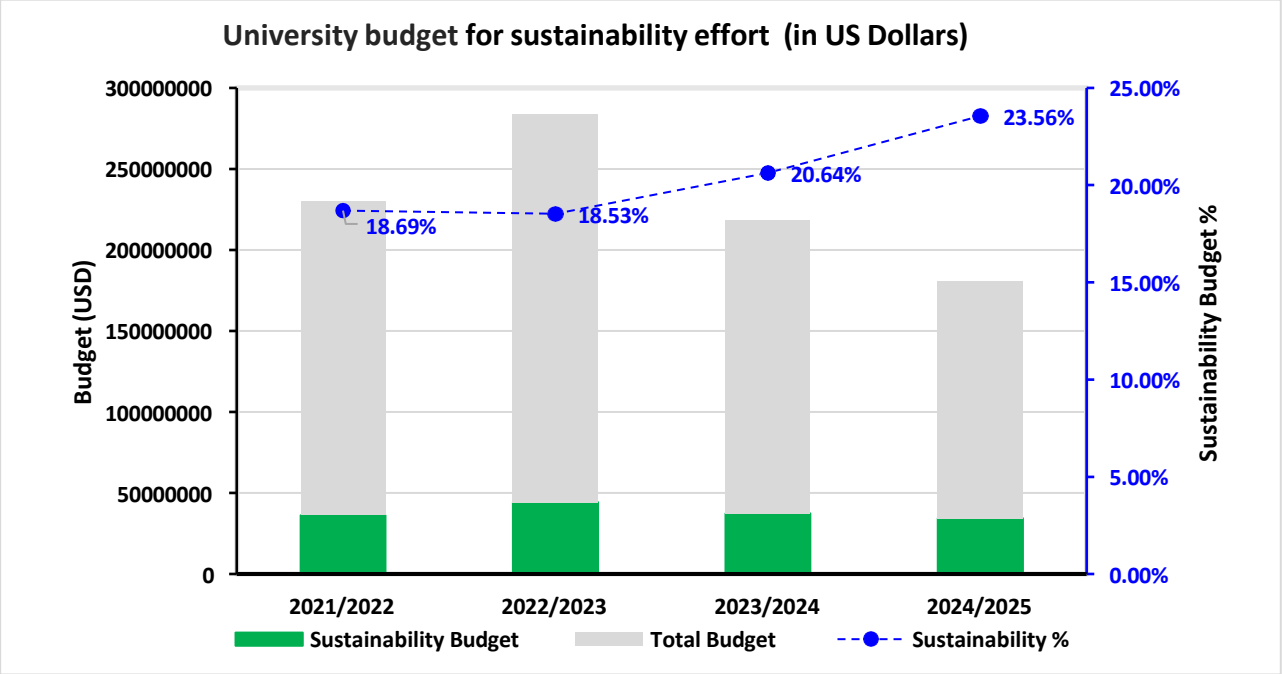
Annual Sustainability Report

Alexandria University has made its annual Sustainability Report available through its official website, offering a comprehensive overview of its sustainability performance and initiatives. The report highlights key areas such as environmental practices, sustainable infrastructure development, academic programs aligned with the United Nations Sustainable Development Goals (SDGs), and community outreach activities that contribute to Egypt Vision 2030.

Through clearly defined institutional policies, the university ensures that sustainability principles are embedded across all aspects of campus operations and strategic planning. These policies are publicly accessible and systematically applied, reflecting a structured approach to advancing the SDGs.

The regular issuance of detailed sustainability reports underscores Alexandria University's strong dedication to transparency, accountability, and its leading role in promoting sustainable development at both the national and regional levels.

University budget for sustainability effort (in US Dollars)



✓ The average percentage of Alexandria University's budget for sustainability effort from the academic year 2021/2022 to 2024/2025 is **20.04 %.**

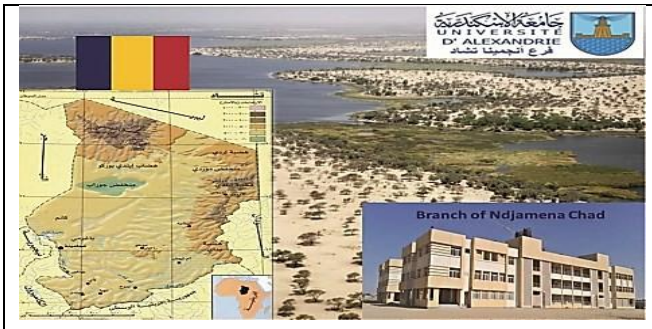
International Branches as Drivers of Sustainable Development

Alexandria University has significantly strengthened its international presence by establishing academic branches in Juba, Tonj, and N'Djamena. These initiatives reflect Egypt's broader vision of promoting academic diplomacy, enhancing capacity building, and advancing the United Nations Sustainable Development Goals (SDGs) across the African continent.

In Chad, the university launched its first Francophone branch in N'Djamena during the 2010–2011 academic year, initially in collaboration with the University of N'Djamena before transitioning to fully independent facilities. The branch currently offers programs in Agriculture and Veterinary Medicine in both Arabic and French, with plans to expand into Pharmacy. It serves around 200 students each year from Chad and neighboring countries, and celebrated the graduation of its first cohort in 2016–2017.

In South Sudan, Alexandria University expanded its outreach through branches in Juba and Tonj, following a Memorandum of Understanding formalized in February 2024 in the presence of Egypt's Minister of Higher Education. Although operations began earlier in 2015, the agreement strengthened institutional collaboration and development. These branches provide a wide range of academic programs, including Agriculture, Veterinary Medicine, Nursing, Education, Engineering, Business, and Biotechnology. All programs are aligned with the Egyptian National Qualifications Framework, ensuring consistency and equivalence with those offered at the main campus in Alexandria, while also enabling opportunities for scholarships, faculty exchange, and study mobility.

Through these cross-border initiatives, Alexandria University contributes directly to key SDGs, particularly Quality Education (SDG 4), Decent Work and Economic Growth (SDG 8), Industry, Innovation and Infrastructure (SDG 9), Reduced Inequalities (SDG 10), and Partnerships for the Goals (SDG 17). At the same time, it reinforces Egypt's academic, economic, and cultural connections throughout Africa.



Alexandria University Branch in the Chadian capital, "N'Djamena"

Alexandria University Branch in Malaysia

Green-building

A comprehensive set of green building practices is applied across the campus to enhance environmental performance and resource efficiency. Energy-efficient LED lighting systems equipped with occupancy and daylight sensors are widely used, alongside advanced Building Management Systems (BMS) that enable optimized scheduling, continuous monitoring, and sub-metering. Major mechanical systems are improved through the installation of variable frequency drives (VFDs) on fans and pumps, as well as upgraded air handling unit (AHU) motors. Outdoor lighting is carefully controlled using photocells and curfew schedules to minimize unnecessary energy use. In addition, renewable energy is promoted through the installation of solar photovoltaic panels on rooftops and parking structures.

To mitigate heat island effects, the campus incorporates cool roofing materials, shaded green areas, permeable and light-colored paving, and solar canopies. Water conservation is addressed through rainwater harvesting and the reuse of air-conditioning condensate for irrigation and flushing, complemented by smart irrigation systems, drip techniques, and drought-resistant landscaping. Water-efficient fixtures, leak detection systems, and sub-metering further support responsible water management.

Sustainable procurement practices ensure the use of low-emission materials with environmental product declarations (EPDs), recycled content, and responsibly sourced timber. Waste management is handled through systematic segregation of recyclables, including paper, plastics, metals, glass, electronic waste, and organic materials. Indoor environmental quality is enhanced through ventilation and air quality controls such as CO_2 monitoring, air filtration, emissions control, and regular testing, alongside measures for daylight optimization, glare reduction, and acoustic comfort.

The campus also adopts integrated pest and landscape management practices with erosion control measures. Environmentally friendly refrigerants with zero ozone depletion potential and low global warming potential are utilized, supported by leak detection and recovery systems. Safety protocols and building user manuals are maintained to ensure proper operation. Performance is continuously tracked through monthly key performance indicators, including building energy use, energy savings, indoor air quality, and maintenance efficiency. Furthermore, the university is advancing innovation through pilot projects such as analytics and fault detection systems, circular laboratory concepts, and low-carbon materials, while planning future integration of heat recovery systems for hot water and reheating applications.

LED Lighting

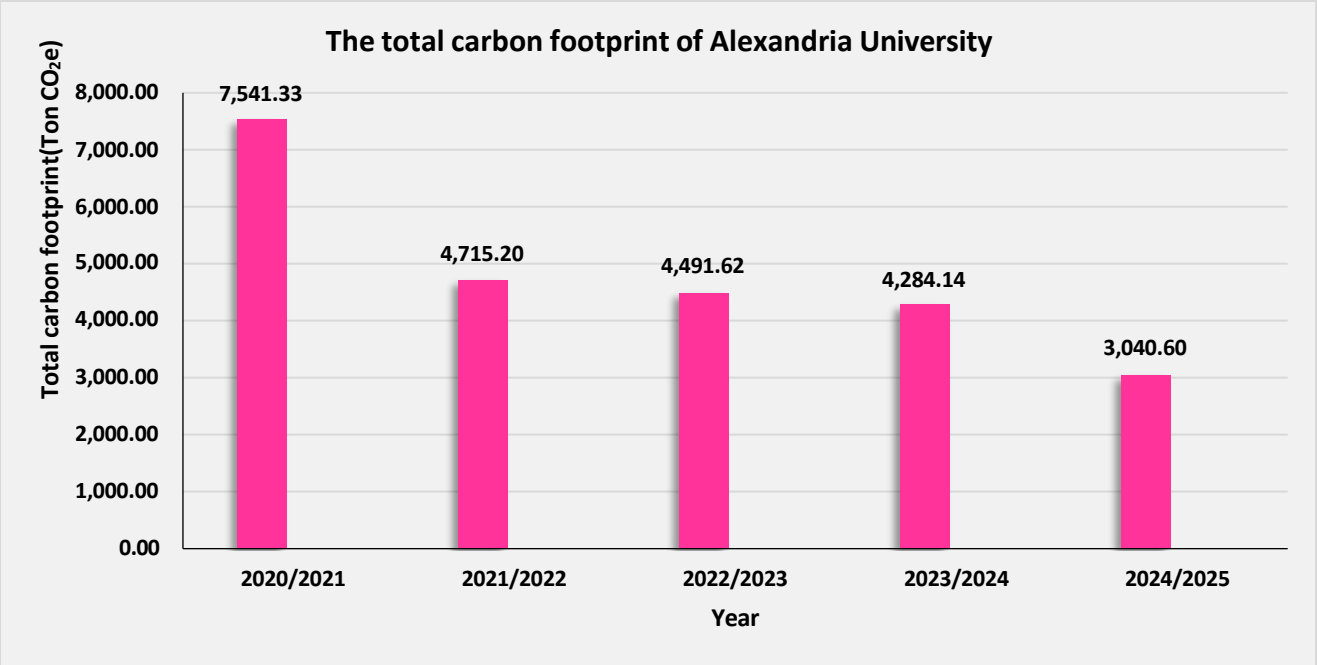
Green building implementation through the use of sun breakers in the SSP building at the Faculty of Engineering

Carbon footprint

Alexandria University has made notable progress in reducing its institutional carbon footprint, with total emissions declining from 7,541.33 metric tons of CO_2e in the 2020/2021 academic year to 3,040.60 metric tons in 2024/2025. This represents an overall reduction of approximately 59.7% over five years, reflecting a sustained and well-structured decarbonization approach.

