

# SDG 13: Climate Action



*The*  
BRITISH UNIVERSITY  
IN EGYPT

**2023-  
2024**

*Key Strategic Initiatives  
of The British University in  
Egypt*



# TABLE OF CONTENTS



The  
BRITISH UNIVERSITY  
IN EGYPT

---

<b>01</b>	<i>Introduction</i>	
<b>02</b>	<i>President's Statement</i>	2
		3–4
<b>03</b>	<i>Key Strategic Pillars</i>	5
<b>04</b>	<i>The University's Commitment to the SDGs and National Development Agenda</i>	
<b>04a</b>	<i>The Road Towards Sustainability</i>	7–15
<b>04b</b>	<i>Student and Staff Involvement in Fostering Sustainable Development</i>	16–25
<b>04c</b>	<i>Action-Oriented Research</i>	26–33



**Teaching and Learning Research**



**Research**



**Community Service**

# 01 Introduction

The British University in Egypt places sustainability at the core of its mission as a leading institution committed to academic excellence, societal impact, and global responsibility. In alignment with international frameworks, including the United Nations Sustainable Development Goals (SDGs), the University has strengthened its strategic approach to advancing environmental stewardship, social well-being, and ethical governance across all faculties and disciplines.

The British University in Egypt continues to foster a campus culture where sustainability is embedded in its three key strategic pillars **teaching and Learning, research, and community engagement**. Through targeted programmes, interdisciplinary initiatives, and student-led activities, the University actively contributes to addressing national and global sustainability challenges. These efforts aim to develop graduates equipped with the knowledge, skills, and values required to drive sustainable development, while simultaneously providing policy-relevant insights that support governmental and societal decision-making.

Environmental quality, climate action, and the reduction of ecological impacts remain key pillars of BUE's sustainability agenda. By integrating innovative solutions, evidence-based research, and sector specific partnerships, the University reinforces its commitment to measurable impact and continuous improvement.

This report presents the University's ongoing progress, highlights significant achievements during the past year, and demonstrates BUE's contribution to sustainable development in Egypt and beyond.



# 02

# President's Statement



Universities have a societal responsibility to adopt and champion SDGs as basis of a ‘good public institution’ anchored in society and by giving visibility to examples where this action has been taken. Universities have a role to serve the societies they live in, for us – *our new strategy will focus on preparing the university to be a responsive global citizen, responding to the societal needs, and equipping graduates to be active global citizens.*

**SDG’s, in my view, should be “fundamentally important” to institutional cultures.**

Ambassador Bayley and I both believe in the universities' role to serve the society, not only in science and art, but as a



platform for *conversions through education, conversions with the SDGs as the common purpose is a noble aim.*

Being a student– centered university, education is an essential factor that is why a huge part of the cooperation with the UNDP is about embedding the SDGs culture inside the BUE campus, promoting the concept of ‘a sustainable campus’ and, other related concepts, in alignment with the university’s three main strategic pillars: *teaching and learning, research and community service.*



The British University in Egypt is an *incubator of ideas*. We thrive to align our activities with national goals, create the right environment to support innovators and entrepreneurs and to work together to present the world with ideas that could make a difference. Our university aspires to create a model. We have outstanding research activities in diverse areas. We strive to integrate sustainable development with its wide-ranging dimensions within our academic curricula as well as the university culture.

Universities need to put sustainable development at the heart of their institutional strategies.

Our cooperation with the UNDP shall support the university's agenda towards enhancing research, achieving SDGs, promoting sustainability and innovation cultures in the university and the local community, enforcing the concept of 'a sustainable campus', as well as *supporting the implementation of the Egyptian and global SDGs agenda*. I believe that the MoU with the UNDP will position the BUE as the first university in the region to commit to aligning itself with the implementation of the SDGs.

**– Professor Mohamed Loutfi**

# 03



A Regional University at  
the Heart of An Ambitious City

## Key Strategic Pillars

The British University in Egypt is committed to advancing environmental and climate quality through its **three strategic pillars**.



### Key Strategic Pillars

Teaching and  
Learning

01

Research

02

Community  
Service

03

The British University In Egypt

# 04

## The University's Commitment to the SDGs and National Development

### Agenda



*The*  
**BRITISH UNIVERSITY**  
**IN EGYPT**



*The*  
BRITISH UNIVERSITY  
IN EGYPT

# 04a

*The Road*

*Towards*

*Sustainability*

# Strategic Partnership and MoU Supporting SDG



## Memorandum of Understanding with the UNDP

Since the signing of the MoU on the 21st of February 2022, the British University in Egypt became the first university in the region to commit itself to aligning with the Sustainable Development Goals (SDGs) by signing a Memorandum of Understanding with the United Nations Development Programme (UNDP).

This cooperation – signed by the UNDP Egypt Resident Representative, Mr. Alessandro Fracassetti



and President & Vice Chancellor of the British University in Egypt, Prof. Mohamed Loutfi, was also witnessed by the British Ambassador to Egypt, H.E. Gareth Bayley.

Throughout 2023, the British University in Egypt and the UNDP have continued to strengthen their collaboration. This partnership has supported the University's ongoing efforts to advance action-oriented research, integrate the SDGs across campus activities, promote a culture of sustainability and innovation, and expand community engagement initiatives aligned with Hayah Karima and the national sustainability agenda.



## Memorandum of Understanding with the UNDP



### MoU Areas of Cooperation

The Memorandum of Understanding outlines the following areas of cooperation:

1. Sharing knowledge, analysis, and information on key policy topics, and supporting action-oriented research on subjects such as local economic development (Hayah Karima), big data and digital transformation, financing for development, impact investments and Environmental, Social and Governance criteria (ESG), COP 27, innovation, and

entrepreneurship, among others.

