BAU BAHÇEŞEHİR UNIVERSITY

SDG 2: ZERO HUNGER



2024-2025

BAU AT A GLANCE

Since its foundation in 1998, the vision of BAU has been to be a global university known for its contribution to scientific, technological, and cultural knowledge through innovative education models and research approaches that reflect international standards as well as service to society. Currently, BAU Global Network comprises of 5 universities (Istanbul, Washington D.C., Berlin, Cyprus, Batumi), 5 liaison offices (BAU Global Azerbaijan Jordan, Uzbekistan, Mongolia, Pakistan) and 5 language schools.

Bahçeşehir University (BAU) is committed to advancing the wellbeing of local and global communities by integrating the United Nations Sustainable Development Goals (SDGs) into its institutional governance, operations, organisational culture, educational programmes, academic research and stakeholder partnerships. Through this integrated approach, BAU seeks to align its academic mission and institutional practices with sustainable development priorities and contribute to positive societal change.

Bringing together staff, students and alumni, BAU promotes a university community guided by ethical conduct, social responsibility and global citizenship. The University encourages its members to recognise their responsibilities towards one another, wider society and the environment, and to apply their knowledge and skills to building a more inclusive, equitable and sustainable future.

BAU IN THE TIMES HIGHER EDUCATION

BAU participates in the Times Higher Education (THE) Impact Rankings since 2019. According to the current rankings, BAU belongs to the 1000-12000 band in the World University Rankings, 59th in the Impact Rankings and the 251-300 in the Asia University Rankings 2026. Also, BAU is ranked as the top university in Türkiye.

The university continuously increases its standing in categories related to the UN Sustainable Development Goals. As of 2026, BAU holds the following standings in the THE Impact Rankings;

- 2nd in Gender Equality
- 6 th in Quality Education
- 77 th in Peace, Justice and Strong Institutions
- 89 th in Partnership for the Goals
- Ranks between 101-200 in Reducing Inequalities
- Ranks between 201-300 in Industry, Innovation and Infrastructure

The University takes the above-mentioned rankings as evaluation criteria for progress regarding its adherence and contribution to the UN Sustainable Development Goals and will continue to report its advancement in the rankings on a yearly basis.

Sustainable Food Systems and Nutritional Resilience at Bahçeşehir University

Bahçeşehir University (BAU) integrates the principles of sustainable food systems, food security, and responsible consumption into its academic, research, and community engagement strategies, demonstrating its institutional alignment with the United Nations Sustainable Development Goal 2 (Zero Hunger). Guided by the university's mission to generate knowledge that serves society and supports global well-being, BAU approaches food and agriculture not merely as scientific disciplines but as interconnected pillars of human development, social equity, and environmental stewardship.

Operating under the provisions of the Higher Education Law No. 2547, BAU has developed a governance framework that promotes interdisciplinary collaboration across faculties and research centers—particularly through the Bahçeşehir University Sustainable Food Systems Application and Research Center (BAUSÜGAM) and CIFAL Istanbul, a UNITAR-affiliated center for sustainable development training and policy dialogue. This structure enables the university to advance education, innovation, and partnerships that address the root causes of hunger and malnutrition while fostering resilient and inclusive food systems.

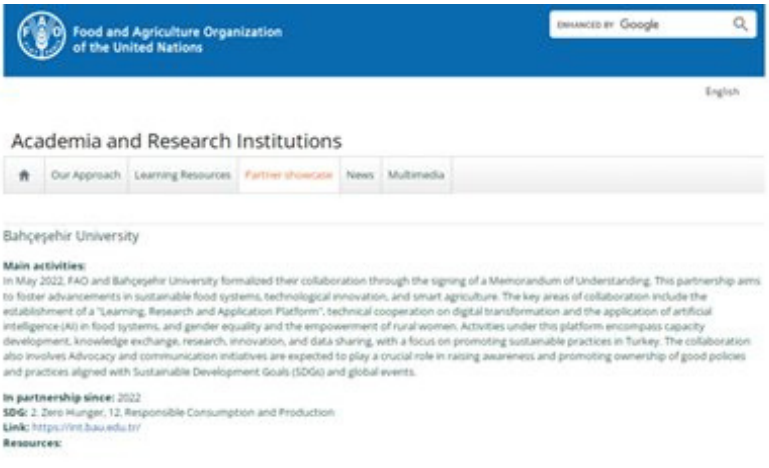
BAU's institutional strategy emphasizes the integration of sustainability into both academic curricula and applied research. Undergraduate and graduate programs in Gastronomy and Culinary Arts, Nutrition and Dietetics, Environmental Engineering, and Agricultural Technologies are designed to equip students with the technical expertise and ethical awareness necessary to transform global food systems. Through experiential learning environments—such as the BAU Farm in Giresun—students and researchers engage in practical training on organic farming, resource efficiency, and community-based food initiatives that support local livelihoods and sustainable production.

The university's partnerships with the Food and Agriculture Organization (FAO), the Agroecology Coalition, and the FABLE Consortium exemplify its role in shaping national and global policy agendas on food security and sustainable agriculture. These collaborations bridge academia, government, and industry, generating evidence-based insights and innovative technologies—from artificial intelligence–driven precision farming to circular food management models—that promote efficient resource use and equitable access to nutritious food.

Furthermore, BAU actively engages in public awareness and community education through its certificate programs, workshops, and student-led initiatives that highlight responsible consumption, food waste reduction, and climate-resilient agriculture. By aligning education with action, the university cultivates a generation of informed citizens, ethical professionals, and solution-oriented leaders capable of addressing the intertwined challenges of hunger, sustainability, and social justice.

Through its holistic approach—combining research excellence, academic innovation, and global cooperation—Bahçeşehir University continues to strengthen its contribution to achieving SDG 2: Zero Hunger, fostering a future where food security, environmental integrity, and human dignity advance together in harmony.

Collaborating for Change: Policy, Innovation, and Capacity Building in the Bahcesehir University–FAO Partnership





Since May 2022, Bahçeşehir University (BAU) and the Food and Agriculture Organization of the United Nations (FAO) have maintained a strategic institutional partnership to advance sustainable food systems, smart agriculture, rural development, and policy development in alignment with the United Nations Sustainable Development Goals (SDGs). The partnership is particularly relevant to SDG 2 (Zero Hunger), as it addresses the interconnected challenges of food security, sustainable agricultural production, rural livelihoods, and the long-term resilience of food systems.

Formalized through a Memorandum of Understanding (MoU), the partnership establishes a long-term framework for cooperation through a Learning, Research, and Application Platform, promoting innovation, knowledge exchange, institutional capacity development, and policy-oriented collaboration in sustainable agriculture and food systems. This framework provides an institutional basis for addressing food security challenges through research-informed approaches, agricultural innovation, and cooperation among stakeholders involved in food production and rural development.

The cooperation encompasses several strategic areas, including:

• Technical collaboration on digital transformation and the application of artificial intelligence (AI) in food systems;

• Joint initiatives on gender equality, rural women's empowerment, and inclusive agricultural development;

• Knowledge exchange and capacity building on sustainable agriculture, food security, and responsible resource management;

• Advocacy, communication, and policy-oriented engagement to raise awareness and strengthen the development, dissemination, and adoption of good policies and practices aligned with the SDGs and global food security priorities;

Supporting knowledge and capacity development relevant to improving agricultural productivity, strengthening small-scale producers, and promoting sustainable and resilient food production systems.

The BAU–FAO partnership remained active throughout 2025, with both institutions continuing their cooperation through initiatives addressing the digital transformation of agriculture, the empowerment of rural communities, sustainable food systems, and inclusive policy dialogue. These areas of cooperation are closely connected to SDG 2 priorities, particularly the need to improve agricultural productivity while ensuring that rural communities and small-scale producers can participate in more sustainable and inclusive food systems.

A key area of continued collaboration was the Digital Villages initiative, which focuses on strengthening digital literacy, technological capabilities, and access to educational opportunities in rural communities, particularly among rural women and women's cooperatives. By connecting BAU's academic expertise with FAO's international experience in agricultural development, the initiative supports the digital inclusion of rural populations and promotes more equitable participation in agricultural innovation and local economic development.

From an SDG 2 perspective, strengthening digital capabilities among rural women and agricultural cooperatives is particularly important because access to technological knowledge can help producers improve agricultural practices, make better-informed production decisions, and explore opportunities to strengthen the economic sustainability of their activities. These capabilities can support the broader objectives of increasing small-scale agricultural productivity, improving rural livelihoods, and building more resilient local food systems.

The initiative also contributes to broader policy-related priorities concerning gender-responsive rural development, digital inclusion, agricultural modernization, and the economic empowerment of women. Through educational outreach and engagement with rural communities, the cooperation connects practical experiences and local development needs with wider discussions on sustainable agricultural strategies and inclusive food systems. In this context, the participation of rural women and cooperatives is especially relevant to efforts to ensure that agricultural innovation reaches groups whose access to technical resources, training, and economic opportunities may otherwise be limited.

Another significant component of the partnership in 2025 was the organization of FAO Talks as part of World Food Day activities. The initiative brought together FAO representatives, non-governmental organizations (NGOs), private-sector companies, academic stakeholders, and young people to discuss sustainable food systems, food security, responsible agricultural practices, and the future of food production and consumption.

In the context of SDG 2, World Food Day provided an important opportunity to draw attention to the need for reliable access to sufficient and nutritious food, sustainable agricultural production, and coordinated responses to the challenges affecting global and local food security.

FAO Talks was designed not only as an educational and awareness-raising activity but also as a multi-stakeholder platform for policy dialogue and cross-sectoral knowledge exchange. By connecting international expertise with civil society perspectives, private-sector experience, academic knowledge, and youth participation, the programme encouraged discussions on the challenges facing contemporary food systems and the identification of shared priorities for more sustainable and inclusive food policies.

The discussions addressed the importance of sustainable food production and consumption, food system resilience, responsible resource management, and collaborative approaches to food security. Particular emphasis was placed on the need to engage different sectors in developing effective responses to environmental, economic, and social challenges affecting food systems. These discussions are directly relevant to SDG 2 targets concerning sustainable food production systems and resilient agricultural practices, particularly in the context of climate-related pressures, resource constraints, and the need to safeguard long-term food availability.

The participation of NGOs and private-sector representatives strengthened the policy dialogue by bringing together different institutional perspectives on sustainable food systems, while the involvement of young people helped incorporate the expectations and priorities of future generations into discussions on food security, agricultural sustainability, and long-term environmental responsibility.

Through FAO Talks, BAU and FAO facilitated policy-oriented dialogue among international organizations, civil society, industry, academia, and youth, creating opportunities to exchange knowledge, consider policy priorities, and explore collaborative approaches to sustainable food system transformation. This engagement reinforced the role of universities as platforms connecting research-based expertise, stakeholder participation, and policy-relevant discussions.

By facilitating dialogue among institutions with different responsibilities across the food system, FAO Talks also supported the exchange of perspectives on how agricultural production,

food security, environmental sustainability, and social inclusion can be addressed through more coordinated and evidence-informed approaches.

Together, the Digital Villages initiative and FAO Talks demonstrated the continued implementation of the BAU–FAO cooperation framework in 2025. While Digital Villages addressed the practical dimensions of digital inclusion, rural women's empowerment, and sustainable agricultural development, FAO Talks provided a complementary platform for cross-sectoral dialogue on food security, sustainability priorities, and policy-related challenges.

Together, these activities reflect two complementary dimensions of SDG 2: strengthening the capabilities of rural communities involved in agricultural production and promoting institutional dialogue on the policies and practices needed to develop sustainable, inclusive, and resilient food systems.

Beyond individual activities, the partnership provides an ongoing institutional mechanism for SDG-related policy engagement, knowledge exchange, and the development of evidence-informed approaches to sustainable agriculture, food security, digital transformation, and rural development. Through its collaboration with FAO, BAU contributes academic expertise and facilitates stakeholder engagement relevant to the identification of policy priorities, the exchange of good practices, and the consideration of inclusive, technology-driven, and gender-sensitive agricultural strategies.

This ongoing cooperation is particularly significant for SDG 2 because addressing hunger and food insecurity requires more than increasing food production alone. It also involves strengthening the capacities of agricultural producers, supporting sustainable rural livelihoods, improving the resilience of food systems, and promoting policies that respond to the needs of vulnerable communities. The BAU–FAO partnership provides a framework for contributing to these interconnected priorities through education, research, knowledge exchange, and policy engagement.

The continued cooperation also demonstrates how universities and international organizations can work together to connect global sustainable development agendas with national and local priorities, bringing academic knowledge, international expertise, civil society perspectives, private-sector participation, and community-level experience into discussions relevant to sustainable development policies.

By maintaining and implementing its institutional partnership with FAO throughout 2025, Bahçeşehir University contributed to SDG-related policy dialogue and cross-sectoral cooperation, supporting participatory, evidence-informed, and inclusive approaches to sustainable food systems and agricultural development. In particular, the partnership strengthened BAU's contribution to the institutional and knowledge-based foundations of SDG 2 by supporting agricultural capacity building, rural inclusion, and policy dialogue on

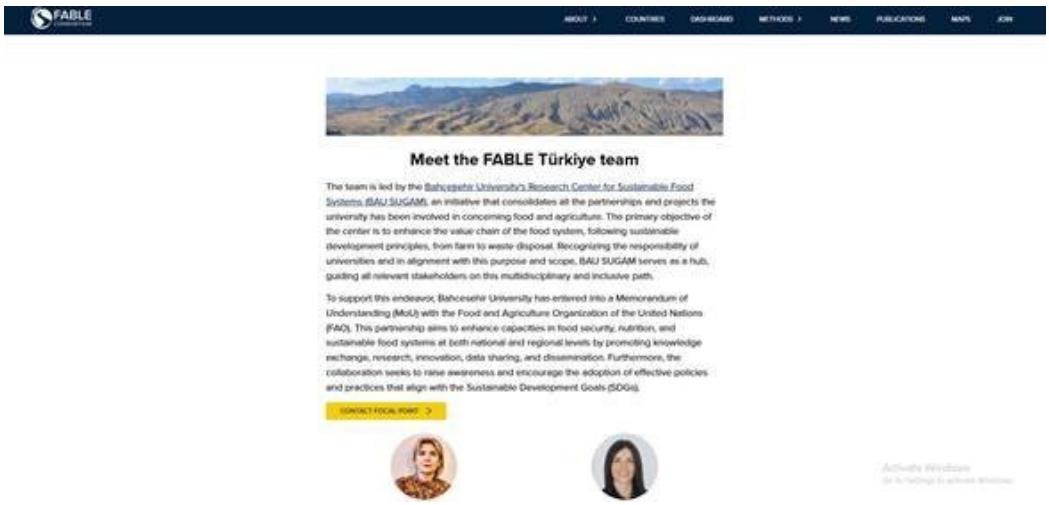
sustainable food production and food security.

