

7.4.1 Programmes 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 programmes raise awareness of renewable energy, promote practical skills, and support Egypt's 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-led initiatives such as Green Cycle and Fab Lab, the university provides training, innovation spaces, and community services that strengthen the transition to cleaner and more sustainable energy practices.

- Community engagement is deeply embedded in the university's mission. In 2024, it organized 392 sustainability-related events, including workshops, awareness campaigns, medical and veterinary convoys, literacy drives, and school outreach programs. The Faculty of Science alone hosted over 50 educational visits to its botanical garden, herbarium, and electron microscopy unit. Additionally, 46 sustainability-focused startups have emerged from university incubators, and 63,279 graduates over the last three years (55.37% of all graduates) are employed in green jobs, spanning renewable energy engineering, environmental law, sustainable tourism, and climate-smart agriculture.
- The university currently holds 118 fully active international agreements, with an additional 89 agreements pending final approval, spanning five global regions. These collaborations encompass dual and joint degree programs, Erasmus+ projects, academic exchanges, and collaborative research initiatives. All partnerships are strategically aligned with Egypt's Vision 2030 and the United Nations Sustainable Development Goals (SDGs), focusing on key priority areas such as climate action, the blue economy, sustainable agriculture, water security, and renewable energy.
- 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.



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:*



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- 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.



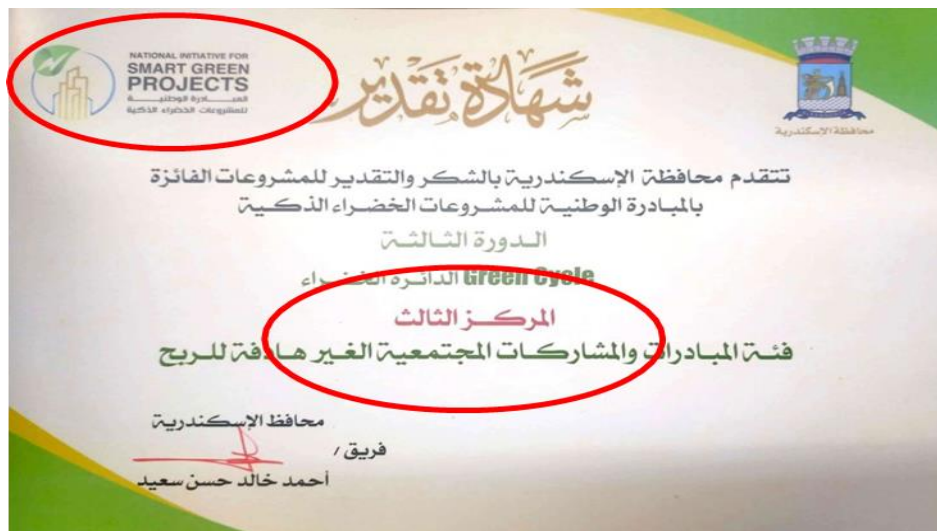
- Faculty of Engineering, Alexandria University Hosts International Atomic Energy Agency Experts to Give Lectures on Nuclear Law during the period from the 28th until the 30th of November 2023.



- Alexandria University Wins First Place in Innovations & Patent Index Ranking and Silver Medal in New Energy Projects at 7th Cairo International Exhibition for Innovation Fair 2023.



- 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.