2. Supporting youth skilling and upskilling, and promoting innovation and an entrepreneurship culture and awareness among BUE students and graduates.
3. Supporting BUE in developing research, innovation, technology transfer, and industry roadmaps and strategies.
4. Promoting, mainstreaming, institutionalising, and raising awareness on the SDGs and sustainability culture among university youth, with the aim of creating current and future SDG implementers.
5. Utilising BUE's role as a partner in implementing Egypt's SDG commitments and obligations, and localising SDG implementation within the Egyptian context.
6. Supporting BUE's lifelong learning and community development activities.
7. Enforcing an SDG culture inside the BUE campus, and promoting the concept of a 'sustainable campus' and related concepts.



## **COP Simulation Initiative (Multi-Year Partnership):**

The UNDP partnership is most visibly expressed through the annual COP Simulation Model, which BUE has organized in collaboration with UNDP for multiple consecutive years. The COP27 and COP28 Simulations were jointly organized by BUE and UNDP, with UNDP providing technical expertise, high-level diplomatic connections, and support for youth participation in actual COP conferences. This partnership demonstrates UNDP's confidence in BUE's capacity to deliver high-quality youth development programming on global development issues.



## **SDG Marathon Initiatives (Health and Well-Being):**

BUE and UNDP have jointly organized the annual Run for Health and Well-Being (SDG3), combining community engagement with global development advocacy. These partnerships leverage UNDP's development platform and BUE's institutional reach to mobilize broad community participation in support of specific SDG objectives.

## **Strategic Alignment with UNDP's Regional Programme:**

The UNDP Regional Programme for Arab States (2022–2025) explicitly addresses shared development challenges including poverty, environmental sustainability, social inequality, and climate resilience across the Arab region. BUE's collaborative initiatives with UNDP directly support the implementation of this regional program's objectives through research, capacity building, and community engagement.

## **Ministry of Higher Education and Scientific Research Partnership**

BUE's SDG initiatives operate under the auspices of the Egyptian Ministry of Higher Education and Scientific Research, reflecting the government's recognition of BUE as a strategic institutional partner in advancing Egypt's Vision 2030. This ministerial support provides formal institutional legitimacy and facilitates coordination with other government agencies advancing sustainable development.

## **Ministry of Youth and Sports Partnership**

The Ministry of Youth and Sports has formally partnered with BUE to support youth-focused SDG initiatives, including the COP Simulation Model and the SDG-focused marathon events. This partnership reflects government recognition that youth empowerment and engagement are central to achieving SDGs and ensures alignment between BUE's youth programs and national youth development policies.

## **Ministry of Foreign Affairs and Ministry of Planning and Economic Development Partnerships**

BUE's sustainable development initiatives operate under the auspices of both the Ministry of Foreign Affairs, Emigration and Egyptian Expatriates and the Ministry of Planning and Economic Development, indicating integration of the university's SDG work into Egypt's formal international relations and development planning apparatus. These partnerships enable BUE to contribute to Egypt's global development commitments while supporting national strategic planning.

## **The British Embassy Engagement**

The British Embassy in Egypt has provided formal support and patronage for BUE's SDG initiatives, reflecting the diplomatic importance of sustainable development partnerships and the embassy's commitment to supporting environmental and social development in Egypt. British diplomatic engagement underscores the international significance of BUE's work and facilitates connections with UK-based partner institutions.

## League of Arab States Partnership

BUE has partnered with the League of Arab States to support regional sustainable development initiatives. The Best Joint Research Project Award (June 2024) was presented at the Prince Mohammad Bin Fahd University Awards Ceremony under the auspices of the League of Arab States Secretary-General, recognizing BUE's research on sustainable agricultural waste management. This partnership indicates BUE's positioning as a leading academic institution within the Arab region for research on sustainable development challenges.

## International University Partnerships

**COP28 Partnership with Zayed University (UAE):** BUE organized the COP28 Simulation in collaboration with Zayed University, United Arab Emirates, demonstrating the university's capacity to facilitate international cooperation on climate and development issues.

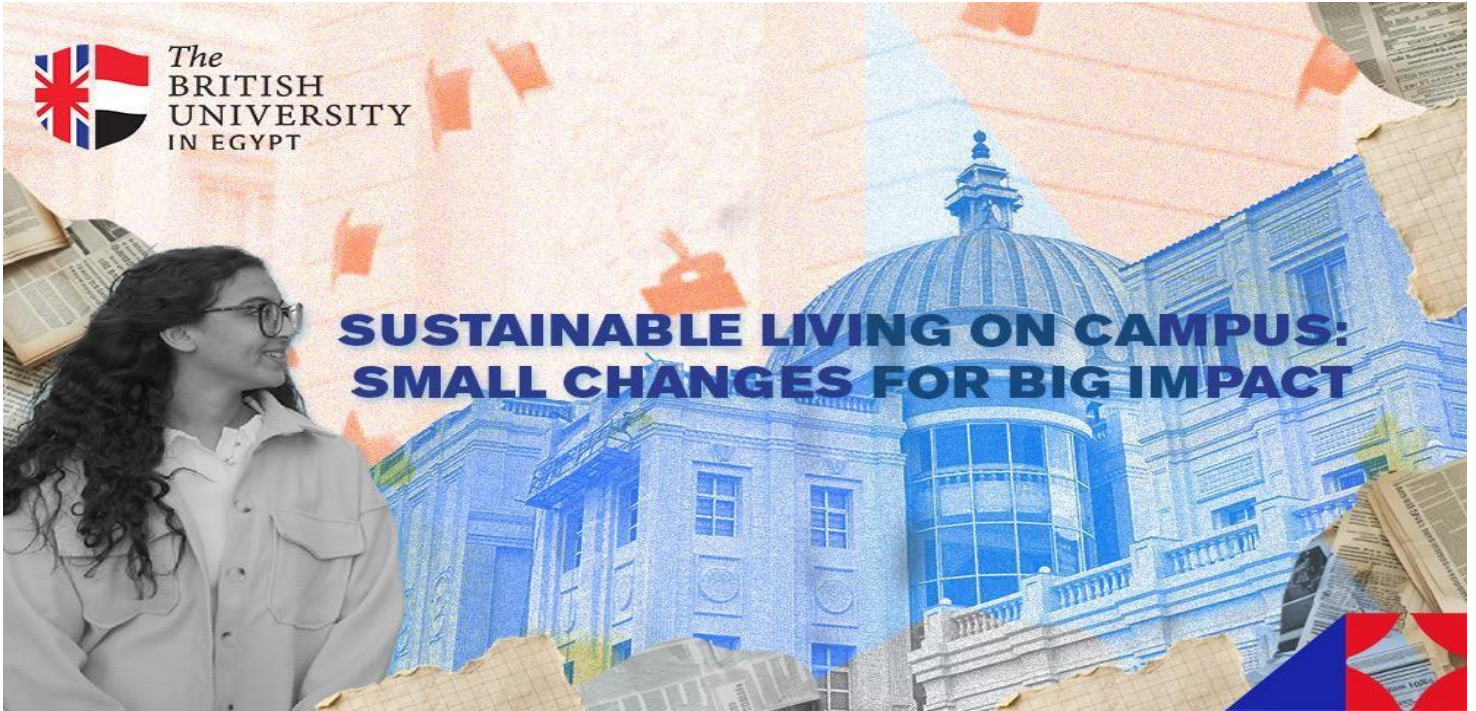
**Research Partnerships on Sustainable Agriculture:** The award-winning research project on sustainable rural agricultural waste management involved international collaboration with Shaqra University (Saudi Arabia), Kasdi Merbah University of Ouargala (Algeria), and the University of Lincoln (United Kingdom), exemplifying BUE's international research networks on sustainability.