This achievement has been driven by a combination of targeted measures, including energy efficiency improvements across campus facilities and the increased adoption and procurement of renewable electricity. These efforts have contributed to a consistent downward trend in emissions, in line with pathways recommended by the Intergovernmental Panel on Climate Change for limiting global temperature rise to 1.5 °C.

Moreover, the university's actions directly support Egypt's commitments under the Paris Agreement and its updated Nationally Determined Contributions (NDCs). By integrating climate action into its core operational and strategic planning, Alexandria University provides a strong, science-based model for effective climate governance that can be replicated across higher education institutions.



Renewable energy

Alexandria University made significant strides in advancing its sustainability and climate action agenda during the 2024–2025 academic year, moving beyond earlier efforts to achieve tangible outcomes in energy efficiency, renewable energy expansion, green infrastructure, and emissions reduction. Total electricity consumption reached 4,228,995.91 kWh, reflecting a 6.42% decrease compared to 2023–2024, alongside a substantial 70% reduction in natural gas use—demonstrating the effectiveness of energy retrofit programs and the transition toward cleaner energy systems. Meanwhile, renewable energy generation rose to 1,213,291.2 kWh annually, accounting for 28.69% of total electricity demand, largely driven by the expansion of solar installations and hybrid energy systems across university faculties.

As part of its forward-looking sustainability strategy, the university is implementing a dual-track initiative that combines rooftop solar deployment with the development of a Fab Lab to support circular economy innovation. The solar component utilizes approximately 200 m² of rooftop space (with a net usable area of 196 m² after allocating 3% for service access), installing a 1.5-ton system expected to generate around 37,700 kWh per year. This projection is based on Alexandria's average global horizontal irradiance of 5.2 kWh/m²/day, incorporating a panel efficiency of 20% and a

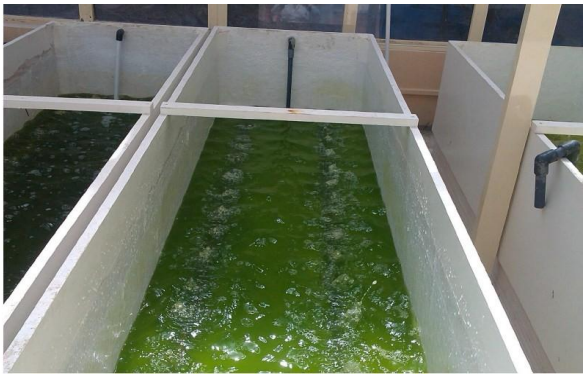
performance ratio of 0.75 to account for system losses.

In parallel, the university is hosting a trans-Mediterranean Fab Lab initiative in collaboration with Horizons Solidarités and University of Corsica. This initiative aims to establish a low-tech innovation hub focused on plastic waste valorization, aligning with the legacy of COP27 and the regional "Zero Plastic Waste" strategy supported by IUCN Med.

The initiative adopts an integrated approach that combines environmental, educational, and socio-economic dimensions through multi-stakeholder collaboration involving Alexandria Governorate, the Alexandria Business Association (ABA), and Francophone academic partners. It seeks to promote inclusive innovation, build technical capacities, and develop scalable circular economy business models, while embedding long-term monitoring frameworks to assess technical performance, financial viability, and social impact

Solar photovoltaic

Algae Cultivated In Flat Panel Photo-Bioreactor, Med-Algae Project (Faculty of Science, Alexandria University)



Open Ponds with running algal cultures, Med-Algae Project (Faculty of Science, Alexandria University)

Digital transformation

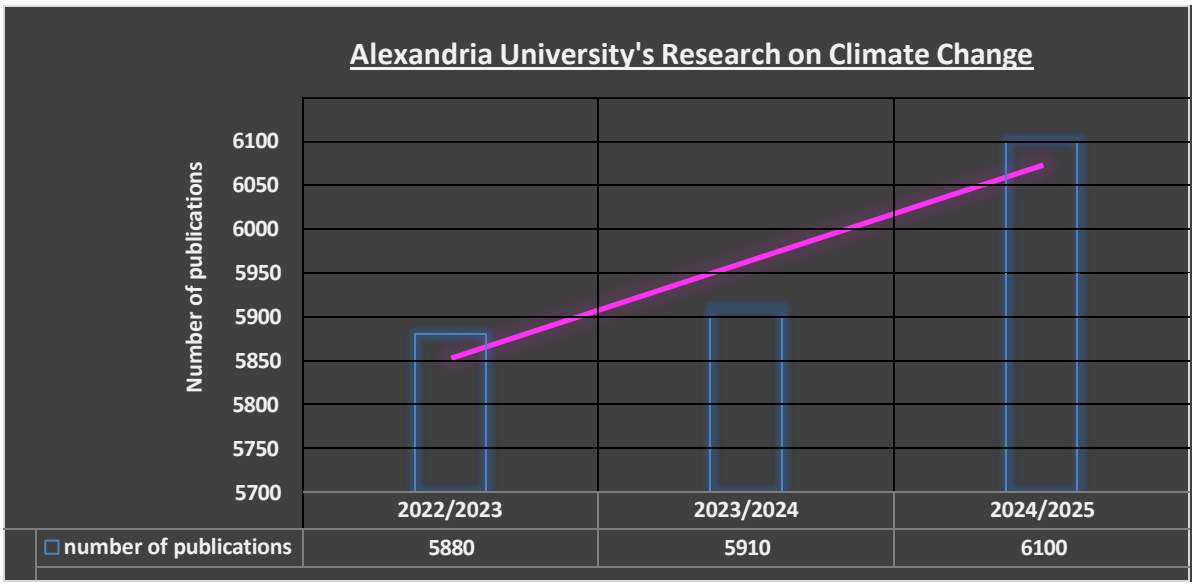
Alexandria University has made notable progress in digital transformation during the 2024–2025 academic year, positioning it as a central driver of sustainability and operational efficiency. The university has moved steadily toward a nearly paperless environment by expanding electronic archiving systems, digital communication channels, and e-administration processes, leading to a 48.6% reduction in paper consumption compared to the 2020/2021 academic year.

In parallel, Alexandria University has modernized its educational infrastructure through the introduction of electronic examination halls across several faculties and the establishment of virtual laboratories. These labs provide remote access to 36 physics, 58 biology, and 92 chemistry experiments, enhancing both accessibility and learning flexibility. The university has also adopted advanced smart technologies, including IoT-based irrigation

systems, Building Management Systems (BMS) equipped with real-time energy monitoring dashboards, and motion-sensor lighting solutions to optimize resource use.
Furthermore, digital innovation extends to specialized tools such as the Green Cycle carpooling application and e-learning platforms focused on renewable energy education, alongside centralized digital systems for monitoring utilities consumption. Collectively, these initiatives contribute to improved resource efficiency and reduced environmental impact.
Through this integrated digital transformation approach, the university not only supports its carbon reduction objectives but also aligns with Egypt Vision 2030 and broader global sustainability goals, while enhancing educational quality, institutional resilience, and environmental responsibility.

Alexandria University's Research on Climate Change

Researchers from various faculties at Alexandria University have published 12,400 research articles and reviews between 2021 and 2025 to investigate the phenomenon of climate change across different scientific fields.



Alexandria University demonstrates a clear and steady increase in climate change–related research output over the past three academic years. The number of publications rose from 5,880 in 2022/2023 to 5,910 in 2023/2024, before reaching 6,100 in 2024/2025.
This pattern reflects a continuous upward trajectory in scholarly productivity, highlighting the university's growing engagement with climate change research. The overall increase of 220 publications between the first and final year underscores both consistent annual growth and a more pronounced rise in the latest period.
Such progress suggests a strengthening of research capacity, potentially supported by increased funding opportunities, enhanced collaboration, and a stronger institutional focus on climate-related topics. Overall, this trend indicates that climate change has become an increasingly prominent priority within the university's research agenda.

Google Scholar "Alexandria University" AND "Climate" OR "Greenhouse gases" OR "Emissio1 •

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A Study of Strategic Plans of Sustainable Urban Development for Alexandria, Egypt to Mitigate the Climate Change Phenomena.

