11 SUSTAINABLE CITIES AND COMMUNITIES

Urbanization presents global opportunities and risks. Özyeğin University supports sustainable urban futures through architectural and engineering research, collaborations with municipalities, and campus-based projects that model inclusive, safe, and resilient urban design.

76	1.09	6	16
Scholarly Publications (2020-2024)	Citation Impact (FWCI)	Funded Projects	Student-Led Activities

Future Step: Participatory Campus Design

Future Step is an interactive sustainability and design project that encourages participants to reimagine their environment and envision a more liveable future. Using a large-scale map of Özyeğin University's campus, participants place magnetic markers representing various urban functions—such as green spaces, transportation routes, or social areas—to express their preferences for the spaces they want to inhabit. These spatial choices are digitally recorded and shared, creating a collective vision of the campus's potential future.

The physical installation is complemented by pathways made from recycled bottle caps collected across the university, symbolically guiding participants toward the campus stream while messages along the way prompt reflection on environmental responsibility and long-term thinking. Through this creative blend of participatory design, recycling, and sustainability awareness, Future Step links the past and the future, transforming everyday materials and spaces into a shared exploration of change.

Architecture Design Studio: Integrating Natural Systems

In the 201.B Architecture Design Studio course, students developed urban design proposals that integrate natural life into everyday campus activities, focusing on the footprint of the campus stream. Through field trips and the design process, students discovered how overlooked spaces could be made visible, awareness about natural life could be raised, and campus landscaping could be improved with more effective design for its inhabitants.

Students particularly worked on strengthening connections between dormitories and academic buildings, drawing inspiration from references provided by the stream. After stages of examination and research, they developed various designs tailored to user profiles, problem definitions, and specific needs to realize their intended designs in their chosen areas.

Sustainable Campus Development

Özyeğin University has embedded sustainable building standards and environmentally-sound operational practices in its campus development. Three of its Çekmeköy Campus buildings (AB1, AB2, and SC) have received LEED Gold certification, demonstrating performance in green design, energy and water efficiency, indoor environmental quality, and sustainable materials usage. The ScOLa (AB3) building, constructed under the EU-funded NEED4B project, consumes only about 20% of the energy used by a typical academic building in Türkiye.

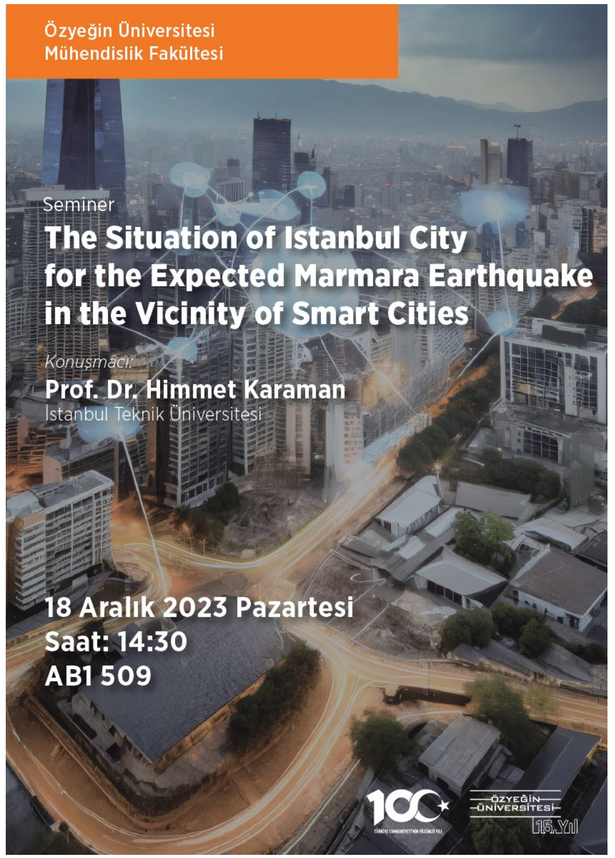
Operational practices include a formal Environmental, Energy, and Water Efficiency Policy, which mandates systematic monitoring, analysis, and continuous improvement of resource consumption across all campus facilities. Energy efficiency is further promoted via campus-wide measures including use of energy efficient equipment and lighting (LED fixtures), passive design principles, building automation, and investments in renewable energy sources. Water-sensitive standards are also part of operations: new and refurbished buildings follow design standards that minimize water usage, support water reuse (gray water, rainwater harvesting), and apply drought-tolerant landscaping in outdoor spaces