The COP Simulation Model is a youth-led climate conference organised by the UNDP and the British University in Egypt, bringing students together from worldwide universities to simulate the COP, acting as country delegates and representatives of international climate stakeholders. Upon the positive outcomes of the COP27 Simulation, the UNDP and the British University in Egypt organised the second version of the COP Simulation in collaboration with Zayed University in the UAE. The COP28 Simulation was another level of success where, out of 2,700 applications, 140 students were selected from 34 countries and 32 universities around the world. The selected delegates attended a two-week capacity-building programme offered by seasoned professionals from global academic institutions and organisations. They were trained on climate literacy, international climate action, the role of youth in climate action diplomacy, debate, and conflict resolution. The COP28 Mock Conference was held at the British University in Egypt, where participants simulated country delegates, chief negotiators, and non-state actors, and they voted on the articles of the COP28 Simulation Declaration.

The final stage was participation in the actual COP28 at Dubai Expo, where around 25 of our top-performing participants had the chance to present the outcomes of the Mock Conference Declaration and share their experiences through three sessions that were held in the Blue and Green Zones at COP28. The COP28 Simulation was identified as the largest student representation at COP28.





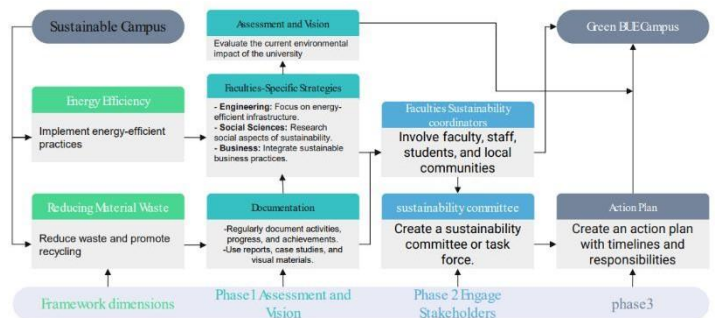
## BUE's Living Laboratory for Sustainability

### Institutional Vision and Strategic Framework

During the 2023–2024 academic year, The British University in Egypt operationalized its strategic commitment to developing a **sustainable campus** aligned with Egypt's Haya Karima (Dignified Life) sustainability agenda and the United Nations Sustainable Development Goals.

Formally established through February 2022 Memorandum of Understanding with the

Towards Going Green BUE Through SDGs integration



United Nations Development Programme (UNDP), BUE's campus functions as a living laboratory where sustainability principles are actively demonstrated, tested, and refined through practical implementation. The comprehensive initiative extends beyond conventional environmental management to encompass energy systems, water management, waste reduction, transportation, campus greening, and behavioral change mechanisms, recognizing that campus operations serve as both a testing ground for sustainable technologies and a powerful educational tool.

### **Solar-Powered Electric Vehicle Charging Station:**

A fleet of electric golf cars recharged on campus is available for both University community and guests so that they can move around campus rather than drive their own vehicles. As part of the University's attempts to cut back on vehicle emissions, the University provides 6 shuttle golf cars with the capacity of 14 Students/Staff in each car. This service facilitates the flow of the students' movements within the Campus boundaries.



**Campus Energy Audit and Management:** The STDF-funded project "A Guide Study for Integrated Sustainable Solutions for Energy & Water Management in Future Education Buildings in Egypt" (led by Dr. Hesham Safwat) implements comprehensive energy audit systems using standardized protocols and thermal measurement investigations, generating evidence-based guidance applicable across Egypt's educational building sector.

**Water Security and Community Service:** Campus Water Desalination, BUE operates on-campus water desalination facilities producing clean water for campus operations and irrigation, addressing municipal water supply stress while demonstrating desalination technology viability in Egypt's water-scarce context.

**Community Water Distribution Model:** BUE has implemented a direct community service model wherein desalinated water produced on campus is distributed to underprivileged villages in Upper Egypt lacking clean water infrastructure. This technology transfer model exemplifies action-oriented



sustainability by converting renewable energy capacity into practical community water security services, directly advancing SDG6 (Clean Water and Sanitation).

**Water Management Research:** The PRIMA project ("Maximising resource use efficiency within the water–nutrient–energy nexus for sustainable agriculture in marginal environments"), coordinated through BUE's Centre for Renewable Energy with international partnership (Germany, France, Italy, Morocco, Portugal, Spain, Tunisia), investigates integrated water resource management approaches encompassing rainwater harvesting, wastewater treatment and reuse, and AI–assisted irrigation management tools.

