



IZMIR INSTITUTE OF TECHNOLOGY

# Sustainability Report 2026





# Content



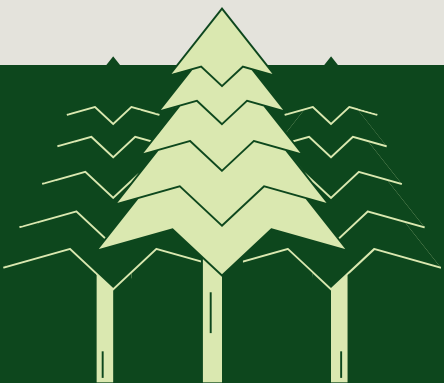
|                           |    |                               |    |
|---------------------------|----|-------------------------------|----|
| Our Commitment            | 03 | Setting & Infrastructure      | 07 |
| Our Campus                | 04 | Energy and Climate            | 13 |
| Our University            | 05 | Waste                         | 21 |
| Green Campus Coordination | 06 | Water                         | 27 |
|                           |    | Transportation                | 33 |
|                           |    | Education and Research        | 37 |
|                           |    | Governance and Digitalization | 49 |





# Our Commitment

Our campus location is truly one of a kind, distinguished by its diverse natural, environmental, and historical richness. We take great pride in being part of a campus that embodies such a strong combination of natural beauty, cultural heritage, and vibrant social life. As members of IYTE, we are deeply committed to preserving these values and continuously working to make our campus more sustainable, livable, and inspiring for everyone. Our mission goes beyond protecting what we already have – we aim to create an active culture of sustainability that involves our students, colleagues, and all stakeholders in meaningful collaboration. Through education, research, and community engagement, we seek to generate lasting change and contribute to environmental and social well-being both locally and globally. Our dedication to protecting, enhancing, and celebrating the unique assets of our campus is an ongoing and evolving journey that we pursue with enthusiasm and responsibility.



# Our Campus

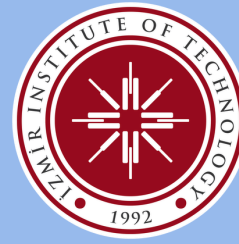


Our university is located in the Urla Region of İzmir, in western Turkey. The campus, one of the largest in the country, covers 35,000,000 m<sup>2</sup> of gently sloping terrain with Mediterranean pine forests, maquis vegetation, wetlands, and fertile plains. The region has a typical Mediterranean climate—hot, dry summers and mild, rainy winters. The campus enjoys a microclimate with sunshine and light breezes throughout the year, offering beautiful sea views and direct access to the coast. It also includes a small waterfall, a winter stream, and an alluvial plain.

About 28,000,000 m<sup>2</sup> of the area is used for campus facilities, which include 52 sustainable buildings, large open areas for social interaction, sports fields, permeable roads and parking areas, and climate-adapted landscaping that helps preserve natural vegetation.



# Our University



## Sustainable Green Campus Coordination

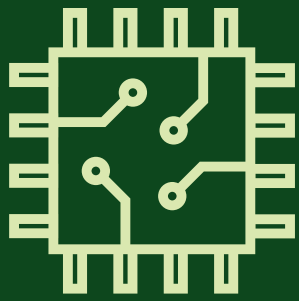
IZTECH is an English-medium public university composed of three faculties—Science, Architecture, and Engineering—offering undergraduate, master’s, and doctoral programs. In 2025, the university provides education to 7,247 students, including 5,972 undergraduate and 1,275 graduate students, supported by 1,228 academic and administrative staff. Recognized as one of Türkiye’s research universities, IZTECH stands out for its strong emphasis on scientific excellence, innovation, and sustainability. The university fosters a dynamic ecosystem that bridges academia, technology, and industry through its Technology Development Zone, Technopark İzmir, Innovation Center, Technology Transfer Office, and multiple Research and Application Centers. Together, these structures form an integrated platform that supports interdisciplinary collaboration and contributes to regional and national progress in science and technology.

The IZTECH Sustainable Green Campus Coordinatorship was established in 2014, laying the foundation for a comprehensive institutional approach to sustainability. The first step toward this vision was the Search Conference for a Sustainable Living Campus, themed “Happy Campus,” which brought together diverse campus stakeholders to co-create ideas for a livable, resilient, and inclusive campus environment. Although a formal Framework on Sustainable Campus was defined later in December 2019, these early efforts shaped the participatory culture that continues to guide IZTECH’s sustainability actions today.

Since 2020, IZTECH has adopted the UI GreenMetric World University Ranking as a self-assessment and benchmarking tool to measure progress and identify opportunities for improvement. Guided by the motto “Happy Campus, Happy Peninsula, Happy İzmir,” the Sustainable Green Campus Coordination Team—comprising 12 members, including the rector, field experts, and dedicated young researchers—has continued to advance the university’s sustainability vision. Strengthened by the active involvement of Eco Motion and numerous student-led initiatives, the Coordinatorship remains a driving force for environmental and social transformation at IZTECH, maintaining its bottom-up, community-centered approach to campus sustainability.







# 1. Setting & Infrastructure

İzmir Institute of Technology (IZTECH), established in 1992, represents a premier model of a state university dedicated to advanced scientific research and technical education in Türkiye. Initially founding its graduate programs within the İzmir city center in 1994 and expanding to undergraduate studies in 1998, the institute executed a strategic relocation in 1999 to its current seaside campus in the rural district of Urla. Today, IZTECH operates on a highly integrated, single campus site that spans a massive total land entitlement of 35,000,000 m<sup>2</sup>. Out of this extensive territory, a total area of 28,140,000 m<sup>2</sup> is actively dedicated to core educational, scientific research, and administrative activities.

The institutional landscape is visually highlighted in the wide aerial panoramic views of the campus grounds (Figure 1a), which show the university's unique positioning between the natural mountain ecosystems and the Aegean Sea. This rural setting, located 50 km from İzmir's metropolitan center and 15 km from the center of Urla district at the intersection of the Çeşme and Karaburun Peninsulas, provides a naturally isolated, low-density research environment. IZTECH campus functions effectively as a living ecological laboratory for over 7,110 students and 1,150 academic and administrative staff members. The precise spatial layout of the active campus area demonstrates a meticulous commitment to maintaining a low-density, resource-efficient built environment.

According to official registries maintained by the Directorate of Construction and Technical Works of IZTECH, the aggregate ground floor base area occupied by all institutional buildings measures exactly 97,861 m<sup>2</sup>. When factoring in multi-story structures, the cumulative indoor built area across all faculties, laboratories, student dormitories, and social facilities reaches a total of 245,579 m<sup>2</sup>. The geographical distribution of these structures and the active campus borders are clearly delineated in the GIS-based institutional satellite mapping (Figure 1b). The precise ratio of open space area to the total active campus area reveals that 99.7% of the university territory consists of unbuilt open space. This vast unbuilt open space is heavily dominated by natural carbon sinks and carbon mitigation vegetation.

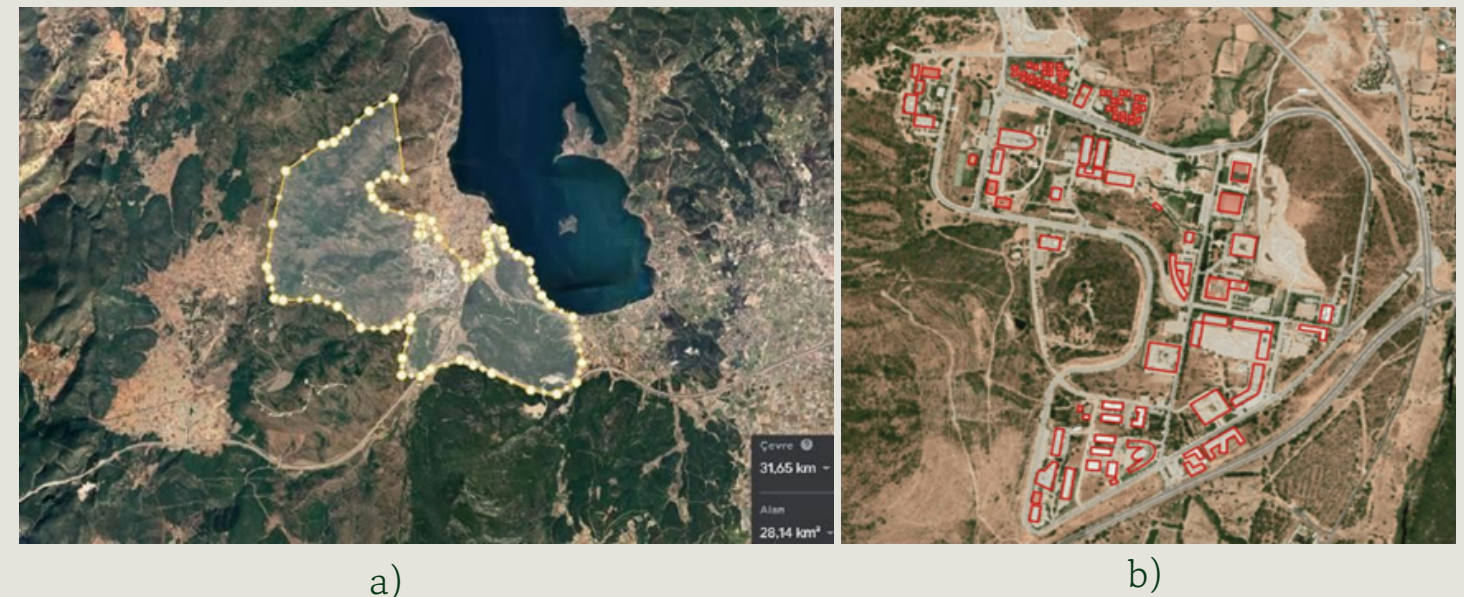


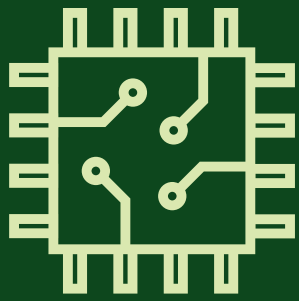
Figure 1. a) Campus area, b) campus buildings distribution

The native forest vegetation cover within the active campus boundary encompasses 22,185,819 m<sup>2</sup>, which represents 79% of the total active university grounds. These forested zones are fully utilized for systematic academic research, field-based teaching, and local community engagement programs. Complementing these wild ecosystems, the cultivated or planted vegetation infrastructure covers 5,868,320 m<sup>2</sup>, accounting for an additional 20.9% of the campus territory. This managed green infrastructure comprises landscaped parks, permeable walkways, and target-driven botanical projects. A comprehensive flora catalog compiled by institutional teams documents a highly diverse plant inventory consisting of 5,197 distinct registered plants spanning 88 different species, which is managed via an interactive student-led biodiversity mobile application called EKOTApp (Figure 2).









# 1. Setting & Infrastructure

Campus safety, structural security, and emergency disaster resilience are maintained through a multi-layered technical infrastructure. The campus boundary features restricted access controls across three main secure entry gates overseen 24/7 by trained personnel and integrated closed-circuit television (CCTV) surveillance networks. Fire prevention is automated through indoor smart fire alarm networks, continuous wall-integrated fire hoses, and extensive external fire hydrant grids. IZTECH operates its own fully operational Fire Engine permanently stationed on campus. Emergency health infrastructure includes a fully staffed on-campus medical clinic capable of executing first aid, biochemistry lab testing, dental treatments, and routine vaccinations. This is reinforced by a modern, fully equipped on-campus ambulance station with a continuous rapid-response vehicle fleet. Through synchronized emergency drills and seven strategically designated emergency assembly zones distributed across the campus territory, the university guarantees a critical incident response time of under 5 minutes for any natural disaster, fire, or medical event.

The holistic implementation of IZTECH's Setting and Infrastructure programs drives concrete advancements across 14 distinct United Nations Sustainable Development Goals (SDGs), bridging environmental preservation with institutional inclusivity. The university protects vital genetic resources and native biodiversity under the comprehensive "IZTECH Biodiversity Conservation Strategy Plan (2025-2050)", which is governed by a multidisciplinary Conservation Steering Committee comprising faculty members from architecture, urban planning, genetics, and engineering. Academic research conducted at the Plant Science Application and Research Center (PSTAR) directly leverages this infrastructure to drive advanced projects in tissue culture, including the mass propagation of endangered Salep Orchids, genetic mapping of Turkish fig varieties, and the valorization of agricultural waste. These integrated research activities, seed banks, and endemic greenhouses are visually detailed in the university's specialized biotechnology laboratories (Figure 4), showcasing the infrastructure's capacity as an operational academic asset and an ecological carbon sink. Through these sustained efforts, IZTECH fulfills its long-term vision of a safe, universally accessible, and climate-resilient green campus.



Figure 4. Greenhouses, seed banks and warning signs for conservation of endemic plants within the campus



## 2. Energy & Climate



Izmir Institute of Technology (IZTECH) has established itself as one of Türkiye's leading sustainable universities through comprehensive energy management, renewable energy generation, smart campus infrastructure, climate action programs, and sustainability-oriented research and innovation. Located in the environmentally sensitive Gulbahçe region of İzmir, the university integrates sustainability principles into its campus operations, educational activities, research programs, and long-term development strategies.

IZTECH focuses on energy efficiency improvement, monitoring efficiency on in daily basis, production of renewable energy and energy consumption reduction thus decreasing greenhouse gas emissions. To improve it further, ISO 50001 energy management certification has been received, and an external energy management unit has been established. As though the IZTECH is an energy positive campus, energy efficient appliances are still used in most of the buildings with increasing amount. LED light bulbs, light bulbs with motion sensors, energy efficient air conditioner systems are some of the approaches to reduce consumption. Roof isolation of the buildings has been repaired due to the strong winds and rainy season every year. Most of the buildings have natural lighting and natural ventilation.



