Boğaziçi University Sustainable Development Goals Progress Report

November • 2026

13

Boğaziçi University

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Boğaziçi University

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Sustainable Development Goal 13:

Climate Action

13

SDG 13: Climate Action – Carbon Neutral Roadmap, Climate Resilience and R&D

THE IMPACT RATINGS 2026

69.

World Rankings

Climate action leadership among the world's top 70 universities with a score of 71.9

5,904 Tons

CO_2 Avoided

Annual savings equivalent to 14,365 trees through the procurement of 12M kWh of green energy

1,200 Tons

Annual CO_2 Sequestration

İMBİYOTAB: Türkiye and Europe's first carbon-negative biorefinery

INSTITUTIONAL EMISSIONS REDUCTION TARGET AND LOW-CARBON ENERGY (2025–2030)

50% Reduction Target | 12,544,761 kWh

50% reduction in Scope 1–2 emissions by 2030 (target <6,276 tCO_2e) and net-zero carbon by 2050

115 Years

Kandilli Continuous Climate Record (WMO Award)

Carbon-Neutral Campus Since 2015
Kilyos Sarıtepe meets all of its electricity needs from its own BÜRES wind turbine

CLIMATE RESILIENCE AND MODELLING

INTEGRATOR & CORDEX

Horizon Europe Cluster 6 coordination (18 partners), digital twins and regional climate modelling

EARLY WARNING AND DISASTER MANAGEMENT

KOERI BDTİM & UNESCO

Tsunami warnings provided to 21 institutions in 15 countries, 20 new Marmara stations, and 8.4-second earthquake warning

CIRCULAR CLIMATE INNOVATION

Helios & Wood Vinegar

World 1st place in Vienna GCIPCleantech for MOF carbon capture and natural agricultural protection from tea waste

Climate Education, Social Mobilization and Contributions to National Policy

25,000 People/Year AHLAB Disaster Education	**2 TTGV Awards** İklimBU & Battery	**EERA Bioenergy** Full Membership	**24 Municipalities** Cities for Climate	**National Plan** 2024–2030 Contribution

Low Carbon Energy Tracking on Campuses

In line with its environmental sustainability goals, Boğaziçi University actively pursues the use of low-carbon energy throughout the campus and takes decisive steps in this field. As part of its efforts to reduce its carbon footprint, the University makes effective use of renewable energy sources.

In order to ensure low-carbon energy production on campus, a **Wind Power Plant** with a peak power of **940 kW** and distributed **photovoltaic (PV) systems** with a total capacity of **100 kW** have been installed. These systems are monitored and reported annually through the SCADA system; the wind power plant and PV systems together produced 544,761 kWh of energy in 2025. These facilities make a significant contribution to the university's low-carbon energy use targets and environmental sustainability efforts.







Low Carbon Energy Tracking on Campuses

In addition, agreements have been made to procure electricity from renewable energy certified suppliers at Boğaziçi University South, North and Kandilli campuses. In this framework, approximately 12 million kWh of energy will be supplied from **Green Energy Certified** sources throughout 2025. Thanks to this green energy use, approximately 5,904 tonnes of carbon emissions will be prevented in 2025, and this effect will contribute to nature as if 14,365 trees were planted annually. Boğaziçi University fulfils its environmental responsibility by using sustainable energy and at the same time aims to raise environmental awareness on a national scale.

The carbon footprint of campus buildings is assessed in accordance with **WBSCSD/WRI Greenhouse Gas Protocol**, IPCC 4th Assessment Report, **ISO 14064 and BSI PAS 2050 standards**. In addition to emissions from electricity, natural gas, water and paper consumption, carbon emissions are classified in Scope 1, 2 and 3 categories, taking into account the fuel consumption of university members for transportation.
Boğaziçi University meticulously monitors and manages low-carbon energy use with all these comprehensive studies and continues to make positive contributions to both the environment and society.

Energy Source	Low Carbon Energy Tracking (kWh)
Wind and Photovoltaic (PV) Power Generation Systems	544,761
Green Energy Certified Source	12,000,000
2025 Total (kWh)	**12,544,761**

Low Carbon Energy Tracking on Campuses

You can access more information about Boğaziçi University's sustainable energy use and efforts to reduce its carbon footprint from the links below:

Boğaziçi University Sustainability Report 2026:
https://kurumsalveri.bogazici.edu.tr/tr/pages/surdurulebilirlik-raporlari/1063

Boğaziçi University Green Campus Success Stories:
https://bogazici.edu.tr/tr_TR/Content/Kampus_Yasami/KampusYesilKampus/BasariOykuleri/BasariOykuleriListe

Green Campus Renewable Energy Applications:
https://bogazici.edu.tr/tr_TR/Content/Kampus_Yasami/KampusYesilKampus/TeknikUygulamalar/YenilenebilirEnerji

Green Campus Carbon Footprint Measurements:
https://yesilkampus.bogazici.edu.tr/tr/pages/bilimsel-arastirma-projesi-bap-bogazici-uni/6892

Climate Change Local Training Programmes and NGO Collaborations

Boğaziçi University aims to raise awareness both within the university and at local and national level by organising comprehensive training programmes and campaigns on the impacts, risks, mitigation and adaptation strategies of climate change. These activities are carried out in cooperation with non-governmental organisations through programmes and events for different groups in order to increase knowledge in combating climate change and contribute to sustainable development.



Climate Change Local Training Programmes and NGO Collaborations

İklimBU Studies

İklimBU
Boğaziçi Üniversitesi
İklim Değişikliği ve Politikaları
Uygulama ve Araştırma Merkezi

Boğaziçi University Climate Change and Policy Research and Application Centre (iklimBU), established in 2014, conducts interdisciplinary research on climate change and related policies. The centre brings together researchers from different disciplines such as Physics, Environmental Sciences, Economics, Geography and Tourism:

- It supports the implementation of climate change research in Turkey and neighbouring regions such as the Eastern Mediterranean, the Middle East and Central Asia.
- It organises informative trainings for relevant units in the public and private sectors and creates a sustainable information platform on climate change risks.

On its website, it offers open educational materials such as articles, blog posts, newsletters and video series that can be utilised by individuals outside academia.

> **Click here to reach İklimBU page:**
> https://climatechange.bogazici.edu.tr/

Climate Change Local Training Programmes and NGO Collaborations

Trainings for Children, Youth, Parents and Teachers

İklimBU, Boğaziçi University Lifelong Learning Centre (BÜYEM) and United Nations Sustainable Development Solutions Network (UN SDSN Turkey) organise climate change trainings for children, youth, parents and teachers in cooperation with various NGOs and companies.

Climate 2030: Climate Change Training with Children and Youth

Organised in cooperation with İklimBU, BÜYEM and UN SDSN Turkey to raise awareness of children and young people about the risks posed by climate change, the training addresses the causes of climate change, how excess carbon dioxide in the atmosphere affects the world and how this increase can be prevented. Within the scope of the training, the roles of states and institutions in this regard as well as the measures that can be taken individually are also conveyed. Prof. Dr. Levent Kurnaz not only provides information to the participants during the training, but also listens to the suggestions of the students, answers their questions inside and outside the classroom, and guides them on the actions that can be taken.

> **Click here to read the related news:**
> https://haberler.bogazici.edu.tr/tr/news/akademik/1/bogazicinden-cocuklara-ve-genclere-iklim-degi/2314

Parent 2030 for Our Children's Future: Climate Change Education

The training, organised in partnership with Yuvam Dünya, İklimBU, BÜYEM and UN SDSN Turkey, aims to raise awareness of parents about the climate crisis and future challenges, to convey these challenges to their children in the language of hope, and to provide them with the knowledge, skills and emotional resilience for the innovative solutions they will need to cope with the climate crisis.