**Greening, and Waste Management:** BUE's campus incorporates dedicated pedestrian pathways and cycling infrastructure promoting low–carbon mobility alternatives, while green spaces designed to enhance biodiversity, reduce ambient temperature through strategic tree placement, and manage stormwater provide recreational benefits and environmental education.

**The Business Incubator and Science and Innovation Park:** showcase sustainable startups

addressing waste reduction, resource circularity, and environmental solutions, creating visible market environments for circular economy business models.

**Research Infrastructure and Institutional Leadership:** The Centre for Renewable Energy (CRE) at the British University in Egypt is formally established as part of the University's research centres. According to the University's official website, the Centre comprises three divisions: the Wind Energy Division, the Solar Energy Division, and the Biomass Division. These divisions support research activities in renewable-energy technologies. Additionally, documentation from the WESET Project confirms that the CRE–Wind Division includes a wind-energy laboratory equipped for small wind turbine testing and related performance experiments.

**The Farouk El-Baz Centre for Sustainability and Future Studies (FECSFS):** The Farouk El-Baz Centre for Sustainability and Future Studies (FECSFS) at BUE formally established in March 2011 operates through five specialized units: Innovation & Ideas; Research & Scientific Studies; International Cooperation, GIS & Decision-Support; Young-Generation Forum; and Culture of Sustainability. The Centre addresses environmental, economic, and social challenges by engaging students, academic staff, and researchers in sustainable development research, education, seminars, workshops, conferences, consultancy, and publications. Since its inception, FECSFS has organized several sustainability-focused conferences and events including the “Future Intermediate Sustainable Cities” conference (2010) and the “Green Heritage Conference” (2018) as part of its mission to promote sustainability awareness and future-oriented thinking.

**Education and Capacity Building:** The SusHumBuild Project (Sustainable Human-to-Building Behavioral Interaction), funded by UK British Council and coordinated with London South Bank University, develops comprehensive training programs addressing energy-saving implementation in Egyptian educational buildings, recognizing that

awareness alone is insufficient without practical implementation training. Graduate students pursuing the MSc. in Renewable Energy (Specialization in Wind Energy) conduct research using campus renewable energy systems as research testbeds, while undergraduate engineering courses (18MECH25I: Alternative Energy Systems) include laboratory experiments examining wind turbine and solar system performance.

**Institutional Governance and Integration:** BUE's campus sustainability commitment is formalized through the Strategic Plan 2023–2028 positioning sustainability as a core institutional priority, with BAEPS Strategic Plan mandating four major annual green initiatives, faculty–level sustainability targets, ESG criteria integration into operational decisions, and dedicated Centre for Renewable Energy director coordination. Annual key performance indicators track renewable energy generation, water production and distribution, campus carbon emissions reductions, waste diversion rates, and student engagement in sustainability initiatives.



*The*  
BRITISH UNIVERSITY  
IN EGYPT

# 04b

*Student and Staff  
Involvement in  
Fostering  
Sustainability*

# Run for Health and Well-Being



The British University in Egypt and the United Nations Development Programme were proud to host their second annual marathon – the "Run for Health and Well-Being, at the University Campus in an event that stands as a beacon of dedication to global Sustainable Development Goals with this year focusing on SDG3, Health and Well-Being.

The marathon, organised down to the smallest detail by Cairo Runners, was attended by the Minister of Youth and Sports, H.E. Professor Ashraf Sobhi, with the race itself being under his ministry's auspices as well as that of the Ministry of Higher Education and Scientific Research, and the British Embassy. The Minister completed the 2KM walk with Chair of the Board of Trustees, Ms. Farida Khamis, President and Vice-Chancellor Professor Mohamed Loutfi and UNDP Resident Representative, Egypt, Mr. Alessandro Fracassetti. They were joined by other distinguished guests such as Ambassador of Singapore, H.E. Ambassador Dominic Goh and Ambassador of Hungary, H.E. Andras Kovacs and El Shorouk District Chief, Engineer Ali Saad. Their presence underscored the collective commitment to advancing health and well-being within our communities.

At the starting gun, runners of all ages converged upon our campus eager to participate in the run and partake in the day's festivities, which catered to both families and sports enthusiasts.





The  
BRITISH  
UNIVERSITY  
IN EGYPT

وزارة التعليم العالي والبحث العلمي  
MINISTRY OF HIGHER EDUCATION  
AND SCIENTIFIC RESEARCH



RUN FOR  
HEALTH &  
WELLBEING

Green



# International Association for Study of Irish Literature Sustainability Conference



The British University in Egypt was honoured to host The International Association for the Study of Irish Literature (IASIL) Sustainability Conference in its 46th round, themed around Sustainability and Irish Studies, in the presence of the President and Vice-Chancellor, Professor Mohamed Loutfi, and special guest, H.E. Nuala O'Brien, Ambassador of Ireland, the Embassy of Ireland, Cairo, the Department of Foreign Affairs, Dublin Culture Ireland, and the IASIL Board.



The Conference was organised by the BUE Research Centre for Irish Studies (RCIS), in collaboration with the Embassy of Ireland in Cairo, the Department of Foreign Affairs, Culture Ireland, and the International Association for the Study of Irish Literatures (IASIL) Over two years, the IASIL Conference was collaboratively organised by Associate Professor Rania M Rafik Khalil, Director-Research Centre for Irish Studies (RCIS) and Postgraduate Studies Programmes Director, Professor Shadia Fahim, Dean of the Faculty of Arts and Humanities, and guest Professor Ondrej Pilny, Director of the Irish Studies Centre, Charles University in Prague, Czech Republic.



## **IASIL 2023: Sustainability Measures and Academic Outcomes**

- ✿ IASIL 2023 reduced all printed paper, used linen tote bags, eco-friendly name tags, and plantable pencils.
- ✿ The conference discussed the critical engagements with climate change and the related issue of human agency, specifically regarding Irish studies.
- ✿ It examined how writers have reflected on the relationship between nature and humanity and assessed the current critical frameworks in Irish studies as well as their sustainability in facing the present global climate crisis.
- ✿ The campus was decorated with the incredible art of the renowned artist Farida Darwish, whose paintings represent the beauty of Egyptian culture.