The partnership contributes primarily to SDG 2 (Zero Hunger) through food security and sustainable agricultural development; SDG 5 (Gender Equality) through rural women's empowerment and inclusive participation; SDG 9 (Industry, Innovation and Infrastructure) through agricultural digitalization and technological innovation; SDG 12 (Responsible Consumption and Production) through sustainable food production and consumption; SDG 13 (Climate Action) through resilient and sustainable agricultural practices; and SDG 17 (Partnerships for the Goals) through sustained institutional cooperation between BAU and FAO and cross-sectoral dialogue involving NGOs, the private sector, academia, and youth. It also supports SDG 4 (Quality Education) through educational outreach, knowledge sharing, and capacity development.

More specifically, the cooperation aligns with SDG Target 2.3, which addresses agricultural productivity and the incomes of small-scale food producers, and SDG Target 2.4, which focuses on sustainable food production systems and resilient agricultural practices. Through its combination of rural capacity development, technological knowledge exchange, and multi-stakeholder policy dialogue, the BAU–FAO partnership contributes to the broader institutional efforts needed to advance these targets.

https://www.fao.org/partnerships/news-archive/news-article/es/c/1538742/

Advancing Policy Pathways for Sustainable Food and Land Systems: Bahçeşehir University and NGOs within the FABLE Consortium



Bahçeşehir University (BAU) serves as the Turkish partner of the global FABLE Consortium (Food, Agriculture, Biodiversity, Land-Use, and Energy), an international network of research institutions and partner organizations working to develop nationally coherent and globally aligned pathways for achieving the United Nations Sustainable Development Goals (SDGs) and the objectives of the Paris Climate Agreement. The consortium's integrated approach is particularly relevant to SDG 2 (Zero Hunger), as it examines how countries can strengthen

food security and agricultural sustainability while addressing environmental pressures and competing demands on natural resources.

The FABLE Consortium provides a collaborative framework through which national research teams develop science-based, data-driven policy pathways for sustainable food systems, agriculture, biodiversity conservation, land use, and climate action. Its approach connects national development priorities with international sustainability commitments, supporting governments and other stakeholders in identifying integrated strategies for long-term environmental, economic, and social sustainability. Within this framework, food security is considered alongside agricultural productivity, land availability, resource efficiency, and the long-term sustainability of food production systems.

The FABLE Secretariat is jointly led by the Sustainable Development Solutions Network (SDSN), the International Institute for Applied Systems Analysis (IIASA), and the Alliance of Bioversity International and CIAT, bringing together international expertise in sustainable development, systems analysis, agricultural research, and environmental policy.

A central feature of the consortium is its bottom-up approach to policy development, through which country teams examine national conditions, identify sustainability challenges, and develop integrated pathways reflecting their countries' specific agricultural, environmental, and socioeconomic priorities. These national pathways are designed to remain consistent with global sustainability objectives while addressing local policy needs and implementation challenges. This country-specific approach is important for SDG 2 because food security challenges, agricultural production conditions, and the availability of land and natural resources differ across national contexts, requiring policies that respond to local needs rather than relying on uniform solutions.

In Türkiye, the FABLE initiative is led by the BAU Research Center for Sustainable Food Systems (BAU SUGAM), which brings together the University's research activities and institutional partnerships related to food systems, agriculture, biodiversity, land use, and sustainability policy.

Through this leadership role, BAU contributes academic expertise, research, data analysis, and modelling capabilities to the development of science-based policy pathways for Türkiye's food and land-use systems. This work supports the examination of long-term sustainability challenges and the identification of potential policy approaches addressing food security, agricultural productivity, biodiversity protection, responsible land use, and climate resilience.

From an SDG 2 perspective, this research and modelling work is particularly significant because it supports the assessment of how agricultural production can meet future food needs while maintaining the natural resources on which food production depends. By examining alternative development pathways, BAU contributes to the evidence base for policies intended

to strengthen agricultural productivity, protect productive land, and improve the long-term resilience of Türkiye's food systems.

The consortium's methodology emphasizes the importance of integrated policy analysis, recognizing that decisions concerning agriculture, food production, land management, biodiversity, and energy are interconnected. By considering these relationships, FABLE country teams contribute to the development of policy pathways that seek to balance environmental sustainability, food security, economic development, and climate commitments.

This integrated perspective directly supports the objectives of SDG Target 2.4, which calls for sustainable food production systems and resilient agricultural practices. It recognizes that long-term food security depends not only on the quantity of food produced but also on the ability of agricultural systems to adapt to climate change, maintain ecosystem health, and preserve the natural resources essential for future production.

BAU's participation through BAU SUGAM connects university-based research directly with an international framework dedicated to informing national sustainability policies. The University's contribution supports the translation of scientific knowledge and analytical findings into policy-relevant insights that can inform the consideration of national strategies and long-term development priorities.

In relation to SDG 2, this connection between academic research and policy development is especially valuable for identifying potential trade-offs between agricultural expansion, food production, biodiversity conservation, and land-use sustainability. Evidence-based analysis can help policymakers consider approaches that strengthen food security without undermining the ecological foundations of agricultural production.

The FABLE Consortium also emphasizes engagement with national governments and relevant stakeholders, encouraging dialogue between researchers, public institutions, and other organizations involved in sustainable development. Through this approach, country teams seek to ensure that scientific findings and proposed sustainability pathways are relevant to national policy discussions and institutional decision-making.

Within this framework, BAU contributes to a collaborative policy development process that links national research and modelling with international sustainability objectives. Its involvement supports evidence-informed discussions on how Türkiye can pursue more sustainable agricultural production, strengthen food system resilience, protect biodiversity, and align land-use strategies with climate and development commitments.

These discussions are particularly relevant to the development of agricultural policies that consider long-term food availability, the sustainability of production systems, and the vulnerability of agriculture to environmental and climate-related risks. By contributing

research-based perspectives to these policy discussions, BAU supports the consideration of strategies aimed at maintaining productive and resilient agricultural systems over time.

The international structure of the consortium further enables knowledge exchange, methodological cooperation, and comparison of national sustainability pathways. By participating in this network, BAU contributes to the exchange of research-based perspectives and policy approaches between Türkiye and other participating countries.

Such international cooperation also strengthens the exchange of analytical approaches relevant to SDG 2, enabling participating countries to examine different strategies for addressing food security, sustainable agriculture, and the environmental challenges affecting food production.

The University's role in the FABLE Consortium demonstrates its engagement in SDG-related policy development beyond conventional academic research. Through BAU SUGAM, the institution participates in an international process designed to produce policy-relevant analysis, identify national sustainability priorities, and support the development of integrated strategies for sustainable food and land-use systems.

Importantly, this engagement contributes to the knowledge and policy foundations needed to address SDG 2 at a systemic level. Rather than focusing exclusively on immediate food assistance, the FABLE approach examines the long-term conditions required to maintain food production, strengthen agricultural sustainability, and reduce risks to future food security.

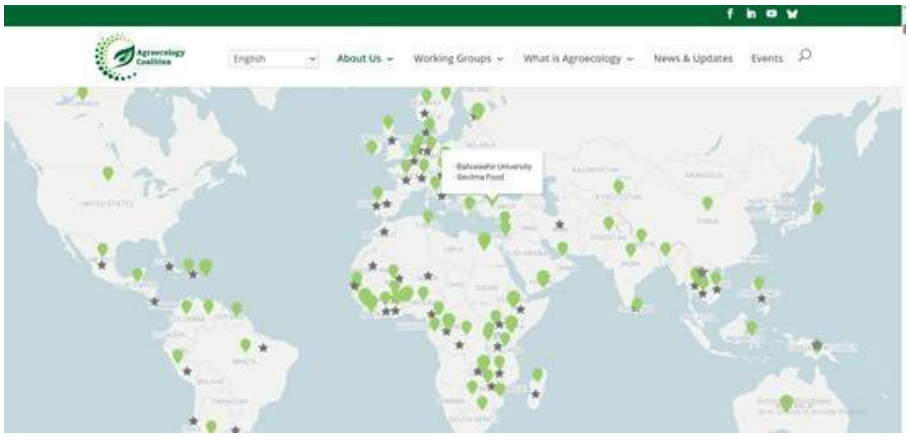
This engagement strengthens the connection between academic research, international scientific cooperation, and national policy development, reinforcing BAU's contribution to evidence-based approaches to sustainable development in Türkiye.

Through BAU SUGAM's leadership of the Türkiye FABLE initiative, the University contributes to the development of research-informed approaches that can support national efforts to reconcile food security objectives with sustainable agricultural production, responsible land management, and climate resilience. This represents an important contribution to the structural and policy dimensions of SDG 2, particularly the transition towards sustainable and resilient food systems.

The initiative contributes primarily to SDG 2 (Zero Hunger) through sustainable food systems and food security; SDG 13 (Climate Action) through climate-aligned agricultural and land-use pathways; SDG 15 (Life on Land) through biodiversity conservation and sustainable land management; and SDG 17 (Partnerships for the Goals) through international scientific cooperation and policy-oriented knowledge exchange. It also supports SDG 12 (Responsible Consumption and Production) through integrated approaches to sustainable food production and resource use.

More specifically, the initiative aligns with SDG Target 2.4 through its emphasis on sustainable food production systems, resilient agricultural practices, and the protection of natural resources essential for agriculture. Its research and modelling activities also provide policy-relevant insights connected to SDG Target 2.3, particularly the long-term conditions affecting agricultural productivity. By linking scientific analysis, national policy priorities, and international sustainability commitments, BAU's participation in FABLE supports the development of integrated approaches to food security and sustainable agricultural transformation.

Bahçeşehir University as a Member of the Agroecology Coalition for Transforming Global Food Systems



Bahçeşehir University (BAU) contributes to international SDG-related policy development, sustainable food systems governance, and evidence-informed agricultural strategies through its institutional membership in the Agroecology Coalition, a United Nations–supported global initiative established following the 2021 United Nations Food Systems Summit (UNFSS). The Coalition's objectives are closely aligned with SDG 2 (Zero Hunger), particularly its emphasis on transforming agricultural and food production systems to improve food security, strengthen sustainable farming practices, and support the long-term availability of nutritious food.

The Coalition brings together more than 300 members, including governments, universities, non-governmental organizations (NGOs), and international institutions, to advance the transition towards sustainable and resilient food systems. Its work is guided by the 13 Principles of Agroecology developed by the High-Level Panel of Experts for Food Security and Nutrition (HLPE-FSN) and the 10 Elements of Agroecology endorsed by the FAO Council in 2019.

These internationally recognized agroecological frameworks are particularly relevant to SDG 2 because they promote agricultural approaches that combine food production with biodiversity conservation, efficient resource use, soil health, and the economic and social sustainability of

farming communities. By addressing these dimensions together, agroecology provides an integrated approach to strengthening food security while reducing the environmental vulnerabilities of agricultural systems.

As an official member, BAU participates in the Coalition's thematic working groups on Policies; Research, Innovation and Education; and Implementation. These platforms provide opportunities for the University to engage with international stakeholders in discussions concerning supportive policy frameworks, sustainable agricultural practices, research priorities, and strategies for integrating agroecology into national and regional development agendas.

From an SDG 2 perspective, participation in these working groups connects BAU with international efforts to identify the policies, scientific knowledge, and institutional conditions needed to support sustainable food production. These discussions are especially relevant to improving the resilience of agricultural systems, strengthening the capacities of food producers, and promoting farming practices that can maintain productivity while protecting natural resources.

BAU's engagement in the Policies Working Group is particularly relevant to SDG policy development, connecting academic knowledge and research perspectives with international efforts to strengthen enabling policy environments for agroecological transformation. Through its participation, the University supports policy-oriented knowledge exchange, evidence-informed approaches, and dialogue on regulatory and institutional conditions necessary for sustainable food systems.

In relation to SDG 2, this policy-oriented engagement supports consideration of how national and regional agricultural policies can encourage sustainable production methods, improve access to agricultural knowledge, and create more supportive conditions for small-scale food producers. Such policy frameworks are important for addressing the structural challenges that can limit agricultural productivity, rural livelihoods, and long-term food security.

The Coalition's multi-stakeholder structure also enables BAU to engage with governments, NGOs, international organizations, and research institutions on shared policy challenges, including food security, climate resilience, biodiversity protection, sustainable agricultural investment, and the implementation of agroecological practices.

This collaborative structure is significant for SDG 2 because food security cannot be addressed through agricultural production alone. It also requires coordinated approaches to the sustainability of farming systems, the availability of natural resources, the resilience of rural communities, and the capacity of agricultural producers to respond to environmental and economic challenges.

Beyond policy dialogue, BAU's participation in the Research, Innovation and Education and Implementation working groups connects research-based knowledge with practical approaches to sustainable agriculture. This reinforces the relationship between policy development, institutional capacity building, scientific collaboration, and implementation, supporting the translation of sustainability objectives into actionable strategies.

These working groups are particularly relevant to SDG Target 2.4, which emphasizes sustainable food production systems and resilient agricultural practices. Through international knowledge exchange on agroecological approaches, BAU engages with research and implementation perspectives concerning soil health, biodiversity, ecosystem protection, and agricultural resilience, all of which are essential to maintaining food production over the long term.

The Coalition's focus on research, innovation, and implementation also provides a framework for examining approaches relevant to SDG Target 2.3, including the challenges faced by small-scale food producers and the importance of improving access to knowledge, productive resources, and sustainable agricultural opportunities.

Through this international engagement, Bahçeşehir University contributes to collaborative processes that inform SDG-related policy priorities and promote the exchange of international best practices, strengthening the role of higher education institutions in addressing interconnected food, climate, and biodiversity challenges.

The University's participation is particularly relevant to the development of more sustainable and inclusive food systems, as agroecological approaches seek to address food security alongside the environmental and socioeconomic conditions affecting agricultural production. By engaging in international discussions on these approaches, BAU supports the exchange of knowledge relevant to agricultural sustainability and the long-term resilience of food systems.

Importantly, BAU's involvement in the Agroecology Coalition contributes to SDG 2 at the level of policy development, scientific cooperation, and institutional capacity building. Rather than representing a direct food assistance programme, this engagement supports the broader transformation of agricultural systems needed to improve food security, protect the resources essential for food production, and strengthen the sustainability of farming communities.

The initiative primarily supports SDG 2 (Zero Hunger) through sustainable agriculture and food security; SDG 13 (Climate Action) through climate-resilient food systems; SDG 15 (Life on Land) through biodiversity protection and ecosystem restoration; and SDG 17 (Partnerships for the Goals) through international cooperation among academia, governments, NGOs, and multilateral organizations.

More specifically, BAU's participation aligns with SDG Target 2.4 through its engagement with policies and practices supporting sustainable food production, agricultural resilience, and the maintenance of healthy ecosystems. It also contributes to knowledge exchange relevant to SDG Target 2.3, particularly regarding the productivity and sustainability of small-scale agricultural production. Through its participation in the Coalition's Policies, Research, Innovation and Education, and Implementation working groups, Bahçeşehir University strengthens its contribution to international cooperation on the policy and knowledge foundations of sustainable agriculture and food security.

https://agroecology-coalition.org/principles-and-vision/

https://agroecology-coalition.org/members/

Bahçeşehir University's BAU Farm in Giresun

Bahçeşehir University established the BAU Farm in Giresun as a multidisciplinary learning space that bridges agriculture, sustainability, and education to promote environmentally responsible and socially inclusive development. Situated in the fertile lands of Türkiye's Black Sea region, the farm functions as a living laboratory where students and visitors engage in experiential learning on sustainable farming, organic food production, and efficient resource management.

