جامعة الإسكندرية
ALEXANDRIA UNIVERSITY

SDG7



Clean Energy

2025-2026

University policy for ensuring all renovations / new builds are following energy efficiency standards

ALEXANDRIA UNIVERSITY

Policy on Energy and water sustainable use

Alexandria university is Committed to pursuing sustainable development within and through the university and to reassessing higher education and its role in the transition to more sustainable societies. This includes building synergies and collaboration in the search for effective and innovative approaches to solving today's as well as future sustainable development challenges.

The university ensures that all renovations and establishment of new buildings are following energy efficiency standards and water conservation strategies.

The university ensures divesting investments and purchases from Carbon-intensive energy industries particularly coal and oil.

The university through its faculties is committed to maximise water reuse across the university buildings and through all services provided in the process of education and research

The objective of this statement is Commitment to offering an open, interactive and collaborative forum for discussion and action, to raise awareness and advocate for changes needed changes in higher education to best serve the goals of sustainable development, (SDGs) as well as building international linkages and cooperation on the basis of core values of academic freedom, institutional autonomy and related local and global responsibilities to society.

Being uncompliant with the commitment to purse sustainable development issue will be regarded as interfering with personal development of the students, and the university administration will act accordingly

Policy created September 2019

Policy reviewed October 2022

Prof. Abdel Aziz Konsowa

University President

A. Konsowa

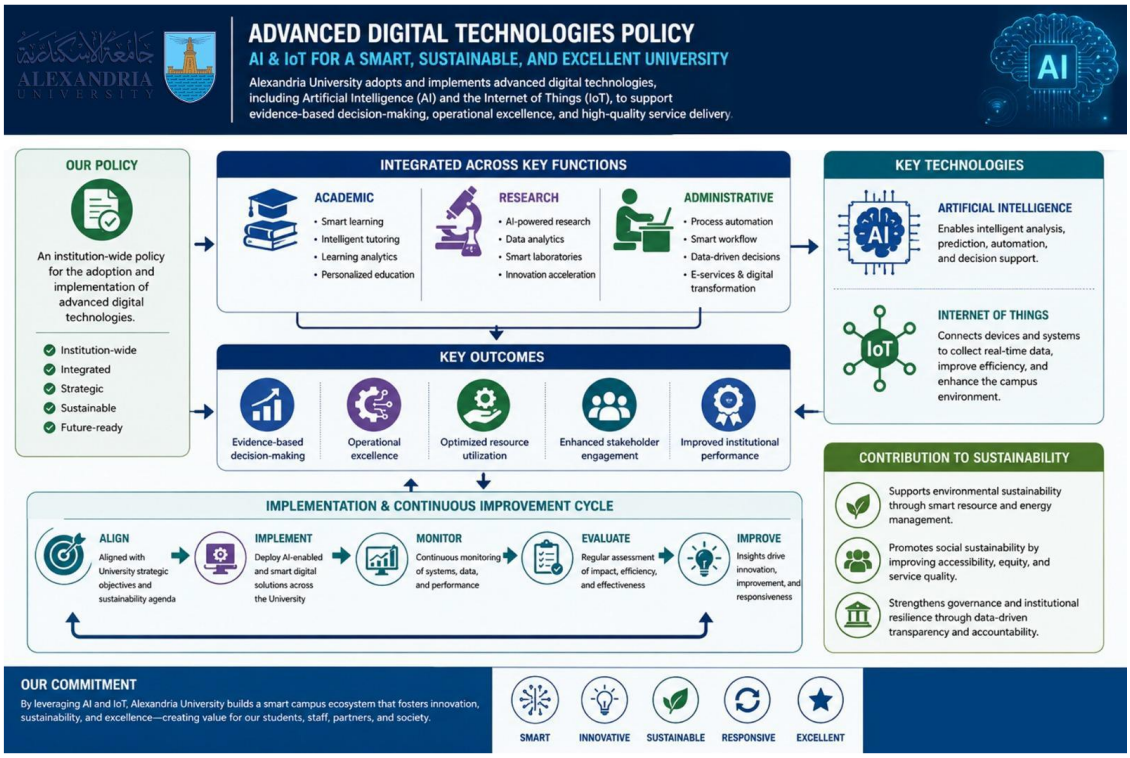
Alexandria University integration of solar cell, energy efficiency, and advanced simulation method reduce carbon dioxide emissions and boost performance. Through renewable energy system—featuring energy storage, wind power, and hydrogen technology—the university enhances energy conservation and environmental condition across construction and renovation. This approach utilizes sustainable materials, process, and innovation to fortify long-term sustainability and resource optimization on campus.

- Alexandria University assigns 137 staff members toward sustainability governance, incorporating university leadership, office personnel, vice deans, and faculty committees. Their ongoing activities span sustainability reporting, policy development, workshops, research collaboration, stakeholder engagement, and applied research projects focused heavily on energy, water, waste, and circular economy themes.

- The university campuses located in Alexandria, Egypt, span a total area of 13,982,352.9 square meters, with 8,090,641.9 square meters dedicated to planted vegetation. Beyond these green sectors, 3,460,144.6 square meters remain open spaces, while building structures account for just 2,431,566.4 square meters of the overall campus zone. This well-planned spatial distribution reflects the institution's dedication to restricting urban growth, safeguarding natural landscapes, and providing expansive outdoor settings that boost biodiversity, ecological health, and student well-being.

- Alexandria University continues to enhance energy efficiency via focused energy management programs and infrastructure updates. Compared to the 2022/2023 baseline, natural gas consumption dropped markedly by 34.79% in 2023/2024, 81.83% in 2024/2025, and 82.52% in 2025/2026. Electricity usage also fell by 2.33% in 2024/2025 and 2.86% in 2025/2026, following a temporary rise of 4.37% in 2023/2024. These outcomes reflect the institution's ongoing dedication to decreasing energy consumption, boosting operational performance, and cutting greenhouse gas emissions to support the Sustainable Development Goals alongside Egypt's Vision 2030.

- Alexandria University has established a broad institutional framework aiming to become an intelligent, eco-friendly, and digitally advanced campus, incorporating modern technologies—such as machine learning, artificial intelligence, cloud solutions, data analysis, IoT systems, and connected digital networks—across teaching, research, and general administrative tasks. This comprehensive policy applies campus-wide to back data-driven decisions, boost operational performance, maximize resource usage, and upgrade service delivery while maintaining steady monitoring and continuous advancement.



• To enhance campus transit, Alexandria University offers regular complimentary shuttle services linking colleges, student residences, research centers, and key transit terminals. This transport system runs along fixed schedules, providing safe, reliable, and accessible mobility for students, faculty, staff, and visitors while decreasing reliance on personal automobiles. The institution has also broadened shared transit alternatives via collaborations with transport companies and campus ride-sharing programs.

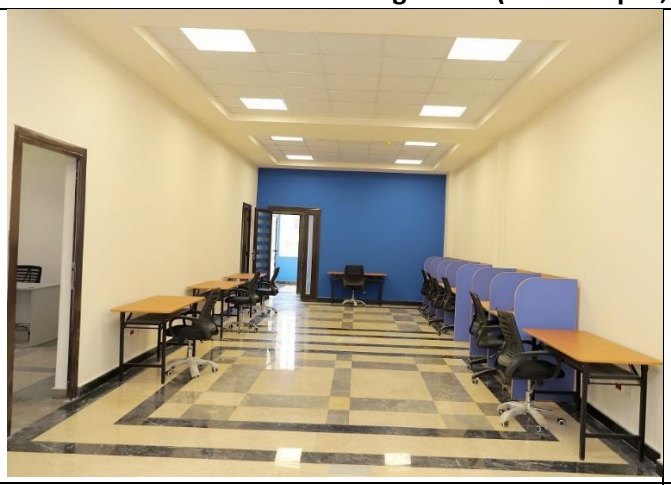
• Renewable energy sources and technologies supporting power generation and combined heat applications include:

1. **Solar Thermal Systems:** Solar collectors generate renewable thermal energy to support heating and hot water demands and complement building energy systems.
2. **Wind Energy:** Wind turbines convert wind energy into renewable electricity to support campus operations and reduce dependence on conventional energy sources.
3. **Biodiesel Production:** Biodiesel derived from biological feedstocks such as plant oils, used cooking oil, and other renewable organic materials serves as a cleaner alternative fuel for energy generation and operational activities.
4. **Green Hydrogen:** Hydrogen produced through water electrolysis using renewable electricity (e.g., solar or wind power) serves as a clean energy carrier that can support electricity generation, thermal applications, and future low-carbon energy systems, including CHP applications where implemented.
5. **Biomass Energy:** Biomass utilization includes advanced conversion technologies such as carbonization, torrefaction, gasification, pyrolysis, and biochar production, contributing to renewable energy generation and efficient resource utilization.
6. **Waste-to-Energy Systems:** Organic or biodegradable waste is converted into useful energy, with CHP applications enabling simultaneous production of electricity and recoverable heat.

Together, these renewable energy technologies contribute to increasing renewable energy production, improving energy efficiency, reduce greenhouse gas emissions, and supporting sustainable development and smart building implementation.

- Alexandria University has established a comprehensive portfolio of 26 innovative programs and projects that promote renewable energy, energy efficiency, climate change mitigation, and sustainable resource management. These initiatives integrate education, research, infrastructure, and community engagement through renewable energy centers, solar and wind power systems, green building technologies, biofuel research, circular economy projects, and international academic partnerships. The University operates renewable energy centers at the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where hybrid solar–wind systems, photovoltaic installations, and Building-Integrated Photovoltaic (BIPV) technologies support both campus operations and applied research. In addition, Alexandria University offers specialized postgraduate programs in climate change, sustainable fisheries, natural resource sustainability, and the blue economy through Erasmus+ and other international collaborations. Campus sustainability projects, including the Green Cycle initiative, greywater recycling, energy-efficient buildings, solar power stations, and plastic recycling laboratories, further demonstrate the University's commitment to reducing carbon emissions, improving resource efficiency, and preparing graduates to address global environmental challenges.

- Driven by the University's keen commitment to transforming into an environmentally friendly institution dedicated to enhancing resource management and rationalizing energy consumption, the Department of Community Service Development launched a comprehensive project aimed at the total transformation of all used fluorescent lighting by replacing them with modern LED bulbs. These light-emitting diodes provide significantly higher efficiency, lower energy consumption, and extended operational lifespans compared to conventional fluorescent lamps. Initiated in 2019, the project has been systematically implemented in structured phases, beginning with a complete inventory of the total quantities required across all university faculties and institutes. During the first quarter, 30% of the necessary stock—covering specific 60 cm, 120 cm, and 9-watt bulb categories—was procured and installed. Concurrently, appropriate measures were executed to safely discard the decommissioned fluorescent lamps through specialized environmental disposal contractors. The second stage involved purchasing and transitioning 37% of the total university requirements, while the third stage accounted for another 25%. In the final phase, the complete transformation of all remaining LED units was successfully performed. The table below summarizes the total quantity of LED bulbs required for this total transition to a green energy source, detailing the replacement percentages achieved over the past four years.

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Elements of Green Building Implementation as Reflected in all new construction and renovation policies:

Green building implementation in new construction and renovation policies focuses on several key elements designed to enhance sustainability, reduce environmental impact, and promote energy efficiency. These elements are typicallyreflected in guidelines and frameworks, such as LEED (Leadership in Energy and Environmental Design) or other local andinternational standards.

1. **Energy Efficiency**

- Integrating solar and wind energy sources into building design reduces reliance on non-renewable

resources.

- Installing systems that optimize ventilation with minimal energy consumption.
- Automated lighting systems that respond to occupancy or time of day.
- As for energy, all the buildings have solar energy generation cells to provide part of the building's needs, which are estimated at about 45%, in addition to using energy-saving lamps (LED).
- The public site lighting poles are powered by solar energy.

2. **Sustainable Materials:** Incorporating materials like recycled steel, concrete, or reclaimed wood.

3. **Indoor Environmental Quality**

- Maximizing the use of daylight to reduce artificial lighting and improve occupant well-being.
- Ensuring adequate ventilation and using non-toxic building materials to maintain clean indoor air.
- Designing spaces to maintain comfortable temperatures naturally through insulation and proper orientation.

4. **Site Selection and Sustainable Landscaping:** The area of the project is 160 acres (667,730.988 m^2), a general site for educational buildings, and 120 acres are complementary activities. The percentage of green areas and lake is about 52% in addition to 25% streets and lanes.

5. **Water Efficiency and Reduction**

- Water-saving plots are used, which will reduce water consumption by about 30%. The sewage water will be treatedand reused in the irrigation of green areas in the project.
- Rainwater is collected in the main lake and used for irrigation.
- The use of plants with few water rationed plants to reduce irrigation needs in addition to absorbing quantities ofrainwater to reduce the severity of rain spells.
- Air conditioning water collection and reuse unit in Faculty of Engineering.
- Wastewater treatment unit at the Faculty of Engineering.
- Reusing wastewater from sinks, showers, and laundry for irrigation or flushing toilets.
- Using drip irrigation and other systems that minimize water use.

6. **Sustainable Transportation:** Proximity to Public Transport: Locating buildings near public transit hubs to reduce theneed for private vehicle use.

The University has reached 55.6% implementation of smart building technologies via the progressive integration of digital infrastructure and intelligent management systems across campus facilities. Major applications feature QR code-based smart attendance systems, automated monitoring and reporting platforms, fire alarm and smoke detection networks, video surveillance, and digital access and safety controls. Comprehensive training programs are executed to ensure effective system adoption and operation. These strategic initiatives drive improved operational efficiency, enhanced safety and security, reduced manual tasks, and the ongoing advancement of a connected, data-driven campus environment.

***Min. at least five requirements for each building**

c.	Name	Place	automation		safety				energy		water		Indoor environment				lighting				Building Area (m^2)
																			3	4	
	University Alexandria; Abis Campus, Buildings 1-11	Alexandria, Egypt																			667,730.988
	University administration building	Alexandria, Egypt																			1940
	Faculty of Physical Education for Boys	Alexandria, Egypt																			13311.93
	Faculty of Physical Education for Girls	Alexandria, Egypt																			2891
	The medical complex	Alexandria, Egypt																			91216
	Faculty of Science in Shatby	Alexandria, Egypt																			22197
	Faculty of Science in Moharram Bek	Alexandria, Egypt																			5485
	Faculty of Engineering	Alexandria, Egypt																			11034
	Campus of Humanities and Social Sciences	Alexandria, Egypt																			80707
0	Faculty of fine Arts	Alexandria, Egypt																			2569
1	Faculty of Specific Educatio	Alexandria, Egypt																			1194

	n																				
2	Faculty of Early Childhood Education	Alexandria, Egypt																			**1407**
3	Medical Research Institute (Horia Street - Smouha)	Alexandria, Egypt																			**2500**
4	Higher Institute of Public Profession	Alexandria, Egypt																			**700**
5	University land in Smouha (College of Nursing - Children's Hospital - Faculty members residences)	Alexandria, Egypt																			**105218.22**
6	Land of Mouwasat Hospital	Alexandria, Egypt																			**20234.27**
7	Institute of Graduate Studies and Research	Alexandria, Egypt																			**2764**
8	Faculty of Agriculture Saba Pasha	Alexandria, Egypt																			**144200.934**
	Total																				**1,377,300.**

								34

———— Please compile one row for each building (or homogeneous part of it) by ticking with a "X" for each requirement ————

Applying green building concepts in the Faculty of Engineering.

The buildings of the Faculty of Engineering - Alexandria University were chosen to be the nucleus from which to implement green building concepts regarding the general vision for applying environmentally friendly green building requirements to the Faculty of Engineering buildings.

The faculty buildings were studied, and the summary of the report was as follows:

1.Mechanical Engineering Building: Complies with green building requirements (LEED) with the silver category.

2.Preparatory building: conforms to green building requirements (LEED) with the silver category.

3.Administration building: It does not currently comply with green building requirements (LEED), but it is possible with simple modifications to adopt it.

4.Electrical Engineering Building: It does not currently comply with green building requirements (LEED), but it is possible to adopt it with simple modifications.

After evaluating the Faculty of Engineering buildings, the elements of Green Building Implementation were considered in all building's maintenance activity and in the construction of new buildings.

University plans to upgrade existing buildings to higher energy efficiency

Alexandria University is upgrading existing facilities through a comprehensive energy efficiency strategy that enhances solar energy conversion, optimizes battery and energy storage systems, and improves overall performance under varying temperature and operational conditions. Using advanced models, simulation, and analysis, the institution evaluates loads, current, and electric potential to reduce carbon dioxide emissions and increase system stability. The plan applies innovative materials, thin films, solar cells, and wind power technologies, combined with intelligent control systems to ensure efficient energy utilization and long-term sustainable development. This approach supports the modernization of campus infrastructure through improved structure, process optimization, and enhanced renewable energy integration.

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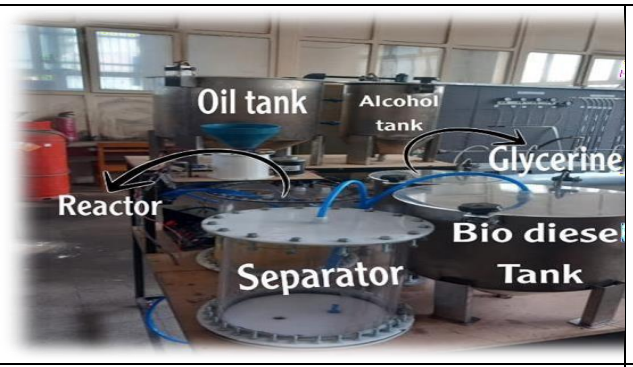
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Solar Energy Center at the Faculty of Agriculture (Alexandria University)



Windmill and Solar Panels (Solar Energy Center at the Faculty of Agriculture - Alexandria University)

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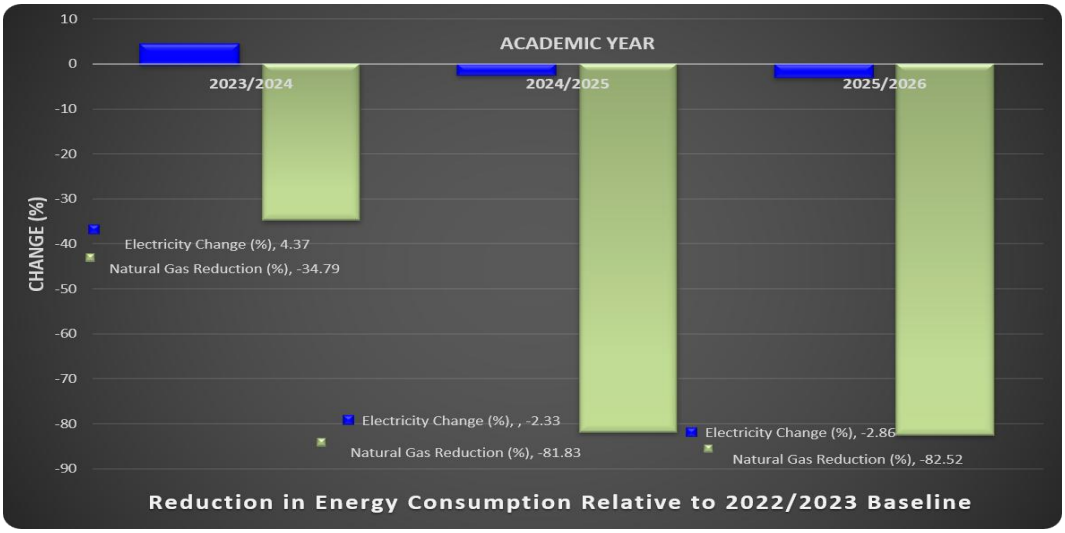
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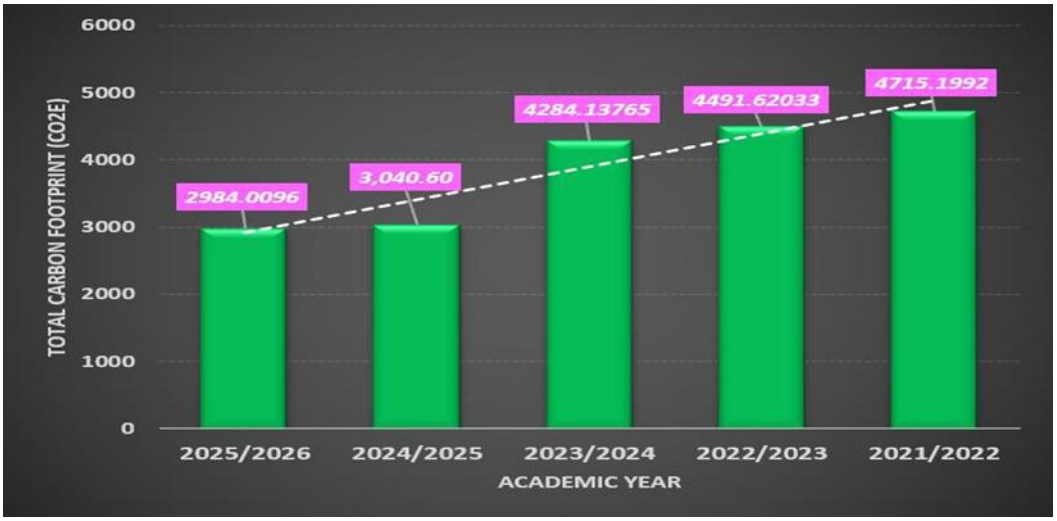
- **Improvement in Energy Efficiency:**

Alexandria University continuously enhances its energy efficiency through targeted energy management initiatives and infrastructure upgrades. Compared with the 2022/2023 baseline, natural gas consumption decreased significantly by 34.79% in 2023/2024, 81.83% in 2024/2025, and 82.52% in 2025/2026. Electricity consumption also declined by 2.33% in 2024/2025 and 2.86% in 2025/2026, following a temporary increase of 4.37% in 2023/2024. These results demonstrate the University's ongoing commitment to reduce energy consumption, improve operational efficiency, and lower greenhouse gas emissions in support of sustainable development goals and regional sustainability frameworks.