Climate Change Local Training Programmes and NGO Collaborations

With the guests hosted every week during the training, the physical causes of climate change, its historical development, what individuals and organisations can do to combat the climate crisis are discussed and parents are informed about the climate crisis.



Teachers 2030: Sustainable Development Goals and Climate Mobilisation Training

Organised in cooperation with BÜYEM, UN SDSN Turkey and Schneider Electric, Teachers 2030: Sustainable Development Goals and Climate Mobilisation Training aims to inform teachers working in K12 schools about the work carried out on sustainability in the field of education. The United Nations 2030 agenda, sustainable development goals and education for sustainable development concepts, lesson plans and classroom practices are discussed with current examples. Within the scope of classroom practices; activities that will develop students' creativity and entrepreneurship by enabling them to focus on the solution are conveyed.

Climate Change Local Training Programmes and NGO Collaborations

Teachers 2030: Sustainable Development Goals and Climate Mobilisation Training



Climate Change Local Training Programmes and NGO Collaborations

Trainings for Local Authorities



Boğaziçi University Center for Lifelong Learning (BÜYEM) organises training programmes to strengthen the role of local governments in combating climate change through various collaborations. These programmes encourage the development of solution-oriented approaches to climate change.

Cities for Climate Workshop and Climate Action Plan Training

Boğaziçi University UN SDSN Turkey, 350 Turkey and Local Monitoring Research and Practices Association (YERELİZ) brought together local administrators from different cities of Turkey in the 'Cities for Climate Workshop and Climate Action Plan Training'. During the three-day workshop, practical climate solutions that cities can implement, preparation of Climate Action and Adaptation Plans and basic information for municipalities to create their own action plans were discussed. At the end of the workshop, the participating municipalities presented the 'We are for Climate' declaration they signed against climate change to the public.

Climate Change Local Training Programmes and NGO Collaborations

Trainings for Local Authorities





Click here to read the related news:
https://haberler.bogazici.edu.tr/tr/news/kampus/2/yerel-yonetimler-iklim-krizinde-cozumun-parca/1866

https://haberler.bogazici.edu.tr/tr/news/kampus/2/24-belediye-bogazicinde-ayni-hedefte-bulustu-/1869

Climate Change Local Training Programmes and NGO Collaborations

Sustainable Cities and Climate Change Online Training Programme

This programme, carried out in cooperation with Union of Marmara Municipalities, 350 Turkey, YERELİZ, UN SDSN Turkey and BÜYEM, encourages municipalities to start mitigation and adaptation works rapidly. Within the scope of the training, topics such as general assessment of climate change and urban climate justice as well as thematic solutions such as energy transformation, transport and urban planning in cities were addressed. In this training, which is intended for local government employees at metropolitan, provincial or district level, participants had the opportunity to reinforce what they learnt in practice by participating in project writing workshops with small working groups.



Climate Change Local Training Programmes and NGO Collaborations

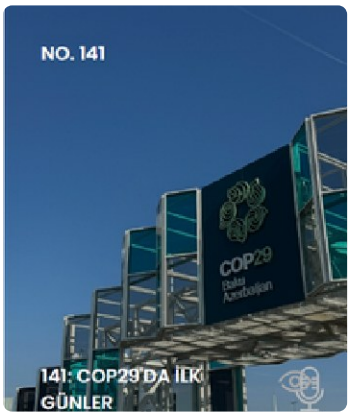
Expertise Trainings

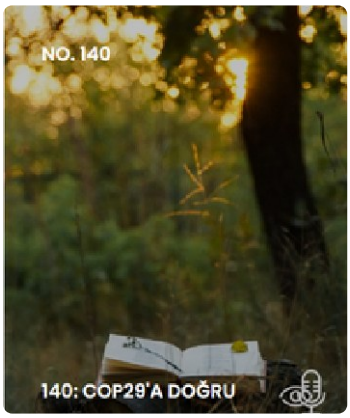
Introduction to Climate Change Expertise Training

The certified 'Introduction to Climate Change Expertise Training' offered through BÜYEM in cooperation with Yuvam Dünya and İklimBU provides a comprehensive basis for the participants with the lectures of Prof. Dr. Levent Kurnaz. After each lecture, small interviews with guest speakers provide participants with different perspectives.
Through these educational programmes and campaigns, Boğaziçi University plays an important role in combating climate change at both local and national level and aims to become a regional hub for sustainable development.

Weekly Bulletin

'Dünyahali' is a weekly digital magazine bulletin prepared in cooperation with İklimBU, Yuvam Dünya, BMWi and APOSTO. It provides content on solutions that can be implemented within the scope of combating the climate crisis, studies around the world and current developments in this field. In addition, the summaries of the bulletin are also delivered to the listeners in podcast format.







Click here to access the newsletter and podcasts of Dünyahali:
https://dunyahali.com.tr/

Collaborative Planning for Climate Change Disasters

Boğaziçi University contributes to collaborative planning processes for climate change disasters at both national and international level and takes an active role in various projects in this field. The studies carried out by the University in this context are as follows:

Contribution to the National Climate Change Mitigation Strategy and Action Plan

Boğaziçi University is among the institutions participating and contributing to the Climate Change Mitigation Strategy and Action Plan (2024-2030) prepared by the Ministry of Environment, Urbanisation and Climate Change. The scope of the plan consists of the following elements:

- Main Mitigation Sectors: Energy, Industry, Buildings, Transport, Agriculture, Waste and Land Use, Land Use Change and Forestry (LULUCF)
- Cross-cutting Theme Areas: Just Transition and Carbon Pricing Mechanisms
- Targets To identify strategies and actions for the mitigation of greenhouse gas emissions in order to achieve the National Contribution Declaration (NDC) targets under the Paris Agreement, and to provide a roadmap for relevant organisations

This co-operation is critical for the measures to be taken against climate change at national and regional level.

Click here to read the Climate Change Mitigation Strategy and Action Plan:
https://iklim.gov.tr/db/turkce/icerikler/files/%C4%B0klim%20De%C4%9Fi%C5%9Fikli%C4%9Fi%20Azalt%C4%B1m%20Stratejisi%20ve%20Eylem%20Plan%C4%B1%20(2024-2030).pdf

Collaborative Planning for Climate Change Disasters

Planning Studies in Cooperation with Local Authorities

Through trainings and workshops, Boğaziçi University provides support to local governments at metropolitan, provincial and district levels in different regions of Turkey in the processes of developing feasible measures to combat climate change and preparing climate action plans.

Cities for Climate Workshop and Climate Action Plan Training:

In the workshop organised in cooperation with Boğaziçi University UN SDSN Turkey, 350 Turkey and YERELİZ,

- Practical climate solutions that cities can implement are presented.
  - Municipalities were guided in the preparation of their own climate action and adaptation plans.
  - At the end of the workshop, municipalities publicised their commitments by signing the declaration **'We are for Climate'.**



Collaborative Planning for Climate Change Disasters

Sustainable Cities and Climate Change Online Training Programme

In the programme organised in cooperation with the Union of Marmara Municipalities, 350 Turkey, YERELİZ, UN SDSN Turkey and Boğaziçi University Lifelong Learning Centre (BÜYEM);

- Thematic solutions such as energy transformation in cities, transport and urban planning were presented to local governments.
- Practical experiences were gained through project writing workshops.

