

## Template for Evidence(s) UI GreenMetric Questionnaire

University : Alexandria  
 Country : Egypt  
 Web Address : <https://alexu.edu.eg/index.php/en/>

### [3] Waste (WS)

#### [3.8] Inorganic Waste Treatment



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)



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



Manual sorting hall in Nahdet Misr company for waste 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



**The EFFCT team from Alexandria University has won second place in the prestigious Hult Prize International Competition, held in Paris, France. Competing against over 10,000 teams from 110 countries, the team impressed the judges with their innovative startup, which focuses on recycling waste from the textile industry. Their achievement highlights Alexandria University's dedication to fostering student innovation and entrepreneurship on the global stage (November 2023).**





The Industrial Microbiology and Applied Chemistry (IMAC) Program organized a scientific visit to El-Shafei Leather Tannery in the Al-Max area of Alexandria on March 26 and April 30, 2024. As part of the "Bioremediation of Pollutants" course, students toured the facility and learned about the various stages of natural leather production, and managing waste from the leather industry. (Faculty Science of Alexandria University).







Students from the Faculty of Fine Arts at Alexandria University are transforming environmental waste into distinctive artistic murals. As part of a community service initiative, they created a sports mural on the university stadium wall, involving 16 students from the mural photography department. The project aims to recycle discarded materials for aesthetic public works, promoting sustainability. Mosaics were used in the mural's completion, while second-year decoration students also created models from waste wood and scrap to enhance the beauty of Alexandria, revitalizing the coastal city through their artistic efforts.



The Center for Educational Innovations and Distance Learning hosted the fifth edition of the conference "Alexandria University for Educational Innovations and Technology-Enhanced Learning," focusing on developing learner autonomy and flipped classrooms. The Faculty of Science earning second place for their project titled "Potential Microbial Degradation of PET from Alexandria Solid Waste Landfill." The research was conducted by a team of students (6 students) under the supervision of Professor Dr. Hanan Ghazlan.

برنامج مصر المستقبل . متابعة  
15 يوليو .

#زيت\_الطعام من مخلفات لـحل صناعي...  
طلبة من كلية علوم Alexandria University جامعة الإسكندرية - الصفحة الرسمية قاموا بابتكار يتيح إعادة استخدام مخلفات  
زيت الطعام و حمل ملدن صديق للبيئة... يعني إيه ملدن و إزاي ممكن نعيد استخدام زيت الطعام لصناعة البلاستيك؟  
يوسف و رفعت جاوبوا الأسئلة

[https://youtu.be/LIB1QJ04fqs?si=GAv08X\\_eJusrxB8R](https://youtu.be/LIB1QJ04fqs?si=GAv08X_eJusrxB8R)