AFA Mohamed - Future Cilies & Environmenl, 2023 - search.et:>scohost.com

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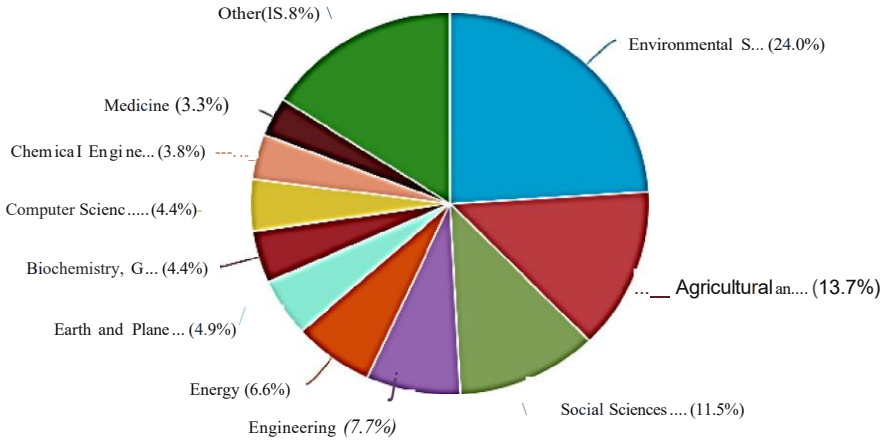
Documents by subject area



Waste

Alexandria University has demonstrated strong academic and operational advancement in sustainability between 2022 and 2025, aligning its practices with Egypt Vision 2030 and the United Nations Sustainable Development Goals (SDGs). Central to this progress is a comprehensive 3R (Reduce, Reuse, Recycle) framework supported by formal policies, clearly defined responsibilities, and measurable targets that are regularly evaluated through annual reporting mechanisms.

During the 2024/2025 academic year, the university further strengthened its sustainability efforts by prioritizing waste reduction, recycling, and environmentally responsible operations across all campuses. In collaboration with Nahdet Misr Company, approximately 231 tons of waste were collected through an integrated system that incorporates waste segregation, recycling, and safe disposal. Organic waste represented 55% (127 tons) of the total and was fully recycled into compost, reflecting a complete circular approach. This figure also indicates a slight reduction from 129 tons in 2023/2024, highlighting improved waste management practices and efficiency gains.

The university applies a structured organic waste management system focused on biological treatment and value recovery. Waste generated from cafeterias, green spaces, and animal facilities undergoes controlled processing—including aeration, purification, fumigation, and filtration—over a 45–60 day period, producing approximately 58 tons of nutrient-rich compost annually. The Faculty of Agriculture plays a leading role by converting agricultural residues into organic fertilizers, animal feed, and biochar, in addition to applying advanced techniques such as vermicomposting and black soldier fly bioconversion to generate sustainable protein sources. The resulting compost is categorized based on particle size for different agricultural uses, supporting soil fertility and sustainable land management, particularly in desert environments.

Inorganic waste accounts for 45% (104.5 tons) of total waste, with 70% recycled and the remainder safely transferred to the Naseria Hazardous Waste Facility under Alexandria Governorate. Paper waste alone reached 109 tons, managed through licensed recycling partnerships. In total, the university handled 340.5 tons of non-hazardous waste, achieving a 4.3% annual reduction in inorganic waste. This integrated system minimizes environmental risks, reduces reliance on landfills, and mitigates pollution across air, water, and soil systems.

Hazardous waste management has also improved significantly, with total volumes decreasing from 3.09 to 2.75 tons—an 11% reduction. These improvements are attributed to stricter oversight, enhanced handling procedures, and compliance with national environmental regulations. Specialized contracts ensure the safe treatment and disposal of medical, biological, and chemical waste. Notably, the Faculty of Medicine introduced an innovative reuse initiative by repurposing empty containers into safe disposal units for sharp medical instruments, combining safety with sustainability.

Recycling initiatives across faculties further enhance resource efficiency. A centralized directive ensures that recyclable materials such as metals, wood, electronic devices, and laboratory equipment are transferred to the Abis Agricultural Research Station for sorting and reuse. This approach transforms waste into valuable inputs, reduces production costs, and lowers environmental impacts. Faculties such as Science have also implemented localized recycling systems, including the production of organic compost from tree waste, contributing to biodiversity and sustainable campus management.

The Faculty of Science has taken a leading role in environmental safety and innovation by implementing strict protocols for chemical management through its Occupational Safety and Health Unit. All faculties maintain Temporary Hazardous Waste Storage facilities equipped with proper ventilation and safety systems, while trained personnel ensure correct handling, documentation, and disposal. Continuous training programs and awareness campaigns further promote a culture of environmental responsibility and safety among students and staff.

In parallel, the university has reinforced its efforts to reduce paper and plastic consumption through digital transformation. The adoption of electronic archiving, e-examinations, digital signatures, and online communication has significantly reduced paper use and associated emissions. Institutional policies promote minimal printing, the use of recycled paper, and shared printing resources to encourage sustainable

administrative practices.

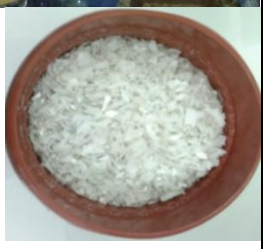
Innovation and student engagement remain key drivers of sustainability at Alexandria University. Students have developed projects ranging from converting used cooking oil into eco-friendly materials to designing biological solutions for plastic degradation and creating art from recycled waste. The university's EFFCT team gained international recognition by securing second place in the Hult Prize in Paris in 2023 for their work on textile waste recycling. Additionally, students from the Faculty of Sport Education in Abu Qir collaborated with the Ministry of Environment in large-scale coastal cleanup activities along Alexandria's Eastern Harbour, reinforcing the university's role in community engagement and environmental stewardship.

Recycling Program for University Waste (Alexandria University, Egypt)

Program for separation of Paper (blue), Plastic (yellow), aluminum cans and glass (green) and organic waste (red) in Campus (Alexandria University, Egypt)

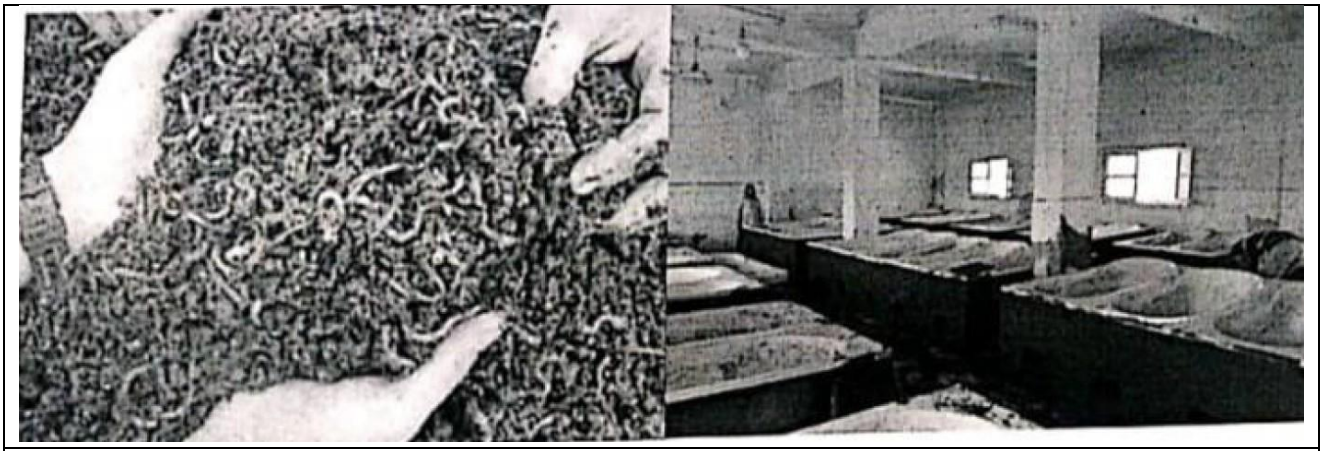
Separating waste into special containers for plastic, paper, glass and metal waste. Donation provided by the Rotary Club of Newaira (for condolences and to the College of Medicine and the Hospital).

Program for separation of Plastic (blue), Paper (green), Aluminum Cans (red) and General (black) in the Faculty of Pharmacy (Alexandria University, Egypt)



Recycling of plastic waste at the Faculty of Science (Alexandria University, Egypt)

Leaves and organic waste were treated for the vermi-compost to produce organic fertilizers to use in the Campus gardens (Alexandria University).



The Faculty of Agriculture recycles 100% of its organic waste (Alexandria University).

Waste reception hall in Nahdet Misr company for waste collection in Alexandria

Manual sorting hall in Nahdet Misr company for waste collection in Alexandria

Organic matter separation unit in Nahdet Misr company for wastes collection in Alexandria

Mixed plastic collected by Nahdet Misr company for wastes collection in Alexandria

Cans waste collected by Nahdet Misr company for wastes collection in Alexandria

Paper and carton baler in Nahdet Misr company for wastes collection in Alexandria

Cans press in Nahdet Misr company for wastes collection in Alexandria

Recycling Program for both materials and equipment with metals and derivatives (Alexandria University, Egypt)

The biohazards and medical hazards, and toxic chemical compounds are handled by Alexandria Governorate Hazardous Waste Management (NASERIA), Alexandria University, Egypt

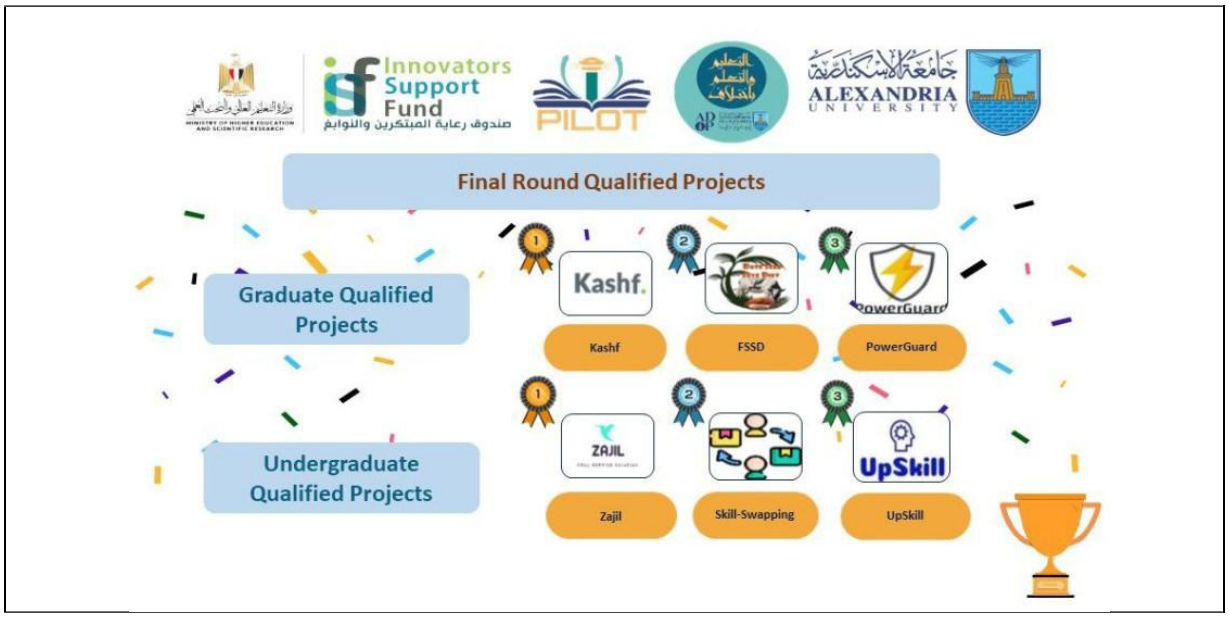
The water sewage of the Aquaculture of the Faculty of Agriculture (Alexandria University, Egypt)
The irrigated water supplied to the fish farm at the Agriculture Experimental Research Station of the Faculty of Agriculture is recycled to irrigate the crops, vegetables, and fruits of the land farm.