More than a conventional agricultural learning environment, BAU Farm provides a practical setting for exploring the interconnected relationship between food production, soil health, biodiversity, and the sustainable use of land and natural resources. By bringing sustainability principles into an agricultural setting, the initiative demonstrates how food production and environmental stewardship can be considered together rather than as competing priorities.

By offering practical training opportunities beyond the university campus, the initiative underscores Bahçeşehir University's dedication to fostering food security awareness and empowering future generations with the skills necessary to develop resilient food systems. The farm serves as a platform where academic research meets local practice, inspiring innovative approaches to sustainable agriculture and community well-being.

From an SDG 2 (Zero Hunger) perspective, BAU Farm highlights the importance of agricultural practices that support sustainable food production while maintaining the natural resources required for long-term productivity. Its emphasis on organic farming, resource efficiency, and experiential agricultural education contributes to the development of knowledge and practical competencies relevant to resilient and environmentally responsible food systems.

The initiative is particularly aligned with SDG Target 2.4, which calls for sustainable food production systems and resilient agricultural practices that help maintain ecosystems, improve

land and soil quality, and strengthen the capacity of agricultural systems to respond to environmental challenges. Through its educational and practical activities, BAU Farm provides a setting in which these principles can be explored in relation to agricultural production and land management.

At the same time, the farm provides an important connection to SDG 15 (Life on Land) by emphasizing the ecological foundations of sustainable agriculture. Agricultural landscapes are not simply spaces for food production; they are also environments in which soil organisms, plants, insects, and other forms of biodiversity interact. Understanding these relationships is essential to promoting land-use practices that support productive agriculture without compromising ecosystem health.

Within this framework, BAU Farm offers opportunities to explore environmentally responsible approaches to soil management, the conservation of agricultural biodiversity, the efficient use of natural resources, and the importance of maintaining healthy terrestrial ecosystems. These areas of learning are relevant to the objectives of SDG 15, particularly the sustainable use of terrestrial ecosystems and the prevention of land degradation.

The farm's living-laboratory approach also creates opportunities to connect academic research with practical observation of agricultural landscapes. By examining how farming practices interact with environmental conditions, students and researchers can develop a more integrated understanding of the relationship between agricultural productivity, ecosystem services, and long-term land sustainability.

Through partnerships with local farmers and organizations, BAU Farm also supports regional agricultural development and women's participation in food production, promoting both environmental balance and equitable economic growth. These collaborations exemplify how universities can play a pivotal role in addressing hunger and advancing sustainable livelihoods through education, innovation, and collective action.

Engagement with local agricultural communities is particularly important for connecting sustainability knowledge with the realities of regional food production. By encouraging cooperation between the University and local producers, BAU Farm provides opportunities for the exchange of agricultural knowledge and experience, supporting approaches that consider both the economic viability of farming and the environmental sustainability of agricultural land.

This community-oriented approach also reinforces the relationship between SDG 2 and SDG 15. Sustainable agricultural livelihoods depend on productive land, healthy soils, functioning ecosystems, and the responsible management of natural resources. Protecting these ecological foundations is therefore essential not only for biodiversity conservation but also for maintaining food production and supporting the long-term resilience of farming communities.

Located in the Black Sea region, where agricultural production forms an important part of local economic and social life, BAU Farm offers a context for examining the relationship between regional agricultural practices and environmental sustainability. Its location enables learning activities to be connected with the agricultural characteristics and resource-management challenges of the surrounding region.

As an educational and applied learning platform, BAU Farm further contributes to sustainability literacy by demonstrating how individual agricultural practices relate to broader environmental challenges, including soil degradation, biodiversity loss, inefficient resource use, and the increasing pressures placed on food production systems.

By aligning scientific expertise with community engagement, Bahçeşehir University demonstrates its ongoing commitment to combating hunger and nurturing sustainable agricultural ecosystems, ensuring that learning, productivity, and social responsibility coexist in harmony.

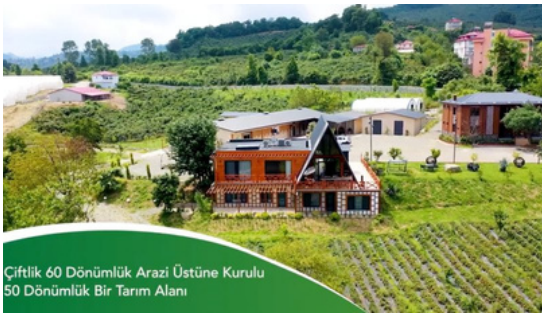
BAU Farm represents an integrated approach to sustainable development in which agricultural education, food production, responsible land use, and ecological awareness reinforce one another. Rather than treating food security and biodiversity conservation as separate objectives, the initiative highlights their fundamental interdependence: the long-term sustainability of food production depends on the health and resilience of the terrestrial ecosystems that support it.

The initiative contributes directly to SDG 2 (Zero Hunger) through sustainable agricultural education, organic food production, and the promotion of resilient food systems. It also supports SDG 15 (Life on Land) through its focus on responsible land management, soil health, agricultural biodiversity, and awareness of terrestrial ecosystem conservation. In addition, the initiative contributes to SDG 4 (Quality Education) through experiential learning, SDG 5 (Gender Equality) through women's participation in agricultural activities, SDG 12 (Responsible Consumption and Production) through environmentally responsible production practices, and SDG 17 (Partnerships for the Goals) through cooperation with local agricultural stakeholders.

More specifically, BAU Farm aligns with SDG Target 2.4 through its emphasis on sustainable food production and agricultural practices that maintain the ecological foundations of farming. It is also relevant to SDG Target 15.1, concerning the conservation and sustainable use of terrestrial ecosystems, and SDG Target 15.3, which addresses land degradation and the restoration of degraded land. Through its combined focus on agricultural sustainability, ecological awareness, and responsible land use, BAU Farm provides a practical educational platform for advancing the interconnected objectives of SDG 2 and SDG 15.









National Policy Forum on Artificial Intelligence and Technology in Hazelnut Farming



Held in Giresun during the 2024–2025 academic year, under the coordination of the Ministry of Agriculture and Forestry and the Giresun Governorship, the National Policy Forum on Artificial Intelligence and Technology in Hazelnut Farming brought together Bahçeşehir University (BAU), Giresun University, the Eastern Black Sea Development Agency (DOKA), and representatives from public institutions, academia, and the private sector.

The forum focused on developing a national roadmap for integrating artificial intelligence and digital technologies into agricultural production, particularly hazelnut farming, an important source of income and employment for rural communities in Türkiye. Bahçeşehir University contributed its expertise in AI applications, sustainable food systems, and policy innovation to discussions on improving agricultural productivity, resource efficiency, and long-term resilience.

By bringing together agricultural policymakers, researchers, technology specialists, and industry representatives, the forum provided a platform for examining how emerging technologies can contribute to the transformation of traditional agricultural production systems. Its policy-oriented approach connected technological innovation with broader priorities concerning food security, sustainable land use, environmental protection, and rural economic development.

Advancing Food Security and Sustainable Agricultural Production (SDG 2)

From an SDG 2 (Zero Hunger) perspective, the forum addressed the role of technological innovation in strengthening agricultural productivity, improving the efficiency of food production, and supporting more resilient agricultural systems. Artificial intelligence and data-driven agricultural technologies offer opportunities to improve production planning, monitor crop conditions, optimize agricultural inputs, and support more informed decisions throughout the production process.

In the context of hazelnut farming, these approaches are particularly relevant to maintaining agricultural productivity while responding to environmental pressures, resource constraints, and changing climatic conditions. By encouraging discussion of technology-driven agricultural strategies, the forum supported the development of policy approaches relevant to sustainable food production and long-term food system resilience.

The initiative aligns particularly with SDG Target 2.4, which emphasizes sustainable food production systems and resilient agricultural practices capable of maintaining ecosystems, improving land and soil quality, and adapting to environmental challenges.

Promoting Agricultural Digital Transformation and Innovation (SDG 9)

The forum also contributed to SDG 9 (Industry, Innovation and Infrastructure) by placing artificial intelligence, digital technologies, and research-based innovation at the centre of agricultural modernization. Its emphasis on developing a national roadmap highlighted the importance of connecting scientific expertise, technological capabilities, and institutional cooperation to support innovation in a strategically important agricultural sector.

Through its contribution to discussions on AI applications and digital agricultural solutions, BAU supported the exchange of knowledge relevant to modernizing production processes, strengthening technological capabilities, and encouraging the adoption of innovative approaches within the agricultural value chain.

This engagement is particularly relevant to SDG Target 9.5, which focuses on strengthening scientific research and upgrading technological capabilities, and to broader efforts to promote innovation-driven and sustainable industrial development.

Supporting Sustainable Land Use and Terrestrial Ecosystems (SDG 15)

From an SDG 15 (Life on Land) perspective, the forum highlighted the potential relationship between agricultural digitalization and more responsible management of land and natural resources. Data-driven agricultural approaches can support more precise monitoring of environmental conditions, more efficient use of agricultural inputs, and better-informed decisions concerning soil and land management.

For agricultural regions such as Giresun, where farming activities are closely connected to the surrounding natural environment, integrating environmental considerations into agricultural modernization is particularly important. The forum's focus on resource efficiency and sustainable agricultural practices provided a policy-relevant context for considering how technological innovation can help reduce pressures on agricultural ecosystems while maintaining productive land use.

These discussions are relevant to SDG Target 15.3, which addresses land degradation, and to the broader objectives of protecting terrestrial ecosystems and promoting sustainable land management. The forum contributed to these objectives through policy dialogue and knowledge exchange rather than through direct ecosystem restoration or conservation activities.

Strengthening Rural Livelihoods and Economic Resilience (SDG 1)

From an SDG 1 perspective, the initiative addressed the economic vulnerability of agricultural producers and rural households, highlighting the potential of technological innovation to reduce production costs, improve yields, strengthen farmers' competitiveness, and support more stable agricultural incomes. By encouraging evidence-based agricultural policies and wider access to technological solutions, the forum promoted approaches that could help small-scale producers overcome structural economic challenges and strengthen sustainable rural livelihoods.

The relationship between agricultural innovation and rural economic resilience is especially significant in regions where household incomes depend heavily on agricultural production. By considering how digital transformation can improve productivity and resource efficiency, the forum supported policy discussions relevant to the long-term economic sustainability of farming communities.

Integrating Research, Policy and Multi-Stakeholder Collaboration

Beyond its individual thematic contributions, the forum demonstrated the importance of integrated approaches to agricultural transformation. Improving productivity, strengthening technological innovation, supporting rural livelihoods, and protecting the natural resources essential to farming are interconnected objectives that require coordinated action across public institutions, universities, development agencies, and the private sector.

Through its participation, Bahçeşehir University contributed academic and technological expertise to a multi-stakeholder policy dialogue aimed at identifying priorities for the future of Türkiye's agricultural sector. The forum provided an opportunity to connect scientific knowledge with national and regional development considerations, supporting evidence-informed approaches to agricultural modernization and sustainability.

The initiative therefore contributes to multiple interconnected Sustainable Development Goals: SDG 2 (Zero Hunger) through sustainable agricultural production, food security, and agricultural resilience; SDG 9 (Industry, Innovation and Infrastructure) through artificial intelligence, technological innovation, and agricultural digitalization; SDG 15 (Life on Land) through policy discussions relevant to responsible land management, resource efficiency, and the sustainability of agricultural ecosystems; SDG 1 (No Poverty) through its focus on strengthening rural livelihoods and agricultural income opportunities; SDG 13 (Climate Action) through climate-responsive agricultural approaches; and SDG 17 (Partnerships for the Goals) through cooperation among government institutions, academia, development agencies, and the private sector.

By connecting technological innovation with food security, sustainable land use, and rural development, the National Policy Forum demonstrated how evidence-informed agricultural policies can address the interconnected economic, technological, and environmental challenges facing contemporary food production systems.





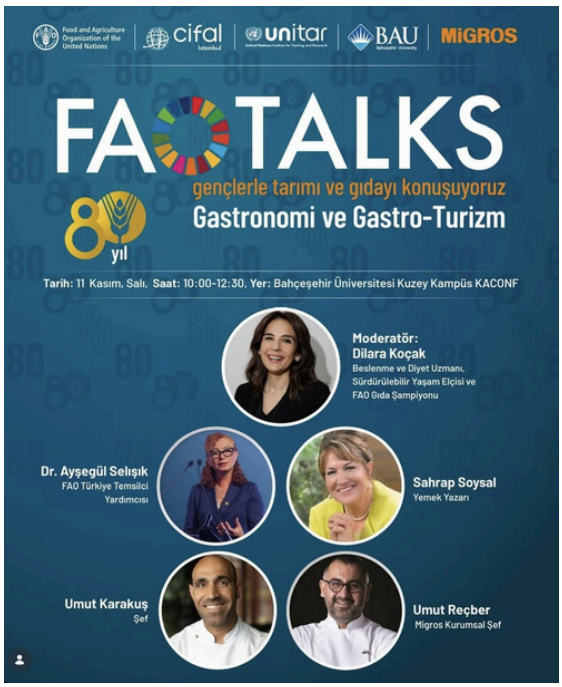
BAU Activities and Initiatives Supporting SDG 2: Zero Hunger

Bahçeşehir University (BAU) actively contributes to the realization of Sustainable Development Goal 2 (Zero Hunger), which seeks to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Guided by an institutional mission that ties academic excellence to social impact, BAU advances a comprehensive approach to food systems — one that integrates research, education, innovation, and community engagement to address the multifaceted causes of food insecurity and malnutrition.

In line with its governance philosophy grounded in ethical leadership, inclusiveness, and evidence-based action, BAU implements a range of programs, research projects, and capacity-building initiatives that strengthen sustainable food production, responsible consumption, and resilient rural livelihoods.

The following sections highlight key activities, collaborations, and educational interventions carried out during the 2024–2025 academic year, demonstrating BAU's sustained commitment to advancing food security, improving nutritional outcomes, and fostering equitable and climate-resilient food systems. These entries illustrate how the University combines scholarship, practical innovation, and community outreach to help build healthier, more resilient, and food-secure communities.

Bahçeşehir University, CIFAL Istanbul and the Food and Agriculture Organization of the United Nations: Cross-Sector Collaboration through FAO Talks



On November 11, 2025, Bahçeşehir University, CIFAL Istanbul—a training centre affiliated with the United Nations Institute for Training and Research (UNITAR)—and the Food and Agriculture Organization of the United Nations (FAO) jointly organised "Gastronomy and Gastro-Tourism: Engaging Youth in Food and Agriculture," with the participation of Migros. Held at Bahçeşehir University's North Campus during FAO's 80th anniversary year, the event brought together academics, international development professionals, culinary practitioners, private-sector representatives and young people. The collaboration created a platform for examining food and agriculture through their interconnected educational, cultural, environmental and economic dimensions.

