JOURNAL OF WATER AND LAND DEVELOPMENT
e-ISSN 2083-4535

Polish Academy of Sciences (PAN) Institute of Technology and Life Sciences – National Research Institute (ITP – PIB)

JOURNAL OF WATER AND LAND DEVELOPMENT
DOI: 10.24425/jwld.2025.155318
2025, No. 66 (VII–IX): 235–243

From vision to visibility: Green Campus initiatives at Ankara's universities

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RECEIVED 05.04.2025 ACCEPTED 23.06.2025 AVAILABLE ONLINE 27.09.2025

Abstract: As the climate crisis intensifies, universities are increasingly adopting the Green Campus model to promote sustainability through energy efficiency, waste reduction, sustainable transportation, and water conservation. These initiatives align closely with the United Nations sustainable development goals (SDGs), particularly SDG 13 (Climate action). As centres of innovation and education, universities play a vital role in fostering environmental responsibility among future generations. This study examines the implementation of the Green Campus model in Ankara, Turkey, by analysing how local universities communicate their sustainability commitments through official websites. The research is based on the 2024 UI (Universitas Indonesia) GreenMetric World University Rankings, which evaluate universities across six key indicators: infrastructure, energy and climate change, waste, water, transportation, and education and research. The findings reveal notable differences in the depth and clarity of sustainability engagement across universities. For instance, Middle East Technical University demonstrates a holistic approach by publicly promoting reforestation and energy-efficient infrastructure projects. In contrast, some institutions mention sustainability only in general terms, lacking project-specific transparency. Financial limitations, weak institutional culture, and minimal regulatory pressure emerge as major challenges affecting implementation and visibility. By focusing on online representations of sustainability, this research highlights how universities position themselves within global climate discourse and offers valuable insights for policymakers, university administrators, and sustainability advocates aiming to enhance higher education's role in climate action. Ultimately, transparent and accessible sustainability communication is essential to increasing awareness, fostering engagement, and reinforcing institutional responsibility across academic communities.

Keywords: climate action, Green Campus, sustainability in higher education, sustainable development goals (SDGs), UI (Universitas Indonesia) Green Metric, university communication

INTRODUCTION

The global climate crisis has emerged as one of the most pressing challenges of the 21st century, demanding urgent and coordinated action across all sectors. Rising temperatures, extreme weather events, and environmental degradation threaten ecosystems and human societies alike, necessitating a shift toward sustainable practices at every level. Educational institutions, particularly universities, hold a unique position in addressing climate change by fostering awareness, conducting research, and implementing environmentally responsible policies. As hubs of knowledge and innovation, universities have the potential to lead, by example, inspiring students, faculty, and broader communities to adopt sustainable practices.

One of the most significant frameworks for integrating sustainability into higher education is the "Green Campus" concept. The Green Campus refers to an educational institution that prioritises sustainable infrastructure, energy efficiency, waste management, sustainable transportation, and environmental education. By embedding these principles into their operational and academic structures, universities contribute to broader climate action efforts while equipping future generations with

the skills and values necessary to combat environmental challenges.

The Green Campus model aligns closely with the United Nations sustainable development goals (SDGs), particularly SDG 13: Climate action, which emphasises the need for immediate and substantial efforts to mitigate climate change and its impacts. Through strategic policies and initiatives, universities can significantly reduce their carbon footprints, minimise resource consumption, and promote a culture of sustainability among students and staff. This commitment not only enhances their institutional reputation but also strengthens their role as agents of social and environmental transformation.

This paper examines how Ankara-based universities implement and communicate Green Campus practices. By analysing their sustainability strategies, public communication, and institutional commitments, this study assesses the extent to which these universities contribute to climate action and identifies challenges they face in adopting and promoting Green Campus initiatives. The findings will provide insights into best practices and highlight areas for improvement, ultimately contributing to the broader discourse on sustainability in higher education.

Furthermore, UI GreenMetric indicators play a crucial role in evaluating universities' sustainability performance and their alignment with the United Nations SDGs. GreenMetric rankings assess universities based on key areas such as energy and climate change policies, waste management strategies, and sustainability education efforts. The integration of GreenMetric assessment criteria with SDGs has been analysed in studies such as Ardalı and Koksal (2022), which provide insights into sustainable university performance evaluations. Additionally, the 2024 UI GreenMetric Turkey report (Yeşil Büyüme, 2024) offers relevant data on Turkish universities' sustainability rankings, further strengthening the foundation of this study. This alignment ensures that universities do not only aim for high rankings but also contribute to global sustainability objectives in a structured and impactful manner.