Figure 1. Examples of natural lighting in our buildings.

Solar panels and wind turbines are actively working at campus. Electricity is being generated by solar panels on roofs of some buildings as well as the swimming pool being heated by solar power. Wind turbines with 13.5 MW capacity located in our campus generate about 4.32 times more electricity than used at the campus. The electricity generated is given to the city hub. IZTECH has achieved positive value on the impact with the last improvements in renewable energy approaches.



Figure 2. Renewable energy sources at our campus.



# 2. Energy & Climate



The Gulbahce region experiences a significant amount of sunshine throughout the year and is also rich in geothermal resources. Efforts to reduce greenhouse gas emissions are being considered across various areas, including electric vehicles operated by the university, bicycles on campus, waste sorting bins for metals, plastics, paper, glass, batteries, and general waste, as well as wastewater treatment and reuse. Additionally, renewable energy sources such as wind and solar power are being utilized, along with lab-scale setup for producing hydrogen energy using electricity generated from wind turbines.

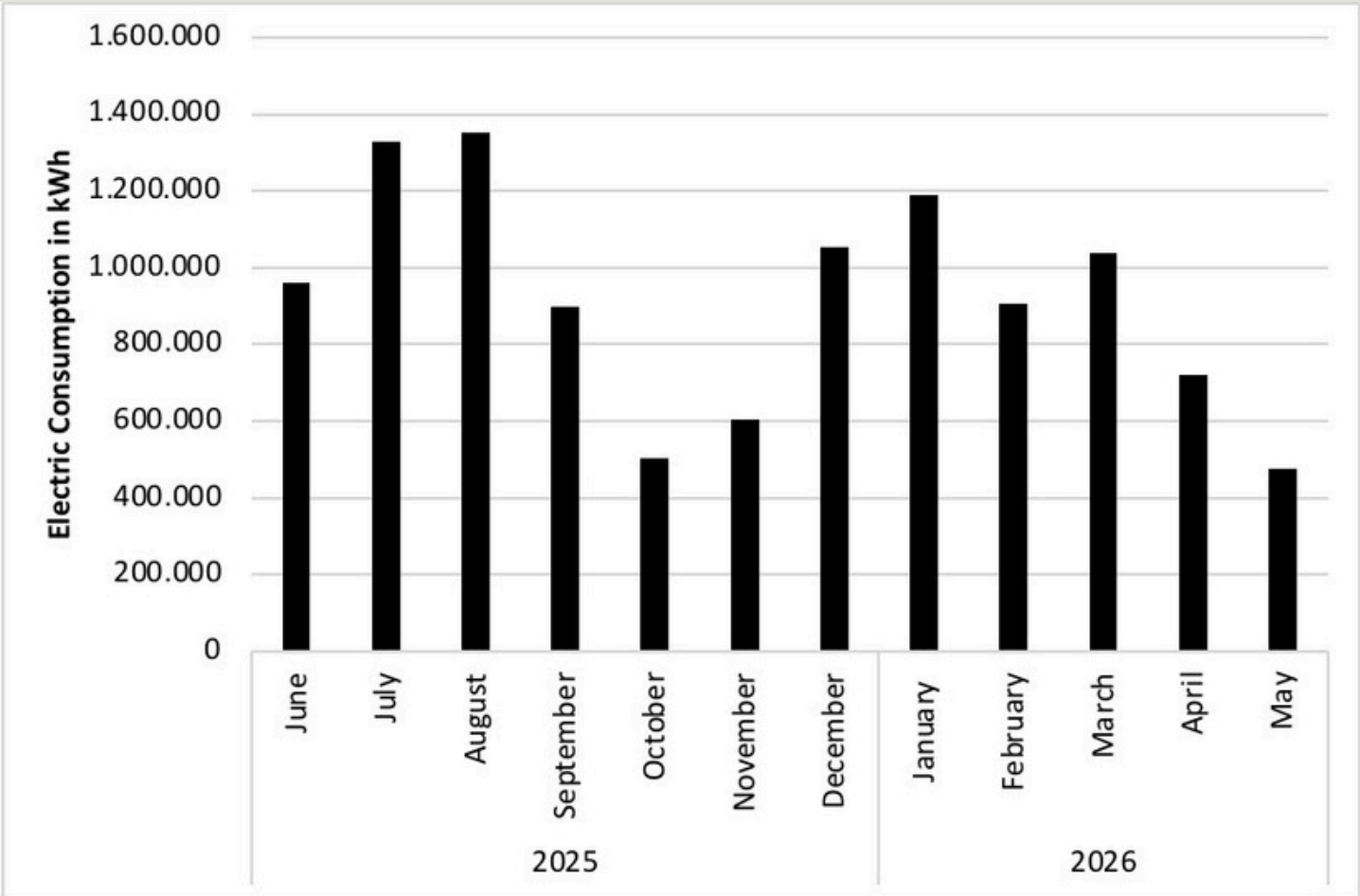


Figure 3. Electricity consumption of IZTECH campus in last 12 months

The university’s climate action strategy extends beyond energy production to include comprehensive greenhouse gas emission reduction programs. Electric vehicle charging stations are available on campus, while electric service vehicles, e-bikes, and e-scooters provide low-carbon transportation alternatives. Shared shuttle buses and campus transportation services reduce private vehicle use and associated emissions.

IZTECH conducts several activities to contribute the technology and innovation. Some of the activities are as follows:

IZTECH is a part of project called Development of Advanced Composite Pressure Vessels for Hydrogen Storage including on-site testing of new hydrogen storage unit. Efficient storage of hydrogen is crucial for the success of emerging hydrogen energy markets & is strongly connected to the performance & safety of the components of the supply chain. Currently, hydrogen is stored & transported in a compressed form to satisfy the safety & weight regulations for high pressure gases. Alternatively, composite storage vessels offering high strength & low weight addresses this largely unmet problem with a multi-disciplinary team that aims at developing cost-competitive lightweight composite cylinders with improved mechanical & barrier properties for hydrogen storage using additive manufacturing technology. Such 3D printed liners with barrier coatings make them impermeable to gases. Further, novel chemo-chromic material-based sensors will be developed & integrated into these structures for real-time monitoring of the diffusion of gas. The 3D printed hydrogen storage vessels will be integrated to the wind hybrid system (wind turbine, PV unit, battery system) and will be tested on the site to evaluate their performance.

IZTECH is a part of project titled Green Hydrogen Generation Energized with Innovative Small Scale Wind Turbine which is a part of the Green and Blue Transformation Program, with assistance from the İzmir development agency.

This project aims to produce the electrolyzer, one of the most important components of green hydrogen production, which has an increasing demand both domestically and abroad. Within the scope of this project, a 2 kW level module will be created, which has not yet been produced locally in our country. Design parameters that will maximize operating efficiency will be tested in both single-cell and multi-cell structures. These parameters include many components such as precious metal loading rate for the anode and cathode separately, catalyst material type, array design, dimensions, operating voltage, squeezing pressure, feed water purity and temperature, cooling load.

On the other hand, the production of hydrogen produced with an electrolyzer powered by renewable energy sources, based on domestic and national technologies, is also very important in terms of the green hydrogen concept. This project will allow the production of hydrogen, one of the strategic energy carriers of the future, through an electrolyzer developed with national engineering, energized by a vertical axis wind turbine developed with national technologies.



# 2. Energy & Climate



As detailed in the Figure 4, the daily electricity generation from the campus's 13.5 MW capacity wind turbines exhibits highly dynamic, fluctuating profiles across the 12 month period from June 2025 through May 2026. Production frequently peaks well above 250 MWh, occasionally surging past 300 MWh and reaching an absolute maximum near 450 MWh during high-wind intervals.

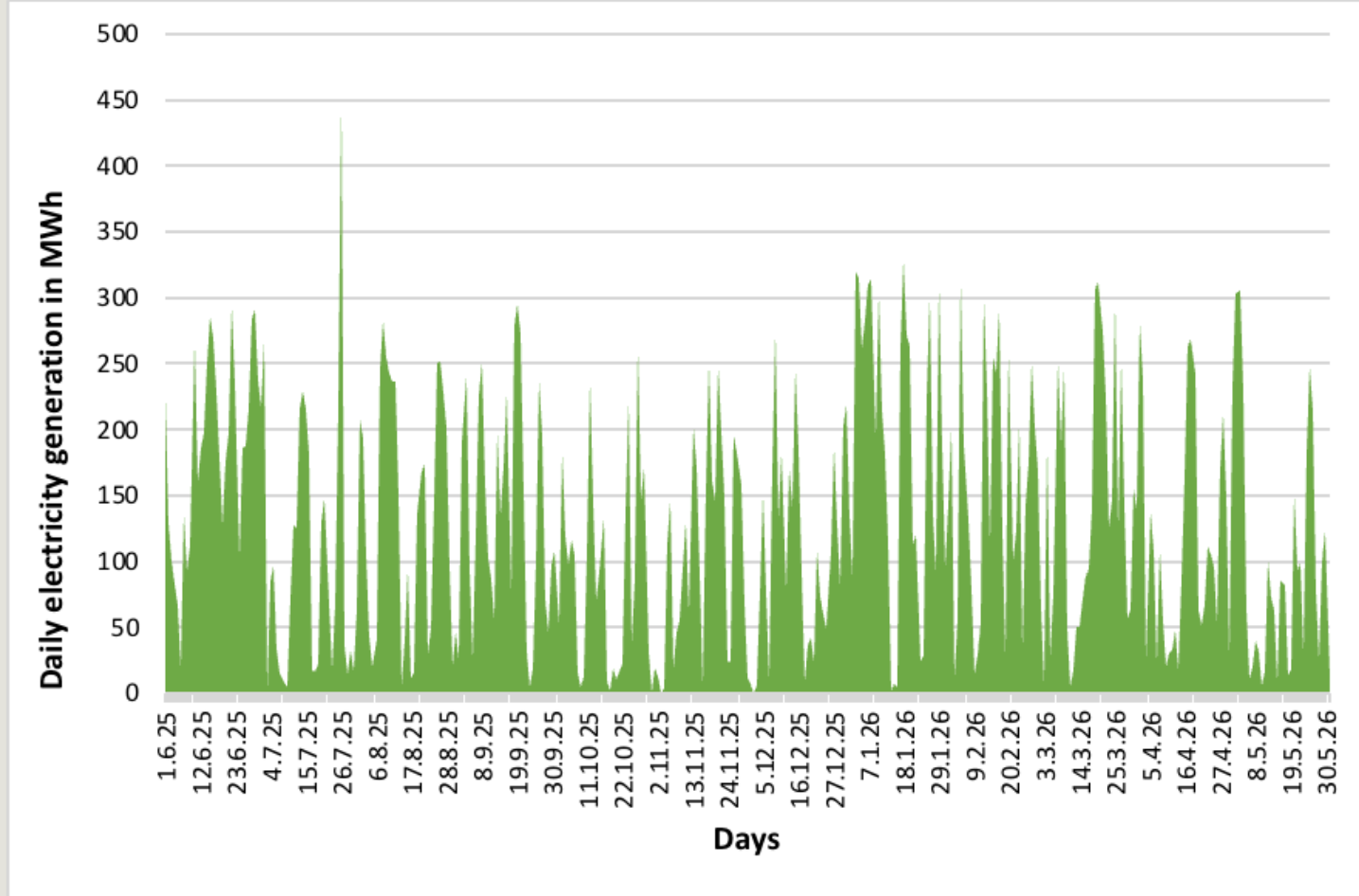


Figure 4. Daily electricity generation in MWh



Figure 5: The vertical axis wind turbine used in the project

IZTECH has committed significant effort to adopting sustainable transportation practices. This isn't solely due to its status as an energy-positive campus. A large number of electric vehicles (EVs) are already in use across the campus, including e-buses, e-scooters, and e-bikes available for use. By leveraging this surplus, renewably-generated electricity, EV chargers always have a positive, sustainable power source.

Furthermore, some research groups require electricity even in remote and rural locations, such as on mountaintops. To address these challenging circumstances, they utilize a mobile charger equipped with solar panels. Thanks to these solar panels, this mobile unit is usable in virtually any environment where electricity is needed for research activities.



## 2. Energy & Climate



Figure 6. EV battery chargers and mobile chargers from left to right

IZTECH completed campus mapping studies that detail important energy and climate elements. This comprehensive map pinpoints the locations of various sustainable resources, including EV charger locations, a mobile charger location, solar energy zones, and a wind turbine zone, alongside historical features like the Ancient Roman bath and a geothermal zone, all made available for public information. Furthermore, to support eco-friendly travel within the campus, the map integrates with an e-scooter application to show the real-time availability and locations of scooters.