- **Reduction in Carbon Footprint**

Alexandria University has achieved a continuous reduction in its carbon footprint through the implementation of energy efficient technologies, renewable energy initiatives, and sustainable campus management practices. As shown in the figure, total carbon dioxide emissions decreased from 4,715.20 tCO_2e in the 2021/2022 academic year to 4,491.62 tCO_2e in 2022/2023 and 4,284.14 tCO_2e in 2023/2024. This downward trend continued with emissions declining to 3,040.60 tCO_2e in 2024/2025 and further to 2,984.01 tCO_2e in 2025/2026. Overall, the University achieved a reduction of approximately 36.7% compared with the 2021/2022 baseline, reflecting its commitment to climate change action, energy conservation, and the transition toward a low-carbon and sustainable development path.



Energy Efficient Appliances Usage

- Alexandria University intends to realize further energy savings by paying close attention to energy management. All the faculties and institutes of the university realize their own energy-saving potential by means of LED lighting and the deployment of sustainable technology.
- Motion-Activated Lighting with PIR Sensors

PIR sensors have been installed in select faculties to enable motion-activated lighting by detecting changes in heat signatures. Gradual implementation of PIR sensors across all faculties and institutes of the university, as a future phase.

- Automated Lighting Systems

Install lighting systems that automatically adjust based on occupancy or time of day to enhance energy efficiency.



Energy Efficient Appliances Usage: Use of LED lighting and lamps (New Abbes Campus, Alexandria University)

Alexandria University Program to reduce Electricity consumption from Air Conditioners and electric devices such as Computers, printers, photocopiers, surveillance cameras.

1. All newly purchased AC are inverter AC to reduce the electricity consumption
2. The new electric devices such as Computers, printers, photocopiers, and surveillance cameras are energy efficient devices.
3. All electronic devises must be shut down at night, when not used.
4. Passive Infrared (PIR) Sensors were implemented in some Faculties for motion-activated lighting

to detect changes in heat signatures when someone or something moves within the sensor's range. These sensors will beimplemented in phases in for all faculties and institutes of the university.

5. Regular Maintenance of all devices.

6. The thermostats of the air conditioner are set at 25°C, and direct sunlight is avoided by using sun protection curtains.

Energy Efficiency

- Integrating solar and wind energy sources into building design reduces reliance on non-renewable resources.
- Installing systems that optimize ventilation with minimal energy consumption.
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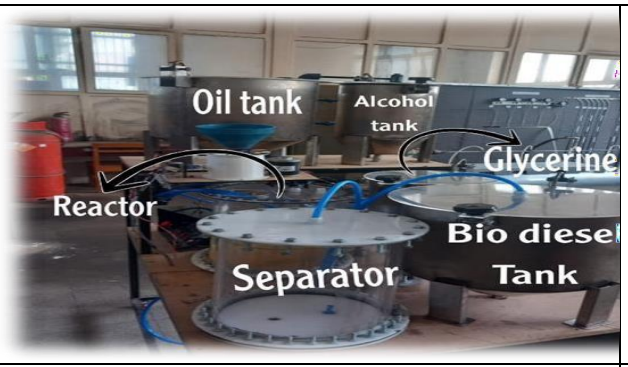
Process for carbon management and reducing carbon dioxide emissions

Alexandria University implements an integrated carbon management approach focused on reducing carbon dioxide emissions through energy efficient operations, renewable energy expansion, and sustainable resource use. The University applies advanced monitoring, analysis, and performance evaluation systems to track emissions and improve environmental stability across campus. Through optimized processes, innovative technology, and compliance with national and international environmental standards, Alexandria University continually enhances its climate action efforts. This comprehensive approach supports long-term sustainable development, aligns with Egypt's Vision 2030, and strengthens the University's leadership in low carbon transformation.

- **Renewable energy sources:**

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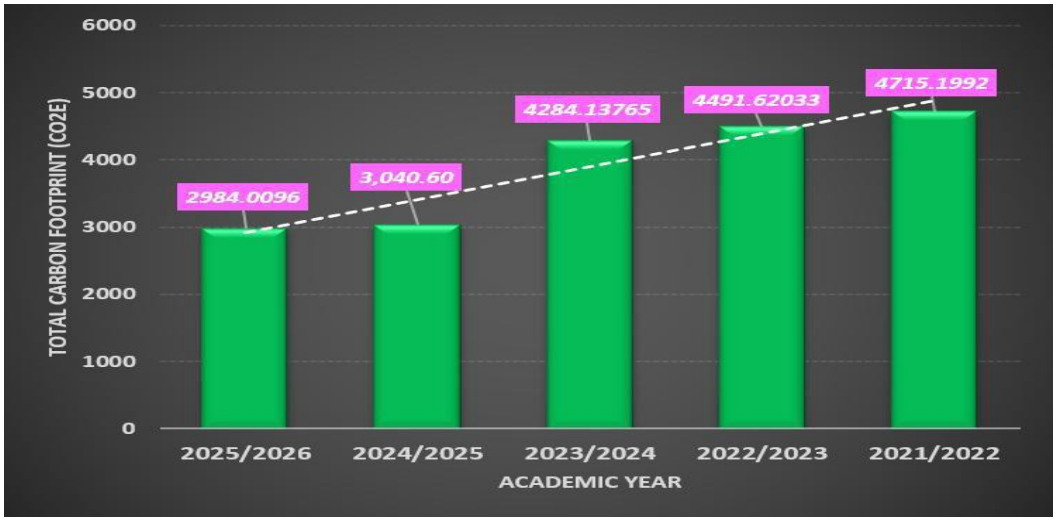
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Carpooling ap ria University, Egypt)

• **Sustainable Transportation:**

Alexandria University is committed to developing a sustainable transportation system that minimizes environmental impacts, improves campus accessibility, and promotes low-carbon mobility. Through an integrated transportation strategy, the University encourages walking, cycling, shared mobility, and public transportation while reducing dependence on private vehicles. These initiatives support climate action,

improve air quality, reduce traffic congestion, and contribute to creating a safe, accessible, and environmentally friendly campus.

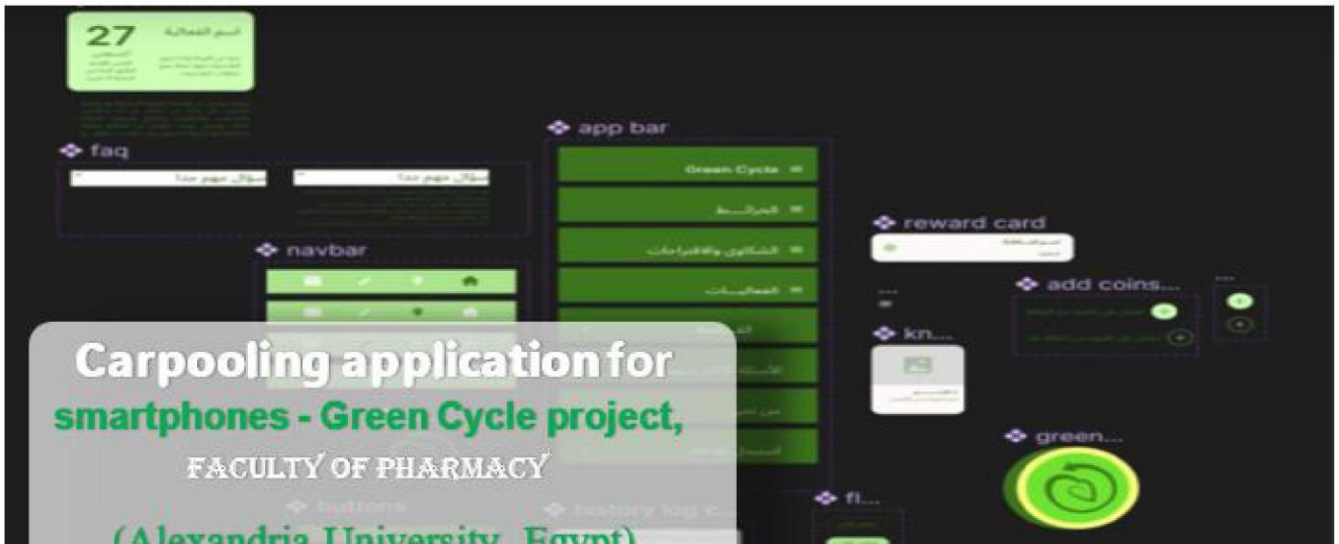
To improve mobility across its campuses, Alexandria University provides regular free shuttle bus services connecting faculties, student housing, research institutes, and major transportation hubs. The shuttle system operates on scheduled routes, ensuring convenient, safe, and accessible transportation for students, faculty members, staff, and visitors while reducing the need for private vehicles. The University has also expanded shared transportation options through partnerships with transportation providers and campus-based ride-sharing initiatives.

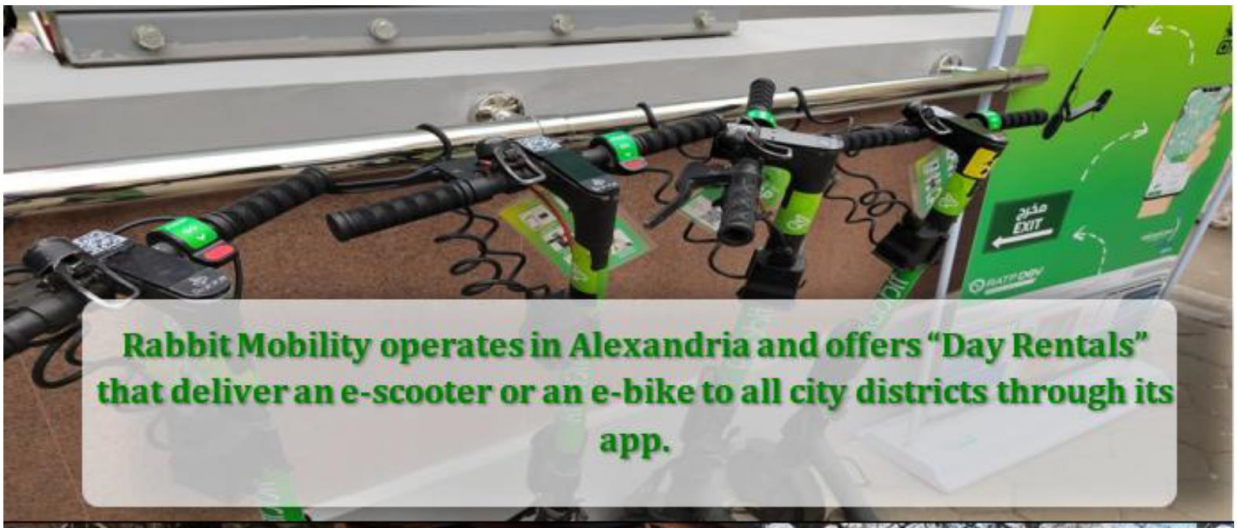
The University has implemented 22 sustainable transportation initiatives designed to reduce private vehicle use and greenhouse gas emissions. These include shuttle services, carpooling programs, bicycle parking facilities, pedestrian-friendly campus design, awareness campaigns, sustainable mobility competitions, smart parking management, and incentives encouraging environmentally responsible travel. Together, these initiatives help decrease traffic congestion, improve campus safety, and enhance environmental quality.

Alexandria University actively promotes zero-emission transportation by providing approximately 1,960 bicycles, e-bikes, and e-scooters across its campuses. Bicycle parking stations, cycling initiatives, the "Green Cycle" carpooling application, and collaborations with micromobility providers encourage students and staff to adopt clean transportation alternatives. The University is also preparing electric vehicle charging infrastructure and supports the gradual transition toward electric and low-emission campus transportation.

Walking remains the preferred mode of movement within Alexandria University campuses. An extensive network of pedestrian pathways connects academic buildings, administrative offices, student facilities, and green spaces. These pathways include shaded walkways, accessible ramps, smooth surfaces, clear signage, lighting, and barrier-free access for persons with disabilities, creating a safe, inclusive, and attractive environment that encourages active mobility while reducing vehicle traffic inside campus.

The University also applies sustainable land-use planning by minimizing parking areas. Parking facilities occupy only approximately 1.13% of the total campus area, with parking primarily reserved for faculty members and administrative staff, while students are encouraged to park outside campus and walk or use sustainable transportation options. Over the past three years, Alexandria University has reduced and optimized parking spaces, converting selected parking areas into green spaces, pedestrian zones, and sustainable mobility infrastructure. These measures improve biodiversity, reduce land sealing, and strengthen the University's commitment to sustainable campus development.









- **Sustainable Graduates careers:**

Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. The number of graduates employed in green jobs remained consistently high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the University's commitment to integrating sustainability into education, equipping students with the knowledge and skills required for emerging green careers, and supporting the transition to a sustainable

and low-carbon economy.

- **Sustainable Waste Management:**

Alexandria University continues to strengthen its sustainable waste management system through integrated initiatives in waste reduction, recycling, and digital transformation. During the 2025/2026 academic year, the University generated 183.19 tons of paper and plastic waste, a 2.76-ton reduction from the previous academic year. Plastic waste decreased from 77.00 tons to 74.94 tons (a reduction of 2.06 tons), while paper waste declined from 108.95 tons to 108.25 tons (a reduction of 0.70 tons). These improvements were achieved through a comprehensive strategy that includes electronic books, paperless administrative services, online examinations, learning management systems, digital communication, QR-code forms, and electronic student services, significantly reducing paper consumption across the University.

To promote a circular economy, Alexandria University has implemented source-separation programs for paper, plastic, glass, metal, organic waste, and aluminum cans across its campuses. Recyclable materials are collected through color-coded waste bins and processed in collaboration with recycling companies. The University also introduced the Green Cycle mobile application, which enables students to locate recycling stations, report recyclable waste using artificial intelligence, and earn reward points that encourage active participation in campus recycling programs. In parallel, a pilot partnership with **BekyaPay** has been launched to facilitate the collection and monetization of recyclable materials, strengthening resource recovery and sustainable waste management practices.

The University's commitment to waste reduction extends beyond campus operations through research, innovation, and community engagement. Alexandria University established the **PECA Fab Lab** for recycling plastic waste into new products using digital manufacturing technologies, while students and researchers have developed innovative projects such as converting used cooking oil into environmentally friendly plasticizers. Community initiatives, including beach-cleaning campaigns, recycling workshops, environmental awareness programs, and partnerships with national and international organizations, further promote responsible consumption, environmental stewardship, and public participation in sustainability.



Institutional side-by-side comparison of plastic waste and paper waste alongside the cumulative Total Waste tonnage between last year and this year. Over a two-year tracking period, 2024/2025 and 2025/2026.





https://apps.apple.com/us/app/green-cycle/id6587549284
https://play.google.com/store/apps/details?id=net.alexpharmacy.green_cycle

The mobile app includes maps of the faculty that help students reach recycling bins more easily. Students can take pictures of the waste to be disposed of, and points are credited after verification using AI.



Alexandria University is exploring a partnership with BekyaPay, with implementation planned by 2027, to collect and monetize recyclable materials such as paper, plastic, and aluminum cans. A pilot has already been launched at the Faculty of Pharmacy, supporting circular economy practices and improving waste segregation.

- **Sustainability-Related Startups**

Alexandria University actively promotes sustainability-driven entrepreneurship through a dynamic innovation ecosystem that supported 46 sustainability-related startups during the reporting period. The University provides comprehensive incubation, mentoring, training, and commercialization support through initiatives such as the Artificial Intelligence Minds Incubator (AIM) and the Alexandria University Technology Incubator for Smart Systems (AUTISS), which foster innovative solutions in artificial intelligence, smart infrastructure, healthcare, agriculture, energy, and digital technologies. Student-led startups, including Samdha Company, develop environmentally friendly products by converting organic and agricultural waste into natural fertilizers and biodegradable materials, thereby reducing waste, supporting sustainable agriculture, and conserving water. In addition, entrepreneurship competitions such as the Startup Olympics and international programs, including the Bio-iChallenge and Hult Prize, encourage students and researchers to transform innovative ideas into market-ready businesses with significant environmental and social impact.



Artificial Intelligence Minds Incubator (Faculty of Engineering, Alexandria University)



Artificial Intelligence Minds Incubator (Faculty of Engineering, Alexandria University)



Alexandria University Technology Incubator for Smart Systems {AUIISS) Incubator (Faculty of Engineering, Alexandria University)



Agro-Food Industries Alliance Products



New partners

Agro-Food Industries Alliance Project

Startup name: "National Committee Sustainable Development"

Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED)

Description: Proposed Mission: Striving to maximize the utilization of the outputs of education and scientific research with the sustainable development goals "Egypt Vision 2030", linking them with the United Nations goals for sustainable development together with developing a framework for the educational system governance aiming at achieving the well-being of society. It includes green, sustainable development and innovative incubators.



Samdha Company, founded by Musaad Darwish, a student in the Department of Civil and Environmental Engineering at the Faculty of Engineering





Samdha Company: The plants in the 2 photos on the left are planted in presence of natural organic fertilizers

An energy efficiency plan to reduce overall energy consumption

Alexandria University implements an integrated energy efficiency plan focused on reducing overall energy consumption through optimized systems, renewable solar and wind integration, and smart control and monitoring technologies. The University applies advanced analysis, performance evaluation, and energy conservation methods to enhance building efficiency, improve energy utilization, and lower carbon emissions. By expanding photovoltaic systems, deploying efficient equipment, and upgrading infrastructure through data-driven optimization, Alexandria University strengthens its transition toward renewable energy, sustainable development, and long-term environmental stability.

Alexandria University – Energy Efficiency Plan to Reduce Overall Energy Consumption

SDG 7: Affordable and Clean Energy | THE Impact Rankings – Indicator 7.2.4

Alexandria University has documented evidence of an institutional energy efficiency plan, including measures to reduce electricity consumption across faculties, institutes, and administrative facilities.

The official university documents covering the 2024–2025 reporting period, including a specific SDG 7 evidence category, an institutional energy conservation initiative, and reported reductions in energy consumption.

Evidence 1 – Official SDG 7 Energy Efficiency Plan (2024–2025)

Alexandria University's sustainability portal explicitly identifies an energy efficiency plan to reduce overall energy consumption under its 2024–2025 SDG 7 documentation.

Evidence 2 – University Energy Conservation Committee (16 January 2025)

The Community Service and Environmental Development Council discussed establishing a committee responsible for rationalizing electricity consumption across university faculties and institutes, consistent with Egypt Vision 2030.

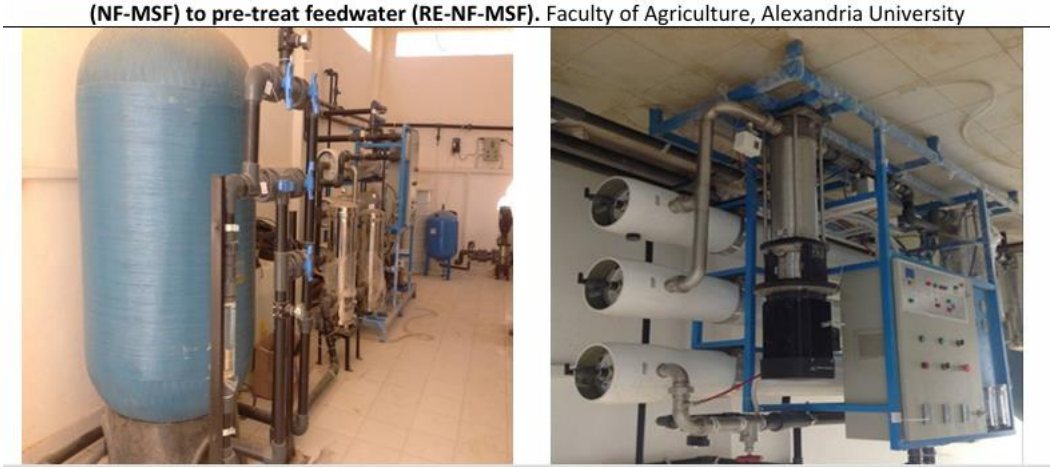


Evidence 3 – Sustainability Report 2024–2025

The report provides quantitative electricity, renewable energy, natural gas, and carbon footprint indicators, supporting the assessment of energy management performance.



Innovative Renewable Energy RE-Multi-stage flash system (MSF) with salt precipitator and nanofiltration (NF-MSF) to pre-treat feedwater (RE-NF-MSF). Faculty of Agriculture, Alexandria University

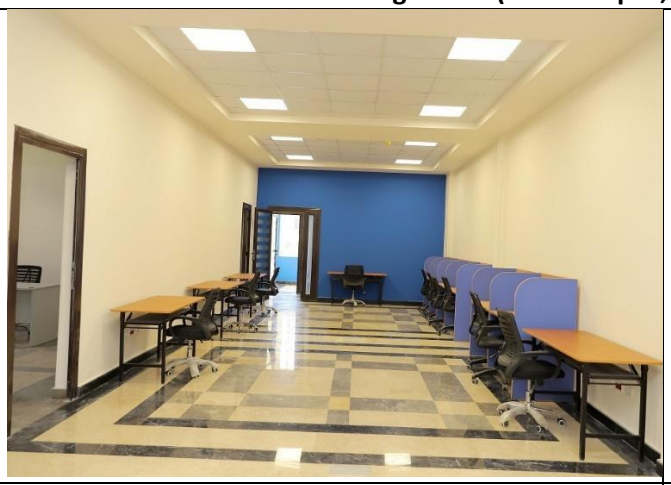


Evidence 4 – Energy Efficiency Implementation Programme

- **Alexandria University Project on Using LEDs as Energy-Efficient Bulbs**

Within the framework of the University's keenness to transform into a green, environmentally friendly university that works to enhance its resources and rationalize energy consumption, the Department of Community Service Development has launched a project for the total transformation of the used LED bulbs instead of the fluorescent ones. The light-emitting diode (LED) bulbs are more efficient, and energy-saving compared to fluorescent bulbs, with a relatively longer life span.