Recent studies have further explored the role of sustainability in higher education. Carayannis and Morawska-Jancelewicz (2022) discuss how the Society 5.0 and Industry 5.0 models influence the transformation of universities toward sustainability, emphasising digital and social innovation. Ardalı and Koksal (2022) evaluate Turkish universities' sustainability performance within the GreenMetric framework, highlighting the challenges associated with energy and climate change strategies. Similarly, Muñoz-Suárez, Guadalajara and Osca (2020) compare academic success and environmental sustainability rankings, demonstrating a positive correlation between GreenMetric scores and global university rankings. These findings indicate that universities with strong sustainability policies tend to perform better academically as well (Muñoz-Suárez, Guadalajara and Osca, 2020).

Yılmaz and Ozmen (2024) analyse the sustainability performance of Turkish universities by examining their standings in the Times Higher Education (THE) impact rankings. Using document analysis, the authors evaluate how Turkish universities have progressed in SDG-focused sustainability efforts, highlight priority areas, and compare their performance with global trends and middle-income countries. Their study emphasises the growing importance of sustainability in Turkish higher education and notes that while progress has been made, significant improvements are still needed. It highlights the necessity of data-driven approaches, such as sustainability reporting and participation in global rankings, to measure university efforts. The research is limited to THE impact rankings and uses descriptive analysis; thus, future studies should include other global rankings, qualitative evaluations of sustainability reports, and case studies of successful universities.

In recent years, the concept of sustainability has gained significant importance within higher education institutions worldwide. Universities have been increasingly recognising their role in promoting environmental responsibility and implementing sustainable practices on their campuses. The literature review examines recent studies on sustainability initiatives in Turkish universities and compares them with global efforts, highlighting key findings and methodologies.

A study by Sarıkoç and Engin (2024) evaluated the energy and climate change strategies of Turkish universities listed in the UI GreenMetric World University Rankings. The research analysed sustainability reports from 19 universities across five different climate regions in Turkey. Findings indicated that factors such as climate conditions, energy savings, renovation needs, and financial constraints significantly influence the sustainability efforts of these institutions. The study also emphasised the necessity for universities to adopt climate-responsive design approaches to enhance their sustainability performance.

Ardalı and Koksal (2022) conducted a performance evaluation of Ondokuz Mayıs University (OMU) based on GreenMetric indicators. Their research assessed the university's infrastructure, energy and climate change policies, waste and water management, transportation, and educational initiatives. The study revealed that OMU demonstrated strengths in infrastructure and waste management but identified areas for improvement in energy efficiency and climate change mitigation strategies.

Gültekin and Korkmaz (2024) focused on measuring the sustainability performance of Duzce University using the UI GreenMetric World Ranking framework. The study involved data collection on campus land use, structural and vegetative areas, and resource efficiency. Results showed that Duzce University has been progressing toward establishing a sustainable campus, with notable advancements in resource efficiency and green infrastructure.

Kaldirim, Ozcan and Ergun (2023) explored the relationship between environmental sustainability and academic success by comparing UI GreenMetric rankings with URAP (University Ranking by Academic Performance) and THE (Times Higher Education) university rankings. The research employed a simple linear regression analysis to determine the correlation between sustainability performance and academic achievements. The findings demonstrate a positive relationship between overall academic success and sustainability performance, indicating that universities excelling in sustainability also tend to perform well academically.

Ucar and Ozdemir (2022) examined sustainability activities and reporting practices among Turkish universities. Their analysis of sustainability reports from various institutions revealed that while many universities focus on environmental sustainability aspects such as zero waste and Green Campus initiatives, there is a lack of comprehensive reporting encompassing all dimensions of sustainability. The study highlighted the

need for universities to adopt holistic approaches to sustainability reporting to effectively communicate their efforts and progress.

