meslek Yüksekokulu
Süresi (Ay)	15 Ay
Durumu	Devam Ediyor



Dünya'ya Yön Veren Metinler Dijital Platformu (World Texts Pedia – WTPEDIA)
8 Ekim 2026



Standardize Edilmiş Antosiyanince Zengin Yaban Mersini Ekstresinin Sıçanlarda Metotreksat ile İndüklenen Bağırsak Mukozitine Karşı Koruyucu Etkileri: İnflamasyon ve Apoptozun Baskılanması Yoluyla
8 Ekim 2026

Figure 20. Our 2025 water-quality and environmental research outputs supporting evidence-informed climate adaptation.

RESULTS AND INTERPRETATION

A year of stronger measurement and wider collaboration

We evaluate different types of progress without treating them as one interchangeable numerical outcome.

During **2025**, we advanced a structured programme of **greenhouse gas activity-data collection and calculation**, maintained **renewable electricity and heat systems**, tracked campus resource use, and supported climate-relevant education and research. Our first priority is to strengthen the comparability and assurance of operational measures; our second is to build practical responses across energy, buildings, water, transport, procurement and community learning.

Our evidence spans distinct types of outputs: **tCO_2e emissions**, **kWh of energy**, **m^3 of water**, **participant registrations**, published educational materials and dated partnerships. We do not add unlike measures into a single impact figure. The first-stage **2025 carbon calculation** is presented separately from the **independently verified 2024 inventory**, while the **2026 policy-revision process** is discussed separately as subsequent work on our **2030 carbon-neutrality objective**.

Dimension	2025 evidence	Implication for our next steps
Carbon accounting	5,790.62 tCO_2e calculated; 2024 inventory independently verified subsequently	Strengthen annual assurance, boundary consistency and reduction planning
Renewable solar energy	139,500 kWh documented for 2024–2025	Continue technology-specific monitoring of electricity and heat
Campus energy demand	1,180,132 kWh in 2024–2025 academic-year series	Review operations, efficiency investments and building use
Water resilience	25,885 m^3 water use in calendar-year 2025	Address demand growth through conservation and monitoring
Climate education	Professional training; public events; awareness resources	Broaden participation and improve learning-outcome tracking
Community partnerships	Earth Market, NGOs, municipal dialogue and research	Extend practical cooperation and measure longer-term results

Progress achieved during 2025 and the next monitoring priorities

Our **2025 implementation** combined certified environmental management, an annual carbon-accounting process, defined renewable-energy systems, climate literacy activities and named community partnerships. A key achievement was the stronger organisational capacity to identify emission sources and maintain a transparent inventory, while our education and research strengthened the reach of climate-related knowledge in tourism, agriculture, media, local government and environmental sciences.

We recognise the distinction between **resources devoted to climate action** and **measured environmental outcomes**. A training attendance number is an output, not proof of a change in business emissions; a tree-planting announcement is not a verified carbon sink; and installing water-saving equipment does not guarantee a fall in total water consumption. Our future reporting will continue improving **comparability of measured energy, verification of inventory years, documentation of outreach and monitoring of practical follow-up**.

CONNECTIONS WITH OTHER DEVELOPMENT GOALS

Climate action strengthens several interconnected objectives

Our primary contribution is SDG 13; secondary contributions arise from the activities and partnerships through which we act.

Our activities contribute directly to **SDG 13 – Climate Action** through greenhouse gas management, low-carbon energy, environmental education, adaptation planning and collaborative responses to environmental risk.

Connections with other development goals

SDG 6 – Clean Water and Sanitation: We monitor resource consumption, use water-saving equipment, promote rainwater harvesting and conduct freshwater ecosystem research to improve water stewardship in a semi-arid region.

SDG 7 – Affordable and Clean Energy: We document on-site solar electricity and solar-derived thermal energy and work to reduce demand through efficient buildings and operational monitoring.

SDG 4 – Quality Education: We integrate climate and environmental issues into public learning, postgraduate research, specialist training, student awareness and open educational resources.

SDG 11 – Sustainable Cities and Communities: Our local-government dialogue, water-sensitive campus management and environmental planning contribute to resilient places and more responsible use of built and natural environments.

SDG 12 – Responsible Consumption and Production: Our Earth Market partnerships, professional training, zero-waste practices and sustainable food-system education connect climate responsibility with production and consumption choices.

SDG 15 – Life on Land: We support biodiversity awareness, local production and research that helps understand ecological pressures on landscapes and freshwater-linked habitats.

SDG 17 – Partnerships for the Goals: We work with public authorities, universities, professional associations, Slow Food networks, Yuvam Dünya Association, GSTC and other partners to extend climate-related learning and community action.

Our 2025 perspective

We will continue linking **credible measurement, environmental resilience and shared knowledge** with institutional decisions and community partnerships. Our **2025** work provides a foundation for improving emissions data, making more efficient use of resources, and developing the practical skills and cooperation needed for a more climate-resilient Cappadocia.