The event was particularly relevant to SDG 2 (Zero Hunger) and SDG 12 (Responsible Consumption and Production), as it connected sustainable agricultural production with the ways food is selected, prepared, consumed and valued. By examining the relationships between producers, culinary professionals, businesses and consumers, the programme encouraged a broader understanding of how food systems can become more sustainable, inclusive and resilient.

Opening remarks were delivered by Prof. Dr. Çisil Sohodol, Director of CIFAL Istanbul; Prof. Dr. Kazım Ozan Özer, Director of the School of Applied Sciences; and Dr. İlâyda Altun Cevahir, Vice

Dean of the Faculty of Health Sciences. The panel was moderated by sustainable living advocate and FAO Food Champion Dilara Koçak and featured Dr. Ayşegül Selışık, FAO Türkiye Deputy Representative; food writer Sahrap Soysal; Chef Umut Karakuş; and Migros Corporate Chef Umut Reçber. Their different professional backgrounds connected international food-system priorities with culinary knowledge, academic perspectives and experience from the food sector.

Discussions addressed sustainable gastronomy, local ingredients, small producers and the contribution of young people to the future of food and agriculture. These themes positioned gastronomy as a way to understand the relationships between agricultural production, cultural heritage and everyday consumption.

From an SDG 2 perspective, the emphasis on local agricultural products and small-scale producers highlighted the importance of strengthening sustainable food production and supporting the communities responsible for supplying food. Small producers play an essential role in local food systems, and greater recognition of their products and production knowledge can contribute to discussions on agricultural sustainability, rural livelihoods and the resilience of regional food supply chains.

The programme also provided an opportunity to consider food security beyond the availability of food alone, drawing attention to the relationships between sustainable production, agricultural livelihoods, food quality and the long-term viability of local food systems. These themes are relevant to SDG Target 2.3, concerning small-scale food producers, and SDG Target 2.4, concerning sustainable food production systems and resilient agricultural practices.

Attention to local products and culinary traditions highlighted how food choices can connect consumers with producers and preserve knowledge passed between generations.

This connection was particularly important for SDG 12, as responsible consumption begins with understanding the resources, labour and production processes behind food. By highlighting the value of local ingredients and sustainable gastronomy, the event encouraged participants to consider how food-related decisions can support more responsible production and consumption patterns.

The discussions also provided a context for raising awareness of resource efficiency, the environmental implications of food choices and the importance of reducing unnecessary food waste. These considerations are closely connected to SDG Target 12.3 on reducing food loss and waste and SDG Target 12.8 on ensuring access to information and awareness for sustainable development and lifestyles in harmony with nature.

The gastro-tourism focus also provided a context for considering how the promotion of local cuisine can support regional economies while encouraging respect for the communities and resources behind food production.

This dimension established a meaningful connection with SDG 8 (Decent Work and Economic Growth), particularly the potential of sustainable gastronomic tourism to create economic opportunities for local producers, culinary businesses and communities. By linking regional food identities with tourism, gastronomy can contribute to the visibility and economic value of local agricultural products, traditional culinary knowledge and regional enterprises.

The event's discussions were especially relevant to SDG Target 8.9, which calls for policies promoting sustainable tourism that creates jobs and promotes local culture and products. While the programme did not itself constitute a tourism development intervention, it provided an educational and professional platform for exploring how gastronomy and local food systems can contribute to more inclusive regional economic development.

The relationship between sustainable gastronomy and SDG 15 (Life on Land) was also reflected in the importance of maintaining the natural resources that support agricultural production. Local food traditions are closely connected to agricultural landscapes, cultivated plant varieties, soil resources and the ecological conditions that make food production possible. Recognising these connections can strengthen awareness of the need to manage agricultural land responsibly and protect the environmental foundations of regional food systems.

In this respect, the programme offered an opportunity to connect food-system sustainability with broader considerations of agricultural biodiversity, responsible land use and terrestrial ecosystem health. This represents an indirect contribution to SDG 15 through education and awareness rather than direct biodiversity conservation or ecosystem restoration.

Youth engagement was central to the event's purpose. By bringing young participants into direct dialogue with specialists and practitioners, the programme encouraged them to consider their potential roles as informed consumers, future professionals and contributors to sustainable food systems.

Food literacy was particularly relevant to this exchange: understanding where food comes from, how it is produced and what social and environmental consequences accompany its consumption can inform decisions across different careers and daily life. Hosting this dialogue within a university connected sustainability learning with professional fields including gastronomy, nutrition, agriculture and tourism.

By engaging young people in discussions with representatives of FAO, academia, the food industry and culinary professions, the event strengthened opportunities for sustainability education across the food value chain. This approach is particularly relevant to SDG 12.8, as it encourages the development of knowledge and awareness needed to make informed choices about sustainable consumption and production.

The event contributes primarily to SDG 2 (Zero Hunger) through its focus on sustainable food systems, local agricultural production, small-scale producers and food security, and SDG 12 (Responsible Consumption and Production) through sustainable gastronomy, food literacy, resource awareness and responsible consumption.

It also supports SDG 8 (Decent Work and Economic Growth) through dialogue on sustainable gastro-tourism, local products and regional economic opportunities, and SDG 15 (Life on Land) through awareness of the relationship between agricultural production, natural resources, agricultural biodiversity and responsible land use.

SDG 17 (Partnerships for the Goals) remains an important dimension of the initiative through cooperation among Bahçeşehir University, CIFAL Istanbul, FAO and Migros, while SDG 4 (Quality Education) is supported through youth engagement and sustainability learning.

By connecting food production with consumption, local livelihoods, cultural heritage and environmental responsibility, the initiative demonstrated how sustainable gastronomy can serve as a platform for advancing interconnected food-system priorities. In particular, it reinforced the importance of considering food security and responsible consumption together, while recognising the economic opportunities and ecological resources that underpin sustainable local food systems.

The images below illustrate highlights from the program:





Advancing Digital Literacy and Women's Empowerment Beyond Campus: Bahçeşehir University's Digital Skills Training for Women-Led Agricultural Cooperatives in Ankara



On October 9, 2025, Bahçeşehir University's (BAU) Science Communication Office and CIFAL Istanbul contributed to the design and delivery of the “Digital Skills Development Training for Women-Led Cooperatives”, held in Ankara as part of World Food Day activities. The training was organized within the framework of the Food and Agriculture Organization of the United Nations (FAO) Digital Villages Initiative (DVI), in collaboration with the Republic of Türkiye Ministry of Agriculture and Forestry and Bahçeşehir University.

The initiative aimed to strengthen the digital competencies of women producers, enhance their access to digital markets, and support the sustainable development of rural communities. By delivering educational activities directly to agricultural stakeholders outside the university environment, BAU extended its academic expertise and educational resources to women entrepreneurs and local producers, demonstrating its commitment to community-oriented education, knowledge transfer, and lifelong learning.

The training provided practical, hands-on learning opportunities focused on the effective use of digital tools, online sales and marketing strategies, and social media management. Through applied learning activities, participants explored how digital platforms could be used to promote agricultural products, improve online visibility, communicate with potential customers, and reach broader markets.

A central objective of the programme was to address the digital literacy needs of women-led agricultural cooperatives, particularly in rural communities where access to specialized training and technological resources may be limited. By introducing accessible digital tools and practical communication strategies, the initiative supported participants in developing competencies relevant to their entrepreneurial activities and everyday business operations.

Bahçeşehir University's contribution through its Science Communication Office and CIFAL Istanbul connected academic knowledge with the practical educational needs of women producers. Rather than limiting university-supported learning to formal degree programmes or campus-based activities, the training brought specialized knowledge directly to a community of agricultural entrepreneurs, enabling participants to engage with digital technologies in ways relevant to their professional activities.

The programme also demonstrated the importance of collaboration between universities, international organizations, and public institutions in expanding access to education. By combining FAO's rural development framework, the Ministry of Agriculture and Forestry's engagement with agricultural communities, and BAU's educational contribution, the initiative created a platform for knowledge exchange and practical skills development.

Importantly, the training was designed for women producers and cooperative members outside Bahçeşehir University's enrolled student population. Its emphasis on applied digital competencies and community-based delivery illustrates BAU's approach to educational outreach beyond campus, particularly for groups that can benefit from greater access to professional learning opportunities.

In addition, the initiative contributes to SDG 1 (No Poverty) by expanding access to skills that can support income-generating opportunities, women's economic independence, and more sustainable rural livelihoods.

The initiative directly contributes to SDG 4 (Quality Education) by expanding access to practical digital skills training, supporting lifelong learning, and providing community-based educational opportunities beyond formal higher education. Through its focus on accessible and applicable knowledge, the programme demonstrates how universities can support the development of competencies that respond to the needs of different communities.

The programme also contributes to SDG 2 (Zero Hunger) by supporting women-led agricultural cooperatives and strengthening their capacity to participate in food markets. Its emphasis on digital market access, product visibility, and entrepreneurial skills is particularly relevant to the economic sustainability of small-scale food producers and the development of more inclusive local food systems.

This focus is also relevant to SDG Target 2.3, which emphasizes increasing the agricultural productivity and incomes of small-scale food producers, particularly women, including through improved access to knowledge, markets, and opportunities for value addition. While the training focused on digital marketing and business-related skills rather than agricultural production techniques, it addressed barriers that can limit producers' ability to connect their products with wider markets and strengthen their livelihoods.

By connecting digital education with the needs of women agricultural producers, the programme further demonstrates how targeted capacity building can contribute to the broader objectives of SDG 2: supporting small-scale food producers, improving access to markets, and strengthening the economic foundations of sustainable and inclusive food systems.

It also strongly aligns with SDG 5 (Gender Equality) by supporting women's digital competencies, entrepreneurship, and economic participation, and SDG 10 (Reduced Inequalities) by addressing digital skills gaps affecting rural communities. The programme further supports SDG 8 (Decent Work and Economic Growth) through its emphasis on entrepreneurship, digital market access, and sustainable business development.

Furthermore, cooperation among Bahçeşehir University, CIFAL Istanbul, FAO Türkiye, and the Republic of Türkiye Ministry of Agriculture and Forestry reflects SDG 17 (Partnerships for the Goals), highlighting the role of multi-stakeholder partnerships in delivering accessible education and supporting inclusive rural development.

Through the Digital Skills Development Training for Women-Led Cooperatives in Ankara, Bahçeşehir University demonstrates its commitment to extending educational opportunities beyond campus, strengthening digital literacy among women producers, and supporting inclusive economic participation through community-based learning. The initiative illustrates how university expertise can contribute to practical capacity-building and sustainable development within rural communities.

The pictures below portray highlights from the Digital Skills Training for Women-Led Agricultural Cooperatives program:





Right to Food: For a Better Today and a Better Tomorrow Poster Competition with FAO

In the 2024-2025 academic year, Bahçeşehir University, in collaboration with the Food and Agriculture Organization (FAO), BAU SÜGAM, and CIFAL Istanbul, organized the "Right to Food: For a Better Today and a Better Tomorrow" Poster Competition to commemorate World Food Day. The event provided a creative platform for students to explore the global challenges of food security, nutrition, and equitable access to resources, encouraging artistic expression as a tool for social change.

Participants visualized the concept of the right to adequate and nutritious food through their artwork, shedding light on the pressing realities of hunger and malnutrition affecting communities worldwide. The initiative not only emphasized the importance of responsible consumption and sustainable production practices but also underscored how access to food is a fundamental human right that links directly to health, education, and equality.

By engaging young people from diverse backgrounds, the competition fostered dialogue on the shared responsibility of individuals and institutions in building more resilient and inclusive food systems. It also encouraged interdisciplinary collaboration within the university and with international partners, promoting a culture of awareness, empathy, and action toward a world free from hunger. Outstanding works were recognized with awards at the conclusion of the event, symbolizing Bahçeşehir University's ongoing commitment to nurturing creativity, social responsibility, and sustainable solutions for global food challenges.





Bahçeşehir University Students Promote Sustainable Consumption During Local Products Week





During the 2024–2025 academic year, as part of Local Products Week, Bahçeşehir University academics and students, with the support of CIFAL Istanbul and BAU Branding, organized an educational outreach activity at Levent Lütfi Banat Primary School, reflecting the University's commitment to extending sustainability education beyond its campus.

The activity featured interactive presentations on local products, brand awareness, and responsible consumption. Through shopping simulations and brand design workshops, primary school students gained practical insights into sustainable food systems, conscious consumer behaviour, and the importance of locally produced goods.

The initiative contributed to SDG 2 (Zero Hunger) by raising awareness of local food production, sustainable agriculture, and the role of local producers in maintaining resilient food systems. It also supported SDG 1 (No Poverty) by introducing students to the economic importance of local production and the role of sustainable agricultural livelihoods in supporting rural communities.

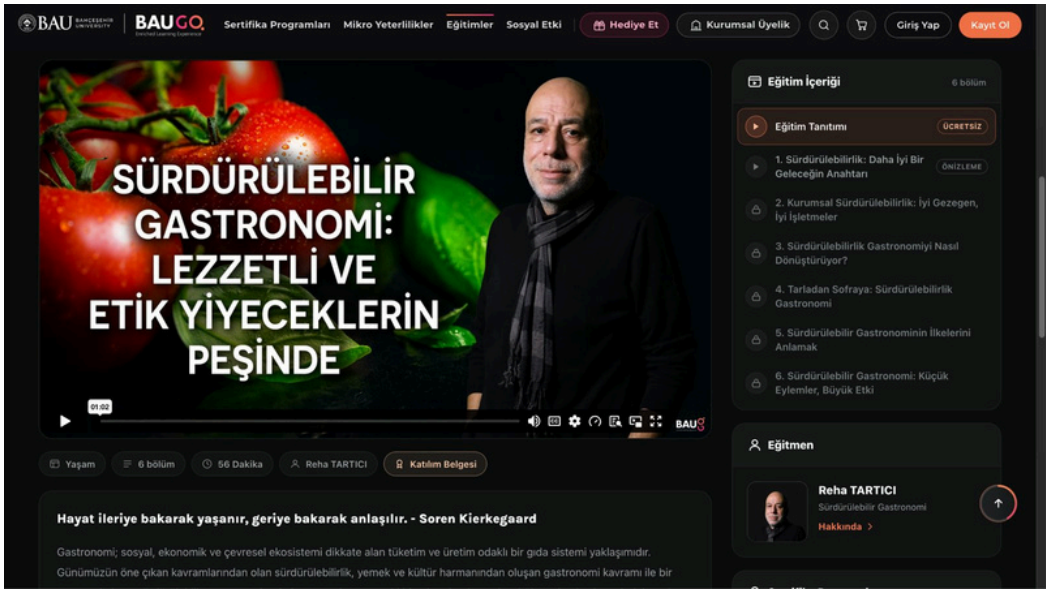
By connecting food literacy, local economic awareness, and responsible consumption, the activity further contributed to SDG 4 (Quality Education) and SDG 12 (Responsible Consumption and Production), encouraging younger generations to make informed and environmentally responsible choices.