Globally, universities are also intensifying their sustainability efforts. A study by Galleli *et al.* (2022) analysed and compared two major global university sustainability rankings, UI GreenMetric and THE-WUR (Times Higher Education World University Rankings), using the Berlin Principles framework. The findings revealed that while THE-WUR performed better overall, both rankings have methodological limitations and structural weaknesses that need improvement. The authors adopt a critical yet constructive stance, questioning the criteria used to define the "best" universities in sustainability.

Fissi *et al.* (2021) examined the University of Florence's transition towards becoming a sustainable green university. The case study detailed strategies, including the integration of sustainability into curricula, research, and campus operations. The findings underscored the importance of a comprehensive approach that encompasses environmental, social, and economic dimensions in advancing sustainability within higher education institutions.

Burmann *et al.* (2021) conducted a study ranking university performance with a focus on sustainability. The research highlighted the growing significance of sustainability metrics in global university rankings and how they influence institutional reputation and student choices. The study advocated for the inclusion of sustainability indicators as a standard criterion in evaluating university performance worldwide.

The reviewed literature indicates a growing commitment among Turkish universities to enhance their sustainability practices, aligning with global trends in higher education. Studies emphasise the need for comprehensive strategies that integrate sustainability into all facets of university operations, from infrastructure development to academic curricula. Both Turkish and international research highlight a positive correlation between sustainability initiatives and academic excellence, suggesting that environmentally responsible practices contribute to the overall success and reputation of higher education institutions.

MATERIALS AND METHODS

METHODOLOGICAL APPROACH

This study employs a mixed-method research approach, combining quantitative and qualitative methods to assess the sustainability performance of universities in Ankara. The research is structured around UI GreenMetric indicators, which provide a standardised framework for evaluating sustainability efforts in higher education institutions (Yeşil Büyüme, 2024). These indicators include infrastructure, energy and climate change, waste, water, transportation, and education and research. Ankara, the capital of Turkey, was chosen as the focus of this study due to several reasons. First, Ankara is home to 21 universities, comprising 8 public and 13 private (foundation) universities. Second, as Turkey's capital, Ankara holds a central role in national education policies and sustainability efforts, making it an important case for analysing Green Campus initiatives. Third, Bilkent University, a university based in Ankara, was the first Turkish university to be ranked in the UI GreenMetric sustainability rankings in 2010, further reinforcing the city's relevance in this research. Despite its significance, the focus solely on Ankara poses a limitation, since the findings may not be generalisable to sustainability efforts in other Turkish cities. As of January 2024, Turkey has a total of 209 universities, with 120 participating in the 2024 UI GreenMetric rankings out of 1,477 institutions from 95 countries – demonstrating the growing importance of Green Campus initiatives among Turkish universities.

This study analyses the official websites of all 21 universities in Ankara to evaluate their sustainability policies, projects, and commitments related to the Green Campus concept. The primary data sources for this study are the UI GreenMetric 2024 rankings, which assess universities based on six key sustainability criteria. Additional university reports, sustainability strategies, and official documentation were reviewed to determine the depth of Green Campus initiatives. Statistical data from UI GreenMetric rankings were analysed to compare the sustainability performance of universities in Ankara. Universities' scores in each GreenMetric category were examined to identify strengths and areas for improvement, and a comparative assessment of Turkish universities within global sustainability rankings was performed.

A content analysis of official websites was conducted to assess the visibility and communication of sustainability initiatives. Case studies were developed for selected universities with strong sustainability initiatives, such as METU, Hacettepe University, and Bilkent University. The study examined the integration of sustainability policies into university mission statements, student involvement, and research projects. However, this study has several limitations. It is limited to universities in Ankara, which means findings may not be generalisable to all Turkish universities. Additionally, the study relies on publicly available data from university websites and UI GreenMetric reports, which may not fully capture internal sustainability efforts. Differences in reporting transparency and sustainability definitions among universities may also affect the consistency of the findings. The findings aim to contribute to ongoing discussions on sustainable university models and inform policy recommendations for enhancing sustainability practices in higher education institutions.

THEORETICAL FRAMEWORK AND IMPORTANCE OF THE GREEN CAMPUS CONCEPT

The concept of a Green Campus is deeply rooted in the principles of corporate sustainability, environmental ethics, and the broader responsibility of public institutions toward social and environmental well-being. Corporate sustainability principles emphasise the triple bottom line approach, which integrates environmental, social, and economic considerations into institutional decision-making. Universities, as public and private institutions, are increasingly adopting these principles to align their operations with global sustainability goals (Carayannis and Morawska-Jancelewicz, 2022).