> **Click here to read the related news:**
> https://haberler.bogazici.edu.tr/tr/news/kampus/2/yerel-yonetimler-iklim-krizinde-cozumun-parca/1866

> https://haberler.bogazici.edu.tr/tr/news/kampus/2/24-belediye-bogazicinde-ayni-hedefte-bulustu-/1869

Regional and International Contributions Regional Research within the Scope of CORDEX:

Boğaziçi University Climate Change and Policy Research and Application Centre (İklimBU) researches the regional impacts of climate change, especially in the Eastern Mediterranean, Middle East and Central Asia, and develops solutions on climate policies by participating in national and international cooperation networks. The focus areas and activities of the Centre are as follows:

Collaborative Planning for Climate Change Disasters

- Focus Areas: Renewable energy, emission mitigation, agricultural adaptation and impacts of extreme climate events
- CORDEX Participation: Also responsible for research in Central Asia, MENA and Australasia.
- Regional Studies: Regional climate model outputs are used to analyse the impacts of climate change on socio-economic factors such as agriculture, water resources, tourism and migration.
- Contributions: It provides support for preparedness against climate disasters in the geography where Turkey and neighbouring countries are located.

For more information about İklimBU, please click here:
https://climatechange.bogazici.edu.tr/

Cooperation with the European Energy Research Association (EERA)

Boğaziçi University has been accepted as a full member of the Bioenergy Platform of the European Energy Research Association (EERA), Europe's largest research community in the field of energy. EERA brings together universities as well as active research organisations in the field of energy in Europe:

Collaborative Planning for Climate Change Disasters

- It carries out studies for the development of more efficient and low-cost low carbon energy technologies.
- It operates within the framework of the Strategic Energy Technologies Plan (SET-Plan), which supports the European Union's goal of becoming a climate-neutral community by 2050.
- EERA-Bioenergy Platform, which is one of the 17 joint research platforms carried out by EERA and established in 2011, carries out studies in five sub-programmes, namely 'Sustainable Biomass Production', 'Thermochemical Processes', 'Biochemical Processes', 'Stable Bioenergy Systems' and 'Sustainability-TechnoEconomic Analyses-Public Acceptance' under the European Union bioenergy framework programme.



Click here to read the related news:
https://haberler.bogazici.edu.tr/tr/news/akademik/1/bogazici-universitesi-avrupa-enerji-arastirma/2118

Collaborative Planning for Climate Change Disasters

Boğaziçi University adopts a solution-oriented approach to deal with crises such as disasters and displacement that cross borders between countries by contributing to both the preparation of national action plans and training and guidance activities for local governments. These activities have a critical importance in increasing resilience against climate change disasters.

Climate Change Disasters and Risk Management Support to Local and Regional Governments

Boğaziçi University Kandilli Observatory and Earthquake Research Institute (KOERI) is a leader in disaster preparedness and early warning systems and plays a key role in providing support to local, national and regional governments. KOERI provides information sharing and technical support to governments to minimise disaster risks and optimise response processes.

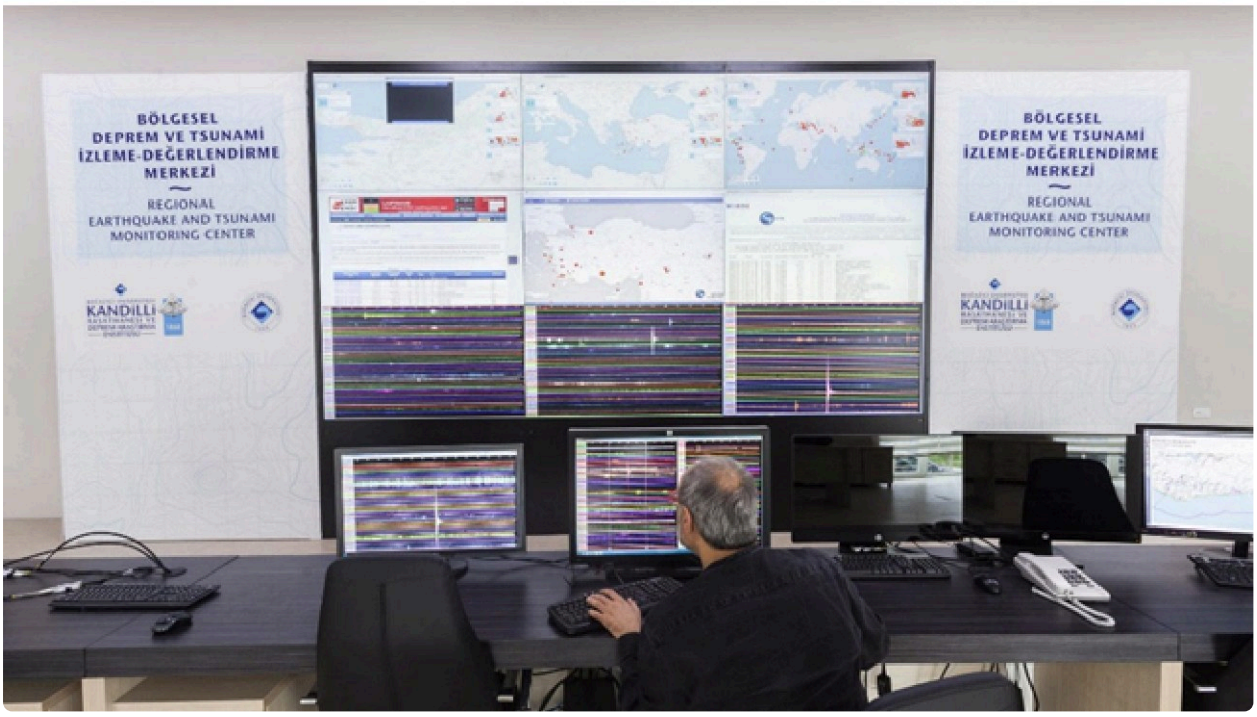


Collaborative Planning for Climate Change Disasters

Regional Earthquake-Tsunami Monitoring and Assessment Centre (BDTIM)

The Regional Earthquake-Tsunami Monitoring and Assessment Centre (BDTIM), operating within the Boğaziçi University Kandilli Observatory and Earthquake Research Institute (KRDAE), is the official institution responsible for reporting tsunamis in Turkey. BDTİM carries out activities within the scope of the Intergovernmental Coordination Group on Tsunami Warning and Mitigation System for the North-East Atlantic, Mediterranean and Related Seas (ICG/NEAMTWS) under the umbrella of the UNESCO Intergovernmental Oceanographic Commission (IOC). In 2012, BDTİM started to serve as a regional tsunami warning centre for the Eastern Mediterranean, the Aegean Sea and the Black Sea. In 2016, BDTİM was accredited by UNESCO and sends tsunami information and warning messages to the countries in the region.