The project has been implemented in phases since 2019 based on the preparation of an inventory of the total numbers needed for all faculties and institutes of the university. The first quarter, the numbers required, which represents the types of 60 cm, 120 cm and 9 watts' bulbs, has been spent and installed, which are almost 30%. In parallel, appropriate measures were taken to dispose of the lost fluorescent lamps through one of the companies concerned with safe disposal. The second step required the purchase and transformation of 37% of the total needs of the faculties and institutes of the university. The third step required the purchase and transformation of 25% of the total needs of the faculties and institutes of the university. During the last phase, the transformation of all remaining LED bulbs was performed.

<table>
<tr><td colspan="2"> 
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<tr><td colspan="2">Teaching rooms (Abis Campus, Alexandria University)</td></tr>
<tr><td></td><td></td></tr>
<tr><td>All teaching rooms contain well-equipped technological facilities (screens, data shows, and white boards).</td><td>Smart screens are used in all lecture halls</td></tr>
</table>

2. Quantitative evidence from 2024–2025

Alexandria University's sustainability report provides the following reported figures:

Reported electricity consumption **4,228,996** kWh

Reported electricity reduction **6.42%** Compared with the report's stated reference period

Renewable electricity production **1.21 million** kWh/year

Renewable electricity share **28.69%** Of reported electricity consumption

The above figures shows that Alexandria University implements an institutional energy efficiency plan aimed at reducing overall energy consumption, improving building performance, and promoting sustainable energy management across its faculties, institutes, and administrative facilities.

The plan incorporates the phased replacement of conventional lighting with energy-efficient LED systems, the procurement of inverter air-conditioning units, the installation of motion-activated lighting controls, regular equipment maintenance, and operational measures to reduce unnecessary electricity consumption.

In January 2025, the University's Community Service and Environmental Development Council discussed establishing a university-wide committee to oversee electricity conservation, strengthening institutional coordination and accountability.

The University's 2024–2025 Sustainability Report records electricity consumption of approximately 4.23 million kWh and reports a 6.42% reduction relative to its stated reference period. Renewable electricity production was reported at approximately 1.21 million kWh annually, equivalent to 28.69% of electricity consumption.

These documented policies, operational measures, and reported performance indicators demonstrate Alexandria University's commitment to systematic energy conservation, sustainable infrastructure development, and continuous improvement in institutional energy efficiency.

- **Renewable Energy Sources in Campus: 1,228,291.2 kWh/year**

Renewable energy:

1) **Solar Thermal Systems:** Solar collectors generate renewable thermal energy to support heating and hot water demands and complement building energy systems.

2) **Wind Energy:** Wind turbines convert wind energy into renewable electricity to support campus operations and reduce dependence on conventional energy sources.

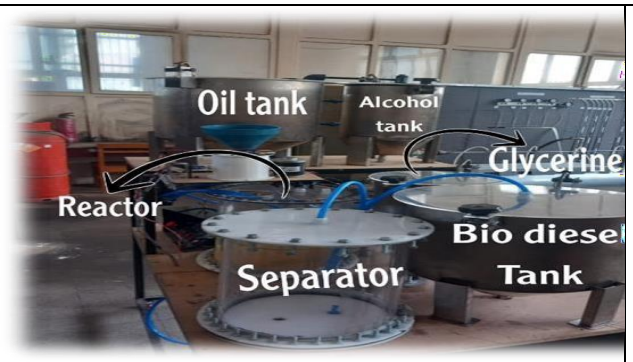
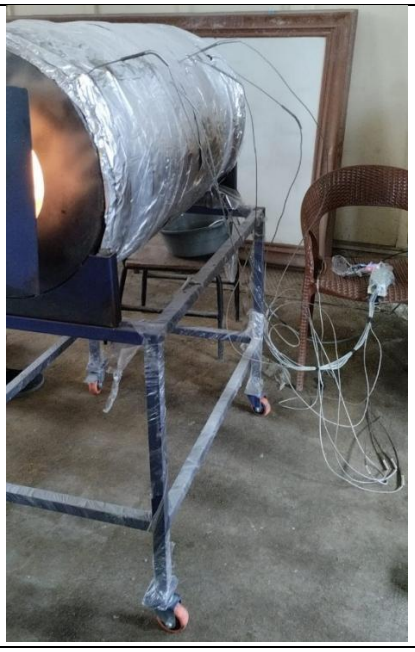
3) **Biodiesel Production:** Biodiesel derived from biological feedstocks such as plant oils, used cooking oil, and other renewable organic materials serves as a cleaner alternative fuel for energy generation and operational activities.

4) **Green Hydrogen:** Hydrogen produced through water electrolysis using renewable electricity (e.g., solar or wind power) serves as a clean energy carrier that can support electricity generation, thermal applications, and future low-carbon energy systems, including CHP applications where implemented.

5) **Biomass Energy:** Biomass utilization includes advanced conversion technologies such as carbonization, torrefaction, gasification, pyrolysis, and biochar production, contributing to renewable energy generation and efficient resource utilization.

6) **Waste-to-Energy Systems:** Organic or biodegradable waste is converted into useful energy, with CHP applications enabling simultaneous production of electricity and recoverable heat.

Together, these renewable energy technologies contribute to increasing renewable energy production, improving energy efficiency, reducing greenhouse gas emissions, and supporting sustainable campus development and smart building implementation.

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Design of Integrated Augmented Vertical Axis Wind Turbine (VAWT) With Solar Energy System for High Rise Urban Applications (Faculty of Engineering, Alexandria University)	Experimental and Simulation Study of Natural Gas–Hydrogen/Diesel RCCI for Engine Decarbonization (Faculty of Engineering, Alexandria University)



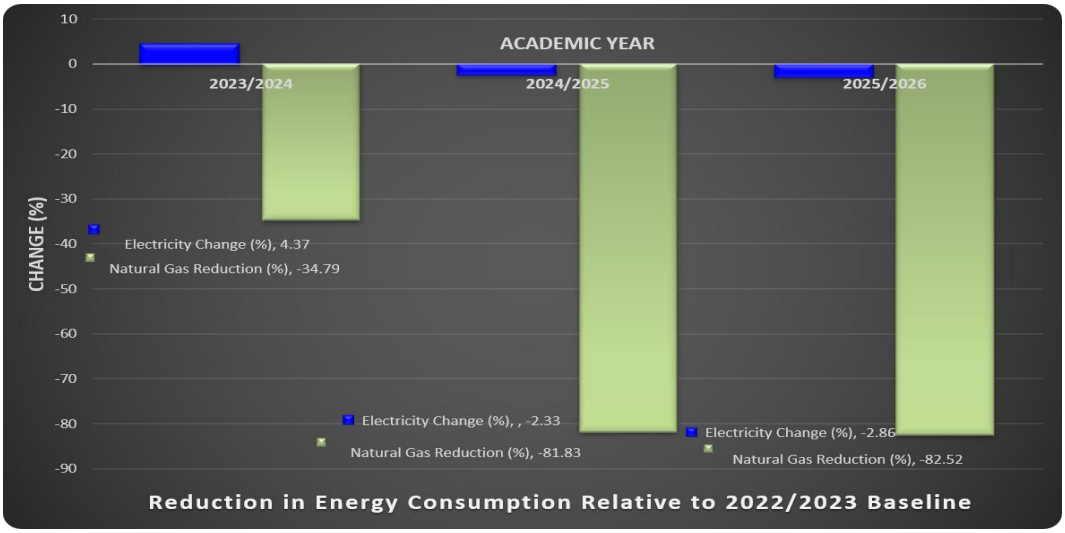
Solar Energy Center at the Faculty of Agriculture (Alexandria University)



Windmill and Solar Panels (Solar Energy Center at the Faculty of Agriculture - Alexandria University)

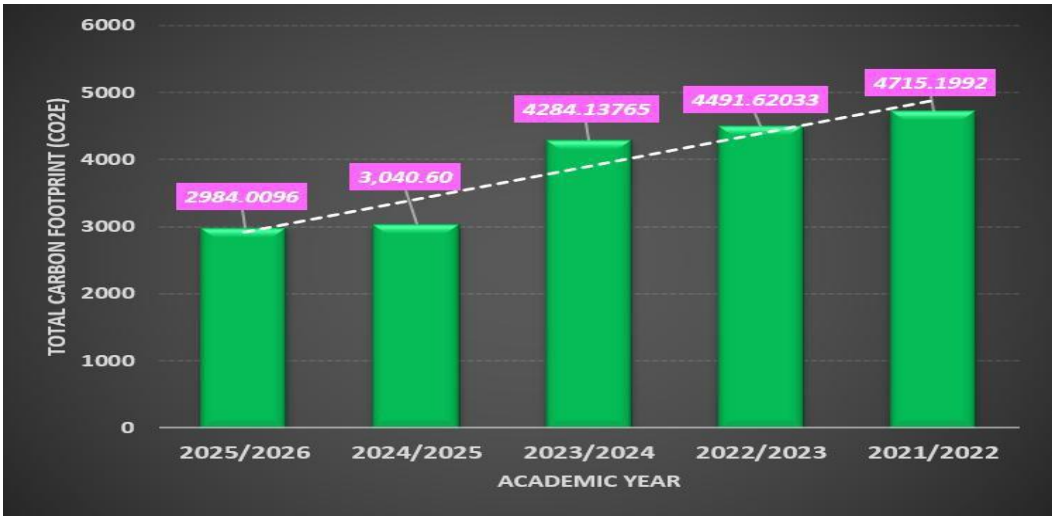
- **Improvement in Energy Efficiency**

Alexandria University continues to improve energy efficiency through targeted energy management initiatives and infrastructure upgrades. Compared with the 2022/2023 baseline, natural gas consumption decreased significantly by **34.79%** in 2023/2024, **81.83%** in 2024/2025, and **82.52%** in 2025/2026. Electricity consumption also declined by **2.33%** in 2024/2025 and **2.86%** in 2025/2026, following a temporary increase of **4.37%** in 2023/2024. These results demonstrate the University's ongoing commitment to reducing energy consumption, improving operational efficiency, and lowering greenhouse gas emissions in support of the Sustainable Development Goals and Egypt's Vision 2030.



- **Reduction in Carbon Footprint**

Alexandria University has achieved a continuous reduction in its carbon footprint through the implementation of energy-efficient technologies, renewable energy initiatives, and sustainable campus management practices. As shown in the figure, total carbon emissions decreased from **4,715.20 tCO_2e** in the 2021/2022 academic year to **4,491.62 tCO_2e** in 2022/2023 and **4,284.14 tCO_2e** in 2023/2024. This downward trend continued with emissions declining to **3,040.60 tCO_2e** in 2024/2025 and further to **2,984.01 tCO_2e** in 2025/2026. Overall, the University achieved a reduction of approximately **36.7%** compared with the 2021/2022 baseline, reflecting its commitment to climate action, energy conservation, and the transition toward a low-carbon and sustainable campus



- **Alexandria University Program to reduce Electricity consumption from Air Conditioners and electric devices such as Computers, printers, photocopiers, surveillance cameras.**

7. All newly purchased AC are inverter AC to reduce the electricity consumption.
8. The new electric devices such as Computers, printers, photocopiers, and surveillance cameras are energy efficient devices.
9. All electronic devises must be shut down at night, when not used.

10. Passive Infrared (PIR) Sensors were implemented in some Faculties for motion-activated lighting to detect changes in heat signatures when someone or something moves within the sensor's range. These sensors will be implemented in phases in for all faculties and institutes of the university.

11. Regular Maintenance of all devices.

12. The thermostats of the air conditioner are set at 25°C, and direct sunlight is avoided by using sun protection curtains.

- **Advanced Solar Complex Design Project**

The implementation of an advanced solar complex design project has been completed. The project aims to synthesize biofuel from agricultural and food industry waste and is located at the research and production farm of the Faculty of Agriculture, Saba Basha, Alexandria University. It is funded by the Science, Technology & Innovation Funding Authority (STDF) and executed through a collaboration between the Faculty of Engineering at Alexandria University and the Desert Research Institute at the City of Scientific Research and Technological Applications (SRTA-City), situated at the tenth village in Abis.

The solar complex area is 300 square meters and comprises a system of reflective mirrors that concentrate solar radiation onto a solar collector. Ambient air is introduced at a controlled velocity and heated from 25°C to approximately 500°C using the concentrated solar energy. The heated air is then directed to a heat exchanger to produce biochar from various types of agricultural waste. Additionally, the hot air is utilized in a solar dryer for dehydrating a wide range of agricultural products, including vegetables, fruits, and fodder.

This solar complex serves as a green hub at the Saba Basha agricultural farm, harnessing clean solar energy for biofuel production and drying processes without reliance on electrical power. Consequently, it contributes to environmental preservation and the reduction of carbon dioxide emissions. The solar dryer also holds future potential for seawater desalination and clean electricity generation, representing a developmental pathway for optimal utilization of the system.



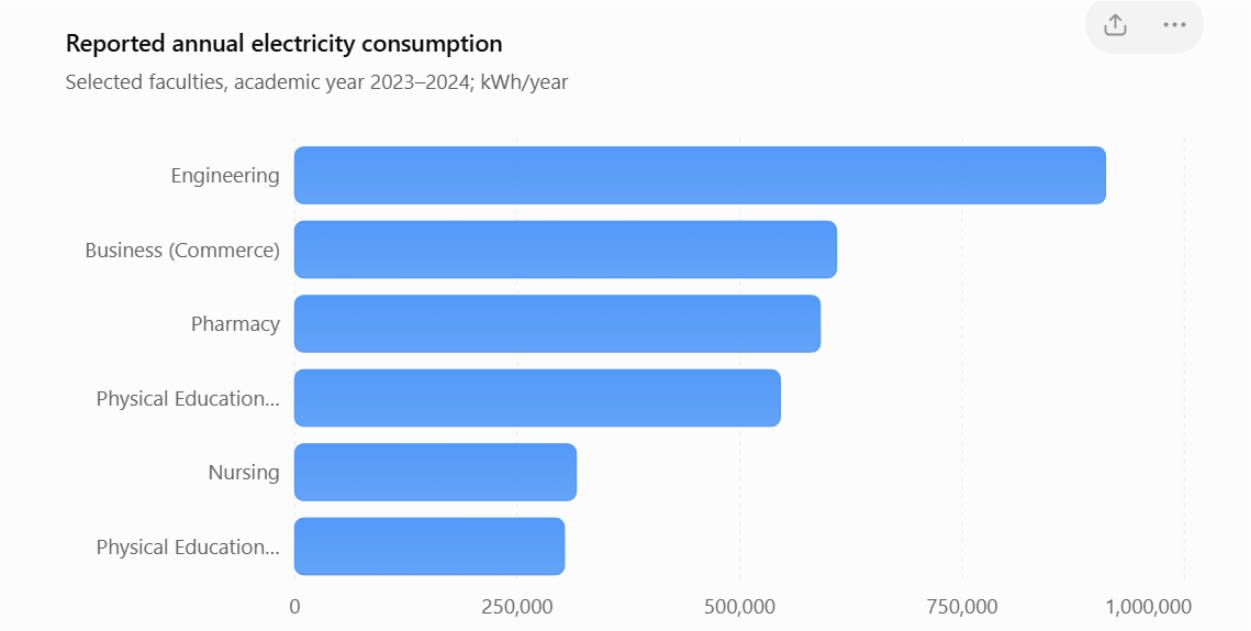
Alexandria University energy reviews to identify areas where energy wastage is highest

Alexandria University uses systematic energy reviews to evaluate building performance and monitor energy consumption across its faculties and institutes. Through expert energy audits, assessment tools, and data analysis, the institution identifies energy waste, improves energy efficiency, and ensures compliance with environmental regulations. These reviews reduce carbon emissions, support sustainable development, and strengthen institutional leadership aligned with Egypt Vision 2030, clean energy policies, and global climate goals.

Alexandria University undertakes institutional energy reviews to assess energy consumption, identify inefficient facilities and equipment, and support the implementation of energy conservation measures across its faculties, institutes, and administrative buildings.

The University maintains electricity consumption records at faculty and institute levels, enabling comparative assessment of energy demand and identification of facilities requiring further technical investigation. Its energy management activities include building energy monitoring, assessment of lighting and cooling efficiency, thermal insulation evaluation, electrical load analysis, and examination of equipment performance. The University's Energy Conservation Advisory Group, based at the Institute of Graduate Studies and Research, provides specialized technical expertise in energy assessment, combustion efficiency, electrical systems, and environmental measurements.

In January 2025, the University's Community Service and Environmental Development Council discussed establishing a university-wide committee to coordinate electricity conservation across faculties and institutes. These activities provide an institutional framework for identifying potential energy wastage, prioritizing energy-efficiency improvements, and monitoring progress toward reducing overall energy consumption.



Alexandria University has made significant academic and operational progress in sustainability over recent years, aligning institutional practices with Egypt Vision 2030 and sustainable development goals. The university’s comprehensive waste management framework features formal policy, defined responsibilities, and quantifiable targets monitored through annual reporting to improve energy efficiency, reduce carbon emissions, and optimize resources.

- Alexandria University leads community service and environmental protection across regional governorates while supporting sustainable development. The university and its faculties remain committed

to national environmental regulations and policy frameworks. Through accredited environmental impact assessment studies, environmental records, and digital monitoring, consultants evaluate project performance to optimize resource utilization, manage waste, reduce carbon emissions, and ensure compliance with safety standards across all academic buildings, facilities, and campus operations.

- The university integrates administrative principles into governance structures, capacity building programs, awareness initiatives, and institutional oversight mechanisms. Control measures are periodically reviewed to reinforce internal performance, reduce institutional risks, and ensure compliance with national regulations and standards.
- Program effectiveness, system performance, and energy efficiency are continuously evaluated through data analytics, operational indicators, storage rates, performance surveys, and stakeholder feedback. Evaluation outcomes are used to revise control models, introduce emerging technology solutions, and strengthen energy conversion readiness. Alexandria University's power management and control system functions as a comprehensive governance mechanism that supports optimal behavior, protects resources, improves operational performance, strengthens public trust, and contributes to sustainable energy development.
- Renewable energy transformation forms a central pillar of Alexandria University's sustainability agenda. Since 2017, the university has implemented energy conservation and digitalization programs aimed at reducing power consumption and improving battery efficiency.
- Major institutional mechanism supporting this vision is the Alex University Sustainability Office, which coordinates sustainability planning and implementation across the university. The office promotes sustainability culture, improves energy efficiency, develops environmental policies, monitors environmental performance, supports innovation in renewable energy and clean technologies, strengthens partnerships, and advances green economy principles. Sustainability governance is reinforced through subsidiary offices and faculty coordinators to ensure institution-wide implementation and monitoring.



- Alexandria University has consistently published its sustainability report on its official website for four consecutive years, covering the 2022, 2023, 2024, and 2025 reporting periods. Each report provides a comprehensive overview of the university's sustainability achievements, including environmental performance, green campus infrastructure, academic and research initiatives aligned with sustainable development goals, and community engagement activities that support Egypt Vision 2030. The reports also highlight formal institutional policies and governance frameworks for integrating sustainability across education, research, operations, and outreach. These policies remain publicly accessible and systematically embedded within strategic planning and operational practices. Continuous annual publication reflects strong commitment to transparency, accountability, and sustainable development.
- Green-building measures are implemented across the campus. LED lighting with occupancy/daylight controls is installed; BMS-based scheduling and monitoring-based commissioning with sub-metering are applied; VFDs are fitted on major fans and pumps and AHU motors are upgraded; exterior lighting curfews with photocells are applied; rooftop/carport solar PV is deployed; heat-island reduction is addressed with cool roofs, shade trees, light/permeable paving, and PV canopies; rainwater harvesting and AC-condensate recovery are used for irrigation and flushing; smart irrigation and drip systems with drought-tolerant planting

are in place; water-efficient fittings, leak detection, and water sub-metering are implemented; low-emitting, EPD/recycled-content materials are specified under a sustainable purchasing policy, and sustainably sourced timber is required; waste segregation for paper/card, plastics/metals, glass, e-waste, and organics is provided; ventilation and IAQ controls (CO_2 monitoring, filtration, ETS control, IAQ testing) are implemented; daylighting and glare control and acoustic comfort measures are provided; integrated pest and landscape management with erosion control is practiced; refrigerants with zero ODP and low GWP are specified with leak detection and recovery; safety programs and Building User Manuals are maintained; monthly KPIs (BEI, kWh saved, IAQ, faults closed) are reported; and innovation pilots (analytics/FDD, circular labs, low-carbon materials) are underway, while heat-recovery solutions for hot water/reheat are planned.

- Driven by the University's keen commitment to transforming into an environmentally friendly institution dedicated to enhancing resource management and rationalizing energy consumption, the Department of Community Service Development launched a comprehensive project aimed at the total transformation of all used fluorescent lighting by replacing them with modern LED bulbs. These light-emitting diodes provide significantly higher efficiency, lower energy consumption, and extended operational lifespans compared to conventional fluorescent lamps. Initiated in 2019, the project has been systematically implemented in structured phases, beginning with a complete inventory of the total quantities required across all university faculties and institutes. During the first quarter, 30% of the necessary stock—covering specific 60 cm, 120 cm, and 9-watt bulb categories—was procured and installed. Concurrently, appropriate measures were executed to safely discard the decommissioned fluorescent lamps through specialized environmental disposal contractors. The second stage involved purchasing and transitioning 37% of the total university requirements, while the third stage accounted for another 25%. In the final phase, the complete transformation of all remaining LED units was successfully performed. The table below summarizes the total quantity of LED bulbs required for this total transition to a green energy source, detailing the replacement percentages achieved over the past four years.