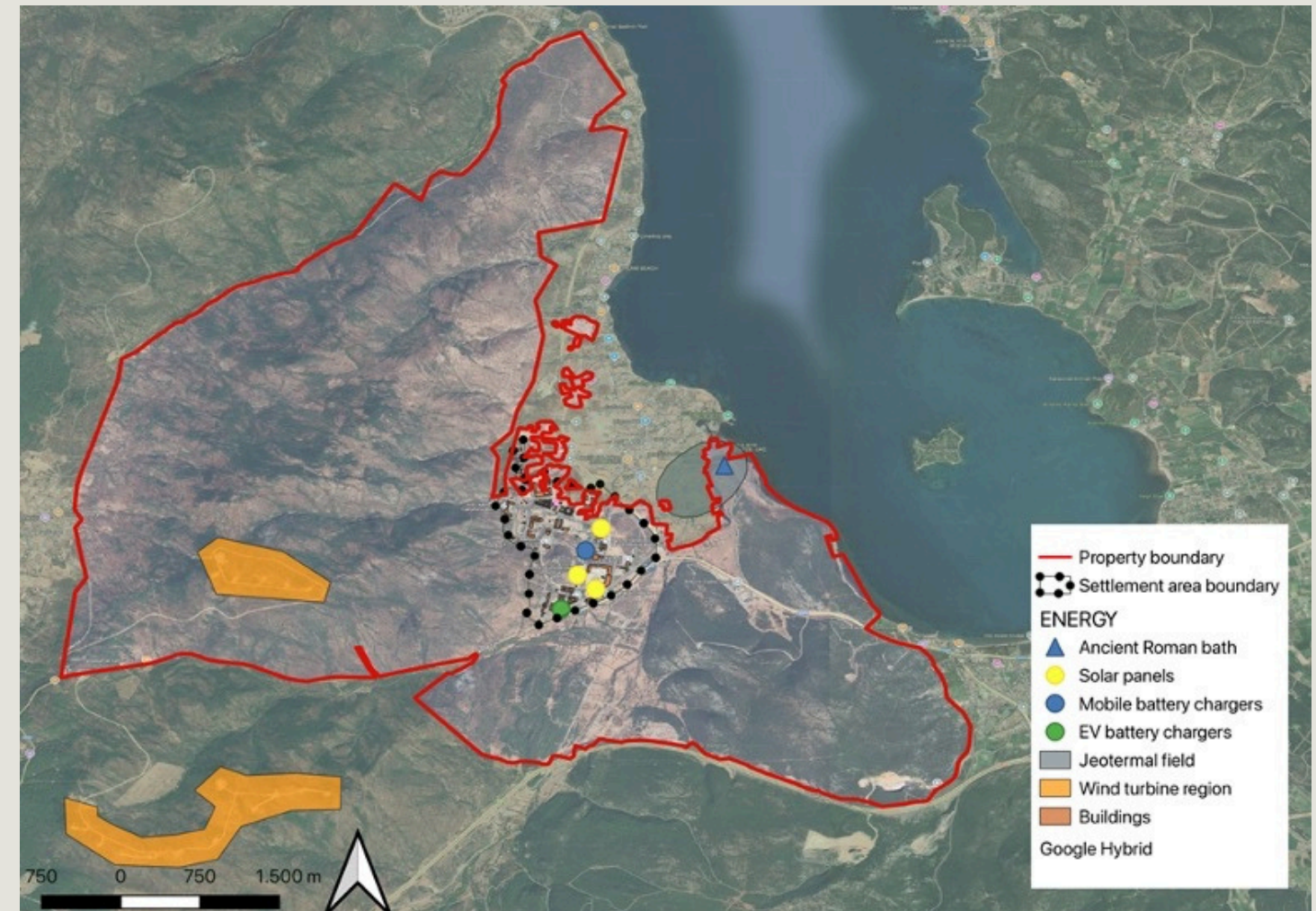


Figure 7. Map of energy and climate related elements in the campus

IZTECH has aligned its extensive energy and climate-related programs to directly support 14 out of the 17 United Nations Sustainable Development Goals (SDGs). By producing 4.32 times more clean electricity than it consumes through its on-campus wind turbines and rooftop solar installations, the university establishes an energy-positive infrastructure that directly answers SDG 7 (Affordable & Clean Energy) and SDG 13 (Climate Action). Beyond renewable energy, the campus incorporates social and research-driven sustainability models SDG 1 (No Poverty) and SDG 4 (Quality Education) through student financial aid programs like SOYAD, alongside circular economy projects such as "Gelecek İçin Dökme Biriktir," which recycles waste cooking oil into eco-friendly biofuels to fund student scholarships while simultaneously advancing SDG 6 (Clean Water and Sanitation) and SDG 12 (Responsible Consumption and Production).





### 3. Waste

IZTECH continues to strengthen its comprehensive Zero Waste and 3R (Reduce, Reuse and Recycle) waste management program through source separation, digital monitoring, infrastructure expansion, awareness activities, and institutional cooperation. After achieving full score under the waste-related GreenMetric criterion in the previous evaluation period, IZTECH did not stop at maintaining its existing system; instead, the university expanded its practices in 2026 with new digital, infrastructural, and participation-based improvements.

A major development is the active use of the EMISSARY CAMPUS platform for digital sustainability monitoring. Through this platform, IZTECH records waste data, monitors container infrastructure, evaluates recycling and recovery capacity, tracks waste-related emissions, and supports data-based sustainability reporting. According to the EMISSARY CAMPUS container infrastructure module, 76% of all defined waste containers are allocated to recycling, recovery, and reuse-oriented waste streams. This demonstrates that the campus waste infrastructure is not only extensive, but also strategically designed to support the 3R program.

The university also expanded its physical waste infrastructure. New 750-L and 200-L containers were purchased and used to establish event-based waste stations, especially for the Spring Festival and other large campus events. Informative labels and brochures were attached to waste containers to guide students, staff, and visitors on correct source separation for PET, glass, aluminum, paper/cardboard, organic waste, mixed waste, batteries, and small electronic waste. In addition, the DOA deposit return machine was introduced on campus to support the separate and digital collection of recyclable beverage packaging.

IZTECH's paper and plastic reduction strategy combines digitalization and practical alternatives to single-use materials. Paper consumption is reduced through UBYS electronic document management and paperless administrative workflows. Plastic bottle use is reduced through water refill infrastructure, including Viamola water stations, campus drinking fountains, and the RePG AQUA atmospheric water generator. These systems provide accessible drinking water alternatives and encourage reusable bottle use across the campus.

Organic waste is managed through multiple treatment and recovery pathways. Cafeteria food waste is separately monitored and used as animal feed by farms in nearby villages. Garden and landscaping waste is composted on campus. Organic fractions that may be included in mixed municipal waste are transferred to the İzmir Metropolitan Municipality waste treatment system, where biogas recovery is carried out. Therefore, IZTECH reports no open dumping of organic waste; recorded organic waste streams are directed to animal feed reuse, composting, or municipal biogas recovery pathways.



Inorganic waste management was also strengthened. Paper, cardboard, plastic, metal, glass, PET, and packaging wastes are collected through color-coded bins, triple recycling sets, glass containers, event-based waste stations, special collection points, and the DOA deposit return machine. Compared with the previous reporting period, the amount of separately collected inorganic waste increased. This increase reflects improved source separation, expanded collection infrastructure, and higher recovery visibility, rather than uncontrolled waste generation. EMISSARY CAMPUS supports traceable monitoring of these waste streams.





### 3. Waste



Campus participation is a central part of IZTECH's waste strategy. During the Spring Festival, event-based waste stations were established and participants' waste management behavior was assessed through a digital tool. The carbon footprint of the event was also calculated, creating a measurable basis for lower-waste and lower-carbon event planning. The "Pour for the Future, Collect for Change!" waste oil project encourages campus users to collect used cooking oil in PET bottles and deliver it to designated collection points. Survey results showed high environmental awareness but low practical participation, guiding IZTECH to improve communication, visibility, and collection-point planning.

Overall, IZTECH's waste management programs support a wide range of Sustainable Development Goals, including SDG 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, and 17. The program contributes to responsible consumption, climate action, water and soil protection, occupational health and safety, digital innovation, sustainable campus infrastructure, education, transparent governance, and institutional partnerships.

Hazardous waste management remains one of the strongest components of IZTECH's waste system. Hazardous waste is collected in designated containers, temporarily stored under controlled conditions, and transferred only through licensed waste management firms. In 2026, IZTECH purchased and distributed 20 hazardous waste containers and 20 spill containment pallets to laboratory-based units. Spill response kits containing leak-proof containment bases, absorbent pads, protective coveralls, safety goggles, and emergency response materials were also provided. All hazardous waste transfers are officially recorded in MoTAT, Türkiye's national Mobile Waste Tracking System, ensuring full traceability from producer to licensed transport and treatment facilities. As a result, 100% of recorded hazardous waste is managed through controlled collection, safe storage, licensed transfer, and documented treatment pathways.

Wastewater and sewage management are also integrated into IZTECH's sustainability approach. Wastewater is collected through the campus sewerage network and treated through activated sludge and disinfection processes in coordination with the İzmir Metropolitan Municipality Water Directorate. Treated wastewater is reused for landscape irrigation where possible. EMISSARY CAMPUS further supports digital monitoring of water footprint, greywater discharge, irrigation water, and wastewater quality indicators.





## 3. Waste

Additional evidence links:

EMISSARY CAMPUS Dashboard:

<https://emissarycampus.iyte.edu.tr/?year=2025&period=yearly>

<https://emissarycampus.iyte.edu.tr/?year=2026>

Spring Festival Carbon Footprint and Participant Assessment:

<https://emissary.com.tr/tr/anket/iztech-2026/sonuclar>

IZTECH Waste Management Page:

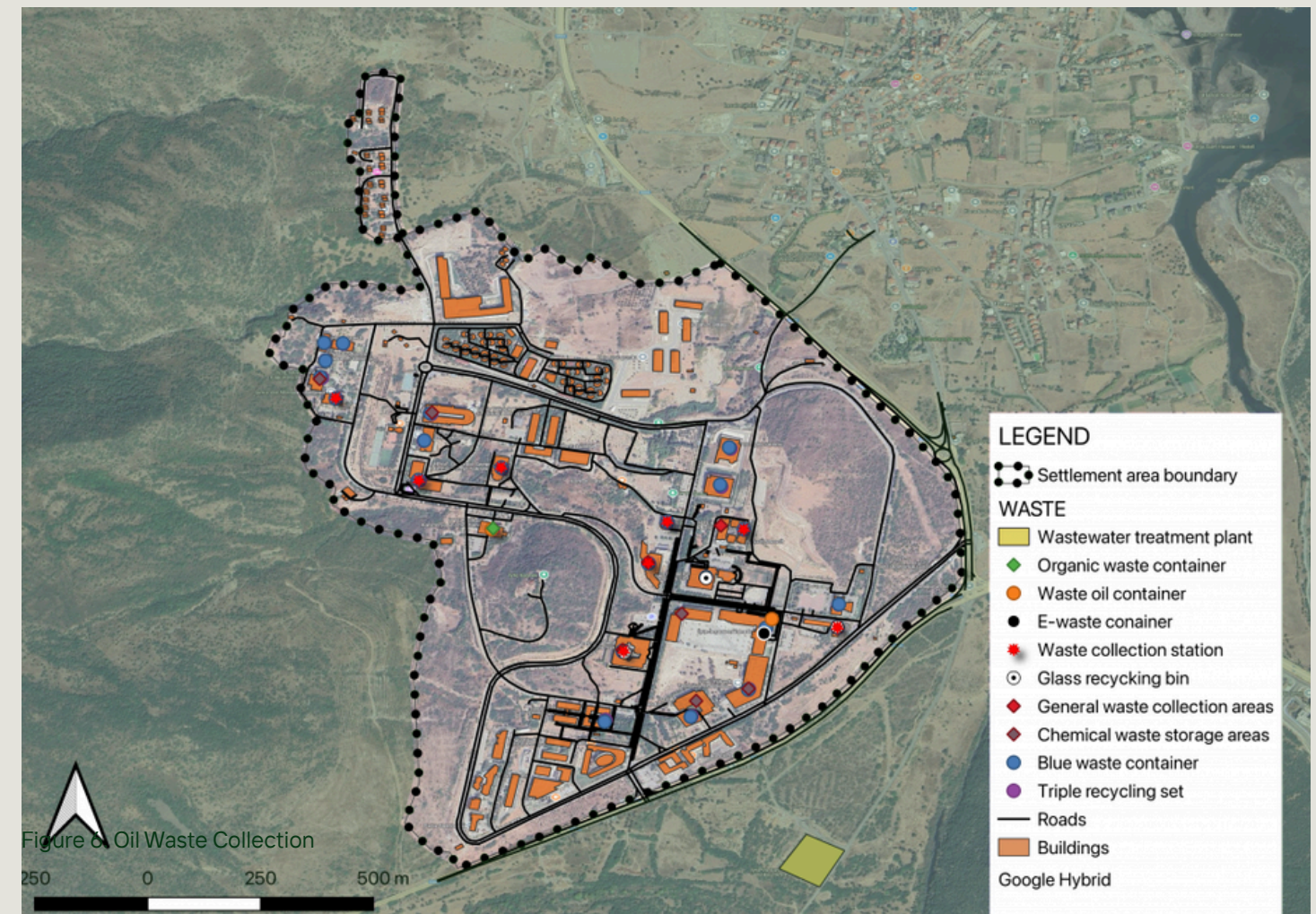
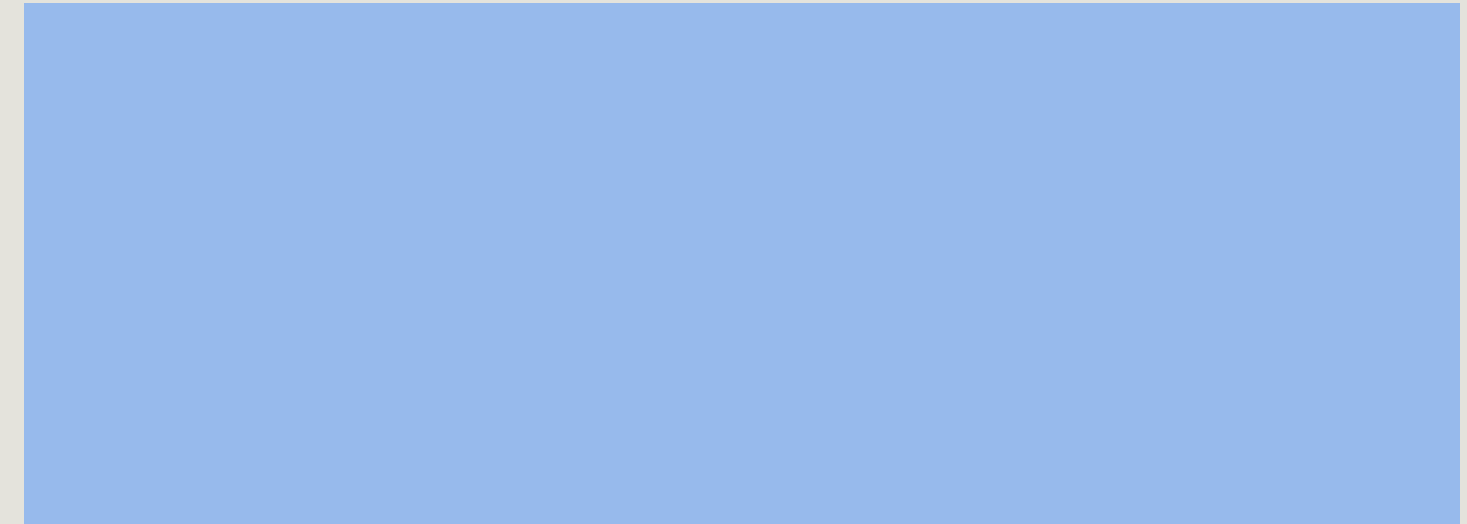
<https://sustainability.iyte.edu.tr/green-campus/waste/>