Collaborative Planning for Climate Change Disasters



Duties of BDTIM:

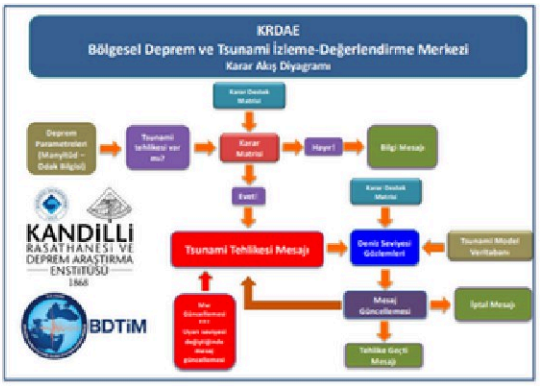
1. Tsunami Monitoring: Real-time monitoring of possible tsunamis that may affect Turkey
2. Early Warning: Preparing early warning messages for tsunamis that may occur after an earthquake and communicating them to the relevant parties
3. Information: Informing the public and raising awareness in tsunami risk areas
4. International Co-operation: To cooperate with international organisations for monitoring and evaluation of tsunamis in the Mediterranean, Aegean Sea and Black Sea Region

> **Click here to go to BDTIM homepage:**
> http://www.koeri.boun.edu.tr/sismo/2/tr/

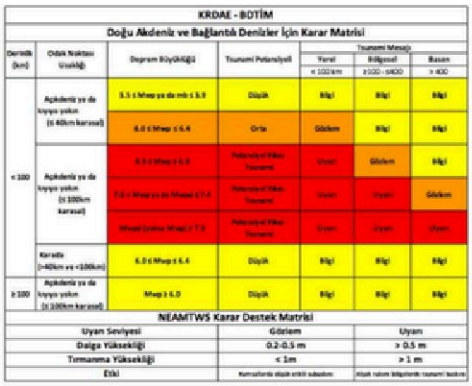
Collaborative Planning for Climate Change Disasters

Regional Earthquake-Tsunami Monitoring and Assessment Centre (BDTIM)





KRDAE Tsunami Mesajı Karar Akış Diyagramı



KRDAE Tsunami Mesajı Karar ve Karar Destek Matrisleri



KRDAE Ulusal ve Bölgesel Sismik Ağı



KRDAE Tsunami Hizmet Sağlayıcı Deniz Seviyesi Gözlem Ağı

Collaborative Planning for Climate Change Disasters

Istanbul Earthquake Rapid Response and Early Warning System

The 'Istanbul Earthquake Rapid Response and Early Warning System' project initiative initiated by Boğaziçi University in 1998, before the 1999 Kocaeli and Düzce earthquakes, was approved by the Council of Ministers Decision No. 2001/2232 dated 5/4/2001.

The design and technical specifications of the project were prepared by Boğaziçi University Kandilli Observatory and Earthquake Research Institute (KRDAE) Department of Earthquake Engineering and the establishment works were started on 10 May 2001. In 2012, the technical infrastructure of the system was updated with the support of Istanbul Governorship.

System Features

The system consists of 100 rapid response stations and 10 early warning stations. Thanks to real-time data from strong earthquake ground motion recorders,

- Strong ground motion parameter distributions are determined,
- Building damage distribution maps are created.
- Early warning stations use the time difference of seconds between the P and S components of earthquake waves to transmit data for controlled shutdown of critical facilities.

This information is shared with Istanbul Metropolitan Municipality Disaster Coordination Centre (IMM-AKOM), Governorships and other local organisations to prioritise post-earthquake response.

> **Click here for more information:**
> https://eqe.bogazici.edu.tr/tr/pages/istanbul-deprem-hizli-mudahale-ve-erken-uyari/4042

Collaborative Planning for Climate Change Disasters

Boğaziçi University Net Zero Carbon Commitment

Boğaziçi University has adopted a net zero carbon target to combat climate change and reduce carbon emissions and has developed comprehensive action plans within the framework of the Greenhouse Gas Protocol (GHG). These plans are managed and meticulously implemented by a committee formed with the support of the university senior management. In line with the targets, various projects have been implemented and new initiatives have been planned to reduce the carbon footprint and implement sustainable energy solutions on campuses.

University Campuses Sustainability Declaration

Boğaziçi University has taken an important step towards becoming a carbon-neutral campus by signing the 'University Campus Sustainability Declaration' together with 21 universities from countries such as China, India, USA, Japan and Korea. With this declaration,

- Reducing the carbon footprint of campuses,
- Use of energy sources that minimise environmental damage,
- It was committed to support research and education studies on energy, environment and sustainability by recognising campuses as 'living laboratories'.

Click here to read the related news:
https://www.ntv.com.tr/egitim/universiteler-karbon-ayak-izi-bildirisini-imzaladi,GADJN8xPY0aJksiCZ3TLbA

Collaborative Planning for Climate Change Disasters

Boğaziçi University Net Zero Carbon Emission Target

Boğaziçi University has prepared a comprehensive flowchart and action plans to achieve its net zero carbon emission target. Within the scope of the flow chart; a system was established to monitor electricity, natural gas, water and fuel consumption; three main emission sources were identified based on the collected data and action plans were developed for these focus areas.

Focus-1 (Direct Emissions): Heating-natural gas, vehicle fuel consumption, diesel generator fuel consumption

Focus-2 (Indirect Emissions): Electric power generation

Focus-3 (Supply Chain Emissions): Emissions arising from the commuting of university staff to and from work-service, business travels, products and services we purchase from suppliers

Focus-1 and Focus-2 Action Plan: Main Headings

- Optimising the use of space
- Organising user awareness activities for energy saving issues
- Implementation of energy efficiency action plans - Implementation of ISO 50001 action plans
- Energy efficient building designs and applications
- Revision of building heating systems
- Electric energy supply
- Investment in renewable energy sources
- Providing on-campus transport with electric vehicles
- Making grey water waste facilities functional

Collaborative Planning for Climate Change Disasters

Focus-3 Action Plan: Main Headings

- Commuting of university staff - shuttle route optimisation
- Procurement of printed publications from Recycling Certified suppliers
- e-books, e-journals and article databases are purchased more than printed sources
- Ethical and sustainable food

Net Zero Emission Target Action Plan:
https://mediastore.cc.bogazici.edu.tr/web/upload/sayfalar/596-bogazici-university-greenhouse-gas-inventory--yayin-20260428-091817.pdf

About Net Zero Emission Policy:
https://mediastore.cc.bogazici.edu.tr/web/upload/sayfalar/596-bogazici-university-greenhouse-gas-inventory--yayin-20260428-091817.pdf



Collaborative Planning for Climate Change Disasters

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Net Zero Carbon Target Period

Within the framework of the action plans prepared, it is aimed to reduce building-related **Focus-1 and Focus-2 carbon emissions by 50% in all campuses of Boğaziçi University by 2030** and to eliminate carbon emissions in all focus areas by 2050.

Carbon Neutral Campus: Kilyos Sarıtepe Campus

Boğaziçi University's Kilyos Sarıtepe Campus sets an example in sustainability efforts and reduction of carbon emissions:

- The campus has been carbon neutral since 2015.

SDG13: Climate Action

Collaborative Planning for Climate Change Disasters

Boğaziçi University's Kilyos Sarıtepe Campus sets an example in sustainability efforts and reduction of carbon emissions:

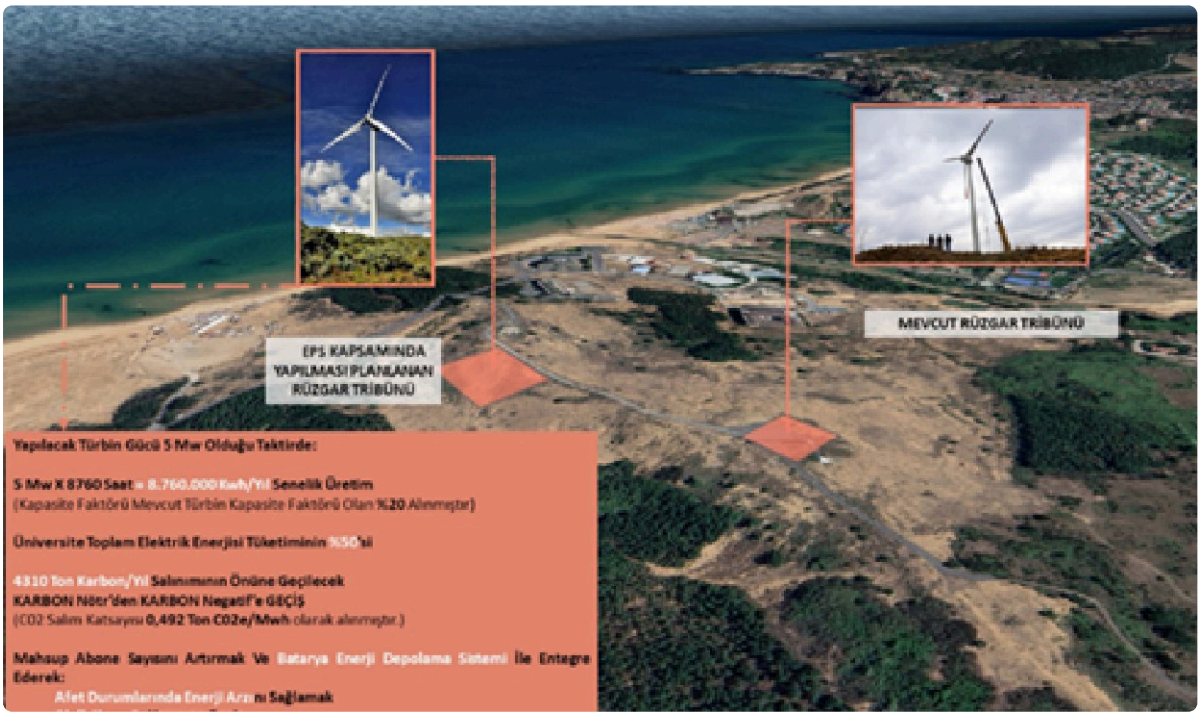
- It has achieved a world first in this field by meeting all of its electricity needs from the wind turbine on campus. Within the scope of the Boğaziçi University Wind Power Plant (BÜRES) project, the 1 MW wind turbine on campus generates 40% more than the annual electricity consumption of the campus, thus preventing approximately 900 tonnes of carbon emissions and saving 1 million kWh of energy every year.
- -The 5 MW wind turbine, which is planned to be added to the campus, is expected to meet 50% of the total electricity consumption of the university and will prevent 4310 tonnes of carbon emissions per year and transition the campus from carbon neutral to carbon negative status.
- Europe's first carbon-negative biorefinery is located on campus as part of the INDEPENDENT Project and has the capacity to capture and use approximately 1200 tonnes of carbon dioxide per year. The project reduces the use of fossil energy in production by introducing innovative algae-based products in the energy, food, health, environment, agriculture and livestock sectors, thus making a two-way contribution to sustainability.





Collaborative Planning for Climate Change Disasters





Reducing Carbon Emissions with Solar Energy

In order to reduce carbon emissions, Boğaziçi University utilises solar energy, which is a clean energy source compared to fossil fuels, through the following applications.

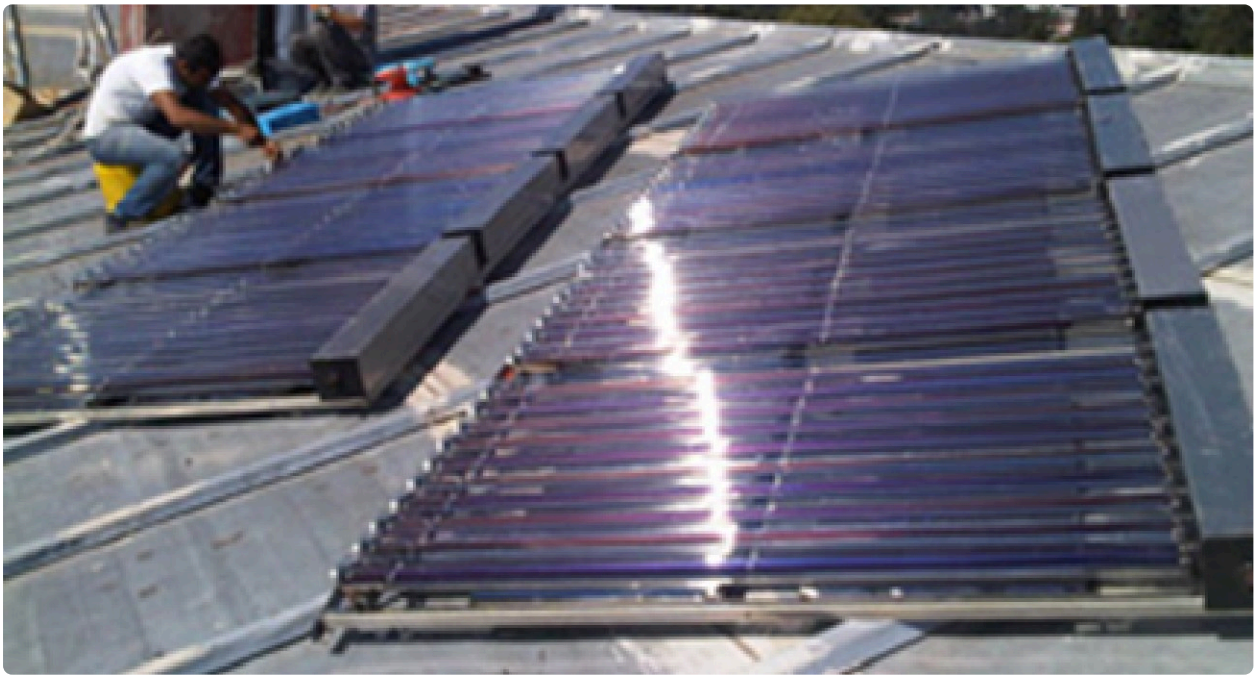
- Solar collector hot water systems: By utilising solar energy to meet water heating needs, it reduces dependence on fossil-fuelled electric or gas water heaters. At Boğaziçi University, **22%** of the hot water requirement of the 1st Men's Dormitoryand the entire hot water requirement of the **Tarsus Gözlükule Excavations Research Centreare** provided by solar collectors.
- Photovoltaic Panel Applications: Photovoltaic panels placed on roofs meet some of the energy needs of buildings by generating electrical energy. Photovoltaic panels are used in North Campus 3rd and 4th Dormitories, South Campus Faculty of Economics and Administrative Sciences, Kandilli Campus National Earthquake Monitoring Centre (UDIM) Tsunami Monitoring Building and Tarsus Gözlükule Excavations Research Centre buildings. In addition, new Solar Energy Systems are planned to be installed within the scope of **KABEV** (Energy Efficiency in Public Buildings Project) and **KADEV** (Earthquake Resistance and Energy Efficiency in Public Buildings) projects.

With these comprehensive action plans, innovative energy solutions and international collaborations, Boğaziçi University is taking decisive steps towards its commitment to carbon neutrality and net zero carbon. These efforts enable the University to assume a leading role in sustainable development.

Collaborative Planning for Climate Change Disasters

Reducing Carbon Emissions with Solar Energy





Click here for more information:
https://bogazici.edu.tr/tr_TR/Content/Kampus_Yasami/KampusYesilKampus/TeknikUygulamalar/YenilenebilirEnerji

Istanbul Provincial Disaster Risk Reduction Plan (IRAP)

Within the scope of the Istanbul Provincial Disaster Risk Reduction Plan (IRAP), the Kandilli Observatory and Earthquake Research Institute (KOERI) launched in 2023 the installation of 20 new “Multidisciplinary Tsunami Observation and Early Warning Stations” around the Marmara Sea and its islands, with the support of the Presidential Strategy and Budget Directorate. The Regional Earthquake–Tsunami Monitoring and Evaluation Center (BDTİM), operating under KOERI, already processes data from 28 tsunami stations across Türkiye to deliver early warning messages to 21 institutions in 15 different countries. With the addition of the new stations, sea level changes across the entire Marmara region—particularly in Istanbul—will be continuously monitored on a 24/7 basis. The first of these stations became operational at the Kartal Municipality Water Sports Center, thanks to the support of Kartal Municipality.