Environmental ethics provides a philosophical foundation for Green Campus initiatives by highlighting the moral responsibility of institutions to minimise their ecological footprint. Universities have a duty to act as role models in sustainable practices, fostering a culture that prioritises environmental stewardship among students and faculty. By embedding

sustainability within their mission and values, universities can lead systemic changes that extend beyond campus boundaries and influence broader societal norms (Muñoz-Suárez, Guadalajara and Osca, 2020).

International organisations such as the United Nations (UN), United Nations Educational, Scientific and Cultural Organization (UNESCO), and the United Nations Environment Programme (UNEP) have developed various guidelines and initiatives that advocate for sustainability in higher education (Michelsen and Wells (eds.), 2017). The UN's 2030 Agenda for Sustainable Development underscores the necessity of climate action through SDG 13, while UNESCO's Education for Sustainable Development (ESD) program promotes the integration of sustainability into curricula and institutional policies. Additionally, UNEP's Global Universities Partnership on Environment for Sustainability (GUPES) encourages universities to take leadership roles in environmental sustainability through research, operational changes, and community engagement (Michelsen and Burandt, 2017).

By linking the Green Campus model with these global frameworks, universities can enhance their contribution to climate action while positioning themselves as key enablers of systemic sustainability transformations. This alignment not only supports institutional sustainability efforts but also ensures compliance with international best practices and policies. The integration of these guidelines into university strategies can lead to more effective and impactful sustainability initiatives, further strengthening the role of higher education in addressing the climate crisis (Ardalı and Köksal, 2022).

Recent studies suggest that sustainability rankings such as UI GreenMetric provide a crucial benchmarking tool for assessing universities' Green Campus initiatives. Research highlights that universities with strong sustainability frameworks tend to achieve higher academic success and institutional recognition (Muñoz-Suárez, Guadalajara and Osca, 2020). Additionally, despite the long-term benefits, high implementation costs often lead universities to deprioritise sustainability (Abo-Khalil, 2024). These findings emphasise the need for systematic evaluation and policy development to ensure long-term sustainability in higher education institutions.

RESULTS AND DISCUSSIONS

Amid the escalating climate crisis, the Green Campus concept has gained significant importance as universities increasingly recognise their responsibility for sustainable development. The UN emphasises the urgent need for institutions to combat climate change, highlighting that education is one of the key tools for addressing environmental challenges (UN, 2024). As centres of learning and innovation, universities are uniquely positioned to lead by example in sustainability practices. By adopting Green Campus initiatives, universities not only reduce their ecological footprints but also educate and empower the next generation of leaders and citizens to advocate for sustainable practices.

Universities are prominent social institutions and, as such, have an ethical duty to contribute to the global sustainability agenda. The 2030 Agenda for Sustainable Development underscores the need for collective action, particularly in achieving sustainable development goal (SDG) 13, which focuses on climate action (UN, 2024). By implementing Green Campus policies – including waste reduction, renewable energy adoption, sustainable transportation, and water conservation – universities can directly contribute to SDG 13 while setting a standard for other sectors to follow. These initiatives serve as practical demonstrations of institutional sustainably, inspiring students, faculty, and the broader community to adopt similar practices.

According to the UNEP emissions gap report (UNEP, 2024), a drastic reduction in carbon emissions is required to stay within the Paris Agreement's 1.5°C limit. Universities, through their infrastructure and operational strategies, have the potential to mitigate greenhouse gas emissions and promote climate resilience (UNEP, 2024). In this regard, higher education institutions (HEIs) must integrate time-bound climate action plans that focus on reducing direct and indirect emissions, starting with energy-efficient infrastructure and non-fossil energy sources (UNESCO, 2024).

Education plays a vital role in mitigating climate change, as acknowledged by UNESCO, which asserts that "education is critical in helping populations understand and address the impacts of climate change" (UNESCO, 2024, p. 14). Green Campus initiatives go beyond infrastructure changes; they also incorporate educational components, such as sustainable curricula, research on environmental issues, and community engagement programmes. By integrating sustainability into their teaching and research agendas, universities can foster a culture of environmental stewardship among students and staff, increasing awareness and promoting behaviours that contribute to long-term ecological resilience.

