SUSTAINABLE DEVELOPMENT GOALS

SUSTAINABILITY REPORT 2023

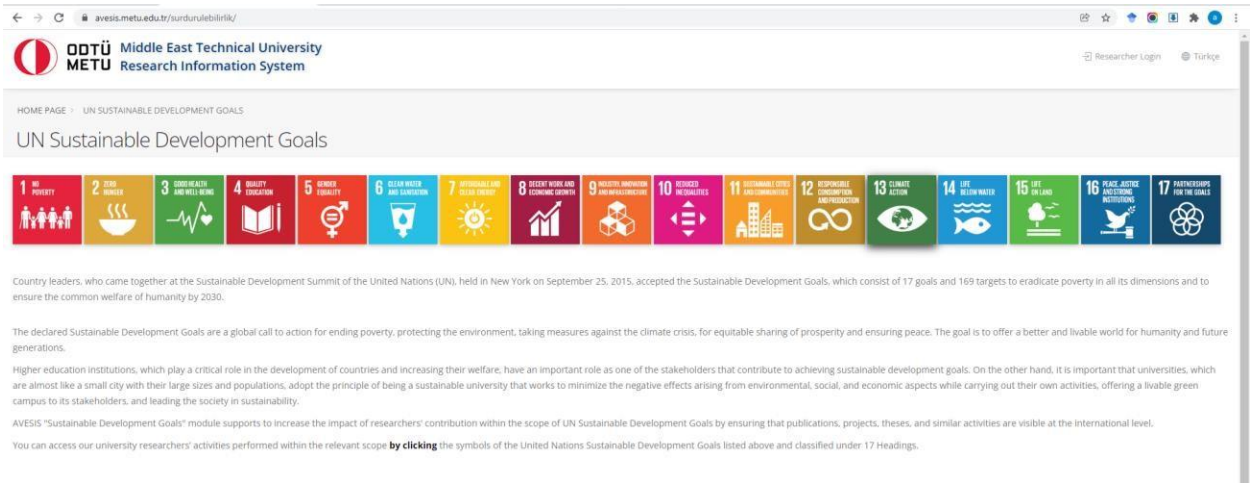
MIDDLE EAST TECHNICAL UNIVERSITY

The United Nations' 17 Sustainable Development Goals (SDGs) are at the heart of the 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015. They are the blueprint for all developed and developing countries to tackle the global challenges, starting from ending poverty and eliminating all deprivations, providing equal access to resources by all, spurring economic growth fighting climate change and preserving the land and the sea.

Universities have a unique role in creating and disseminating knowledge, yet as one of the leading universities in Turkey, METU extends its mission to cover community service as well as education and research. The true societal impact of a university lies where these three mission components intersect and overlap. METU aims to fulfill all SDGs through research, teaching and outreach activities, sustainable campus operations and collaborations with the stakeholders.

Middle East Technical University in Turkey is setting the example by putting sustainability at the core of the institution. In fact, just recently, METU established a Sustainable Campus Executive Board and in December 2020 introduced the METU sustainability website (http://sustainablecampus.metu.edu.tr/en) along with the University's first ever Sustainability Report.

In addition, "Sustainable Development Module" was added to Research Information System (AVESİS) as a platform to improve the impact level and international visibility of activities such as publications, projects, and theses conducted by METU's researchers, in relation to SDGs.



METU Avesis Sustainability Module can be accessed at: https://avesis.metu.edu.tr/surdurulebilirlik/

End Poverty in all its Forms Everywhere

https://sdgs.un.org/goals/goal1

COMMUNITY SUPPORT

METU assists the start-up of sustainable businesses, in local and national scale, through relevant education or resources (e.g. mentorship programs, training workshops) offered by METU Teknokent.

(https://odtuteknokent.com.tr/tr/programlar/girisimcilik.php)

STUDENT SUPPORT

In Turkey, the existence of a centralized selection and admission system (https://www.osym.gov.tr/) does not allow the universities to specifically target to admit low household income groups for undergraduate education. For admission to graduate programs, the selection is based on academic qualities rather than background. The selection and admission processes are carried out transparently.

METU "ACADEMIC FREEDOM, INTEGRITY, INCLUSIVENESS and EQUALITY"
Policy ensures the inclusion of low income students by monitoring "the acceptance, success and completion rates of those students from the lower quartile income groups, people with disability, and other disadvantaged groups and continue financial and other support (such as mentorship and adviserships) for their education," and taking "affirmative action in application and acceptance of international students from low and middle low income countries." (http://sustainablecampus.metu.edu.tr/en/policies)

In Turkey, public universities are free of charge for undergraduate study. However, universities can support students from low-income groups after admission through a number of scholarships and financial support, such as for food and housing.

Scholarship opportunities are listed in the following link: https://adayogrenci.metu.edu.tr/ankara/burs-olanaklari

ODTÜ Alumni Run in London to Raise Scholarships

ODTÜ alumni and supporters have taken action to provide scholarships for students in need by participating in the Istanbul Marathon on November 5, 2023. Although their hearts remain with ODTÜ, their steps this year are in London. All donations collected through the campaign will be distributed as scholarships to students via the Istanbul ODTÜ Alumni Association. Those who wish to contribute can either donate to the campaign or start their own fundraising initiative.

https://fonzip.com/odtumist/kampanya/odtu-ogrencilerine-burs-i-cin-londra-da-kosuyoruz-

Support for ODTÜ Students Through the "Give a Scholarship for the Future" Campaign

As part of the 100th anniversary of the Republic, the “Give a Scholarship for the Future” campaign was launched on January 17, 2023, with the approval of the Ankara Governor’s Office to provide scholarships, especially for students affected by the earthquake. A total of 1,813,000 TL was raised, and scholarships were distributed to more than 400 students identified by the ODTÜ Scholarship and Aid Committee.

https://cumhuriyetim.metu.edu.tr/tr/gelecege-burs-ver-kampanyasi

Supporting ODTÜ Students Through the Half Marathon

Prof. Dr. Ahmet Türer, a faculty member of the Civil Engineering Department at ODTÜ, ran the 10 km race in the N Kolay Istanbul Half Marathon on April 30, 2023, together with the ODTÜ Alumni Association Marathon Working Group. The run aimed to raise scholarships for students facing financial difficulties. All donations from the event will be allocated as scholarships to support students struggling with essential needs such as food, housing, books, and transportation.

https://fonzip.com/odtumd/fundraising-campaigns/odtu-ogrencilerine-burs-icin-yarimaraton-21-km-kosuyorum---

9466 METU Scholarship Fund Concert

The first concert of the scholarship campaign, initiated with the approval of the Ankara Governorship (No. 196668) to support METU students on the 100th anniversary of the Republic, was held on October 7, 2023, at the METU Stadium. The event featured performances by Føltergëist (comprising Prof. Dr. Oğuz Uzol, Prof. Dr. İlkay Yavrucuk, and alumni Kıvanç Düzgünçınar and Uğur Oksay) and Zorba (featuring Alperen Demirkilit, Oğuzhan Öztan, Batuhan Ayduğan, and Kemal Zorlu Topaloğlu). The program was hosted by Canberk Koçkan, a Geology student, and Zeren İldoğan, a 2022 International Relations graduate. During the event, the "How well do you know METU?" quiz turned each correct answer by alumni into contributions to the scholarship fund. An auction was also held, with prizes such as a "Chocolate Workshop," "ATV Ride at Lake Eymir," free courses from the Fine Arts Department, and free event access at the Culture and Congress Center. Watch the event's promotional video here: https://youtu.be/xCjohNcQrPA

Donate for the Future Project on the 100th Anniversary of the Republic

As part of the "Donate for the Future" campaign celebrating the 100th anniversary of our Republic, messages from donors who contributed 300 TL or more to the student scholarship fund through the AdımODTÜ website between December 26-28, 2023, were written on selected METU postcards and sent to their loved ones and families. For more information, please visit:

https://adimodtu.org.tr/proje/burs-sizden-yilbasi-kartpostaliniz-bizden.

Assistance for electronic equipment needs

With the opening of schools and the start of classes, the METU Alumni Association is donating unused electronic devices that are in working condition or can work with minor maintenance and repair to students in need.

https://www.odtumd.org.tr/arsivler/12597

Financial support for students of Turkish Nationality is listed here:
http://oidb.metu.edu.tr/en/node/266

The **Directive for Scholarship and Financial Support** is made public in the following link (in Turkish):
https://oidb.metu.edu.tr/en/node/170

Only students placed in temporary dormitories by Ankara Metropolitan Municipality can view Student-Friendly House Rental Portal" has been put into effect. https://ogrencievi.ankara.bel.tr/

In addition to food and housing support, transportation within the campus is offered free and on a regular basis. For public transport, Ankara Metropolitan Municipality offers student discounts in subway and bus services:
https://www.ego.gov.tr/tr/haber/5444/buyuksehirden-odtuye-ucretsiz-ring-servisi-basladi

For international students, Tuition Fee Exemption and other scholarships and supports are shared at https://iso.metu.edu.tr/en/scholarship-opportunities/

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

https://sdgs.un.org/goals/goal2

HUNGER ON CAMPUS

METU offers a variety of food options for students and staff. The meals are offered at low prices, as low as 6 TRY per meal (https://kafeterya.metu.edu.tr/index.php?sayfa=fiyatlar&durum=tabldotfiyat) in university operated cafeteria. For low-income students, food support is also available.

- In 2019, 1,350 students received 783,000 TRY.
- In 2020, 1,343 students received 778.940 TRY.
- In 2021, 1851 students received 881.000 TRY.
- In 2022, 1300 students received 1.558.656 TRY.
- In 2023, 1385 students received 11772.5 TRY.

The daily menu is announced at https://kafeterya.metu.edu.tr, with price and nutrition information in order to help students maintain a health and well-balanced diet. Vegan and vegetarian food options are also included.

Food purchases are made in accordance with the Public Procurement Law (No. 4734) and Turkish Food Codex Regulation, as well as relevant Turkish Standards Institution (TSE) Standards. All suppliers are required to fulfill ISO 22000 standards. Purchases prioritize local sustainable suppliers, as allowed by legal and technical restrictions.

METU Sustainable Food Policy
METU also commits to ensure to provision of affordable, nutritious, and healthy food choices (including vegan and vegetarian menus) across all the outlets.
By revising its procurement guidelines, METU is also committed to ensure all food consumed within the Campus, to the extent possible within the budgetary constraints, is produced using sustainable methods (whether from sea or land, including the conditions of the workforce who are involved in the production) and from the local producers. This commitment extends to all outlets (including those owned by the third-party sellers) and to suppliers.
(Accessible at: http://sustainablecampus.metu.edu.tr/en/policies)

Support for ODTÜ Students During Exam Weeks

Since 2018, ODTÜ students studying late into the night at the library during exam weeks have received snack packages with sandwiches, fruit, cake, and coffee. In 2023, as part of this tradition, students were again treated to these packages, along with hundreds of supportive messages from ODTÜ alumni and friends.

https://adimodtu.org.tr/proje/final-donemi-odtu-lunun-sandvici-ve-kahvesi-benden

https://www.youtube.com/watch?v=Wb5LyVy4KOQ

https://www.youtube.com/watch?v=mB2RCVs7Uck

Ensure healthy lives and promote well-being for all at all ages

https://sdgs.un.org/goals/goal3

HEALTH ON CAMPUS

Sports facilities

ODTÜ Republic Run Held with Great Enthusiasm on October 29

The annual "ODTÜ Republic Run," organized by the University Sports Department to celebrate the spirit of the Republic, took place on October 29 with excitement, honoring the 100th anniversary of our Republic. Before the run, participants enjoyed performances by the Ballroom Dance and Hip-Hop communities and took part in warm-up exercises.

https://cumhuriyetim.metu.edu.tr/tr/odtu-cumhuriyet-kosusu

Organized regularly every year on October 29th to celebrate the founding of our Republic, the "Republic Run" is a huge event that brings together current students and staff, alumni and many sports enthusiasts from Ankara.

In 2023, our students participated in a total of 30 competitions, as detailed below:

Id	Competition Name	Date	Location	Result
1	Intercollegiate Wrestling Championship	April 1-5, 2023	Ankara	No ranking.
2	Intercollegiate Football (Men) Tournament	April 24- 28, 2023	METU	No ranking.
3	Badminton Unilig Regional League Tournament	April 25-30, 2023	Ordu	No ranking.
4	Intercollegiate Table Tennis Turkey Championship	May 16-21, 2023	Kırklareli	Men's and Women's Teams earned the right to participate in the Super League.
5	Intercollegiate Red Bull Half Court 3x3 Basketball Championship	May 26-28, 2023	Gazi University	Men’s Team placed 1st and qualified for the finals.
6	Intercollegiate Flag Football Super League Tournament	April 29-June 24, 2023	METU- Istanbul	Team placed 3rd.
7	Rugby Unilig Tournament	May 8-11, 2023	METU	No ranking.
8	Basketball Unilig Super League Promotion Tournament (Women)	May 5-10, 2023	METU	No ranking.
9	Karting Unilig Tournament	May 4-6, 2023	Ankara	Team placed 3rd.
10	Handball Unilig Super League Promotion Tournament	May 5-12, 2023	METU	No ranking.
11	Swimming Unilig Turkey Championship	May 5-7, 2023	Gazi University	Women's Team placed 2nd.
12	Athletics Unilig Turkey Championship	May 4-7, 2023	Manisa	Team placed 2nd.
13	E-Sports Unilig Turkey Championship	May 7-9, 2023	Izmir	Team Turkey placed 2nd.
14	Fencing Unilig Turkey Championship	May 9-11, 2023	Ankara	No ranking.
15	Flag Football Unilig Turkey Championship	May 8-11, 2023	Ankara	No ranking.
16	Taekwondo Unilig Turkey Championship	May 10-13, 2023	Bartın	No ranking.
17	Intercollegiate Ultimate Frisbee Turkey Championship	May 25-26, 2023	METU	No ranking.
18	Rowing and Dragon Boat Unilig Turkey Championship	May 29-30, 2023	Istanbul	Dragon Boat Mixed Team placed 3rd. Women's Coxless Double Team placed 2nd.
19	Sailing Unilig Turkey Championship	May 29-30, 2023	Istanbul	No ranking.
20	Orienteering Unilig Turkey Championship	May 30- June 1, 2023	Sivas	Men's Team placed 2nd.
21	Archery Unilig Turkey Championship	June 12-16, 2023	Eskişehir	Men's Team placed 2nd in the Classic Bow Category.

22	Intercollegiate Red Bull Half Court 3x3 Basketball Championship	June 3-4, 2023	Istanbul	Men's Team participated but did not place.
23	Intercollegiate Tennis Regional League Tournament	May 30- June 3, 2023	METU	Women's Team placed 1st and qualified for the Super League.
24	Mountain and Road Cycling Unilig Turkey Championship	October 22-23, 2023	Izmir	Women's Team placed 1st.
25	Intercollegiate Futsal Regional League Tournament	December 4-19, 2023	METU	Group 1 Team qualified for the playoff matches.
26	Intercollegiate Volleyball Regional League Tournament	Nov 27- Dec 12, 2023	Bilkent University	No ranking.
27	Intercollegiate Basketball (Women) Regional League Tournament	Nov 21- Dec 4, 2023	Bilkent University	Women's Team placed 2nd and qualified for the playoffs.
28	Intercollegiate Basketball (Men) Regional League Tournament	Nov 20- Dec 5, 2023	METU	Men's Team placed 1st and qualified for the playoffs.
29	Intercollegiate Handball Regional League Tournament	Dec 20-24, 2023	METU	Men's Group 1 Team qualified for the Super League promotion matches.
30	Flag Football Unilig Super League Tournament	Dec 24, 2023	METU	Matches are ongoing.

METU sports facilities (gymnasium and pool) are shared on a paid basis with the public (http://spormd.metu.edu.tr/en/)

Pool membership for guests: https://hm.metu.edu.tr/en/guest-member

METU Gymnasium: https://www.metu.edu.tr/sports-facilities

Lake Eymir presents a recreational and sports area for the local community, entrance is free and open for all visitors.

Mental health support

METU Medical Center offers free mental health support for students. https://srm.metu.edu.tr/en
METU Clinical Psychology Unit offers psychological evaluation and psychotherapy services to students on a paid basis (https://ayna.metu.edu.tr/hizmetler)

METU Smoking Policy

Every member of the METU community is expected to make responsible choices regarding tobacco smoking. The smoking can affect individuals and those around with detrimental consequences. At METU, we expect from everyone to engage and contribute a healthy and safe educational environment that plays a key role in supporting each student to reach their full academic potential. We value the health and well-being of every member of our community.

METU commits to the fulfilment of its obligations regarding the implementation of prohibitions and taking institutional measures in accordance with the Law on the Prevention of Harms of Tobacco Products (4207/2008) (http://sustainablecampus.metu.edu.tr/en/policies).

HEALTH OUTREACH

Current collaborations with health institutions

Collaboration regarding development and commercialization of innovative health products and projects, https://www.baskent.edu.tr/tr/haberler/saglik-ve-egitim/turkiyenin-onde-gelen-universitelerinden-odtu-ve-baskent-saglik-sektoru-icin-ortak-hareket-edecek/5 with Başkent University Hospital.

"New Openings in the Medical Device Industry" in collaboration with the Ministry of Health, Turkish Pharmaceuticals and Medical Devices Institution
https://www.titck.gov.tr/haber/tibbi-cihaz-sektorunde-yeni-acilimlar-toplantisi-25112019163433

Health outreach programs

METU Community engages in various sorts of ad hoc and programmed outreach programs and projects in the local community to improve health and wellbeing in the wider community. Ad hoc programs include faculty participation in and organization of seminars on nutrition, sports, exercise, and other health and well-being related topics. Programmed activities include annual student society events, student volunteering programs listed below:

- Information on how to communicate to individuals with leukemia, autism, down syndrome, and cerebral palsy LODOS Student Society
- (http://lodostoplulugu.com/)
- Talking About Disability METU without Disability Student Society (https://eot.metu.edu.tr/)

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

https://sdgs.un.org/goals/goal4

OUTREACH

Lifelong learning access policy

METU Strategy Plan Objective 12 concerns the sharing of METU's accumulation of knowledge and experience for the wider community's benefit. This involves making public activities widespread, and accessible for all regardless of gender, race and income level (Strategic Goal 12.1) and creating free online content accessible by all (Strategic Goal 12.3).

METU Strategic Plan is accessible at http://sp.metu.edu.tr/system/files/odtu_sp_2018_11_01.pdf

OPEN METU

Institutional academic archives are structures that enable universities to compile, store and protect their knowledge resources on a digital platform, allowing open access in line with copyright laws and international standards. These structures enable institutions to manage their own knowledge resources, evaluate their potential, and contribute towards interdisciplinary studies by increasing academic visibility.

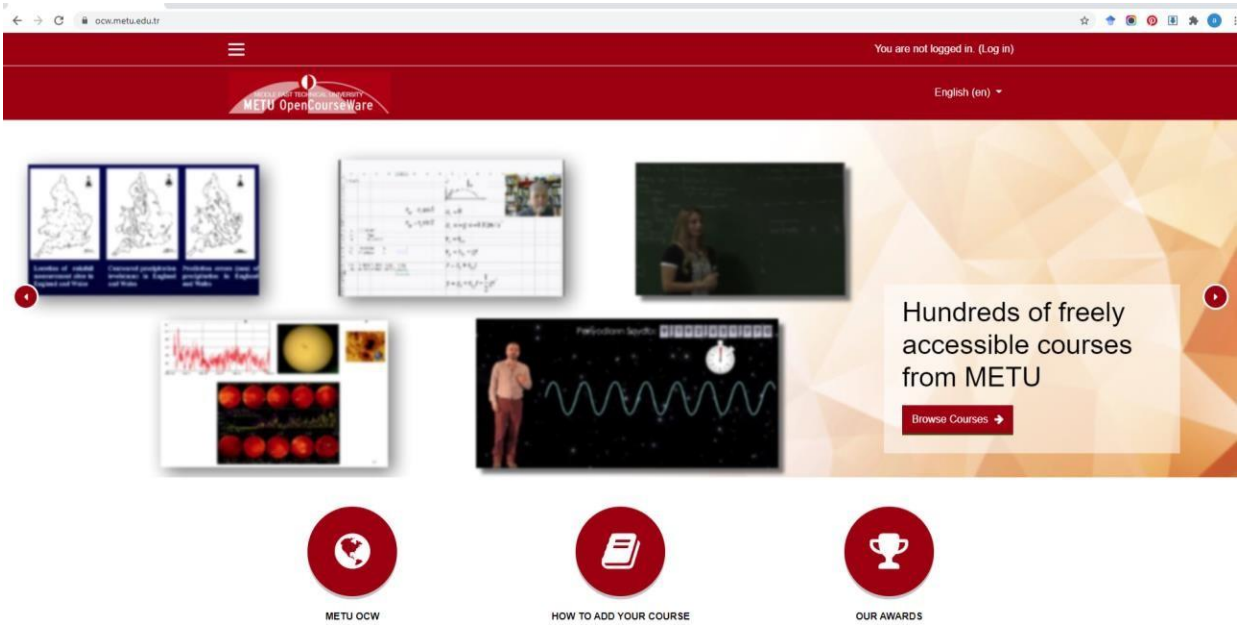
Allowing researchers open access to the scientific knowledge produced by others, within an ethical framework, is of great importance for scientific progression. The open access system is a structure that supports and facilitates one of the primary purposes of universities: the provision on national and international platforms of new products and services resulting from their research. OpenMETU, created within this scope, aims to provide Internet access to the scientific information produced by METU, without any financial, legal or technical obstacles.