This regionally integrated infrastructure, developed through institutional collaboration, represents a concrete reflection of Boğaziçi University’s mission to provide reliable scientific data and support to local governments in addressing disaster risks driven by earthquakes and climate change.





Click here for more information:
https://haberler.bogazici.edu.tr/tr/news/bilim/4/krdae-marmarada-yeni-20-gelismis-tsunami-ista/2787

Century-Old Meteorological Station Strengthening Climate and Disaster Early Warning Systems

Boğaziçi University's Meteorology Laboratory at the Kandilli Observatory and Earthquake Research Institute (KRDAE) has been awarded the "Centennial Station Certificate" by the World Meteorological Organization (WMO), recognizing its uninterrupted contribution to climate monitoring and disaster early warning systems. Operating continuously since 1911, the station has ensured the integrity of Türkiye's climate records from the late Ottoman era through the Republic, while providing reliable scientific data to anticipate and assess disaster risks at local and regional scales.

The KRDAE's ability to inform and support public institutions on climate change, meteorological hazards, and risk management is significantly strengthened by these century-long, high-quality observations. The formal installation of the certificate at the laboratory's entrance stands as a tangible testament to Boğaziçi University's mission of delivering rigorous scientific observation and data for the public good, reinforcing its leadership in shaping evidence-based and sustainable climate policies.



Click here for more information:
https://haberler.bogazici.edu.tr/tr/news/akademik/1/kandilli-rasathanesi-meteoroloji-laboratuvari/2872

Collaborative Workshop with Local Authorities on Tsunami Awareness and Disaster Resilience

In recognition of World Tsunami Awareness Day on November 5, Boğaziçi University's Kandilli Observatory and Earthquake Research Institute (KOERI) organized the "Standard Operating Procedures for Tsunami Early Warning" Workshop to strengthen preparedness and resilience of coastal municipalities along the Marmara Sea against tsunami hazards. The workshop brought together representatives from the Istanbul Metropolitan Municipality, AFAD, coastal municipalities, universities, and the Turkish Amateur Radio Association, with the aim of refining the procedures to be followed by local authorities after receiving tsunami early warning messages issued by KOERI.

Prof. Dr. Nurcan Meral Özel, Director of KOERI, highlighted that Türkiye has managed the national segment of UNESCO's Intergovernmental Oceanographic Commission NEAMTWS system for over a decade. Since July 1, 2012, KOERI has issued 46 tsunami messages, including 31 information bulletins, 9 advisories, and 6 warnings, supported by continuous monitoring through 297 seismic sensors and 28 multi-disciplinary early warning stations tracking sea-level and atmospheric changes 24/7.



News

Following the Bodrum and İzmir-Seferihisar tsunami events, Türkiye also contributed to the UNESCO LastMile and CoastWAVE projects, through which Istanbul's Büyükçekmece district was designated as a "Tsunami-Ready City" in the Eastern Mediterranean and Europe. This initiative marks a significant step in enhancing both scientific and operational capacity for disaster risk reduction, achieved through cooperation between local governments and international stakeholders.



Click here for more information:
https://haberler.bogazici.edu.tr/tr/news/akademik/1/5-kasim-dunya-tsunami-farkindalik-gununde-krd/2879

News

Scientific Monitoring and Support for Local Governments Against Earthquake and Tsunami Risks

Boğaziçi University's Kandilli Observatory and Earthquake Research Institute (KOERI) continues its uninterrupted scientific monitoring and early warning efforts regarding seismic activity and potential tsunami risks in Türkiye. At a press briefing marking the second anniversary of the February 6, 2023 Kahramanmaraş earthquakes, KOERI Director Prof. Dr. Nurcan Meral Özel noted that while no major earthquake is anticipated in the near term along the East Anatolian Fault, urban renewal and building reinforcement in the Marmara Region remain of critical importance. She highlighted the establishment of 20 new seismic and meteorological monitoring stations, along with expanded sea-level observation networks in Marmara, and emphasized the potential risk posed by the Kumburgaz Fault in central Marmara under possible earthquake scenarios.





Prof. Dr. Özel also drew attention to the intense seismicity and volcanic activity in the Aegean Sea and around Santorini, which could generate tsunamis exceeding one meter, with waves potentially surpassing three meters along the coasts of Crete, Northeastern Libya, and Alexandria. She stressed the importance of continuous vigilance in monitoring both earthquake and tsunami hazards. Since 2012, KOERI has served as a United Nations-accredited Tsunami Warning Center, providing timely alerts on potential tsunami risks in the Marmara, Aegean, and Black Seas, as well as connected waters. These warnings are simultaneously shared with the international community and local governments, thereby making a critical contribution to regional disaster risk reduction strategies.

Through these comprehensive monitoring and early warning mechanisms, Boğaziçi University demonstrates its sustained commitment to supporting local and regional authorities with scientific data, thereby advancing preparedness and resilience against disaster risks and climate-related hazards.



Click here for more information:
https://haberler.bogazici.edu.tr/tr/news/akademik/1/bogazici-universitesi-kandilli-rasathanesi-ve/2893

Boğaziçi Receives Two Awards at "TTGV Day and Awards", Featuring a Panel on the Future of Climate Technologies

Boğaziçi University received two awards at the **2025 TTGV Awards**, organised by the Technology Development Foundation of Türkiye (TTGV), in recognition of its contributions to climate research and sustainable energy technologies.

Boğaziçi University's Centre for Climate Change and Policy Studies

(İklimBU) received the **"Mehmet Şuhubi Pioneering Civic Initiative Award"** for its interdisciplinary research on climate change and its policy implications. By bringing together climate science, economics, energy and policy, İklimBU contributes to climate action by producing scientific knowledge that supports the development of solution- and policy-oriented strategies.



Assoc. Prof. Damla Eroğlu Pala of Boğaziçi University's Department of Chemical Engineering received the **"Dr Akın Çakmakcı Pioneering Researcher Award"** for her research on lithium-sulphur batteries and next-generation battery technologies. Her work, which aims to advance environmentally responsible and highly efficient energy-storage technologies, contributes to the scientific and technological capacity needed for the transition to low-carbon energy systems.



The event also featured a panel titled **"The Future of Climate Technologies"**, which brought together experts from academia, industry and the entrepreneurial ecosystem to exchange knowledge and perspectives on sustainable technologies. Together, these two awards highlight Boğaziçi University's contribution to climate action through scientific research, technological innovation and policy-oriented knowledge production.

The full news article is available here.

International Collaboration on Environmental Sustainability Education through the SENSES Project

As a partner in the **SENSES (Science Education through Novel Teaching Strategies for Environmental Sustainability)** Project, Boğaziçi University contributes to developing innovative teaching approaches that integrate environmental sustainability into science education. Supported by the European Union's Erasmus+ Programme, the project brings together universities and educational institutions from **Türkiye, Germany, the Netherlands, Greece and Cyprus**. Led at Boğaziçi University by Prof. Sevil Akaygün, with Prof. Emine Adadan serving as a researcher, the project develops online teaching modules, train-the-trainer programmes and teacher networks for teacher educators and pre-service teachers.