For instance, "The sustainable development goals report 2024" highlights that only 17% of SDG targets are currently on track, while climate action is among the most lagging areas (UN, 2024). Given this challenge, universities have a crucial role in accelerating sustainability transitions. The Race to Zero campaign, which involves over 1,193 universities worldwide, demonstrates the growing commitment of HEIs to achieving carbon neutrality through targeted policies and educational programmes (Ruwoko, 2023).

A major component of education for sustainability is experiential learning. According to the SDG Brief on climate action, universities function as "small cities" with substantial environmental footprints, offering direct learning opportunities through operational improvements (Roser-Chinchilla, Galán-Muros and Banerjee, 2024). This hands-on approach not only enhances student engagement but also cultivates sustainability leadership skills necessary for future environmental challenges.

Universities play a critical role in shaping future leaders who will address the climate crisis. The UN emphasises that sustainable education is essential for developing the skills, values, and attitudes necessary to tackle global challenges (UN, 2024). A Green Campus provides an immersive environment where students can experience sustainable practices first-hand, making sustainability a core part of their academic and personal identities. This exposure prepares students to incorporate sustainability into their future professions and communities, contributing to a generation more conscious of and committed to climate action. Moreover, higher education institutions in low-income countries tend to focus more on climate adaptation strategies, while universities in high-emission countries prioritise mitigation policies (UNESCO, 2024). This variation highlights the

need for global academic cooperation to ensure that sustainability education remains inclusive and context specific.

The article published in the World Economic Forum (2025) analysed the crucial role of universities in tackling global sustainability issues via research, education, and innovation. Notwithstanding their promise, colleges frequently fail to fully leverage their expertise in addressing these concerns. Additionally, the study underscores strategic partnerships between universities and external entities as crucial components enhancing their influence and creating large-scale sustainable solutions. Nonetheless, obstacles such as rivalry for scarce financing, academic incentive frameworks, and international political dynamics may impede effective collaboration. The article emphasises new strategies to address these challenges, such as Imperial College's creation of interdisciplinary schools for convergence science and the University of Pennsylvania's actions in climate finance. The World Economic Forum's "4P" cooperation concept promotes collaboration among professors, public, private, and philanthropic sectors to enhance universities' contributions to global sustainability initiatives (World Economic Forum, 2025).

The Green Campus concept is essential for universities committed to addressing the climate crisis, aligning with international directives and contributing to global sustainability goals. As highlighted by reports from the United Nations and its agencies, including UNEP and UNESCO, universities have the potential to make significant impact in combating climate change through both institutional practices and educational initiatives. By fostering environmentally conscious campuses, universities not only reduce their carbon footprints but also equip students with the knowledge and commitment needed to lead sustainable lives. In doing so, they play an essential role in advancing global efforts to combat climate change.

Ankara hosts multiple universities that contribute to sustainability efforts at different levels. These institutions, classified as public and private (foundation) universities, pursue Green Campus initiatives with varying degrees of commitment.

- Public universities:
  - Ankara University – emphasises environmental awareness, renewable energy projects, and sustainable waste management;
  - Gazi University – ranked in UI GreenMetric, implements waste reduction strategies and energy-efficient building systems;
  - Hacettepe University – runs comprehensive Green Campus projects, including energy-efficient lighting, sustainable landscaping, and recycling programs;
  - Middle East Technical University (METU) – a leader in sustainability, METU operates large-scale solar energy projects, waste management systems, and green buildings;
  - Ankara Yıldırım Beyazıt University – implements eco-friendly policies and educational programs focused on sustainability;
  - Ankara Hacı Bayram Veli University – engages in environmental initiatives and awareness programs among students and staff.
- Private (foundation) universities:
  - Bilkent University – one of the first Turkish universities to adopt GreenMetric standards, focusing on green architecture and energy efficiency;
  - Atılım University – conducts sustainability research and enforces green energy usage policies;
  - Başkent University – implements green infrastructure projects and waste management strategies;
  - Çankaya University – participates in sustainability awareness campaigns and eco-friendly transportation initiatives;
  - the TOBB University of Economics and Technology – engages in green technology research and environmental science programs.