The IASIL 2023 Sustainability Conference closing remarks took place at Abdeen Palace during the Gala Dinner on 21ST of July 2023, from 6:00 to 10:00 P.M where Professor Yehia Bahei–El– Din Deputy Vice–Chancellor and Vice President for Research and Enterprise highlighted the importance of the ranking of the British University in Egypt and commended the efforts of the Research Centre for Irish Studies (RCIS) in bringing together such a diverse group of researchers and scholars interested in sustainability and Irish studies.

Professor Shadia Fahim, Dean of the Faculty of Arts and Humanities, acknowledged the contributions of the Embassy of Ireland in Cairo and the international partners, and the Department of English academic staff, in making the conference a success in collaboration with the Director of the Research Centre for Irish Studies (RCIS).







On November 2, 2023, the Faculty of Business Administration, Economics, and Political Sciences, in collaboration with the Community Service teams, organised an event that brought students together to participate in various community service activities centred around the Sustainable Development Goals (SDGs). United in purpose, we are forging a path towards a more sustainable and environmentally responsible future.



In a remarkable display of commitment, our students engaged in activities that extended beyond the mere affixation of SDG stickers on the ladder of progress. This initiative was further supported by the Organisational Behavior module team, with additional collaboration from The Green Economy Research Group, underscoring the significance of collective efforts in catalysing constructive change.



## The activities included:

- Affixing SDG stickers on the ladder of progress.
- Participating in community-oriented tasks aligned with the Sustainable Development Goals (SDGs).
- Contributing to collaborative sustainability efforts supported by multiple academic teams and research groups.



# Annual Conference of Business, Economics, and Politics Science in the Middle East 2023



The Faculty of Business, Economics, and Political Science (BAEPS) proudly presents its Annual Conference, focusing on the critical study of the Middle East through interdisciplinary perspectives in business, economics, and political science. The 2024 conference, set for November 9, will revolve around the theme: *Digitalization, Governance, and Sustainability*.

This year's conference builds on the success of last year's event, held on October 21, 2023, with a remarkable turnout of **42 presenters, 8 session chairs, and 48 attendees**, alongside published Conference Proceedings bearing an ISSN. In 2024, the conference will once again provide a platform for rich discussions and expert insights.

## Conference Tracks:

1. **Governance and Digitalization in the Middle East**
2. **Repercussions of the Russia–Ukraine Conflict on the Middle East**
3. **Sustainability and Environment in the Middle East**
4. **Postgraduate Perspectives on Business, Economics, and Political Issues**

As the Middle East continues to address pressing challenges—such as security,

migration, climate change, and technological adaptation—this conference underscores the significance of interdisciplinary research in understanding and shaping the region’s future.

## **Annual Conference of Business, Economics, and Politics Science in the Middle East 2023**

### **Agenda**

# Cross-Faculty Contributions to Sustainability and the SDGs



## Faculty of Business Administration, Economics, and Political Science (BAEPS)

BAEPS has emerged as a leader in systematically integrating SDGs across teaching, learning, research, and community engagement. The faculty's 2023–2028 Strategic Plan explicitly prioritizes sustainability and SDG achievement across all three pillars of academic work.



### SDG Integration in Teaching and Learning:

BAEPS has revised all undergraduate curricula to incorporate SDG-related content across modules and courses. A core strategic objective (T6) mandates that 100% of undergraduate students complete at least **one dedicated module related to UN SDGs** and Egypt's Vision 2030 at each level of study (year 1, year 2, year 3, and year 4) by 2025–2026. This systematic curricular embedding ensures that sustainability and sustainable development principles become foundational knowledge for all business, economics, and political science graduates.

### Work-Based Learning and Employability Enhancement:

BAEPS has prioritized embedding work-based learning opportunities, including placements, internships, field training, and live projects with external stakeholders—into undergraduate programs. By 2024–2025, the faculty completed a comprehensive review of existing work-based learning opportunities and established a dedicated faculty committee to integrate such opportunities systematically across undergraduate curricula. Strategic partnerships were established with at least 10 new industry partners, professional associations, and external stakeholders to expand the range of work-based learning opportunities available to students. These initiatives directly support SDG4 (Quality Education) by preparing graduates with practical, employable skills, and simultaneously address SDG8 (Decent Work and Economic Growth) by connecting

students with professional development opportunities.

### **Research Aligned with SDGs and Egypt's Vision 2030:**

BAEPS has established clear strategic objectives to develop interdisciplinary research initiatives explicitly focused on achieving the SDGs and contributing to Egypt's Vision 2030, particularly in areas including sustainable economy, education, and digital transformation. Action plans call for developing new SDG-aligned research themes and research groups, with annual key performance indicators measuring the volume and impact of SDG research and community outreach at the faculty level. Faculty members are incentivized to pursue research collaborations with international institutions through support for grant writing and professional development workshops

### **Community Engagement and Social Responsibility:**

The faculty's community service framework is structured around two primary pillars: promoting SDG achievement and engaging in Egypt's national community goals. BAEPS has established specific objectives to integrate SDGs frameworks into academic and non-academic activities (C1.1), encourage activities with social, environmental, and cultural impact on the surrounding community (C1.2), and enhance student interaction with local and global communities (C1.3). Action plans specify conducting four major green initiatives on or off campus annually, organizing at least four community and alumni engagement events per year, and incorporating SDG principles into operational and governance practices. Environmental, Social, and

Governance (ESG) criteria have been embedded across strategic activities to enhance sustainability compliance by 2026.

### **Civic Engagement and Social Responsibility:**

To foster civic engagement and social responsibility among students, BAEPS facilitates participation in public and community activities addressing national societal, cultural, ethical, and economic needs (Objective T7). The faculty established a structured program enabling at least 30% of the student body to actively engage in community-based projects, volunteer initiatives, or collaborative partnerships with local organizations within the next academic year, focusing on education, healthcare, environmental sustainability, and economic development. By the end of the 2024–2025 academic year, at least 25% of participating students will have completed a minimum of 20 hours of documented community service or engagement activities.