Wastewater treatment unit at Faculty of Engineering

Grey water recycling system organized by Faculty of Pharmacy (Alexandria University, Egypt), and reused in rooftop cultivation.

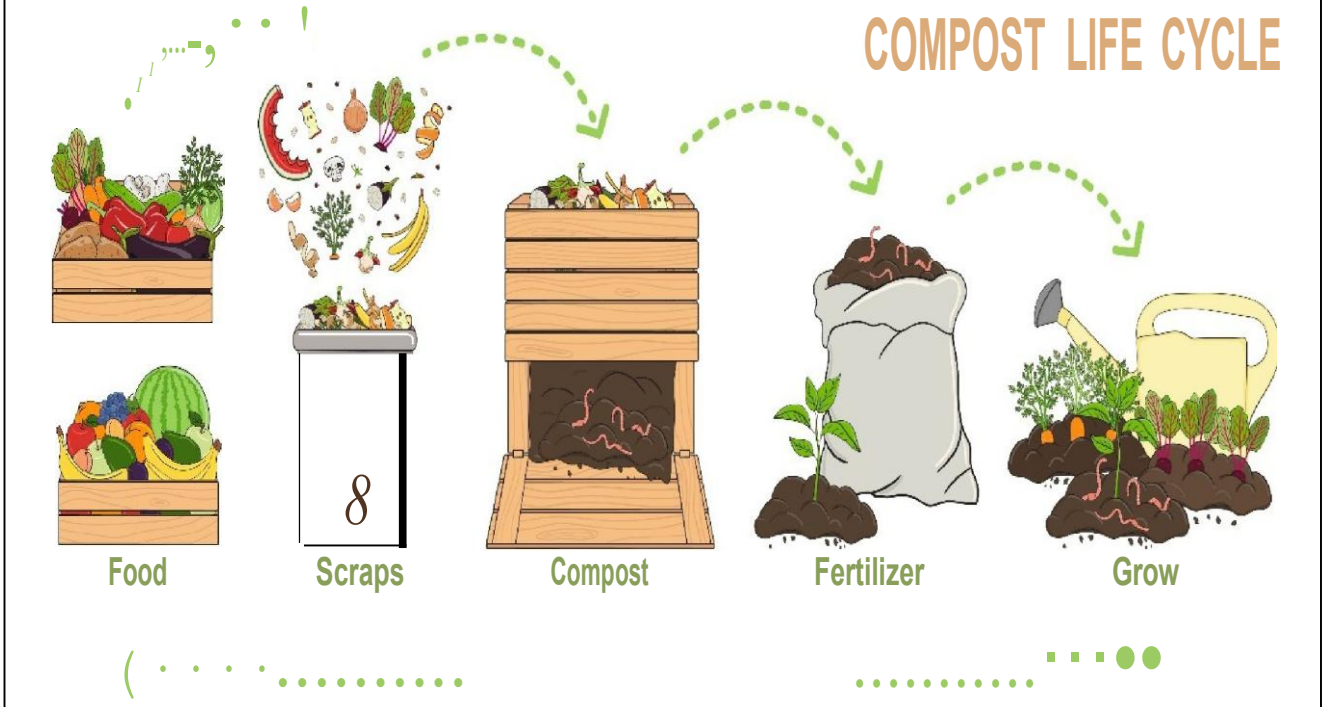
Alexandria University activities for waste recycling and treatment

- Alexandria University's FSSD project—recycling agricultural waste via advanced bioprocessing to produce sustainable alternative animal feed—has reached the national finals of the 2024 Startup Olympiad (Researchers track) under the Innovators Support Fund (ISF). After winning the university qualifiers (July 2024) and excelling in the regional qualifiers (September 2024), the team, led by Prof. Doaa Ahmed Gharib (Medical Biotechnology, Faculty of Science) with collaborators from SRTA-City, now competes at the national level. The project advances circular resource use, cuts reliance on imported feed, strengthens food security, and aligns with environmental sustainability and the green economy, showcasing impactful university–research collaboration for societal and industrial benefit.



Alexandria University Project for Recycling Agricultural Waste into Bio-Feed Reaches 2024 Startup Olympiad Final

- For more than fifteen years, the Faculty of Science has demonstrated a strong commitment to environmental sustainability through continuous efforts to trim infected palm trees, maintain the surrounding landscape, and remove trees that pose potential risks to pedestrians. As part of its sustainability initiatives, the Faculty ensures that waste generated from palm tree pruning is recycled rather than discarded. Using the Palm Fronds and Plant Residues Shredding Machine, the Faculty processes palm fronds and other agricultural residues into reusable products such as animal feed and organic fertilizers. In addition, the Faculty has produced five tons of organic compost from tree waste collected in the botanical garden, with an estimated value of approximately 250,000 EGP. This initiative not only reduces waste but also enhances the sustainable use of natural resources and supports environmental conservation across the campus.


COMPOST LIFE CYCLE
Food
Scraps
Compost
Fertilizer
Grow

Sustainable Management and Recycling of Palm Tree Waste at the Faculty of Science

- On **Wednesday, May 7, 2025**, the **Faculty of Science** hosted a seminar titled *"Environmental Sustainability of Natural Resources and the Protection of Future Generations' Rights"* as part of the Community Service and Environmental Development Sector. **Dr. Ashraf Saeed Mohamed Ragab** (General Manager, Alexandria Company for Oils and Soap) presented on **sustainable refining of edible oils**, highlighting local **production-consumption gaps**, **eco-friendly refining technologies** that cut emissions and carbon footprint, and strategies for **recycling/reuse** of process wastes. He emphasized expanding **oilseed cultivation** to boost self-sufficiency, reduce imports and foreign-currency pressure, and strengthen environmental protection through **recycling-oriented industrial practices**.

Faculty of Science Seminar Highlights Sustainable Oil Refining and Recycling Practices

Water

During the 2024–2025 academic year, Alexandria University is implementing a comprehensive, university-wide water sustainability strategy aligned with Egypt's Vision 2030 and the United Nations Sustainable Development Goals (SDGs), particularly SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), and SDG 14 (Life Below Water).

Water Conservation Program (WR.1) involves installing high-efficiency fixtures such as sensor-activated faucets, low-flow toilets, and bidets, achieving an estimated 50% reduction in potable water use across university faculties. A proactive leak detection and preventive maintenance program minimizes losses from aging infrastructure. Innovative irrigation techniques, including drip systems and soil moisture sensors, along with drought-tolerant landscaping, further reduce water demand. Awareness campaigns, conducted in partnership with the Alexandria Drinking Water Company and the Holding Company for Water and Wastewater, engage students, faculty, and staff in sustainable water practices.

Water Recycling Program (WR.2) has made significant progress in non-potable water reuse and resource recovery. Approximately 1.12 million m^3 of treated sewage effluent (TSE) is used annually for landscape irrigation. A greywater pilot system at the Faculty of Pharmacy treats hand-wash wastewater for toilet flushing, while air-conditioning condensate recovery systems supply irrigation and flushing in select buildings. Rainwater is collected in a central retention lake, and nutrient-rich effluent from the Faculty of Agriculture's eight-pond aquaculture facility irrigates nearby crops, enhancing soil fertility. Additionally, a solar-powered desalination unit at Wadi El-Natroun (100 m^3/day) and an innovative renewable energy–driven multi-stage flash desalination system (RE-NF-MSF) demonstrate the University's leadership in sustainable water technologies.

Water-Efficient Appliances (WR.3) now account for 80.1% of all campus fixtures, including 90.97% of bathroom faucets, 50.48% of toilets, and 57.69% of urinals fitted with flow-control devices. Institutional policies ensure all new buildings and major renovations meet water-efficiency standards. At the Abis Campus, green infrastructure now covers 52% of the site, integrating sustainability principles into the built environment.

Treated Water Consumption (WR.4) is carefully managed, with the University's entire annual wastewater volume of 1,116,625.26 m^3 routed through the Alexandria Sanitation Company for secondary and tertiary treatment. A significant portion is reused to support Egypt's New Delta agricultural reclamation project, contributing to national food security. Treated water is also applied in irrigation, aquaculture, and experimental research, creating a closed-loop water management system.

Water Pollution Control (WR.5) is maintained through strict compliance with Egyptian environmental regulations and international standards, including APHA methods. Accredited laboratories at the Faculties of Science and Engineering and the Institute of Graduate Studies and Research monitor physical, chemical, and biological parameters in stormwater, wastewater, and coastal discharges. The University actively engages in marine conservation through shoreline clean-ups, environmental impact assessments, and research on marine biodiversity and pollution mitigation. Collaborative initiatives, such as the EU-funded "Circular Economy: From the Beach to the Lab" project and Erasmus+ programs on sustainable aquaculture, highlight Alexandria University's contribution to Mediterranean coastal ecosystem protection.

The Center of Excellence for Water complements these efforts with student training in wastewater operations, entrepreneurship bootcamps on water innovation, and workshops on EU-funded research opportunities. Collectively, these initiatives position Alexandria University as a national and regional leader in sustainable water governance, demonstrating how academic excellence, technological innovation, and environmental stewardship can effectively address Egypt's water and climate challenges.