Each university follows its own distinct sustainability policies, with some making substantial contributions to environmental conservation, while others remain at early stages of implementation. The extent to which sustainability initiatives are communicated in official reports and mission statements significantly affects student engagement and institutional reputation.

UI GreenMetric is an internationally recognised ranking system that assesses sustainability in higher education institutions. It provides universities with a benchmarking tool to evaluate performance in energy usage, waste management, transportation policies, and climate change initiatives (Alawneh *et al.*, 2021). Universities that rank highly in UI GreenMetric gain visibility on global sustainability platforms, attracting environmentally conscious students and research funding (Sari *et al.*, 2023).

UI GreenMetric serves as a critical bridge between university sustainability efforts and international climate goals (UNESCO, 2019). Universities contribute significantly to carbon emissions through their energy consumption, transportation systems, and waste generation (IPCC, 2021). UI GreenMetric provides a structured framework that aligns institutional efforts with SDG 13 (Climate Action) and the Paris Agreement (UNFCCC, 2023). Highly ranked institutions often implement renewable energy projects, carbon neutrality programmes, and water conservation strategies (Smolennikov *et al.*, 2024).

Turkish participation in the UI GreenMetric World University Rankings has gained momentum over the years, reflecting growing interest in sustainability within higher education. Bilkent University was the first Turkish institution to be included in the rankings, while Middle East Technical University (METU) became the first Ankara-based university to participate actively. Today, METU, Gazi University, and Hacettepe University are among the most prominent Turkish universities featured in the UI GreenMetric rankings. However, despite growing engagement, there is still a pressing need for deeper institutional commitment, enhanced research collaboration, and more effective policy implementation to strengthen and expand Green Campus initiatives across Turkey. Internationally, leading institutions such as Harvard University and the University of Cambridge consistently rank among the top, setting global standards for sustainable campus development.

Evaluation of Green Campus progress in Ankara Universities is shown in Tables 1 and 2.

Ankara's universities have demonstrated considerable progress in their Green Campus initiatives, as reflected in their UI GreenMetric 2023 and 2024 rankings. The data indicate an overall upward trend in sustainability efforts, with several universities improving their positions through enhanced sustainability policies and infrastructure investments. However, fluctuations in rankings suggest that while some institutions have strength-

Table 1. Sustainability rankings and key initiatives of Ankara's Public Universities (2023–2024)

University	GreenMetric ranking		Key sustainability initiatives
	2023[1)]	2024[2)]	
Ankara University	829th	605th (61st in the country)	sustainable campus design conference, carbon sequestration research, biodiversity preservation
Gazi University	483rd	401st (39th in the country)	sustainability and future technologies community, energy efficiency projects, waste management
Hacettepe University	312th	299th (30th in the country)	sustainable campuses coordination, extensive green spaces, sustainable development integration
Middle East Technical University (METU)	123rd	126th (8th in the country)	afforestation campaign, sustainable energy initiatives, student sustainability programs
Ankara Yıldırım Beyazıt University	no ranking data	no ranking data	energy systems engineering, sustainable urban research
Ankara Hacı Bayram Veli University	no ranking data	no ranking data	research on social innovation and sustainability, sustainable tourism conferences
Ankara Music and Fine Arts University	no ranking data	no ranking data	quality sustainability policies, cultural sustainability initiatives
Ankara Social Sciences University	no ranking data	no ranking data	social innovation centre, environmental social sciences PhD program

[1)] 1,182 total entries.
[2)] 1,477 total entries.
Source: own elaboration based on UI GreenMetric 2024 data.

Table 2. Sustainability rankings and key initiatives of Ankara's private universities (2023–2024)