ÖzU - Istanbul Municipality Collaboration on Smart Cities

Istanbul Municipality Collaboration on Smart Cities

Özyeğin University's participation in the Yeşil Şehir Eylem Planı (Green City Action Plan Workshop) represents a significant milestone in the university's commitment to sustainability. The initiative involved collaborative efforts with various stakeholders, including local government, businesses, and civil society, to develop a comprehensive plan aimed at making cities more environmentally friendly and sustainable.

The signing of a protocol with the European Bank for Reconstruction and Development (EBRD) signifies a strategic partnership to implement the plan's objectives. This collaboration with EBRD provides financial and technical support for green initiatives, ultimately leading to improved urban sustainability, cleaner environments, and enhanced quality of life for the communities involved, showcasing Özyeğin University's dedication to addressing pressing environmental issues and fostering sustainable urban development.



Cultural Tourism and Rural Community Resilience

The research conducted by Assoc. Prof. Ebru Ergöz Karahan, aculty of Architecture at ÖzÜ, and colleagues, presented in "Cultural Tourism and Rural Community Resilience: A Framework and Its Application" (Göçer, Boyacıoğlu, Ergöz Karahan, and Shrestha, 2024), explores strategies to bolster resilience in rural communities through cultural tourism. This study emphasizes inclusivity and socio-cultural resilience, economic and environmental adaptability, and the conservation of heritage and biodiversity.

In the rural area examined (Behramkale), establishing new settlements allows locals to maintain cultural roots and adapt to tourism-driven economic shifts. The area's resilience strategies involve new infrastructure to balance tourism demand with heritage preservation, helping the community manage tourism's economic and environmental stresses while promoting both sustainability and cultural continuity. The rural model offers valuable insights for cities seeking to balance development with heritage and environmental conservation.

Predicting Post-Earthquake Road Closures

The project on the Prediction of Road Closure Probability and Recovery Process Analysis in Earthquakes, led by Bekir Oğuz Bartın, aims to develop advanced predictive models for determining post-earthquake road closures and estimating recovery timelines. This research addresses a critical gap in disaster preparedness by examining the impact of building collapses on roadway accessibility and transportation network functionality.

The research team focuses on quantifying the cascading effects of building failures on transportation infrastructure. Building collapses during seismic events not only constitute structural failures but also significantly compromise critical transportation corridors, thereby impeding emergency response operations and prolonging recovery periods. Through predictive modelling of such closures, emergency management agencies can formulate more effective response protocols and establish evidence-based priorities for long-term infrastructure enhancement.

Knowledge Production in Refugee Studies

Maissam Nimer from the Social Science Faculty at ÖzÜ explored the case of the migration studies industry in Türkiye through an examination of knowledge production on refugee labour. Focusing on research about Syrian refugees' labour and employment in Türkiye between 2012 and 2018, the research highlighted the ways in which refugee labour is articulated and studied to provide ground for a wider critique of migration-related knowledge production.

4

11 SUSTAINABLE CITIES AND COMMUNITIES

This study aimed to reflexively question academic outputs by exploring the conceptual frames used broadly in research on refugee labour and developing an overview of the literature on Türkiye with a focus on this topic. The research serves as an example to argue that knowledge produced in a Southern context is mainly incorporated as case studies despite attempts to advance theoretical discussions, highlighting a North-South hierarchization of knowledge and its implications for understanding urban migration dynamics.

RESEARCH INITIATIVES