IZTECH Sustainability Page:

<https://sustainability.iyte.edu.tr/>

“Pour for the Future, Collect for Change!” Project:

<https://sustainability.iyte.edu.tr/tag/news-en/>



. IZTECH Waste Map



# 4. Water



IZTECH demonstrates strong commitment to sustainable water management through conservation, reuse, and efficient irrigation practices. IZTECH has launched several projects in the water conservation field in recent years. The aim of conserving 70% of water on the campus grounds was achieved with a collective effort by different stakeholders in the campus with the leadership of the IZTECH Rectorate.

**Total area on campus for water absorption besides the forest and planted vegetation (meter<sup>2</sup>):**  
Total **water absorption** area: 12,905,745 m<sup>2</sup>  
Total Area: 28,140,000 m<sup>2</sup>  
Percentage area: 46%

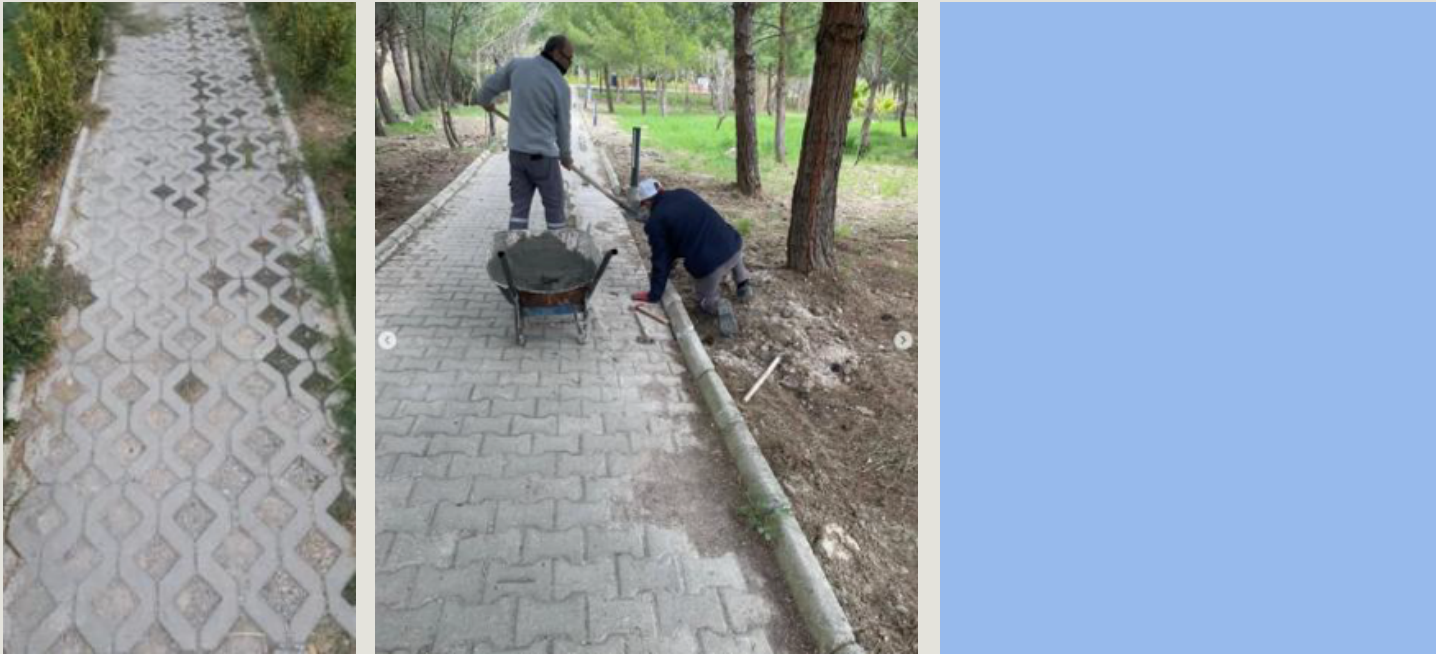


Fig 1. Examples of Total area on campus for water absorption besides the forest and planted vegetation

## Water Conservation Program

In 2025, a site study was conducted to identify a suitable location for the rainwater garden. The selected site was chosen to capture and retain rainwater on campus, preventing direct runoff into the sea. The system consists of three interconnected rain gardens designed to manage water flow sequentially through connecting channels. A natural filtration layer composed of sand, fine gravel, and coarse gravel was installed at the base, and drought-tolerant, climate-adaptive plant species were planted. In May 2026, the rain garden was completed and officially opened under the name "Rain Garden Sustainability Park (Fig. 2).



Figure 2. Drought-Tolerant Plant Species Used in the Campus Rain Garden

To promote efficient and responsible water use on campus, a QR-code-based awareness activity was carried out during the Spring Festival held in May, 2026. Informative QR codes were prepared and displayed in the festival areas to raise awareness among students, staff, and visitors about water conservation and the importance of using campus water resources efficiently (Fig 3).





# 4. Water



Figure 3. QR-Code-Based Awareness Activity



Figure 4. Rainwater Harvesting Tanks

In 2024, the total amount of rainwater collected in the system was measured as 5.4 m<sup>3</sup>, increasing to 6 m<sup>3</sup> in 2025. In 2026, the total harvested rainwater reached 8 m<sup>3</sup>, demonstrating a further improvement in the system's rainwater retention capacity (Fig. 4).

As part of IZTECH's climate-resilient and sustainable campus planning, a feasibility and design study was prepared to develop a possible solution for stormwater accumulation observed on campus. The study was carried out in coordination with Environmental Engineering Department students and the Faculty of Architecture, focusing on the pedestrian axis between Science Park and the Festival Area, where surface runoff during heavy rainfall may affect campus accessibility. The proposed project was based on Sustainable Urban Drainage Systems (SUDS) and Low Impact Development (LID) principles. Within the feasibility study, approximately 100 m<sup>2</sup> of impermeable surface was evaluated for replacement with permeable pavement systems. The design also proposed integrated underground modular storage units with a capacity of 10 m<sup>3</sup> to temporarily collect infiltrated rainwater and reduce uncontrolled runoff.

The map illustrating the campus waterways is presented in the link below:

<https://sustainability.iyte.edu.tr/green-campus/water/>

## Water Recycling Program

- The campus recycles 100% of its wastewater, facilitated by an on-site treatment plant that handles 1,500 m<sup>3</sup>/day.
- From June 2025 to May 2026, 264165 m<sup>3</sup> of water was consumed at IZTECH campus, **decreasing the water consumption by 3.6% from the previous year** (Fig. 5).
- The use of recycled wastewater substitutes for freshwater abstraction, corresponding to approximately 51.6% of the total water demand in the reporting year (Fig. 6).

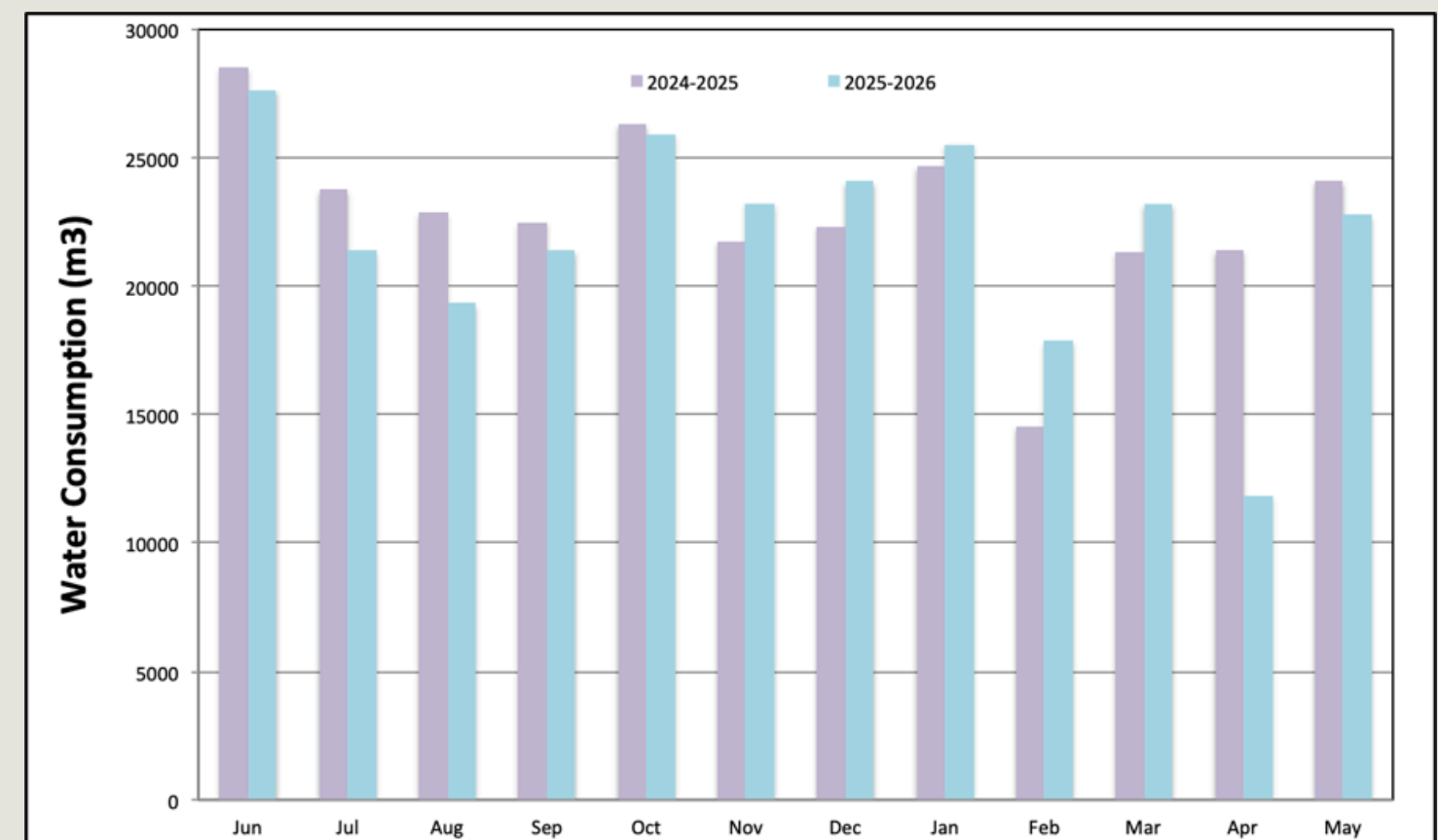


Figure 5. Comparison of Monthly Campus Water Consumption: 2025 vs 2026 (m<sup>3</sup>)

## Water Efficient Appliances:

The use of sensor-operated devices in restrooms increased from 64.5% in 2024 to 75% in 2025, corresponding to an approximate relative increase of 16.3%. In 2026, this rate further increased to 82%, indicating continued improvement in water-saving practices. As part of the university's future sustainability planning, sensor-based systems are planned to be integrated into newly constructed campus buildings to improve water efficiency and support sustainable resource management.



# 4. Water



## Consumption of Treated Water:

Recycled wastewater used as a substitute for freshwater abstraction was approximately 152,590 m<sup>3</sup> in 2024, 142,904 m<sup>3</sup> in 2025, and 136,380 m<sup>3</sup> in 2026. Treated water is used for irrigating plants and green areas on campus (Fig. 6).