News



The project's second transnational meeting took place at Boğaziçi University's South Campus on 22 October 2025, followed by a seminar titled **"Training of Trainers: Environmental Sustainability Education"** on 23–24 October. The seminar presented innovative teaching modules addressing socio-scientific issues, inquiry-based learning, ocean literacy, systems thinking, and problem-solving. By strengthening the capacity of future science teachers to integrate environmental sustainability into their teaching, the SENSES Project contributes to **environmental awareness, global citizenship, and education that supports climate action.**



The full news article is available here.

A Next-Generation Earthquake Early Warning System for Disaster Resilience

Boğaziçi University's Kandilli Observatory and Earthquake Research Institute (KOERI) introduced its next-generation test system in November 2025 as part of efforts to strengthen earthquake early warning capacity across the Marmara Region. With **30 new-generation strong-motion stations** installed across the region, data-transmission latency has been reduced to 0.2 seconds. Once an initial signal is detected by at least four stations, the system calculates the earthquake's location and magnitude and generates a **warning within 6–9 seconds**. During the Mw 5.0 earthquake in the Sea of Marmara on 2 October 2025, the system issued its first warning in 8.4 seconds, demonstrating the performance of the new algorithms under real-world conditions.



The critical time provided by an early warning enables automatic safety measures such as stopping metro services, closing gas valves and slowing high-speed trains. By installing sensors capable of transmitting real-time data from the seabed of the Sea of Marmara, KOERI **aims to reduce warning time to 3–6 seconds** and, following further network modernisation, expand the early warning infrastructure nationwide.

Istanbul's existing network of 100 Rapid Response Stations and 10 Early Warning Stations also produces real-time shaking and damage-distribution maps and shares them with critical institutions. Building on over 25 years of early warning expertise, KOERI directly supports public authorities and local governments in disaster risk reduction, improved preparedness and the development of safer and more resilient communities.

The full news article is available here.

International Collaboration with Universitas Pendidikan in Environmental Sciences



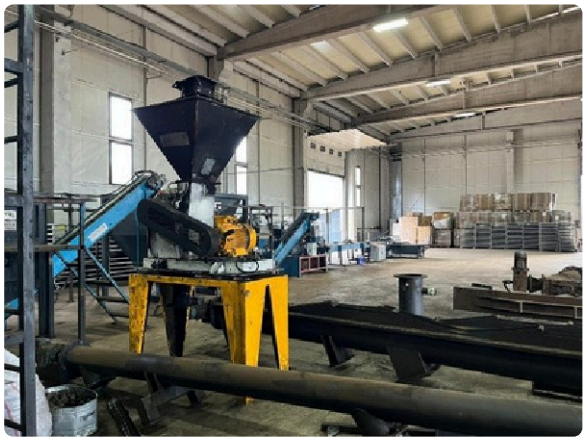
Boğaziçi University and Universitas Pendidikan, one of Indonesia's prominent higher education institutions, signed an academic cooperation protocol during a visit by an academic delegation from Universitas Pendidikan to Boğaziçi University on 18 December 2025. The agreement aims to facilitate student and faculty exchanges and to develop joint research and projects in environmental sciences. By enabling the international exchange of knowledge, expertise and research capacity in environmental sciences, the protocol provides **an institutional foundation for future collaborative work on climate change and environmental sustainability**.

The full news article is available here.

Nature-Based Solutions for Climate-Resilient Agriculture

The project entitled **"Nature-based Solutions for Climate-Resilient Agriculture: Pest Control through Wood Vinegar Application"**, developed by Boğaziçi University's Centre for Climate Change and Policy Studies (İklimBU), was awarded funding under the **EU–Türkiye Climate Change Grant Programme**. Developed by Prof. Levent Kurnaz, Dr Nazan An and Dr Tufan Turp, the 24-month project will be led by Boğaziçi University and implemented in Rize, the Giresun–Ordu area and Mersin in partnership with Rize Municipality, the Mersin Chamber of Commerce and Industry, and the Alata Horticultural Research Institute Directorate.





The project will develop wood vinegar produced from tea waste as a nature-based alternative for controlling agricultural pests whose spread is increasing with climate change. The approach aims to reduce the use of chemical pesticides in tea, hazelnut and citrus production, strengthen the resilience of agricultural systems to the impacts of climate change, and recover agricultural waste within a circular economy framework.

News

Designed **in alignment with Türkiye's 2024–2030 National Mitigation and Adaptation Strategies**, the project directly contributes to building local climate adaptation capacity, expanding sustainable agricultural practices and supporting climate-resilient production models.





The full news article is available here.

Climate-Resilient Approaches at the Türkiye–China Sustainable Development Youth Dialogue

The first **Türkiye–China Sustainable Development Youth Dialogue**, held in Türkiye, brought together academics and students at Boğaziçi University on 19 January 2026. Organised to mark the 55th anniversary of Türkiye–China relations, the event was jointly hosted by the Boğaziçi University Confucius Institute, Tsinghua University's Xiuzhong College and Boğaziçi University's Institute of Environmental Sciences. Participants exchanged ideas and explored shared solutions through three concurrent sessions addressing the environmental, social and economic dimensions of sustainable development.

News



Moderated by Boğaziçi University faculty member Dr Tamer Atabarut, the session **"Integrating Climate-Resilient Approaches"** provided a platform for young participants to exchange knowledge and perspectives on embedding climate resilience within sustainable development processes. By also addressing education, decent work, peace, justice, inclusion and equality, the programme encouraged a holistic discussion of the links between climate action and other dimensions of sustainable development. The event strengthened young people's climate awareness and capacity through knowledge exchange and supported international academic dialogue on climate resilience.



The full news article is available here.

KOERI's 25-Year Mission in Disaster Education and Community Resilience

Boğaziçi University's Kandilli Observatory and Earthquake Research Institute (KOERI) transforms scientific and technical knowledge into practical public education through its **Disaster Preparedness Laboratory (AHLAB)**, established in 2000. Through programmes such as "Basic Disaster Awareness" and "Structural Awareness against Earthquakes", AHLAB **reaches an average of 25,000 people each year**. Its Observatory Tours, which have run for more than 25 years, provide students from primary school through to university with opportunities to learn about disaster preparedness and Earth sciences.






Visitors practise appropriate responses during an earthquake in simulators at the Earthquake Park, while the Meteorology Laboratory introduces them to measuring meteorological parameters and preparing weather forecasts. Since 2008, KOERI has also extended disaster education to communities across Türkiye through its **Mobile Earthquake Simulation Truck (GEDSET)**. By improving public knowledge, risk awareness, and preparedness, these activities strengthen **community capacity and resilience to natural disasters**.

The full news article is available here.

News

Integrating Kandilli's 115-Year Climate Record into Digital Research Infrastructure

The Boğaziçi University Kandilli Observatory and Earthquake Research Institute (KOERI) Meteorology Laboratory is digitising **115 years of continuous analogue meteorological graph records dating back to 1911** using artificial intelligence. To integrate this invaluable historical climate record into modern research infrastructure, the University hosted a hackathon titled ***"Preserving Meteorological Scientific Heritage: AI-Assisted Digitisation of Meteorological Graph Records"*** on 6–7 March 2026, organised in collaboration with the Department of Computer Engineering.





The competition brought together 45 students from four universities to develop projects in the categories of **digitisation, data visualisation, and forecasting**, and to present them to a jury of academic and technical experts. The successful teams earned the opportunity to present their projects at the workshop **"Kandilli's 115-Year Climate Record"** on 27 March 2026. By preserving historical meteorological records and improving their accessibility and analytical value, the project contributes to long-term climate research, more effective use of climate data, and capacity-building among young researchers in data-driven climate studies.