### **Faculty of Engineering**

The Faculty of Engineering has committed to translating sustainability principles into practical technical solutions and campus-level environmental improvements.

#### **Environmental Sustainability Initiatives:**

Engineering students and faculty have implemented comprehensive environmental initiatives including energy-saving campaigns, recycling drives, and sustainable campus infrastructure improvements. These practical applications enable engineering students to develop and demonstrate real-world solutions aligned with multiple SDGs, including SDG7 (Affordable and Clean Energy), SDG12 (Responsible Consumption and Production), and SDG15 (Life on Land).



#### **Community Projects and Applied Research:**

Undergraduate and postgraduate engineering students engage in field training, green enterprise collaborations, and applied research projects with direct sustainability



focus. These projects form part of graduation requirements, ensuring that all engineering graduates have participated in practical, community-oriented sustainable development work. This integration of sustainability into core curriculum and degree requirements embeds SDG awareness into the professional identity of future engineers.

**Award-Winning Research on Sustainable Agriculture:** The Faculty of Engineering achieved significant recognition through an award-winning research project titled **"Sustainable Rural Agricultural Waste Management: A Roadmap for the Circular Economy and the Living Lab."** This project, led by Dr. Noha Mostafa (Associate Professor at the Faculty of Engineering) under the strategic oversight of Professor Yehia Bahei-El-Din (Deputy Vice-Chancellor and Vice President for Research and Enterprise), was honored with the prestigious **Best Joint Research Project Award** at the Prince Mohammad Bin Fahd University Awards Ceremony (June 2024).

The award was presented under the auspices of Mr. Ahmed Aboul Gheit, Secretary-General of the League of Arab States, with recognition from Professor Amr Ezzat Salama (Secretary-General of the Federation of Arab Universities) and Professor Issa Al Ansari (President of Prince Mohammad Bin Fahd University). The project represents a collaborative effort involving Shaqra University (Saudi Arabia), Kasdi Merbah University of Ouargala (Algeria), and the University of Lincoln

(United Kingdom), demonstrating BUE's strong international research partnerships on sustainability.

The project focuses on innovative strategies for managing rural agricultural waste, promoting circular economy models, and establishing living labs to test and refine strategies in real-world settings directly addresses multiple SDGs, including SDG12 (Responsible Consumption and Production), SDG2 (Zero Hunger), and SDG13 (Climate Action). This award-winning research exemplifies how engineering research can generate practical, scalable solutions to national environmental and economic challenges.

### **Faculty of Pharmacy**

The Faculty of Pharmacy and Biotechnology has positioned itself as a champion for SDG3 (Good Health and Well-Being) and SDG6 (Clean Water and Sanitation) through targeted health campaigns and responsible pharmaceutical practices.

**Health and Sanitation Campaigns:** The faculty has led awareness campaigns on clean water, hygiene, and public health in nearby communities, directly supporting SDG3 and SDG6 objectives. These campaigns educate community members on preventive health measures, sanitation practices, and access to clean water—critical foundational elements for improving population health outcomes.

**Sustainable Pharmaceutical and Biotechnology Workshops:** The faculty has organized seminars on sustainable pharmaceutical practices, environmental chemistry, and responsible biotechnology use in food and health sectors. These workshops address the intersection of health outcomes and environmental sustainability, emphasizing how pharmaceutical and biotechnology sectors can contribute to climate action and environmental protection while maintaining therapeutic effectiveness.

### **Faculty of Law**

The Faculty of Law has developed a specialized curriculum and speaker series addressing the legal frameworks underpinning sustainable development, aligning with SDG16 (Peace, Justice and Strong Institutions) and SDG17 (Partnerships for the Goals).

**SDGs and the Law Seminar Series:**The faculty has hosted lectures and panel discussions on legal frameworks for sustainable development, climate justice, and environmental law. These seminars bring together external legal experts, ministry representatives, and students to examine how legal systems can advance sustainability. Topics span environmental law, international climate agreements, and domestic legislative frameworks supporting Egypt's Vision 2030.

### **Faculty of Arts & Humanities**

The Faculty of Arts & Humanities has integrated SDG awareness across teaching modules spanning gender equality (SDG5), reduced inequalities (SDG10), peace and justice (SDG16), and related social themes.

**Student–Led Debate and Civic Engagement:**The faculty has hosted student conferences and debates on civic responsibility, the role of youth in SDG achievement, and locally actionable development projects. These initiatives develop critical thinking skills and foster informed engagement with complex social and development challenges, supporting BUE's broader mission to prepare students to serve as agents of change in their communities.

**University–Wide Student Community Engagement:** Across all faculties, BUE has engaged at least 30% of the student body in structured community–based SDG projects throughout the 2023– 2024 academic year. These initiatives encompass environmental cleanup days, awareness workshops, and local development partnerships, ensuring that sustainability engagement becomes a normative aspect of the BUE student experience. By embedding community service as an expectation across diverse student populations, BUE fosters a culture where SDG awareness and action are integrated into academic identity.

**Research Excellence Recognition:** BUE established the **Mohamed Farid Khamis Award** to recognize outstanding research on SDGs and sustainability by students and faculty across the university. This university–wide competition incentivizes research excellence on sustainability topics and celebrates contributions advancing SDG achievement, reinforcing institutional priorities and motivating future research efforts.



*The*  
BRITISH UNIVERSITY  
IN EGYPT



**04c**

*Action-Oriented  
Research*

## Strategic Framework for Research Excellence and Impact

During the 2023–2024 academic year, The British University in Egypt reinforced its commitment to action-oriented research—research designed to generate practical solutions to real-world sustainable development challenges. This strategic orientation operates within the institutional framework established through the February 2022 Memorandum of Understanding between BUE and the United Nations Development Programme (UNDP), which explicitly commits the university to enhancing action-oriented research toward achieving the Sustainable Development Goals, enforcing sustainability and innovation cultures within the university and local community, promoting the concept of a "sustainable campus," and supporting the implementation of Egypt's Haya Karima sustainability agenda.