Adopting a mechanism to maintain water pipes to prevent waste resulting from leaks (Alexandria University, Egypt)


Supplying water taps with water conservation units (Alexandria University, Egypt)


Supplying water taps with water conservation units (Alexandria University, Egypt)


Air conditioning water collection and reuse unit - Faculty of Engineering

Wastewater treatment unit at the Faculty of Engineering

The sewage water will be treated and reused in the irrigation of green areas in the project (Alexandria University)

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

A 100 m^3 desalination unit in Wadi Natroun (Faculty of Agriculture, Alexandria University)

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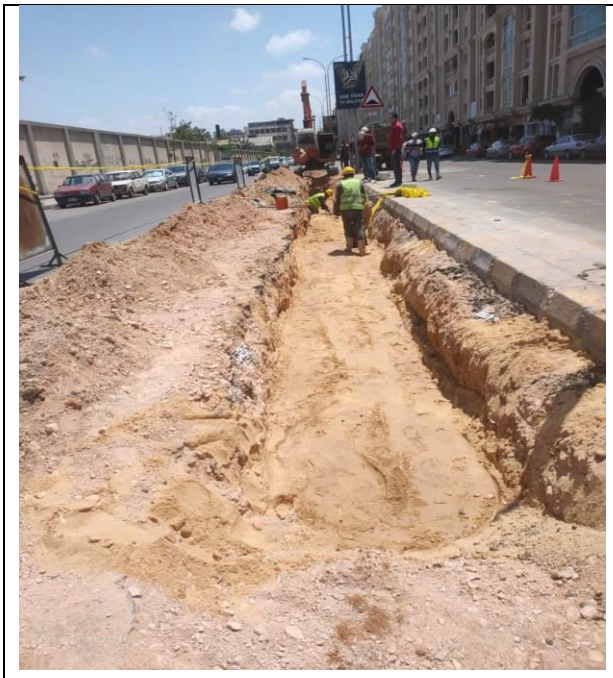
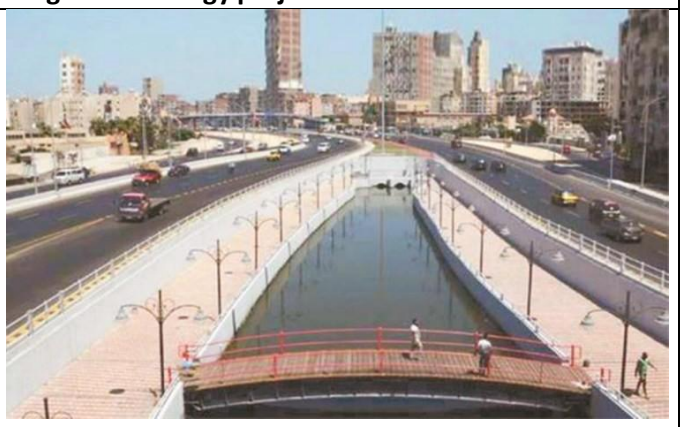
Integrated strategy project for rainwater management in Alexandria Governorate in cooperation with Alexandria University



Integrated strategy project for rainwater management in Alexandria Governorate in cooperation with Alexandria University

Before performing the integrated strategy project

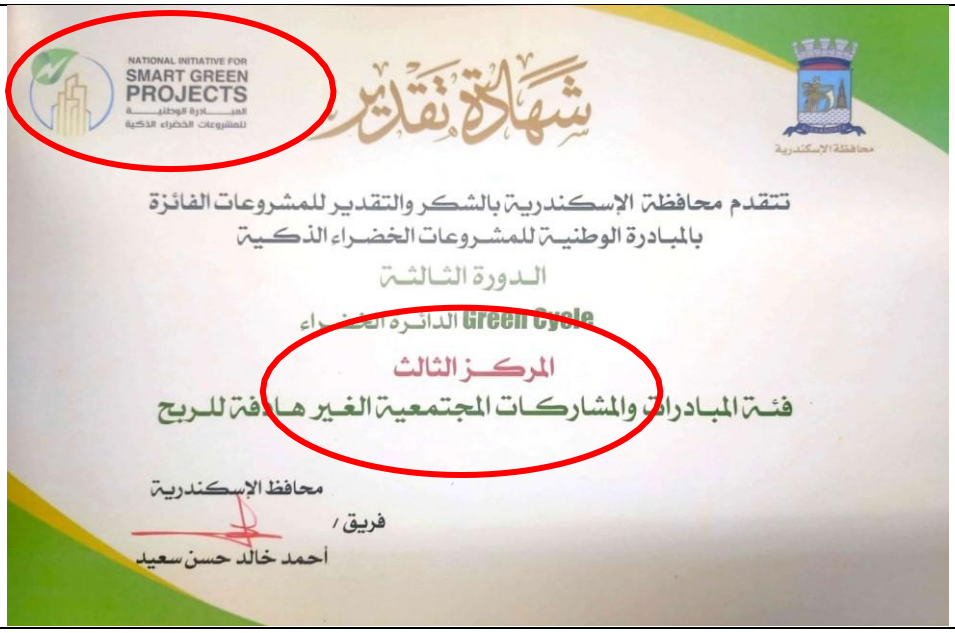
After performing the integrated strategy project

Mahmoudiyah Axis Project before and after performing the project

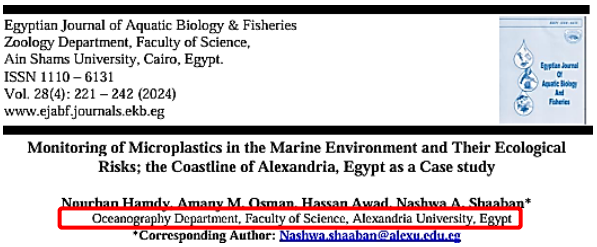
Raising awareness among university staff about water conservation through seminars and workshops organized in collaboration with Alexandria Drinking Water Company at the Faculy of Science.

An environmental impact assessment was conducted by academic members of the Faculty of Science - Alexandria University to evaluate the rate of shoreline erosion caused by urbanization in Alexandria's North Coast region.

The faculty members from the Faculty of Engineering are providing engineering consultations and supervision concerning the construction of the Mahmoudiyah road.



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.



Researchers at Alexandria University are conducting studies to conserve the marine environment near the university campus

Raising awareness among Alexandria University students about wastewater treatment was achieved through summer training activities conducted at Alexandria Sewerage for students from various faculties, including Science, Engineering (Civil, Mechanical, and Mechatronics), Commerce, Arts (Surveying, Mapping, and GIS), and Fine Arts (Architecture), September 2024.

The Center of Excellence for Water at Alexandria University is organizing a training program for scholarship students in collaboration with EPROM Company. This initiative aims to equip students with practical skills in water management including training courses about Water Treatment for Industrial Applications, and Wastewater Plant Operations and Troubleshooting, ensuring they are well-prepared for the business sector and aligned with labor market requirements (March, 2024).

Students from the Faculty of Sport Education at Abu Qir took part in a week-long initiative to clean the eastern harbour of Alexandria, starting on July 8, 2024. The initiative aims to promote sustainable tourism, improve waste disposal practices, and raise awareness about the dangers of plastic waste to marine life, while encouraging recycling efforts and maintaining clean beaches. The project included the Alexandria university, El-Raml Rotary Club, and the Egyptian Diving and Rescue Federation.

Students from various schools in Alexandria, alongside those from the French Institute, participated in a large-scale cleanup campaign at Anfouchi beach titled “Our Sea is Clean Without Trash .” Following the cleanup, participants explored the process of transforming plastic waste into usable materials through 3D printing at the Fab Lab at Alexandria University. This initiative is part of the "Circular Economy: From the Beach to the Lab" project, led by the French Consulate and the French Institute, with financial backing from the European Union and collaboration with the Alexandria Governorate. The project aims to foster partnerships for sustainability and actively engage the local community in environmental efforts.

Transportation

Alexandria University has established a comprehensive and integrated sustainable transportation system that aligns with *Egypt's Vision 2030* and the *United Nations Sustainable Development Goals (SDGs)*. Central to this strategy is a strong institutional commitment to reducing private vehicle dependency, minimizing the parking footprint, and promoting zero- and low-emission mobility across all campuses. The University operates a fleet of 35 modern shuttle buses, each with a capacity of 51 passengers, running twice daily on fixed routes to serve faculty, staff, and students. This system has significantly reduced on-campus traffic congestion and carbon emissions. Complementary partnerships with private transport providers and public minibuses further enhance accessibility, particularly for students commuting from distant areas such as Borg El Arab, where a dedicated evening shuttle departs daily at 8:30 PM from the Faculty of Commerce.

To actively discourage private car use, Alexandria University enforces a strict **policy minimizing parking**. Since 2022, no new surface parking has been permitted within academic zones, and the total parking capacity across all campuses is capped at 1.425% of the **total land area** below the 1.5% sustainability benchmark. Student park their cars outside the University Campus, while surplus or underutilized parking areas are systematically repurposed into green spaces, pedestrian zones, and stormwater management sites. This "land return" strategy enhances biodiversity, improves thermal comfort, and supports the creation of more walkable, human-centered campus environments.

The University actively promotes active and shared mobility through a range of targeted initiatives. It currently supports **1,960 bicycles, e-bikes, and e-scooters**, including a student bicycle program that offers affordable monthly rentals through partnerships with national banks. Designated bicycle parking areas are located throughout the faculties to encourage daily use. Annual events, such as the "Running for Green" marathon and the "Our Health is in Our Planet" awareness run, as well as university-wide cycling festivals, promote physical activity and foster climate awareness among students and staff. The award-winning *"Green Cycle"* carpooling application, developed by the Faculty of Pharmacy, facilitates safe ride-sharing for staff and students and has received regional recognition for two consecutive years in green innovation competitions.

In preparation for the transition to electric mobility, Alexandria University is piloting the installation of **four electric vehicle (EV) charging stations** in staff parking areas. It has adopted a procurement policy that prioritizes hybrid and electric light-duty vehicles. The existing fleet already includes buses powered by **Compressed Natural Gas (CNG)**, which provide immediate reductions in greenhouse gas emissions and operational costs. Complementing these initiatives is a formal **Pedestrian Path Policy**, which ensures that all walkways across campus are safe, shaded, well-lit, and fully accessible, with ramps and smooth surfaces designed to accommodate individuals with disabilities.