University	GreenMetric ranking		Key sustainability initiatives
	2023[1)]	2024[1)]	
Bilkent University	549th	504th (48th in country)	sustainability year initiative, renewable energy projects, waste management strategies
Atılım University	532nd	503rd (47th in country)	social innovation and entrepreneurship, research on sustainability
Başkent University	152nd	129th (9th in country)	Sustainable Environment Research Center (BÜÇEM), energy efficiency measures
Çankaya University	1000th	1211th (109th in country)	waste management and recycling, Green Campus design
The TOBB University of Economics and Technology	806th	1153rd (105th in country)	climate summit, gender equality and sustainability policies
TED University	962nd	1325th (113th in country)	sustainability working group, plastic reduction initiatives
Ufuk University	no ranking data	no ranking data	potential for future Green Campus initiatives
Turkish Aeronautical Association University	no ranking data	no ranking data	aviation sustainability research potential
Lokman Hekim University	no ranking data	no ranking data	sustainable nutrition education, textile waste recycling
Ostim Technical University	886th	no ranking data	sustainability report, carbon footprint analysis
Ankara Medipol University	no ranking data	no ranking data	zero waste initiatives, agricultural harvesting
Ankara Science University	no ranking data	no ranking data	potential for sustainability research and initiatives
Yüksek İhtisas University	no ranking data	no ranking data	circular economy research in healthcare

[1)] 1,182 total entries.
[2)] 1,477 total entries.
Source: own elaboration based on UI GreenMetric 2024 data.

ened their commitment to environmental responsibility, others have struggled to maintain their progress in an increasingly competitive global landscape.

Among public universities, Middle East Technical University (METU) remains the highest-ranked institution in Ankara, consistently positioning itself among the top 130 universities worldwide. Its strong performance in afforestation initiatives, sustainable energy programmes, and student-led environmental projects underscores its leadership in sustainability. However, a slight decline in its ranking from 123rd in 2023

to 126th in 2024 suggests that the global competition in sustainability rankings has intensified, necessitating continuous innovation in climate action strategies. Hacettepe University has shown improvement, rising from 312th to 299th place, largely due to its increasing investment in sustainable campus coordination, biodiversity conservation, and policy-driven environmental governance. Similarly, Ankara University has made significant advancements, climbing from 829th in 2023 to 605th in 2024, reflecting its enhanced sustainability measures, particularly in carbon sequestration research and green infrastructure development. Gazi University also improved its ranking, moving from 483rd to 401st, highlighting progress in waste management and energy efficiency. Nevertheless, several public universities, including Ankara Yıldırım Beyazıt University, Ankara Hacı Bayram Veli University, and Ankara Social Sciences University, did not appear in the UI GreenMetric rankings, suggesting either a lack of participation or insufficient sustainability efforts to meet the ranking's assessment criteria.

Private universities in Ankara exhibit mixed results, with some institutions demonstrating notable progress while others experiencing declines in their rankings. Baskent University has shown the most significant improvement, advancing from 152nd to 129th place, positioning itself among the top ten sustainable universities in Turkey. This upward trajectory is attributed to its comprehensive sustainability initiatives, including energy efficiency measures, its Sustainable Environment Research Center (BÜÇEM), and well-integrated waste management strategies. Bilkent University and Atılım University have made moderate progress, with Bilkent rising from 549th to 504th and Atılım from 532nd to 503rd, largely driven by their renewable energy projects and sustainability research contributions. Conversely, Çankaya University experienced a substantial decline, dropping from 1,000th to 1,211th place, indicating a need for stronger policy implementation and sustainable infrastructure investments. The decrease of the TOBB University of Economics and Technology and TED University rankings highlights the necessity for more structured sustainability policies and an increased focus on measurable environmental performance. Additionally, several private universities, including Ufuk University, Turkish Aeronautical Association University, Lokman Hekim University, and Ostim Technical University, were absent from the rankings, suggesting a lack of active engagement in sustainability assessments.

The data reveal several overarching trends regarding sustainability efforts among Ankara's universities. First, public universities generally perform better in sustainability rankings compared to their private counterparts, with institutions such as METU, Hacettepe, and Ankara University leading in Green Campus initiatives. Second, while many universities have improved their rankings, others have shown stagnation or regression, indicating that maintaining sustainability commitments requires continuous adaptation to evolving environmental standards and assessment methodologies. Third, the increasing participation of universities in UI GreenMetric rankings underscores a growing emphasis on environmental responsibility in higher education. However, the heightened global competition, with the number of participating institutions rising from 1,182 in 2023 to 1,477 in 2024, has made it more challenging for universities to secure and maintain high rankings.