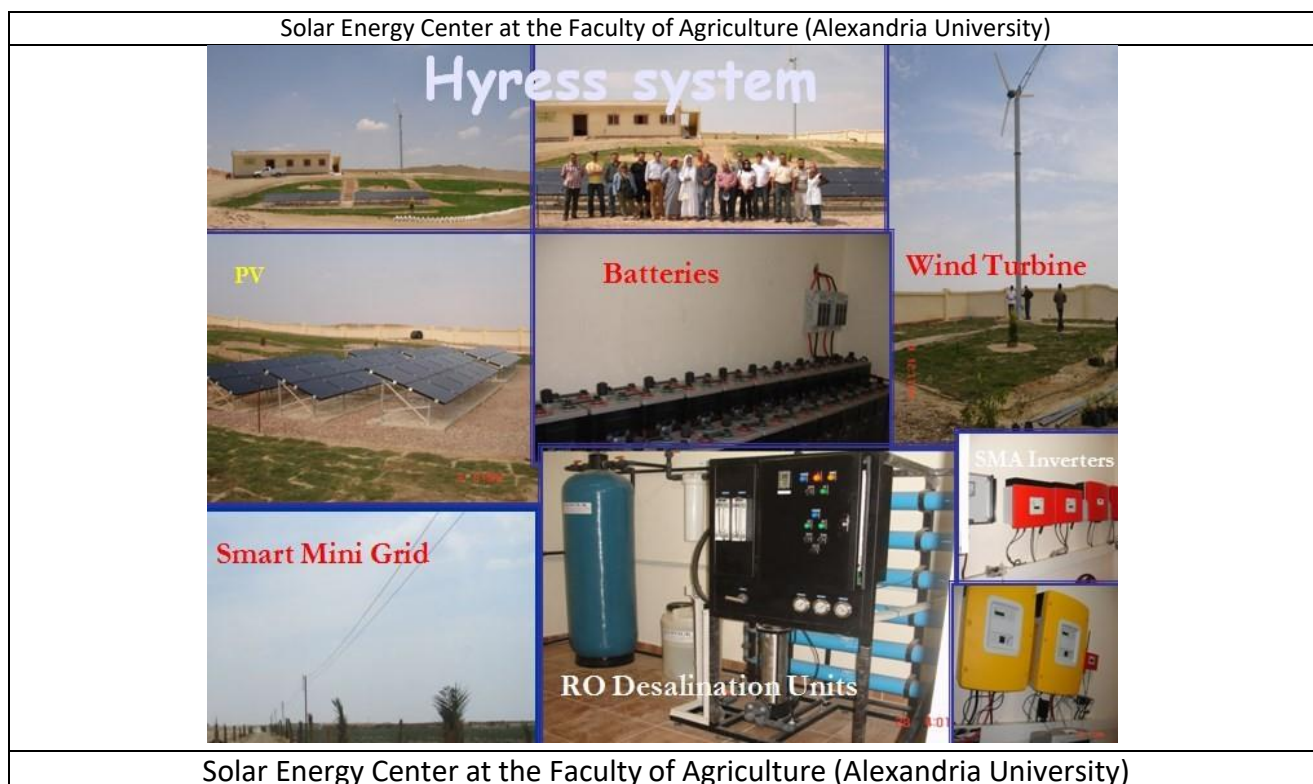
The services provided by the Solar Energy Center at the Faculty of Agriculture (Alexandria University):

- 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.