Sustainable Gastronomy: In Pursuit of Delicious and Ethical Food Training Program

As part of the Environmental, Social, and Economic Sustainability Certificate Program offered through BAUGO, Bahçeşehir University continues to empower individuals with the knowledge and awareness to promote sustainable food systems and responsible consumption practices. The training session titled “Sustainable Gastronomy: In Pursuit of Delicious and Ethical Food,” led by Reha Tartıcı, a lecturer at Bahçeşehir University, explored how sustainability principles can reshape gastronomy by linking food production, consumption, and waste reduction.

The training examined how individuals and organizations can contribute to more resilient and equitable food systems by supporting local and regional producers, minimizing food waste, and adopting sustainable cooking and dining habits. Participants learned how small, mindful actions in food preparation and consumption can collectively create a significant positive impact on both the planet and society.

By bridging gastronomy with sustainability, the program encouraged reflection on the journey from farm to table, emphasizing the transformative role of education in how people understand, value, and interact with food. Through this learning experience, Bahçeşehir University reinforced its mission to cultivate a responsible food culture—aligning academic learning with real-world practices that contribute to ending hunger and promoting sustainable nutrition for all.



Bahçeşehir University's Participation in the 3rd Food Innovation Summit

During the 2024-2025 academic year, Bahçeşehir University Professor and Director of CIFAL Istanbul – UNITAR, Prof. Çisil Sohodol, delivered a keynote speech at the 3rd Food Innovation Summit, organized by the Center for Food, Beverage and Agricultural Policies (GİFT) at Boğaziçi University. Her talk, titled "Being a Food Brand in the Age of Crises: How Do We Survive?", addressed how innovative food brands can build trust and resilience in an era marked by misinformation and global uncertainty.

Focusing on nutrition, planetary health, and sustainable food economies, Prof. Sohodol emphasized that ensuring access to safe, nutritious, and reliable food requires not only technological innovation but also effective communication strategies that promote transparency and consumer awareness. Her contribution underlined how informed public dialogue can support the acceptance of innovative and sustainable food products, fostering a food ecosystem that values both health and sustainability.

The summit featured 75 distinguished speakers across 21 presentations and 15 panels, bringing together representatives from public institutions, the private sector, academia, embassies, industry associations, health professionals, media, and influencers. Discussions explored pathways to value-added food production, sustainable branding, and research-driven innovation, highlighting the critical role of cross-sector collaboration in achieving global food security.

Through its academic representation at this summit, Bahçeşehir University reaffirmed its commitment to advancing knowledge and innovation in sustainable food systems, aligning with the principles of Zero Hunger and contributing to the development of resilient, ethical, and inclusive food networks.



"A Bowl of Kindness" Volunteer Initiative with Çorbada Tuzun Olsun Association

Bahçeşehir University's BAU Gastronomy Student Club and BAU Bi'Soluk Student Club, in collaboration with the Çorbada Tuzun Olsun Association, regularly participate in monthly volunteer soup distribution activities aimed at supporting people experiencing homelessness in Istanbul. These activities reflect Bahçeşehir University's strong commitment to social solidarity, hunger alleviation, and community engagement, while also underscoring the value of sustainable and inclusive food systems.

During each session, BAU students take part in the preparation, packaging, and distribution of meals, ensuring that nutritious food reaches individuals in need. The initiative not only provides immediate relief to vulnerable populations but also fosters empathy, civic responsibility, and ethical awareness among participants—encouraging them to understand hunger as a social issue that requires long-term, collective solutions. By emphasizing the importance of equitable access to food as a fundamental human right, the project connects humanitarian action with the principles of sustainability and social justice.

Beyond its direct impact, the initiative serves as an experiential learning platform where students can translate theoretical knowledge into real-world practice. It strengthens the University's holistic approach to education, which integrates academic learning with social consciousness and community service. Through this engagement, Bahçeşehir University positions its students as active contributors to urban well-being and sustainable development,

empowering them to become agents of change in addressing the interconnected challenges of hunger, poverty, and inequality.

By combining hands-on volunteering with awareness-raising efforts, this collaboration highlights how collective action and youth engagement can help combat hunger and promote social reintegration. The project also serves as an example of how small-scale, community-based initiatives can contribute to the broader goals of Zero Hunger and inclusive, sustainable urban living.



AI-Integrated System Design for Addressing Water, Soil, and Energy Challenges in Olive Cultivation Across the Mediterranean Region



An international research and best practice development project titled “Designing an Integrated System Using Artificial Intelligence Technology to Address Water, Soil, and Energy Challenges in Olive Cultivation in Rural Areas of the Mediterranean Region” has been launched under the joint leadership of Assoc. Prof. Dr. Zeynep Tacer Caba from Bahçeşehir University (Türkiye) and Barbara Bracone, Director of Malta Wes Trade Ltd. (Malta). The collaboration brings together research expertise and practical experience from two Mediterranean countries to review different approaches to sustainable agriculture and jointly develop solutions to shared environmental and agricultural challenges.

Supported through the Bilateral Cooperation Support Program by the Scientific and Technological Research Council of Türkiye (TÜBİTAK) and the Malta Council for Science and Technology (MCST), the initiative aims to develop an AI-driven sustainable agricultural model that integrates climate-smart practices to optimize water, soil, and energy management in olive cultivation. The project specifically focuses on evaluating and implementing the best practices of both countries in addressing these challenges. By comparing agricultural practices, resource management approaches, and technological applications in Türkiye and Malta, the partners seek to identify effective methods that can inform the development of internationally transferable best practices for sustainable olive cultivation.

The project emphasizes mutual evaluation and transfer of best practices between Türkiye and Malta, drawing on the expertise and local innovations of both countries. Through comparative research, data-driven modeling, and applied field studies, the collaboration seeks to generate scalable solutions for sustainable rural development in the Mediterranean region. This combination of comparative research and applied innovation supports the joint assessment, adaptation, and development of best practices that respond to common challenges in water efficiency, soil management, and energy use. The resulting research-based approaches are intended to inform sustainable agricultural practices that may be applicable in other Mediterranean contexts facing similar environmental pressures.

This institutional framework is particularly significant because the research addresses areas of direct relevance to public policy, including sustainable agriculture, water resource management, climate adaptation, rural development, and technological innovation. By supporting collaborative research in these fields, TÜBİTAK and MCST facilitate the development of scientific knowledge and technological solutions relevant to national and regional sustainability priorities.

A central dimension of the collaboration is the comparative evaluation, exchange, and application of best practices from Türkiye and Malta. By bringing together expertise, technological approaches, and practical experiences from both countries, the project supports mutual learning and the development of innovative solutions that may be adapted to similar agricultural and environmental conditions across the Mediterranean region.

This cross-border exchange of experience and expertise demonstrates how international research cooperation can contribute to the identification, development, and potential dissemination of SDG-related best practices, strengthening the capacity of participating institutions to address common sustainability challenges. By combining artificial intelligence, environmental science, and cross-border policy dialogue, the project contributes directly to SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals). It also makes a significant contribution to SDG 15 (Life on Land) by promoting research and innovation aimed at improving soil health, preventing land degradation, and supporting the sustainable management of agricultural landscapes. Through AI-driven monitoring, comparative analysis of soil management practices, and the development of resource-efficient cultivation approaches, the project seeks to identify solutions that can reduce environmental pressures on Mediterranean agricultural ecosystems. These objectives are particularly relevant to SDG Target 15.3, which focuses on combating desertification and restoring degraded land and soil, including land affected by drought. Through the systematic comparison of national practices and the collaborative development of an AI-supported agricultural model, the project demonstrates how international research partnerships can review comparative approaches and develop shared best practices for tackling SDG-related challenges in sustainable food production, soil conservation, ecosystem protection, and resource management.



Bahçeşehir University Supports the International Conference on Consumer and Sensory Sciences





In the 2024-2025 academic year, as part of its commitment to advancing sustainable food systems and research-driven innovation, Bahçeşehir University supported the International Conference on Consumer and Sensory Sciences (CONSENSE 2024), held on October 2–3, 2024, at Istanbul Technical University's Süleyman Demirel Cultural Center.

The conference brought together national and international researchers, academics, and industry representatives to explore emerging insights in consumer behavior, sensory perception, and food innovation. Under the theme "Product Development through Sensory Sciences and Consumer Preferences: From Experience to Innovation," participants discussed how understanding sensory experiences can guide the development of healthier, more sustainable food products that meet evolving consumer expectations.

A key highlight of the event was the presentation by Prof. Luisa Torri from the University of Gastronomic Sciences (Pollenzo, Italy), who shared her research on consumer behavior toward sustainable alternative protein sources—a topic aligning closely with global efforts to enhance food security and reduce environmental impact.

Through its academic and institutional support for CONSENSE 2024, Bahçeşehir University reinforced its role in fostering interdisciplinary collaboration across food science, sustainability, and innovation, while contributing to the achievement of Sustainable Development Goal 2: Zero Hunger. The conference emphasized the growing importance of scientific research in shaping responsible consumption habits and developing resilient food systems for a sustainable future.

Bahçeşehir University Gastronomy Summit





In the 2024-2025 academic year, Bahçeşehir University hosted the first Gastronomy Summit, organized by the BAU Gastronomy Student Club, bringing together students, academics, chefs, and industry professionals to discuss the evolving role of gastronomy in sustainability, culture, and innovation. The summit aimed to highlight that gastronomy extends far beyond culinary practice — encompassing art, communication, sustainability, and entrepreneurship — while fostering dialogue on shaping the future of food systems.

Among the summits, one of the impactful sessions was "Sustainable Food Systems and Eco-Friendly Gastronomy," delivered by content creator and recipe developer Pınar Aluç. The session emphasized practical ways to minimize kitchen waste and promote responsible consumption through sustainable cooking practices. Demonstrating the preparation of natural vinegar made from lemon peels and water, Aluç showcased how small, mindful innovations can significantly reduce waste while contributing to more circular and resource-efficient food systems.

By engaging participants in a hands-on and reflective learning experience, the session underscored the potential of gastronomy as a driver of environmental awareness and behavioral change. Through this initiative, Bahçeşehir University reinforced its mission to integrate sustainability into culinary education and to inspire a new generation of gastronomy professionals to take an active role in building resilient, equitable, and sustainable food systems.

The initiative contributes to SDG 2 (Zero Hunger) by promoting sustainable food systems, resource-efficient food preparation, and practices that help reduce food waste. By encouraging future gastronomy professionals to adopt environmentally responsible approaches, the summit supports broader efforts to strengthen food security and the long-term sustainability of food production and consumption.

IV. Agriculture and Forestry Council: BAUSÜGAM Presentation on Innovative Technologies in Rural Areas



During the 2024–2025 academic year, as part of the IV Agriculture and Forestry Council organized by the Ministry of Agriculture and Forestry of the Republic of Türkiye, the "Workshop on Sustainable Living in Rural Areas" brought together experts, academics, and policymakers to discuss innovative approaches to sustainable rural development. The session titled "Resilience in Rural Areas" featured Assistant Professor Dr. Müge Kesici Baysoy, Deputy Director of the Bahçeşehir University Sustainable Food Systems Application and Research Center (BAU SÜGAM), who delivered a presentation on "Innovative Technologies in Rural Areas."

In her presentation, Dr. Baysoy highlighted the potential of technological innovation, digital transformation, and data-driven agricultural practices to improve agricultural productivity, strengthen rural livelihoods, and support the sustainable management of natural resources. The discussion emphasized that the future of rural development depends not only on increasing agricultural output but also on ensuring that farming systems remain environmentally sustainable, economically viable, and resilient to changing climatic and ecological conditions.

From an SDG 2 (Zero Hunger) perspective, the workshop addressed the importance of strengthening sustainable food production systems through technological innovation and more efficient agricultural practices. The application of digital technologies and data-driven approaches can support better-informed production decisions, more efficient resource allocation, and improved agricultural resilience. These considerations are particularly relevant to SDG Target 2.4, which emphasizes sustainable food production systems and resilient agricultural practices that maintain ecosystems, improve land and soil quality, and strengthen adaptation to environmental challenges.

The initiative also established a meaningful connection with SDG 15 (Life on Land) by highlighting the relationship between agricultural modernization and the responsible management of terrestrial ecosystems. Sustainable rural development requires protecting the

environmental foundations of agricultural production, including healthy soils, productive land, biodiversity, and natural resources. Technological innovation can contribute to these objectives by supporting more precise resource management, monitoring environmental conditions, and informing agricultural decisions that seek to reduce pressure on land and ecosystems.

In particular, the workshop's focus on resource conservation and sustainable agricultural practices aligns with the broader objectives of SDG Target 15.3, which addresses land degradation and the sustainable management of land resources. By connecting technological innovation with environmental responsibility, the discussions reinforced the importance of agricultural development strategies that consider both food production and the long-term health of terrestrial ecosystems.

Through the participation of BAU SÜGAM, Bahçeşehir University contributed academic expertise to a national policy dialogue on the future of rural areas, supporting the integration of scientific knowledge, technological innovation, and sustainability considerations into agricultural development strategies. The University's involvement demonstrated the importance of connecting research institutions with public policymakers to address the interconnected challenges of food security, rural resilience, and environmental sustainability.

The initiative contributes to SDG 2 (Zero Hunger) through its focus on sustainable agricultural production, technological innovation, and food system resilience, and SDG 15 (Life on Land) through its emphasis on responsible land use, natural resource conservation, and environmentally sustainable agricultural practices. It also supports SDG 9 (Industry, Innovation and Infrastructure) through agricultural technological innovation, SDG 13 (Climate Action) through climate-resilient rural development, and SDG 17 (Partnerships for the Goals) through academic participation in national policy dialogue.

By bringing together agricultural innovation, food security, rural development, and ecosystem sustainability, the workshop highlighted a central principle of sustainable development: the long-term capacity to produce food depends on the responsible management and protection of the land and natural resources that make agricultural production possible.



TÜBİTAK SME R&D Start-up Support Program: Development of Super Absorbent Polymers as Microfertilizer Carriers



In 2025, Bahçeşehir University continued to contribute to sustainable agricultural innovation through academic–industry collaboration. Under the 1507 TÜBİTAK SME R&D Start-up Support Program, the initiative titled "Development of Super Absorbent Polymers as Microfertilizer Carriers and Their Application in Agricultural Fields", co-founded by Dr. Merve Senem Seven, faculty member at the BAU Faculty of Engineering and Natural Sciences, was approved for an 18-month funding period.

The project aims to enhance soil productivity and optimize fertilizer efficiency through the development of environmentally friendly polymer-based carriers that enable controlled nutrient release. By improving the delivery and availability of nutrients to crops, the proposed technology seeks to reduce unnecessary fertilizer use, limit nutrient losses, and support more efficient agricultural production. This approach has the potential to reduce agricultural input waste and minimize soil and water contamination, addressing both the environmental and economic dimensions of food production.

From an SDG 2 (Zero Hunger) perspective, the project contributes to research and innovation aimed at improving agricultural productivity and supporting sustainable food production systems. Efficient nutrient management is essential for maintaining crop productivity while reducing dependence on excessive agricultural inputs. By developing technologies designed to improve fertilizer performance and soil productivity, the research directly supports the objectives of SDG Target 2.4, which promotes sustainable food production systems and resilient agricultural practices that improve land and soil quality.