LED Lighting



Green building implementation through the use of sun breakers in the SSP building at the Faculty of Engineering

- The university has achieved 55.6% implementation of smart building technologies through progressive integration of digital infrastructure and intelligent management systems across campus facilities. Key applications include digital smart attendance systems, automated monitoring and reporting platforms, fire alarm and smoke detection systems, video surveillance, and digital access and safety controls. Training programs have also been conducted to support effective system adoption and operation. These initiatives contribute to improved operational efficiency, enhanced safety and security, reduced manual processes, and advancement of a connected, data-driven environment.
- The university also monitors greenhouse gases and solid particles to prevent environmental pollution and mitigate climate change. Monitoring is conducted by faculty members holding consultant certificates for self-monitoring of facilities, alongside environmental measurements performed in accredited laboratories.

- **Energy Conservation Advisory Group in Center for Graduate Studies and Research – Institute of Graduate Studies and Research – Alexandria University**

This group is concerned with reviewing energy in all its forms at all levels, such as measuring and analyzing exhaust gases in furnaces and boilers with the aim of improving combustion efficiency and reducing emissions, measuring and analyzing boiler water, in addition to tests of thermal insulation efficiency, lighting efficiency, electrical energy analysis, and compatibility with electrical loads. It also determines the power factor to increase efficiency. Rationalizing the energy used, reviewing energy use, radiation measurements and safety tests for radioactive sources. The group has a mobile laboratory that can visit sites and make environmental measurements related to energy as well as emissions and study energy consumption and the extent of thermal insulation in industrial sites.

A policy on divesting investments from carbon-intensive energy industries especially coal and oil

Alexandria University is committed to reducing environmental impact by promoting responsible and sustainable finar practices. The university supports an investment policy that discourages funding for carbon-intensive energy indust particularly coal and oil, while encouraging funds toward renewable energy, green technology, and low-carbon innovat This approach aligns with Egypt Vision 2030, global climate commitments, and sustainable development strategy.

The University's 2024–2025 Sustainability Report states that its carbon footprint decreased from 7,541.33 tonnes CO_2 2020–2021 to 3,040.60 tonnes in 2024–2025. It also reports renewable electricity production of approximately 1.21 mil kWh annually. These figures demonstrate environmental progress

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Solar Energy Center at the Faculty of Agriculture (Alexandria University)



Windmill and Solar Panels (Solar Energy Center at the Faculty of Agriculture - Alexandria University)

Policy on Energy and water sustainable use

Alexandria university is Committed to pursuing sustainable development within and through the university and to reassessing higher education and its role in the transition to more sustainable societies. This includes building synergies and collaboration in the search for effective and innovative approaches to solving today's as well as future sustainable development challenges.

The university ensures that all renovations and establishment of new buildings are following energy efficiency standards and water conservation strategies.

The university ensures divesting investments and purchases from Carbon-intensive energy industries particularly coal and oil.

The university through its faculties is committed to maximise water reuse across the university buildings and through all services provided in the process of education and research

The objective of this statement is Commitment to offering an open, interactive and collaborative forum for discussion and action, to raise awareness and advocate for changes needed changes in higher education to best serve the goals of sustainable development, (SDGs) as well as building international linkages and cooperation on the basis of core values of academic freedom, institutional autonomy and related local and global responsibilities to society.

Being uncompliant with the commitment to purse sustainable development issue will be regarded as interfering with personal development of the students, and the university administration will act accordingly

Policy created September 2019

Policy reviewed October 2022

Prof. Abdel Aziz Konsowa

University President

A. Konsowa

جامعة الإسكندرية
ALEXANDRIA
UNIVERSITY

Alexandria University Sustainable Investment policy.

A sustainable investment policy refers to the set of guidelines and principles that Alexandria University . The policy aims to align the organization's investment activities with its sustainability goals and values.

Implementing a sustainable investment policy align investments strategies of the university with sustainable development Goals, and promotes responsible investing practices, and contribute to the transition to a more sustainable and resilient economy. It also attracts socially and environmentally conscious investors and stakeholders who value sustainable investment practices.

Important elements include:

1. ESG Integration: The policy should emphasize the integration of ESG factors into the investment decision-making process. This involves considering environmental and social risks and opportunities, as well as governance practices of potential investments. ESG analysis can help identify companies or projects that demonstrate strong sustainability performance.
2. Sustainable objectives: The policy defines the university's sustainability objectives and priorities focusing on on specific ESG themes, such as climate change, renewable energy, social justice, or diversity and inclusion. Such objectives help guide investment strategies and ensure consistency with sustainability goals .
3. Engagement and Stewardship: The policy outlines the organization's commitment to active engagement with investee companies to encourage improved ESG practices. This includes voting on shareholder resolutions, engaging in dialogues, and exercising influence to promote positive change. Stewardship activities help drive sustainable behavior and align investee companies with sustainability goals.
4. Ongoing review and monitoring: The policy includes procedures for ongoing monitoring and review of investments to ensure they continue to meet sustainability criteria. Regular assessments of portfolio performance, ESG risks, and evolving sustainability trends help maintain alignment with the university's strategic objectives
5. Positive Impact investments: The policy ensures commitment to investing in projects that generate positive environmental and social impacts. This could include investing in renewable energy projects in new buildings of the universities and in the upgrade process taking place, , clean technologies in the use of energy and water, sustainable infrastructure with green areas .
6. Reporting and transparency: The policy encourages collaboration with the industry sector, and stakeholders to advance sustainable investment practices. This involves

sharing best practices, participating in initiatives, and supporting industry-wide efforts to promote sustainability.

Adopting this sustainable investment policy, the university contributes to positive social and environmental outcomes while generating financial returns. It demonstrates a commitment to responsible investing and can attract stakeholders who value sustainability.

Following this strategy, the university has established several investment projects e.g. technology park for incubation and acceleration, Alexandria National university, International university with two branches in Chad and south Sudan, as well as International Branch Campuses (IBC).

University president Endorsement

A. Konsowa

Prof. Abdel Aziz Konsowa

Alexandria University Sustainable Procurement/purchasing policy.

A sustainable procurement or purchasing policy refers to the set of guidelines and principles that Alexandria University follows when procuring goods, services, or works in a sustainable and socially responsible manner. It aims to minimize the negative environmental, social, and economic impacts associated with the procurement process and promote sustainable practices throughout the supply chain.

Implementing a sustainable procurement and purchasing policy brings several benefits including reduced environmental impact, enhanced reputation, cost savings through efficiency improvements, and increased social responsibility. The element of the policy are used as guidelines that the university follows when making decisions with a focus on environmental, social and governance (ESG) factors and ensure consistency with sustainability goals.

Below is the set of key elements included in the policy:

1. Environmental Considerations: prioritization of environmentally friendly products and services that have a reduced carbon footprint, conserve resources, promote energy efficiency, and minimize waste generation. This includes the use of renewable materials, promote recycling and waste reduction, and specify environmentally preferable conditions and standards.
2. Social and Labor Standards: The policy require suppliers to comply with social and labor standards, including fair wages, safe working conditions, and respect for human rights. Such a policy promotes the use of suppliers who have fair trade or responsible sourcing certifications and encourage diversity and inclusion
3. Ethical Sourcing: The policy addresses issues such as conflict minerals, child labor, and corruption. It requires suppliers to provide evidences of responsible sourcing practices and ensure that they do not engage in unethical or illegal activities.
4. Screening and Exclusions: The policy includes criteria for screening and excluding certain investments based on negative ESG factors. For example, it may exclude investments in companies involved in fossil fuel extraction or those with poor labor practices. This approach aims to align investments with ethical and sustainable principles
5. Supplier Evaluation and Selection: The policy outlines criteria for evaluating and selecting suppliers based on their sustainability performance. It considers factors such as environmental management systems, social responsibility practices, and adherence

to relevant standards. The selection is based on companies or projects with strong ESG performance or those focused on sustainable solutions, such as renewable energy, clean technology, or social impact initiatives

6. Life Cycle Assessment: The policy may encourage the consideration of a product's life cycle impacts, including the extraction of raw materials, production processes, transportation, use, and disposal. This approach aims to select products that have a lower overall environmental impact throughout their life cycle.
7. Collaboration and Engagement: The policy emphasizes collaboration with suppliers, stakeholders, and industry groups to promote sustainability initiatives and innovation. It encourages wherever possible partnerships for knowledge sharing, and joint project.
8. Monitoring and Reporting: The policy establishes mechanisms to monitor and measure the effectiveness of sustainable procurement practices. Regular reporting is routinely carried out to track progress, identify areas for improvement, and communicate achievements.
9. Training and Awareness: The policy requires training programs as a must to educate staff and suppliers about sustainable procurement practices, and foster a culture of sustainability within the university

University president Endorsement

Prof. Abdel Aziz Konsowa

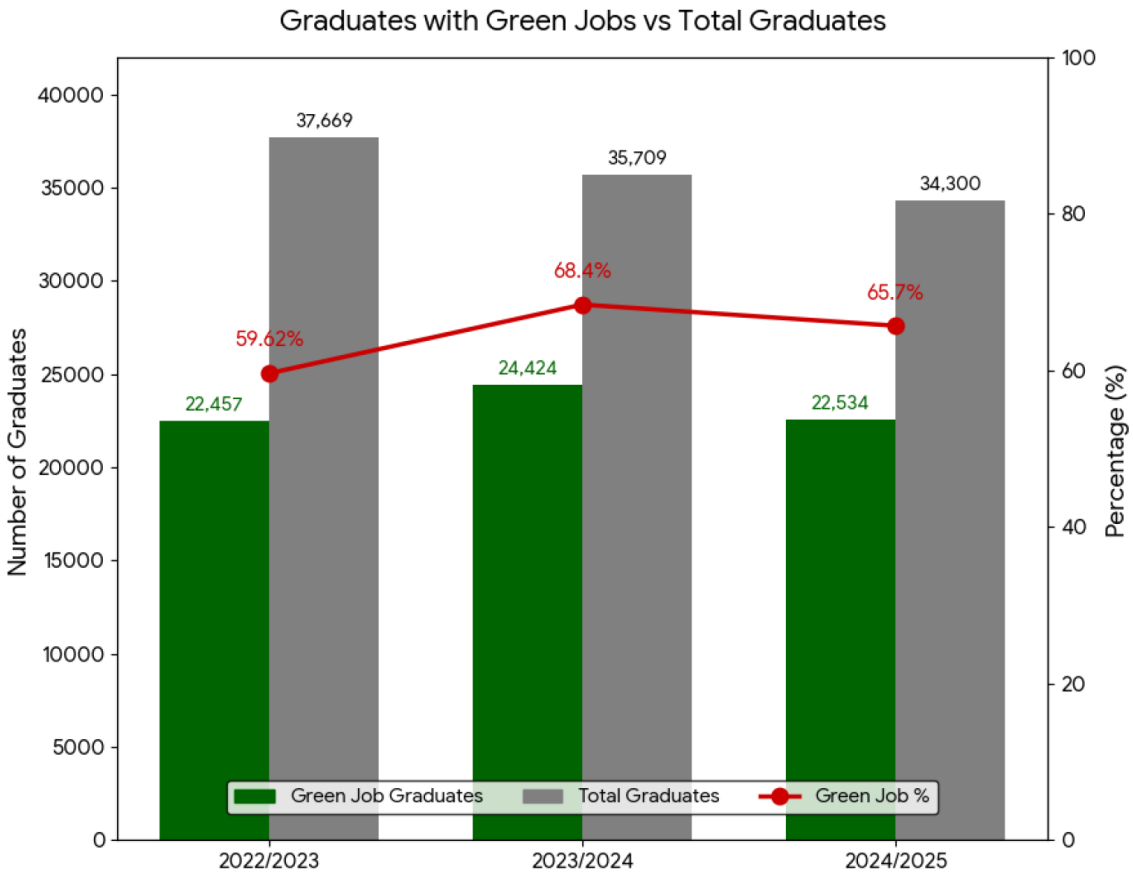
Programmers for local community to learn about importance of energy efficiency and clean energy

Alexandria University actively educates the local community about energy efficiency and clean energy through workshops, outreach activities, and sustainability events delivered across its faculties and centers. These programs raise awareness of renewable energy, promote practical skills, and support Egypt Vision 2030 by engaging students, schools, and the public in hands-on learning. Through the Center of Excellence for Water, the Solar Energy Center, and faculty initiatives, the university provides training, innovation spaces, and community services that strengthen the transition to clean energy practices.

- Alexandria University has consistently published its sustainability report on its official website for four consecutive years, covering the 2022, 2023, 2024, and 2025 reporting periods. Each report provides a comprehensive overview of the university's sustainability achievements, including environmental performance, green campus infrastructure, academic and research initiatives aligned with sustainable development goals, and community engagement activities that support Egypt Vision 2030. The reports also highlight formal institutional policies and governance frameworks for integrating sustainability across education, research, operations, and outreach. These policies remain publicly accessible and systematically embedded within strategic planning and operational practices. Continuous annual publication reflects strong commitment to transparency, accountability, and sustainable development.
- Alexandria University has established a comprehensive portfolio of 26 innovative programs and projects that promote renewable energy, energy efficiency, climate change mitigation, and sustainable resource management. These initiatives integrate education, research, infrastructure, and community engagement through renewable energy centers, solar and wind power systems, green building technologies, biofuel research, circular economy projects, and international academic partnerships. The University operates renewable energy centers at the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where hybrid solar–wind systems, photovoltaic installations, and Building-Integrated Photovoltaic (BIPV) technologies support both campus operations and applied research. In addition, Alexandria University offers specialized postgraduate programs in climate change, sustainable fisheries, natural resource sustainability, and the blue economy through Erasmus+ and other international collaborations. Campus sustainability projects, including the Green Cycle initiative, greywater recycling, energy-efficient buildings, solar power stations, and plastic recycling laboratories, further demonstrate the University's commitment to reducing carbon emissions, improving resource efficiency, and preparing graduates to address global environmental challenges.
- The University has achieved 55.6% implementation of smart building technologies through the progressive integration of digital infrastructure and intelligent management systems across campus facilities. Key applications include QR code-based smart attendance systems, automated monitoring and reporting platforms, fire alarm and smoke detection systems, video surveillance, and digital access and safety controls. Training programs have also been conducted to support effective system adoption and operation. These initiatives contribute to improved operational efficiency, enhanced safety and security, reduced manual processes, and the advancement of a connected, data-driven campus environment.
- Alexandria University actively empowers students to lead sustainability initiatives that foster environmental awareness, innovation, community engagement, and social responsibility. During the reporting period, more than 30 sustainability activities were organized by student groups across the university, demonstrating active participation in advancing sustainable development goals. These activities included international conferences, scientific symposia, green chemistry campaigns, climate awareness events, water entrepreneurship bootcamps, research conferences, engineering competitions, workshops, exhibitions, and community outreach programs.
- **Green Employment Outcomes of Alexandria University Graduates**

Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. As shown in the figure, the number of graduates employed in green jobs remained consistently

high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the university's commitment to integrating sustainability into education, equipping students with knowledge and skills required for emerging green careers, and supporting the transition to a sustainable, low-carbon economy.



- Alexandria University has established an integrated governance and sustainability framework that embeds sustainable development into institutional leadership, operations, education, research, and community engagement. Sustainability initiatives are supervised centrally through executive leadership and implemented across faculties through administrative deans and faculty sustainability committees.
- Alexandria University has dedicated 137 staff members to sustainability governance, including university leadership, sustainability office members, vice deans, and faculty committees. Their activities include sustainability reporting, policy development, workshops, research collaboration, stakeholder engagement, and living-lab projects focused on energy, water, waste, and circular economy themes.
- The university also promotes sustainability through educational and public engagement initiatives such as food security programs, sustainable agriculture models, youth activities, seminars on biomimicry, and workshops on sustainable biofilms, biofuel, and circular economy approaches for water treatment.
- A seminar organized by the Faculty of Engineering in cooperation with Russian delegation from Rosatom, titled “The Role of Engineering in the Peaceful Use of Nuclear Energy.” Held as part of the 2025 Science and Innovation Celebration, the seminar addressed the role of artificial intelligence engineering in advancing the nuclear industry, the integrative relationship between different engineering disciplines and the nuclear sector, and presented insights into the future of nuclear energy worldwide, with a focus on the promising career paths available in this field.





- A workshop organized by Alexandria University in cooperation with the Academy of Scientific Research and Technology and the Horizon Egypt Program on "European Union Funding and Support for Scientific Research and Innovation." The workshop aimed to introduce European Union-funded projects and how researchers at Alexandria University can benefit from them, as well as how to apply for these projects, in addition to introducing grants provided by the European Union. Alexandria University has a role in the "European Horizons" program as a partner country in this agreement, which was initialed in April 2025. He emphasized that this program is an exceptional opportunity for researchers at Egyptian universities and research centers to obtain funding for their innovative research ideas. He also discussed the Prima initiative, which provides the necessary funding for competitive projects in the fields of water, food, agriculture, and energy, with joint funding from European Union countries and countries of the Southern Mediterranean.



- Student organizations such as student chapters, engineering groups, and pharmaceutical associations played a leading role in delivering these initiatives. Their activities promoted green chemistry, circular economy principles, climate action, sustainable materials, water innovation, biodiversity conservation, scientific communication, entrepreneurship, and environmental education through hands-on workshops, public awareness campaigns, interactive exhibitions, field training, and international collaborations across campus facilities and academic faculties.



1- 2nd International Conference on the Role of Organic, Medicinal, and Pharmaceutical Chemistry.

In collaboration with ACS Egypt, our chapter actively supported the organization and smooth running of this international summit (July 14–15, 2025), serving 230 total attendees. Our members managed the event flow, gatekeeping, information desk, and poster hall coordination. The experience allowed members to experience professional conference management while networking directly with international speakers from Georgia State University.



- The Center of Excellence for Water at Alexandria University is pleased to announce the opening of applications for the fourth workshop entitled (The Relationship between Water - Energy - Food), which will be held at the American University in Cairo during the period from August 3-26, 2024. Applications are open until May 14, 2024.

USAID FROM THE AMERICAN PEOPLE

ALEXANDRIA UNIVERSITY

The American University in Cairo

Center of Excellence for Water

CALL FOR APPLICATION

FOURTH WATER-ENERGY-FOOD NEXUS SCHOOL 2024

DATE 3 – 26 AUGUST 2024

Call Launch Date: 24 April 2024

Submission Deadline: 14 May 2024 - 11:55 pm (Cairo Local Time)

Exchange, Training, and Scholarships Pillar activities are implemented in cooperation with:

TEMPLE UNIVERSITY

ASWAN UNIVERSITY

This document is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of The Center of Excellence for Water and do not necessarily reflect the views of USAID or the United States Government.

- Centre of Excellence for Water at Alexandria University Organizes Workshop on Relationship between Water, Energy and Food in Cooperation with the Arab Water Council in 15 august 2024. The workshop aimed to deepen the comprehensive understanding of the interrelationship between these three resources (water, energy and food), highlight the challenges they face, and propose sustainable solutions, and the latest developments in this field, exchanging creative ideas, and enhancing cooperation between industry and academic institutions.



- The Faculty of Pharmacy won third place in the Alexandria Governorate for the 2024 National Initiative for Green Smart Projects with its 'Green Cycle' project, competing in the non-profit community initiatives category. This marks the project's second consecutive year of recognition, having previously secured first place last year.



The services provided by the Solar Energy Center at the Faculty of Agriculture (Alexandria University):

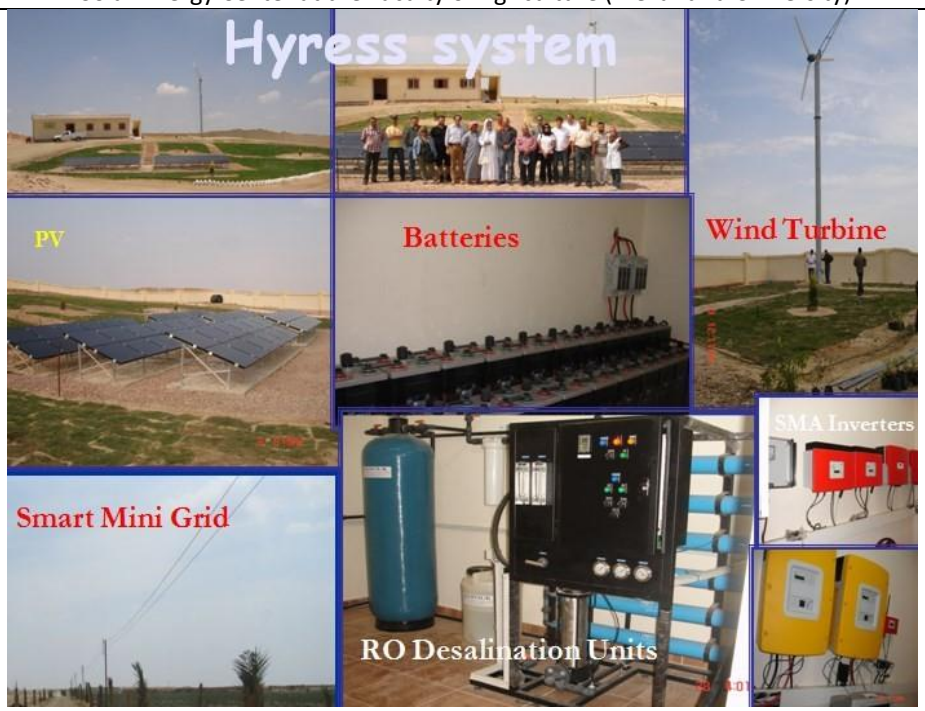
1) **Research and development**: Encouraging applied research on renewable energy at AU and through collaborations with other national and international universities. Development of hybrid systems in renewable energy and its uses in water pumping and water desalination and development of remote and desert areas. Development of research in energy from biomass and waste. Development of thermal uses of solar energy.
2) **Consultations:** Various consultations in renewable energy systems, especially hybrid systems, drying and solar heating.
3) **Education and Training:** Supporting the renewable energy education at AU. Developing and delivering courses, e-learning, workshops, training courses, and conferences on various renewable energy systems.
4) Serving the Egyptian community by providing all renewable energy information to the public.

