13 CLIMATE ACTION

Climate change is the defining challenge of our time. ÖzÜ is committed to reducing its carbon footprint through sustainable operations, embedding climate action into education, and advancing research that addresses climate adaptation and mitigation at local and national levels.

32	1.31	24	6
Scholarly Publications (2020-2024)	Citation Impact (FWCI)	Funded Projects	Student-Led Activities

Student Representation at COP28

Emre Yiğit Ay, a second-year Law student and President of the Social Awareness Club at Özyeğin University, represented Türkiye and the university at the United Nations Climate Change Conference (COP28) in Dubai, United Arab Emirates, held from November 30 to December 9, 2023. Selected as one of only five national Climate Ambassadors under the joint initiative of the Ministry of Environment, Urbanization, and Climate Change and UNICEF, Ay stood out among nearly 150 university representatives from across the country.

On the opening day, he presented the climate agenda of Turkish youth, voicing their priorities and perspectives before global leaders, and later joined official negotiation sessions as part of the Turkish delegation. His participation provided valuable firsthand exposure to international climate diplomacy, reinforcing Özyeğin University's commitment to youth engagement, climate advocacy, and global sustainability governance.

Net Zero Campus Initiative

Özyeğin University is committed to achieving a net-zero campus through systematic carbon management and climate-responsible operations. Since 2018, the university has calculated and publicly shared its carbon and water footprints, integrating the results into its Environmental Policy and strategic sustainability plan. Regular assessments of environmental risks and resource efficiency ensure that climate-related impacts are continuously monitored and addressed.

Operationally, the university offsets its emissions through mechanisms such as International Renewable Energy Certificates (I-REC) and verified carbon projects while also implementing direct reduction measures, including the Campus Holiday initiative and event-based carbon offsetting. Sustainable infrastructure practices—such as drought-tolerant landscaping, rainwater harvesting, greywater reuse, and advanced energy and water metering—further enhance efficiency and climate resilience. These actions are reinforced by awareness programs across campus, supported by digital campaigns and the efforts of the university's Climate Ambassador. Integrated management systems, including ISO 14001, ISO 50001, and ISO 46001, provide the foundation for continuous improvement toward a low-carbon, climate-resilient campus.

Student Clubs' Collaborative Climate Seminar Series

The Climate Crisis and Sustainable Climate Transformation Conference and the Climate Crisis, Climate Transformation, and Sustainability Seminar held at Özyeğin University on May 7-8, 2024, involved collaborative efforts from Sustainability Platform, Faculty of Law, Law Club, the Diplomacy Club, and the ÖzÜ Debate Club. These events featured discussions on environmental challenges, climate policy, and sustainable solutions, strengthening climate governance and encouraging students to engage in policy discussions.
This interdisciplinary approach encouraged students to advocate for sustainable practices across society and fostered learning about climate issues, empowering students with knowledge and skills to address climate transformation and resilience challenges.

Nature-Based Solutions for Urban Climate Resilience

Dr. Beyza Şat, Faculty of Architecture at ÖzÜ, and her graduate student Emine Şen conducted a systematic literature review on the implementation of bioswales as nature-based solutions to address the growing challenges posed by climate change in urban areas. Their research focuses on ecosystem preservation and urban climate resilience. The study analyzed bioswale design and performance based on factors such as materials, orientation, and location within urban landscapes, aiming to establish a framework that enhances ecosystem services, manages stormwater effectively, and improves quality of life for city residents while supporting biodiversity and ecosystem health.

Climate-Resilient School Buildings

Dr. Touraj Ashrafian conducted research on incorporating future weather predictions into building assessments to enhance resilience, energy efficiency, and occupant comfort in response to climate change. His study explored the interplay between climate change and building performance, focusing on energy usage and cost implications in school buildings across different climate zones. Utilizing a comprehensive simulation-based approach, Dr. Ashrafian implemented and validated future weather data in a Turkish school building, integrating envelope improvements and photovoltaic applications. This research provides critical insights for designing climate-resilient educational infrastructure that can maintain functionality and comfort under changing climate conditions.

Residential Building Climate Adaptation

Dr. Touraj Ashrafian and his graduate student Gökçe Tomrukçü from the Faculty of Architecture and Design investigated the potential impact of climate change on residential buildings and explored strategies for improving existing structures to support long-term climate adaptation. Using climate data scenarios developed by the Intergovernmental Panel on Climate Change (IPCC), various building envelope and HVAC system scenarios were created and compared. The study highlighted the need for strategies to increase the climate resilience of single-family homes, which constitute a substantial portion of Türkiye's building stock, identifying practical adaptation measures to mitigate climate change impacts while supporting energy efficiency and emissions reduction goals.

Project PHOENIX: Human Mobility and Climate-Induced Social Change

Dr. Susan Rottman from the Faculty of Social Sciences serves as the principal investigator for Project PHOENIX (Human Mobility, Global Challenges and Resilience in an Age of Social Stress), supported by the Belmont Forum. This interdisciplinary research initiative examines global changes including environmental and climate changes, demographic shifts, and socio-cultural transformations. The project conducts human-centric case studies examining food security and cultural survival, providing new perspectives on how climate-induced (im)mobilities are shaped by socio-cultural contexts and the psycho-social health of populations. Drawing on both natural and social sciences, Project PHOENIX addresses the often-overlooked human dimensions of climate change, examining how climate impacts intersect with social systems, mental health, and human mobility patterns—critical considerations for developing comprehensive and equitable climate action strategies.