The project is equally relevant to SDG 15 (Life on Land) through its focus on soil protection, responsible agricultural input management, and the reduction of potential environmental pressures associated with fertilizer use. Excessive or inefficient fertilizer application can contribute to soil degradation, nutrient imbalances, and contamination of surrounding ecosystems. The development of controlled-release fertilizer carriers offers a research-based approach to addressing these challenges by seeking to improve nutrient-use efficiency and reduce losses to the environment.

In particular, the initiative aligns with SDG Target 15.3, which addresses land degradation and the restoration of degraded land and soil. Although the project does not itself constitute a land restoration programme, its proposed technology has the potential to support healthier agricultural soils and more sustainable land management practices, contributing to the long-term protection of the natural resources on which food production depends.

Through this innovative research, Bahçeşehir University demonstrates its commitment to fostering scientific advancements that support sustainable agriculture, food security, soil health, and resource-efficient production systems. By connecting engineering research with agricultural and environmental challenges, the initiative illustrates how university–industry collaboration can contribute to the development of technologies that seek to improve food production while reducing pressure on terrestrial ecosystems.

The project therefore contributes to SDG 2 (Zero Hunger) through research on sustainable agricultural productivity and efficient nutrient management, and SDG 15 (Life on Land) through its focus on soil protection, reducing potential agricultural pollution, and supporting sustainable land use. It also relates to SDG 9 (Industry, Innovation and Infrastructure) through applied technological research and university–industry innovation partnerships. Ultimately, the project reflects an integrated approach to agricultural sustainability in which improving crop productivity and protecting the environmental foundations of agriculture are treated as complementary objectives.

Article: “Toward Food Waste Reduction at Universities”


Brought to you by Bahcesehir University

Scopus

Search Sources SciVal

Back

Toward food waste reduction at universities

Environment, Development and Sustainability · Article · 2024 · DOI: 10.1007/s10668-023-03300-2

Leal Filho, Walter[a,b]; Ribeiro, Priscilla Cristina Cabral[c]; Setti, Andréia Faraoni Freitas[d]; Azam, Fardous Mohammad Safiul[e]; Abubakar, Ismaila Rimi[f]; +5 authors

[e]Department of Natural Sciences, Manchester Metropolitan University, Chester Street, Manchester, M1 5GD, United Kingdom

Show all information

View PDF Full text Export Save to list

Document Impact Cited by (37) References (64) Similar documents

37 99th percentile Citations

8.89 FWCI

Abstract

Abstract
Author keywords
Indexed keywords
Funding details
Corresponding authors

Food waste is a serious problem, which undermines the achievement of many sustainable development goals (SDGs), despite their consideration in the agendas of many countries and companies. Notoriously, food waste (FW) causes different kinds of pollution that affect public health and social justice, while contributing to economic losses. This waste phenomenon has causes, drivers, and impacts that require rigorous assessments and effective approaches to mitigate its noxious effects, which are a serious concern for universities. Within these institutions, reducing food waste becomes a circular economy strategy, which is being utilized to assist in promoting sustainable development. However, there is a need for urgent attention to the specific causes of food waste and for consistent actions to reduce it, while boosting awareness in the campus community and triggering a change in students' eating habits. The purpose of this study is to analyze what can be done to reduce the levels of food waste at universities. To achieve this, a review of the theme's state of the art, which is inclusive of an overview of food waste production at universities around the world, is presented. The study employed a qualitative methodology where a comprehensive review of the literature and case studies analyses from selected world regions were considered. The data indicate that a broad variance exists in producing food waste among universities, from 0.12 to 50 kg/capita/day. More factors influence the problem (e.g., gender, age, season, consumer behavior), as well as strategies to solve and prevent it (e.g., composting, recycling, new designs of packages, trayless meals, education), and benefits leading toward food waste reductions from 13 to 50%. Also, four priority actions were identified to reduce food waste at universities, and these consist of planning and awareness, food preparation and storage, services, and direct waste reuse. With appropriate adaptations, these recommended actions should be deployed as means for reducing food waste at universities around the world, while expanding learning and education in sustainability. © The Author(s), under exclusive licence to Springer Nature B.V. 2023.

Published in the 2024-2025 academic year as a peer-reviewed article by Walter Leal Filho, Priscilla Cristina Cabral Ribeiro, Andréia Faraoni Freitas Setti, Fardous Mohammad Safiul Azam, Ismaila Rimi Abubakar, Julen Castillo-Apraiz, Unai Tamayo, Pınar Gökçin Özuyar, Kamila Frizzo, and Bruno Borsari (EID: 2-s2.0-85158171171).

Authors are affiliated with institutions including Manchester Metropolitan University (UK), Hamburg University of Applied Sciences (Germany), Fluminense Federal University (Brazil), University of Aveiro (Portugal), Neijiang Normal University (China), Imam Abdulrahman Bin Faisal University (Saudi Arabia), University of the Basque Country (Spain), Bahçeşehir University (Türkiye), Federal University of Santa Maria (Brazil), and Winona State University (USA).

This study explores the key drivers of food waste in higher-education institutions and evaluates mitigation strategies such as composting, packaging redesign, trayless dining, and awareness programs. It emphasizes campus-level circular economy practices and highlights how behavioral change, infrastructure design, and educational initiatives can collectively reduce waste generation and resource inefficiency.

The study contributes to SDG 14 (Life Below Water) by supporting actions that prevent food-waste leakage and nutrient pollution from reaching aquatic ecosystems, thereby protecting marine and freshwater quality. It also aligns with SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) by advancing reduced waste systems, sustainable consumption models and reducing the carbon footprint associated with food systems.

Sustaining Agricultural Landscapes and Rural Livelihoods: Economic and Social Challenges and Transformations in Türkiye's Hazelnut Production



Bahçeşehir University's Center for Economic and Social Research (BETAM) and Department of Sociology jointly organised the conference "Economic and Social Challenges and Transformations in Türkiye's Hazelnut Production" at the BAU Beşiktaş Campus. The programme presented findings from two complementary reports: Türkiye'de Fındık Sektörünün Geleceği ve Sorunları (The Future and Problems of Türkiye's Hazelnut Sector) and Giresun'un Kırsal Hafızasında Fındık Üretiminin Dönüşen Hikâyesi (The Changing Story of Hazelnut Production in Giresun's Rural Memory). Together, these studies connected sectoral economic analysis with producers lived experiences, providing a basis for stakeholder discussion on the future of hazelnut farming. By bringing together quantitative economic research and qualitative field-based evidence, the initiative offered a multidimensional perspective on the sustainability of agricultural production, the protection of productive land, and the resilience of rural food systems.

The first report, The Future and Problems of Türkiye's Hazelnut Sector, examined Türkiye's position in global hazelnut production and trade, the structural problems affecting the sector and possible future developments. Its analysis addressed comparatively low yields per unit of land and considered alternative scenarios for production and export performance. It also recognised climate change as a source of uncertainty for future cultivation.

From an SDG 2 (Zero Hunger) perspective, the report provided research-based evidence relevant to improving agricultural productivity, strengthening the economic sustainability of food production, and addressing structural challenges affecting producers. Its examination of yields, production capacity, and future sectoral scenarios contributes to understanding the conditions necessary for maintaining productive and resilient agricultural systems. These findings are particularly relevant to SDG Target 2.3, which addresses agricultural productivity and the incomes of small-scale food producers, and SDG Target 2.4, which emphasizes sustainable food production systems and resilient agricultural practices.

From an SDG 15: Life on Land perspective, these findings underline the importance of considering agricultural land productivity alongside environmental pressures and long-term production resilience. The report's consideration of climate-related uncertainty also reinforces the need to examine how changing environmental conditions may affect the long-term productive capacity of agricultural landscapes. This relationship is relevant to sustainable land management because the future of agricultural production depends not only on economic performance but also on maintaining the ecological conditions that support cultivation. Higher yields alone, however, do not establish environmentally sustainable land management; this requires attention to how productivity improvements are achieved.

The second report, The Changing Story of Hazelnut Production in Giresun's Rural Memory, used oral histories, expert interviews and field observations to examine agricultural transformation. It documented producers' experiences of soil degradation, cultivation practices and difficulties accessing trusted advice. Its analysis of socio-ecological memory explored how migration and ageing disrupt the transmission of local knowledge.

These findings establish a particularly important connection with SDG 15 (Life on Land), as they identify soil degradation and the loss of locally accumulated agricultural knowledge as challenges affecting the long-term sustainability of cultivated land. By documenting producers' experiences and the changing relationship between rural communities and their agricultural environments, the research contributes to understanding the social and ecological factors that influence land management practices.

The findings are especially relevant to SDG Target 15.3, which addresses land degradation and the restoration of degraded land and soil. While the research did not itself implement land restoration measures, its documentation of soil-related challenges and agricultural practices provides evidence that can inform discussions on preventing further degradation and improving the sustainability of agricultural land use.

The report also highlights an important relationship between SDG 2 and SDG 15: agricultural productivity and food-system resilience depend on the long-term health of soils and the availability of reliable knowledge about sustainable cultivation practices. The disruption of knowledge transfer between generations, together with limited access to trusted agricultural advice, can create additional challenges for producers seeking to maintain productive and environmentally sustainable farming systems.

The Giresun report also recommended locally appropriate agricultural information, stronger producer–expert exchange, transparent purchasing and producer-supportive pricing. These proposals relate to SDG 1: No Poverty by addressing rural economic vulnerability, and to SDG 2 through producer incomes and the continuity of agricultural production.

In particular, the recommendations concerning accessible agricultural information and stronger producer–expert relationships are relevant to SDG Target 2.3, which recognizes the importance of improving small-scale producers' access to knowledge and markets. They also support the broader objectives of SDG Target 2.4 by identifying conditions that can help producers adopt more informed and sustainable agricultural practices.

From an SDG 15 perspective, the emphasis on locally appropriate knowledge and agricultural advisory support is equally significant. Effective land management requires an understanding of local soil conditions, cultivation practices, and environmental pressures. Strengthening the exchange of knowledge between producers and specialists can therefore contribute to the development of approaches that better integrate agricultural productivity with soil protection and responsible land use.

By presenting the reports together and incorporating stakeholder evaluations, the conference supported dialogue on the interdependence of agricultural landscapes, production systems and rural livelihoods. The combined findings demonstrated that the sustainability of hazelnut production cannot be assessed through economic indicators alone; it also requires consideration of soil conditions, environmental change, agricultural knowledge, and the social structures that sustain farming communities.

The initiative contributes to SDG 2 (Zero Hunger) by generating and disseminating research relevant to agricultural productivity, producer livelihoods, sustainable cultivation, and the long-term resilience of food production systems. It also contributes to SDG 15 (Life on Land) by documenting soil degradation, examining socio-ecological transformations, and identifying knowledge-related challenges relevant to sustainable agricultural land management.

By connecting sectoral economic analysis with field-based evidence of environmental and social change, Bahçeşehir University contributed to a more integrated understanding of agricultural sustainability—one in which productive farming systems, healthy soils, and the continuity of rural knowledge are recognised as interconnected foundations of long-term food security and responsible land stewardship.

9:30–9:45	**Karşılama, çay/kahve ikramı** **Açılış konuşması**
9:45–10:30	**"Fındık Sektöründe Yapısal Sorunlar ve Sektörün Geleceği** **Seyfettin Gürsel, Ozan Bakış** Bahçeşehir Üniversitesi Ekonomik ve Toplumsal Araştırmalar Merkezi (Betam)
10:30–11:15	**"Giresun'un Kırsal Hafızasında Fındık Üretiminin Dönüşümü"** **İlhan Zeynep Karakılıç, Pınar Melis Yelsalı Parmaksız, Ayşe Yılmaz** Bahçeşehir Üniversitesi Sosyoloji Bölümü
11:15–11:30	**Soru & Cevap**
11:30–11:45	**Çay/kahve arası**
11:45–12:30	**Değerlendirme:** **Levent Karlıbel** Ordu Ticaret ve Sanayi Odası Başkanı **Selvinaz Altunbaş Aydın** Üretici **Musa Sabırlı** Üretici

Bahcesehir University Policy Forum and Outcome Report on Artificial Intelligence and Technology in Hazelnut Agriculture with NGOs





Held in Giresun during the 2024–2025 academic year, under the coordination of the Ministry of Agriculture and Forestry and the Giresun Governorship, the National Policy Forum on Artificial Intelligence and Technology in Hazelnut Farming brought together Bahçeşehir University (BAU), Giresun University, the Eastern Black Sea Development Agency (DOKA), and representatives from public institutions, academia, and the private sector.

The forum focused on developing a national roadmap for integrating artificial intelligence and digital technologies into agricultural production, particularly hazelnut farming, an important source of income and employment for rural communities in Türkiye. Bahçeşehir University contributed its expertise in AI applications, sustainable food systems, and policy innovation to discussions on improving agricultural productivity, resource efficiency, and long-term resilience.

By bringing together agricultural policymakers, researchers, technology specialists, and industry representatives, the forum provided a platform for examining how emerging technologies can contribute to the transformation of traditional agricultural production systems. Its policy-oriented approach connected technological innovation with broader priorities concerning food security, sustainable land use, environmental protection, and rural economic development.

Advancing Food Security and Sustainable Agricultural Production (SDG 2)

From an SDG 2 (Zero Hunger) perspective, the forum addressed the role of technological innovation in strengthening agricultural productivity, improving the efficiency of food production, and supporting more resilient agricultural systems. Artificial intelligence and data-driven agricultural technologies offer opportunities to improve production planning, monitor crop conditions, optimize agricultural inputs, and support more informed decisions throughout the production process.

In the context of hazelnut farming, these approaches are particularly relevant to maintaining agricultural productivity while responding to environmental pressures, resource constraints, and changing climatic conditions. By encouraging discussion of technology-driven agricultural strategies, the forum supported the development of policy approaches relevant to sustainable food production and long-term food system resilience.

The initiative aligns particularly with SDG Target 2.4, which emphasizes sustainable food production systems and resilient agricultural practices capable of maintaining ecosystems, improving land and soil quality, and adapting to environmental challenges.

Promoting Agricultural Digital Transformation and Innovation (SDG 9)

The forum also contributed to SDG 9 (Industry, Innovation and Infrastructure) by placing artificial intelligence, digital technologies, and research-based innovation at the centre of agricultural modernization. Its emphasis on developing a national roadmap highlighted the importance of connecting scientific expertise, technological capabilities, and institutional cooperation to support innovation in a strategically important agricultural sector.

Through its contribution to discussions on AI applications and digital agricultural solutions, BAU supported the exchange of knowledge relevant to modernizing production processes, strengthening technological capabilities, and encouraging the adoption of innovative approaches within the agricultural value chain.

This engagement is particularly relevant to SDG Target 9.5, which focuses on strengthening scientific research and upgrading technological capabilities, and to broader efforts to promote innovation-driven and sustainable industrial development.

Supporting Sustainable Land Use and Terrestrial Ecosystems (SDG 15)

From an SDG 15 (Life on Land) perspective, the forum highlighted the potential relationship between agricultural digitalization and more responsible management of land and natural resources. Data-driven agricultural approaches can support more precise monitoring of environmental conditions, more efficient use of agricultural inputs, and better-informed decisions concerning soil and land management.