Shuttle Services (Alexandria University)

Alexandria University Shuttle Service Station

Alexandria University Shuttle bus parking outside the Campus

Rabbit Mobility operates in Alexandria; they offer "Day Rentals" that deliver an e-scooter or and e-bikes to all districts in the city their application.

The Faculty of Commerce at Alexandria University has introduced a new public transport bus service to support students living outside the city. The service will provide direct transportation from the university campus to the Borg El Arab area, aiming to reduce travel time and ease the burden of commuting to student housing, particularly during late hours. With lectures concluding as late as 8:30 PM.

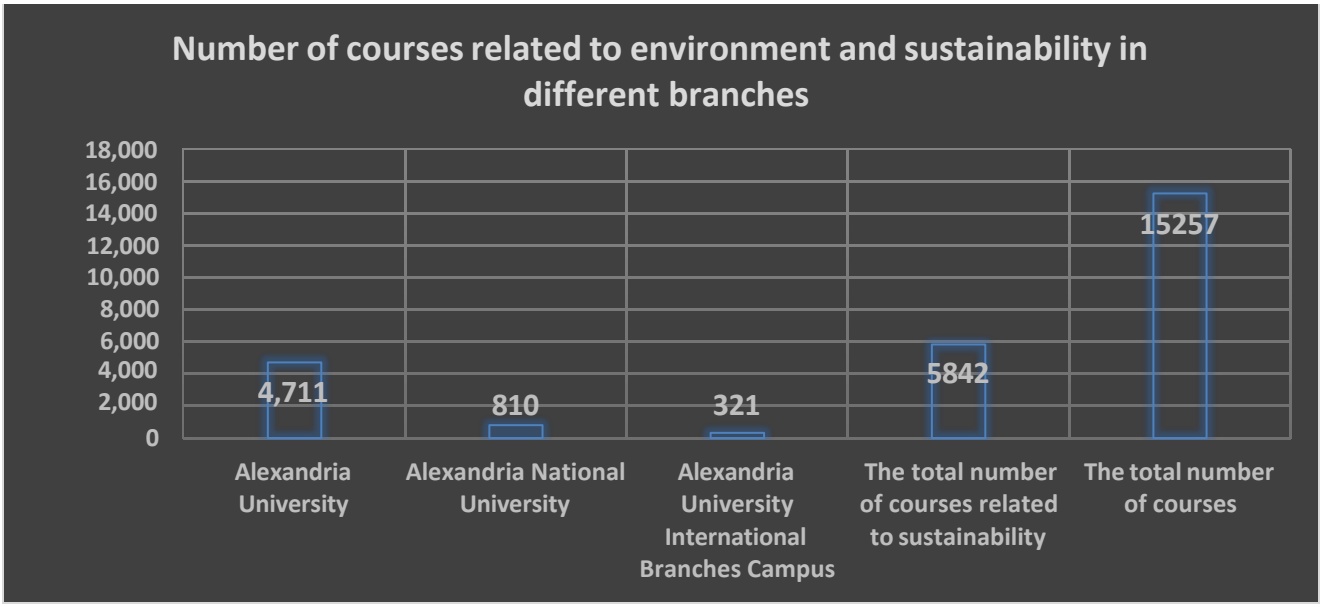
Carpooling application for smartphones - Green Cycle project in the Faculty of Pharmacy (Alexandria University, Egypt)

Support and encourage student participation in awareness initiatives that urge them to use environmentally friendly transportation on campus.

Education and Research

During the 2024–2025 academic year, Alexandria University offered a total of **4,711 undergraduate and graduate courses** related to environmental and sustainability topics. This represents **34% of the total 13,852 courses** available across all programs. In addition, a new **International Dual Master Program** was launched at the Faculty of Science: **MSc in Sustainable Blue Economy and Management of Coastal Resources (SBEM) (Dual Degree)**.

Examining the broader Alexandria University system, there is notable variation in sustainability-focused offerings. Alexandria University itself provides the largest share with 4,711 courses, followed by Alexandria National University with 810 courses, and the International Branch Campus with 321 courses. Combined, these institutions offer **5,842 courses dedicated to sustainability**, accounting for approximately **38.3% of the total 15,257 courses** across the university system. While this demonstrates a strong commitment to integrating sustainability into the curriculum, such courses still constitute less than half of all academic offerings.



Total Number of Courses/Subjects Offered:

In the academic year 2024–2025, **Alexandria University** offered a total of **15,257 courses** across all its campuses and branches. This includes **1,038 courses** at **Alexandria National University** and **367 courses** at **Alexandria University International Branches**.

The accompanying histogram illustrates the progression in the number of courses offered at Alexandria University's main campus **in Alexandria, Egypt**, across different academic years. The data, encompassing both undergraduate and postgraduate programs, reveal a gradual increase from the academic year **2020/2021 to 2024/2025**. While **undergraduate courses** remained steady at **6,906**, **postgraduate courses** rose slightly from **6,604 to 6,946**, resulting in a total growth from **13,510 to 13,852 courses**.

This steady upward trend underscores the university's ongoing expansion of its academic portfolio and its robust commitment to **curriculum diversification** and the **integration of sustainability** across its educational offerings.

Additional information:

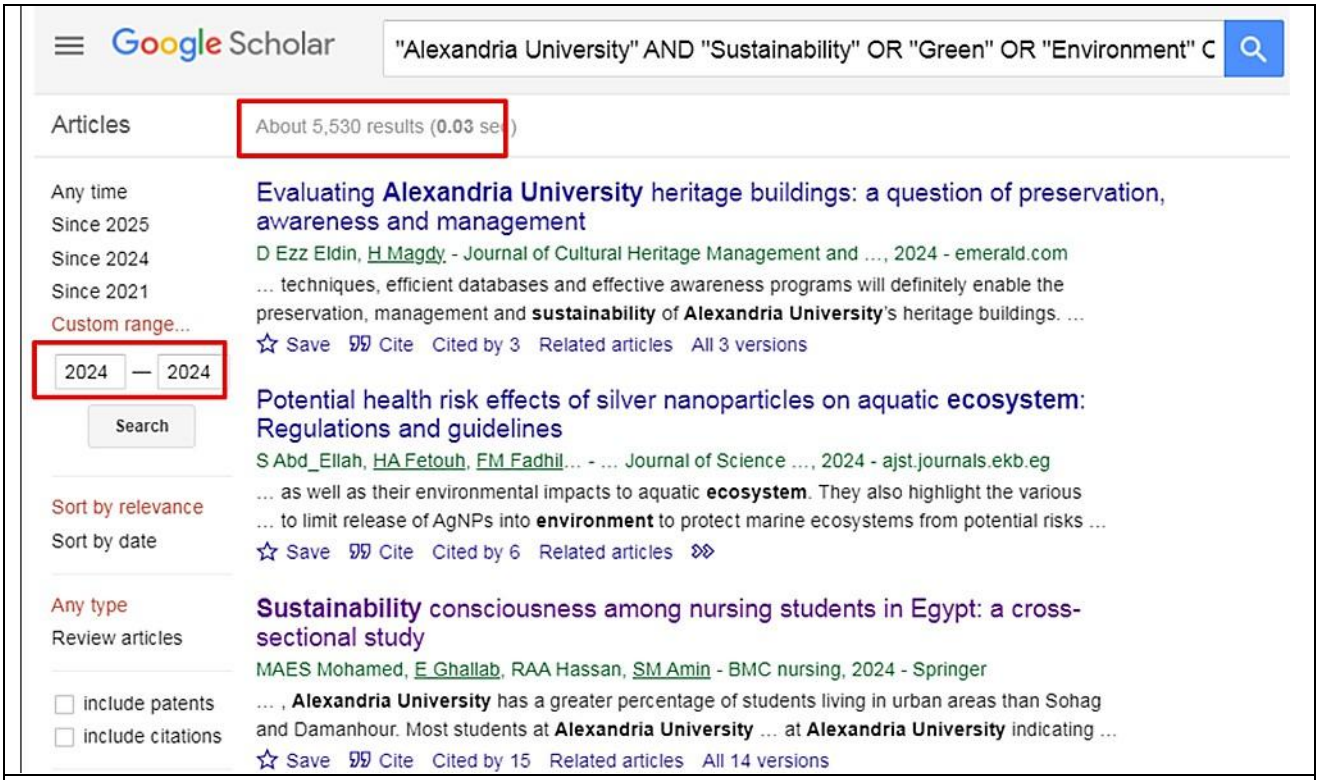
https://www.alexu.edu.eg/index.php/en/branches

https://alexu.edu.eg/index.php/en/branches/8-2015-11-18-08-45-03/8834-alexandria-university-branch-in-ndjamena-%E2%80%93-chad?utm