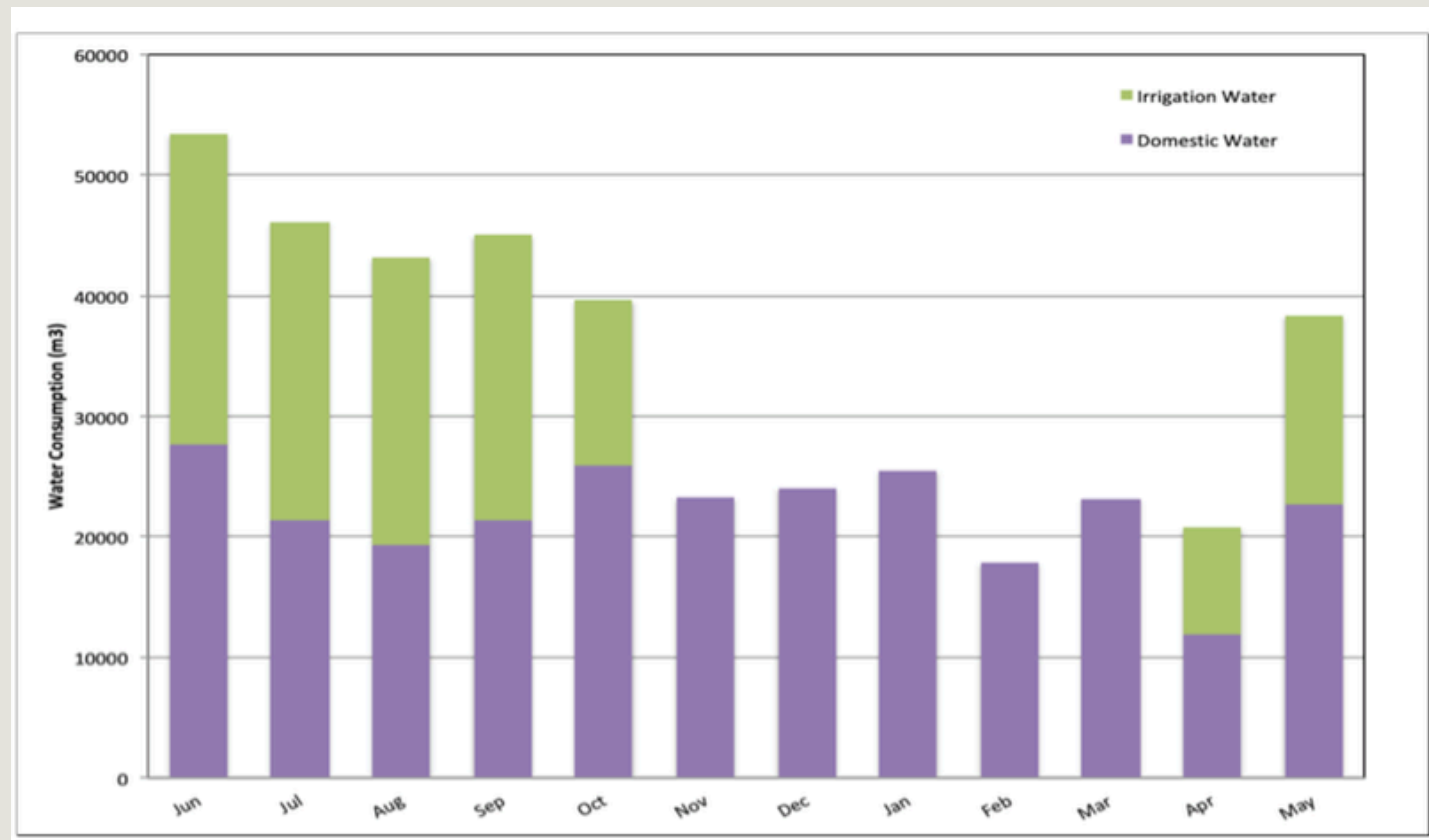


Figure 6. Irrigation and Domestic Water Consumption (m<sup>3</sup>)

## Water Pollution Control in Campus Area

These initiatives, coupled with IZTECH's compliance with national wastewater discharge policies, underscore the institution's commitment to a sustainable and green campus environment. Policy and programs for water pollution control on IZTECH campus are fully implemented and monitored regularly. IZTECH regularly checks for contamination from wastewater streams to its water sources.

## Impact of Water Management programs in supporting the Sustainable Development Goals (SDGs)

Through a holistic and integrated approach to sustainability, IZTECH demonstrates a strong institutional commitment to water management, climate resilience, and the broader objectives of the 17 Sustainable Development Goals.

At IZTECH, we recognize water as a critical resource essential to both human well-being and environmental sustainability. In alignment with Sustainable Development Goal 6 (SDG 6) – "Ensure availability and sustainable management of water and sanitation for all" – our institution has implemented a range of comprehensive programs focused on water conservation, recycling, treatment, and pollution control. IZTECH has implemented a comprehensive set of water management strategies that support multiple Sustainable Development Goals, particularly SDG 6 – Clean Water and Sanitation, along with SDGs 3, 6, 9, 11, 12, 13, 14, and 15.

## Key programs include:

- Installation of drinking water fountains and atmospheric water generation devices across campus to ensure reliable access to clean and safe drinking water for students, staff, and visitors, contributing to the promotion of public health and well-being (SDG 3).
- Installation of rainwater harvesting systems on rooftops and open areas to collect and store rainwater for non-potable uses such as irrigation (SDG 6).
- Construction of infiltration wells (bioswale project) and bio-retention systems (rainwater garden project) to reduce surface runoff and improve groundwater recharge (SDG 6& 13).
- Use of water-saving fixtures (low-flow faucets, dual flush toilets, waterless urinals) across campus buildings to minimize daily water consumption (SDG 6, 9 & 12).
- Implementation of wastewater treatment systems for greywater reuse in gardening (SDG 6&11).
- Design of permeable pavements and green roofs to reduce runoff and enhance natural absorption (SDG 11&13).
- Regular operation and monitoring of the campus wastewater treatment system, including periodic analysis of treated wastewater, to prevent polluted water discharge and protect aquatic ecosystems (SDG 14).
- Integration of native and drought-tolerant plant species in landscaping to reduce irrigation demands (SDG 15).

Detailed information regarding all water-related activities and ongoing projects across the campus can be accessed through the university's website.

**Link:** <https://sustainability.iyte.edu.tr/green-campus/water/>





# 5. Transportation

This report outlines the environmentally conscious, inclusive, and low-carbon transportation strategies implemented by the Izmir Institute of Technology (IZTECH) in alignment with UI GreenMetric standards. The core focus is on reducing private vehicle dependency, incentivizing micro-mobility, enhancing pedestrian safety, and integrating these policies with the United Nations Sustainable Development Goals (SDGs). The data and strategic initiatives are categorized into five primary axes:

## 1. Private Vehicle Reduction and Parking Optimization

IZTECH actively minimizes vehicle traffic and spatial footprint through strict campus policies and spatial planning.

- **Parking Area Ratio:** Only 0.1% (27,396 m<sup>2</sup>) of the vast 28.14 million m<sup>2</sup> campus area is designated for parking.
- **Vehicle-to-Population Ratio:** Despite a campus population of 8,260, the average number of daily vehicles (including 16 university-managed vehicles) is restricted to 824. This results in an exceptionally low vehicle-to-population ratio of 0.0997.
- **Access Control:** All three campus gates are equipped with a License-Plate Recognition System (LPRS) to autonomously monitor and regulate registered vehicles, while visitors are processed individually by security personnel.

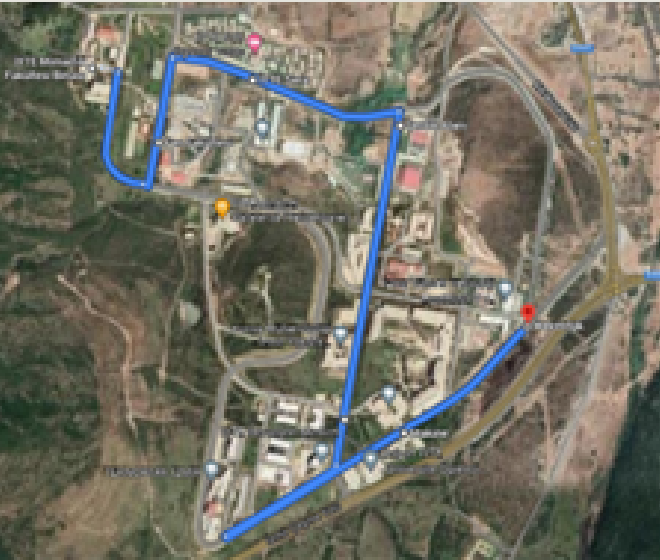


Types of Vehicles on Campus

## 2. Comprehensive Shuttle Networks and Public Transit Integration

To directly curb private car commuting, IZTECH provides an extensive free transportation network for both students and staff.

- **Staff Commuting Services:** Free bus services transport personnel from 12 different locations across the Izmir Metropolitan Area, reducing private car usage by over 30%.
- **Campus Ring Shuttles:** A free, hop-on hop-off shuttle runs 18 times a day, connecting faculties, dormitories, and the neighboring Gülbahçe Village. Late-night services are also provided for library users.
- **Public Transit Integration:** Izmir Metropolitan Municipality operates electric public buses (equipped with bicycle carriers) that route directly through the campus. Additionally, local minibuses circulate through all departments every 20 minutes from early morning until late at night.



Shuttle Service and Route Through Campus

## 3. Zero-Emission Vehicles (ZEV) and Micro-Mobility

In pursuit of a zero-carbon campus, IZTECH is rapidly expanding its electric vehicle fleet and shared micro-mobility options.

- **Electric Fleet:** The university operates two fully electric TOGG T10X cars charged via solar panels on the sports center roof. The fleet also includes two electric minivans for cargo, two e-bikes for agricultural and civil engineering research, and two custom electric vehicles assigned to disabled students.





5. Transportation

- Shared Micro-Mobility: The campus hosts 59 free-to-use bicycles (donated by the Ministry of Health), 50 Unibike sharing-system bicycles, and 40 e-scooters available via mobile app.
- Traffic Calming: A strict 30 km/h speed limit is enforced on all shared roads, successfully accommodating approximately 90–110 private bicycle trips daily.



Zero Emission Vehicles (ZEV)

4. Pedestrian-Centric Infrastructure and Campus Safety

The physical infrastructure is heavily prioritized toward pedestrian safety, outdoor comfort, and universal accessibility.

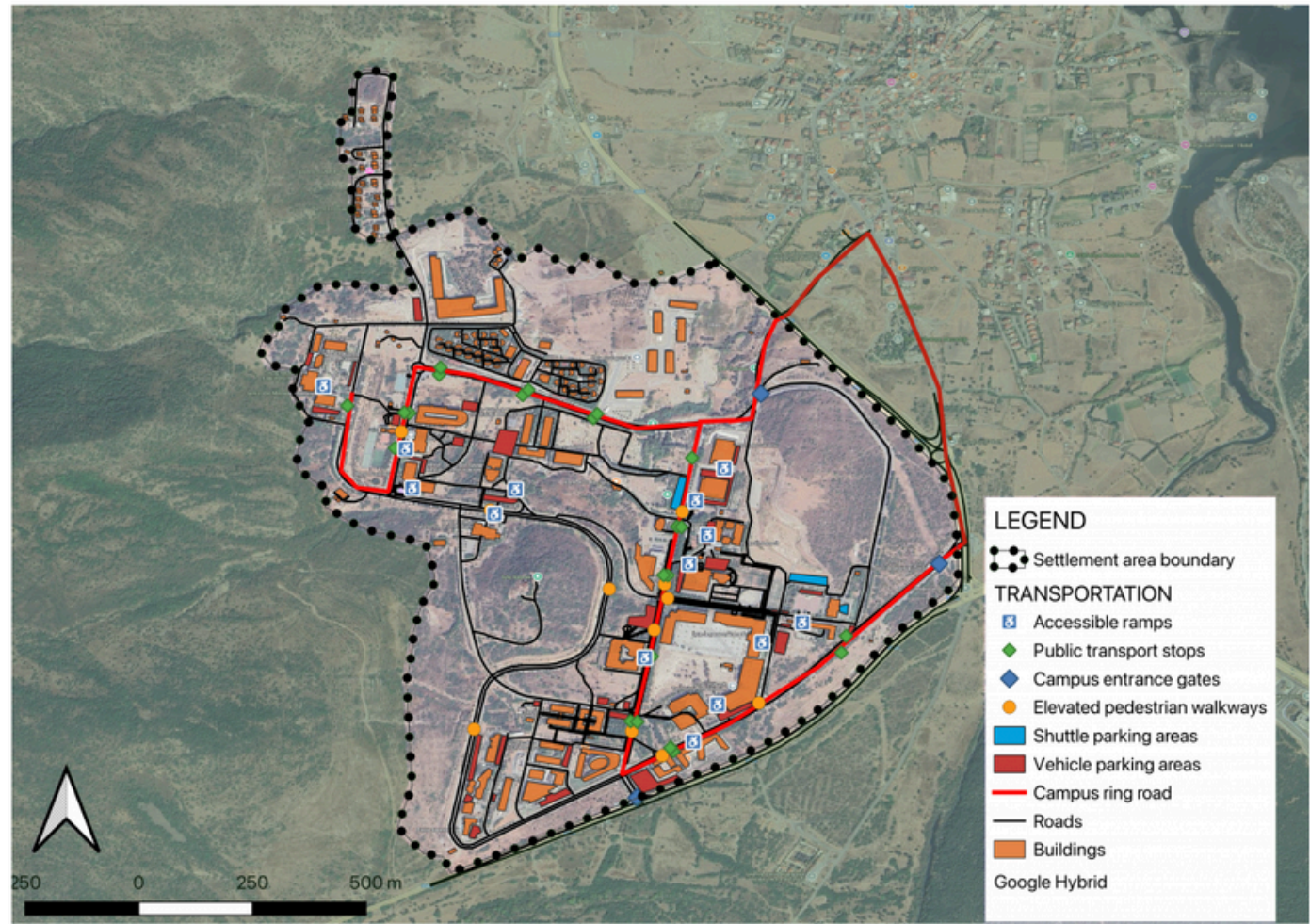
- Safe Pathways: Main buildings are connected by distinct, well-lit pedestrian pathways and dedicated bike lanes that are physically separated from vehicle roads by elevation. Tree-shaded paths provide comfort during summer months.
- Accessible Crosswalks: Elevated crosswalks serve a dual purpose: acting as speed ramps to enforce the 30 km/h limit and providing seamless, accessible transit for pedestrians and individuals with disabilities.