For agricultural regions such as Giresun, where farming activities are closely connected to the surrounding natural environment, integrating environmental considerations into agricultural modernization is particularly important. The forum's focus on resource efficiency and sustainable agricultural practices provided a policy-relevant context for considering how technological innovation can help reduce pressures on agricultural ecosystems while maintaining productive land use.

These discussions are relevant to SDG Target 15.3, which addresses land degradation, and to the broader objectives of protecting terrestrial ecosystems and promoting sustainable land management. The forum contributed to these objectives through policy dialogue and knowledge exchange rather than through direct ecosystem restoration or conservation activities.

Strengthening Rural Livelihoods and Economic Resilience (SDG 1)

From an SDG 1 perspective, the initiative addressed the economic vulnerability of agricultural producers and rural households, highlighting the potential of technological innovation to reduce production costs, improve yields, strengthen farmers' competitiveness, and support more stable agricultural incomes. By encouraging evidence-based agricultural policies and wider access to technological solutions, the forum promoted approaches that could help small-scale producers overcome structural economic challenges and strengthen sustainable rural livelihoods.

The relationship between agricultural innovation and rural economic resilience is especially significant in regions where household incomes depend heavily on agricultural production. By considering how digital transformation can improve productivity and resource efficiency, the forum supported policy discussions relevant to the long-term economic sustainability of farming communities.

Integrating Research, Policy and Multi-Stakeholder Collaboration

Beyond its individual thematic contributions, the forum demonstrated the importance of integrated approaches to agricultural transformation. Improving productivity, strengthening technological innovation, supporting rural livelihoods, and protecting the natural resources essential to farming are interconnected objectives that require coordinated action across public institutions, universities, development agencies, and the private sector.

Through its participation, Bahçeşehir University contributed academic and technological expertise to a multi-stakeholder policy dialogue aimed at identifying priorities for the future of Türkiye's agricultural sector. The forum provided an opportunity to connect scientific knowledge with national and regional development considerations, supporting evidence-informed approaches to agricultural modernization and sustainability.

The initiative therefore contributes to multiple interconnected Sustainable Development Goals: SDG 2 (Zero Hunger) through sustainable agricultural production, food security, and agricultural resilience; SDG 9 (Industry, Innovation and Infrastructure) through artificial intelligence, technological innovation, and agricultural digitalization; SDG 15 (Life on Land) through policy discussions relevant to responsible land management, resource efficiency, and the sustainability of agricultural ecosystems; SDG 1 (No Poverty) through its focus on strengthening rural livelihoods and agricultural income opportunities; SDG 13 (Climate Action) through climate-responsive agricultural approaches; and SDG 17 (Partnerships for the Goals) through cooperation among government institutions, academia, development agencies, and the private sector.

By connecting technological innovation with food security, sustainable land use, and rural development, the National Policy Forum demonstrated how evidence-informed agricultural policies can address the interconnected economic, technological, and environmental challenges facing contemporary food production systems.



Production of Superabsorbent Materials for Soil Conditioning: Supporting Resource-Efficient Agricultural Production



The project "Production of Superabsorbent Materials for Soil Conditioning," led by Assist. Prof. Merve Senem Seven from Bahçeşehir University's Faculty of Engineering and Natural Sciences, was selected for support under KOSGEB's SME Technological Product Investment Support Programme (TEKNOYATIRIM). Announced on 3 October 2025, the project has a budget of TRY 14,743,912 and will receive support for 18 months. It focuses on producing superabsorbent materials for soil conditioning, connecting materials development with potential applications in agricultural resource management. By addressing the capacity of agricultural soils to retain moisture, the project explores a technological approach to one of the fundamental challenges of sustainable agriculture: maintaining productive growing conditions while using limited water resources efficiently.

The project supports SDG 12: Responsible Consumption and Production through its focus on materials that could enable more efficient use of water in agricultural production. The water absorption and retention properties of superabsorbent materials provide a basis for exploring how soil moisture can be managed more effectively. Developing these materials for soil conditioning offers a potential pathway towards more resource-efficient agricultural practices, with their performance and resulting benefits to be assessed through the project.

This approach is particularly relevant to SDG Target 12.2, which promotes the sustainable management and efficient use of natural resources. Water is a critical agricultural resource, and technologies designed to improve moisture retention in soil may help reduce unnecessary water losses and support more efficient irrigation practices. By investigating materials that could improve the effectiveness of water use in agricultural soils, the project contributes to

research and technological development aimed at reducing resource intensity in food production.

The initiative also reflects the broader principles of responsible production by exploring how material innovation can contribute to agricultural processes that make more effective use of available natural resources. Its potential contribution lies in developing and evaluating a technological solution rather than claiming water savings or environmental improvements before these have been demonstrated.

The project also aligns with SDG 2: Zero Hunger, particularly through its relevance to sustainable agriculture. Soil moisture availability is an important consideration in maintaining agricultural production, and materials designed to retain water could help support favourable growing conditions for crops. By developing superabsorbent materials for this purpose, the project contributes to technological approaches that may support agricultural productivity and more resilient production systems.

From an SDG 2 perspective, the project addresses the relationship between soil moisture management, agricultural productivity, and the resilience of food production systems. Inadequate water availability can limit crop development and create additional challenges for agricultural producers, particularly under conditions of water scarcity and climatic variability. Technologies capable of retaining water within agricultural soils may offer opportunities to maintain more favourable growing conditions and support the continuity of agricultural production.

The research is particularly relevant to SDG Target 2.4, which calls for sustainable food production systems and resilient agricultural practices that strengthen adaptation to drought and other environmental challenges while progressively improving land and soil quality. By developing materials intended to improve soil moisture retention, the project contributes to technological research that could support more resilient and resource-efficient farming practices.

The project also has a meaningful connection with SDG 15: Life on Land through its focus on soil conditioning and the sustainable management of agricultural land. Soil moisture is an important component of soil functioning and agricultural land productivity. Technologies designed to improve water retention may help address certain moisture-related limitations affecting cultivated soils and support approaches to maintaining productive agricultural land under changing environmental conditions.

This connection is particularly relevant to SDG Target 15.3, which addresses land degradation and the restoration of degraded land and soil. Although the project does not constitute a land restoration initiative, its research into soil-conditioning materials is relevant to the development of practices that may support sustainable land management and help maintain

the productive capacity of agricultural soils. The actual environmental performance of the materials, including their effects on soil properties and long-term ecological compatibility, will need to be established through testing and evaluation.

Bahçeşehir University's contribution brings academic expertise in materials development into an applied project addressing agricultural needs. By connecting engineering research with soil management, agricultural water efficiency, and sustainable production, the initiative illustrates the potential of interdisciplinary innovation to address interconnected food-system and environmental challenges.

The project contributes to SDG 2 (Zero Hunger) through research relevant to agricultural resilience, soil moisture management, and sustainable food production; SDG 12 (Responsible Consumption and Production) through the development of materials intended to improve the efficiency of water use in agriculture; and SDG 15 (Life on Land) through its relevance to soil conditioning, sustainable agricultural land management, and the long-term maintenance of productive soils.

By exploring how advanced materials can improve the management of water within agricultural soils, the project demonstrates Bahçeşehir University's commitment to developing research-based solutions that bring together food security, responsible resource consumption, and the sustainable use of land.

Herbal Dietary Supplements and Their Health Effects: Postgraduate Seminar Series





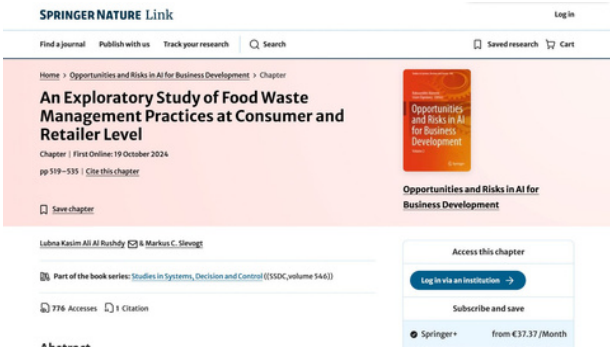
Organized by Bahçeşehir University's Department of Nutrition and Dietetics, the "Herbal Dietary Supplements and Their Health Effects" Postgraduate Seminar Series provided a structured academic platform where 19 postgraduate dietitians presented literature-based reviews of 15 herbal and bioactive supplements to an audience of 85 participants. The presentations examined the potential health effects, appropriate uses, limitations, and safety considerations associated with herbal dietary supplements.

The programme also explored evidence-based practices for using naturally available plant-based products and dietary components to support metabolic functions, while emphasizing that “natural” does not automatically mean safe or clinically effective. Participants were encouraged to evaluate scientific evidence, appropriate dosages, possible side effects, and interactions with medications before incorporating herbal products into nutritional or healthcare practices. This approach promoted informed decision-making and discouraged unsupported health claims or unsafe self-medication.

The seminar strengthened postgraduate students’ research literacy, critical appraisal, scientific communication, and professional competencies, preparing them to translate academic evidence into safe clinical and public-health practice. It was offered free of charge and open to the public online without registration, while BAU members could participate either in person or remotely. This accessible format extended the programme beyond the university, with 26 of the 85 participants attending as external guests from the wider professional community.

The initiative contributed directly to SDG 3: Good Health and Well-Being by promoting scientifically informed and safe approaches to nutrition, metabolic health, and supplement use. It supported SDG 4: Quality Education through postgraduate skills development and free learning opportunities accessible beyond the university. The seminar also related to SDG 2: Zero Hunger, particularly its nutrition dimension, by strengthening knowledge of diverse plant-based dietary resources and their responsible use in supporting healthy and nutritionally adequate diets. Furthermore, it contributed to SDG 12: Responsible Consumption and Production by encouraging participants to approach herbal products through evidence-based, conscious, and responsible consumption practices, while considering appropriate use, product safety, sustainable sourcing, and the prevention of unnecessary or excessive supplement consumption.

An Exploratory Study of Food Waste Management Practices at Consumer and Retailer Level



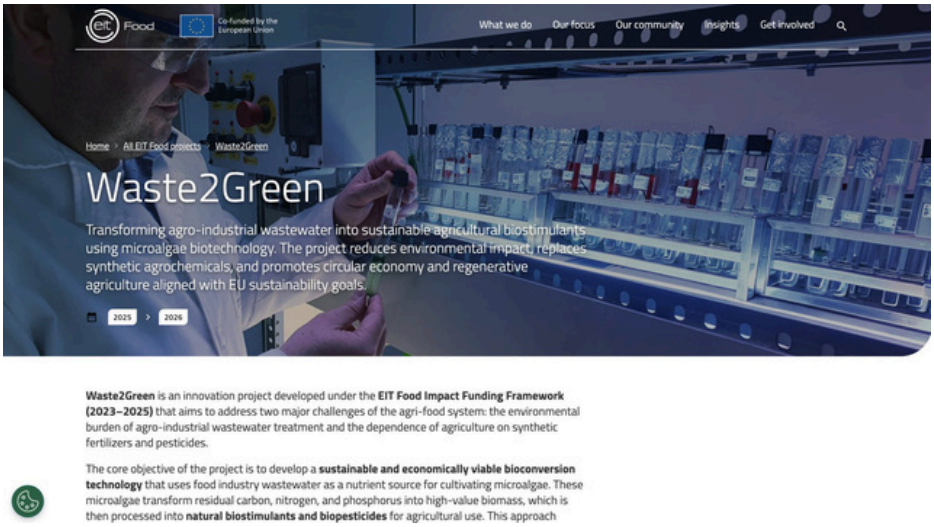
The book chapter "An Exploratory Study of Food Waste Management Practices at Consumer and Retailer Level," by Lubna Kasim Ali Al Rushdy and Markus C. Slevogt of Bahçeşehir University, examines food waste through consumer behaviour and retail management practices in Türkiye. Combining an online survey of 247 adult consumers with supermarket observations and interviews with planning and store managers, the research explores how awareness, personal responsibility and operational practices influence food waste prevention.

At the consumer level, the findings indicate that insufficient awareness and a limited sense of responsibility towards food waste negatively affect intentions to reduce it. The study also identifies age and education as factors influencing these intentions. These findings support SDG 12: Responsible Consumption and Production by highlighting the importance of consumer education and awareness in encouraging more responsible food consumption. Understanding these behavioural factors can help inform initiatives that encourage individuals to recognise avoidable waste and take greater responsibility for the food they purchase and use.

At the retail level, the research examines fresh fruit and vegetable waste over a three-month observation period, identifying grapes, tomatoes, potatoes, peaches and cucumbers as the categories with the highest recorded waste. Within the retail setting studied, the findings suggest that recognition of food waste did not translate into sufficient urgency about its economic and environmental consequences. This points to the importance of connecting awareness with operational responses that prioritise waste prevention and more sustainable management of unsold food.

The chapter contributes to SDG 12: Responsible Consumption and Production by bringing consumer responsibility and retailer practices into a shared analysis of avoidable food waste. The chapter also supports SDG 2: Zero Hunger by contributing knowledge on food waste prevention as a component of more sustainable food systems. Its examination of avoidable losses at consumer and retail levels highlights opportunities to make better use of food already produced. Although the study does not directly assess food access or redistribution, its findings can inform efforts to preserve food resources and strengthen efficiency across the food system. Its examination of the economic and financial implications of fresh produce losses strengthens the case for treating food waste as a resource-management concern across the consumption and distribution stages. Through this research, Bahçeşehir University contributes evidence that can inform consumer awareness initiatives and improvements in retail food waste management.

Waste2Green: Converting Agricultural and Industrial Waste into Green Solutions through Microalgae Biotechnology



Bahçeşehir University participates in Waste2Green, an international research and innovation project supported through the EIT Food Impact Funding Framework, bringing together expertise in biotechnology, sustainable agriculture, wastewater management and circular resource use. The project aims to transform agro-industrial wastewater from an environmental management challenge into a valuable resource for developing innovative agricultural products, demonstrating the potential of biotechnology to contribute to more sustainable and resource-efficient food systems.

Bahçeşehir University's contribution is led by Dr. Alper Devrim Özkan, from the Department of Pharmaceutical Microbiology, Faculty of Pharmacy. Within the international consortium, BAU is responsible for characterising microalgal biomass and evaluating its potential applications as a biostimulant and biopesticide, including laboratory investigations of plant growth and protection against plant diseases. These activities involve algal characterisation, sequencing and biological activity assessments using model crops, contributing scientific evidence on the potential effectiveness of microalgae-derived agricultural products.

By connecting wastewater nutrient recovery with the development of biological agricultural inputs, Waste2Green addresses two interconnected sustainability challenges: reducing the environmental pressures associated with agro-industrial waste and developing alternatives that could support productive, resilient and environmentally responsible agriculture. BAU's participation brings pharmaceutical microbiology expertise into an interdisciplinary research framework linking environmental biotechnology, agricultural innovation and the circular bioeconomy.

Waste2Green contributes to SDG 2 (Zero Hunger) through research into innovative biological products designed to support sustainable agricultural productivity. Microalgae-derived

biostimulants and biopesticides offer potential alternatives or complements to conventional agricultural inputs, with applications in improving plant growth, supporting crop resilience and protecting plants against diseases.