The Center Goals are to:

- Remove the knowledge barriers against the installation of RE systems in Egypt.
- Enhance the utilization of renewable energy.
- Develop educational and e-learning program about renewable energy.
- Educate students, graduates, public and key stakeholders in Egypt and the Arab world on the various sources of renewable energy and its successful applications.
- Build the infrastructure necessary to develop, install and maintain renewable energy applications.
- Present a show case or a model for the successful utilization of renewable energy in Egypt.
- Continue excellence in all of our educational programs.



Solar Energy Center at the Faculty of Agriculture (Alexandria University)



Solar Energy Center at the Faculty of Agriculture (Alexandria University)

Fab Lab Project in the Faculty of Engineering - Alexandria University

The overall goal of the project is to develop the circular and creative economy model by creating an innovation place equipped with machines Low Tech in Alexandria is hosted by Alexandria University. This place will play a role in creating local dynamism Transversal to become a crossroads between different audiences and actors from different

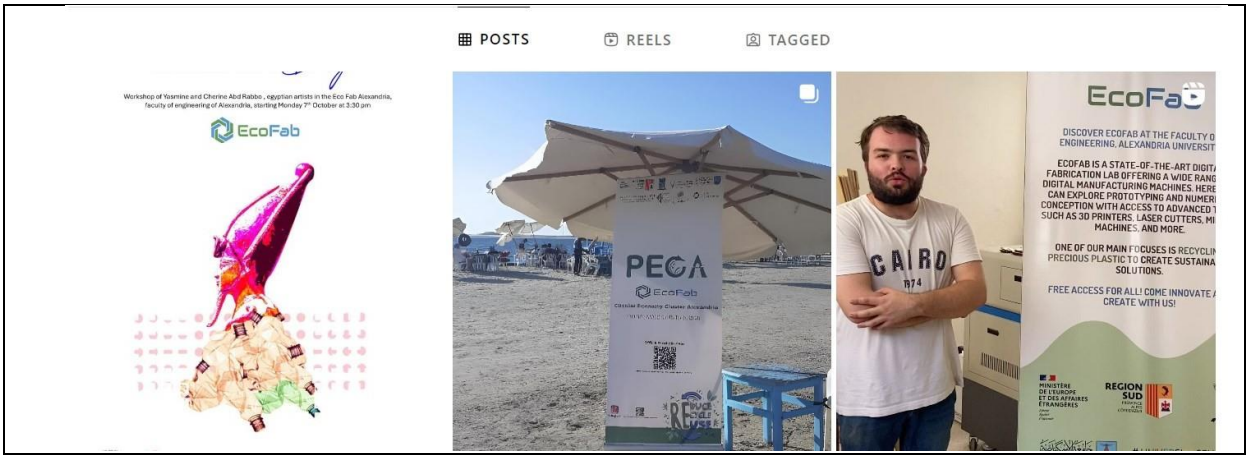
backgrounds. To connect waste collection Plastic and its evaluation. Horizons Solidarités and the University of Corsica, in partnership with their peers in Alexandria, based on their experience in Fab Lab Corte, conduct experiments on recreating value for plastic in Alexandria. The goal is to connect all actors from assembly through training to development and dissemination.

The scope of work in the project

1- Environment, climate, and energy

2- Education, social aspect, and research

These goals will be implemented through the establishment of a FabLab within Alexandria University, which is a space for innovation. Derives place this innovation is energized by a generation that has innovative ideas in the fields of environment, citizenship, and culture. This revival is embodied in women and the men who are partners in the project. The high skills of Alexandria University and Senghor University, Francophone operator in Alexandria, ensures the long-term commitment of their students and the sustainability of the local dynamism. Implementation benefits from facilities Headquarters provided by Alexandria University Project Engine. VSI contributes to the unification of links between regions. Project depends on the Alexandria Business Association (ABA), a trade organization that invests in creating startups in the circular economy and selling finished products. A multi-representative consortium from both sides of the Mediterranean could be formed from these dynamics that will support the project over time.





Eco Fab Alexandria

The Eco Fab is a fab lab dedicated to plastic recycling in Alexandria, Egypt and part of PECA project (Circular economy hub in alexandria).

7.4.2 Public pledge toward 100% renewable energy (petitions, meetings, discussions, events) beyond the university

Alexandria University demonstrates its commitment to a clean-energy future through active public engagement beyo campus. The university participates in petitions, community meetings, awareness events, and multi-stakehold discussions promoting a transition to 100% renewable energy. By collaborating with government bodies, civil socie and international partners, the university helps advance national awareness of clean energy solutions and suppor Egypt's broader pathway toward a low-carbon, sustainable energy system.





A seminar organized on November 2025 by the Faculty of Engineering in cooperation with Russian delegation from Rosatom, titled "The Role of Engineering in the Peaceful Use of Nuclear Energy." Held as part of the 2025 Science and Innovation Celebration, the seminar addressed the role of artificial intelligence engineering in advancing the nuclear industry, the integrative relationship between different engineering disciplines and the nuclear sector, and presented insights into the future of nuclear energy worldwide, with a focus on the promising career paths available in this field.





Alexandria University, received on November 2025 a delegation from the Russian company Rosatom, headed by Ms. Elena Alexandrova, an official from the events sector at Atom Energy of the Future. The visit aimed to explore avenues for strengthening scientific and research cooperation between Alexandria University, the Russian company, and academic institutions in Russia.





The closing ceremony of the "Flow and Foresight" workshop (April 2025), organized by the Faculty of Engineering at Alexandria University in collaboration with the University of Toulon and the Barcelona Advanced Computing Centre. The workshop that was part of the Pharos project, funded by the government of the Southern France region, aimed to discuss climate change and hydrodynamic processes to enhance resilience to marine and submersion hazards. The two-day event was held at the Faculty of Engineering, the Bibliotheca Alexandrina, and the French Cultural Institute. highlighted the importance of the timing of the workshop in light of accelerating climate change and increasing carbon emissions, and Alexandria's exposure to the repercussions of these changes and their impact on infrastructure. She noted the Alexandria Governorate's adoption of several initiatives in the fields of smart green projects, clean energy, sustainable transportation, and waste recycling.





Introductory Meeting on Requirements of Second Call for Research Projects of European Regional Cooperation Program Interreg NEXT MED (January 2025). The requirements for obtaining funding for applicable research projects aimed at enabling Mediterranean countries to achieve more sustainable, intelligent, competitive, cooperative, and comprehensive development with lower carbon emissions and pollution rates, by supporting youth environmental projects and green transformation projects in the sectors of education, health, waste management, confronting climate change, entrepreneurship, applied research, rationalization of energy consumption, water scarcity research, and governance, and focusing on areas of policy development, awareness-raising, training, modern technology, and innovation.





Under the Strategic Partnership between the Arab Republic of Egypt and the European Union Ministry of Planning, Economic Development and International Cooperation Witnesses the Launch of the "EU 4 Water Preneurs" Training Camp for Entrepreneurs in the Water Sector (May 2025). The initiative aims to stimulate the young energies of Egyptian innovators, researchers, and students, and encourage them to develop scientific and realistic solutions applicable on the ground to address the increasing and interconnected challenges facing Egypt in the fields of water, energy, and food.





President of Alexandria University, received Ambassador Olivia Todrian, Ambassador of Romania in Cairo, to discuss means of cooperation in academic and research fields of common interest (January 2025) and to develop cooperation with Romanian academic institutions in scientific and research fields of common interest through the exchange of expertise, ideas and scientific research, especially in the fields of nanotechnology, water technology and energy.





In February 2025, Alexandria University Council approved the cooperation agreement to establish an academic program for partnership in nuclear law between Alexandria University (Faculty of Engineering) and the International Atomic Energy Agency in Vienna, Austria.

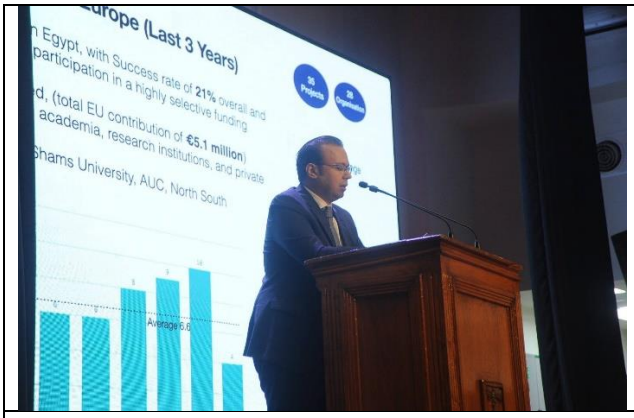




In May 2025, Alexandria University’s Graduate Studies and Research Council Discusses Opening Applications for Projects Funded by Science, Technology, and Innovation Funding Authority (STDF). These projects are funded by EGP 3 million per project in the fields of water, food and agriculture, health, information and communications technology, advanced industries, renewable energy, and artificial intelligence. The program also includes the Egyptian-Chinese Joint Research Laboratories Establishment Program (First Call), with funding of up to EGP 20 million from the Egyptian side and 3 million yuan from the Chinese side for projects including waste management and recycling, green energy, low-carbon technology, smart agriculture, artificial intelligence, and advanced robotics. The deadline for applications for these projects is June 23, 2025.



In November 2025, minister of Higher Education and Scientific Research, announced that Alexandria University won second place in the "Best Eco-Friendly University" competition among public universities established more than fifty years ago. It is worth noting that the competition was based on precise evaluation criteria, including the efficiency of green infrastructure, energy management, resource consumption rationalization, waste management, in addition to student initiatives that contribute to raising the level of environmental awareness within the university community.





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education through hands-on workshops, public awareness campaigns, interactive exhibitions, field training, and international collaborations across campus facilities and academic faculties.





Centre of Excellence for Water at Alexandria University Organizes Workshop (August 2024) on Relationship between Water, Energy and Food in Cooperation with the Arab Water Council. The workshop aimed to deepen the comprehensive understanding of the interrelationship between these three resources (water, energy and food), highlight the challenges they face, and propose sustainable solutions, and the latest developments in this field, exchanging creative ideas, and enhancing cooperation between industry and academic institutions.





Alexandria University Receives Supreme Council of Universities Delegation for Best Environment-Friendly University Competition August 2024. Explaining the role of the university in serving and developing the community, and the vision of Alexandria University towards raising the awareness of its students to care about environmental issues, contributing to building a better and more sustainable future for the younger generations, and reaching a green university by adhering to a number of standards, the most important of which are education and scientific research, university infrastructure, energy and climate change standards, waste management, and water management.



Inauguration of First International Conference on Advances in Science for Sustainable Development (ICASSD 2024) May 18, 2024, the conference aims to harness science and technology to confront the challenges facing our world today. successive scientific developments have begun to play a pivotal role in finding solutions to pressing issues such as climate change, artificial intelligence, and environmental degradation.



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Alexandria University President Receives Australian Ambassador to Cairo and his accompanying delegation, to discuss enhancing the frameworks of joint cooperation between Alexandria University and Australian universities and academic institutions in linking scientific research to industry, especially in the fields of water, energy, and agriculture, through the activities and programs provided by the Water Excellence Centre at the university.



In the frame of the webinar series, the Center of Excellence for Water organized the twenty first webinar with CaliforniaSanta Cruz University and Zagazig, entitled: "Water Energy Food Nexus and its connectivity to SDGs"

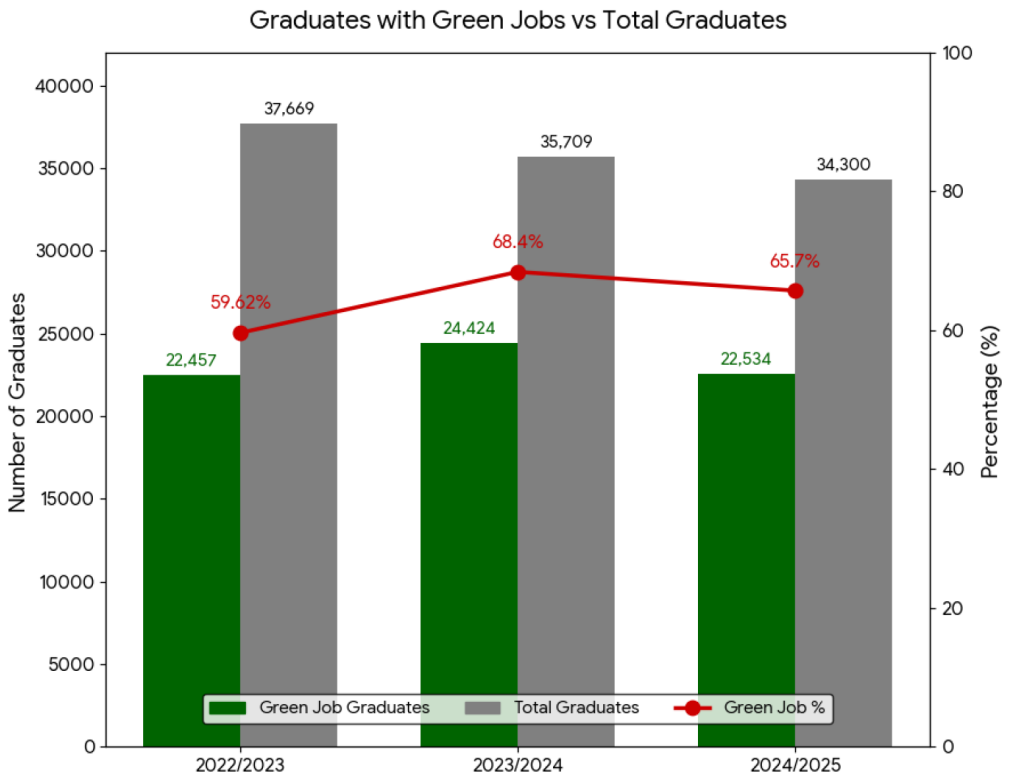
7.4.3 Direct services to local industry aimed at improving energy efficiency and clean energy

Alexandria University supports local industry by providing energy-efficiency assessments, specialized workshops, and applied research on renewable energy solutions. Through its research centers, technology incubators, and renewable energy laboratories, the university offers technical guidance, training, and innovative clean-energy models that help businesses reduce energy waste and adopt sustainable technologies. These outreach services strengthen industry-university collaboration and promote the transition to a more efficient, low-carbon industrial sector in Alexandria and beyond.

- Alexandria University has established an integrated governance and sustainability framework that embeds sustainable development into institutional leadership, operations, education, research, and community engagement. Sustainability initiatives are supervised centrally through the Vice President for Community Service and Environmental Development and implemented across faculties through Vice Deans and faculty sustainability committees.

- Alexandria University has dedicated 137 staff members to sustainability governance, including university leadership, sustainability office members, vice deans, and faculty sustainability committees. Their activities include sustainability reporting, policy development, workshops, research collaboration, stakeholder engagement, and living-lab projects focused on energy, water, waste, and circular economy themes.

- Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. As shown in the figure, the number of graduates employed in green jobs remained consistently high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the University's commitment to integrating sustainability into education, equipping students with the knowledge and skills required for emerging green careers, and supporting the transition to a sustainable and low-carbon economy.



- Alexandria University actively promotes sustainability-driven entrepreneurship through a dynamic innovatio ecosystem that supported 46 sustainability-related startups during the reporting period. The University provide comprehensive incubation, mentoring, training, and commercialization support through initiatives such as the Artificia Intelligence Minds Incubator (AIM) and the Alexandria University Technology Incubator for Smart Systems (AUTISS) which foster innovative solutions in artificial intelligence, smart infrastructure, healthcare, agriculture, energy, an digital technologies. Student-led startups, including Samdha Company, develop environmentally friendly products b converting organic and agricultural waste into natural fertilizers and biodegradable materials, thereby reducing waste supporting sustainable agriculture, and conserving water. In addition, entrepreneurship competitions such as th Startup Olympics and international programs, including the Bio-iChallenge and Hult Prize, encourage students an researchers to transform innovative ideas into market-ready businesses with significant environmental and socia impact.



Alexandria University Technology Incubator for Smart Systems (AUTISS) Incubator (Faculty of Engineering, Alexandria University)



Agro-Food Industries Alliance Products



New partners

Agro-Food Industries Alliance Project

Startup name: "National Committee Sustainable Development"

Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED)

Description: Proposed Mission: Striving to maximize the utilization of the outputs of education and scientific research with the sustainable development goals "Egypt Vision 2030", linking them with the United Nations goals for sustainable development together with developing a framework for the educational system governance aiming at achieving the well-being of society. It includes green, sustainable development and innovative incubators.

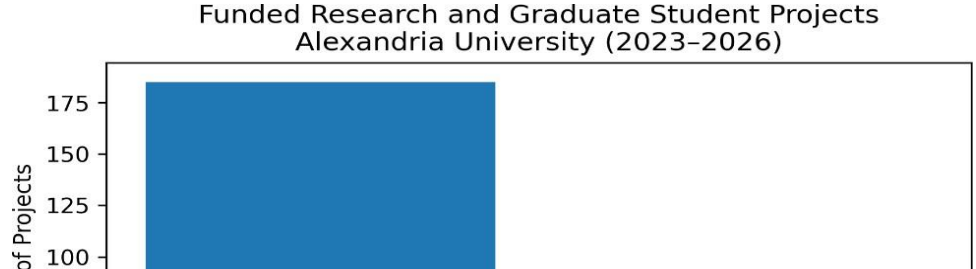


Samdha Company, founded by Musaad Darwish, a student in the Department of Civil and Environmental Engineering at the Faculty of Engineering



Samdha Company: The plants in the 2 photos on the left are planted in presence of natural organic fertilizers

- Alexandria University maintains a robust collection of twenty-six sustainable programs and projects focused on renewable energy, energy efficiency, climate change mitigation, and resource management. These endeavors unite education, research, infrastructure, and community engagement via renewable systems, solar energy, wind power, green technologies, biofuel studies, and global academic networks. The University runs energy centers within the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where solar photovoltaic installations, wind power systems, and building technologies support operations and applied research. Furthermore, Alexandria University provides postgraduate education concerning climate change, sustainable fisheries, natural resources, and the blue economy through international partnerships. Campus projects, featuring the Green Cycle initiative, greywater treatment, efficient buildings, solar power stations, and plastic laboratories, highlight the institution's dedication to reducing carbon emissions, optimizing resource efficiency, and training students to tackle global environmental challenges.

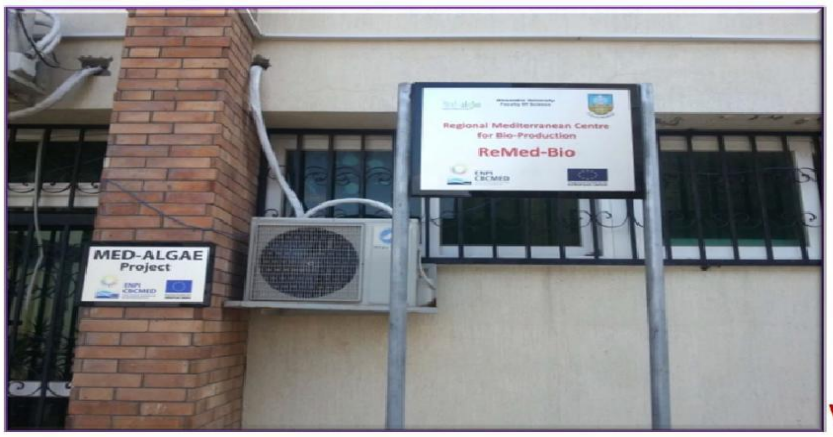


The number of funded research projects and funded graduate student projects at Alexandria University (2023-2026) 185:56



Natural Resources Sustainability for Land Development (Erasmus+ Project, European Union) in collaboration of Alexandria University (Egypt) with Aachen University (Germany)

Med-algae
Production of Biodiesel from Algae

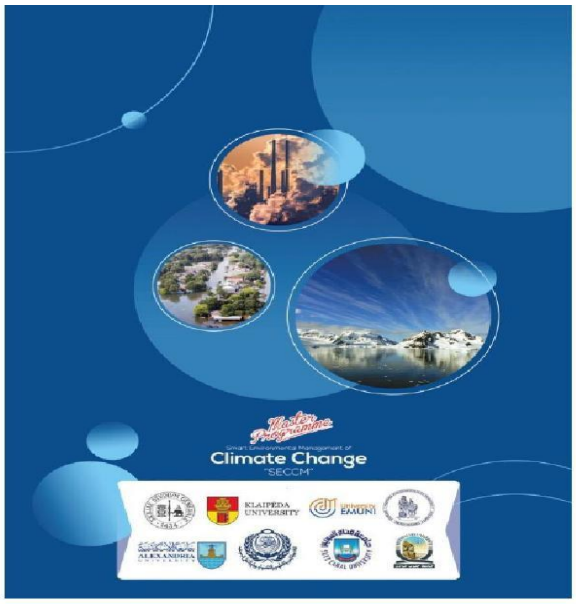


Visitors,
Stakeholders &
Media
29 March 2014

Project
funded by the
EUROPEAN UNION

ENPI
CBCMED

Production of Bio-Diesel from Algae in Selected Mediterranean Countries: Med-Algae Project, Faculty of Science, Alexandria University, Egypt. Fuded by CBCMED-ENPI (CROSS BORDER COOPERATION IN THE MEDITERRANEAN-European Neighborhood and Partnership Instrument)





Smart Environmental Management of Climate Change in collaboration with Catania University, Italy. (AdapTm-Erasmus project) – Faculty of Science, Alexandria University, Egypt.

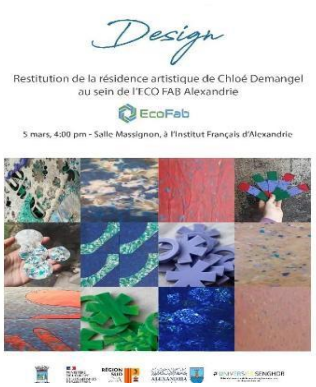


Sustainable Management of Fisheries and Aquaculture Science, in collaboration with University of Aveiro, Portugal (Erasmus+ Project, European Union) - Faculty of Science, Alexandria University, Egypt.