The UI GreenMetric World University rankings assess universities' sustainability efforts across multiple categories, including setting and infrastructure, energy efficiency, waste and water management, transportation, and the integration of sustainability into education and research. In the 2024 rankings, leading institutions have excelled in implementing comprehensive strategies across these categories. Wageningen University in the Netherlands has distinguished itself by integrating sustainability into all aspects of its operations, from extensive Green Campus initiatives to cutting-edge environmental research. In the United Kingdom, Nottingham Trent University has been recognised for its energy-efficient infrastructure and robust waste reduction programs, emphasising sustainability in both campus management and academic offerings. The University of Groningen, the Netherlands, has excelled in renewable energy usage, effective water conservation measures, and the promotion of sustainable transportation solutions. Similarly, the University of Nottingham, the UK, has demonstrated a strong commitment to sustainability research and education, complemented by its expansive green spaces and comprehensive waste management systems. The Università di Bologna, Italy, has consistently led national rankings in sustainability, making significant strides in sustainable infrastructure and energy conservation while integrating these practices into its academic framework. The University of Connecticut in the US has also been a consistent top performer, recognised for its sustainable campus operations, including energy efficiency measures, waste reduction programs, and the active promotion of sustainability education.

These institutions have set a benchmark in sustainability by adopting holistic approaches that integrate eco-friendly campus designs, renewable energy initiatives, efficient resource management, and sustainable transportation policies. Their commitment to embedding sustainability into their academic and research missions serves as a model for universities worldwide. As Ankara's universities seek to strengthen their sustainability strategies, these global best practices provide valuable insights into the policies and initiatives that can further enhance their environmental performance.

Despite the observed progress, challenges remain in fully integrating sustainability into institutional policies and operations. Greater investment in renewable energy, water conservation, waste reduction, and sustainable transportation infrastructure is urgently needed. Many universities lack comprehensive sustainability reporting, which affects transparency and ranking performance. Additionally, while certain institutions have excelled in categories such as green infrastructure and education, improvements in areas such as climate action plans, carbon neutrality strategies, and mobility solutions remain necessary for ensuring long-term sustainability.

In conclusion, Ankara's universities are steadily advancing their Green Campus initiatives, with many institutions making significant progress in sustainability rankings. However, sustaining and improving these efforts requires continued commitment, strategic investments, and policy-driven environmental governance. Three universities, i.e. METU, Hacettepe, and Baskent University, stand out as leading institutions in sustainability, while other universities must strengthen their environmental policies and broaden the scope of their sustainability initiatives to remain competitive in the global higher education landscape. As universities continue to enhance their sustain-

ability practices, their role in addressing the climate crisis and contributing to global environmental goals will become increasingly prominent.

CONCLUSIONS

This study demonstrates that universities in Ankara are increasingly engaging with Green Campus initiatives, reflecting a broader alignment with global sustainability trends. Leading institutions such as METU, Hacettepe, and Başkent University illustrate that strategic policies and investments can result in tangible progress, while other universities still face challenges in implementation.

Overall, the findings highlight that the success of Green Campus initiatives depends on institutional commitment, transparent reporting, and continuous investment in sustainability practices.

Beyond these findings, the study contributes to the growing body of literature on sustainability in higher education by providing an in-depth analysis of the intersection between the UI GreenMetric indicators and the United Nations' SDG 13 (Climate Action) within a Turkish context. By focusing on Ankara – the country's capital and home to diverse higher education institutions – the research offers a valuable case for understanding how national education policies and institutional capacities shape the visibility and impact of Green Campus practices.

From a policy perspective, the results underscore the need for stronger coordination between universities, government agencies, and civil society in order to establish long-term climate action strategies. Transparent sustainability reporting, increased financial support for renewable energy projects, and greater integration of sustainability into curricula are essential for enhancing both institutional performance and public accountability. Universities should also promote student-led initiatives and community partnerships, as these have the potential to amplify environmental awareness and foster behavioural change beyond campus boundaries.

Finally, while the study provides an important benchmark, it is limited to publicly available data and a single urban context. Future research should incorporate qualitative perspectives from students, faculty, and administrators, as well as comparative analyses across different Turkish cities or international cases. Such approaches would enrich understanding of the social, cultural, and political dimensions of Green Campus initiatives and provide further insights into how universities can play a transformative role in the global response to the climate crisis.

CONFLICT OF INTERESTS

All authors declare that they have no conflict of interests.

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