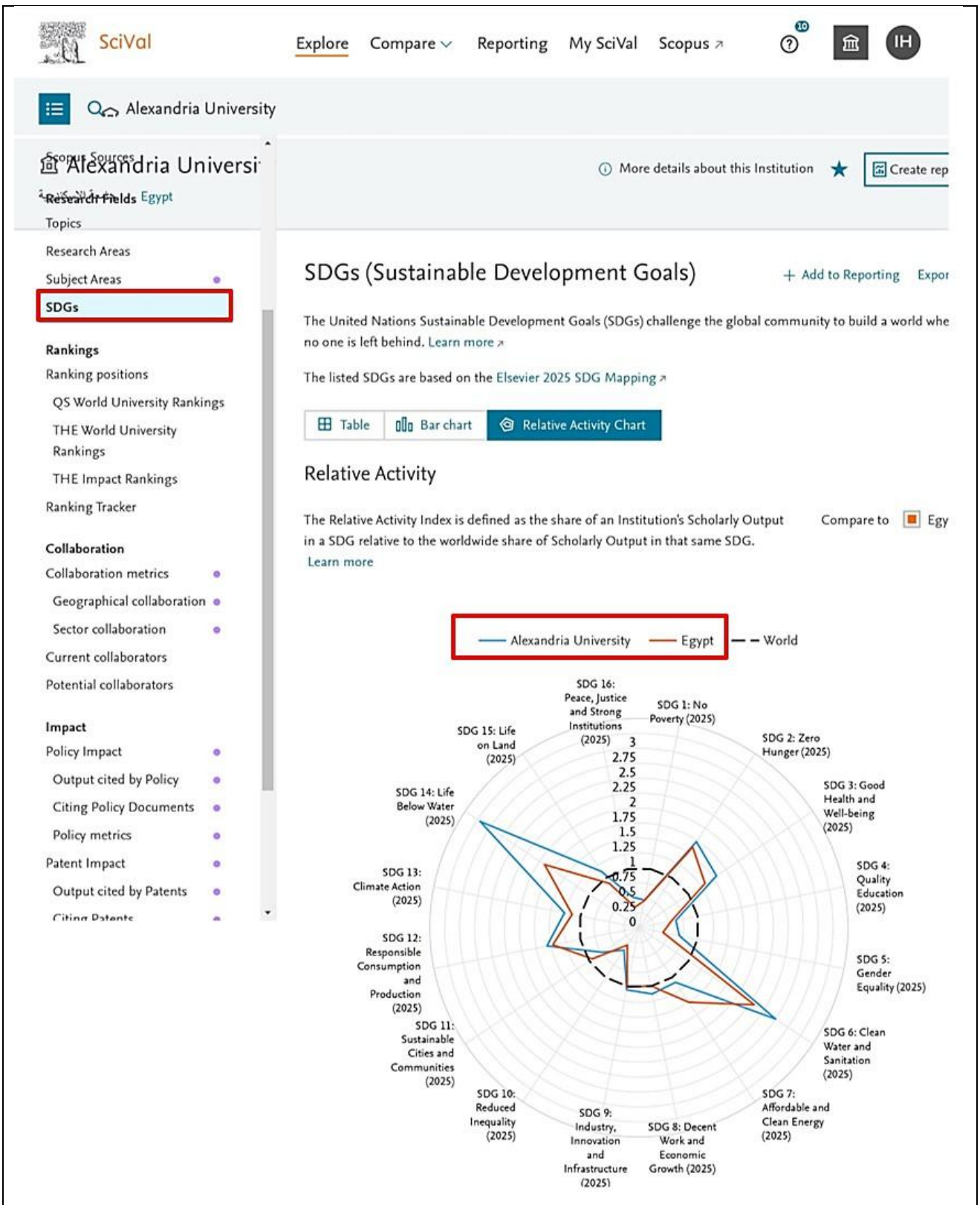
https://www.alexu.edu.eg/index.php/en/faculties-centers/au-branches/south-sudan

The university provides 769 sustainability-related study programs out of 838 total programs (91.77%), including 11 internationally accredited dual-degree programs such as the M.Sc. in *Sustainable Blue Economy and Management of Coastal Resources* (with Université du Littoral Côte d'Opale, France) and programs in *Smart Environmental Management of Climate Change*, *Natural Resources Sustainability for Land Development*, and *Sustainable Fisheries and Aquaculture*. These programs are developed through strategic Erasmus+ and international partnerships, ensuring alignment with global standards and labor market needs in sustainability sectors.

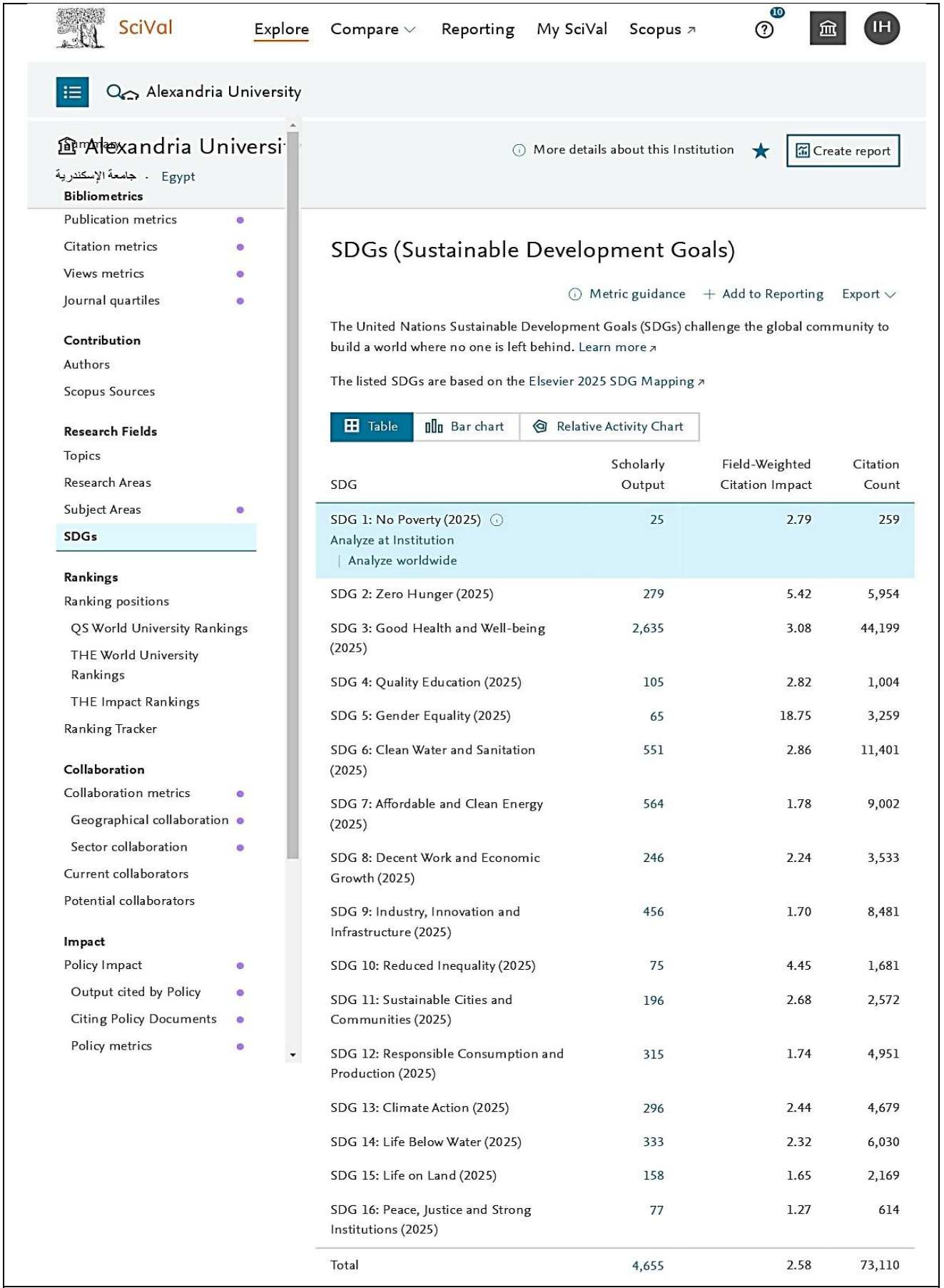
Research at Alexandria University is strongly oriented toward sustainability, with 5,530 scholarly publications on sustainability topics in 2024 and 512 theses currently in progress or recently completed on environmental and sustainability themes. Over the past three years, the university has dedicated an average of USD 1,512,729 annually to sustainability-focused research, supporting over 262 active projects including EU-funded initiatives such as BLUE-ERA, Med-Algae, SUREMAP, and FishAqu that address climate action, water security, the circular economy, and blue economy innovation. The university also hosts Centers of Excellence in Water, Regenerative Medicine, and Climate Change, further strengthening its research infrastructure.



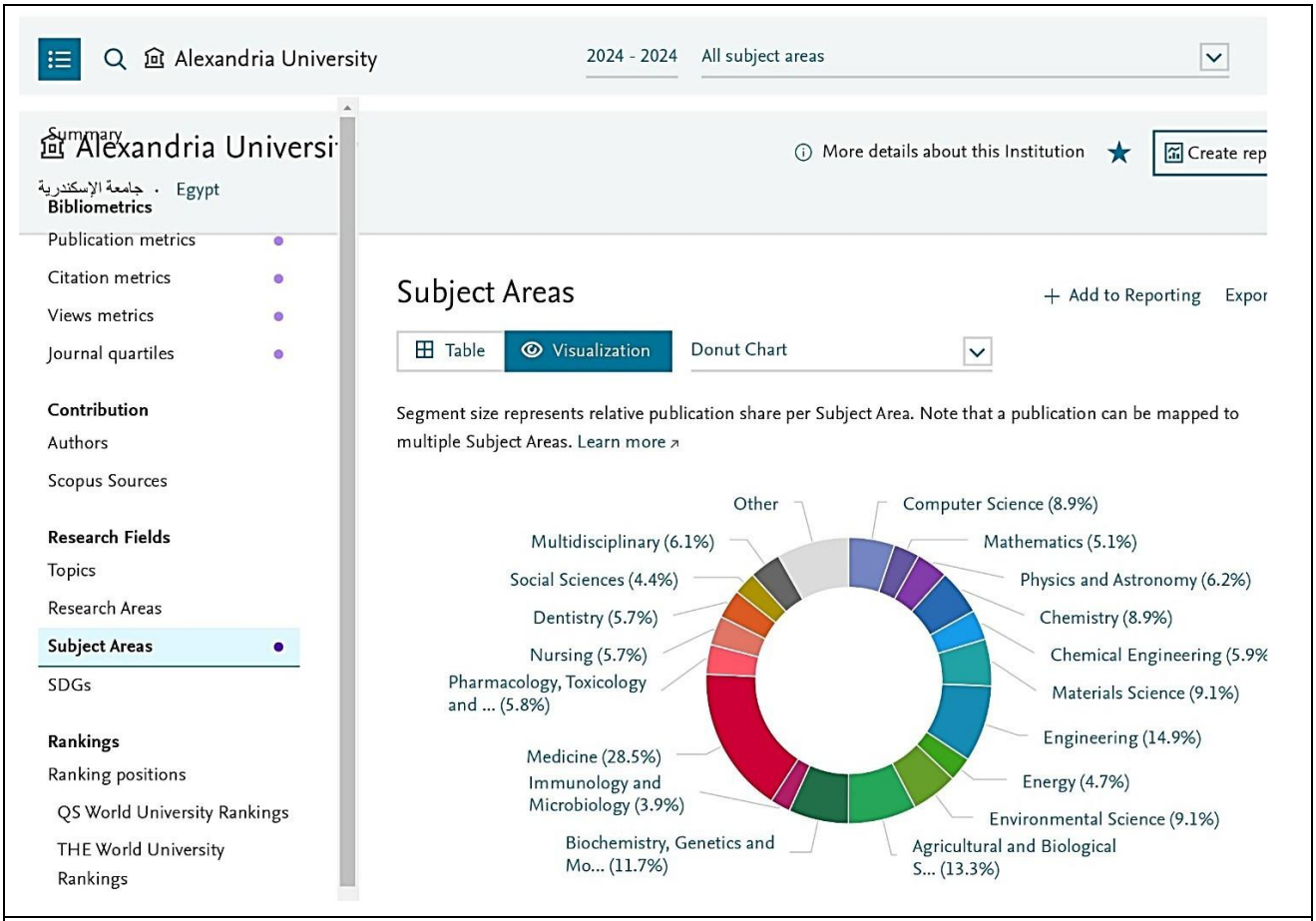
Scholarly publications on sustainability (Alexandria University, Egypt, 2024)