Alexandria University Center for Maritime Archaeology & Underwater Cultural Heritage was established as a European Union project under the EU-Tempus III Program

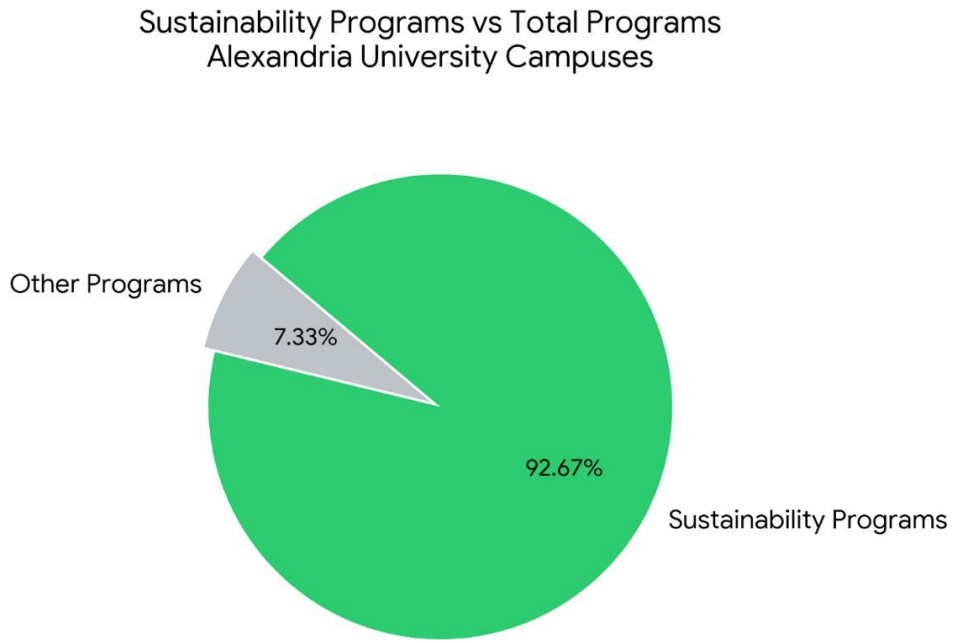


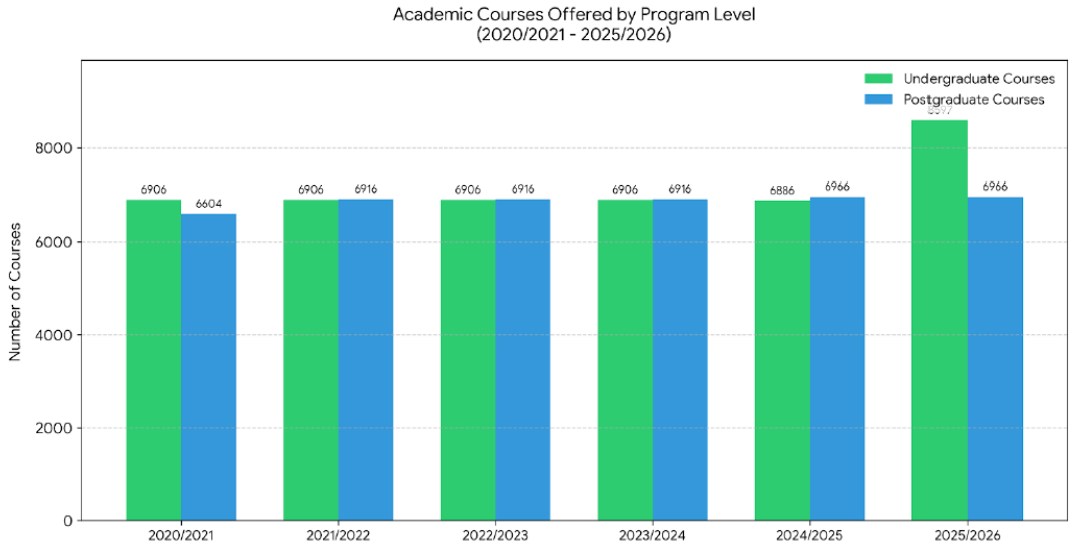


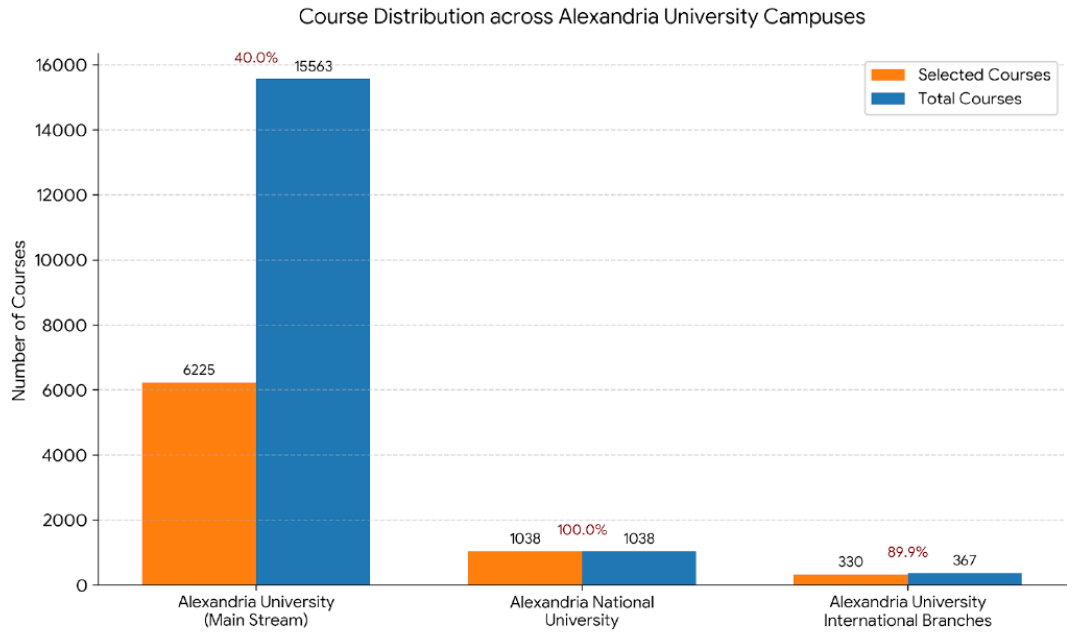


The Eco Fab is a fab lab dedicated to plastic recycling in Alexandria, Egypt and part of PECA project (Circular economy hub in alexandria).

- The University secures diverse funding sources, including national agencies like the Science, Technology and Innovation Funding Authority and the Academy of Scientific Research and Technology, alongside international organizations such as the European Union, Erasmus+, and global research partners. Alexandria University also supports researchers via publication agreements, open-access publishing opportunities, and thirty-nine scientific journals published in Arabic and English, several of which provide free publication options for University researchers.


Sustainability Programs vs Total Programs
Alexandria University Campuses
Other Programs
7.33%
92.67%
Sustainability Programs


Academic Courses Offered by Program Level
(2020/2021 - 2025/2026)
Undergraduate Courses
Postgraduate Courses
Number of Courses
0
2000
4000
6000
8000
6906
6604
6906
6916
6906
6916
6906
6916
6886
6966
6966
2020/2021
2021/2022
2022/2023
2023/2024
2024/2025
2025/2026


Course Distribution across Alexandria University Campuses
Selected Courses
Total Courses
Number of Courses
0
2000
4000
6000
8000
10000
12000
14000
16000
40.0%
15563
6225
1038
100.0%
1038
330
89.9%
367
Alexandria University
(Main Stream)
Alexandria National
University
Alexandria University
International Branches



Five Cooperation Protocols Signed Between Alexandria University and French Universities





A seminar organized on November 2025 by the Faculty of Engineering in cooperation with Russian delegation from Rosatom, titled “The Role of Engineering in the Peaceful Use of Nuclear Energy.” Held as part of the 2025 Science and Innovation Celebration, the seminar addressed the role of artificial intelligence engineering in advancing the nuclear industry, the integrative relationship between different engineering disciplines and the nuclear sector, and presented insights into the future of nuclear energy worldwide, with a focus on the promising career paths available in this field.





Alexandria University, received on November 2025 a delegation from the Russian company Rosatom, headed by Ms. Elena Alexandrova, an official from the events sector at Atom Energy of the Future. The visit aimed to explore avenues for strengthening scientific and research cooperation between Alexandria University, the Russian company, and academic institutions in Russia.





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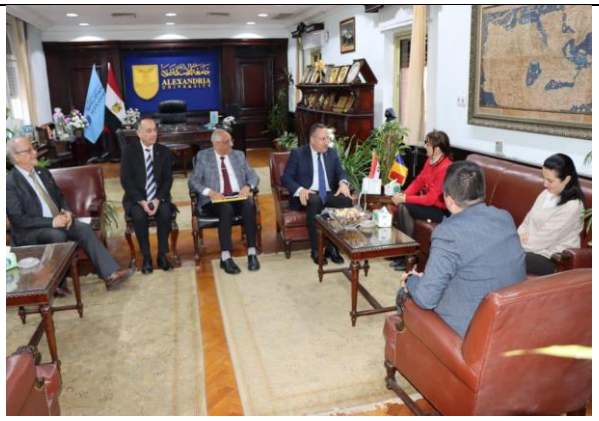


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Under the Strategic Partnership between the Arab Republic of Egypt and the European Union Ministry of Planning, Economic Development and International Cooperation Witnesses the Launch of the "EU 4 Water Preneurs" Training Camp for Entrepreneurs in the Water Sector (May 2025). The initiative aims to stimulate the young energies of Egyptian innovators, researchers, and students, and encourage them to develop scientific and realistic solutions applicable on the ground to address the increasing and interconnected challenges facing Egypt in the fields of water, energy, and food.





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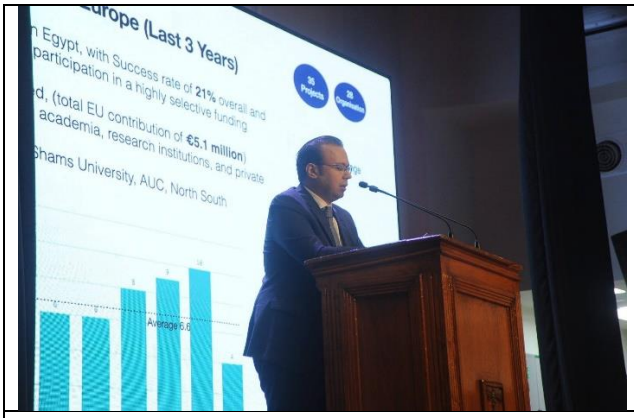




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1- 2nd International Conference on the Role of Organic, Medicinal, and Pharmaceutical Chemistry.

In collaboration with ACS Egypt, our chapter actively supported the organization and smooth running of this international summit (July 14–15, 2025), serving 230 total attendees. Our members managed the event flow, gatekeeping, information desk, and poster hall coordination. The experience allowed members to experience professional conference management while networking directly with international speakers from Georgia State University.



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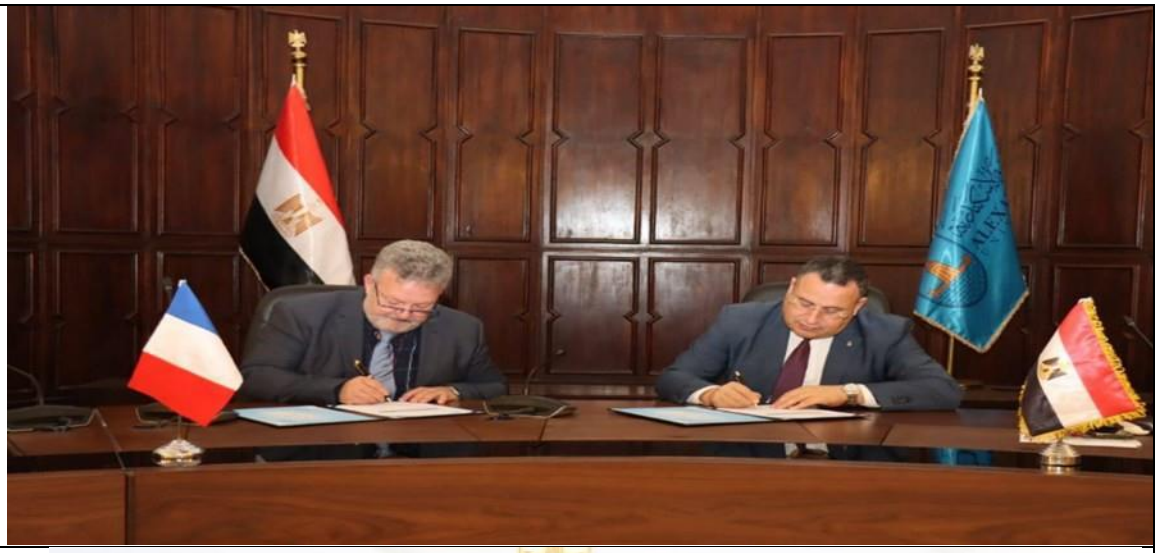


Centre of Excellence for Water at Alexandria University Organizes Workshop (August 2024) on Relationship between Water, Energy and Food in Cooperation with the Arab Water Council. The workshop aimed to deepen the comprehensive understanding of the interrelationship between these three resources (water, energy and food), highlight the challenges they face, and propose sustainable solutions, and the latest developments in this field, exchanging creative ideas, and enhancing cooperation between industry and academic institutions.



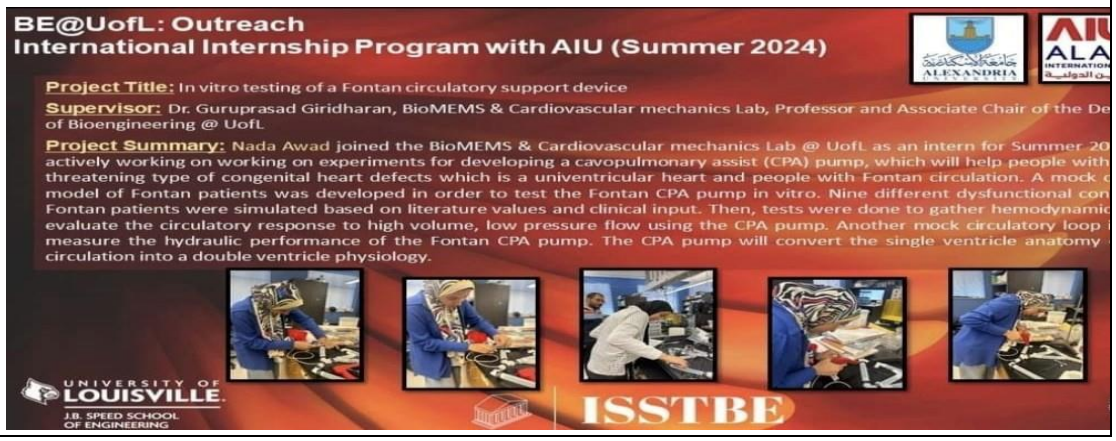


Alexandria University Receives Supreme Council of Universities Delegation for Best Environment-Friendly University Competition August 2024. Explaining the role of the university in serving and developing the community, and the vision of Alexandria University towards raising the awareness of its students to care about environmental issues, contributing to building a better and more sustainable future for the younger generations, and reaching a green university by adhering to a number of standards, the most important of which are education and scientific research, university infrastructure, energy and climate change standards, waste management, and water management.





AU and Université du Littoral Côte d’Opale (ULCO) – Dual Degree Cooperation Programs







Alexandria University's Faculty of Engineering Students win First Places in Annual Summer Training Competition at University of Louisville, USA. The summer training program comes within the framework of the distinguished partnership between Alexandria University and the University of Louisville, USA, over the past years, which includes the partnership in summer training in research laboratories at the University of Louisville, and the partnership in the 2+2 bachelor's programs to grant double degrees in computer science and engineering, and biomedical engineering majors. This year was the graduation of the first group that joined the University of Louisville through this partnership in the field of biomedical engineering, numbering
five students.



Inauguration of First International Conference on Advances in Science for Sustainable Development (ICASSD 2024) May 18, 2024, the conference aims to harness science and technology to confront the challenges facing our world today. successive scientific developments have begun to play a pivotal role in finding solutions to pressing issues such as climate change, artificial intelligence, and environmental degradation.



Centre of Excellence for Water at Alexandria University Organizes Workshop on Relationship between Water, Energy and Food in Cooperation with the Arab Water Council in 15 august 2024. The workshop aimed to deepen the comprehensive understanding of the interrelationship between these three resources (water, energy and food), highlight the challenges they face, and propose sustainable solutions, and the latest developments in this field, exchanging creative ideas, and enhancing cooperation between industry and academic institutions.



The Faculty of Pharmacy won third place in the Alexandria Governorate for the 2024 National Initiative for Green Smart Projects with its 'Green Cycle' project, competing in the non-profit community initiatives category. This marks the project's second consecutive year of recognition, having previously secured first place last year.



The Center of Excellence for Water at Alexandria University is pleased to announce the opening of applications for the fourth workshop entitled (The Relationship between Water - Energy - Food), which will be held at the American University in Cairo during the period from August 3-26, 2024. Applications are open until May 14, 2024.



Alexandria University President Receives Australian Ambassador to Cairo and his accompanying delegation, to discuss enhancing the frameworks of joint cooperation between Alexandria University and Australian universities and academic institutions in linking scientific research to industry, especially in the fields of water, energy, and agriculture, through the activities and programs provided by the Water Excellence Centre at the university.

- An academic team (Ph.D.) from the Faculty of Science at Alexandria University teaches a course titled 'Man and Environment' (University Elective Course – 2 Credits). The course addresses environmental problems, types of natural resources, pollution, environmental footprint, carbon footprint, waste management, recycling, climate change and global warming, biodiversity, and the Sustainable Development Goals (SDGs). It is offered to students from various faculties at Alexandria University, such as:
    1) Faculty of Science
    2) Faculty of Tourism
    3) Faculty of Agriculture
    4) Faculty of Sport Education
    5) Faculty of Business
    6) Faculty of Computers and Data Science
    7) Faculty of Dentistry
    8) Faculty of Economics and Political Science
    9) Faculty of Arts
    10) Faculty of Nursing

Also, this course is offered in some programs at Alexandria National University, including:

- **A.** Computer and Data Sciences (CDS) Programs
- **B.** Oral and Dental Surgery Program
- **C.** Software and Multimedia Production Program (SIM)

The Renewable Energy Center at Faculty of Agriculture Alexandria University.

- The center along with partner from Greece, Germany, Spain Morocco and Tunisia awarded a Six Framework project (FP6project) from the European commission to developed Hybrid renewable energy system to supply service for Mediterranean partner countries.
- The center representing AU and Las Palm University in Spain awarded a project from the Spanish cooperation Spanish Agency for International Co-Operation (AECE), in the area of water desalination by Renewable Energy.
- Recently with cooperation with the Faculty of Engineering, the center awarded an STDF project. The project title is "Development of hybrid renewable energy - RO desalination system and minigrids for remote and desert areas in Egypt(HAREDES)".

The Center Goals are to:

- Remove the knowledge barriers against the installation of RE systems in Egypt.
- Enhance the utilization of renewable energy.
- Develop educational and e-learning program about renewable energy.
- Educate students, graduates, public and key stakeholders in Egypt and the Arab world on the various sources ofrenewable energy and its successful applications.
- Build the infrastructure necessary to develop, install and maintain renewable energy applications.
- Present a show case or a model for the successful utilization of renewable energy in Egypt.
- Continue excellence in all of our educational programs.

S**olar Energy Center at the Faculty of Agriculture (Alexandria University)**

Hybrid Renewable Energy Systems to Supply Services in Rural Settlements of Mediterranean Partner Countries.

The services provided by the center:

5) **Research and development**: Encouraging applied research on renewable energy at AU and through collaborationswith other national and international universities. Development of hybrid systems in renewable

energy and its uses in water pumping and water desalination and development of remote and desert areas. Development of research in energy from biomass and waste. Development of thermal uses of solar energy.

6) **Consultations:** Various consultations in renewable energy systems, especially hybrid systems, drying and solar heating.

7) **Education and Training:** Supporting the renewable energy education at AU. Developing and delivering courses, e-learning, workshops, training courses, and conferences on various renewable energy systems.

8) Serving the Egyptian community by providing all renewable energy information to the public.

7.4.4 University inform and support government in clean energy and energy-efficient technology policy development

Alexandria University actively supports government initiatives in clean energy and energy efficiency by supplying research data, and policy guidance. Through sustainability reports, applied research projects, digital monitoring tools, an international collaborations, the institution shares insights regarding energy-efficient technologies and renewabl energy solutions. It engages in joint programs with ministries, industry sectors, and global partners, including trainin sessions, workshops, and advisory services, to advance Egypt's Vision 2030 and the United Nations Sustainabl Development Goals. By integrating science-based recommendations into national strategies, Alexandria University act as a model for evidence-driven, sustainable energy governance.

- Alexandria University has established an integrated governance and sustainability framework that embeds sustainabl development into institutional leadership, operations, education, research, and community engagement Sustainability initiatives are supervised centrally through the Vice President for Community Service and Environmenta Development and implemented across faculties through Vice Deans and faculty sustainability committees.

- Alexandria University has dedicated 137 staff members to sustainability governance, including university leadership sustainability office members, vice deans, and faculty sustainability committees. Their activities include sustainabilit reporting, policy development, workshops, research collaboration, stakeholder engagement, and living-lab project focused on energy, water, waste, and circular economy themes.