## Award-Winning Research on Sustainable Agricultural Waste Management

**Best Scientific Production in Scientific Research and Technological Development Award (October 2024):** During the 2023–2024 academic year, BUE's action-oriented research achieved significant international recognition. In October 2024, The British University in Egypt signed a Memorandum of Understanding with the Association of Arab Universities, activating funding for the prestigious **Award for Best Scientific Production in Scientific Research and Technological Development**, presented by Prince Mohammad Bin Fahd University.

The award-winning project, titled **"Smart and Sustainable Management of Agricultural Waste in Rural Areas: A Roadmap for Circular Economy and Living Lab,"** directly addresses SDG12 (Responsible Consumption and Production), SDG2 (Zero Hunger), SDG13 (Climate Action), and SDG15 (Life on Land). Led by **Dr. Noha Mostafa**, Associate Professor at the Faculty of Engineering, under the strategic guidance of **Professor Yehia Bahei-El-Din**, Deputy Vice-Chancellor and Vice President for Research and Enterprise, this project tackles the pressing challenge of agricultural waste management in rural areas through a circular economy model.

The research project represents an international collaborative effort involving researchers from BUE (Egypt), Shaqra University (Saudi Arabia), Kasdi Merbah University of Ouargala (Algeria), and the University of Lincoln (United Kingdom), reflecting BUE's capacity to establish and maintain high-quality international research partnerships. The project's innovative approach centers on transforming rural agricultural waste into valued resources through circular economy principles, establishing "living labs"—real-world testing environments embedded within rural agricultural communities—enabling researchers to validate strategies in authentic operational contexts before scaling to broader implementation.

The MOU signing ceremony involved **Professor Mohamed Loutfi**, President and Vice-Chancellor of The British University in Egypt, and **Professor Amr Ezzat Salama**, Secretary General of the Association of Arab Universities. The signing was witnessed by **Ms. Farida Khamis**, Chair of the Board of Trustees, and attended by Sir **Professor Magdi Yacoub**, Chancellor of the University, along with distinguished members of the Board of Trustees, underscoring the university's institutional commitment to leading in research and development within the Arab region.

### **Mohamed Farid Khamis Award for Research (2023)**

Throughout the 2023–2024 academic year, BUE continued to promote action-oriented research through its internal research awards program. The **Mohamed Farid Khamis Award 2023** was held under the thematic focus "**Towards Sustainability 2030,**" directly aligning research promotion with SDG achievement objectives. This thematic focus ensured that competitive research funding prioritized proposals explicitly addressing sustainable development challenges aligned with Egypt's Vision 2030.

## Faculty–Level Action–Oriented Research Initiatives

### Faculty of Business Administration, Economics, and Political Science (BAEPS) Research Strategy (2023– 2028):

During 2023–2024, BAEPS finalized its strategic research agenda explicitly aligned with SDGs. The faculty's research strategy mandates the development of interdisciplinary research initiatives focused on achieving the Sustainable Development Goals and contributing to Egypt's Vision 2030, with particular emphasis on sustainable economy, education, and digital transformation. The faculty established clear action plans for :

- Launching community engagement projects that apply research findings to local challenges, supporting societal needs and policy development.
- Increasing visibility and impact of research by enhancing research dissemination through publications, conferences, and community platforms.
- Fostering research collaborations with international institutions through support for grant writing and professional development workshops.
- Measuring annual key performance indicators tracking the volume, quality, and community impact of SDG– focused research outputs.

### Strategic Research Funding Architecture

#### National and International Research Funding Opportunities:

During 2023–2024, BUE's research staff actively pursued funding through diverse national and international mechanisms, including:

- **Science and Technology International Funding Agency (STIFA):** Supporting experts, reviewers, and international cooperation grants
- **British Council:** Funding transnational education and research partnerships
- **UK Aid Direct:** Supporting development–focused research initiatives
- **ASRT/STDF Mechanisms:** Supporting fundamental and applied research addressing Egypt's national development priorities

Over the years, BUE has been awarded more than 45 externally funded research projects tackling key national research areas including new and renewable energy, water conservation, pollution management, and climate change.

### Research Recognition and Institutional Positioning

The MOU signed in October 2024 between BUE, and the Association of Arab Universities represents institutional recognition of BUE's research leadership within the Arab region. The university's positioning as a recipient of the prestigious Award for Best Scientific Production underscores the quality and development relevance of BUE's action-oriented research. This recognition extends beyond academic metrics to encompass practical contributions to addressing Egypt's most pressing environmental and agricultural sustainability challenges.



## MOU with El-Reef Al Masry

On April 12th, 2021, The British University in Egypt represented by Prof. Yehia Bahei-El-Din, Vice President for Research and Enterprise, and attended by Mrs Farida Khamis, Chair of the Board of Trustees, and The New Egyptian Countryside Development Company “El-Reef Al-Masry” represented by Major General Amr Abdel-Wahab, signed a joint cooperation protocol regarding the cooperation in the field of renewable energy in the western desert region, known as Western- Western Minya, Minya Governorate.

In the framework of the joint cooperation between the two parties, El-Reef Al-Masry has allocated plots of land in different areas of “the one and a half million acres ”in the western- western Minya region located on the Bani Mazar Al- Bawiti road, where the British University in Egypt is going to experiment and operate one of the wind turbines prototypes developed and produced by its research teams.

The British University in Egypt is installing wind turbines in Minya to help generate green energy as well as support groundwater extraction and desalination for drinking and irrigation thereby contributing to the development of new urban and agricultural areas within the governorate.