5. Direct Impact on Sustainable Development Goals (SDGs)

Every transportation initiative at IZTECH is purposefully mapped to support the UN's 17 SDGs.

- The mobility programs heavily support SDG 3 (Good Health and Well-being), SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action) by lowering emissions, promoting active lifestyles, and building safe infrastructure.
- As the ultimate reflection of this vision, the IZTECH Sustainability Park was established to physically unite technology, nature, innovation, and environmental responsibility on campus.

**Conclusion:** By merging modern infrastructure with stringent ecological policies, IZTECH has successfully cultivated a "Sustainable Campus" model where low-carbon transit, shared mobility, and pedestrian safety are the cultural standard.





# 6. Education and Research



As a leading national research and higher education institution, IZTECH integrates principles of sustainability into its research and education. In IZTECH, in 2025-2026 Fall and Spring Semester, the total number of courses offered, including graduate and undergraduate degrees, is 4182. Among them, 1577 courses are related to sustainability. These courses are offered in Faculty of Engineering, Faculty of Natural Sciences, and Faculty of Architecture. Total number of Sustainability related study programs are 62 including undergradute, masters, doctoral, interdisciplinary masters and doctoral programs. A high percentage of the courses in the Departments of Environmental Engineering, Material Science and Engineering, Energy Systems of Engineering, City and Regional Planning, Architecture and Molecular Biology and Genetics and International Water Resources are sustainaibility related. They cover a variety of aspects in sustainability and aims to satisfiy sustainability development goals with their curriculum and educational program targets. In recent years, there have been efforts to offer sustainability related courses common to whole students in IZTECH.

For example, the course of “Global Sustainable Development” offered by the department of Chemical Engineering for the last three years is open to all students. It covers the topics/issues about sustainable production and development. The aim of the course is to present negative effects of production processes on the environment and society and to inform about what should be done to reduce this. As another example, the courses mostly in the Department of Bioengineering aims to train students and give them the necessary knowledge to produce high value technologies, products and information using innovative bioengineering approaches to solve problems in national and international priority areas such as health and pharmaceutical industry, and environmental and energy industry.

They basically target SDGs of “3-good health and well being”, “9-industry, innovation and infrastructure”. The course of “Economy and Design of Engineering” at Chemical Engineering Department aims to provide students with an understanding of entrepreneurship, innovation, and sustainable development, and knowledge of professional life, including project management, risk management, and change management. The course of “Introduction of Bioenergy” in Energy Systems Engineering follows sustainability reated topics, such as, biomass energy and types of biomass; heat and power generation from biomass; methods and technologies for biofuels production in solid, liquid and gaseous forms; utilization of organic municipal waste using biomass conversion technologies.

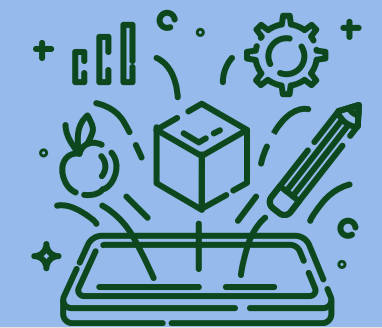
The below table gives examples of sustainability related courses given at IZTECH.

**Table 1. Selected Sustainability Related Courses at IZTECH in 2025-2026 Fall and Spring Semesters**

|       | Course Name                                            | Programme / Department  | Link to / Relationship with Sustainability and Related Themes (Ecology, Environment, Energy, Water Resources, Society, Economy, etc.)                                                                                                                                                                                                                                                                                                                                                                              |
|-------|--------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AR281 | Introduction to Energy and Heat Transfer               | Architecture            | In the course, energy and sustainability related issues are covered. Energy and energy efficiency are considered by using “Energy Performance Regulations in Buildings”; and heat and moisture transfer in buildings are investigated based on “Heat Insulation Regulations in Buildings”. The course name is later changed into “Introduction to Energy and Heat Transfer”.                                                                                                                                       |
| AR482 | Building Performance Simulation for Sustainable Design | Architecture            | By using dynamic simulations models (DSMs), a designer has a possibility to compare different design options in terms building performance. Besides, DSMs are pedagogical tools offering to bring easily the subjects of builing physics into architectural design. In this course, the use of building performance simulation tools are taught as a support to the architectural design process. It demonstrates how the design can be evolved any using d tested to give optimum performance in terms of energy. |
| AR595 | Rural Transformation and Built Environment             | Masters in Architecture | Concepts and definitions in relations to rural, urban and rural relations, rural architecture, new spatial organisations in rural areas as well as sustainability related issues are covered.                                                                                                                                                                                                                                                                                                                      |
| CE101 | Introduction to Civil Engineering and Sustainability   | Civil Engineering       | The course aims to introduce the civil engineering profession including ability to design a complex system, process, device or product to meet needs under realistic constraints such as economic, environmental, health, safety, manufacturability and sustainability.                                                                                                                                                                                                                                            |
| CE471 | Water Resources Engineering                            | Civil Engineering       | The course covers technical issues in order to provide students with the ability to design a complex system, process, device or product to meet needs under realistic constraints such as economic, environmental, health, safety, manufacturability and sustainability.                                                                                                                                                                                                                                           |
| CE480 | Design of Coastal Structures                           | Civil Engineering       | The course covers the following themes: Wave Climate, design wave, wave forces on vertical walls, rubble mounds and circular cylinders, design of harbour structures; quays, piers, gravity and floating breakwaters. design of breakwater layout and harbour tranquillity. Design of seawalls, revetments and groins. design of concrete block quaywalls, sheet pile walls and piled quay walls. Seismic design.                                                                                                  |



# 6. Education and Research



|        |                                            |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------|--------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CE511  | Coastal Engineering                        | Masters in Civil Engineering          | An introduction to coastal engineering with emphasis on the interaction between oceanic dynamic processes (waves, currents, and tides) and coastal regions (beaches, harbors, structures, and estuaries) and on the engineering approaches necessary to prevent adverse effects caused by this interaction.                                                                                                                                                                                                                                                                                                                           |
| CE524  | Urban Traffic Management and Control       | Masters in Civil Engineering          | Nature of urban vehicular traffic congestion. Roadway capacity. Intersection design and traffic signaloperations. Freeway operations and management. Corridor control. Traffic stream models. Trafficdelay models. Traffic forecasting.                                                                                                                                                                                                                                                                                                                                                                                               |
| CE538  | Water Resources System Engineering         | Masters in Civil Engineering          | Planning, design and management of water resources systems. Application of deterministic and stochastic optimization techniques. Water allocation, capacity expansion, and design and operation of reservoir systems. Surface water and groundwater management.                                                                                                                                                                                                                                                                                                                                                                       |
| CE578  | Sea Renewable Engineering                  | Masters in Civil Engineering          | The course focuses on the following topics: Marine renewable energy, wave energy, wave energy converters, power take off systems, tidal energy, offshore wind energy, Combined systems.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CHE542 | Water and Waste Treatment                  | Masters in Chemical Engineering       | Following topics are covered: Characteristics of water and airborne wastes treatment processes and kinetics; treatment system design: Process interactions, optimal design, treatment needs related to water supply.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| CP111  | Urbanization and City Planning             | City and Regional Planning            | The course covers the followng topics that are related to social and environmental sustainability: Urbanization. Types of urban settlements. Urban economy. Urban land. Urban morphology. Urbanization and natural environment. Urban land use, infrastructure and transportation. Urban planning. Planning problems of Turkey. Urban design and planning process. Development plans, renewal and conservation issues. Administrative and legal aspects of city planning.                                                                                                                                                             |
| CP335  | Environmental Issues and Planning          | City and Regional Planning            | The course explores the fundamental concepts of ecology the interactions between natural environment and urbanization and the environmental problems created by the current trends in urban processes. Then it elaborates on the policy options and planning tools for creating sustainable urban environments and solving the environmental problems such as urban and industrial pollution chemical toxins, water scarcity, degradation in ecosystems, etc. The course also covers the methods for analysing and evaluating the adverse impacts of current trends of industrialization and urbanization on the natural environment. |
| CP492  | Regional Economic Development and Planning | City and Regional Planning            | This course is designed to provide background knowledge on the concept economic development, theories of regional economic development and the evolution of planning practice with reference to the EU and Turkey, involving sustainability related topics too.                                                                                                                                                                                                                                                                                                                                                                       |
| CP555  | Environmental Ethics                       | Masters in City and Regional Planning | This course provides a comprehensive coverage of issues related with environmental ethics including alternative ethical frameworks for environmental planning (utilitarian biocentric and ecocentric ethics) Responsibilities to future generations duties to the natural world and animals as well as distributive equity and environmental justice. The applications of these to environmental ethics will be discussed.                                                                                                                                                                                                            |
| ENE501 | Fundamentals Of Energy Engineering         | Masters in Energy Engineering         | The content of the course will include Wind, solar, Geothermal, Biomass, Wave Energy, Energy Efficiency, networks/grids and energy policies. Students will choose a subject after the mid-term as a project topic and work in groups to prepare a scientific report and presentation. The course will also be supported with site visits.                                                                                                                                                                                                                                                                                             |
| ENE510 | Fundamentals of Wind Energy Systems        | Masters in Energy Engineering         | This course includes the history and near future of wind energy, the status of wind energy in turkey and around the globe, basic information about sub-topics of wind energy (i) meteorology (ii) aerodynamics and (iii) control. The content is supported with a site visit. The course gives knowledge and understanding on wind turbine peripherals/sections such as blades, rotor, gearbox, generator, brakes, nacelle, tower, grid connection and wind measurements.                                                                                                                                                             |
| ENV315 | Water Supply                               | Environmental Engineering             | This course is one of the compulsory and fundemental courses of the Department of Environmental Engineering, whose aim is to protect health of human beings and the environment by assessing exposures and associated risks to determine mitigation needs, by developing better monitoring and sampling techniques, better treatment processes, and environmental standards. Environmental sustainabiliy is a core issue.                                                                                                                                                                                                             |

|        |                                               |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|-----------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ENV317 | Atmospheric Chemistry and Air Pollution       | Environmental Engineering            | This course is one of the compulsory and fundemental courses of the Department of Environmental Engineering, whose aim is to protect and the environment focusing on air pollution by assessing exposures and associated risks to determine mitigation needs, by developing better monitoring and sampling techniques, better treatment processes, and environmental standards. Environmental sustainability is a core issue.                                                                                                                                                                                                                                                                                |
| ENV321 | Water Quality                                 | Environmental Engineering            | This course is one of the compulsory and fundemental courses of the Department of Environmental Engineering, whose aim is to protect health of human beings and the water resources by assessing exposures and associated risks to determine mitigation needs, by developing better monitoring and sampling techniques, better treatment processes, and environmental standards. Environmental sustainability is a core issue.                                                                                                                                                                                                                                                                               |
| ENV413 | Solid Waste Engineering                       | Environmental Engineering            | This course provides students with the knowledge to create a design for a solid waste treatment facility, improve how recycling programs function, makearrangements for the proper disposal of trash and garbage containers, and create sanitation plans to ensure healthy working conditions.                                                                                                                                                                                                                                                                                                                                                                                                               |
| ENV440 | Industrial WaterTreatment                     | Environmental Engineering            | The course aims to give knwledge on processes like removal of heavy metals, adsorption, ion exchange, membrane process, and advanced oxidation processes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ENV511 | Micropollutants in the Environment            | Masters in Environmental Engineering | Once micropollutants, formed as a result of human activities, are released to the environment, they are distributed within environmental compartments via various transport and transformation processes depending on their physico-chemical properties and environmental conditions, and may pose a risk to the environment and human health. Within the scope of this course, various micropollutant groups will be introduced together with their physico-chemical properties, the transformation processes that play an important role in the fate of these pollutants will be examined in detail by using the knowledge on fundamentals of mass transport, and modeling applications will be explained. |
| ENV519 | Hazardous Waste Management                    | Masters in Environmental Engineering | This course covers management, planning, regulatory, and engineering aspects of hazardous waste handling, treatment, and disposal. The course will evaluate engineering process design and the analysis of important unit operations and processes in different treatment technologies for hazardous wastes. It will also familiarize students with issues, problems, and processes involved in hazardous waste management and treatment systems.                                                                                                                                                                                                                                                            |
| FE541  | Food and Environmental Virology               | Masters in Food Engineering          | Introduction to Food and Environmental Virology, Molecular Virology of Human and Animal Viruses in Food, Viruses with Potential for Food-borne Transmission, Conventional and Molecular Methods of Virus Detection in Foods, Survival and Transport of Enteric Viruses in the Environment, bacteriophages in Food Virology, Epidemiology of Viral Food-borne Outbreaks, Prevention and Control Strategies Against Food-borne Viruses                                                                                                                                                                                                                                                                         |
| HUM260 | Introduction to Disaster Management           | General Culture Courses Department   | Following issues are covered: Key issues and debates related to the theory and application of disaster risk reduction; the concepts of risk, hazard and disaster, vulnerability; various types of natural and human induced hazards, principles and processes of disaster risk management. Resilience and vulnerability; multi-hazard risk management.                                                                                                                                                                                                                                                                                                                                                       |
| HUM261 | Global Sustainability                         | GeneralCulture Courses Dep.          | This course exploresat global sustainability, planetary and societal resilience, climate change, and solutions for societal transformations at global scale.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| ME427  | Introduction to Renewable Energy Resources    | Mechanical Engineering               | Introduction to renewable energies. Principles of renewable energies. Basic laws of heat transfer and fluid mechanics. Uses of renewable energies: solar, wind, geothermal, bio, tidal, wave, etc. Storage of energy and its distribution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| AR447  | Rural Built Environment                       | Architecture                         | Introduction to Rural Built Environment, Basic Definitions of Rural Settlements, Elements of Built Environment, Dwelling and Settlements Relationship, Spatial Organisation in Dwelling, Spatial Elements of Rural Dwellings, Structural and Construction Systems of Rural Dwellings.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CE532  | Groundwater Hydrology and Pollutant Transport | Masters in Civil Engineering         | The course covers fundamental concepts in groundwater hydrology and the occurrence of pollution in groundwater sources. Topics include groundwater flow through different types of aquifers, the use of flow nets, and principles of well hydraulics. It also examines the chemical properties of groundwater and the impacts of contamination. Additionally, the course introduces numerical modeling techniques for simulating groundwater flow and chemical pollutant transport.                                                                                                                                                                                                                          |