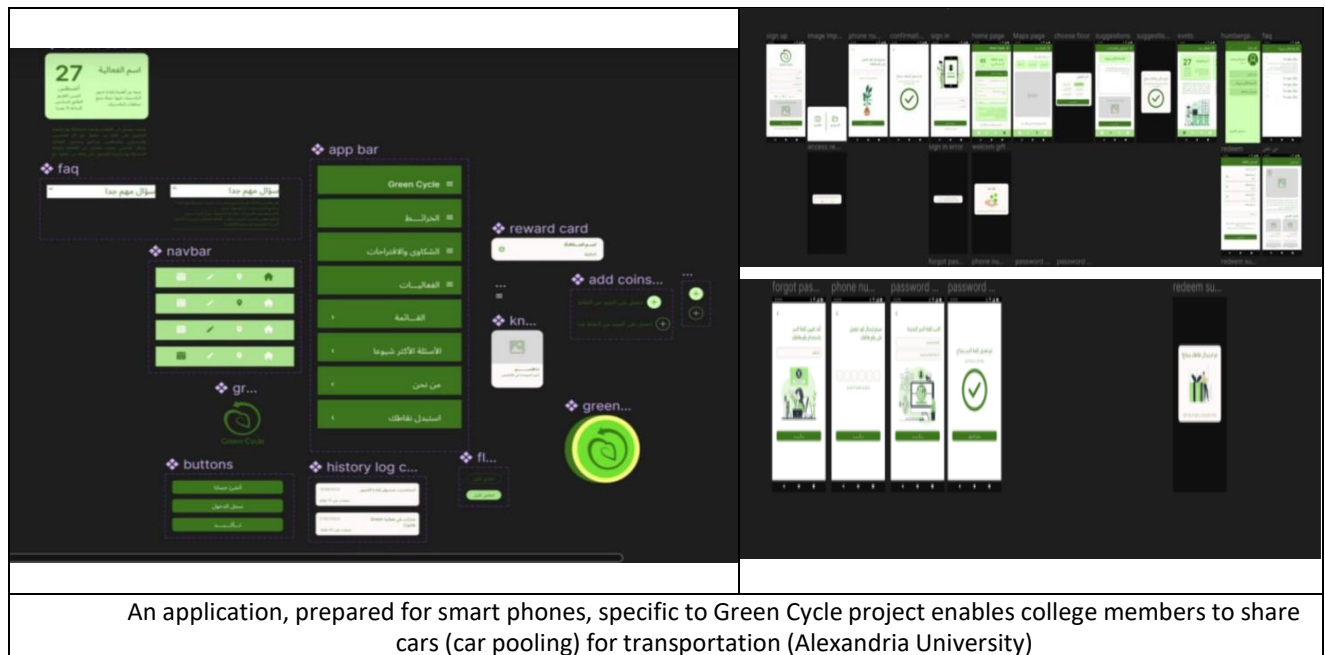




Green Cycle project in the Faculty of Pharmacy - Alexandria University

Within the framework of the Faculty of Pharmacy's tireless endeavor to meet the needs of the community inside and outside the university and to contribute to solving contemporary health, social and economic problems, in line with the vision of Alexandria University, which is based on the principles of comprehensive quality and continuous and sustainable development, in harmony with the state's development plan "Sustainable Development Strategy: Egypt Vision 2030": The college is advancing the "Green Circle" project, which is a non-profit project that seeks to keep the environment clean and green in a sustainable way by growing plants to increase green spaces, as well as separating waste for recycling and establishing charitable markets to benefit from used clothes and use electricity-saving alternatives such as energy saving lamps.

The GHG sources are reduced by Ride Share using the University Shuttle and Carpool, by the decrease of burning of fuels. In addition, the use of bicycles reduces the GHG source. An application was developed for smart phones, by the students at the Faculty of Pharmacy- Alexandria University that enables faculty members to share cars for transportation in a safe manner (Green Cycle project). In addition, regular vehicle maintenance is performed to reduce greenhouse gas emissions.



Innovation and Technology Development for the Investment in Green Technologies:

There are also many research projects to reduce greenhouse gas emissions, including, for example:

1. Monitoring pollutants using satellites (a project funded by the Academy of Scientific Research and Technology 2021).
2. Confronting rampant heat waves and climate change (World Bank financing 2023).
3. Confronting severe air pollution and black cloud episodes (World Bank financing 2023-2024).
4. the research project entitled: Utilizing alternative feed materials to maximize milk and meat productivity and reducemethane production in ruminants, funded by the Science and Technology Fund STDF-DDP No. 18575
5. The research project entitled Safe milk and meat production and greenhouse gas emissions from ruminants fed withthe addition of nano-silt, funded by the Science and Technology Fund STDF- Innovation in the period from 2020-2023.
6. Construction of a Self-Charging Unit for Collecting Wasted Mechanical Energy from Basic Human Motion, (2023- 2025).