## BUE's Action-Oriented Wind Energy Program (2023–2024 Academic

### Year) Strategic Wind Energy Research and Development

During the 2023–2024 academic year, The British University in Egypt sustained its commitment to advancing wind energy technology through its dedicated Centre for Renewable Energy—Wind Energy Division (CRE–Wind). Established in 2019 and supported through the European Union's Erasmus+ funded Wind Energy Skills in Egypt and Tunisia (WESET) project, the CRE–Wind serves as a comprehensive research, training, and development facility focused on mechanical and aerodynamic aspects of wind energy systems, directly advancing SDG7 (Affordable and Clean Energy) and SDG13 (Climate Action).

The institutional structure comprises three complementary divisions—Wind Energy Division, Solar Energy Division, and Biomass Division—reflecting BUE's strategic prioritization of wind energy as a critical component of Egypt's renewable energy transition and sustainable development agenda.

#### Laboratory Infrastructure and Wind Turbine Testing Protocols

The CRE–Wind Laboratory, located in Building B of BUE's Faculty of Engineering, hosts a comprehensive array of research equipment specifically designed to support wind turbine research, design validation, and student experimentation.

#### Key facilities include:

- **Small Wind Test Section:** Equipped with complete system controls and real-time monitoring screens, enabling systematic testing of small-scale wind turbine prototypes under controlled laboratory conditions relevant to Egypt's specific wind regimes
- **Structured Experimental Protocols:** Aligned with postgraduate modules

(MSc. REN603: Wind Energy Systems and Fundamentals) and undergraduate coursework (18MECH25I: Alternative Energy Systems), encompassing wind energy system components and measurements, different turbine configurations for output optimization, and blade pitch angle effects on system performance.

### **Wind Turbine Design and Development Projects (2023–**

#### **2024) Vertical Axis Wind Turbine (VAWT) Research**

BUE's wind energy research–maintained focus on Vertical Axis Wind Turbine designs as alternatives to traditional Horizontal Axis Wind Turbines. VAWTs offer design advantages particularly relevant to Egyptian contexts: reduced wind–direction sensing requirements, simplified maintenance, capability to operate in low–wind conditions, reduced noise emissions, and reduced bird collision hazards.



**High-Efficiency Wind Turbine Enhancement Project:** Led by **Professor Hani Ghali** and funded by Egypt's Science and Technology Development Fund (STDF), this project addresses specific technological constraints of wind systems deployed in Egypt's challenging desert climate characterized by high ambient temperatures and variable wind speeds.

The project objectives include improving turbine efficiency and reliability under Egypt's specific environmental conditions.

**Maximum Power Point Tracking (MPPT) Research:** Advanced research focused on "Prototyping Various MPPT Techniques Used in Wind Energy Conversion Systems for Response Time Monitoring," conducted by a multidisciplinary team including Amro A. Kawashty, Sameh O. Abdellatif, and Professor Hani A. Ghali. MPPT systems are critical control mechanisms that optimize electrical power extracted from wind turbines by continuously adjusting operating parameters to maintain maximum energy conversion efficiency across varying wind conditions.

### **Integration with Postgraduate Education and Capacity Building**

Wind energy research activities during 2023–2024 were integrated into comprehensive postgraduate training through the MSc. in Renewable Energy (Specialization in Wind Energy), with curriculum addressing wind resource assessment, turbine aerodynamics, mechanical design, electrical systems, and power grid integration. Graduate students have direct access to laboratory equipment and testing facilities, enabling original research on wind turbine design, performance optimization, and real-world deployment challenges, ensuring that BUE develops the next generation of Egyptian engineers capable of advancing the nation's clean energy transition.

### **Sustainable Campus Demonstration and National Alignment**

BUE's wind turbines installed on campus serve as demonstrable proof-of-

concept for renewable energy viability in Egypt. By operating turbines on campus grounds generating electricity for institutional operations, BUE provides visible evidence that wind energy technology functions effectively in Egyptian contexts, building political will for broader energy system transformation.

BUE's wind energy research during 2023–2024 operates within a broader institutional context supporting Egypt's Vision 2030, SDG7 (Affordable and Clean Energy), SDG13 (Climate Action), SDG9 (Industry, Innovation and Infrastructure), and Egypt's Haya Karima sustainability agenda. The WESET project partnership reflects BUE's engagement with international institutions in advancing wind energy knowledge and capacity building, enabling the university to access cutting-edge international research developments while developing technologies appropriate to Middle Eastern and North African contexts.



## 300 KW Solar Energy System



The need for alternative energy sources is an urgent global issue. Egypt's electricity generation depends mainly on natural gas and oil. In 2018, Egypt produced 0.71% of the world's CO<sub>2</sub> emissions, making it the 23rd source of carbon emissions worldwide. Consequently, the research community in Egypt focused on allocating the energy consumption distribution among various sectors seeking green alternatives. Building-integrated Photovoltaics (BIPV) has been introduced as a booming solution towards green, smart, and sustainable buildings. BIPVs are technologies that replace conventional building components with components that harness solar energy.

In this context, the Faculty of Engineering at the British University in Egypt has contributed to providing technical consultancy to the linked industrial partner, Oriental Weavers. A group of experts led by Prof. Sayed Akl, Vice Dean for Community Service, Prof. Ahmed Abdelazim, Professor in Mechanical Engineering department, and Dr. Sameh Osama, Lecturer in Electrical Engineering department has inputted in the [technical design](#),

implementation, and operation evaluation for a 300 KW solar energy system established on the roof of the Oriental Weaver's main showroom in Alexandria, Egypt and officially launched on the 6th of March 2022. The structured system is considered a seed in transferring all Oriental Weavers showrooms towards [sustainable and green buildings with zero emissions](#).



The Economics department members have always been keen to attend and present their papers in local and international conferences to have a better understanding of sustainability such as:

- The Sustainable Energy & Environmental Protection Conference , University of Sharjah
- The BAEPS Annual Conference, Cairo
- Sustainability and Development Conference, University of Michigan
- ERF Annual Conferences.



## Conferences



## Local and International Collaborations



The British University in Egypt takes part in local and international collaborations which allow for the dissemination of knowledge.



onal collaborations which