# 6. Education and Research

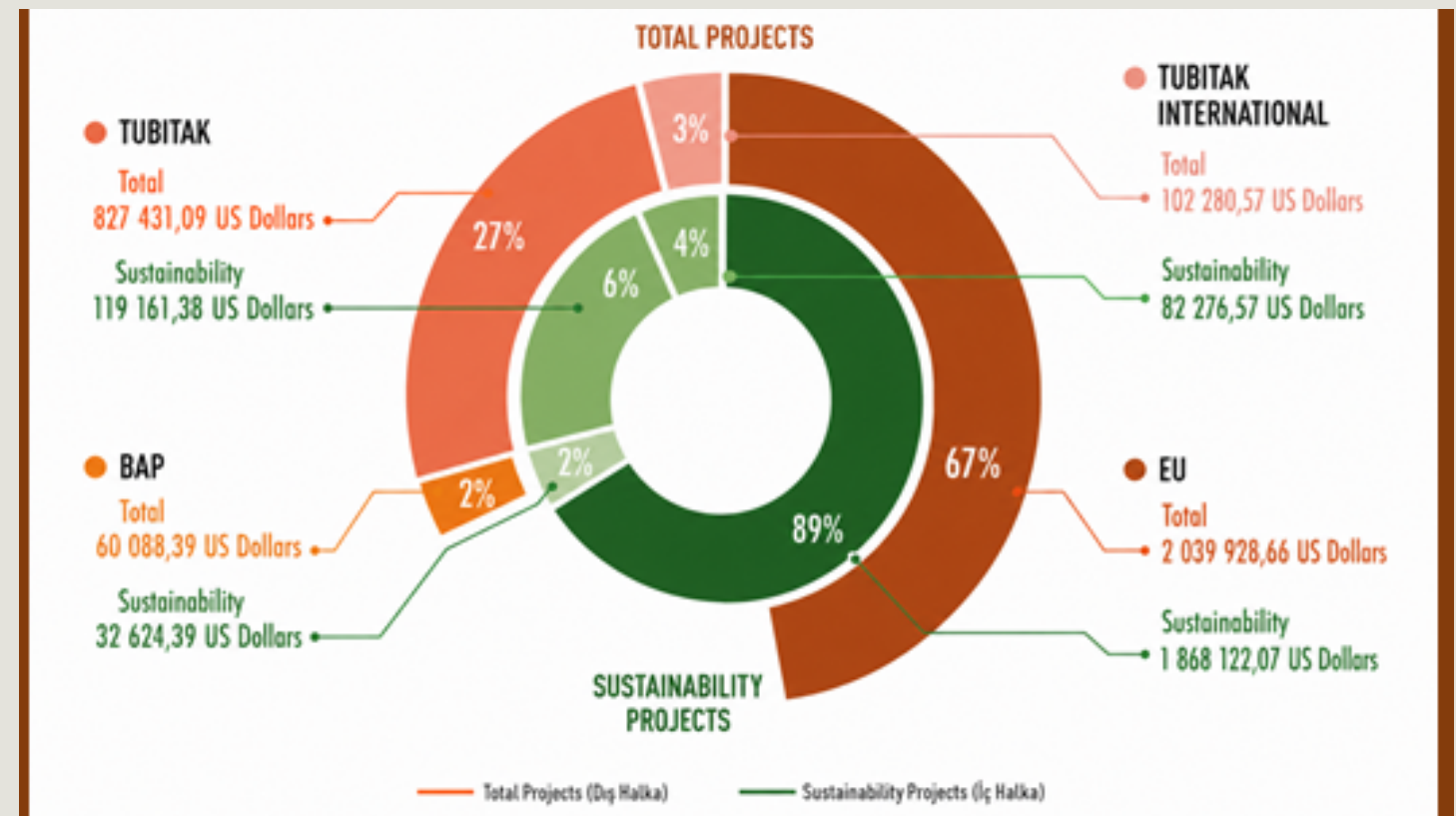


Our university develops interdisciplinary programs, internationally collaborated PhD programs and offers international exchange programs focused on climate change, energy generation and transition, circular economy, sustainable development, innovation and technological developments in sciences, clean water resources in relation to ecosystems and technology, developing biotechnologies for agriculture, food and health. Partnerships with international academic networks elevates research collaborations and results in platforms to share sustainable practices and new developments, innovations in education. Such collaborations involve opportunities for students, such as provisions of sustainability-focused scholarships, thesis grants. Additionally, Incubation Center in Technopark provides support for students to establish their own startups or capstone projects related to sustainability themes.

IZTECH has a research ecosystem that is unique for Izmir as the campus area also includes a planned technology development zone, Technopark IZMİR, Innovation Center, Technology Transfer Office, and Research Centers. Establishment of dedicated research centers and labs, in addition to startups addressing key sustainability challenges such as renewable energy, biotechnology, biodiversity, water management, and urban resilience and sustainable building design, materials and recycling science, has complementing role in education and research. Students and researchers co-develop and pilot sustainability innovations on campus, through Technopark opportunities which are not only for profit based companies. Sustainability research in IZTECH gets fund from EU projects, The Scientific and Technological Research Council of Turkey (TUBİTAK) projects and IZTECH's Scientific Research Program. A variety of departments including Civil Engineering, Food Engineering, Architecture, Material Science and Engineering, Bioengineering and City Planning and Environmental Engineering have become partners of EU projects, and have received funding from other institutions. Sustainability research projects follow SDGs precisely.



Breakdown of research funds in IZTECH by Funding Institution and by Amount of Funding



Research implementations

Our university's outstanding power remains in academic outputs, mainly annual publication of sustainability-related research outputs, including peer-reviewed journals, books, policy briefs, and innovation patents, as presented in GCRIS Database by IZTECH Library. Similar to research centers, research projects and courses each research output contributes to all SDGs. IZTECH Library provides open access publishing to make several research outputs available for every person through the 2025 Open Access Agreements.



# 6. Education and Research



Publication Metrics at IZTECH

Collaboration with local governments, industries, and NGOs in community-based learning and participatory action research is a key strength in our education and research system. Through partnerships with municipal authorities, industry players, and international organizations, IZTECH plays a vital role in creating sustainable solutions that improve urban living standards while also safeguarding the environment and fostering social inclusivity.

Community Engagement Directorate is another administrative unit collaborating institutions, organizations, associations and volunteer citizens nearby environment of IYTE. Students, researchers and citizens have come together to carry out community responsibility projects. Child University, Wisdom Academy are good examples of life-long learning with additional sustainable activities.

We work with the vision of transforming our campus into a vibrant, 24/7 ecosystem where science, art and sport interwine. We are delighted to have received "Sports Friendly Campus" certificate from YÖK, which is a highly valuable reflection of our vision. Our priority is to prepare our youth for life as fully equipped individuals in every aspect, alongside a strong academic education. With outdoor sports areas and modern facilities, we are making every corner of our campus, and we continue to lead the way in this field. (<https://www.instagram.com/p/DZsPHEOCgBQ/?igsh=Z2hibjFzMmRzcmcx>)

A variety of activities raise awareness about SDGs at various levels. With the inclusion of student communities implementation of environmental literacy campaigns bring students, staff, and the broader community together in this sense. Department of Health, Culture and Sports student organizations faculties and individuals (academic people and students) take part in organizing a variety of activities in IZTECH Campus and in the city of IZMİR as well. All these cultural, academic and social related activities existing in the campus explain social dimension of sustainability in IZTECH. Supporting students' physical and mental wellness and health, improving their personal abilities and personalities, make this department a key link for achieving SDGs.

With regards to sustainability related events, Department of Health, Culture and Sports, student organizations, faculties and individuals (academic people and students) take part in organizing a variety of activities in IZTECH Campus and in the city of IZMİR as well. All these cultural, academic and social related activities existing in the campus explain social dimension of sustainability in IZTECH. The aim of the Department of health, culture and sports is to provide support for students' physical and mental wellness and health, to improve their personal abilities and personalities. So that makes this department a key link for achieving sustainable development goals. The total number of events related to environment and sustainability issues which were hosted or organized by different departments, units, and members of the University in the 2022-2025 period is more than 160. This increase is partly related to increased attention towards sustainability issues. Additionally, student initiatives focusing on sustainability and environmental issues also exist within the campus. The number of student organizations at IZTECH campus dealing with sustainability in different areas are around 40. Some examples are Permaculture and Ecological Living Community, Environment and Young TEMA Community, ECO-Motion Community, Natural Research Community, Women in Business, etc.





## 6. Education and Research

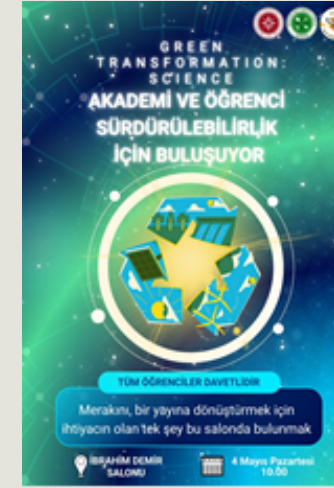


A collection of cultural activities and students' organization events in IZTECH.

The Sustainable Green Campus Coordinatorship was established in 2014 with the following objectives:

- To raise awareness and understanding of sustainability among our university community and beyond.
- To support and coordinate initiatives that align with sustainability across our university's departments, faculties, institutes, centers, and units.
- To monitor and report on our university's progress towards sustainability using relevant indicators and benchmarks.
- To foster collaboration and partnership with other universities, organizations, institutions, and stakeholders that are working towards sustainability.
- To showcase and celebrate our university's achievements and best practices related to sustainability.

The web site "Sustainable Green Campus" of the Coordinatorship is regularly updated and designed to include announcements of sustainability related events, projects, student organizations and news. Also, the website is connected to collection of publication and these related to sustainability under IZTECH Library Catalogue.



A collection of cultural activities and students' organization events in IZTECH.

IZTECH gets the 3<sup>rd</sup> rank among the state universities in Türkiye that was found successful in transition to distant education. Trainings were given to both students and faculty members to ease the transition process to distant and online learning systems. Microsoft Teams that offer classrooms and meeting spaces was adopted. An online classroom was established to be used by faculty members to record their lectures. More than 1000 lectures were recorded by using Microsoft Teams and Adobe Connect. Tablet computers were distributed to support faculty members and students to continue education by online means. Apart from that, sanitation related measures (i.e. signs and mask/disinfection stands) were adopted all around the campus. s focusing on sustainability and environmental issues also exist within the campus. The number of student organizations at IZTECH campus dealing with sustainability in different areas are around 40. Some examples are Permaculture and Ecological Living Community, Environment and Young TEMA Community, ECO-Motion Community, Natural Research Community, Women in Business, etc.

Izmir Institute of Technology fosters a vibrant entrepreneurial ecosystem through its Technopark, which currently hosts over 200 active startups across diverse fields such as technology, design, biotechnology, and engineering. The Technopark provides incubation, mentoring, and funding support to early-stage companies and organizes regular entrepreneurship events and collaboration programs. Between 2022 and 2025, approximately 100 new startups were founded under its guidance, reflecting the university's strong commitment to innovation and applied research. Some of them work on material technologies, clean energy, renewable energy (solar and wind), and recycling; while some others focus on developing innovative, water treatment solutions or optical systems, LED lighting, and the use of microalgae as a raw material in biodiesel production, from CO<sub>2</sub> disposal to production in domestic waste water.



# 6. Education and Research



Views from the Teknopark Buildings and Innovation Center in the IZTECH Campus.





# 7. Governance & Digitalization (GD)



IZTECH's approach to governance and digitalization embeds sustainability into the structures, systems, and culture through which the university is managed. Guided by the Sustainable Campus Policy (Senate, October 2021) and the 2024–2028 Strategic Plan, the institution has built a governance framework that is transparent, data-driven, and inclusive – spanning budget accountability, digital infrastructure, ethics, and gender equity in leadership.

The Sustainable Green Campus Coordinatorship, supported by 22 staff across nine thematic units, serves as the institutional hub for coordinating, monitoring, and publicly reporting sustainability efforts. Its real-time Sustainability Dashboard makes key performance indicators visible to all campus stakeholders, while annual sustainability and financial reports ensure institutional accountability.