The METU postgraduate electronic thesis archive has provided open, digital access to all postgraduate and doctoral theses completed since its launch in 2003 by the Department of Library and Documentation. The METU postgraduate electronic thesis archive system is the first open access system in our country. OpenMETU, enriched with its research data, software products, articles, book chapters, conference papers and presentations, is built on this structure.

https://open.metu.edu.tr/about

Open Courseware

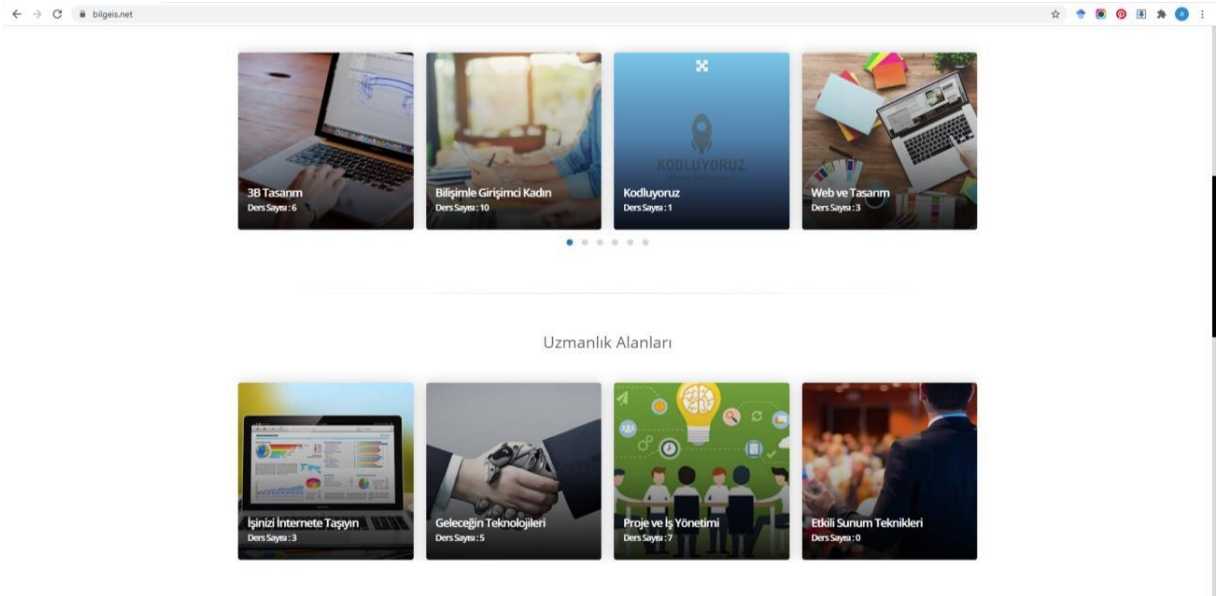
METU offers free online courses under a number of headings. Courses are available at https://www.youtube.com/c/METUOpenCourseWare/playlists free of charge.



Screenshot from https://ocw.metu.edu.tr/

Bilge-İş Project

Bilge-İş is a self-paced learning platform implemented with support from the European Union and the Republic of Turkey. As of October 17, 2017, the project has been successfully completed and currently continues to offer online courses. By the beginning of 2020, there were 162 thousand registered users to the platform, and a total of 101 thousand electronic certificates are awarded to those who successfully complete the modules.



Screenshot from https://bilgeis.net

Public events (lifelong learning)

The Continuing Education Center (CEC) held a total of 42 seminars in 2023, 26 of which were contracted and 16 were open to general participation, reaching 3,286 people. The list of open seminars is presented below:

Id	Title	Department	Duration (Hours)	Number of participants
1	Welding Engineering Training	Continuing Education Centre	514	58
2	Teacher as a Leader of Change	Computer Education and Instructional Technology	3	70
3	Fundamentals of Modern Electrical Distribution Systems	Electrical and Electronics Engineering	12	50
4	Technology Innovation Management	Business Administration	24	26
5	Non-Destructive Testing	Continuing Education Centre	24	80
6	Blockchain Seminar	Informatics	4	450
7	Nursing Services Week	Computer Education and Instructional Technology	4	450
8	Aerospace Engineering Navigation Training	Aerospace Engineering	24	15
9	Welding Engineering Training	Continuing Education Centre	514	41
10	Adult Education and Developmental Psychology	Computer Education and Instructional Technology	3	40
11	Every Child Can Learn; But How?	Computer Education and Instructional Technology	3	40
12	Every Child Can Learn; But How?	Computer Education and Instructional Technology	3	40
13	Trainer Training	Computer Education and Instructional Technology	4	20
14	Every Child Can Learn	Computer Education and Instructional Technology	4	4
15	Vibration Mechanics	Mechanical Engineering	12	12
16	Scientific Foundations of Learning	Computer Education and Instructional Technology	6	60
17	Customized Classroom Teaching Method	Computer Education and Instructional Technology	3	80
18	Instructional Design Development	Computer Education and Instructional Technology	12	30
19	International Military Diplomacy	School of Foreign Languages, International Relations	315	25
20	The Journey of Learning in the Mind – How Does Every Child Learn?	Computer Education and Instructional Technology	3	120

21	Quality in Mathematics Teaching: Singapore CPA Approach	Science and Mathematics Education	3	60
22	Internet-Based Certification Program for the Design and Inspection of Drywall Systems	Civil Engineering	30	60
23	Welding Training	Tübitak_Sage	40	20
24	Welding Training	Tübitak_Sage	40	20
25	Certification Program on Process Awareness and Management in Mining	Mining Engineering	24	15
26	Learning	Computer Education and Instructional Technology	6	30

METU Center for Society and Science also hosts numerous visitors' activities throughout the year. Activities in the exhibition area are carried out in 5 different venues. These; "Science and Technology History Exhibition (BTTS)", "Classic Automobile Exhibition (KOS)", "Science Center (BM)", "Science Workshops (BA)" buildings and "Open Air Exhibition (AHS)". https://tbm.metu.edu.tr/

METU Center for Society and Science also hosts numerous visitors' activities throughout the year. The following activities were carried out in 2023:

- Throughout January-June 2023, primary and secondary school groups with appointments were hosted in the TBM Exhibition Area for various activities, five days a week.
- A "Metaverse" themed article was prepared for the METU magazine issue titled "Are We the Ones Who Couldn't Be Digitized? Is Humanity Moving into the Digital Universe?" and submitted to the relevant unit (05.01.2023).
- Activity packages for school groups were prepared and presented to students for the 2023 Spring Semester (10.03.2023).
- Scientific activities were provided to 188 students from Anfa Schools by the METU İlayda Student Community, aimed at supporting students in earthquake-affected regions (March 21 - April 12, 2023).
- A student group from ABC Schools visited the TBM Exhibition Area, and their questions were answered during the visit (14.04.2023).
- Announcements and visuals for the National Sovereignty and Children's Day celebrations were shared on the center's website and social media accounts (25.04.2023).
- A science workshop was held for 6th-grade students during the "Being a Scientist" event organized by the METU Development Foundation Schools (26.04.2023).
- As part of the METU Academic Development (AGEP) Program, TBM Exhibition Area was visited by METU faculty members under the coordination of Vice Rectors Prof. Dr. Ömer Delialioğlu and Assoc. Prof. Dr. Bahar Öz (28.04.2023).
- The National Sovereignty and Children's Day was celebrated with scientific activities at the Center for Society and Science (TBM) (29.04.2023).
- A nature trip was organized with METU Faculty of Education students as part of the "Science Teaching Methods II" course (10.05.2023).
- METU and TÜBİTAK officials visited the TBM Exhibition Area as part of the KARDAN Project, supported by TÜBİTAK 4005, and various activities were carried out (May 11-12, 2023).
- The "3D Modeling with Code Blocks" event was held (May 16-18, 2023).

- The "Anatolian Planet Traveler" competition was held at the TBM Exhibition Area (July 20-23, 2023).
- Three representatives from Koç University VE-KAM were hosted at the TBM (03.08.2023).
- Various activities were held at the Çam Silo Building as part of the Summer Science School (August 21-25, 2023).
- Four works were contributed to the "Independence or Death! On the Road to the Republic" exhibition organized by Koç University VE-KAM, Çankaya Municipality, and the Collectors Association (29.09.2023).
- As part of the "Rector's Lecture Series," retired NASA astronaut Dorothy Marie "Dottie" Metcalf-Lindenburger gave a seminar titled "Launch Your Big Dreams" (02.10.2023).
- International participants were hosted in the TBM Exhibition Area during the International Design Factory Week (IDFW) (October 2-6, 2023).
- Various activities were organized with METU students as part of the Community Service course (10.10.2023).
- The TBM Fall Term "Opening Event" was held (13.10.2023).
- A workshop event organized by LEGO was held at the TBM Training Center (16.10.2023).
- TBM personnel attended the "Basic Occupational Health and Safety" training organized by the METU Electrical Operations Department (17.10.2023).
- The lighting of sample buildings in the TBM Exhibition Area was updated (October 23-24, 2023).
- TBM personnel participated in the "Emergency Teams Training" held at METU (September 27-29 and November 11-12, 2023).
- A technical team consisting of TBM personnel conducted an inspection visit to the TBM Exhibition Area (24.10.2023).
- TBM personnel Lecturer Merve Aytekin Bircan attended the event organized by Zeiss, titled "New Trends in Advanced- Imaging in Microscopic Workflow" (28.11.2023).
- Maintenance of the lighting in the Classic Car Exhibition at the TBM Exhibition Area was completed (15.12.2023).
- Gazi High School and Ankara High School students were hosted at the TBM Exhibition Area as part of the 100th-anniversary celebrations of the Republic (19.12.2023).
- As part of the "Explain Your Research" competition, participating students presented their projects at the TBM (23.12.2023).
- TBM personnel participated in the "Earthquake Awareness Training Program" organized by the Presidential Human Resources Office (01.10.2023 – 31.12.2023).

(https://tbm.metu.edu.tr/).

Education outreach activities beyond campus

METU Science Communication Group (https://big.metu.edu.tr/) hoists several events including:

- METU Science Café (https://bilimkafe.metu.edu.tr/)
- Science meets Art (https://big.metu.edu.tr/bilim-ve-sanat-bulusuyor/)
- Household Science (*BIlimin en hali*) (*https://big.metu.edu.tr/bilimin-ev-hali/*) and (https://www.trtizle.com/belgesel/bilimin-ev-hali)
- Scientists Podcast series (https://big.metu.edu.tr/bilim-insanlari-podcast-serisi/)

Achieve gender equality and empower all women and girls.

https://sdgs.un.org/goals/goal5

Policy for women participation

METU has a policy addressing women's applications, acceptance/entry, participation and progress at the university:
https://citob.metu.edu.tr/system/files/odtu_toplumsalcinsiyetesitligi_ilke_ve_stratejiler_belgesi.pdf

https://ak.metu.edu.tr/tr/system/files/metu-gep_2021.pdf

The application and acceptance rate of female students to graduate programs are measured and recorded by respective programs and institutes. The success and completion rate of all students are also tracked in accordance with the METU ACADEMIC FREEDOM, INTEGRITY, INCLUSIVENESS and EQUALITY Policy (http://sustainablecampus.metu.edu.tr/en/policies).

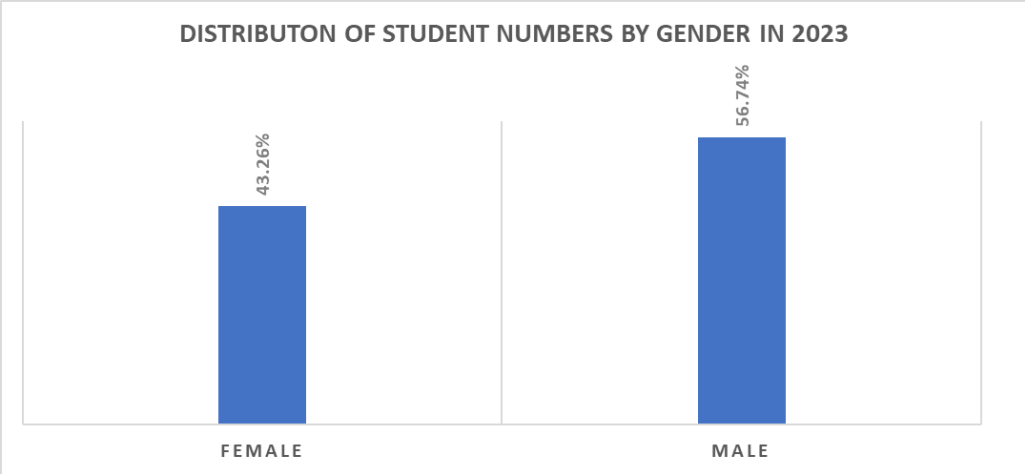
METU Institutional Development and Planning Office tracks women's likelihood of graduating compared to men's, to warn the relevant units and administration for any significant gaps. The data is shared in the institutional reports (in Turkish) at http://kgpo.metu.edu.tr/tr/stratejik-ve-mali-yonetim-belgeleri.

METU provides women's access schemes in the form of mentoring and scholarships. The alumni network (https://odtum.network/) as managed by the Alumni Office (https://mezun.metu.edu.tr/) helps students to connect to more experiences alumni to provide mentorship (https://odtumist.org/burs/mentorluk/)/ and https://ogem.metu.edu.tr/.

Women's application in underrepresented subjects

METU encourages applications by women in subjects where they are underrepresented through ongoing collaborations with different stakeholders including European Union (https://www.youtube.com/watch?v=UT7ZPohxSZU), community groups (https://www.instagram.com/p/CGHqEJRH6DX/) and university outreach in the form of promotion of programs where women are underrepresented with a focus on gender prejudice.

Proportion of women receiving degrees



Some of the events organized

METU GUNAM Organizes Basic Training on Gender Equality for Personnel

On Monday, November 27, 2023, a "Basic Training on Gender Equality" was organized for METU personnel. This training was conducted as part of the activities carried out under METU-GUNAM's Gender Equality Plan (GEP).
https://www.instagram.com/odtugunam/p/C0JnzzGNDtf/?img_index=4

TALK: "Law No. 6284; Legal Protection Against Violence Against Women"

A talk titled "Law No. 6284; Legal Protection Against Violence Against Women," organized by the METU Alumni Association's Gender Equality Commission, was held on Saturday, April 29, 2023, at 14:30 in the Eymir Hall of the Vişnelik Facility.

Women Power: Celebrating the Role of Women in Business, Sports, Culture, and Arts

The "Women Power" event, organized by the METU Business Club, was held to highlight the role of women in the fields of business, sports, culture, and arts. The event brought together successful executives, entrepreneurs, athletes, and artists, and took place through panels and sessions on December 24, 2023, at the METU Faculty of Economic and Administrative Sciences (FEAS) B Building.

https://www.instagram.com/metubiz/p/C1Mg7i_N2wM/

Maternity and paternity policies

Maternity and paternity policies are regulated by relevant laws, which does not allow public universities (as state institutions) to exercise any practice outside the law. Civil Servants Act 657 allows for a 16-week maternity leave and the Labor Law 4857 Article 35 allows for a 10-day paternity leave.

The application procedure for maternity and paternity leave can be accessed at https://pdb.metu.edu.tr/tr/dogum-izni-islemleri/.

Childcare facilities

METU provides paid childcare facilities for students, staff and faculty. The website of METU Pre-school is accessible at https://yuva.metu.edu.tr/

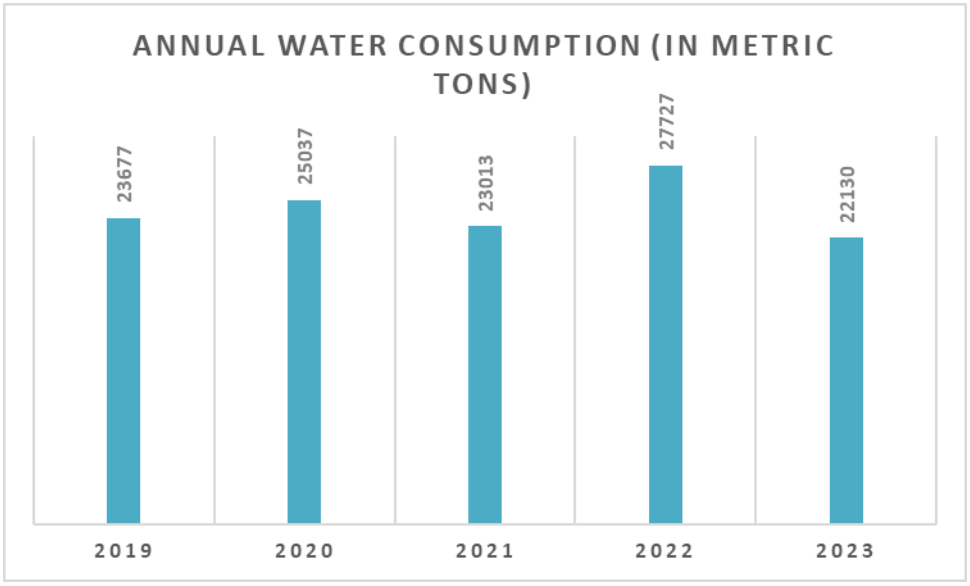
Women's mentoring schemes

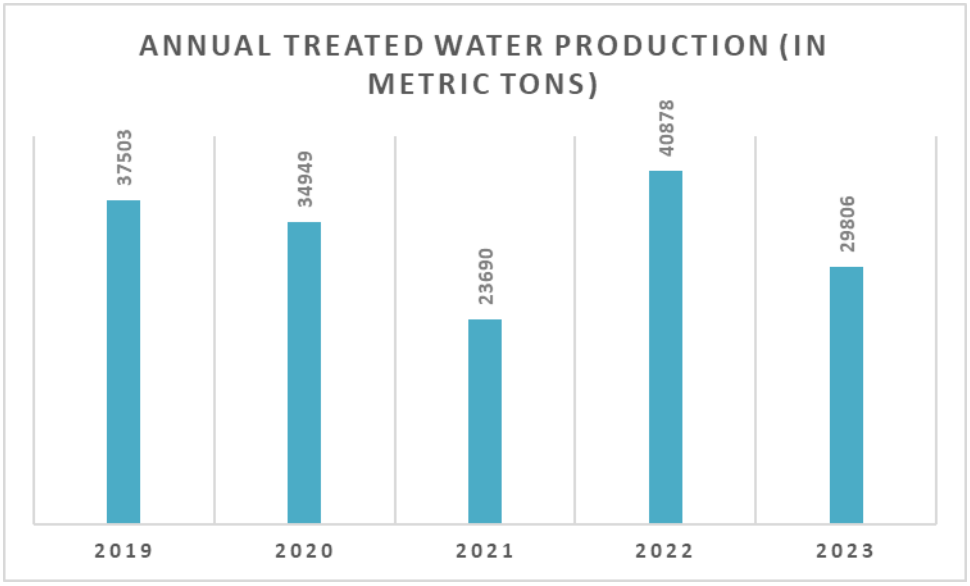
METU provides women's access schemes in the form of mentoring and scholarships. The alumni network (https://odtum.network/) as managed by the Alumni Office (https://mezun.metu.edu.tr/) helps students to connect to more experiences alumni to provide mentorship (https://odtumist.org/mentorluk/) and https://ogem.metu.edu.tr/.

Ensureavailabilityandsustainablemanagementofwaterandsanitationforall

https://sdgs.un.org/goals/goal6

On-Campus water usage and care

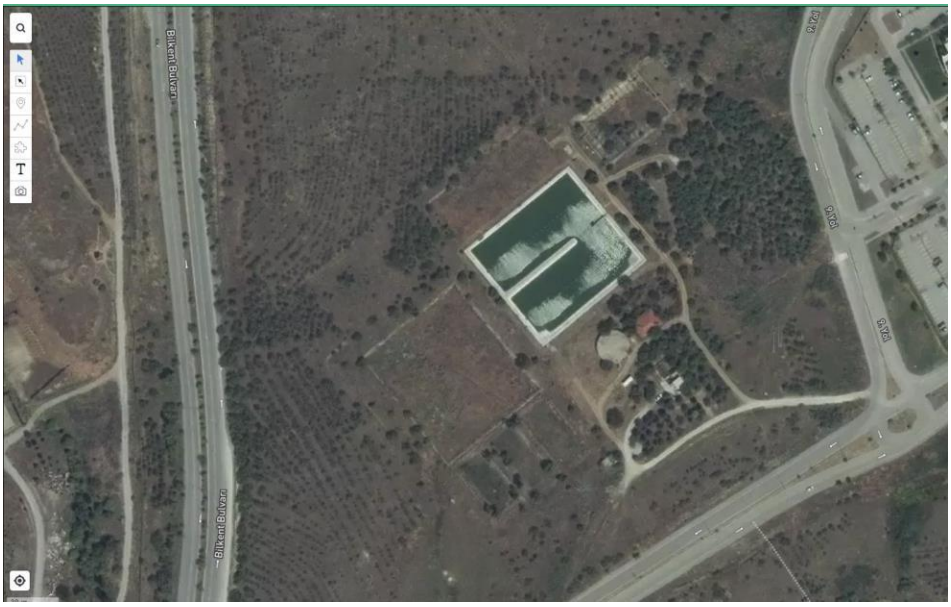




Wastewater treatment

Municipalities Law No. 5216 dictates municipalities to undertake sewerage services for all those within their boundaries. The sewerage in METU is treated technically for reuse in the university's own facilities than transferred to Ankara Water and Sewerage Authority's (ASKI) infrastructure to whereby a conventional activated sludge process is employed.

ASKİ, Conventional activated sludge process, Ankara (http://www.aski.gov.tr/TR/ICERIK/Atiksu-Aritma/30).



Water Recycling Plant (taken from Google Earth)

Water reuse policy

As part of the METU Platform for Advanced Research on Renewable Energy, Ecosystem and Sustainability (YESAP) study (BAP-08-11KB2014K120600-2)

- ***Rainwater Management:*** With the employment of Stormwater Management Model (SWMM) the potential use of green roofs, rain barrels (for rainwater harvesting), rain gardens and permeable concrete (on roads and parking lots), a plan to prevent rainwater runoff was formulated.
- ***Water management:*** The water for Ankara Campus is exclusively sourced from three wells near Lake Eymir. As a pilot application, the wastewater of METU Teknokent and the lodgments are refined in membrane facilities within the campus to use for irrigation.