The development of these products is particularly relevant to the long-term sustainability of food production, as agricultural systems face increasing pressure to maintain productivity while reducing their environmental impacts. By investigating the biological properties and potential agricultural applications of microalgal biomass, the project contributes to the scientific development of approaches that may support more efficient and resilient crop production.

BAU's laboratory research plays an important role in this process by assessing whether microalgae-derived materials demonstrate biological activity relevant to plant development and crop protection. These investigations provide an evidence base for determining the potential of the resulting products to contribute to sustainable agricultural practices.

The initiative is particularly aligned with SDG Target 2.4, which promotes sustainable food production systems and resilient agricultural practices that maintain ecosystems and progressively improve land and soil quality. Waste2Green explores how biological innovation and resource recovery can be integrated into agricultural production, supporting research towards food systems that are both productive and environmentally sustainable.

Waste2Green also addresses SDG 6 (Clean Water and Sanitation) by exploring innovative approaches to agro-industrial wastewater treatment and resource recovery.

The project uses wastewater as a cultivation medium for microalgae, which can assimilate residual nutrients, including nitrogen and phosphorus, during biomass production. This process creates an opportunity to recover valuable nutrients from wastewater streams while producing biomass with potential agricultural applications.

By treating wastewater as a resource rather than solely as a waste product, the project contributes to the development of more circular approaches to water management. Its research is relevant to reducing nutrient pollution, improving the efficiency of wastewater treatment processes and exploring opportunities to decrease the demand for additional resources in biomass cultivation.

These objectives are particularly relevant to SDG Target 6.3, which calls for improving water quality by reducing pollution and increasing wastewater treatment, recycling and safe reuse.

The project's contribution lies in developing and validating biological treatment and recovery technologies, with their actual effectiveness in reducing wastewater pollution to be established through technical assessment.

SDG 12 (Responsible Consumption and Production) is one of the project's central sustainability dimensions. Waste2Green applies circular-economy principles by seeking to convert waste streams generated through agro-industrial activities into valuable biological resources that can be reintegrated into agricultural production.

Rather than treating wastewater nutrients as materials to be discarded, the project explores their recovery through microalgal cultivation. The resulting biomass is then investigated for its potential to serve as a source of biostimulants and biopesticides, creating a research pathway through which resources originating in the food production system may be transformed into inputs for future agricultural use.

This approach illustrates the potential of circular bioeconomy models to reduce resource losses, recover value from agricultural and industrial by-products, and support more efficient production systems.

The project's planned modular, mobile processing system is intended to enable wastewater valorisation closer to its source, while the proposed Digital Product Passport aims to strengthen traceability and transparency concerning the resulting products.

These features are relevant to SDG Target 12.2, which promotes sustainable management and efficient use of natural resources, and SDG Target 12.5, which focuses on reducing waste generation through prevention, reduction, recycling and reuse.

By integrating waste recovery, biotechnology, product development and traceability, Waste2Green demonstrates how innovation can help redesign production processes around resource efficiency and circularity.

Waste2Green contributes to research relevant to SDG 13 (Climate Action) by exploring technologies with the potential to reduce the environmental footprint of agricultural inputs and wastewater processing.

Its approach combines biological nutrient recovery with the development of agricultural products that may reduce dependence on certain conventional synthetic inputs. By investigating resource-efficient biological processes and alternative agricultural products, the project supports the development of technologies relevant to climate-responsive and environmentally sustainable agri-food systems.

The proposed modular processing approach may also create opportunities to examine resource use and processing efficiency at the source of wastewater generation.

However, potential reductions in energy consumption or greenhouse gas emissions require comparative lifecycle assessment and technical validation. The project's contribution to SDG

13 therefore lies in advancing research into potentially lower-impact production pathways rather than demonstrating quantified emissions reductions at this stage.

Waste2Green has an indirect but relevant connection to SDG 14 (Life Below Water) through its focus on recovering nutrients from agro-industrial wastewater and developing biological agricultural products.

Excessive nutrient discharge into aquatic environments can contribute to eutrophication and the deterioration of water quality. By investigating microalgal processes capable of recovering nitrogen and phosphorus from wastewater, the project explores a potential pathway for reducing nutrient loads before treated water reaches receiving environments.

Similarly, the development of effective biological alternatives to certain conventional agricultural inputs may offer opportunities to reduce pollution pressures associated with agricultural runoff.

These research directions are relevant to SDG Target 14.1, which addresses marine pollution, including nutrient pollution originating from land-based activities.

The project's relevance to SDG 14 is therefore preventive and indirect, arising from its potential contribution to reducing land-based pollution pressures rather than from direct marine conservation activities.

Waste2Green also establishes a meaningful connection with SDG 15 (Life on Land) through the development of biological agricultural products intended to support crop productivity while reducing environmental pressures associated with conventional agricultural practices.

The project's investigation of microalgae-derived biostimulants and biopesticides is particularly relevant to the relationship between agricultural production and the long-term sustainability of terrestrial ecosystems. Developing effective biological inputs could offer opportunities to reduce reliance on certain synthetic agricultural chemicals, support more environmentally responsible crop management and limit some of the pressures agricultural activities place on soils and surrounding ecosystems.

BAU's contribution is particularly significant in this context. Through the characterisation of algal biomass and laboratory evaluation of its potential effects on plant growth and disease protection, the University contributes to establishing the scientific foundations for agricultural technologies that seek to balance crop productivity with environmental sustainability.

The project is relevant to SDG Target 15.3, which addresses land degradation and the sustainable management of land and soil. Its research also supports broader consideration of how agricultural innovation can contribute to maintaining the ecological conditions necessary

for long-term food production.

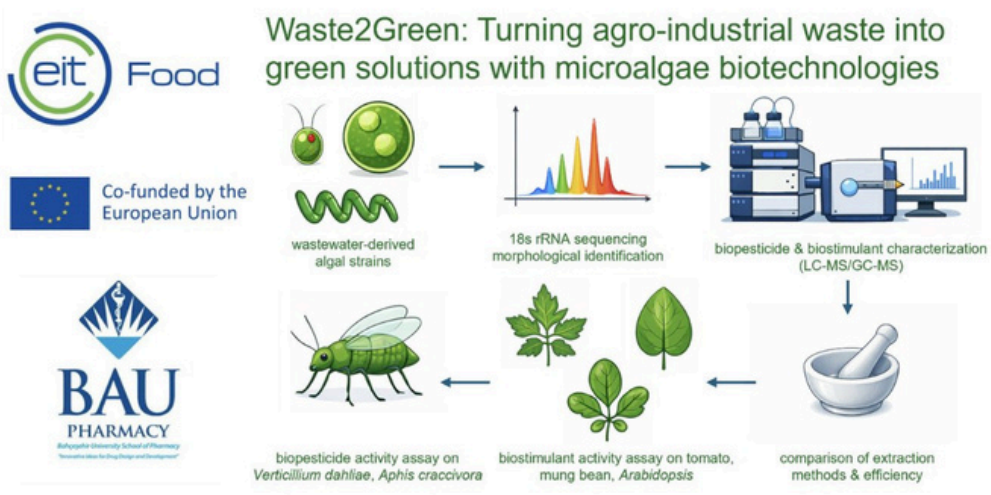
Importantly, the project does not itself demonstrate soil restoration, biodiversity conservation or reduced ecosystem damage. Such outcomes would require subsequent field trials, environmental safety assessments and evidence of the products' performance under agricultural conditions. Its contribution to SDG 15 is therefore best understood as applied research supporting the development of potentially more sustainable agricultural land management practices.

Through its participation in Waste2Green, Bahçeşehir University demonstrates how interdisciplinary scientific research and international collaboration can contribute to addressing interconnected challenges across agriculture, water management and environmental sustainability.

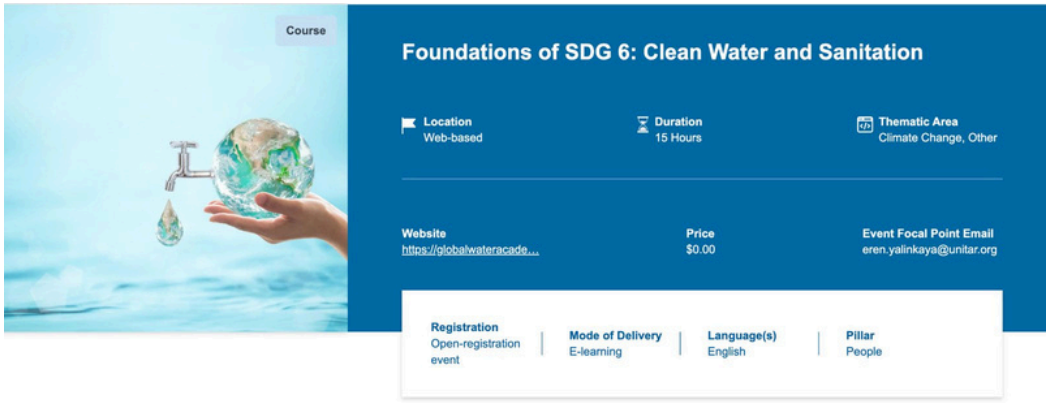
The project brings together SDG 2 (Zero Hunger) through the development of biological inputs for sustainable agricultural production; SDG 6 (Clean Water and Sanitation) through wastewater treatment research and nutrient recovery; SDG 12 (Responsible Consumption and Production) through circular resource management and waste valorisation; and SDG 15 (Life on Land) through research into environmentally responsible agricultural inputs and sustainable land management.

It also contributes to research relevant to SDG 13 (Climate Action) through potentially lower-impact agricultural technologies and SDG 14 (Life Below Water) through approaches that may reduce nutrient pollution reaching aquatic environments.

By transforming the relationship between agricultural waste and agricultural production, Waste2Green represents an innovative approach to sustainability in which wastewater becomes a potential source of valuable biological resources. Bahçeşehir University's research contribution helps advance the scientific assessment of this approach, supporting the development of agricultural technologies that seek to improve productivity, recover resources and reduce environmental pressures across the food system.



Expanding Water Literacy and SDG 6 Education through Bahçeşehir University, CIFAL Istanbul and UNITAR Global Water Academy



Bahçeşehir University has integrated UNITAR's Foundations of SDG 6: Clean Water and Sanitation into its learning opportunities through CIFAL Istanbul, making the course available free of charge to BAU students, academicians and administrative staff. Developed by the United Nations Institute for Training and Research (UNITAR) Global Water Academy, the English-language, web-based course is designed for self-paced study and takes approximately 15 hours to complete. Its availability gives students an opportunity to explore water and sanitation challenges through an international learning programme.

The initiative represents an important step in strengthening institutional capacity for water-related sustainability education. By facilitating access to a specialised United Nations training programme, Bahçeşehir University connects its academic community with internationally developed knowledge on water security, sanitation, sustainable water management and the protection of water-related ecosystems. Rather than approaching water solely as an environmental issue, the programme encourages an integrated understanding of its significance for human health, food production, social equality, climate resilience and sustainable development.

Through case studies, readings, multimedia materials and exercises, participants can connect these topics to practical approaches for managing water resources and addressing unequal access. The learning experience is designed to strengthen participants' ability to recognise water-related sustainability challenges, understand relevant policy and management approaches, and consider how these challenges intersect with their academic disciplines and future professional responsibilities.

The initiative also establishes an important connection with SDG 2 (Zero Hunger), as sustainable agricultural production and food security depend on the availability and responsible management of water resources. The course's coverage of water-use efficiency, water scarcity and integrated resource management provides knowledge relevant to agricultural resilience, sustainable irrigation and the long-term sustainability of food production systems. These themes connect particularly with SDG Target 2.4, which promotes sustainable and resilient agricultural practices.

Through this initiative, Bahçeşehir University demonstrates its commitment to making internationally developed sustainability education accessible to a broader learning community. By combining UNITAR Global Water Academy's specialised educational resources, CIFAL Istanbul's international training network and BAU's university-wide outreach capacity, the programme creates an institutional framework for advancing water literacy and awareness of sustainable water management.

The certificate below confirms that Ergün Akgün, an academic at Bahçeşehir University, successfully completed UNITAR's "Foundations of SDG 6: Clean Water and Sanitation" course. Although the certificate does not display the BAU logo, the recipient's affiliation demonstrates participation from the university's academic community.

https://event.unitar.org/full-catalog/foundations-sdg-6-clean-water-and-sanitation-0

https://event.unitar.org/full-catalog/foundations-sdg-6-clean-water-and-sanitation-0


unitar
United Nations Institute for Training and Research

CERTIFICATE OF COMPLETION

Ergün AKGÜN

has successfully completed the

Foundations of SDG 6: Clean Water and Sanitation

Certification date: October 23, 2026

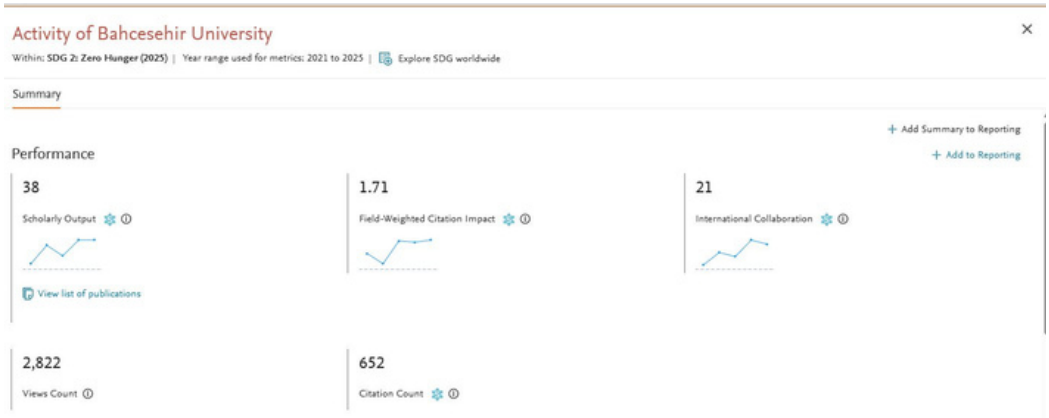
Michelle Gyles-McDonnough
UN Assistant Secretary-General,
Executive Director, UNITAR

Bahçeşehir University's Research Performance in SDG 2: Zero Hunger (2021–2025)

According to SciVal data, Bahçeşehir University produced 38 publications classified under SDG 2: Zero Hunger during the 2021–2025 period. These publications achieved a Field-Weighted Citation Impact (FWCI) of 1.71, indicating citation performance 71% above the global average for comparable publications, adjusted for subject field, publication year and publication type.

The research output received 652 citations and recorded 2,822 views, reflecting its visibility and uptake within the academic community. These indicators highlight BAU's contribution to the scientific knowledge base relevant to food security, nutrition and sustainable agriculture, providing resources for further research and informed discussion of challenges associated with ending hunger.

The figure below presents SciVal's overview of Bahçeşehir University's research performance under SDG 2 for the 2021–2025 period, including scholarly output, citation impact, international collaboration and publication views.





BAU BAHÇEŞEHİR UNIVERSITY