- Alexandria University has consistently published its sustainability report on its official website for four consecutive years, covering the 2022, 2023, 2024, and 2025 reporting periods. Each report provides a comprehensive overview of the university's sustainability achievements, including environmental performance, green campus infrastructure, academic and research initiatives aligned with sustainable development goals, and community engagement activities that support Egypt Vision 2030. The reports also highlight formal institutional policies and governance frameworks for integrating sustainability across education, research, operations, and outreach. These policies remain publicly accessible and systematically embedded within strategic planning and operational practices. Continuous annual publication reflects strong commitment to transparency, accountability, and sustainable development.

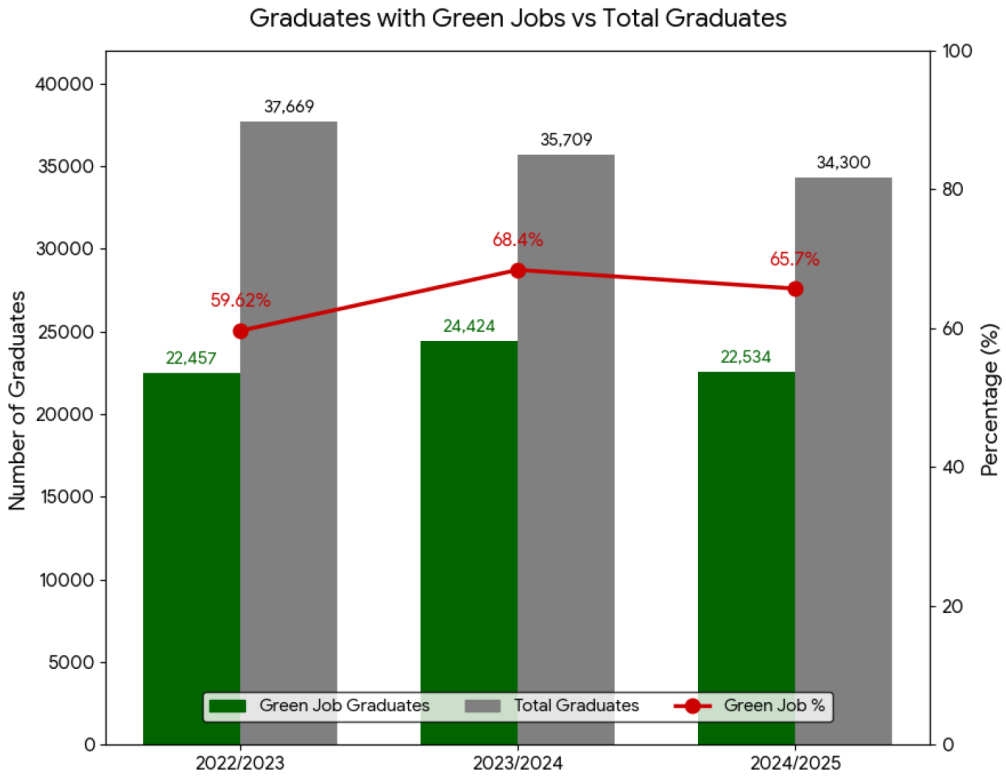
- Alexandria University has established a comprehensive portfolio of 26 innovative programs and projects that promote renewable energy, energy efficiency, climate change mitigation, and sustainable resource management. These initiatives integrate education, research, infrastructure, and community engagement through renewable energy centers, solar and wind power systems, green building technologies, biofuel research, circular economy projects, and international academic partnerships. The University operates renewable energy centers at the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where hybrid solar–wind systems, photovoltaic installations, and Building-Integrated Photovoltaic (BIPV) technologies support both campus operations and applied research. In addition, Alexandria University offers specialized postgraduate programs in climate change, sustainable fisheries, natural resource sustainability, and the blue economy through Erasmus+ and other international collaborations. Campus sustainability projects, including the Green Cycle initiative, greywater recycling, energy-efficient buildings, solar power stations, and plastic recycling laboratories, further demonstrate the University's commitment to reducing carbon emissions, improving resource efficiency, and preparing graduates to address global environmental challenges.

- The University has achieved 55.6% implementation of smart building technologies through the progressive integration of digital infrastructure and intelligent management systems across campus facilities. Key applications include QR code-based smart attendance systems, automated monitoring and reporting platforms, fire alarm and smoke detection systems, video surveillance, and digital access and safety controls. Training programs have also been conducted to support effective system adoption and operation. These initiatives contribute to improved operational

efficiency, enhanced safety and security, reduced manual processes, and the advancement of a connected, data-driven campus environment.

- Alexandria University actively empowers students to lead sustainability initiatives that foster environmental awareness, innovation, community engagement, and social responsibility. During the reporting period, more than 30 sustainability activities were organized by student groups across the university, demonstrating active participation in advancing sustainable development goals. These activities included international conferences, scientific symposia, green chemistry campaigns, climate awareness events, water entrepreneurship bootcamps, research conferences, engineering competitions, workshops, exhibitions, and community outreach programs.

- Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. As shown in the figure, the number of graduates employed in green jobs remained consistently high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the University's commitment to integrating sustainability into education, equipping students with the knowledge and skills required for emerging green careers and supporting the transition to a sustainable and low-carbon economy.



- Alexandria University actively promotes sustainability-driven entrepreneurship through a dynamic innovation ecosystem that supported 46 sustainability-related startups during the reporting period. The University provides comprehensive incubation, mentoring, training, and commercialization support through initiatives such as the Artificial Intelligence Minds Incubator (AIM) and the Alexandria University Technology Incubator for Smart Systems (AUTISS), which foster innovative solutions in artificial intelligence, smart infrastructure, healthcare, agriculture, energy, and digital technologies. Student-led startups, including Samdha Company, develop environmentally friendly products by converting organic and agricultural waste into natural fertilizers and biodegradable materials, thereby reducing waste, supporting sustainable agriculture, and conserving water. In addition, entrepreneurship competitions such as th

Startup Olympics and international programs, including the Bio-iChallenge and Hult Prize, encourage students ar researchers to transform innovative ideas into market-ready businesses with significant environmental and soc impact.



Alexandria University Technology Incubator for Smart Systems (AUTISS) Incubator (Faculty of Engineering, Alexandria University)



Agro-Food Industries Alliance Products



New partners

Agro-Food Industries Alliance Project

Startup name: "National Committee Sustainable Development"

Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED)

Description: Proposed Mission: Striving to maximize the utilization of the outputs of education and scientific research with the sustainable development goals "Egypt Vision 2030", linking them with the United Nations goals for sustainable development together with developing a framework for the educational system governance aiming at achieving the well-being of society. It includes green, sustainable development and innovative incubators.



Samdha Company, founded by Musaad Darwish, a student in the Department of Civil and Environmental Engineering at the Faculty of Engineering



Samdha Company: The plants in the 2 photos on the left are planted in presence of natural organic fertilizers

- The consistent downward trajectory aligns with the emission reduction pathways recommended by th Intergovernmental Panel on Climate Change for limiting global warming to 1.5 °C. It supports Egypt's updated Nationa Determined Contributions under the Paris Agreement. By embedding these measures into core operational plannin the university demonstrates a replicable model of science-based climate governance within the higher education secto



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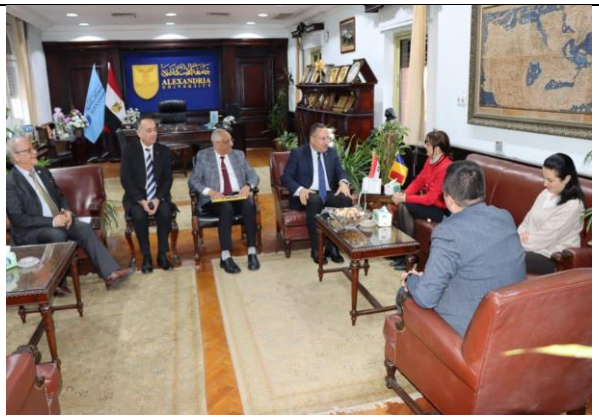


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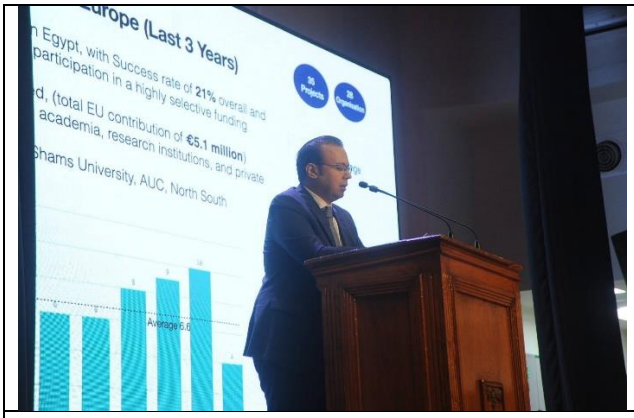




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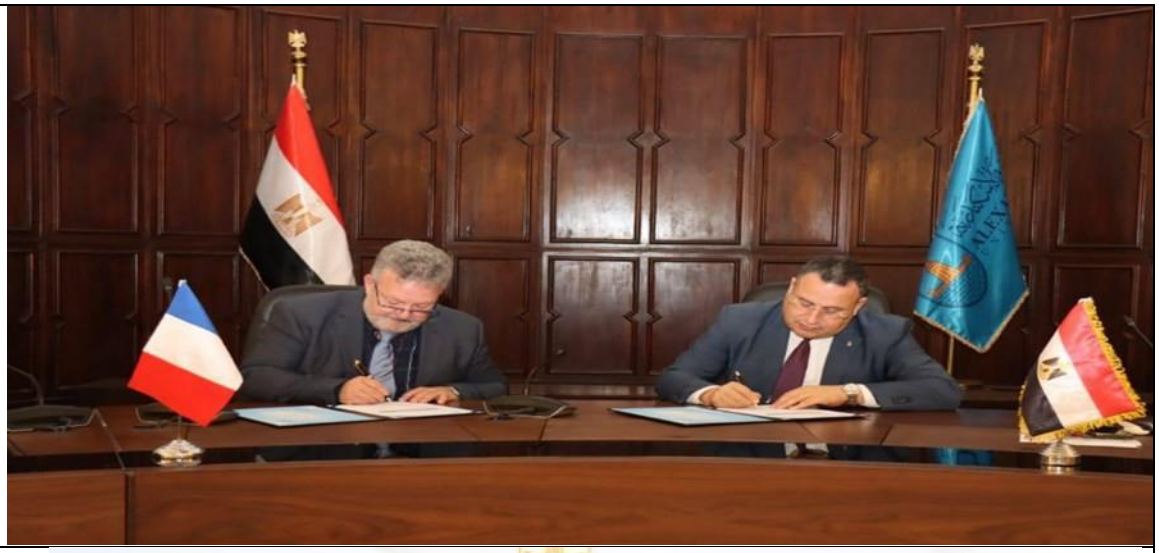


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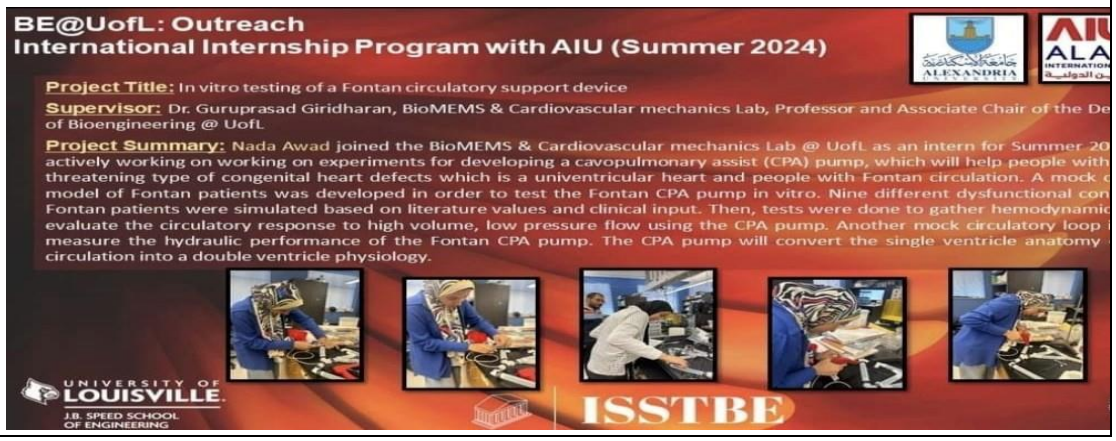


Alexandria University Receives Supreme Council of Universities Delegation for Best Environment-Friendly University Competition August 2024. Explaining the role of the university in serving and developing the community, and the vision of Alexandria University towards raising the awareness of its students to care about environmental issues, contributing to building a better and more sustainable future for the younger generations, and reaching a green university by adhering to a number of standards, the most important of which are education and scientific research, university infrastructure, energy and climate change standards, waste management, and water management.





AU and Université du Littoral Côte d’Opale (ULCO) – Dual Degree Cooperation Programs







Alexandria University's Faculty of Engineering Students win First Places in Annual Summer Training Competition at University of Louisville, USA. The summer training program comes within the framework of the distinguished partnership between Alexandria University and the University of Louisville, USA, over the past years, which includes the partnership in summer training in research laboratories at the University of Louisville, and the partnership in the 2+2 bachelor's programs to grant double degrees in computer science and engineering, and biomedical engineering majors. This year was the graduation of the first group that joined the University of Louisville through this partnership in the field of biomedical engineering, numbering
five students.



Inauguration of First International Conference on Advances in Science for Sustainable Development (ICASSD 2024) May 18, 2024, the conference aims to harness science and technology to confront the challenges facing our world today. successive scientific developments have begun to play a pivotal role in finding solutions to pressing issues such as climate change, artificial intelligence, and environmental degradation.



Centre of Excellence for Water at Alexandria University Organizes Workshop on Relationship between Water, Energy and Food in Cooperation with the Arab Water Council in 15 august 2024. The workshop aimed to deepen the comprehensive understanding of the interrelationship between these three resources (water, energy and food), highlight the challenges they face, and propose sustainable solutions, and the latest developments in this field, exchanging creative ideas, and enhancing cooperation between industry and academic institutions.



The Faculty of Pharmacy won third place in the Alexandria Governorate for the 2024 National Initiative for Green Smart Projects with its 'Green Cycle' project, competing in the non-profit community initiatives category. This marks the project's second consecutive year of recognition, having previously secured first place last year.



The Center of Excellence for Water at Alexandria University is pleased to announce the opening of applications for the fourth workshop entitled (The Relationship between Water - Energy - Food), which will be held at the American University in Cairo during the period from August 3-26, 2024. Applications are open until May 14, 2024.



Alexandria University President Receives Australian Ambassador to Cairo and his accompanying delegation, to discuss enhancing the frameworks of joint cooperation between Alexandria University and Australian universities and academic institutions in linking scientific research to industry, especially in the fields of water, energy, and agriculture, through the activities and programs provided by the Water Excellence Centre at the university.

جامعة الإسكندرية
ALEXANDRIA UNIVERSITY

Policy on Energy and water sustainable use

Alexandria university is Committed to pursuing sustainable development within and through the university and to reassessing higher education and its role in the transition to more sustainable societies. This includes building synergies and collaboration in the search for effective and innovative approaches to solving today's as well as future sustainable development challenges.

The university ensures that all renovations and establishment of new buildings are following energy efficiency standards and water conservation strategies.

The university ensures divesting investments and purchases from Carbon-intensive energy industries particularly coal and oil.

The university through its faculties is committed to maximise water reuse across the university buildings and through all services provided in the process of education and research

The objective of this statement is Commitment to offering an open, interactive and collaborative forum for discussion and action, to raise awareness and advocate for changes needed changes in higher education to best serve the goals of sustainable development, (SDGs) as well as building international linkages and cooperation on the basis of core values of academic freedom, institutional autonomy and related local and global responsibilities to society.

Being uncompliant with the commitment to purse sustainable development issue will be regarded as interfering with personal development of the students, and the university administration will act accordingly

Policy created September 2019

Policy reviewed October 2022

Prof. Abdel Aziz Konsowa

University President

A. Konsowa

جامعة الإسكندرية
ALEXANDRIA
UNIVERSITY

Alexandria University Sustainable Investment policy.

A sustainable investment policy refers to the set of guidelines and principles that Alexandria University . The policy aims to align the organization's investment activities with its sustainability goals and values.

Implementing a sustainable investment policy align investments strategies of the university with sustainable developement Goals, and promotes responsible investing practices, and contribute to the transition to a more sustainable and resilient economy. It also attracts socially and environmentally conscious investors and stakeholders who value sustainable investment practices.

Important elements include:

1. ESG Integration: The policy should emphasize the integration of ESG factors into the investment decision-making process. This involves considering environmental and social risks and opportunities, as well as governance practices of potential investments. ESG analysis can help identify companies or projects that demonstrate strong sustainability performance.
2. Sustainable objectives: The policy defines the university's sustainability objectives and priorities focusing on on specific ESG themes, such as climate change, renewable energy, social justice, or diversity and inclusion. Such objectives help guide investment strategies and ensure consistency with sustainability goals .
3. Engagement and Stewardship: The policy outlines the organization's commitment to active engagement with investee companies to encourage improved ESG practices. This includes voting on shareholder resolutions, engaging in dialogues, and exercising influence to promote positive change. Stewardship activities help drive sustainable behavior and align investee companies with sustainability goals.
4. Ongoing review and monitoring: The policy includes procedures for ongoing monitoring and review of investments to ensure they continue to meet sustainability criteria. Regular assessments of portfolio performance, ESG risks, and evolving sustainability trends help maintain alignment with the university's strategic objectives
5. Positive Impact investments: The policy ensures commitment to investing in projects that generate positive environmental and social impacts. This could include investing in renewable energy projects in new buildings of the universities and in the upgrade process taking place, , clean technologies in the use of energy and water, sustainable infrastructure with green areas .
6. Reporting and transparency: The policy encourages collaboration with the industry sector, and stakeholders to advance sustainable investment practices. This involves

sharing best practices, participating in initiatives, and supporting industry-wide efforts to promote sustainability.

Adopting this sustainable investment policy, the university contributes to positive social and environmental outcomes while generating financial returns. It demonstrates a commitment to responsible investing and can attract stakeholders who value sustainability.

Following this strategy, the university has established several investment projects e.g. technology park for incubation and acceleration, Alexandria National university, International university with two branches in Chad and south Sudan, as well as International Branch Campuses (IBC).

University president Endorsement

A. Konsowa

Prof. Abdel Aziz Konsowa

جامعة الإسكندرية
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UNIVERSITY

Alexandria University Sustainable Procurement/purchasing policy.

A sustainable procurement or purchasing policy refers to the set of guidelines and principles that Alexandria University follows when procuring goods, services, or works in a sustainable and socially responsible manner. It aims to minimize the negative environmental, social, and economic impacts associated with the procurement process and promote sustainable practices throughout the supply chain.

Implementing a sustainable procurement and purchasing policy brings several benefits including reduced environmental impact, enhanced reputation, cost savings through efficiency improvements, and increased social responsibility. The element of the policy are used as guidelines that the university follows when making decisions with a focus on environmental, social and governance (ESG) factors and ensure consistency with sustainability goals.

Below is the set of key elements included in the policy:

1. Environmental Considerations: prioritization of environmentally friendly products and services that have a reduced carbon footprint, conserve resources, promote energy efficiency, and minimize waste generation. This includes the use of renewable materials, promote recycling and waste reduction, and specify environmentally preferable conditions and standards.
2. Social and Labor Standards: The policy require suppliers to comply with social and labor standards, including fair wages, safe working conditions, and respect for human rights. Such a policy promotes the use of suppliers who have fair trade or responsible sourcing certifications and encourage diversity and inclusion
3. Ethical Sourcing: The policy addresses issues such as conflict minerals, child labor, and corruption. It requires suppliers to provide evidences of responsible sourcing practices and ensure that they do not engage in unethical or illegal activities.
4. Screening and Exclusions: The policy includes criteria for screening and excluding certain investments based on negative ESG factors. For example, it may exclude investments in companies involved in fossil fuel extraction or those with poor labor practices. This approach aims to align investments with ethical and sustainable principles
5. Supplier Evaluation and Selection: The policy outlines criteria for evaluating and selecting suppliers based on their sustainability performance. It considers factors such as environmental management systems, social responsibility practices, and adherence

7.4.5 University provide assistance for start-ups that foster and support a low-carbon economy/technology

Alexandria University Technology Incubator for Smart Systems nurtures innovation and entrepreneurship, linking university research with Egypt's Vision 2030 and the UN SDGs. It supports startups in smart systems, energy, agriculture, health, and education, providing technical, business, and commercialization guidance. The Energy Conservation Advisory Group assesses energy use and efficiency, while the Air Pollution Advisory Group monitors emissions and advises industries to improve air quality. Together, they advance sustainable technologies and environmental stewardship in Alexandria and beyond.

- Alexandria University has established a comprehensive portfolio of 26 innovative programs and projects that promote renewable energy, energy efficiency, climate change mitigation, and sustainable resource management. These initiatives integrate education, research, infrastructure, and community engagement through renewable energy centers, solar and wind power systems, green building technologies, biofuel research, circular economy projects, and international academic partnerships. The University operates renewable energy centers at the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where hybrid solar–wind systems, photovoltaic installations, and Building-Integrated Photovoltaic (BIPV) technologies support both campus operations and applied research. In addition, Alexandria University offers specialized postgraduate programs in climate change, sustainable fisheries, natural resource sustainability, and the blue economy through Erasmus+ and other international collaborations. Campus sustainability projects, including the Green Cycle initiative, greywater recycling, energy-efficient buildings, solar power stations, and plastic recycling laboratories, further demonstrate the University's commitment to reducing carbon emissions, improving resource efficiency, and preparing graduates to address global environmental challenges.

- Alexandria University actively empowers students to lead sustainability initiatives that foster environmental awareness, innovation, community engagement, and social responsibility. During the reporting period, more than 30 sustainability activities were organized by student groups across the university, demonstrating active participation in advancing sustainable development goals. These activities included international conferences, scientific symposia, green chemistry campaigns, climate awareness events, water entrepreneurship bootcamps, research conferences, engineering competitions, workshops, exhibitions, and community outreach programs.

- Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. The number of graduates employed in green jobs remained consistently high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the University's commitment to integrating sustainability into education, equipping students with the knowledge and skills required for emerging green careers, and supporting the transition to a sustainable and low-carbon economy.

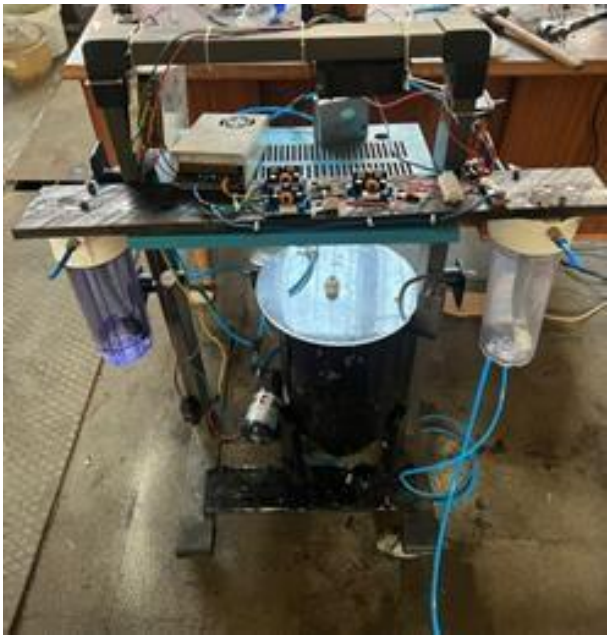
- Research and innovation form another pillar of the strategy. Alexandria University supports energy-driven research platforms, digital laboratories, business incubators, and entrepreneurship initiatives, alongside establishing specialized research centers and adopting international technology and governance frameworks. Applied examples include smart grid applications, solar energy and battery storage projects, renewable power systems, and interdisciplinary research in emerging technologies such as hydrogen

production.

- **Renewable energy:**

13) **Solar Thermal Systems:** Solar collectors generate renewable thermal energy to support heating and hot water demands and complement building energy systems.
14) **Wind Energy:** Wind turbines convert wind energy into renewable electricity to support campus operations and reduce dependence on conventional energy sources.
15) **Biodiesel Production:** Biodiesel derived from biological feedstocks such as plant oils, used cooking oil, and other renewable organic materials serves as a cleaner alternative fuel for energy generation and operational activities.
16) **Green Hydrogen:** Hydrogen produced through water electrolysis using renewable electricity (e.g., solar or wind power) serves as a clean energy carrier that can support electricity generation, thermal applications, and future low-carbon energy systems, including CHP applications where implemented.
17) **Biomass Energy:** Biomass utilization includes advanced conversion technologies such as carbonization, torrefaction, gasification, pyrolysis, and biochar production, contributing to renewable energy generation and efficient resource utilization.
18) **Waste-to-Energy Systems:** Organic or biodegradable waste is converted into useful energy, with CHP applications enabling simultaneous production of electricity and recoverable heat.
Together, these renewable energy technologies contribute to increasing renewable energy production, improving energy efficiency, reducing greenhouse gas emissions, and supporting sustainable campus development and smart building implementation.

	
Automatically Controlled Biodiesel Production Unit. (Faculty of Engineering, Alexandria University)	Activated carbon cloth from biomass fibrous resources (Faculty of Engineering, Alexandria University)

	
Design and Fabrication of Biodiesel Burner test rig. (Faculty of Engineering, Alexandria University)	Green Hydrogen/Diesel Dual-Fuel Retrofit: A Scalable Pathway to Industrial Decarbonization (Faculty of Engineering, Alexandria University)
	
Design of Integrated Augmented Vertical Axis Wind Turbine (VAWT) With Solar Energy System for High Rise Urban Applications (Faculty of Engineering, Alexandria University)	Experimental and Simulation Study of Natural Gas–Hydrogen/Diesel RCCI for Engine Decarbonization (Faculty of Engineering, Alexandria University)

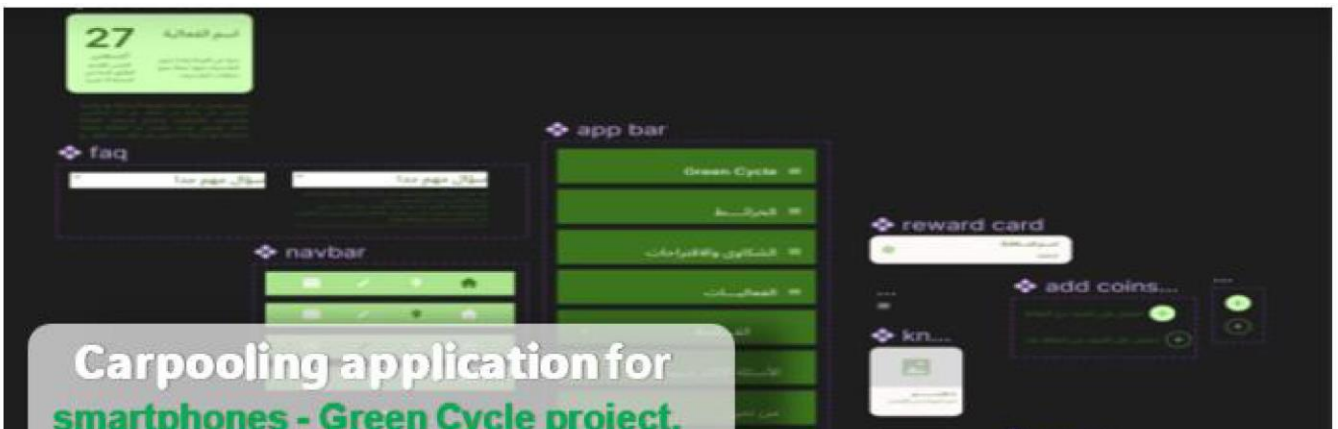


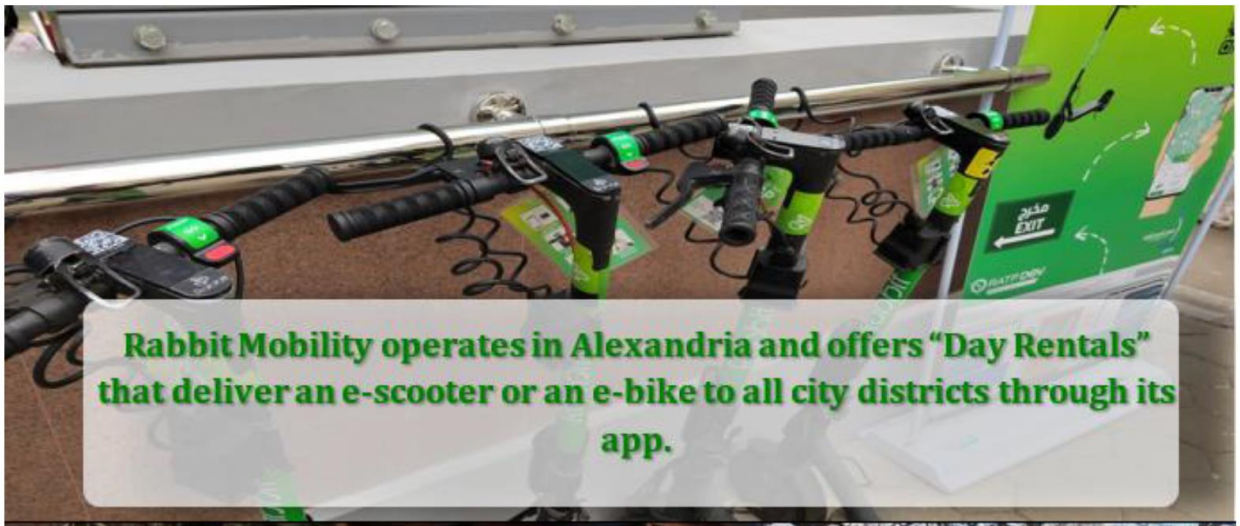
Solar Energy Center at the Faculty of Agriculture (Alexandria University)



Windmill and Solar Panels (Solar Energy Center at the Faculty of Agriculture - Alexandria University)

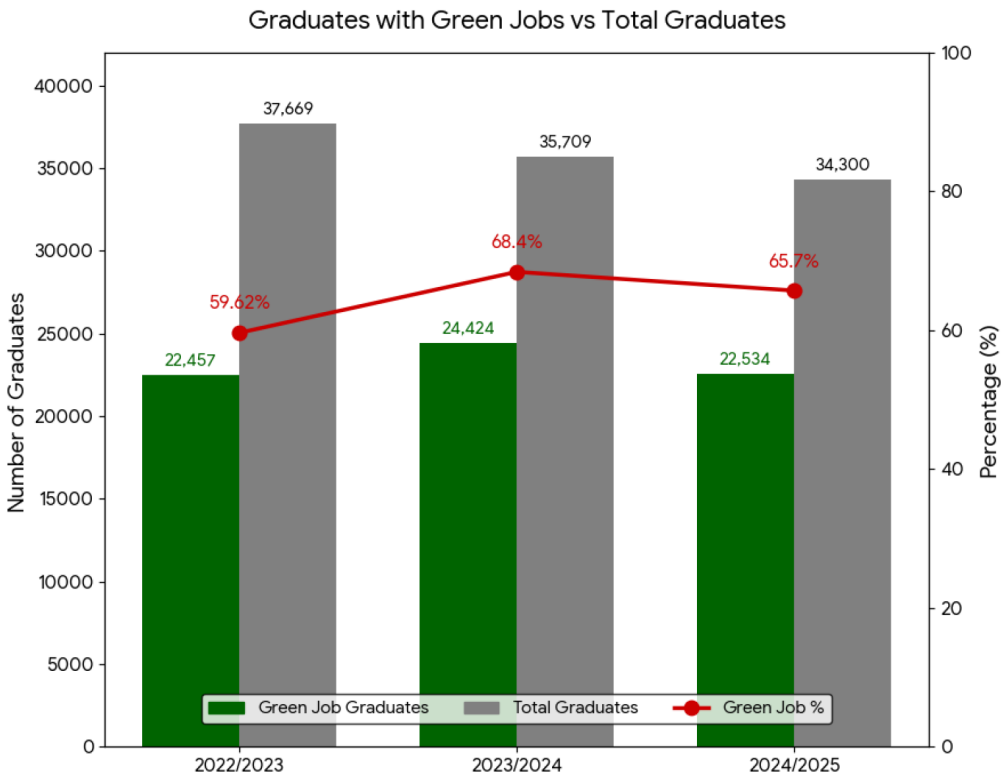
- The University has implemented 22 sustainable transportation initiatives designed to reduce private vehicle use and greenhouse gas emissions. These include shuttle services, carpooling programs, bicycle parking facilities, pedestrian-friendly campus design, awareness campaigns, sustainable mobility competitions, smart parking management, and incentives encouraging environmentally responsible travel. Together, these initiatives help decrease traffic congestion, improve campus safety, and enhance environmental quality.
- Alexandria University actively promotes zero-emission transportation by providing approximately 1,960 bicycles, e-bikes, and e-scooters across its campuses. Bicycle parking stations, cycling initiatives, the "Green Cycle" carpooling application, and collaborations with micromobility providers encourage students and staff to adopt clean transportation alternatives. The University is also preparing electric vehicle charging infrastructure and supports the gradual transition toward electric and low-emission campus transportation.







- Alexandria University continues to prepare graduates for careers that contribute to sustainable development and the green economy. As shown in the figure, the number of graduates employed in green jobs remained consistently high over the three academic years. In 2022/2023, 22,457 out of 37,669 graduates secured green jobs, representing 59.62% of total graduates. This proportion increased significantly to 65.7% in 2023/2024, with 22,534 graduates entering green employment out of 34,300 total graduates, and was maintained at 65.7% in 2024/2025. The sustained increase in the percentage of graduates employed in green sectors reflects the University's commitment to integrating sustainability into education, equipping students with the knowledge and skills required for emerging green careers, and supporting the transition to a sustainable and low-carbon economy.



- Alexandria University actively promotes sustainability-driven entrepreneurship through a dynamic innovation ecosystem that supported 46 sustainability-related startups during the reporting period. The University provides comprehensive incubation, mentoring, training, and commercialization support through initiatives such as the Artificial Intelligence Minds Incubator (AIM) and the Alexandria University Technology Incubator for Smart Systems (AUTISS), which foster innovative solutions in artificial intelligence, smart infrastructure, healthcare, agriculture, energy, and digital technologies. Student-led startups, including Samdha Company, develop environmentally friendly products by converting organic and agricultural waste into natural fertilizers and biodegradable materials, thereby reducing waste, supporting sustainable agriculture, and conserving water. In addition, entrepreneurship competitions such as the Startup Olympics and international programs, including the Bio-iChallenge and Hult Prize, encourage students and researchers to transform innovative ideas into market-ready businesses with significant environmental and social impact.



Alexandria University Technology Incubator for Smart Systems (AUTISS) Incubator (Faculty of Engineering, Alexandria University)



Agro-Food Industries Alliance Products



New partners

Agro-Food Industries Alliance Project

Startup name: "National Committee Sustainable Development"

Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED)

Description: Proposed Mission: Striving to maximize the utilization of the outputs of education and scientific research with the sustainable development goals "Egypt Vision 2030", linking them with the United Nations goals for sustainable development together with developing a framework for the educational system governance aiming at achieving the well-being of society. It includes green, sustainable development and innovative incubators.

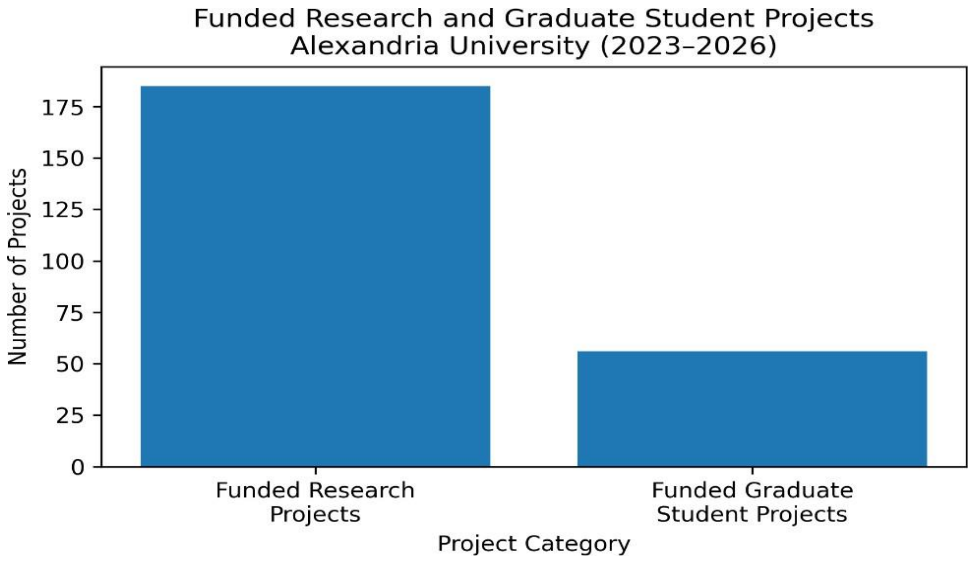


Samdha Company, founded by Musaad Darwish, a student in the Department of Civil and Environmental Engineering at the Faculty of Engineering



Samdha Company: The plants in the 2 photos on the left are planted in presence of natural organic fertilizers

- Alexandria University maintains a robust collection of twenty-six sustainable programs and projects focused on renewable energy, energy efficiency, climate change mitigation, and resource management. These endeavors unite education, research, infrastructure, and community engagement via renewable systems, solar energy, wind power, green technologies, biofuel studies, and global academic networks. The University runs energy centers within the Faculty of Agriculture, Faculty of Science, and Faculty of Engineering, where solar photovoltaic installations, wind power systems, and building technologies support operations and applied research. Furthermore, Alexandria University provides postgraduate education concerning climate change, sustainable fisheries, natural resources, and the blue economy through international partnerships. Campus projects, featuring the Green Cycle initiative, greywater treatment, efficient buildings, solar power stations, and plastic laboratories, highlight the institution's dedication to reducing carbon emissions, optimizing resource efficiency, and training students to tackle global environmental challenges.

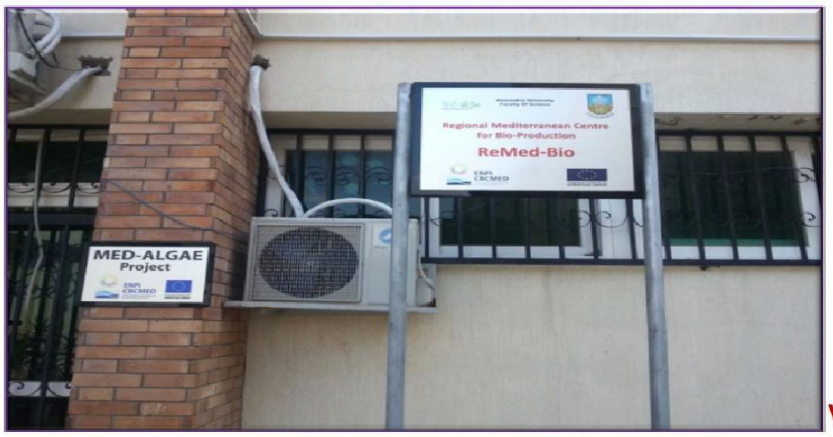


The number of funded research projects and funded graduate student projects at Alexandria University (2023-2026)
185:56



Natural Resources Sustainability for Land Development (Erasmus+ Project, European Union) in collaboration of Alexandria University (Egypt) with Aachen University (Germany)

Med-algae
Production of Biodiesel from Algae



Visitors, Stakeholders & Media
29 March 2014

Project funded by the EUROPEAN UNION

ENPI CBCMED

Production of Bio-Diesel from Algae in Selected Mediterranean Countries: Med-Algae Project, Faculty of Science, Alexandria University, Egypt. Fuded by CBCMED-ENPI (CROSS BORDER COOPERATION IN THE MEDITERRANEAN-European Neighborhood and Partnership Instrument)





Smart Environmental Management of Climate Change in collaboration with Catania University, Italy. (AdapTm-Erasmus project) – Faculty of Science, Alexandria University, Egypt.



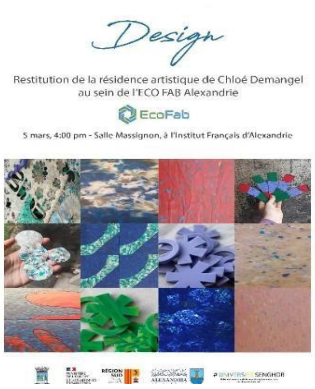
Sustainable Management of Fisheries and Aquaculture Science, in collaboration with University of Aveiro, Portugal (Erasmus+ Project, European Union) - Faculty of Science, Alexandria University, Egypt.

Alexandria University Center for Maritime Archaeology & Underwater Cultural Heritage was established as a



European Union project under the EU-Tempus III Program







The Eco Fab is a fab lab dedicated to plastic recycling in Alexandria, Egypt and part of PECA project (Circular economy hub in alexandria).

•To promote a circular economy, Alexandria University has implemented source-separation programs for paper, plastic, glass, metal, organic waste, and aluminum cans across its campuses. Recyclable materials are collected through color-coded waste bins and processed in collaboration with recycling companies. The University also introduced the Green Cycle mobile application, which enables students to locate recycling stations, report recyclable waste using artificial intelligence, and earn reward points that encourage active participation in campus recycling programs. In parallel, a pilot partnership with **BekyaPay** has been launched to facilitate the collection and monetization of recyclable materials, strengthening resource recovery and sustainable waste management practices.

- The University's commitment to waste reduction extends beyond campus operations through research, innovation, and community engagement. Alexandria University established the **PECA Fab Lab** for recycling plastic waste into new products using digital manufacturing technologies, while students and researchers have developed innovative projects such as converting used cooking oil into environmentally friendly plasticizers. Community initiatives, including beach-cleaning campaigns, recycling workshops, environmental awareness programs, and partnerships with national and international organizations, further promote responsible consumption, environmental stewardship, and public participation in sustainability.



Institutional side-by-side comparison of plastic waste and paper waste alongside the cumulative Total Waste tonnage between last year and this year. Over a two-year tracking period, 2024/2025 and 2025/2026.

The mobile app includes maps of the faculty that help students reach recycling bins more easily. Students can take pictures of the waste to be disposed of, and points are credited after verification using AI.





https://apps.apple.com/us/app/green-cycle/id6587549284
https://play.google.com/store/apps/details?id=net.alexpharmacy.green_cycle



Alexandria University is exploring a partnership with BekyaPay, with implementation planned by 2027, to collect and monetize recyclable materials such as paper, plastic, and aluminum cans. A pilot has already been launched at the Faculty of Pharmacy, supporting circular economy practices and improving waste segregation.

- Alexandria University continues to strengthen its energy research ecosystem by securing substantial national and international funding that supports scientific innovation, renewable energy, and sustainable development. During the period 2023–2025, the University received an average annual research funding of USD 1.35 million, with total research funds amounting to USD 1.85 million in 2023, USD 0.98 million in 2024, and USD 1.20 million in 2025. While the value expressed in U.S. dollars declined in 2024 due to local currency changes, actual research funding allocated for power system optimization, solar energy, and battery storage increased, reflecting continued project investment. Funding levels recovered in 2025, demonstrating sustained commitment to high-quality energy technology research.
- The University benefits from diverse funding sources, including national agencies such as STDF and ASRT, as well as international partners supporting sustainable energy efficiency, smart grid technology, and power generation projects. Alexandria University also supports researchers through open-access publishing opportunities, experimental data management, and 39 scientific journals published in both Arabic and English, several of which offer free publication for University researchers.