Recycled water used in irrigation

Mediterranean stakeholders come together for waste-free and clean oceans

On 12 December 2023, METU Institute of Marine Sciences (METU DBE), hosted by Mersin Chamber of Commerce and Industry (MTSO), with the contributions of Mersin Metropolitan Municipality, Mersin Chamber of Shipping (MDTO) and Mersin Economic Platform, organised the 'Workshop on the Establishment of a Mediterranean Hub in Turkey' to support the objectives of the Horizon Europe Oceans and Waters Restoration Mission on clean seas and oceans. The workshop was attended by nearly 100 participants, including representatives from academia, decision-makers, non-governmental organisations, marine and maritime sectors. In the event, national and international practices for the prevention and elimination of pollution in the Mediterranean were presented.

https://haber.metu.edu.tr/en/2023/12/mediterranean-stakeholders-come-together-for-waste-free-and-clean-oceans/

The WATER4ALL: Experts Will Be Trained for the Sustainable Management of Water

Sustainable Water Management PhD Program, led by İzmir Institute of Technology in partnership with Gebze Technical University, Istanbul Technical University, and Middle East Technical University (METU), was submitted in February 2023 under the HORIZON-MSCA-COFUND-2022 call and has been granted support by the European Commission and TÜBİTAK. The program aims to train PhD experts through an interdisciplinary, intersectoral, and international approach to address the critical issue of sustainable water management. It will provide 20 PhD students with scholarships for 48 months, covering education, research, and travel expenses, with the support of 19 supervisors from various fields at İYTE, İTÜ, ODTÜ, and GTÜ. Strengthened by short-term visits to leading industrial and research institutions in Turkey, Europe, and the USA, the program offers students opportunities to gain both international and intersectoral experience.

Suyun sürdürülebilir yönetimi için uzmanlar yetiştirilecek

Proje paydaşları arasında GTÜ'nün de bulunduğu "Sürdürülebilir Su Yönetimi Doktora Programı" projesi Avrupa Komisyonu ve TÜBİTAK tarafından destek aldı.

TÜBİTAK DESTEK VERİYOR

2023 yılı Şubat ayında Marie Sklodowska-Curie Aksiyonları kapsamında HORIZON-MSCA-COFUND-2022 çağrısına İzmir Yüksek Teknoloji Enstitüsü (İYTE) yürütücülüğü ve Gebze Teknik Üniversitesi(GTÜ), İstanbul Teknik Üniversitesi ve Ortadoğu Teknik Üniversitesi ortaklığında başvurusu gerçekleştirilen WATER4ALL: Sürdürülebilir Su Yönetimi Doktora Programı projesi Avrupa Komisyonu ve TÜBİTAK tarafından desteklenmeye değer bulundu.

ARAŞTIRMA KURUMLARI ZİYARET EDİLECEK

Projenin amacı, çağımızın en önemli sorunu olan suyun sürdürülebilir yönetimi için interdisipliner, inter-sektörel ve uluslararası bir yaklaşımla doktoralı uzmanlar yetiştirmektir. Bu proje kapsamında 20 doktora öğrencisine 48 ay boyunca eğitim, araştırma ve seyahat için burs imkanı sağlanacaktır. Programa İzmir Yüksek Teknoloji Enstitüsü, İstanbul Teknik Üniversitesi, Orta Doğu Teknik Üniversitesi ve Gebze Teknik Üniversitesi'ndeki farklı disiplinlerden ve çalışma alanlarından toplam 19 supervizör destek vermektedir. Program ayrıca Türkiye, Avrupa ve Amerika Birleşik Devletleri'ndeki önde gelen endüstri ve araştırma kurumlarının kısa süreli ziyaret desteğiyle güçlendirilmiştir ve öğrencilere inter-sektörel ve uluslararası deneyim kazanma fırsatı da sağlayacaktır.

OKU ZİYARETLERİ YAPILACAK

Water4All Doktora Programı yapısı, sürdürülebilir su yönetiminin farklı açılarını dikkate alacak şekilde farklı disiplinlerin (çevre bilimleri ve mühendisliği, malzeme bilimi, uzaktan algılama/sensör teknolojileri, enerji sistemleri mühendisliği, şehir ve bölge planlama vb.) işbirliğini merkezine alarak modüller halinde tasarlanmıştır. Öğrenciler akademik eğitimlerinin yanı sıra, ortak dersler modülü çerçevesinde döngüsel ekonomi, sürdürülebilirlik, açık erişim, iletişim ve sunum becerileri, cinsiyet eşitliği, girişimcilik, proje yönetimi ve fikri mülkiyet hakları ile ilgili eğitimlere de katılacaktır. Proje çıktılarının yayılımı, doktora öğrencilerinin çalışmaları hakkında bilgi verecekleri düzenli olarak düzenlenen seminerler ile tüm doktora öğrencileri, akademik danışmanlar, eş danışmanlar, endüstri mentorları, ve sektör temsilcilerini bir araya getirmek için her yıl düzenlenecek bir sempozyum ve okul ziyaretleri ile sağlanacaktır. GTÜ Kimya Mühendisliği Bölümü'nden Prof. Dr. Mehmet Melikoğlu, Çevre Mühendisliği Bölümü'nden Prof. Dr. Alireza Khataee, Prof. Dr. Melek Özkan, Dr. Öğr. Üyesi Emel Topuz ve Dr. Öğr. Üyesi Derya Ayral Çınar supervizörlüğünde toplam 4 doktora öğrencisi, bu program kapsamında desteklenecektir.

https://www.gercekkocaeli.com.tr/d/87145/suyun-surdurulebilir-yonetimi-icin-uzmanlar-yetistirilecek

Sea and Climate School

METU Centre for Climate Change and Sustainable Development and Institute of Marine Sciences, in cooperation with Mersin Metropolitan Municipality, have initiated a regular education series for children to better and accurately understand climate change and its impact on the seas.

In the trainings given to primary and secondary school students by expert lecturers, research assistants and young researchers of METU Institute of Marine Sciences, it is aimed to raise awareness on issues such as climate change, human-induced global warming, climate change and global warming, especially to raise and protect marine awareness in children, to raise marine awareness in children and to approach the planet they live on with love.

https://cumhuriyetim.metu.edu.tr/tr/iklim-ve-deniz-egitimleri

METU Discovers Clean Deep Waters in the Mediterranean

The Middle East Technical University (METU) Institute of Marine Sciences conducted a comprehensive study in the Mediterranean using the Sea Explorer glider device, provided by Türkiye İş Bankası. The device participated in one of the research expeditions led by METU's DEKOSİM center, collecting water column data over 20 days and traveling 12 times between Turkey and Cyprus, measuring depths of up to 1000 meters. During the research, a water mass called the Levant Intermediate Water, which cools at the surface and sinks to deeper levels, was detected, offering valuable insights into the impact of climate change on ocean currents and ecosystems. The study also addressed the increasing pollution in Mersin Bay, noting that contamination levels in the region are approaching those of the Marmara Sea, requiring urgent action.

ODTÜ araştırdı, Akdeniz'in derin suları temiz çıktı

ODTÜ Deniz Bilimleri Enstitüsünün kullanımına sunulan Deniz Kaşifi adlı glider cihazı Akdeniz'deki ilk çalışmasını tamamladı. Derin denizlerde kapsamlı ölçüm yapan cihaz, Akdeniz'de mayıs ve haziran aylarında 20 gün boyunca veri topladı.

ODTÜ Deniz Bilimleri Enstitüsünün kullanımına sunulan Deniz Kaşifi adlı glider cihazı Deniz Kaşifi'nin Akdeniz'de elde ettiği verilerle ilgili bilgi veren ODTÜ Deniz Bilimleri Enstitüsü Müdürü Prof. Dr. Barış Salihoğlu, Deniz Kaşifi cihazının en önemli özelliğinin sürekliliği olduğunu belirterek, "Derin denizde ölçüm yapmak için gemi kullanmak zorundasınız ama bunun sürekliliği olmuyor. Bir noktada ancak bir an bulunabiliyorsunuz ve gemi hareket ederek çalışmalarına devam ediyor. Kaşif, 12 kez Türkiye ile Kıbrıs arasında benzer bir rota üzerinde sürekli gidip geldi ve ondülasyon yaparak su kolonunu 1000 metreye kadar taradı. Bu bizim için çok değerli bir veri oldu." dedi. Cihazın, Akdeniz'deki Türk kara sularında, Türkiye ile Kıbrıs arasında ilk kez kullanıldığını bildiren Salihoğlu, söz konusu bölgede bazı dip akıntıları ve yapısını bilmedikleri su kütleleri bulunduğunu, iklim değişikliğinin buralardaki etkisini anlamaya çalıştıklarını, incelemeleri sırasında "Levant orta suyu" olarak isimlendirdikleri yüzeyde soğuyarak dibe batan bir su kütlesini de tespit ettiklerini kaydetti.Salihoğlu, şöyle devam etti: " 'Ara su' dediğimiz suyun geçen kış koşullarında oluşmuş olduğunu gördük. Bu konuda endişeliydik, gelişen kış koşulları ve artan sıcaklıklarla bu tür sular oluşmuyor ve ekosistem üzerinde ters etkileri var. Değişen iklimle akıntı sistemleri değişebiliyor." Ara tabaka suyun kaybolmamasının umut verici olduğunu dile getiren Salihoğlu, yüzey suyu sıcaklıklarında bu yıla özgü bir artış olmadığına, buna rağmen genel olarak ciddi artışların devam ettiğine dikkati çekti. Salihoğlu, "İklim değişikliğinin ciddi etkilerinin yansımasını anlamamız için daha fazla çalışmaya ihtiyacımız var fakat ilk başta gördüğümüz Akdeniz'in derin suları şu anda yapısını koruyor. Derin sularda kısmi sıcaklık artışları görüyoruz ve levant ara suyu oluşumlarında bazı azalmalar tespit ediyoruz ama buna rağmen bu ara suyu oluşumlarını gözlüyoruz. Beklediğimiz yapıyı şu an görmüş durumdayız ama yüzeydeki iklim etkilerinin derinlere yansımasını takip etmemiz gerekiyor çünkü derinlerde olacak değişimler bütün ekosistemi altüst edecek." dedi.

Dr. Barış Salihoğlu

Mersin Körfezi'ndeki deniz kirliliğine değinen Salihoğlu, "Açık denizde bu kirlilik az, Kıbrıs'a yaklaştıkça daha da az. Mersin Körfezi'ndeki kirliliğinin etkileri bölgemize yayılmakta. Körfez alarm veren bir bölge, bir an önce bunu durdurmamız lazım. Gerek şehir deşarjları gerekse de tarımsal faaliyetler bölgeyi kirletiyor. Neredeyse Marmara'daki kadar kirlilik bölgede hakim." ifadelerini kullandı. **(AA)**

https://www.trthaber.com/haber/cevre/deniz-kasifi-akdenizde-iklim-degisikligini-inceledi-derin-sular-yapisini-koruyor-779124.html

Nature's water, sound and breath photo exhibition

METU Alumni Association has organised this exhibition in order to contribute to the preservation of Lake Eymir and the surrounding forested and rural areas as well as METU Forest and Steppe to remain natural, to protect them against the construction attempts that have come to the agenda many times so far and are likely to come in the coming days, and to contribute to the strengthening of this awareness by spreading it widely.

https://kultursanat.cankaya.bel.tr/etkinlikler/odtu'de-doganin-suyu-sesi-nefesi-fotograf-sergisi

International Conference on Turkey's Contribution to the UN Ocean Decade

The United Nations Ocean Decade is a framework supporting the 2030 agenda. This framework aims to improve the management of ocean and coastal resources, develop research programmes and observation systems, and ensure coordination of marine spatial planning and marine risk reduction. Within the scope of this framework, 'International Conference on Turkey's Contributions to the UN Ocean Decade' was organised in 2023 under the coordination of METU Institute of Marine Sciences by a committee consisting of leading research and educational institutions of Turkey, including our Ministries.

https://ims.metu.edu.tr/tr/slayt/turkiyenin-bm-okyanus-yilina-katkilari-konferansi

Cooperation between İşbank and METU for the seas

İşbank and Middle East Technical University (METU) have entered a cooperation to support scientific and academic studies on life in our seas. Within the scope of the cooperation, which is of great importance for scientists, academics and researchers conducting research on the seas, İşbank offered the unmanned underwater glider device called 'Deniz Kâşifi', which is produced in France and will be used for the first time in our country, to the use of the Institute of Marine Sciences at METU. The device will collect data to identify, monitor and take necessary precautions and develop solutions for the problems that need a lot of data, especially the negative effects of climate change on the seas. 'Sea Explorer' will guide the scientific world in the sustainability of the ecosystem in our seas, especially in the protection of the health of our seas, prevention and elimination of pollution, protection of biological diversity with the data it collects. The results obtained from the data collected by the device will be used by the entire scientific world, academicians and decision-makers in our country who conduct research on the seas.

https://basinda.metu.edu.tr/2023-01-04/3319649

https://www.isbank.com.tr/bankamizi-taniyin/is-bankasi-ve-odtuden-denizler-icin-isbirligi#:~:text=%E2%80%8B%E2%80%8BT%C3%BCrkiye%20%C4%B0%C5%9F%20Bankas%C4%B1,insanlar%C4%B1n%C4%B1n%20ihtiya%C3%A7%20duydu%C4%9Fu%20verileri%20toplayacak

Promoting conscious water usage

Between 2014-17, within the framework of METU Platform for Advanced Research on Renewable Energy, Ecosystem and Sustainability (YESAP), a study was carried out (BAP-08-11KB2014K120600-2) to evaluate METU's environmental performance an investigate the application possibilities for rainwater, sewerage and solid waste management.

Rainwater Management: With the employment of Stormwater Management Model (SWMM) the potential use of green roofs, rain barrels (for rainwater harvesting), rain gardens and permeable concrete (on roads and parking lots), a plan to prevent rainwater runoff was formulated.
Water management: The water for Ankara Campus is exclusively sourced from three wells near Lake Eymir. As a pilot application, the wastewater of METU Teknokent and the lodgments are refined in

membrane facilities within the campus to use for irrigation.
The installation of smart water meters: In order to uncover water consumption and losses, smart water meters were installed in a number of locations, including dormitories, and water consumption was actively monitored throughout the life of the project. The findings revealed that behavioral and infrastructural modifications are necessary to achieve water management within the campus.

Through the use of well water extracted from Bursal wells and Lake Eymir, which became usable as a result of METU Limnology Lab's bio-manipulation program explained below, METU helps off-campus water conservation.
METU Ankara Campus hosts Lake Eymir, which is a part of Eymir - Mogan Watershed consisting of two consecutive lakes along the line of Ankara – Hatip Stream. Up until 1997, Lake Eymir was largely polluted by the wastewater from the town of Gölbaşı, located just outside Ankara. With the collaboration of Ankara Water and Sewer Authority and METU Limnology Laboratory, the ecological monitoring of the watershed has begun and a facility to treat wastewater was installed. For the healing of the aqua system of Eymir, a plan involving biomanipulation (eliminating the unwanted alien species from the lake) has been initiated.

https://www.metu.edu.tr/system/files/eymir_golu.pdf

"Mogan-Eymir Lake Sub-Basin Protection Action Plan" is still effective in collaboration with the Ministry of Agriculture and Forestry General Directorate of Water Management. (https://www.tarimorman.gov.tr/SYGM/Sayfalar/Detay.aspx?SayfaId=7)

Cooperation on water security

The following are the examples of ongoing projects, on water security.

Flow Estimation and Basin Optimization Model

The Evaluation of Water Energy Food Nexus in Sakarya Watershed
Paralleling and Optimizing Hash Function Algorithms

Ensure access to affordable, reliable, sustainable and modern energy for all

https://sdgs.un.org/goals/goal7

University measures towards affordable and clean energy

METU 2023-27 lays the groundwork for renovations in the existing building stock and the construction of new buildings.

Smart building applications are embraced in the renovations and new constructions. The construction of METU Campus began in the late 1950s, becoming a landmark of modernist architecture in the years to come. The buildings in the original plan are conserved, while getting equipped with energy efficient applications, such as LED lighting fixtures, automatic climate control systems, motion sensor operated lights, energy efficient electronics (computers, monitors and accessories) and appliances (A/C units, dishwashers etc.).

New buildings are designed and constructed in accordance with smart building principles to save energy. Shielding adjustments and the use of natural light indoors are most used elements, in addition to the use of energy efficient applications. The list of newest additions to METU Campus building stock are listed below.

Ayaslı Research Center:

http://www.ayasligroup.com/en/responsibility/odtu-ayasli-research-center

MATPUM

https://www.venesco.com.tr/odtu-matpum
http://www.emo.org.tr/ekler/60381704cad1744_ek.pdf?dergi=520%22%20target=

METU Yüksel Proje Auditorium:
http://www.arkiv.com.tr/proje/odtu-yuksel-proje-amfisi/10324

METU Faculty of Education Annex Building:
http://www.arkiv.com.tr/proje/orta-dogu-teknik- universitesi-egitim-fakultesi-ek-binasi/11319

METU MODSIMMER Building:
http://www.arkiv.com.tr/proje/odtu-modsimmer-modelleme-ve- simulasyon-arastirma-ve-uygulama-merkezi/1587

METU Research Center Building:

https://www.archdaily.com/980651/metu-research-center-eaa-emre-arolat-architecture

METU 2023-27 Strategic Plan, Goal 17.1 outlines the principles for renovation of existing buildings and construction of new ones.

The list of buildings with smart elements in METU Campus

No.	Name	Building Area (m^2)	No.	Name	Building Area (m^2)
1	YTM Matpum	2,000	11	Tasarım Fabrikası	1,216
2	Ayaslı Research Center	3,200	12	TAI AR-GE binası	4057
3	Matpum Annexe Building	1,100	13	Milsoft Building	7,300
4	Telekom Ar-Ge Binası	15,727	14	Yüksel Proje Auditorium	5,200
5	SATGEB	25,882	15	Faculty of Education Annex Building:	6,600
6	MET Tesisleri (A-B-D-E Blk-BİLİM)	40,336	16	Graduate Students Guest House	11,870
7	Titanyum Blok	6,587	17	İsa Demiray Dorm.	7,000
8	İkizler Binası	8,275	18	19th Dorm	14,000
9	Galyum Blok	13,968	19	Osman Yazıcı Guest House	2,500
10	Silikon Blok	10,300	20	METU MODSIMMER Building	10,500
21	METU Research Center	28,600			

METU 2023-27 Strategic Plan, Goal 17.3 outlines the principles for renovation of existing buildings.
METU SP 2023-27 is accessible at https://sp.metu.edu.tr/system/files/SP_2023-27-ENG.pdf

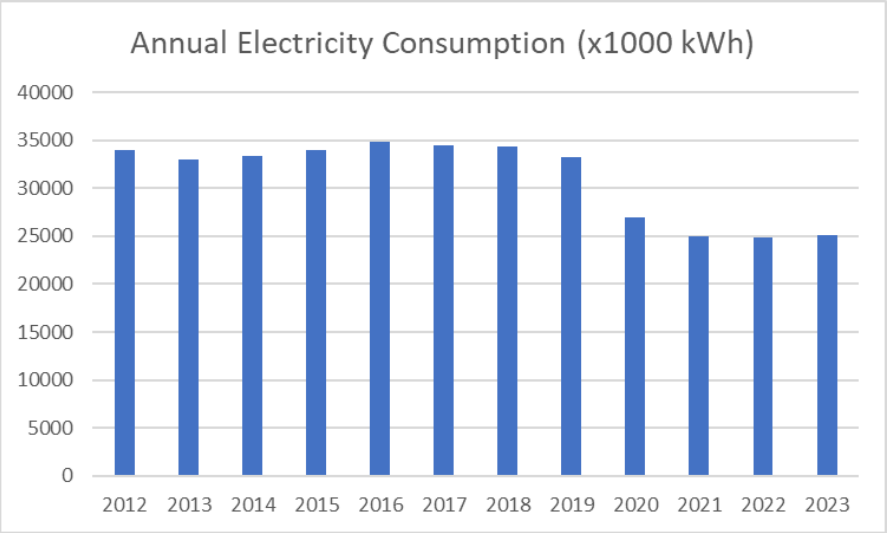
Carbon reduction and emission reduction process

METU 2023-27 Strategic Plan, Goal 17.2, aims to lower energy consumption, hence reduce the carbon footprint by altering the on-campus transportation system.

In METU, annual energy consumption is monitored and reduced by using energy efficient practices.

Electricity usage per year (in kilo watt hour)

Total Electricity Usage (All Locations) in 2012-2023 (Middle East Technical University, Turkey)



Energy wastage identification

The university regularly checks energy consumption levels at the campus level, and for individual buildings to identify where energy waste is possible. In addition to the plan to replace appliances, electronics and lighting fixtures for electricity consumption and the improvements made on building elements to reduce heat escape is performed on a regular basis.

Divestment policy

In order to reliance on coal and oil, METU has a divestment policy to use more environmentally friendly sources, notably gas, and renewable sources such as solar energy.

Middle East Technical University has solar energy applications (photovoltaics) on two buildings. One of them is located on the Ayasli Smart Building and has a total power of 75 kW. The other is a total of 5.5 KW panels on the roof of the Physics department.

For the 50kW part of the total of 75 KW panels in the Ayaslı building, real-time data can be tracked instantly via a website that is accessible within the campus.

In the "Photovoltaic Systems Test Platform" within the body of "ODTÜ-GÜNAM", 3 kW of 5.5 kW is given directly to the Physics building network while 2.5 kW part is for testing, and the energy produced by them

is given to the load unit of electronic analysis systems. Analysis results and evaluations are announced to the world of science through international articles.

Solar Panel (METU Department of Electrical and Electronics Engineering Building)

Solar Panel (METU GUNAM)

Activities to ensure access to affordable, reliable, sustainable and modern energy for all:

Energy Usage and Green Public Transportation in Future Smart Cities: An Innovative Teaching Program for Students, Stakeholders and Entrepreneurs (EUGPUT)

Green public transportation is a multidisciplinary subject which focuses designing the unimodal or intermodal public transportation system in the cities, energy usage in these systems, information systems to gather information related to possible passengers. Green public transportation is a common subject for all countries,

and this will be the most interesting technological area not only for developed countries but also developing countries. All cities will transform their traditional transportation systems to cutting-edge high technology transportation systems.

http://eugput.com/?page_id=48
https://tr.linkedin.com/in/eugput-project-41762a211
http://eugput.com/

OUTREACH: Energy and the community

Local community outreach

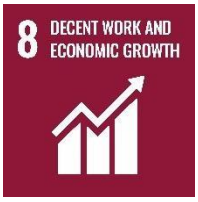
METU hosts two significant research centers excelling in renewable energy sources, collaborating with local, national and global stakeholders in conducting research and developing policies to disseminate the use of renewable energy sources.