Number of scholarly publications on sustainability (by the 17 SDGs): <u>Alexandria University vs. all Egyptian</u> universities by SciVal



Number of scholarly publications on sustainability according to each SDG for Alexandria University by SciVal in one year 2024-2024



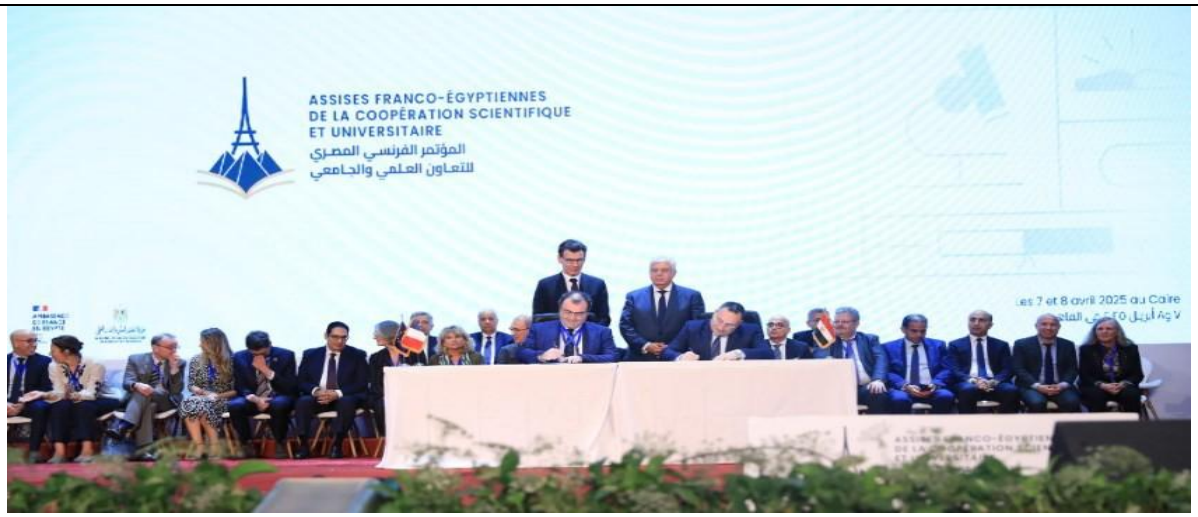
The percentage of publications by subject area in one year- 2024

Community engagement is a core component of Alexandria University's mission. During the 2024–2025 academic year, the University organized **392 sustainability-related initiatives**, including workshops, awareness campaigns, medical and veterinary convoys, literacy programs, and school outreach activities. The Faculty of Science alone hosted more than **50 educational visits** to its botanical garden, herbarium, and electron microscopy unit. University incubators have supported the emergence of **46 sustainability-focused startups**, while **63,279 graduates over the past three years**—representing **55.37% of all graduates**—are employed in green sectors such as renewable energy engineering, environmental law, sustainable tourism, and climate-smart agriculture.

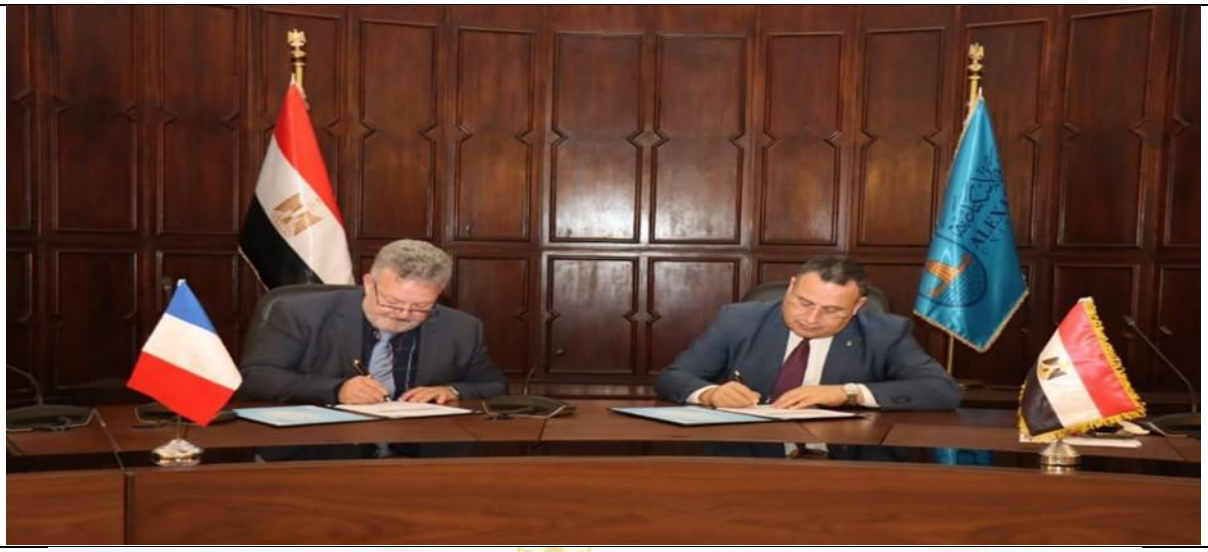
The University maintains **118 fully active international agreements**, with **89 additional agreements pending approval**, spanning five global regions. These partnerships include dual and joint degree programs, Erasmus+ projects, academic exchanges, and collaborative research, all strategically aligned with Egypt's Vision 2030 and the United Nations Sustainable Development Goals (SDGs). Priority areas include climate action, the blue economy, sustainable agriculture, water security, and renewable energy.

Notable international programs include the **M.Sc. in Sustainable Blue Economy and Management of Coastal Resources** with Université du Littoral Côte d'Opale (France), the **M.Sc. in Smart Environmental Management of Climate Change** with the University of Catania (Italy), and the **M.Sc. in Natural Resources Sustainability for Land Development** with RWTH Aachen University (Germany). High-impact collaborations also include joint Bachelor's programs in Medicine and Dentistry with the University of Manchester (UK), dual engineering degrees with the University of Louisville (USA), and new agreements signed during President Macron's visit to Egypt in April 2025 with leading French universities.

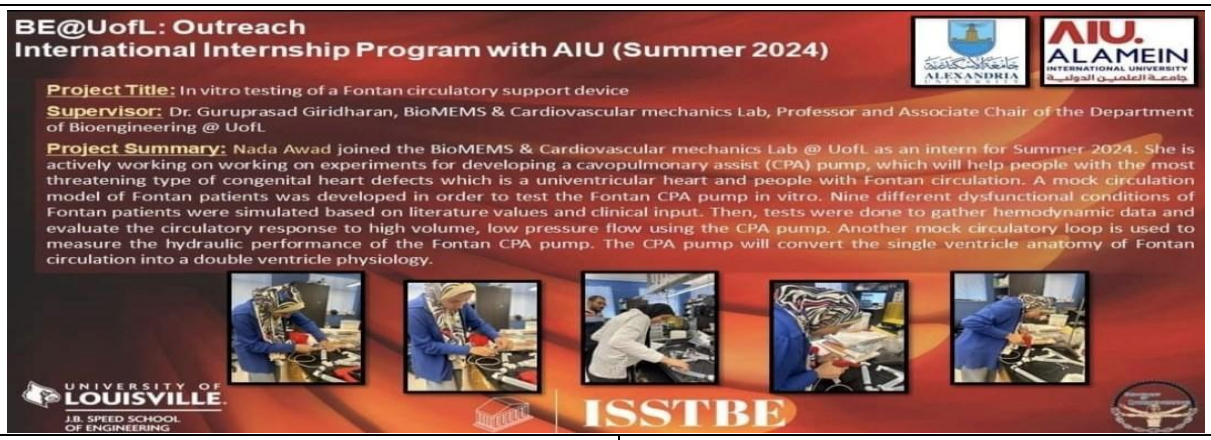
Through structured curricula, mandatory international mobility, co-supervised theses, and applied research projects with government and industry partners, these initiatives equip graduates for sustainability-oriented careers while reinforcing Alexandria University's leadership in international, sustainability-focused higher education across the region.



Five Cooperation Protocols Signed Between Alexandria University and French Universities



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.

Links:

1. https://blue-era.univ-littoral.fr/aastmt-au-and-ulco-sign-mous-under-blue-era-during-the-franco-egyptian-higher-education-and-research-forum/
2. https://blue-era.univ-littoral.fr/blue-era-second-consortium-meeting-advancing-sustainable-blue-economy-education/
3. https://alexu.edu.eg/index.php/en/important-news/9857-alexandria-university-and-the-university-of-littoral-presidents-sign-cooperation-agreement-to-launch-dual-degrees-in-engineering%2C-computer-science%2C-marine-sciences%2C-and-the-blue-economy?

Over the three academic years presented, **Alexandria University** awarded degrees to **37,669 students in 2022/2023**, followed by a slight decrease to **35,446 graduates in 2023/2024**, and then a substantial rise to **41,171 graduates in 2024/2025**. Altogether, this represents a total of **114,286 graduates** over the three-year period.