The full news article is available here.

Green and Digital Transformation in Industry: Istanbul Twin Transformation Platform

Led by the Boğaziçi University Foundation (BÜVAK) and implemented in partnership with Boğaziçi University, the Foreign Economic Relations Board (DEİK), and the Software Industrialists Association (YASAD), the **Istanbul Twin Transformation Platform** has begun operations to accelerate the green and digital transformation of the manufacturing industry. Supported by the Istanbul Development Agency (İSTKA), the platform held its opening conference on 9 April 2026, bringing together representatives from government, academia, industry, and the technology sector.



Focusing on **five strategic manufacturing sectors—machinery, electronics, automotive, home appliances, and textiles**—the platform aims to support digital transformation and integrate environmental priorities into companies' production processes. The initiative brings together technology providers, transformation centres, academics, public institutions, and decision-makers within a unified ecosystem. By integrating industrial decarbonisation, resource efficiency, and climate adaptation with digital infrastructure, the initiative prepares Istanbul's manufacturing base for a low-carbon, climate-resilient economy, directly advancing global climate action goals.

The full news article is available here.

Global First Prize for Carbon Capture Technology Developed at Boğaziçi University

Helios, a deep-technology venture founded by Boğaziçi University Biomedical Engineering doctoral student Gizem Uysal, received the **"GCIP Global 1st Place (Overall Winner)"** at Cleantech Days 2026. The event was held under the Global Cleantech Innovation Programme, implemented by the United Nations Industrial Development Organization (UNIDO) and the Global Environment Facility (GEF). Established through the commercialisation of academic research, Helios continues its activities in the laboratories of the Deep Technology Hub at Boğaziçi University's Kandilli Campus.



The technology developed by Helios uses **metal–organic framework (MOF) materials to capture carbon dioxide from the flue gases of hard-to-abate industrial sectors, including cement, steel and aluminium**. Currently exported to seven countries, the solution represents a scalable climate technology with the potential to support the green transformation of carbon-intensive industries. By translating scientific research into an internationally deployed solution, the initiative contributes to the **technological capacity to reduce industrial greenhouse gas emissions and address climate change.**

The full news article is available here.

Yeşilhat Academy Meetings: Climate Risks, Adaptation and Solutions in Agriculture

Boğaziçi University and Anadolu Agency (AA) Yeşilhat jointly organised a Yeşilhat Academy Meetings panel under the theme **"Agriculture in the Face of the Climate Crisis: Risks, Adaptation and Solutions"**. Bringing together academics and students, the event featured Prof. Levent Kurnaz, Director of Boğaziçi University's Centre for Climate Change and Policy Studies, together with the Centre's Executive Board members Prof. Murat Türkeş and Prof. Cem Avcı.



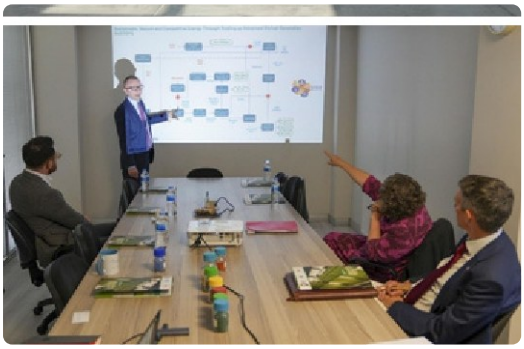
Drawing on scientific evidence, the panel examined the effects of rising atmospheric carbon dioxide concentrations on the climate system and the risks that climate change poses to agriculture, water and energy systems. Participants discussed sustainable solutions and adaptation strategies in response to threats to agricultural production, including increasingly prolonged, severe and widespread droughts, and the growing unpredictability of frost events and extreme rainfall. By communicating scientific expertise to wider audiences through collaboration with the media, the event contributed to education and awareness of climate-related risks, impacts and adaptation options.

The full news article is available here.

UK–Türkiye Collaboration on Microalgae Biotechnology and Climate Action

Boğaziçi University's Istanbul Microalgae Biotechnologies Research and Development Unit (İMBİYOTAB) hosted a high-level UK delegation— including UK Climate Envoy Ruth Davis OBE and UK Trade Commissioner for Eastern Europe and Central Asia and Consul General in Istanbul David Reed MBE—at the Sarıtepe Campus on May 6, 2026. Guided by Assoc. Prof. Dr. Berat Haznedaroğlu, Director of İMBİYOTAB and faculty member at the Institute of Environmental Sciences, the visit focused on algae-based bioprocesses, carbon capture and utilisation (CCU) technologies, sustainable bioeconomy, and circular economy applications.






The discussions highlighted ongoing scientific partnerships between Boğaziçi University and Cambridge University—supported by the Newton Fund, the Royal Society of Chemistry, and the British Council—that advance climate action, knowledge transfer, and the commercialisation of green technology. Showcasing İMBİYOTAB's pilot-scale infrastructure, the delegation examined scalable biological solutions for industrial carbon mitigation, biofuels, and wastewater treatment, reinforcing strategic UK-Türkiye cooperation in climate resilience, sustainability, and green trade.

The full news article is available here.

INTEGRATOR: Data-Driven Water Resilience in Response to Climate Change

The **"INTEGRATOR: Integrated Innovation Ecosystems for Transformative Nexus Governance towards Enhanced Water Resilience"** project, coordinated by Boğaziçi University, has received funding under the Horizon Europe Programme. Supported by Horizon Europe Cluster 6—Food, Bioeconomy, Natural Resources, Agriculture and Environment—the project brings together **18 partners from 11 countries**. The Boğaziçi University research team includes Asst. Prof. İrem Daloğlu, Prof. Nadim Copty, Prof. Raşit Bilgin, and Asst. Prof. Cem İskender Aydın from the Institute of Environmental Sciences.



INTEGRATOR aims to develop **a data-driven water-management framework that integrates digital twins, multi-scale monitoring systems, and advanced modelling approaches** in response to the growing pressures of climate change on the water cycle and water resources. By enabling more effective use of scientific data in water governance and decision-making, the project seeks to support the sustainable management of water resources and strengthen resilience to climate-related risks. INTEGRATOR therefore represents an international research initiative that advances climate adaptation capacity and resilience to water-related climate risks.

The full news article is available here.

Seferihisar Receives UNESCO "Tsunami Ready" Recognition

As a result of activities carried out under the **CoastWAVE 2.0 Project**, implemented through cooperation between Boğaziçi University's Kandilli Observatory and Earthquake Research Institute (KOERI) and Middle East Technical University, with support from UNESCO's Intergovernmental Oceanographic Commission (UNESCO-IOC), Seferihisar has officially received the international **"Tsunami Ready"** recognition certificate. The certification demonstrates that Seferihisar is a coastal community that understands its tsunami risk, maintains preparedness measures, prioritises disaster safety and strengthens cooperation among relevant institutions.



KOERI provided scientific guidance and technical support for activities designed to raise public awareness of tsunami risk, promote the effective use of early warning systems and strengthen local disaster preparedness. Developed with the participation of local and regional authorities, AFAD, academics, neighbourhood representatives and civil society organisations, these activities brought together **monitoring, early warning, risk communication and inter-institutional coordination**. In line with SDG 13 targets on strengthening resilience and adaptive capacity to natural disasters, the CoastWAVE 2.0 Project contributes to improving the disaster preparedness of coastal communities.

The full news article is available here.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