1. **The Center for Solar Energy Research and Applications (GÜNAM)** is a multi-disciplinary center of excellence in solar energy science and technology. It has been supported by the Turkish Ministry of Development since 2009. With rich infrastructure and human capital, GÜNAM is the leading and most comprehensive national center in the development of solar energy technologies including photovoltaic, concentrating solar thermal, and cross cutting technologies such as high performance buildings, smart grids, and smart cities with a mission to be a global player in this field (https://odtugunam.org/).

2. **METU Center for Wind Energy (RÜZGEM / METUWind)** is established on 28 February 2011, funded by The Ministry of Development.
   METUWind is established with the vocation of becoming the center of attraction at the national and international level with its innovative and competent designs/accreditation activities as well as its scientific and technological research on the wind energy.
   METUWind is part of several national and international organizations. At the national level, METUWind has a membership of Renewable Energy, Eco-systems and Sustainability Research Platform of METU (YESAP), Turkish Wind Energy Association (TWEA/TÜREB) and Wind Energy Technologies Platform (RETEP). At the international level, METUWind takes part at the pioneering wind energy platforms in Europe such as the European Energy Research Alliance – Wind Energy Joint Program (EERA JP Wind) (associate member) and the European Academy of Wind Energy (EAWE) (full member) (https://ruzgem.metu.edu.tr/en)

METU Continuous Education Center (CEC) also offers a training program on wind energy titled "Wind Energy and Turbine Technologies" (https://sem.metu.edu.tr/egitim/ruzgar-enerjisi-ve-ruzgar-turbini-teknolojileri-temel-egitimi.html)

METU Sustainable Energy Group (METU-SEG) The Sustainable Energy Group at Middle East Technical University is focused on advancing the State-of-the-Art in Sustainable Thermal Energy Conversion Technologies. (http://seg.me.metu.edu.tr/index.html)



Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.

https://sdgs.un.org/goals/goal8

ACADEMIC FREEDOM, INTEGRITY, INCLUSIVENESS and EQUALITY Policy ensures inclusiveness and equality in employment practices (http://sustainablecampus.metu.edu.tr/en/policies).

Employment practice living wage

METU pays all staff and faculty the wage defined by the state. All the employees are paid at least a living wage, as dictated by the Civil Servants' Act (657) of 1965. (https://www.mevzuat.gov.tr/MevzuatMetin/1.5.657.pdf)

Employment practice unions

METU recognizes unions and labor rights (freedom of association and collective bargaining) for all, including women and international staff. The list of members and their respective unions are also made public: http://pdb2.metu.edu.tr/sendika-uye-listesi/

Employment policy on discrimination

METU has a policy on ending discrimination in the workplace based on gender. In 2017, Gender Equality Support and Sexual Harassment Prevention Unit (CİTÖB) was formed to raise awareness on gender equality, support equality in representation, and raise awareness of cases of gender-based violence, especially sexual harassment and assault, raise awareness and evaluate applications regarding these cases and support applicants.

The institutional policy in policy of non-discrimination against women (in Turkish) is accessible at:

https://citob.metu.edu.tr/system/files/odtu_toplumsalcinsiyetesitligi_ilke_ve_stratejiler_belgesi.pdf

Other bases of discrimination (age, religion etc.) are eliminated by Labour Law (4857) and Civil Servants' Act (657).

Employment practice equivalent rights outsourcing

METU has a policy on guaranteeing equivalent rights of workers when outsourcing activities to third parties: https://pdb.metu.edu.tr/4857-sayili-kanuna-tabi-calisan-personel-icin-maas-islemleri

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

https://sdgs.un.org/goals/goal9

METU fosters innovation through collaborative projects with the industry and public sector.

METU Teknokent

METU Teknokent was established in 2001 to bring together research institutions and industrial enterprises to cooperate towards research-and-development and innovative activities, engaging in knowledge and technology transfer. METU Teknokent hosts more than 450 companies (https://odtuteknokent.com.tr/tr/firmalar/tum-firmalar.php).

METU Technology Transfer Office (TTO)

Funded by TÜBİTAK 1513 Technology Transfer Offices Support Programme, METU Technology Transfer Office (METU-TTO) was founded to focus on university-industry collaboration. METU-TTO assumes a central position in delivering the output of R&D activity by METU researchers to the community's service. The execution of University-Industry Cooperation activities, management of intellectual property rights of created by the R&D activity of METU faculty, and their commercialization for both community's use and generation of income for further research are the main objectives of the unit. METU TTO focuses on three main strategies:

- To carry out activities to improve Technology Readiness Level (TRL) of innovations; for the lowest TRL Level innovations (TRL1), collaborations with small- and medium scale enterprises were given primary importance.
- To disseminate academic entrepreneurship among METU researchers by supporting them set up businesses towards further development and commercialization of innovations found in the METU TTO portfolio.
- The relationships with the institutions already collaborated through companies and TTO groups, new projects will be made more sustainable though new projects within the scope of internationalization.

Other Collaborations

Within the framework of the knowledge and competencies of the university, strengthening existing structures and creating new ones, the growth strategy focusing on technology-based entrepreneurship has been continued. In 2018, the activities and program such as YFYİ (Yeni Fikirler Yeni İşler), Animation Technologies and Game Development Center (ATOM), TÜBİTAK 1512 Individual Young Initiative Program (BİGG) TEKNOSTART, TeknoMENTORs program, Incubation Program and Investor-Entrepreneur meetings, Entrepreneurship and Innovation Platform are organized with increasing interest from participants. Growth Circuit—an accelerator program and investment company founded by METU Technopolis, aiding initial-phase technological investments within the Turkish entrepreneurship ecosystem, towards accessing to international markets. Growth Circuit Ventures is aiding technology start-ups with $ 25,000-250,000 investments, also establishing Turkey's first co-working space sponsored by Technopolis, Cozone,

within Technopolis Informatics Innovation Center (BİLİM) to host 350 members in a 2,300 square meter space. LABSOUT is a research based (intellectual property focused) startup accelerator, with the objective to help identify, develop, and speed up the commercialization of university-based intellectual property through commercialization by licensing the technology to the new startups established by the inventors.)

ASELSAN ACADEMY

In order to take advantage of university-industry cooperation with profound R&D implications; METU, ASELSAN and three Research Universities (Gazi University, Gebze Technical University and Istanbul Technical University) signed a Graduate Education Protocol in 2018.

The program entails cooperation not only with ASELSAN, but also among participating research universities towards contributing to our defense industry in the fields of technology and engineering. The number of graduate students participating in the ASELSAN Academy program are increasing with the heightened involvement of METU.

News

METU Teknokent launched the Education Technologies Incubation and Innovation Center (ETKİM).

EĞİTİMCİ GİRİŞİMLERİN 'TEKNOLOJİK' YUVASI

Eğitim ve oyunlaştırarak öğretme gibi konular üzerine yoğunlaşan ODTÜ Teknokent, Eğitim Teknolojileri Kuluçka ve İnovasyon Merkezi faaliyete geçirdi.

Teknolojinin gelişmesiyle birlikte eğitimde bu gelişime uygun bir yapıya kavuşmaya başladı. Tüm dünyada teknolojinin avantajları eğitime entegre edilerek öğrenme biçimlerinin de kolaylaşmasını sağlıyor. Özellikle küçük yaştaki çocuklar, geliştirilen teknolojik ürünlerin öğretilecek olguyu oyunlaştırmasıyla birlikte eğlenirken daha iyi şekilde öğrenebiliyor. Bu durumun bilincinde olan ODTÜ Teknokent ise eğitim, oyunlaştırarak öğretme gibi konularda çalışan girişimcileri, ODTÜ Teknokent bünyesinde kurulan Eğitim Teknolojileri Kuluçka ve İnovasyon Merkezi'ne (ETKİM) davet ediyor.

BU ALANDAKİ İLK TEKNOLOJİ ÜSSÜ

ETKİM, eğitim teknolojileri geliştiren firmalar için Türkiye'nin bu alandaki ilk üssü olacak. Teknolojik üs yapay zekaya dayalı veri analitiği ve ölçme, oyunlaştırma, sanal gerçeklik, blokzincir ve benzeri teknolojilere ev sahipliği yapacak. Eski adıyla ODTÜ TEKMER binası teknolojiye ev sahipliği yapması adına sıfırdan yapıldı ve ETKİM olarak kullanılacak.

Kuruluş çalışmaları ile ilgili detayları aktaran ODTÜ Teknokent Genel Müdürü Alemdar, merkezi, ODTÜ Teknokent, Milli Eğitim Bakanlığı ve KOSGEB ile "eğitim teknolojileri dikeyinde uzmanlaşmış bir kuluçka merkezi" olarak tekrar faaliyete geçirdiklerini anlattı.

KÜRESEL REKABET SAHNESİ

Merkezin, Türkiye'nin her yerinden girişimcilere açık olduğunu, girişimcilere "kuluçka hizmeti" sunacaklarını belirten Alemdar, "Burada, girişimcilerin sadece bilgisayarlarını alıp çalışabilecekleri, onun dışındaki ofis ihtiyacının büyük ölçüde karşılandığı bir ortam sunuyoruz" diye konuştu. Burada asıl ihtiyaç duyulanın girişimciler arası sinerjinin yakalanması olduğunu vurgulayan Alemdar, "Yani aynı acıları yaşayan, aynı yoldan giden girişimcilerin bir arada olmaları, onların da kapsamlı bir şekilde diğer startup'larla veya kendilerinden önce aynı yolu geçmiş startup'larla ve kurucularla tanışmalarını sağlıyoruz" değerlendirmesinde bulundu. Serdar Alemdar, özellikle eğitmenlerin dijital altyapı konusunda yetiştirilmesi için geliştirilecek içeriklerin önemine de dikkat çekti. Oyunlaştırılmış içeriklerle küresel rekabetteki ülke gücünün artabileceğini belirten Alemdar, son dönemde ROKETSAN'ın da üzerinde çalıştığı ciddi oyun projelerine de katkı sunacaklarını kaydetti. Alemdar, söz konusu projelerin geliştirilecek ürünlere geniş bir simülasyon alanı sağladığını ve savaş uçağı gibi eğitimlerin burada verilebileceğini ifade etti.

https://basinda.metu.edu.tr/images/basin/1845695491_0.jpg
https://basinda.metu.edu.tr/images/basin/1849838463_0.jpg

TraBTech, a technology company that develops implants used inside the body with 3D printers established in METU Teknokent, has received 1.3 million euros from EU funds for new implant materials to be developed in the field of orthopedics and pediatrics following a new investment.

3 BOYUTLU YAZICILARDAN ÇIKAN İMPLANTLAR

DÜNYAYA AÇILIYOR

ODTÜ TEKNOKENT'te kurulan 3 boyutlu yazıcılarla vücut içi kullanılan implant geliştiren teknoloji şirketi TraBTech kurumsal ve bireysel yatırımcılardan 6,6 milyon dolar; AB fonlarından ise 1,3 milyon avro destek aldı.

2013 yılında ODTÜ Teknoknent'te kurulan eklemeli imalat alanında ürün ve hizmetler geliştiren BTech iştiraki olan 3 boyutlu yazıcılarla vücut içine yerleştirilen yeni nesil implantlar geliştiren teknoloji şirketi TraBTech, kurumsal ve bireysel yatırımcıların katıldığı yatırım turuyla 6,6 milyon dolar değerleme üzerinden tohum yatırımı aldı.

Firma, alınan bu yeni yatırımın ardından ileri malzeme araştırmaları ve pediatrik uygulamaların da dahil olduğu, ortopedi ve pediatrik alanında geliştireceği yeni implant malzemeler için AB fonlarından 1,3 milyon avro destek sağladı.

İmplant endüstrisinde geliştirdikleri yeniliklerle kişiye özel ürünler üreten firma, ilk seri imalat ürünü olan kalça protezi TrabCup'ın ticarileşmesini sağlamayı, yeni geliştirilen ürünlerin regülasyon süreçlerinin tamamlanmasını amaçlıyor.

Kuntay AKTAY

DÜŞÜK MALİYETLİ KALİTELİ ÜRÜNLER

Medikal alanlarda vücut içi kullanımına sunulan implantlar savunma ve havacılık endüstrilerinde de kullanılarak teknolojinin getirdiği karmaşık yapıları tasarlayarak çözümlemeyi hedefliyor. TrabTech Yönetim Kurulu Başkanı Kuntay Aktay, medikal alanında geliştirilen ve sertifikalandırılan ürünlerin bir kısmını seri imal etmeyi planladıklarını aktararak, "Çok düşük maliyetle yüksek nitelikli malzemeleri üretmeye çalışıyoruz. Bunun yanı sıra havacılık ve sağlık alanlarında kullanılan işlenmesi zor olan titanyum maddesini toz hale getirerek yüksek katma değerli ürünlere dönüştürüyoruz" açıklamalarında bulundu.

YATIRIMLARLA DÜNYAYA AÇILIYOR

Aktay, yatırım turlarının sonra erdiğini belirterek, implant alanında bilgi birikimi ve tecrübeleri ile global alanda tanınırlığını artırmayı planladıklarını vurguladı. Aktay, "Bu yatırım sayesinde şirketimizin Almanya ve ABD'deki varlığını artırarak global bir oyuncu olma yolunda önemli bir adım atıyoruz. Teknik alandaki yetkinliğimizi global anlamda hem bir değere dönüştürmek hem de Türkiye ve şirketin dünyada söz sahibi olduğu alanlardan birisini ortaya çıkartmaya çalışıyoruz" dedi.

Dünya genelinde yaşanan gelişmeler ile üretim aşamalarında insansız çalışan geçmiş dönemlerde mümkün olmayan şeyler üretilen "karanlık fabrikalar" oluşturulduğunu vurgulayarak, "TraBTech olarak medikal alanda bazı ürünler için regülasyon süreçlerini tamamlayarak 6 ay içinde ürünlerimizi pazara sürmeyi hedefliyoruz. Bunlar vücutların içine yerleştirilen implantlar. Yeni nesil, daha başarılı, daha teknolojik implantlar. Global tarafta da bunların yaygınlaştığını görüyoruz. O tarafa doğru sürüklemeye çalışacağız. Burada başladığımız yeni biyomalzemelerin, tekniklerin işin içine girdiği bir yola girmiş olacağız" ifadelerine yer verdi

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METU establishes special technology network for 3 critical sectors

ÜÇ SEKTÖRE ÖZEL TEKNOLOJİ AĞI HAMLESİ

Orta Doğu Teknik Üniversitesi (ODTÜ), dünya genelinde yılda yaklaşık 800 milyar dolar gelir sağlayan 3 kritik sektöre özel bir teknoloji ağı kuruyor. Avrupa Birliği (AB) tarafından da finans desteği alınan proje, bu üç sektörde çalışmalar yapmak isteyenleri bir araya getirecek.

Orta Doğu Teknik Üniversitesi (ODTÜ) dünya genelinde yaklaşık olarak 800 milyar dolarlık gelir sağlayan ve milyonları aşan istihdamıyla giderek büyüyen stratejik öneme sahip "oyun", "giyilebilir teknolojiler" ve "yeni nesil filmler" sektörlerine yatırım yapacak KOBİ'ler ve girişimcileri yenilikçi teknolojilerle desteklemek üzere yeni bir teknoloji ağı kuruyor. "Oyun, Giyilebilir Teknolojiler ve Yeni Nesil Filmler:Yaratıcı Endüstriler Aracılığı ile Ekonomik Kalkınma Projesi (ECITE)" adıyla hayata geçirilecek proje; Sanayi ve Teknoloji Bakanlığı, ODTÜ Teknokent, Ankara Kalkınma Ajansı, Türkiye Oyun Geliştiricileri Derneği, Ankara Ticaret Odası, Moda Tasarımcılar Birlik ve Dayanışma Derneği tarafından desteklenecek.

ÜRETİM VE DAĞITIMA DESTEK

Kurulacak teknoloji ağında sağlanacak iş birliği ortamında KOBİ, girişimci, akademisyen ve araştırmacıların bir araya gelme imkânı bulacak ve söz konusu üç sektörün yeni ürün ve hizmetler geliştirmelerine destekler sağlanacak. Üretim ve dağıtım faaliyetlerini de içeren proje ile birlikte Türkiye'de yaratıcı endüstrilerde yaratılan değerin artması, istihdam olanaklarının genişlemesi ve bu alanlara daha fazla yatırım yapılması hedefleniyor.

TOPLAM GELİR 1 TRİLYON DOLAR

UNESCO'nun "Cultural Times" raporuna göre, yaratıcı endüstrilerin dünya çapında sağladığı gelir 1 trilyon doların üzerine çıktı ve bu alanda istihdam edilenlerin sayısı ise yaklaşık 30 milyona ulaştı. Bunun yanında projenin odak sektörlerinden biri olan dijital oyunların 2022'deki küresel pazarı yaklaşık 200 milyar doları buldu. Yeni nesil sinema ise iş modellerini ve film yapım süreçlerini yeniden şekillendiren internet ve yeni medya teknolojilerine bağlı olarak hızlı bir dönüşüm içindeki sektörler arasında yer aldı. Bu pazarın büyüklüğü son yıllarda 500 milyar doları geçti. ECITE projesinin sağlayacağı iş birliği ortamında KOBİ ve girişimcilerin akademisyen ve araştırmacılarla bir araya gelmesi, yenilik kültürünün yaratıcı sektörlerce benimsenmesi, istihdam olanaklarının artması ve bu alanlara daha fazla yatırımın çekilmesi hedefleniyor.

PROJEYE AB'DEN DESTEK GELDİ

Avrupa Birliği (AB) ve Türkiye tarafından da finansman desteği sağlanan Yaratıcı Sektörler Ağında, ODTÜ Tasarım ve Önmodelleme Uygulama ve Araştırma Merkezi (Tasarım Fabrikası), Görsel İşitsel Sistemler Araştırma ve Uygulama Merkezi (GİSAM) ve Animasyon Teknolojileri ve Oyun Geliştirme Merkezi (ATOM) iş birliği ile yürütülecek. Projede yeni nesil film yapımı, oyun ve giyilebilir teknolojiler gibi alanlarda çalışmalar yapan KOBİ, mikro işletmeleri, girişimcileri yenilikçi teknolojilerle desteklemesi hedefleniyor.

PAZAR BÜYÜKLÜĞÜ ARTACAK

Proje kapsamında ele alınan giyilebilir teknolojiler alanının pazar büyüklüğü 70 milyar dolar olsa da kullanıcıya daha fazla işlevsellik sağlayan yardımcı teknolojilerin dahil olduğu akıllı giyilebilir cihazların yaratıcı endüstriler alanındaki payının gün geçtikçe artacağı belirtiliyor. Yayınlana raporda bu üç sektörün payının yılda 800 milyar dolara ulaşacağı bildiriliyor.

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https://www.baskentgazete.com.tr/odtu-3-kritik-sektore-ozel-teknoloji-agi-kuruyor

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Major cooperation between University and Industry

Üniversite ile sanayi arasında dev iş birliği

YÖK Kanunu'nda yapılan değişikle uluslararası seçkin üniversiteler ile kamu ve özel sektörden nitelikli araştırmacıların üniversitelerde kısmi zamanlı istihdam edilmesine imkân sağlandı. YÖK Başkanı Özvar, "Üniversitelerimize çok ciddi bir Ar-Ge dinamizmi kazandırmış olacağız" dedi.

2547 sayılı Yükseköğretim Kanunu'nda yapılan değişikle uygulamaya giren "Ek-46" düzenlemesiyle uluslararası seçkin üniversiteler ile kamu ve özel sektörden nitelikli araştırmacıların üniversitelerde kısmi zamanlı istihdam edilmesine imkan sağlandı. Yükseköğretim Kurulu (YÖK) Başkanı Prof. Dr. Erol Özvar, devlet üniversitelerine 2547 sayılı Yükseköğretim Kanunu'nda yapılan değişik kapsamında yurt içinde ve yurt dışında yerli, yabancı kaliteli araştırmacıları ülkeye kazandırmaları çağrısında bulundu.

YÖK'ün yeni düzenlemesinin teknolojiye yön veren kurumlarda ve üniversitelerde heyecan yarattığı ifade edilen açıklamada, Türkiye'de bilim, sanayi ve teknoloji dünyasının öncü kuruluşlarının temsilcileri ile Bilkent, İTÜ, ODTÜ ve Sabancı Üniversitesi rektörlerinin düzenlemenin üniversite-sanayi işbirliğinde yeni bir sinerji yaratacağı yönündeki görüşlerine yer verildi.

YÖK Başkanı Prof. Dr. Erol Özvar, konuya ilişkin değerlendirmesinde, Türkiye'de üniversite-sanayi işbirliğine dair pek çok çalışma yürütüldüğünü ifade etti. Yükseköğretim Kurulu olarak üniversite-sanayi işbirliğinde bir ilki gerçekleştirmenin heyecanını duyduklarını ifade eden Özvar, kısa süre önce 2547 sayılı Yükseköğretim Kanunu'nda yapılan değişiklikle bu işbirliğinin hukuki altyapısının belirlendiğini ve ilgili maddenin "Ek-46. madde" olarak adlandırıldığını anlattı.

Söz konusu maddeyle sanayide, teknolojide, Ar-Ge faaliyetlerinde ciddi katkılar sağlayan doktoralı araştırmacıların üniversitelerde kısmi zamanlı çalışmasının önünün açıldığını vurgulayan Özvar, "Artık sadece kamuda değil aynı zamanda özel sektörde, sadece yurt içinde değil aynı zamanda yurt dışında da doktora yapmış ve Ar-Ge, faydalı tasarım, patent ve buna mümasil alanlarda kendini kanıtlamış, yerli veya yabancı herhangi bir araştırmacı Türkiye'de devlet üniversitelerinde kısmi zamanlı olarak istihdam edilebilecektir. Bu madde, kısmi zamanlı istihdamın önünü açan önemli bir madde. Devlet üniversitelerimizden bir an önce bu maddeden istifade etmek üzere gerek kamu sektöründe gerek özel sektörde gerek yurt içinde ve yurt dışında yerli, yabancı kaliteli araştırmacılarla temasa geçmek suretiyle üniversitelerine bu araştırmacıları kazandırmalarını bekliyoruz." dedi.