Digital transformation is a strategic pillar at IZTECH. The UBYS integrated academic portal, the GCRIS research tracking system, the Emissary carbon monitoring platform, and the Cloud-LMS together form a layered ICT ecosystem that supports every dimension of campus governance – from grant management and course delivery to energy monitoring and civic project coordination.

In the 2025 reporting period, IZTECH formalized its AI and Data Governance Policy, achieved a female leadership ratio of 51%, and further strengthened its ethics and whistleblowing architecture. The sections below present IZTECH's performance across each GreenMetric sub-criterion of Category 7.

Key Figures - Governance and Digitalization

|                                                         |                                            |                                          |                                       |
|---------------------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------|
| <b>\$9,870,740</b><br>Total Sustainability Budget (USD) | <b>20%</b><br>% of Total University Budget | <b>22</b><br>Sustainability Team Members | <b>51%</b><br>Female Leadership Ratio |
|---------------------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------|

## Sustainability Budget

In 2025, IZTECH's sustainability-related expenditures reached 9,870,740 USD – 20% of the university's total budget of 50,398,405 USD. The largest single item is the staff transport fleet (fuel and maintenance: 3,305,300 USD), which provides free shuttle services from twelve locations across İzmir, actively reducing private vehicle use. Building maintenance, retrofit, and seismic safety investments account for a further 2,509,809 USD, reflecting IZTECH's responsibility as an operator of 52 campus buildings in a seismically active zone.

Student meal support (738,970 USD) reflects the social dimension of the sustainability budget, while the disabled accessibility allocation (11,439 USD) underpins a campus that has achieved full compliance across all buildings. Electric vehicles and 11 charging units added 44,129 USD to the sustainability account. Sustainability project income (2,870,795 USD) demonstrates that IZTECH's investments also generate institutional returns.

| Expenditure Category                      | USD       |
|-------------------------------------------|-----------|
| Fuel & Maintenance (Transport Fleet)      | 3,305,300 |
| Building Maintenance / Retrofit / Seismic | 2,509,809 |
| Sustainability Projects Income            | 2,870,795 |
| Student Meal Support                      | 738,97    |
| Staff Service Contracts                   | 748,502   |
| Healthcare Facility Costs                 | 210,39    |
| Sports, Events & Ceremonies               | 179,908   |
| Electric Vehicles & Charging              | 44,129    |
| Disabled Accessibility                    | 11,439    |
| TOTAL                                     | 9,870,740 |



# 7. Governance & Digitalization (GD)



## Sustainability & Financial Reports

IZTECH publishes annual Sustainability Reports (2023, 2024, 2025) publicly available on sustainability.iyte.edu.tr, alongside the annual Financial Status and Expectations Report produced by the Directorate of Strategic Planning. Together, these documents constitute a robust public accountability framework accessible to all campus stakeholders.

## Sustainable Green Campus Coordinatorship

The Coordinatorship is IZTECH's central sustainability governance body, formally grounded in the Senate-adopted Campus Policy of October 2021. Led by Prof. Dr. Şeniz Çıkış and staffed by 22 members across nine thematic units – Energy, Water, Waste, Transportation, Infrastructure, Education & Research, Mapping & ICT, Sustainability Reporting, and Website & Communication – it coordinates all planning, monitoring, and reporting activities across the institution.

The Coordinatorship manages the real-time Sustainability Dashboard, organizes the Sustainable Green Campus seminar series, collaborates with the student Eco Motion community, and maintains the sustainability website and social media channels. Its guiding motto – Happy Campus, Happy Peninsula, Happy İzmir – captures the philosophy that sustainability at IZTECH begins on campus and extends into the surrounding region.



## ICT for Sustainability Management

IZTECH's ICT infrastructure for sustainability spans four domains. The web-based Sustainability Dashboard and Emissary Campus platform provide real-time KPI tracking for energy, water, waste, and carbon emissions – with carbon monitoring extended to campus events through QR-code surveys. The Online Reporting Portal centralizes data submission from all faculties with automated validation.

UBYS, the Integrated Academic Portal, serves as the backbone of academic governance: grant management, course delivery, research tracking, and graduate management are all handled within a single platform. Campus-wide Eduroam Wi-Fi, dual-ISP redundancy, and centralized network monitoring complete the connectivity layer.

| Platform                    | Function                               |
|-----------------------------|----------------------------------------|
| Sustainability Dashboard    | Real-time GreenMetric KPI monitoring   |
| Emissary Campus             | Energy & carbon emission tracking      |
| UBYS Academic Portal        | Grants, courses, research, graduates   |
| GCRIS Database              | Research output tracking & open access |
| Cloud-LMS                   | Digital course delivery & assessment   |
| Community Engagement Portal | Civic project planning & evaluation    |



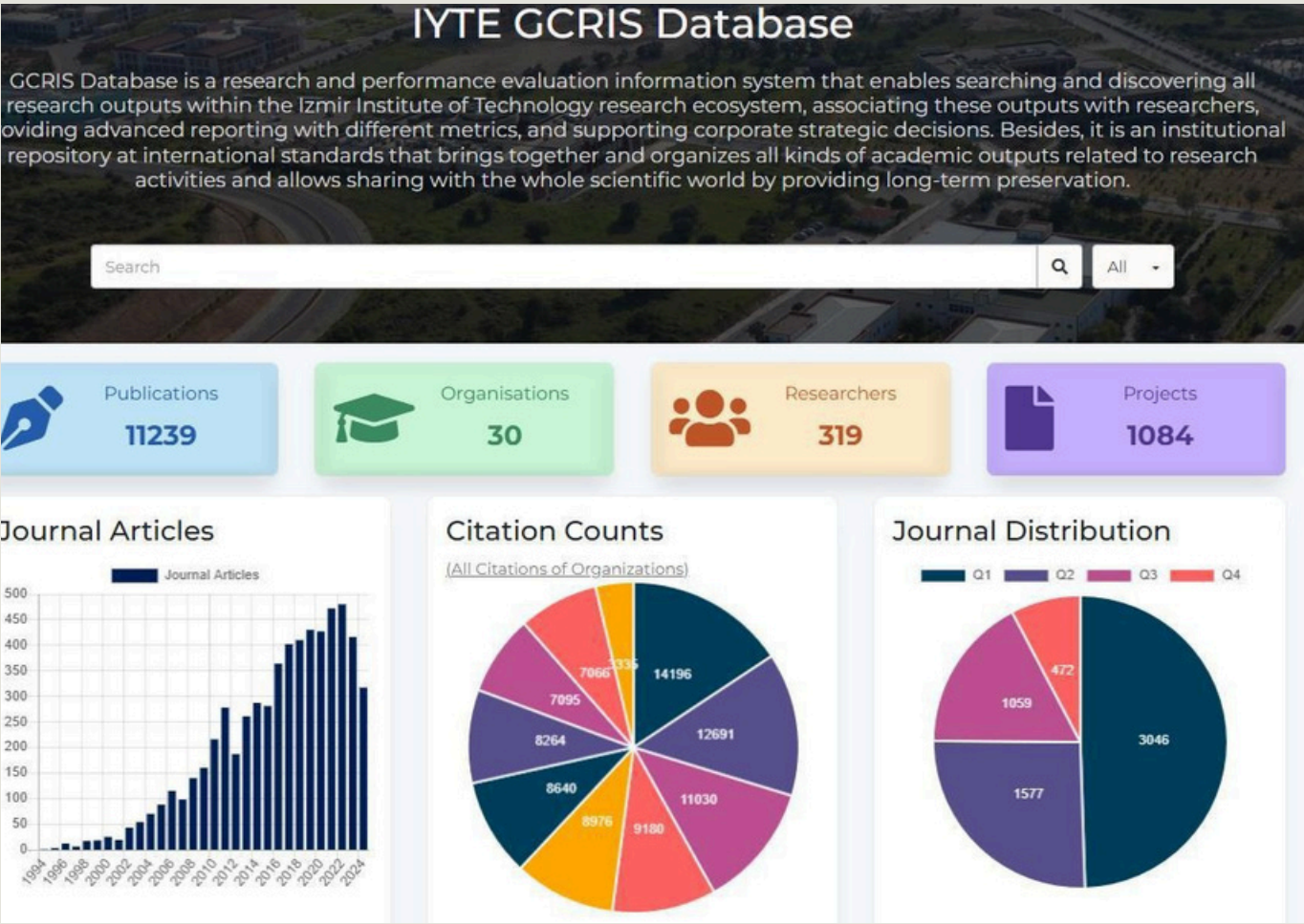
# 7. Governance & Digitalization (GD)



## Advanced Digital Technologies — AI & IoT

In 2026, IZTECH adopted a University Policy on AI and Digital Transformation covering all faculties and administrative units. Complementary departmental guidelines govern the ethical use of AI in teaching and assessment. The GCRIS system integrates an AI dashboard and chatbot for student and staff services; the Digital Humanities and AI Laboratory (DBB) supports interdisciplinary AI-driven research; and IoT-based smart facility monitoring through Emissary tracks energy, water, and waste metrics in real time across all campus buildings.

Further initiatives include the SUDTE Project (digitalization of Erasmus processes), a fully paperless e-signature and document workflow, and the YETKİM secure single-sign-on system. In total, 14 policy-backed digital initiatives are active across education, research, administration, and campus operations.



## Female Leadership Ratio

IZTECH's female leadership ratio stands at 51% — 75 women among 148 total leadership and deputy positions across the university, faculty, study program, and unit levels. At the study program level, 27 of 45 positions are held by women. University-wide units include female coordinators for Quality, Community Engagement, Institutional Data Management, and the Sustainable Green Campus itself. This figure reflects sustained institutional commitment to inclusive and participatory governance.

## Data Protection — GDPR / KVKK Compliance

IZTECH complies with Turkey's KVKK legislation (Law No. 6698, structurally equivalent to GDPR) and holds ISO/IEC 27001 ISMS certification. The Data Controller is designated at the level of the Rectorate Executive Office. Key mechanisms include a Personal Data Protection Policy, access control matrices based on least-privilege principles, SSL/TLS encryption, centralized log management, daily data backups, and a documented emergency response plan for data breaches.

All GDPR-related documentation — including the Data Storage and Destruction Policy, consent and privacy notices, and data subject application forms — is publicly accessible at [iyte.edu.tr/hakkinda/kvkk-dokumanlari/](http://iyte.edu.tr/hakkinda/kvkk-dokumanlari/), reinforcing the university's commitment to transparency in personal data governance.

## Anti-Corruption and Integrity

IZTECH's integrity framework is anchored in its Internal Control System, governed by COSO-based public internal control standards. Eight documented components cover pre-financial control, institutional risk management (2024–2028 strategy), risk control action plans, annual evaluation reports, and staff training on risk management. Together, they create a systematic safeguard against financial irregularities across all administrative and academic processes.



# 7. Governance & Digitalization (GD)



## Whistleblowing and Complaint System

IZTECH provides multiple formal reporting channels with confidentiality guarantees and explicit anti-retaliation protections. Institutionally, the Ethics Committee Application System (UBYS), dedicated publication ethics committees for natural sciences (FMBBAYEK) and social sciences (SBBBAYEK), and the Rector's direct request form are all available. Nationally, complaints can be submitted through CİMER (Presidential Communication Center) and the Ombudsman Institution, both of which provide legally binding oversight of IZTECH's responses. This multi-tier architecture ensures every campus member has a protected and effective voice in governance.

## Digital Literacy Programs

IZTECH's digital literacy program is coordinated across the Library, Continuing Education Center (SEM), IT Department, and academic units. In 2025–2026, eight major initiatives were delivered: cybersecurity awareness training for İŞKUR students, academic staff, and administrative personnel; the SİBERAY programme covering cyberbullying and digital addiction; the Authors' Workshop on AI, academic integrity, and responsible publishing; and the AI Training Series — Understanding Today, Understanding the Future, organized by IZTECH SEM.

The Digital Education Project extended digital skills training to elderly residents of the Narlıdere Nursing Home through volunteer IZTECH students, embodying the university's commitment to inclusive digital access. The 14th Education Workshop (Focusing in the Digital Age) addressed attention and focus in digitally saturated learning environments, reinforcing critical engagement with technology as a core institutional value.

## Written Code of Ethics

IZTECH's ethics framework comprises eleven instruments covering all campus actors — from university leaders and academic staff to graduate students and research supervisors. The foundational document is the IZTECH Ethical Conduct Principles and Ethics Committee Guideline, supported by the Code of Good Research Practice, the Directive on Scientific Research and Publication Ethics, and the HRS4R European research integrity commitment.

Specialized review committees address disciplinary context: FMBBAYEK for engineering and natural sciences; SBBBAYEK for social sciences and humanities; and HADYEK for animal research. Graduate School Ethical Rules and Principles for Good Supervision extend accountability to the supervision relationship. The Quality Assurance System links ethics to continuous improvement through a formal complaint and feedback mechanism open to all campus members.

### SDGs Directly Supported by Category 7

Transparent budgeting and institutional accountability advance SDG 16 (Peace, Justice and Strong Institutions). The 51% female leadership ratio advances SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities). AI and digitalization policies support SDG 9 (Innovation and Infrastructure). Digital literacy programs contribute to SDG 4 (Quality Education). The whistleblowing and ethics architecture operationalizes inclusive, accountable governance across all levels of the institution.

**SDGs 4 · 5 · 9 · 10 · 16 · 17**

[sustainability.iyte.edu.tr](https://sustainability.iyte.edu.tr) • [iyte.edu.tr/hakkinda/iyte-etik-ilkeler/](https://iyte.edu.tr/hakkinda/iyte-etik-ilkeler/) • [kalite.iyte.edu.tr](https://kalite.iyte.edu.tr)