Fab Lab Project in the Faculty of Engineering - Alexandria University

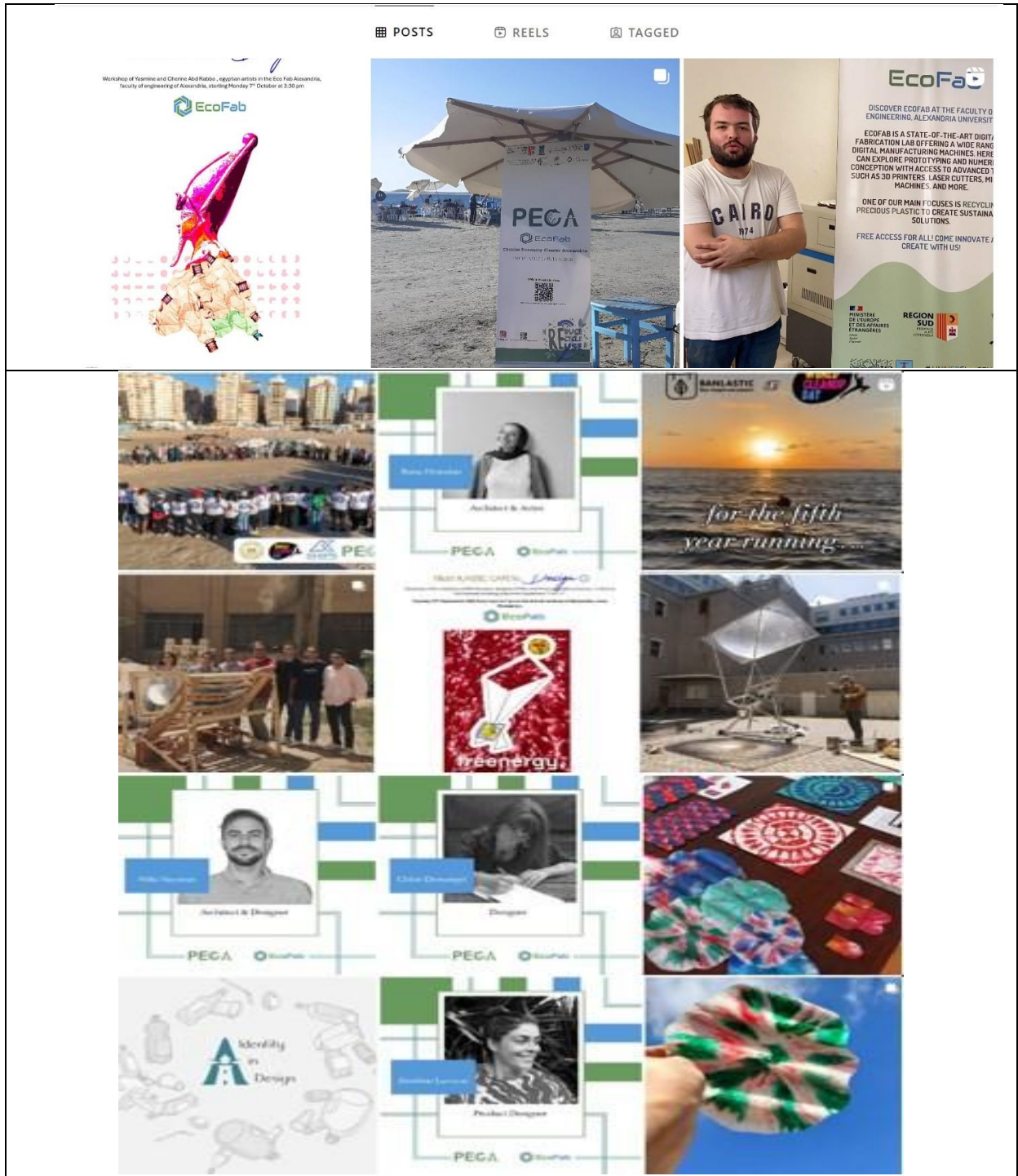
The overall goal of the project is to develop the circular and creative economy model by creating an innovation place equipped with machines Low Tech in Alexandria is hosted by Alexandria University. This place will play a role in creating local dynamism Transversal to become a crossroads between different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