Düzenlemenin üniversitelerin elini rahatlatacağını kaydeden Özvar, "Artık özel sektörde veya kamu sektöründe sözünü ettiğimiz özelliklere sahip araştırmacılar devlet üniversitelerimizde kendi adlarına tez yönetebilecekler, aynı zamanda proje yürütebilecekler. Bunun fevkalade önemli bir yenilik olduğunu düşünüyorum. Bu bakımdan üniversite ile üniversite dışında Ar-Ge kültürünü birbirine daha çok yaklaştıracak bir uygulama olacaktır." değerlendirmesinde bulundu.

Sanayi ve teknoloji faaliyetleri yürüten, üreten kurumları ve Ar-Ge'leri üniversitelere yaklaştıran bir mevzuat altyapısı oluştuğunu ifade eden Özvar, "Üniversite dışında, devlette veya özel sektörde çalışan araştırmacıları bu madde dolayısıyla bir araya getirebileceğimizi umut ediyorum. İnanıyorum ki bu mevzuat değişikliğiyle birlikte üniversitelerimize çok ciddi bir Ar-Ge dinamizmi kazandırmış olacağız." ifadelerini kullandı.

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METU Teknokent Yeni Fikirler Yeni İşler

ODTÜ·TEKNOKENT'TEN YENİ İŞ BİRLİĞİ

Microsoft Türkiye, start-up ekosistemini güçlendirmeye yönelik iş birliklerine ODTÜ ile devam ediyor. Microsoft ve ODTU TEKNOKENT'in "Yeni Fikirler Yeni İşler" ile başlayan stratejik iş birliği, Microsoft for Startups Founders Hub üye girişimlerine özel Demo Day'ler ile devam edecek. ODTÜ ve ODTÜ TEKNOKENT tarafından organize edilen, Türkiye'nin öncü erken aşama hızlandırma programı Yeni Fikirler Yeni İşler programında teknoloji tabanlı iş fikirleri, girişimcilik programları ve teknoloji ürünlerinin hayata geçirilmesinde büyük destek sağlanıyor. Ürünlerin hızlıbir şekilde ticarileşmesine destek sağlayan Microsoft For Startups Founders Hub programının girişimlere sunduğu avantajlardan faydalanmak isteyenler internet sitelerinden bilgi alabilecekler.

https://basinda.metu.edu.tr/images/basin/1792226971_0.jpg

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Reduce inequality within and among countries

https://sdgs.un.org/goals/goal10

Non-discriminatory admissions policy

In Turkey, the existence of a centralized selection and admission system (https://www.osym.gov.tr/) does not allow the universities to specifically target to admit any disadvantaged groups for undergraduate education. However, the practices of positive discrimination is ensured by relevant laws and regulations:

Law on Disabilities (No. 5378) Articles 14 and 15 guarantees employment and education for all individuals with disabilities:
https://engelsiz.yok.gov.tr/Documents/Hakkimizda/5378_sayili_engelliler_kanunu.pdf

The universities are required to spare a capacity for the admission of disabled students:
https://engelsiz.yok.gov.tr/Sayfalar/Haberler/kontenjan-mujdesi.aspx

Access to university track underrepresented groups' applications

METU as a body measures and track applications and admissions of underrepresented (and potentially underrepresented) groups including

- low-income students,
- non-traditional students,
- women, and
- disabled students.

Their application, admission, success and completion rates are monitored by Directorate of Student Affairs and METU Disability Support Office (https://engelsiz.metu.edu.tr/en/about-dso).

Gender Equality Support and Sexual Harassment Prevention Unit

CİTÖB aims to raise awareness on gender equality, support equality in representation, and raise awareness of cases of gender-based violence, especially sexual harassment and assault, raise awareness and evaluate applications regarding these cases and support applicants.

https://citob.metu.edu.tr/tr

Access to university underrepresented groups recruit

METU delivers programmes to recruit students, staff, and faculty from underrepresented groups, within the liberties identified by the relevant laws and regulations.

Student Recruitment

In Turkey, the existence of a centralized selection and admission system (https://www.osym.gov.tr/) does not allow the universities to specifically target to admit any disadvantaged groups for undergraduate education. However, the practices of positive discrimination is ensured by relevant laws and regulations:

Law on Disabilities (No. 5378) Article 15 guarantees education for all individuals with disabilities.

The universities are required to spare a capacity for the admission of disabled students: https://engelsiz.yok.gov.tr/Sayfalar/Haberler/kontenjan-mujdesi.aspx

Staff and Faculty Recruitment

Law on Disabilities (No. 5378) Article 14 employment for all individuals with disabilities.

METU ACADEMIC FREEDOM, INTEGRITY, INCLUSIVENESS and EQUALITY Policy ensures "equality in employment with regard to gender, cultural and religious background" (http://sustainablecampus.metu.edu.tr/en/policies).

METU Disability Support Office

Middle East Technical University is the first university of Turkey in which accessibility studies towards students with disabilities have been initiated. The first attempt in accessibility studies started in 1998 when the work group of "Accessible METU Project" was established. The main objective of the project was to improve the accessibility of buildings in the campus and circulation inside the buildings. The aim of the project was to make pedestrian ways between faculty buildings, dormitories, sport arenas and cafes suitable for transportation of students with disabilities. In 2004, long before the legal obligation for universities to establish a disability coordination service in Turkey, METU Disability Support Coordination Unit was established to investigate problems that students with disabilities faced and to develop suitable systems for the solution of these problems. The Unit involved in the studies of "Regulations on the Solidarity and Coordination of the Individuals with Disabilities in the Institutions of Higher Education" which was approved in 2006 and revised in 2010.

Disability Support Coordination Unit was reconstituted, and METU Disability Support Office was established instead on June 28th, 2011in accordance with the Middle East Technical University Senate's decision dated and numbered 2011/5-2. METU Disability Support Office was charged with providing equal access to resources and services of the university for students who have special needs because of specific disabilities, and establishing an environment that supports their development. METU Disability Support Office's working procedures and principles determined as reorganizing physical circumstances of the campus depending on the special needs of students with disabilities and enhancing academic accessibility in accordance with the articles 11 and 12 of "Regulations on the Solidarity and Coordination of the

Individuals with Disabilities in the Institutions of Higher Education".

https://engelsiz.metu.edu.tr/en/about-dso

Accessible facilities

METU Campus is equipped with lift chairs and ramps for those with disability. To eliminate any possibility of oversight, the Disability Support Office employs “Hunting the Barriers” survey to identify any obstructions on Campus.

Disability access scheme

METU offers access schemes for people with disabilities such as mentoring or other targeted support

Mentoring: https://engelsiz.metu.edu.tr/en/

Other targeted support:
https://basinda.metu.edu.tr/icerik/odtuden/84/odtuye-yokten-engelsiz- universite-odulu-university-accessibility-award-to-metu-by-yok

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Disability accommodation policy

Have **reasonable accommodation** policy or strategy for people with disabilities invloving physical, emotional, mental, academic or employment related issues.

For emotional and mental accommodations members can seek help in https://srm.metu.edu.tr/

For academic accommodations METU Disability Support Office offers notetaker support and course partnerships (https://engelsiz.metu.edu.tr/en/)

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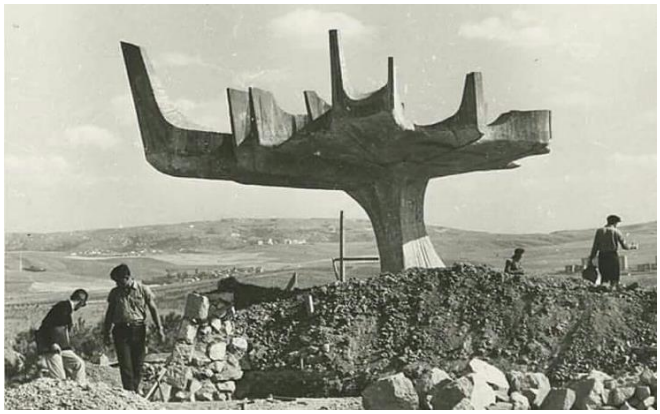
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

https://sdgs.un.org/goals/goal11

Support of arts and heritage

The construction of METU Campus began in the early 1960s as Turkey's first university Campus. Located outside Ankara, the Campus hosts a group of finest examples of modern architecture, designed by Behruz and Altuğ Çinici. (METU Campus as featured in the Architecture journal Arkitekt, 1965 (3) 320: http://dergi.mo.org.tr/dergiler/2/146/1746.pdf). METU provides public access to buildings, monuments, and natural heritage.

METU also hosts a large number of sculptures and monuments.



METU "Tree of Science" Tamer Başoğlu and Ersen Gürsel (1966)

"Space and Youth" Burhan Alkar (1986)

The Campus is open to public for educational and research activities. METU Library is open to public, for on-site use of books and other collections. (http://lib.metu.edu.tr/)

METU Campus hosts three museums METU Archeology Museum, Science and Technology Museum, and Geology Museum.

METU Archeology Museum

METU is located outside Ankara, and the Campus was built in the early 1960s at Yalıncak and Koçumbeli villages, both of which are significant archeological settlements.

Founded in 1969, the METU Archeology Museum exhibits archaeological artifacts unearthed in the Koçumbeli settlement (https://muze.metu.edu.tr/galeri/kocumbeli), which dates back 5,000 years, within the METU campus site, as well as the artifacts found in Yalıncak site (https://muze.metu.edu.tr/galeri/yalincak) and the Phrygian necropolis tumuli (https://muze.metu.edu.tr/frig-tumulusleri) in Ankara city center.

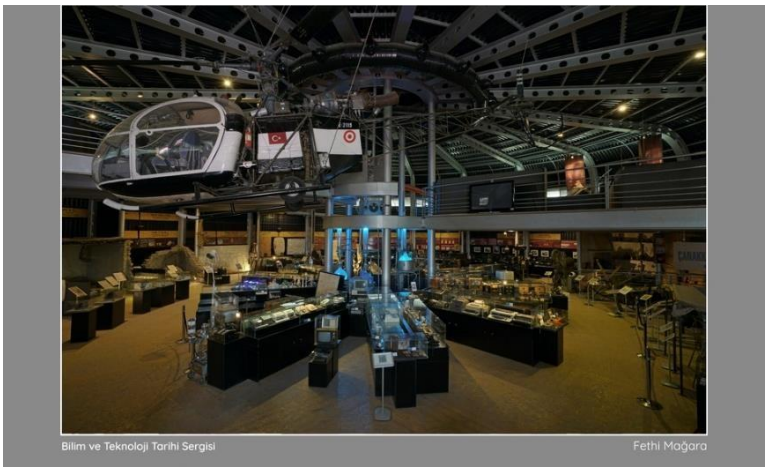
Science and Technology Museum

As Part of METU Center for Society and Science (https://tbm.metu.edu.tr/) METU Science and Technology Museum consists of Open Air Museum (https://tbm.metu.edu.tr/ahs/), Classical Automobile Museum (https://tbm.metu.edu.tr/kos/), The History of Science and Technology Museum (https://tbm.metu.edu.tr/btts/), Science Center (https://tbm.metu.edu.tr/bm/), Planetarium (https://tbm.metu.edu.tr/gokevi/) all of which are open to public.

METU Center for Society and Science also hosts numerous visitors' activities throughout the year. The activities take place in Center's five different facilities.

Classical Automobile Museum (https://tbm.metu.edu.tr/kos/)

Open Air Museum (https://tbm.metu.edu.tr/ahs/)



The History of Science and Technology Museum (https://tbm.metu.edu.tr/btts/)

Science Center (https://tbm.metu.edu.tr/bm/)

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Planetarium (https://tbm.metu.edu.tr/gokevi/)

METU Geology Museum

Middle East Technical University Geology Museum was established in 1995 and exhibits rocks, minerals, fossils, precious stones and historical mining artifacts in the 150 m2 corridor located on the ground floor of the Geological Engineering Department. It has been home to thousands of mineral, rock and fossil specimens collected by the members and graduates of the department or donated by collectors since the foundation year of the department in 1963 (http://geoe.metu.edu.tr/en/geology-museum).

Public access to green spaces

METU's Lake Eymir is open to all visitors throughout the year (https://ihm.metu.edu.tr/tr/galeri/eymir-golu-resimleri)

Arts and heritage contribution

Contribute to local arts, in terms of number of annual public performances of university choirs, theatre groups, orchestras etc… either ad-hoc or as part of an ongoing programme.

METU hosts a large number of events open to general public both on a programmed and ad hoc basis.

METU Culture and Convention Center is the primary area where such activities take place. The schedule for the year 2021 can be accessed at https://kkm.metu.edu.tr/calendar-node-field-etkinlik-tarihi/year.

In addition, METU hosts a large number of public events including:

- METU Music Society's annual Rock Festival (https://www.instagram.com/odtumt/?hl=en)
- METU Theatre Festival (http://odtuoyunculari.metu.edu.tr/)
- METU Art Festival (https://odtusanat.metu.edu.tr/)

Record and preserve cultural heritage

METU delivers projects to record and preserve intangible cultural heritage (such as local folklore, traditions, language, and knowledge).

Center for Research and Assessment of Historical Environment (TACDAM)

In 1966, scholars from various universities and scientific institutions of Turkey joined together under the leadership of the former president of Middle East Technical University, Kemal Kurdaş, to establish a research institute which would undertake the Keban Project. It was the co-operative effort towards salvaging the historical monuments and sites of a region that had to be flooded through the construction of the Keban Dam in the 1970s. After 1975, the project extended its study area to include the Lower Euphrates Region. While the archaeological sites within METU campus were being excavated, METU Archaeological Musem was established with the aim of disseminating to the public the information revealed by these excavations.

This institute, re-structured in 1995 as a Centre of Research and Assessment of Historical Environment (TAÇDAM) continued with its original mission: to motivate undertakings of salvage archaeology and documentation of historical environment by means of the most advanced methods and techniques for those areas under risk. Now, being among advanced institutions of archaeology in Turkey, TAÇDAM stands as one of the leading research units concerning historical environmental matters with an interdisciplinary vision. Directed on research matters by a managing committee formed of representatives from several academic units at Middle East Technical University -archaeometry, geology, restoration of historic monuments, city and regional planning- TAÇDAM serves as an interdisciplinary research center to survey and excavate archaeological sites in threatened areas of Turkey, and to publish their results.

SUSTAINABLE CAMPUS

METU Strategic Plan 2023-27 Goals 17.1 and 17.2 lays the groundwork for the preparation of a more sustainable transportation scheme.

- The bicycle path and pedestrian walkway construction has been underway and scheduled to be completed by the end of 2020. Bicycle racks are also installed in key locations.
- The renewal of ring services is planned, existing bus fleet are being replaced with older models.
- Charger station for EV cars has been installed.

In order to limit in-campus traffic and use of private vehicles, the university opened new satellite parking lots at the edge of the campus perimeters, where members can leave their cars and commute with shuttle to other parts of the campus. Once members got used to using these parking lots, other parking lots at the core of the campus will be gradually decreased.

A2 Gate, Satellite Parking Lot, Middle East Technical University, Ankara (39.906846, 32.767037)

<table>
<tr><td>  </td><td> 
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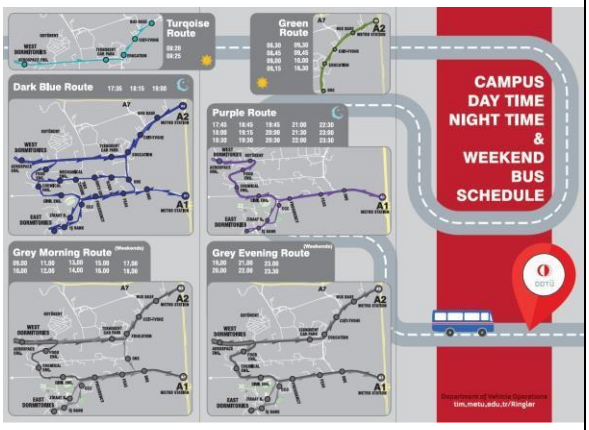
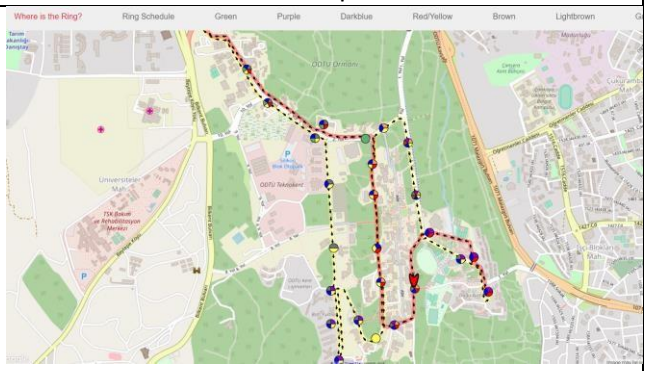
<tr><td>Bus Stop with Schedule</td><td>Bus Depot</td></tr>
<tr><td> 
</td><td> 

Middle East Technical University, Turkey/
https://ring.metu.edu.tr</td></tr>
<tr><td>Bus Routes and Schedule</td><td>Real Time Location of Busses</td></tr>
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The Directorate of Vehicle Management offers free shuttle services for the METU Community (http://tim.metu.edu.tr), 20 buses complete 380 trips per day.

ODTÜ mobile phone applications for both iOS and android, and web pages offer information about bus routes, real time location and trips.

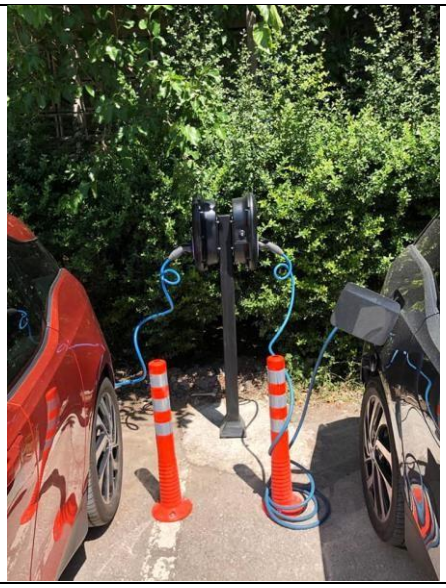
Web page for bus routes and trips:
Main campus: https://ring.metu.edu.tr
APP: https://itunes.apple.com/tr/app/orta-doğu-teknik-üniversitesi/id1206857420?l=tr&mt=8
https://play.google.com/store/apps/details?id=tr.edu.metu.mobile

The use of Zero Emission Vehicles (ZEV) is also encouraged on campus.

bike parking racks near cafeteria

(above and below) METU Electric Charge Station

Electric Scooters



With the 2023-27 Strategic Plan, METU prioritized the increased use of bicycles and Zero Emisson Shuttles in its campuses.

METU Campuses are cyclist and pedestrian friendly. Along with central Alle, there are many roads closed to vehicle traffic in order to provide a safe environment for cyclists and pedestrians. Ankara Campus is accessible through public transport, and many students and staff members reach to campus using the subway. Many administrative and academic buildings are at a walking distance (10-15 minutes) from the subway station and paid electric scooters or bicycles are available. Also, there is a cycling path parallel to the main road.

Affordable on-campus housing

METU offers affordable housing for employees on METU Campus. The information of METU Lodgings can be accessed at https://stm.metu.edu.tr/tr/lojman-tipleri-ve-krokileri

METU Professor Houses (Behruz Altuğ Çinici)

METU offers a wide range of housing alternatives (including dorms and guesthouses) for students (http://yurtlar.metu.edu.tr/en). With 19 dormitories, METU has a capacity to host a total of 7,286 students.

METU 19th Dorm

Pedestrian priority on campus

METU prioritizes pedestrian commuting on its campus by putting speed limit to vehicles, offering pedestrian crossings and walkways throughout the campus. METU Strategic Plan 2023-27 lays the groundwork for the application of pedestrian priority on campus, by improving pedestrian walkways.

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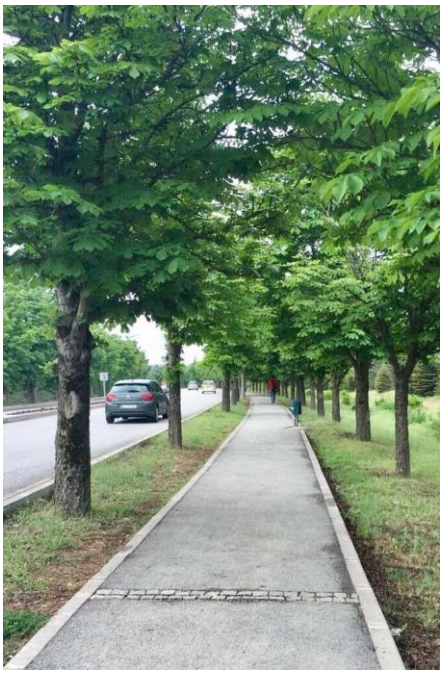
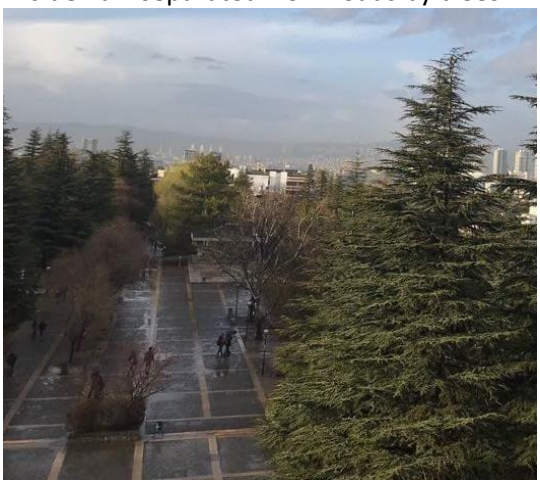


sidewalk separated from roads by trees

lifts for wheelchair users



main pedestrian road called “ALLE”

pedestrian road and square near stadium

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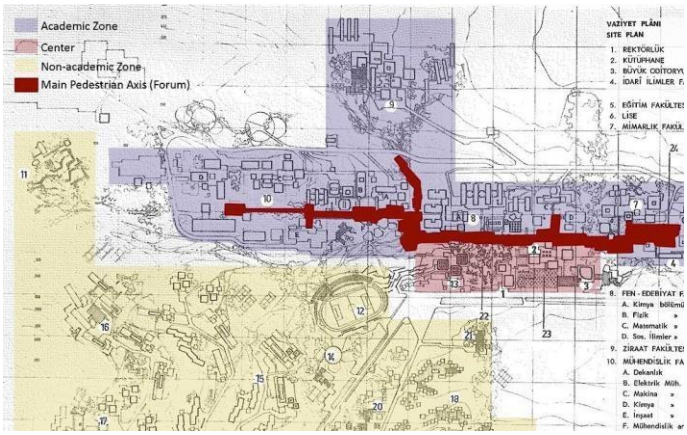
platform lifts for disabled



Altuğ-Behruz Çinici Plan (1961) and settlement sub-regions according to main function groups

elevated pedestrian crosswalks

warning sign for pedestrian area at the campus entrance

Local authority collaboration regarding planning and development

There are a number of research projects carried out in collaboration with local, regional, national and international authorities:

- UP2030: Urban Planning and design ready for 2030 (H2020 Project, 2023 - 2026)

  https://avesis.metu.edu.tr/proje/bd93b081-bcb1-43ae-83c6-288ae97d2ab4/up2030-urban-planning-and-design-ready-for-2030

- Climate Resilient 3D-Printable Building Components Incorporating Sustainable and Low-Cost Materials (3D-PC): Providing Low-Cost and High-Speed Housing for Vulnerable Populations (TÜBİTAK International Bilateral Joint Cooperation Program Project, 2021 - 2023)

  https://avesis.metu.edu.tr/proje/d8ec3274-9f86-482f-b74a-5f645b890d8d/surdurulebilir-ve-dusuk-maliyetli-malzemeler-iceren-iklime-dayanikli-3d-yazdirilabilir-bina-bilesenleri-3d-pc-hassas-nufuslar-icin-dusuk-maliyetli-ve-yuksek-hizli-konut-saglanmasi

- Earth Commission: Translation of Earth System Boundaries for Cities (Other International Funding Programs, 2021 - 2023)

  https://avesis.metu.edu.tr/proje/e12259d5-f45f-4810-8459-df0d2b494152/earth-commission-translation-of-earth-system-boundaries-for-cities

- “Nature Based Solutions for Re-Naturing Cities: Knowledge Diffusion and Decision Support Platform through New Collaborative Models” (https://cordis.europa.eu/project/id/730468). Ankara as one of the pilot cities, the project brings together METU and local Çankaya Municipality.

City Council and METU Collaborate for Sustainable Urbanism

Kent Konseyi ve ODTÜ'den sürdürülebilir şehircilik için iş birliği

Mersin Kent Konseyi ile ODTÜ İklim Değişikliği ve Sürdürülebilir Kalkınma Uygulama ve Araştırma Merkezi iş birliğinde 'Tanıtım Buluşması ve İşbirliği Protokolü' imza töreni gerçekleşti. Törende Mersin Kent Konseyi Başkanı Ayferi Tuğcu açılışı yaparken, ODTÜ İklim Değişikliği ve Sürdürülebilir Kalkınma Uygulama ve Araştırma Merkezi Müdürü Prof. Dr. Barış Salihoğlu, protokolün hazırlanma ve imza sebepleriyle detayları hakkında bilgi verdi.

TUĞCU: "MERSİN'DE TOPLUMSAL DEĞER YARATMAKTAN MUTLULUK DUYUYORUZ"

Daha yaşanabilir bir dünya için iş birlikleriyle, yaptıkları yenilikçi çalışmalarla Mersin'de her geçen gün toplumsal değer yaratmaktan mutluluk duyduklarını ifade eden Mersin Kent Konseyi Başkanı Ayferi Tuğcu, "Bu iş birliğine katılan tüm bileşenlerimiz, şehrimizin son derece önemli, alanlarında değer yaratan dinamiklerin temsilcileri olarak birer düşünce insanı, birer çevre dostu ve çok kıymetli kimlikler olarak görüyorum" diye konuştu.

PROF. SALİHOĞLU: "SÜRDÜRÜLEBİLİR ŞEHİRCİLİK İLKELERİNE UYGUN STRATEJİLER GELİŞTİRECEĞİZ"

Protokolü gerçekleştirirken iki ana prensibe öncelik verdiklerini kaydeden ODTÜ İklim Değişikliği ve Sürdürülebilir Kalkınma Uygulama ve Araştırma Merkezi Müdürü Prof. Dr. Barış Salihoğlu ise, "İlk prensibimiz ve odağımız, Mersin'in iklim dostu bir şehir olması sebebiyle, sürdürülebilir şehircilik ilkelerine uygun fikirlerin ve stratejilerin geliştirilebilmesi için Kent Konseyi'ne bu alanda iş birliğiyle destekli birlikte ilerlememiz olacak. İkincisi ise; Mersin bir deniz şehri, ancak denizlerinden arzu edilen en optimum seviyede faydalanamıyoruz. Bununla birlikte deniz ekosistemini de yeterince korumuyoruz. Yapılan protokolde, bu çalışmalara da odaklanıyoruz. Bu bağlamda Kent Konseyi ile iş birliği çerçevesinde çalışmalarımıza son halini vereceğiz" dedi. **(Haber Merkezi)**

https://basinda.metu.edu.tr/images/basin/1860293374_0.jpg

https://www.mersin.bel.tr/haber/kent-konseyi-ve-odtuden-surdurulebilir-sehircilik-icin-isbirligi-1687328105

https://basinda.metu.edu.tr/images/basin/1860273691_0.jpg

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Ensure sustainable consumption and production patterns

https://sdgs.un.org/goals/goal12

Policy waste disposal

Toxic waste treatment

The toxic waste in METU is handled in accordance with the Waste Directive of the Environment Ministry of Environment and Urban Planning (https://www.resmigazete.gov.tr/eskiler/2015/04/20150402-2.htm)

In METU, the presence of a large number of research labs help produce a large sum of toxic waste. The toxic waste regulation was introduced in 2018. Pictures show Temporary Waste Storage areas where the waste received from the labs are stored, they are picked up from the authorized companies such as (https://ekovar.com.tr/hizmetlerimiz/). The Rectorate does not dictate which companies to work with as the units can find more suitable waste management companies, specific to their type of waste. However, when the unit faces a high cost to get rid of toxic waste, it can seek support from the "Laboratuvary waste commission".

Landfill policy

The waste disposal in METU is handled in accordance with the Waste Directive of the Environment Ministry of Environment and Urban Planning (https://www.resmigazete.gov.tr/eskiler/2015/04/20150402-2.htm).

Minimization of plastic use

In 2019, METU Zero Waste Unit was formed in order to prevent waste, to use resources more efficiently, to prevent or minimize waste generation by reviewing the causes of waste generation, and to collect and recycle waste separately at its source in case of occurrence.

To carry out zero waste practices that will raise awareness with the aim of managing resources in a sustainable and efficient manner, after determining the current situation in the Middle East Technical University and providing the necessary equipment within the scope of the zero waste project.

Ensuring the transportation of the wastes that are collected separately at the source and collected separately without mixing with each other in coordination with the Internal Services Directorate and the relevant unit of the Municipality.

Starting from the prevention of waste generation, to ensure the establishment and continuity of the zero waste management system, which includes the processes of reducing waste, collecting separately at its source, temporary storage, separate collection, transportation and processing.

To register to the Zero Waste Information System and to ensure the traceability of the waste managed in this context.

Relevant legislation can be accessed at https://sifiratik.gov.tr/ and Zero Waste Directive which is binding for all public institutions
https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=32659&MevzuatTur=7&MevzuatTertip=5

Minimization of other disposable items

Zero Waste Directive dictates the minimization of disposable items, made from plastic and paper.

METU INORGANIC WASTE AND RECYCLING POLICY

Middle East Technical University (METU) considers solid waste and recyclable products as a resource that will contribute to the quality of life, inclusive and sustainable economy, and integrity of nature in a way that supports sustainable development. While preparing action plans on solid waste and recycling, these three basic elements (quality of life, inclusive and sustainable economy, integrity of nature) reflecting the interdependent and interacting parts of sustainable development are taken into account, and none is more prominent than the other. METU solid waste and recycling policies are designed to guide all official institutions, organizations, businesses and individuals with which it cooperates. The relevant stakeholders are expected to use solid waste management system based on recycling waste, reusing, or not generating waste.

METU is committed to reuse solid waste as a resource and takes steps to encourage sustainable use of natural resources in its decision-making processes. It establishes systems that can make useful products from materials considered as waste but have natural value by reviewing them economically, environmentally, and socially. In this way, it offers some facilities to create new job opportunities, use sustainable energy, protect human health, and enhance environmental quality. METU has full responsibility to decrease the consumption of disposable materials from paper, plastic, and aluminium.

Our staff will carry out all internal and external correspondences using the "Electronic Document Management System". Educational materials in each course will be shared utilizing ODTUCLASS, the learning management system of METU. Necessary arrangements will be made for students to get minimum number of printouts. Disposable and non-environmentally friendly service materials made of plastic, aluminum or foam cannot be used in canteens, cafeterias, restaurants, and buffets located in the campus. These products cannot be sold in the markets in the campus. In all kinds of academic/social meetings and events to be held on the university campus, reusable service products will be preferred instead of disposable products. All suppliers will be expected to sell products in reusable or recyclable packages on the university campus.

Applications

In order to eliminate paper use, EBYS (E-Document Management Platform), Scientific Research Projects, Academic Performance and Publicaton Promotion and Scienitific Promotion processes are carried out using digital platforms.

https://ebys.metu.edu.tr, https://bapsis.metu.edu.tr, https://apsis.metu.edu.tr/

In order to avoid the use of single-use plastic bottles, METU offers free drinking water in all the fountains across campuses. Also the cafeterias does not offer plastic kitchenware to eliminate waste.

https://kafeterya.metu.edu.tr/odtu-kafeterya-mudurlugu

ODTUDEN store offers products to replace single use items, the income form the sales are transferred to university scholarship funds https://odtuden.com.tr

As initiated by the METU Green Campus student association, the BPA-free and reusable bottles are sold as part of the Zero Waste initative.

Projects for SDG 12

- Metal Organik Çerçeveli Elektrospun Hibrit Nanofiber Kullanan Akıllı Telefon Tabanlı Kolorimetrik Gıda Tazelik Algılama Sistemi (TÜBİTAK International Bilateral Joint Cooperation Program Project, 2022 - 2024)

  https://avesis.metu.edu.tr/proje/b40d0297-3739-4d29-bc15-d6c022ccdf62/metal-organik-cerceveli-elektrospun-hibrit-nanofiber-kullanan-akilli-telefon-tabanli-kolorimetrik-gida-tazelik-algilama-sistemi

- Polilaktik Asidin Süperkritik Karbondioksit Ortamında Sıfır Atıkla Kimyasal Geri Dönüşümü (TUBITAK Project, 2022 - 2024)

  https://avesis.metu.edu.tr/proje/305fcab0-ff33-443c-bdf8-81044397296c/polilaktik-asidin-superkritik-karbondioksit-ortaminda-sifir-atikla-kimyasal-geri-donusumu

- RecMine - Environmental footprint reduction through eco-friendly technologies of mine tailings recycling (TÜBİTAK International Multi-Cooperation Project, 2022 - 2024)

  https://avesis.metu.edu.tr/proje/d573a1d2-5aec-464b-8ff3-8599e488982c/recmine-cevre-dostu-geri-donusum-teknolojileri-ile-maden-atiklarinin-cevresel-ayak-izinin-azaltilmasi

Take urgent action to combat climate change and its impacts

https://sdgs.un.org/goals/goal13

Local education programmes on climate

METU Continuous Education Center (METU CEC) offers certificate program titled "Climate Change, Adaptation Policies and Turkey" for non-students. The purpose of the program is to train the staff of public institutions and organizations, the private sector, universities, research institutions, non- governmental organizations on issues of climate change, adaptation to the effects of climate change through strategy alignment, planning policies integrated with social and economic dimensions. This training program is a modular program prepared by METU Earth System Sciences Department.

https://sem.metu.edu.tr/egitim/iklim-degisikligi-sertifika-programi.html

Co-operative planning for climate change disasters

METU cooperates with the government in planning for climate change disasters through Disaster Management Implementation and Research Center. The activities of the research center is listed at http://dmc.metu.edu.tr/en/.

In addition, there are several ongoing and research collaborations funded by the government on planning for climate change and sustainable cities.

- UP2030: Urban Planning and design ready for 2030 (Horizon 2020 Project, 2023 - 2026)
- Multi-purpose floating solar power plant (FloSoWer) (TUBITAK International Bilateral Joint Cooperation Program Project, 2022 - 2024)
- REcube: REthink, REvive, REuse - Transmitting the knowledge for the green regeneration of the European Concrete Heritage (Erasmus Project, 2021 - 2024)
- BRIDGE-BS: Advancing Black Sea Research and Innovation to Co-Develop Blue Growth within Resilient Ecosystems (Horizon 2020 Project, 2021 - 2025)
- Floatıng Hybrıd Renewable Energy Systems For Turkey (Newton Programme Project, 2021 - 2023)

- Updating Guidelines for Provincial Risk Reduction Plan Preparation by Pilot Implementation Project

- Arsinoe: Climate Resilient-Regions Through Systemic Solutions and Innovations (Horizon 2020 Project, 2021-2025)

- Climate change effects on trophic structure and dynamics in saline and brackish water based on a space-for-time field sampling, controlled mesocosm experiments, paleoecology, remote sensing and modelling CLIM-SALTLAKES (TUBITAK Project, 2020-2023)

- PONDERFUL-POND Ecosystems for Resilient Future Landscapes in a changing climate (Horizon 2020 Project, 2020-2024)

- İklim Değişikliğinin Türkiye'de Aşırı Yağışlara Etkisinin En Güncel İklim Modelleri (CMIP6) İle Yüksek Çözünürlükte Değerlendirilmesi (TUBITAK Project, 2022-2025)

- Genomic Biodiversity Knowledge for Resilient Ecosystems (TUBITAK - AB COST Project , 2019 - 2023)

- SÜRDÜRÜLEBİLİR KENTLER İÇİN İLERİ TEKNOLOJİLER PLATFORMU (SÜİT) (TUBITAK Project, 2022 - 2025)

- Sürdürülebilir ve Düşük Maliyetli Malzemeler İçeren İklime Dayanıklı 3D Yazdırılabilir Bina Bileşenleri (3D-PC): Hassas Nüfuslar İçin Düşük Maliyetli ve Yüksek Hızlı Konut Sağlanması (TUBITAK International Bilateral Joint Cooperation Program Project, 2021 - 2023)

Collaborations with the government

METU informs and supports local or regional government in local climate change disaster or risk early warning and monitoring through the work of its related research centers

- Disaster Management Implementation and Research Center (http://dmc.metu.edu.tr/en/.)
- DEKOSIM (http://dekosim.ims.metu.edu.tr/)

Environmental education collaborations with NGOs

METU collaborates with non-governmental organizations (NGOs) on climate adaptation. An example is the collaboration for the "Nature of Youth and the City" Erasmus+ Project by Nature Conservation Center, METU Ecosystem Implementation and Research Center (EKOSAM), Butterfly Conservation (UK), Anima Mundi (IT), Technological Education Institute of Thessaly (GR). The project aims to train and equip youngsters on sustainability and preservation of nature. https://odtudedoga.org

METU establishes “Climate Center” to solve the problem of “global warming”

METU Climate Center will carry out studies with the aim of contributing to the development of scientific, realistic and reliable climate and sustainable development strategies and policies that the country and society will need at national and international level, and to develop technologies that will stand out in the fight against climate. The Center will bring together many departments and centers in different disciplines within and outside METU on climate change and sustainability issues, and will implement interdisciplinary studies and projects with the synergy that will be created.

https://iklim.metu.edu.tr/en
https://www.aa.com.tr/tr/gundem/odtu-kuresel-isinma-sorununa-cozum-icin-iklim-merkezi-kurdu/2958915

“

Sea and Climate School

Children from disadvantaged groups are given information about marine sciences, climate crisis and marine pollution in regular weekly events held at the Institute of Marine Sciences within the METU Climate Center.

https://avesis.metu.edu.tr/etkinlik-organizasyonu/8de62123-4f29-4ca3-b879-83e2110febe0/deniz-ve-iklim-okulu

“

UP2030: Urban Planning and design ready for 2030

METU Faculty of Architecture and METU Solar Energy Research and Application Center (GÜNAM) are among the partners of the “Urban Planning and Design ready for 2030-UP2030” project, which will last until the end of 2025. The UP2030 project, carried out under the Horizon Europe research program to support the implementation of the “Climate Neutral and Smart Cities Mission”, aims to achieve the social and technical transformations needed to meet the climate neutrality goals of cities using urban planning and design.

https://haber.metu.edu.tr/en/2023/09/metu-faculty-of-architecture-and-metu-gunam-work-together-for-climate-neutral-and-smart-cities/

https://avesis.metu.edu.tr/proje/bd93b081-bcb1-43ae-83c6-288ae97d2ab4/up2030-urban-planning-and-design-ready-for-2030

https://www.iklimhaber.org/odtu-yapay-zeka-ile-istanbulu-karbon-notr-hale-getirecek/

Conserve and sustainably use the oceans, seas and marine resources for sustainable

https://sdgs.un.org/goals/goal14

Sustainable Development Goal 14 is an important goal set to sustainably manage and protect marine and ocean resources. In order to contribute to this critical goal, our university has successfully carried out various research projects and carried out important studies on marine and ocean ecosystems. These projects cover a range of areas such as marine biology, water quality, fisheries sustainability and ocean pollution. The table below summarizes the major research projects carried out at our university. These projects support our commitment to the conservation of marine and ocean resources within the framework of SDG 14.

Project Name	**Project Type**
Kuzeydoğu Akdeniz balık populasyonlarında son 40 yıldaki değişimler, bu değişimlerde ötrofikasyon, balıkçılık baskısı, iklim ve Lessepsian göçünün rolü ve değişimlere yön verme olasılıklarının araştırılması	TUBITAK Project (2021-2024)
Marmara Denizi Bütünlesik Modelleme Sistemi (MARMOD) Faz II	Project Supported by Other Official Institutions (2021-2023)
ACTNOW: Advancing Understanding of Cumulative Impacts on European Marine Biodiversity, Ecosystem Functions and Services for Human Wellbeing	Horizon Europe Project (2023 – 2026)
Developing Optimal and Open Research Support for the Black Sea (DOORS)	Horizon 2020 Project (2021-2025)
BRIDGE-BS: Advancing Black Sea Research and Innovation to Co-Develop Blue Growth within Resilient Ecosystems	Horizon 2020 Project (2021-2025)
AQUACOSM-plus: Network of Leading Ecosystem Scale Experimental AQUAtic MesoCOSM Facilities Connecting Rivers, Lakes, Estuaries and Oceans in Europe and beyond	Horizon 2020 Project (2020-2024)
Türkiye için yüzer hibrit yenilenebilir enerji sistemleri	TUBITAK International Bilateral Cooperation Project (2021-2023)
Cultoure4Youth: Supporting Youth Entrepreneurship in Cultural Tourism for coastal communities in the Black Sea region	Other EU Funded Projects (2021-2023)
Earth Commission: Translation of Earth System Boundaries for Cities	Other International Funding Programs (2021-2023)

BRIDGE-BS project to investigate the effects of climate change in the Black Sea.

"BRIDGE-BS" projesiyle "ODTÜ Bilim-2" gemisi yola çıktı

Karadeniz'de iklim değişikliğinin etkileri araştırılacak

İklim değişikliğinin Karadeniz'deki etkilerini gözlemlemek amacıyla hayata geçirilen "Karadeniz'de Dirençli Ekosistemlerde Mavi Büyüme Gelişimi için Araştırma ve İnovasyon" projesinin ilk deniz seferi için "ODTÜ Bilim-2" gemisi yola çıktı

Orta Doğu Teknik Üniversitesi (ODTÜ) Deniz Bilimleri Enstitüsü Müdürü Prof. Dr. Barış Salihoğlu ve Müdür Yardımcısı Doç. Dr. Mustafa Yücel liderliğinde "Karadeniz'de Dirençli Ekosistemlerde Mavi Büyüme Gelişimi için Araştırma ve İnovasyon" (BRIDGE-BS: Advancing Black Sea Research and Innovation to Co-Develop Blue Growth within Resilient Ecosystems) başlıklı çok uluslu proje geçen yılın haziran ayında başladı. Konsorsiyumunu 7'si Karadeniz kıyı ülkesinden, 8'i Avrupa Birliği üye ülkesinden ve uluslararası kuruluşlardan olmak üzere toplam 33 ortağın oluşturduğu BRIDGE-BS, Avrupa Birliği'nin (AB) bilimsel kaynaklarını birleştiren "AB Ufuk 2020" programı içerisinde, bugüne kadar en fazla Türk ortağın yer aldığı proje olma özelliği taşıyor.

İLK KIŞ SEFERLERİNİ GERÇEKLEŞTİRİLECEK

Bütçesi 9 milyon avro olan proje, Karadeniz'in ekosistem direncine, mavi ekonominin gelişmesine, bunu tamamlayıcı nitelikte ortak gözlem sistemleri geliştirmeye ve kara-deniz etkileşimlerine odaklanıyor. Proje kapsamında ilk deniz seferi ise 13 bilim insanının katılımıyla ODTÜ Bilim-2 gemisi ile başladı. 30 gün sürecek sefer boyunca Karadeniz'de 150 ayrı noktadan numuneler alınacak ve ölçümler yapılacak. Karadeniz seferine başlayan gemide değerlendirmelerde bulunan Doç. Dr. Mustafa Yücel, kendileriyle projede yer alan diğer ülkelere ait araştırma gemilerinin de aynı dönemde Karadeniz'de bulunacağını ve ülkelerin ortak olarak ilk kış seferlerini gerçekleştireceğini söyledi.

KARADENİZ BİRÇOK BASKI ALTINDA

Eş zamanlı araştırmalar yapılmasının en önemli konu olduğunu, verileri birleştirdikleri zaman "Karadeniz'de aralık ayının resmini çektik" diyebileceklerini dile getiren Yücel, "Biri kış, diğeri yaz olmak üzere 30'ar günlük 2 büyük sefer planladık. Haziran ayında da aynı seferin yaz başındaki versiyonunu çalışacağız. Bunların yanında ortaklarımız imkan bulup Karadeniz'e çıktıkça küçük çaplı örneklemeler yapmaya devam edecekler" dedi. Yücel, "Karadeniz, özellikle iklim değişikliği, insan kaynaklı kirlilik gibi birçok baskı altında olan bir deniz. Bu baskılar karşısında Karadeniz nasıl etkilendi, nereye doğru değişecek ve hangi önlemler alınmalı? En basit anlamda BRIDGE-BS Projesi bu soruların yanıtını bulmaya hizmet ediyor" ifadesini kullandı.

"İLK ETKİ OKSİJEN ÜZERİNDE OLUYOR"

Karadeniz'de iklim değişikliğinin etkilerine ilişkin mevcut bulguları paylaşan Yücel şu bilgileri verdi:

"Karadeniz'deki iklim değişikliği bulguları maalesef iç açıcı değil. Karadeniz kendi doğası itibarıyla ilk 80-100 metresinde birçok balık türünün yaşayabileceği kadar oksijen içeriyor. Derinlerinde oksijen yok, hatta 120-150 metreden sonra hidrojen sülfür dediğimiz, birçok canlı için zehirli, toksik gaz birikimi ile metan birikimi var. İklim değişikliğiyle denizler ısındıkça içinde daha az oksijen tutabiliyor. Isınma, net olarak denizlerin oksijeni kaybetmesine neden oluyor. Marmara'da olduğu gibi karasal atıklar ve aşırı biyolojik üretim de bunun üzerine ek yük getiriyor. Karadeniz'de maalesef iklim değişikliğinin ilk etkisi oksijen üzerinde oluyor."

Yücel, şu andaki veriler yeterli düzeyde olmadığı için ellerinde net bir rakam olmamakla birlikte, normalde 120-130 metre derinlikte başlayan hidrojen sülfürün, Karadeniz'de şu anda 100-110 metrede başladığına dair işaretler olduğunu belirtti.

"ISINMA KARADENİZ'DE ÇOK KUVVETLİ"

Biyoçeşitlilik kaybına ve balık popülasyonlarının azalmasına yol açan ısınmanın Karadeniz'de çok kuvvetli olduğunu, okyanuslar ortalama 1,5 derece ısınırken Karadeniz'in 2 ila 2,5 derecelik ısınmaya maruz kaldığını bildiren Yücel, bu durumun, Karadeniz'in akıntı sistemlerinde de bazı hayati değişikliklere yol açtığına dikkati çekti. Yücel, "Karadeniz'e özgü baza iç akıntı sistemleri var, bunun çok yavaşladığını gördük. Bu, tarihsel olarak bilinen, gösterilen bir akıntıdır. Kış döneminde oluşur, dibe oksijen pompalar. Bunun maalesef çok çok yavaşladığını bulduk. Karadeniz'in bu tip nefes alış mekanizmaları sırf ısınma nedeniyle azalmış durumda" dedi. Tuna, Dinyeper ve Dinyester gibi Karadeniz'e dökülen büyük nehirlerin kapladığı alanın, Karadeniz'in 5 katı olduğu bilgisini veren Yücel, proje kapsamında bu havzalarda da çalışmalar yürütüldüğünü aktardı.

MAVİ EKONOMİ STRATEJİSİ

Doç. Dr. Mustafa Yücel, denizlerden ekonomik anlamda faydalanabilmenin proje kapsamındaki konulardan biri olduğunu vurgulayarak, şöyle devam etti: "Burada beklenen sadece iklim değişikliği, kirlilikle ilgili trendleri ortaya koyup 'Sistem kötüye gidiyor' deyip çekilmek değil. Bir yandan da çözüm üretmek. Karadeniz'de belki akuakültür gelişebilir. Yenilenebilir enerjinin hangi alanlarda uygun olacağı yönünde çalışmalar var. Projenin kalanı, 'Karbondioksit salmayan ya da minimal salan, çevreci, sürdürülebilir sektörleri denizde geliştirebilir miyiz?' sorusuyla ilgileniyor. Bu anlamda yenilenebilir enerji, sürdürülebilir akuakültür, biyoteknoloji geliştirme gibi ileride iş imkanları sağlayacak, denizi kullanarak ama denizin sağlığını da koruyarak sürdürülebilir mavi ekonomi gelişimi yönünde bir strateji oluşturuyoruz."

"KARADENİZ VE MARMARA BİRBİRİNİ ETKİLİYOR"

Karadeniz'deki ısınmanın Marmara Denizi'ni doğrudan etkilediği uyarısında bulunan Yücel, sözlerini şöyle tamamladı: "Birkaç haftada, maksimum 60 günde, İstanbul Boğazı'ndan giren Karadeniz suyu, Çanakkale Boğazı'ndan çıkmış oluyor. Marmara'nın üst suları Karadeniz'in yüzey sularına çok benzer. Oradaki bir değişiklik çok hızlı biçimde Marmara'yı etkiliyor. Yapısı gereği daha küçük, çevresinde şehirleşme gibi unsurların olmasıyla Marmara, muhtemelen daha büyük bir ısınmaya maruz kalıyor. Karadeniz'in ısınması, her anlamda kötüye gidişi Marmara'yı çok hızlı etkileyecek. Karadeniz'deki türlerin azalması, Marmara'nın biyoçeşitliliğini etkiliyor. Marmara'daki durumun kötüleşmesi de Karadeniz'i etkiliyor. Bu iki deniz derin akıntıyla birbirine bağlı. Marmara için ne uygulamıyorsa, Karadeniz kıyılarımızda da bence bir an önce uygulamamız gerek. Atık su arıtma, çevre dostu uygulamalar gibi çalışmalar bütün kıyılarımızda yapılması zaten gerekli."

https://www.aa.com.tr/tr/yesilhat/bilim/iklim-degisikliginin-karadenizdeki-etkileri-bridge-bs-projesiyle-arastirilacak/1819116
https://avesis.metu.edu.tr/proje/f904e974-f3e9-4617-8db4-aa0dbcbad447/bridge-bs-advancing-black-sea-research-and-innovation-to-co-develop-blue-growth-within-resilient-ecosystems

İşbank and METU collaborate for the seas

Within the scope of the cooperation, İşbank offered the unmanned underwater glider device called 'Deniz Kâşifi', produced in France, to the use of the Institute of Marine Sciences at METU. They aim to provide a better understanding of the seas and a better determination of the state of ecosystem health.

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(https://www.aa.com.tr/tr/sirkethaberleri/egitim/is-bankasi-ve-odtuden-denizler-icin-is-birligi/677218)

https://dekosim.ims.metu.edu.tr/dekosim/Deniz-Kasifi

https://basinda.metu.edu.tr/2022-12-02/3269953

International Conference on Turkey's Contribution to the UN Ocean Decade

https://cumhuriyetim.metu.edu.tr/tr/turkiyenin-bm-okyanus-yilina-katkilari-uluslararasi-konferansi

“

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

https://sdgs.un.org/goals/goal15

OUTREACH: Supporting land ecosystems through education

Projects for SDG 15

- Anadolu'da Yaşayan Lekeli Semender, Salamandra infraimmaculata (Mertens, 1948)'nın (Caudata: Salamandridae) Ekolojisi, Popülasyon Biyolojisi ve Filogenetik Yapısı (TÜBİTAK Projesi, 2021 – 2023)
- Genomic Biodiversity Knowledge for Resilient Ecosystems (TÜBİTAK - AB COST Projesi , 2019 - 2023)
- Identifying seed sources for highly adaptable oak forests in a changing climate (TÜBİTAK Uluslararası Çoklu İşbirliği Projesi, 2021-2023)
- Kıyılardaki Kültürel Miras Alanlarının Deniz Seviyesi Yükselmesi ve Etkilerine Olan Kırılganlığı (TÜBİTAK Projesi, 2022- 2025)
- Göllerde İklim Değişimi Kaynaklı Aşırı Karasal Çözünmüş Organik Madde (tDOC) Yüküne Karşı Mikrobik ve Planktonik Komünitelerin Dayanıklılığı (Resistance), Esnekliği (Resilience) Ve İyileşmesi (Recovery): Mezokozm Temelli Deneysel Araştırma(Kısaltma: R3-DOC) (TÜBİTAK Projesi, 2020 - 2023)

Educational programmes on ecosystems

As an extension of EKOSAM, EKOSAM Student Community aims to protect the natural wealth and biological diversity of ecosystems, especially the METU campus, and to raise awareness by making environmental and nature-themed activities primarily for the students of METU and for people who visit and work in the campus (http://ekosam.metu.edu.tr/en/ekosam-student-club-0).

In recent years, different events took place on METU Campus related to the sustainable use of land.

Species Count (Tür Say!)

In 2018 and 2019, Turkey's first bio blitz (Tür Say!) event took place at METU Campus as part of the "Nature of Youth and the City" Erasmus+ Project carriedoutbyNatureConservationCenter,METU Ecosystem Implementationand Research Center (EKOSAM), Butterfly Conservation (UK), Anima Mundi (IT), Technological Education Institute of Thessaly (GR).

(https://dkm.org.tr/sites/other/dkm/uploads/yayinlar/makaleler/mak-1.pdf)

Counting species activity, also known as bioblitz (combination of the words "bio" meaning life and "blitz" meaning raid indicates that people discover the diversity of species in a certain place in a short time by intensively cooperating), has been around in many countries, including the United States and the United Kingdom, as a community science activity in order to increase public interest in nature. In this activity open to all the participants from all backgrounds, the living creatures observed in nature are identified by the help of experts, after a giving brief training to participants on Campus species.

May 26, 2019 Species Count (Tür Say!) event (Source: odtudedoga.org)

“

Plogging at Lake Eymir

Since May 2017, annual *Plogging (*"plocka upp" and "jogging") event takes place around Lake Eymir. (Source: https://cumhuriyetim.metu.edu.tr/tr/cop-topla-kos-plogging-etkinligi)

Annual Aforestation Festival

The main METU Campus is located on the West of Ankara, once a remote location which became the first ever university campus in Turkey. Inhabiting the steppes on Central Anatolia, the joint efforts of students and personnel turned the dry land in to a large forested land which became the lungs of Ankara, transforming into one the largest artificial forests in the World[1].

The 39,280,000 square meter campus are also hosts a natural lake, Eymir, with an area of 1,090,000 square meters, surrounded by the METU Forest [1]https://www.metu.edu.tr/system/files/odtu-kampus-haritasi.pdf

The construction of Ankara Campus began in late 1950s, in the outskirts of the Turkish Capital, Ankara. Its suburban setting turned to urban with the expansion of the city, beginning in the late 1990s and continues until this day.

[1] [1]*https://the.akdn/en/how-we-work/our-agencies/aga-khan-trust-culture/akaa/re-forestation-programme-metu*

METU Rector Kemal Kurdaş (1961-69) Planting the first trees of the METU Forest

METU Forestation Festival took place on October 30, 2019
(https://www.youtube.com/watch?v=NElWcISCqoM)

Activities to maintain and extend current ecosystems' biodiversity

To maintain and extend existing ecosystems and their biodiversity, of both plants and animals, METU undertakes research on ecosystems.

Ecosystem Implementation and Research Center (EKOSAM)

As one of many research centers at METU, the aim of EKOSAM is:

1. to investigate the structure, function, biodiversity and ecosystem services and products of aquatic, steppe and forest ecosystems, which are widespread in our country including METU campus,
2. to develop adaptation and mitigation proposals in our region, which is warming up today and will become even more hot and dry in the future, in order to preserve the structure and functions of these ecosystems,
3. setting sustainable management objectives that will help to make optimal decisions that balance ecosystem conservation / restoration needs and socio-economic developments, and
4. to share the information with the society obtained from the researches in order to increase scientific awareness and to improve the activities of citizen science.
(http://ekosam.metu.edu.tr/en/about)

Eymir and Mogan Lakes Ecological Research Activities
https://cumhuriyetim.metu.edu.tr/tr/eymir-ve-mogan-golleri-ekolojik-arastirma-etkinlikleri

Planning for local biodiversity

In order to preserve natural and architectural properties of the METU Campus, "METU Conservation Development Plan" was developed in 2014, with the collaboration of Ministry of Urban and Environmental Planning. The plan was revised in 2017.

https://www.metu.edu.tr/tr/duyuru/odtu-koruma-amacli-imar-plani-hakkinda-aciklama

In the construction of new buildings, decisions for location are based on METU Conservation Development Plan. Local biodiversity is also taken into consideration, especially the protection of the land classified as forest area is a priority.

METU NATURE and ECOSYSTEMS POLICY

METU campuses contain a very rich mosaic of land, lake and marine ecosystems that very few universities in the world have. The University adopts as a principle to use these ecosystems as natural laboratories to protect, develop and develop exemplary strategies for their sustainable use. In addition, it supports the studies at the institutional level for the formation of concrete principles for the following subjects and their implementation through practices.

Sustainable practices (such as plastic waste management, air pollutants emission limits) to prevent sea/water/air pollution caused by activities carried out on land.

Establishing observation and prediction systems to monitor the health of aquatic and marine ecosystems and sharing data openly over the web (example of Lake Eymir and DBE coast)

Developing an integrated management strategy specific to METU for the protection of land and sea creatures and ecosystems and ensuring its visibility on the relevant web pages.

Establishing a database on campuses' unique biodiversity, protecting endangered species determined by the International Union for Conservation of Nature (IUCN), and developing practices for protecting the ecosystem against invasive species (http://sustainablecampus.metu.edu.tr/en/policies).

Collaborations with the local government

Within the scope of the project "Building a Resilient City to Climate Change by Empowering Women", coordinated by Ankara, Çankaya Municipality, **Nature at METU** carried out a study in which it provided training together with climate change experts and raised awareness about climate change by playing games. After training kindergarten teachers were instructed to implement in their schools.

METU Institute of Marine Sciences (IMS) collaborates with local stakeholders, including Mersin Chamber of Commerce and Industry and Mersin Economy Platform in formulating the Blue Strategy to protect the ecosystem of East Mediterranean coast of Turkey.

https://www.mersinhaberci.com/haber/19857/byle-br-ar-geye-destek-salanmadi.html

METU IMS also signed “Clean Mediterranean” protocol with four municipalities of Antalya, Mersin, Adana and Hatay, to preserve the East Mediterranean Sea.

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https://www.milliyet.com.tr/yerel-haberler/mersin/merkez/temiz-bir-akdeniz-icin-4-belediye-bir-arada-6092421

METU also collaborates with the Ankara Metropolitan Municipality to protect and develop the surroundings of Lake Eymir. (https://www.birgun.net/haber/abb-ve-odtu-den-eymir-isbirligi-286056) Another collaboration is with the Çankaya Munipality in Nature4Cities project mentioned in 11.4.7. (https://pdo.metu.edu.tr/node/193)

https://cordis.europa.eu/project/id/730468/factsheet

METU cooperates with NGOs such Doğa Koruma Derneği (https://www.dkm.org.tr/) in carrying out *Species Count (Tür Say!) event (Source: odtudedoga.org).*

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Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

https://sdgs.un.org/goals/goal16

COLLABORATIONS

METU Faculty provides specific expert advice to local, regional or national government through policy guidance, participation in committees, provision of evidence. On-going consultancies in 2019 to government institutions include:

- The Council of State
- Ministry of National Education EU Commission
- International Organization of Migration
- Turkish State Railways
- Eskisehir Metropolitan Municipality
- Ankara Water and Sewer Authority
- Istanbul Metropolitan Municipality
- Mersin Metropolitan Municipality
- Turkish Army, General Staff

Policy- and law makers outreach and education

METU provides outreach, general education, upskilling and capacity-building to policy and lawmakers on relevant topics including economics, law, technology, climate change. An example is the METU Continuous Education Center (METU CEC) certificate program titled “Climate Change, Adaptation Policies and Turkey” for non-students.

The purpose of “Climate Change, Adaptation Policies and Turkey” Program is to train the staff of public institutions and organizations, the private sector, universities, research institutions, non-governmental organizations on issues of climate change, adaptation to the effects of climate change through strategy alignment, planning policies integrated with social and economic dimensions. This training program is a modular program prepared by METU Earth System Sciences Department.

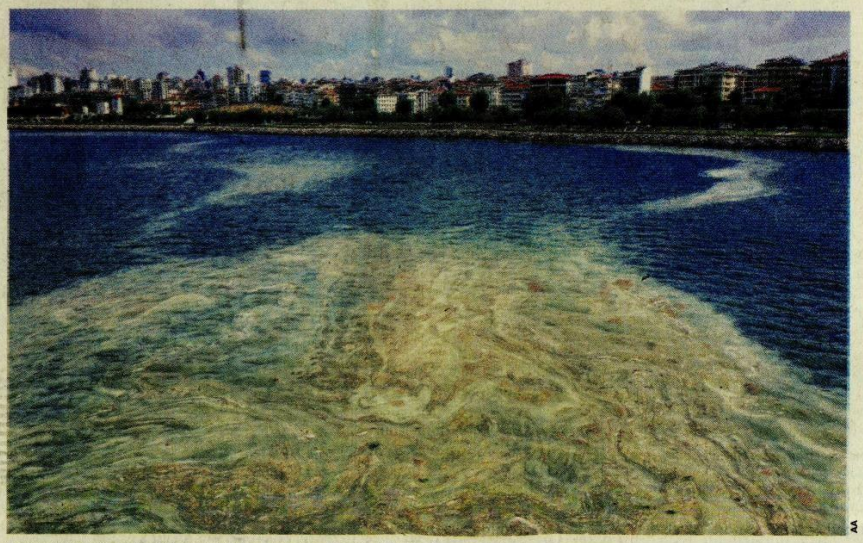
https://sem.metu.edu.tr/egitim/iklim-degisikligi-sertifika-programi.html

Participation in government research
METU undertake policy-focused research in collaboration with government departments. The projects continuing as of 2021 are as follows:

Sea Snot (Musilage) Research in Marmara Sea carried out by METU IMS, in collaboration with the Ministry of Environment, Urbanization and Climate Change in order to reduce and eliminate water pollution in the Marmara Sea.

Scientists sound alarm over 'sea snot' in Marmara Sea

Turkey seeks a solution to the marine mucilage known as 'sea snot' which has taken over parts of the Marmara Sea, while scientists researching the phenomenon say it is 'unprecedented' and point to pollution's contribution to the situation



A view of the "sea snot" off the coast of the Asian side of Istanbul, Turkey, June 4, 2021.

CONTINUED FROM PAGE ONE

PROFESSOR Barış Salihoğlu, head of METU's Institute of Maritime Sciences, says mucilage was widespread, from the surface to the bottom. "We have seen a gel-like structure spreading across the sea and never encountered such a large mass before," he told Demirören News Agency (DHA) on Friday. The university's Science-2 vessel was deployed to the sea for mucilage research earlier this week and will continue research for four more days, before presenting its findings to the Ministry of Environment and Urban Planning which leads the cleaning efforts against the mucilage.

Salihoğlu says the mucilage is not something new, but this time it has significantly reduced oxygen levels at sea. He said the lack of waste treatment aggravated the situation. "Agricultural waste, industrial waste pouring into the sea from deltas, tributaries particularly worsened it. We need to halve the pollution at least. Cleaning the pollution at least by half would return oxygen levels to normal within five to six years. We need patience and also swift measures," he warned.

The mucilage, more visible in areas close to the coast, dealt a blow to fishing as it reduces visibility and harms the nets. Below the sea, the ecosystem is suffering, with flora and fauna dying. It also scares away swimmers, at a time when coastal towns rely on tourism revenues with the onset of summer.

Sea snot, basically a huge collection of microorganisms, increases with the discharge of nutrient-rich sewage into the sea. Salihoğlu says wastewater was discharged to the bottom of the sea with the presumption that it would "head" to the Black Sea but a large part of the discharge sticks on the surface and stays in Marmara. He noted that although wastewater treatment plants are operating, some need improvement. "The pollution should also be decreased in rivers too, especially in the Susurluk delta (south of Marmara)," Salihoğlu stated.

The government is currently running a workshop on the issue and is expected to unveil an emergency action plan Sunday. Minister of Environment and Urban Planning Murat Kurum told reporters earlier this week that they developed "short-term and long-term" solutions to the issue with scientists, nonprofit groups, municipalities and local authorities. Kurum said the activities of industrial facilities played a role in the pollution and they would take steps to increase the number and capacity of wastewater treatment plants.

Eyyüp Karahan, head of the ministry's Directorate of Environmental Protection, says they had no means to intervene in the "dramatic rise in seawater temperatures" that worsened the mucilage but they can work to reduce the pollution. Speaking at the workshop held in the northwestern province Kocaeli, which is among the cities affected by the sea snot, Karahan said Friday that they have notified municipalities and governorates about the wastewater's contribution to mucilage in January and sought immediate action. He noted that Turkey had 1,170 wastewater treatment facilities run by municipalities serving 89% of the population and 249 among them were in the Marmara region. He noted that the recycling rate of wastewater has reached 3.2% and they hope to increase it to 5% in the next two years.

Tahir Büyükakın, the Kocaeli mayor who heads the Marmara Municipalities' Union, told the workshop that the Marmara has almost been treated like a "cesspool" for years, with sewage discharged without comprehensive treatment. "The Sea of Marmara should be viewed as part of a larger ecosystem, rather than a sea independent of its immediate region. We have to take steps to address the problem by tackling the sources of pollution, including those from the Black Sea and from the countries littoral to Black Sea," he said.

For Veysel Eroğlu, a former minister of Forestry and Waterworks, the solution is "easy" if the correct steps are taken. Eroğlu, now a lawmaker for the ruling Justice and Development Party (AK Party) said at a press conference Thursday that all relevant parties, from municipalities to the countries releasing wastewater into the Black Sea, should cooperate for a solution. "All municipalities discharging wastewater into the Marmara should have biological treatment plants. Nitrogen and phosphorus should be eliminated from industrial wastewater. We need an industry that creates less pollution and consumes less water. We need to rehabilitate all streams pouring into the Marmara. We need to check the pollution caused by pesticides. Finally, we need a tight inspection for pollution and to set up a monitoring network against pollution in all streams and all sources of wastewater pouring into the sea," he says. "This is not impossible. If all this is done, the pollution would be gone and so would the mucilage," he concluded.

ISTANBUL / DAILY SABAH WITH AGENCIES

Mucilage covering Marmara may spread to Black Sea: Expert

An expert warns about the spread of mucilage, also known as sea snot, to the Black Sea, saying, 'If the Marmara Sea dies, the Black Sea will die with it'

ISTANBUL

An aerial photo shows a marina full of musilage, a glue-like substance that develops on the surface of the water due to phytoplankton, on the Marmara Sea.

The massive marine mucilage bloom that has been killing the undersea life of the Marmara Sea might also hasten the end of the Black Sea, an expert warned while briefing the Turkish Parliament Global Climate Change Research Commission on June 3.

"The Black Sea is the world's largest oxygen-free water body. If the Marmara Sea dies, then the Black Sea will die with it," Gülşah Deniz Atalar, a board member of the Climate Change Policy and Research Association, told commission members.

Mucilage is a viscous, gluey substance that develops on the surface of the water due to the excessive proliferation of microscopic plants called phytoplankton. It is caused by the accumulation of nitrogen, phosphorus and carbon in industrial and agricultural wastewater.

Talking about the Danube River in her briefing, Atalar said: "The river carries all of the pollution of the western Balkan countries to the Black Sea."

Highlighting the importance of the Marmara Sea for the Black Sea, she said, "The Marmara Sea feeds and gives oxygen to the Black Sea by the undercurrent. But due to the mucilage, the Marmara Sea cannot do this."

The Black Sea is home to 60 percent of the Turkish fishing industry.

Turkey's environment minister said on June 3 that they were preparing a comprehensive action plan for the protection of the Marmara Sea.

"We are currently working on measures to be taken both in the short and the long term regarding the mucilage occurring in the Marmara," Murat Kurum told reporters in the Central Anatolian province of Konya.

He said scientists, nongovernmental organizations (NGOs), the Environment Ministry and the Marmara Municipalities Union were all working together to solve the sea snot problem.

"We are preparing an emergency action plan. Of course, when you look at this point, the reason for mucilage seems to be the increase in seawater temperature, the pollution in the sea and the decrease in the water level with the effects of climate change and the decrease in water mobility," Kurum added.

He stressed that they would also take steps to increase the number, quantity and quality of wastewater treatment plants in the region.

"This is an important issue that concerns our environment, our seas and our coasts, and we are trying to carry out this process as part of an urgent action plan," he noted.

The causes of the pollution and the uncontrolled production of sea snot in the Marmara Sea are being investigated by scientists in a research ship by the Middle East Technical University (ODTÜ).

The Bilim-2 (Science-2) vessel collects data from 100 stations, including the Istanbul and Çanakkale straits, in the Marmara Sea as part of the "Marmara Sea Integrated Modeling System (MARMOD) Project," which has been conducted since 2017 by the environment ministry.

Samples are analyzed in the laboratory of the Bilim-2 ship.

Marine Sciences Institute Director Barış Salihoğlu told the state-run Anadolu Agency that ODTÜ recently focused on the Marmara because scientists observed an ongoing decrease in oxygen level in the sea.

Upon the occurrence of recently aggravated mucilage production in the Marmara Sea, Salihoğlu said that climate change and overfishing were among the factors that triggered the problem.

"It is necessary to study the Marmara Sea with all its parameters. Otherwise, you will not be able to analyze problems such as mucilage correctly," he said.

Noting that the research is mainly focused on current factors such as the decline of oxygen and salt that affect sea snot production in the Marmara Sea, Salihoğlu said it would take at least six to seven years to see an improvement if precautions were taken as soon as possible.

"A very quick recovery is not easy, it takes time and patience," he said.

He also said that it was hard to tell the amount of pollution in the Marmara at the moment, adding, "There is mucilage in the entire water column."

"There are serious signals about the health of the ecosystem. It will not immediately improve after the measures are taken, but we think that we can solve it in the long term with determined steps," he said.

- BLACKSEA CONNECT –Coordination of Marine and Maritime Research and Innovation in the Black Sea (https://ims.metu.edu.tr/slider/black-sea-connect)
- SeaDataCloud-Further Developing the Pan-European Infrastructure for Marine and Ocean Data Management (https://www.seadatanet.org/About-us/SeaDataCloud/Partners)
- AQUACOSM - Network of Leading European AQUAtic MesoCOSM Facilities Connecting Mountains to Oceans from the Arctic to the Mediterranean (Project Partners: https://www.aquacosm.eu/project-information/aquacosm/)
- Expressive and receptive skills in bilingual children: A study on refugee childrens narrative production and lexical processing abilities (Higher Education Institutions Supported Project, 2020 - Continuing)
- Enhancement of research excellence in Mathematics Teacher Knowledge (MaTeK) (HORIZON 2020 Project, 2021-2023)
- Teachers Close to Borders: Uncovering Teachers? Practices as they Work to Enact Equitable Teaching with Refugee Children (TÜBİTAK Project, 2021 - 2023)
- Cultoure4Youth: Supporting Youth Entrepreneurship in Cultural Tourism for coastal communities in the Black Sea region (EU Supported Other Project, 2021 - 2023)
- Climate Resilient 3D-Printable Building Components Incorporating Sustainable and Low-Cost Materials (3D-PC): Providing Low-Cost and High-Speed Housing for Vulnerable Populations (TÜBİTAK International Bilateral Joint Cooperation Program Project, 2021 – 2023)

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Other government research:

Title	Researchers	Project Type
NÖROM Nörobilim Ve Nöroteknoloji Mükemmeliyet Merkezi	Ulusoy İ., Halıcı U., Bayram B., Ankaralı M. M. , Temizel A., Gençer N. G. , Akar G., Ertekin Bolelli Ş., Turgut A. E. , Son Ç. D. , Et Al.	Presidency Of Turkey, The Office Of Strategy And Budget Project
Yerli Radyasyon Monitörü	Demirköz M. B.	Presidency Of Turkey, The Office Of Strategy And Budget Project
Robotik Teknolojileri Araştırma, Geliştirme Ve Eğitim Merkezi (ROMER)	Şahin E., Ankarali M. M. , Kalkan S., Saranli U., Yazicioğlu Y., Cinbiş R. G.	Presidency Of Turkey, The Office Of Strategy And Budget Project
Teknoloji Tasarım Ve Yenilik Uygulama Ve Araştırma Merkezi	Sorguç A.	Presidency Of Turkey, The Office Of Strategy And Budget Project
ODTÜ MEMS Biyomedikal Uygulamalara Yönelik Altyapı	Külah H.	Presidency Of Turkey, The Office Of Strategy And Budget Project
Kanser Sistem Biyolojisi Laboratuvarı (KANSİL)	Acar A. C.	Presidency Of Turkey, The Office Of Strategy And Budget Project
Enerji Depolama Malzemeleri Ve Cihazları Araştırma Merkezi	Aydinol M. K.	Presidency Of Turkey, The Office Of Strategy And Budget Project

Orta Doğu Teknik Üniversitesi, İİBF İşletme Bölümü Bünyesinde Çalıştırılan TradeMaster Investment Lounge İsimli Yatırım Laboratuvarı'nın Altyapısını Geliştirme Projesi	Ayaydin Haciömeroğlu H., Danişoğlu S.	Presidency of Turkey, The Office of Strategy and Budget Project
Dişli ve Güç Aktarma Sistemleri Araştırma Merkezi	Ciğeroğlu E., Özgen G. O. , Yazıcıoğlu Y., Özer M. B.	Presidency of Turkey, The Office of Strategy and Budget Project
Saçılmalı Demet Hattı Laboratuvarı	Demirköz M. B.	Presidency of Turkey, The Office of Strategy and Budget Project
BİOMATEN Altyapısının Geliştirilmesi	Durucan C.	Presidency of Turkey, The Office of Strategy and Budget Project
Parçacık Radyasyonu Testleri Oluşturma Laboratuvarı	Demirköz M. B.	Presidency of Turkey, The Office of Strategy and Budget Project
GÜNAM 2. Aşama Global Mükemmeliyet ve Sanayi Ara Yüzü Oluşturulması	Turan R.	Presidency of Turkey, The Office of Strategy and Budget Project
GÜNAM Expansion project	Baker D. K.	Presidency of Turkey, The Office of Strategy and Budget Project
Araştırma Parkı	Hasançebi O.	Presidency of Turkey, The Office of Strategy and Budget Project

Deniz Ekosistem ve İklim Araştırma Merkezi (DEKOSİM)	Salihoğlu B.	Presidency of Turkey, The Office of Strategy and Budget Project
Araştırmacı Yetiştirme Programı	Dal H.	Presidency of Turkey, The Office of Strategy and Budget Project
Rüzgar Enerjisi Teknolojileri Ar- Ge Merkezi (RÜZGEM)	Uzol O.	Presidency of Turkey, The Office of Strategy and Budget Project
Komana Kazısı	Erciyas D. B. , Acara Eser M., PişkinE., SevimliE., Erdal Y. S. , Karasu Y. E.	Ministry of Culture and Tourism

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Strengthen the means of implementation and revitalize the global partnership for sustainable development.

https://sdgs.un.org/goals/goal17

Relationships with NGOs and government for SDG policy

METU has direct involvement with the SDG policy development processes of the Turkish government through research projects and other collaborative work:

"Climate Change and Our Seas" Workshop in collaboration with Turkish Marine Research Foundation

Scientific opinions that emerged after the workshop were collected in a book titled "Climate Change and Its Effects on Turkish Seas" and presented to the use of academic institutions, decision makers, voluntary organizations and students working on this subject.

The proceedings were gathered in a book, which can be downloaded (at https://tudav.org/wp-content/uploads/2021/04/iklim_kitap_tudav_odtu.pdf) and benefited free of charge from the Turkish Marine Research Foundation's website, provides ideas for the municipalities and relevant state institutions on adaptation to change, as well as the measures that can be taken with the effects of climate change on the marine ecosystem, our coasts, cultural heritage and human health. Recent studies show that the surface seawater temperature in the Mediterranean has increased by about 1.5°C over the past 50 years. Estimates show that sea level may rise by 1-2 meters in 2100, which will greatly affect the Mediterranean coastal population. In addition, at least half of the cities on the Mediterranean coast will be severely affected by climate change by 2050. Long-term measurement and monitoring studies are needed more than ever before in Turkish seas. All settlements on the coast, especially Istanbul, need to make detailed adaptation plans.

http://ims.metu.edu.tr/slider/iklim-degisikligi-ve-turkiye-denizleri-uzerine-etkileri-kitabimiz-yayinlandi

Blue Growth Initiative for Research and Innovation in the Black Sea

A Blue Growth Initiative for Research and Innovation in the Black Sea aims to advance a shared vision for a productive, healthy, resilient, sustainable and better valued Black Sea by 2030. The initiative will help to deeper connect Black Sea societies through a bridge of new knowledge, technologies and services.
The initiative aims to foster human and infrastructures capacity building in coastal, marine and maritime sectors in view of unlocking unique opportunities for a sustainable and environmentally friendly blue growth in the Black Sea.

In 2017, an Initiative was launched and supported by the European Commission (EC) to develop a joint research and innovation agenda and guide national and EU-level policymakers named as, 'The Blue Growth Initiative for Research and Innovation in the Black Sea'. As highlighted in the Burgas Vision Paper, this expert working group consisted of experts from Black Sea coastal countries, (Republic of Bulgaria, Georgia, Romania, the Russian Federation, the Republic of Turkey and Ukraine, as well as the Republic of Moldova), in cooperation with marine experts from leading European marine institutes and organisations, with the support of the European Commission. They produced the Burgas Vision Paper

the key framework document for a shared vision of a productive, healthy, resilient, sustainable and better-valued Black Sea by 2030. The paper was launched during the European Maritime Day 2018 in Burgas, Bulgaria (May 2018). It addresses the key pillars on which a new Strategic Research and Innovation Agenda (SRIA) can be built on. This process was further supported by the Ministerial Declaration towards a Common Maritime Agenda (2018) for the Black Sea, endorsed by the same Black Sea countries.

http://connect2blacksea.org/research-and-innovation-in-the-black-sea-empowering-the-next-generation-for-a-healthy-resilient-and-productive-black-sea/

Implementation of Stock Assessment in Fisheries Activities (IFISH)

The objective of the project is to contribute to the gradual harmonization with EU legislation in the Republic of Turkey's fisheries policy. The project, which will be implemented in line with the general objectives of the EU's common fisheries policy, will provide the basis for a sustainable fisheries governance strategy. Thus, Turkey's fishing industry and the desired sustainability goals is to help develop the ecosystem approach.

The aim of the project is to improve the institutional capacity of the Ministry of Agriculture and Forestry and to increase stakeholder awareness in stock assessment and ecosystem monitoring in fisheries activities. The project has three components. These are; strengthening the administrative capacity of the Ministry of Agriculture and Forestry for stock assessment in fisheries activities, ecosystem monitoring and management and the establishment of a comprehensive advisory board; data collection, verification, evaluation methodology development and stock assessment in fisheries activities, and stakeholder awareness and participation.

The project will focus on several key elements. The first of these is to provide training for fisheries managers and scientists with an ecosystem-based approach in fisheries management. In this way, the importance of strong stock assessments to increase the usability of data in line with the principles of ecosystem-based fisheries management will be emphasized. Also, stakeholders were included in the fisheries management process to ensure the sustainability of marine resources in Turkey.

https://www.i-fish.org/

International collaboration data gathering for SDG

METU is a member of Sustainable Development Solutions Network (SDSN) since 2016 (https://www.unsdsn.org/sdsn-members).

Also, activities conducted by Institute of Marine Sciences produce data shared with other researchers, in relation to SDG 14.

1. ARGO Program

Argo is an international program that collects information from inside the ocean using a fleet of robotic instruments that drift with the ocean currents and move up and down between the surface and a mid-water level. Each instrument (float) spends almost all its life below the surface (https://argo.ucsd.edu/about/). METU Institute of Marine Sciences is one of the partners of the ARGO Program.

The first Argo swimmer in Turkish seas was released to the Black Sea in 2002 in partnership with METU-DBE, Marine Hydrophysical Institute (Sevastopol/Ukraine) and Washington University (USA). In the following period, a total of seven Argo swimmers were left in the Black Sea. Details of this study can be found at https://dekosim.ims.metu.edu.tr/dekosim/Argo.

Within the scope of the DEKOSİM project, four of the six Argo devices purchased with the support of the Ministry of Development were left in the Black Sea and two in the Mediterranean, in order to measure the long-term and continuous current and physical parameters in the seas of Turkey, and measurement results began to be obtained via satellite. All Argo swimmers have sensors on them that measure temperature, conductivity (salinity), pressure, and dissolved oxygen.

Data is shared with other researchers at http://dekosim.ims.metu.edu.tr/dekosim/icerik/odtu-argo-programi.

2. Erdemli Time Series

Again, within the scope of DEKOSİM project, long-term observation infrastructure has a very important place. For this reason, the studies conducted in the past years were examined and the data collected in the same regions were compiled as a basis for long-term observation studies. Especially in Mersin Bay, where METU Marine Sciences Institute is located, physical, chemical and biological parameters have been collected since 1997 in the region from the shore to a water depth of 200 meters, despite various interruptions.

Named after the coastal town where METU IMS is located, the "Erdemli Time Series" (ETS) program has been launched to ensure that this existing data set is maintained more regularly and precisely. Within the scope of this program, physical parameters in the water column are measured weekly at eight stations along a profile from the shore to a water depth of 200 meters, corresponding to water depths of 20, 50, 75, 100, 125, 150, 175 and 200 meters, respectively. The most exposed station is located about 15 km from the coast. Regular flow measurements will begin to be taken along this long profile, which perpendicularly cuts the general water cycle of the Eastern Mediterranean. In addition to physical parameters, water sampling will be made from 10, 20, 30, 50, 75, 100, 150 and 200 meters water depths for chemical and biological parameters in monthly periods.

http://dekosim.ims.metu.edu.tr/dekosim/Erdemli-Zaman-Serisi

3. Float/Buoy Monitoring System

Within the scope of the DEKOSİM project, two buoy systems will be installed in the Black Sea and the Mediterranean for long-term and continuous measurement. One of the buoy systems will be installed in the Black Sea in front of Sinop, the other in the Mediterranean, in front of the METU Marine Sciences Institute campus in Mersin. The system, which will be installed at a depth of approximately 100 meters, 5 miles off the shore, has sensors to measure at surface, 10, 20, 30, 50, 75 and 100 meters. All sensors measure temperature and conductivity (salinity). Receivers at the surface, 50 and 100 meters can measure dissolved oxygen. In addition, chlorophyll and turbidity measurements will be made on the surface.

The cable carrying the float system is also used in data transmission from sensors carrying an inductive modem to the float on the surface. Meteorological measurement devices will be installed on the floater in accordance with the protocol signed with the General Directorate of Meteorology. Meteorological data will be published on the D-OMGI web page in real time. The products to be obtained from the oceanographic data will be published on the dekosim.ims.metu.edu.tr page.

http://dekosim.ims.metu.edu.tr/dekosim/Samandira

METU, as a body, initiate and participate in cross-sectoral dialogue about the SDGs. Below are two examples in relation to SDG 14.

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https://www.i-fish.org/

Collaboration between Microsoft and METU TEKNOKENT

Microsoft Turkey continues its collaborations with METU to strengthen the start-up ecosystem. The strategic cooperation between Microsoft and ODTU TEKNOKENT, which started with “New Ideas New Businesses”, will continue with special Demo Days for Microsoft for Startups Founders Hub member initiatives.

Microsoft ve ODTÜ TEKNOKENT'ten işbirliği

Microsoft Türkiye, start-up ekosistemini güçlendirmeye yönelik iş birliklerine ODTÜ ile devam ediyor. Microsoft ve ODTU TEKNOKENT'in Yeni Fikirler Yeni İşler ile başlayan stratejik iş birliği, Microsoft for Startups Founders Hub üye girişimlerine özel Demo Day'ler ile devam edecek.

ODTÜ ve ODTÜ TEKNOKENT tarafından organize edilen, Türkiye'nin öncü erken aşama hızlandırma programı Yeni Fikirler Yeni İşler 2022 Demo Day, 14 Aralık Çarşamba günü ODTÜ'de gerçekleşti. Microsoft Türkiye'nin de desteklediği program ile ODTÜ TEKNOKENT, teknoloji tabanlı iş fikirlerinin hayata geçmesine ve ürünlerin hızlı bir şekilde ticarileşmesine destek sağlıyor. Microsoft ve ODTU TEKNOKENT'in Yeni Fikirler Yeni İşler ile başlayan stratejik iş birliği Microsoft for Startups Founders Hub üye girişimlerine özel Demo Day'ler ile devam edecek. Microsoft For Startups Founders Hub programının girişimlere sunduğu avantajlardan faydalanmak isteyen start-up'lar https://foundershub.startups.microsoft.com/signup linkindeki başvuru sayfasını ziyaret ederek bilgi alabilirler.

https://basinda.metu.edu.tr/2022-12-30/3313635
https://www.dunya.com/sirketler/mcdonalds-dijital-alisveris-deneyimi-sunmaya-basladi-haberi-679779

Promet and METU: A Future-Oriented Collaboration in Artificial Intelligence

Artificial Intelligence Research and Development: Through joint projects, Promet and METU Teknokent will conduct research and development activities in the field of artificial intelligence. This contributes to the development of future AI applications.

Artificial Intelligence Training: Promet, in cooperation with METU Teknokent, aims to train future artificial intelligence experts by offering training programs. This provides new career opportunities for young talents.

Software Applications: Promet and METU Teknokent will work to provide competitive advantage to companies by integrating artificial intelligence technologies into software applications.

https://prometbilisim.com/haber/promet-ve-odtu-teknokent-yapay-zeka-alaninda-gelecege-yonelik-bir-isbirligi/

Turkey's most comprehensive TarımGES project from METU-GÜNAM

The Ayaş TarımGES project, the first and most comprehensive application in Turkey where a solar power plant with a solar tracking system is installed on an open agricultural land, was inaugurated on October 12, 2023. The project, carried out by METU-GÜNAM with the aim of high-tech sustainable development of agricultural lands, which are very valuable for Turkey, is important in terms of its focus on university, industry and agriculture. The project aims to carry out energy production and agricultural activities simultaneously with the help of elevated photovoltaic (PV) solar panels.

https://haber.metu.edu.tr/tr/2023/10/odtu-gunamdan-turkiyenin-en-kapsamli-tarimges-projesi/
https://www.aa.com.tr/tr/ekonomi/turkiyenin-ilk-gunes-takip-sistemli-tarim-gesi-acildi/3017090

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Other projects for SDG 17

- Earth Commission: Translation of Earth System Boundaries for Cities (Other International Funding Programs, 2021 - 2023)
- Floating Hybrid Renewable Energy Systems for Turkey (TÜBİTAK International Bilateral Joint Cooperation Program Project, 2021 - 2023)
- Innosolpower, Yenilikçi Yüksek Güç Yoğunluğuna Sahip Mikro-Termal Güneş Enerjisi Depolama (TÜBİTAK International Multi-Cooperation Project, 2021 - 2024)
- Taş Dolgu Dalgakıranlarda Kullanılan Farklı Ünitelerin Ve Dizilimlerin Dalga Aşmasına Ve Kronman Duvarlara Etkiyen Kuvvetlere Etkisinin Modellenmesi (TUBITAK Project, 2022 - 2025)
- SHALLOW LANDSLIDE SUSCEPTIBILITY MAPPING IN RIZE, TURKEY (Funded by UK Newton Fund, IAPP Industry-Academia Partnership) (Newton Programme Project, 2020 - 2023)
- Kent Formu, Hava Kirliliği ve Çocukluk Dönemi Astımı İlişkisi (TUBITAK Project, 2020 - 2024)
- Turnover response system development (Newton Programme Project, 2020 - 2023)
- Development of a module add-on that can make attacker position estimation for micro and mini unmanned aerial vehicles (TUBITAK Project, 2021 - 2023)
- REcube: REthink, REvive, REuse - Transmitting the knowledge for the green regeneration of the European Concrete Heritage (Erasmus Project, 2021 - 2024)