#شباب\_مصر #بتمية #جامعة\_الإسكندرية #مصر\_المستقبل #مخلفات\_زيت\_الطعام



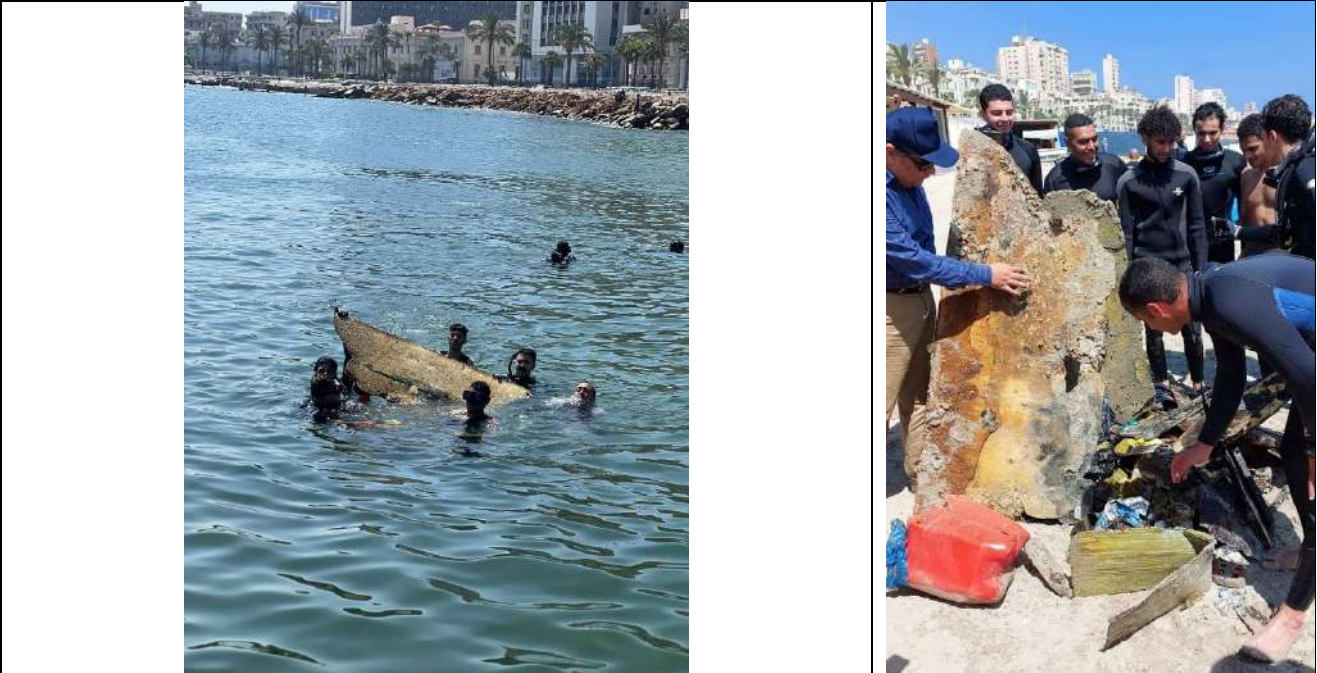
YOUTUBE.COM

الطلاب يوسف الشويخ والطلاب رفعت طارق وهم طالبان بكلية العلوم جامعة الإسكندرية في مصر المستقبل

**Cooking Oil Waste as an Industrial Solution.. Students from the Faculty of Science at Alexandria University have innovated a way to recycle used cooking oil to create an eco-friendly plasticizer, and how can we reuse cooking oil in plastic production.**







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.



In order to raise awareness among university staff and students, the Faculty of Science at Alexandria University held a training course titled "Safety and Security Precautions in Various College Laboratories" for technicians and workers from various departments. Prof. Dr. Amal Fawzy El-Husseiny led the training, covering safety objectives and needs, evacuation procedures, optimal use of equipment, handling biological contaminants, and accident prevention and management in chemistry laboratories.



**Description:**

**The University Strategy for Treatment of Inorganic Waste**

1. In general, the inorganic waste in the University is divided into two types including:
  - **Non-medical waste:**

Products which are collected and stored in a far place in the faculties which are then removed to a general dump for recycling, examples: papers, plastics, aluminium and glasses.

Heavy metal: Heavy metal waste consists of both materials and equipment with metals and derivatives, examples: Batteries, amalgam, broken mercury thermometers.
  - **Medical waste:**

Medical waste consists of several different subcategories that should all be dealt with in the same way:

Potential infectious waste includes all waste items that are contaminated with or suspected of being contaminated with body fluids.

Examples include: Blood and blood products, used catheters and gloves.
2. Inorganic Wastes are collected in separate containers labelled for inorganic waste. The garbage bags are collected daily by Nahdet Misr company for processing.
3. Approximately **185 tons of waste per year** were collected at the level of university buildings with Nahdet Misr company and separated into organic waste and inorganic waste. **Inorganic waste constitutes about 45% of the total waste** collected from the campus where 70% were recycled while the rest 30% were transported to Alexandria Governorate Hazardous Waste Management (NASERIA) for their disposal.
4. Batteries and other E-wastes are collected separately inside Alexandria University Campus and are delivered for special treatment by Nahdet Misr company. The E-Material are never trashed into a regular trash.
5. The University follows the Egyptian laws associated with disposal of hard materials waste No. (6) for the year 2009 and No. (9) for the year 1982 concerning with environment protection. Alexandria University has a yearly contract with Alexandria Governorate Hazardous Waste Management (NASERIA) for the disposal of Inorganic Waste.
6. By Nahdet Misr company, 10% of the sorted items in the form of paper, plastic, aluminium and glass are recycled, 60% of the collected inorganic waste are recycled in the form of alternative fuel (RDF), which is used in cement factories instead of diesel while the rest 30% are transported to Alexandria Governorate Hazardous Waste Management (NASERIA) to be buried in landfills.
7. The EFFCT team from Alexandria University won second place in the prestigious Hult Prize International Competition held in Paris, France. competing against over 10,000 teams from 110 countries. The team developed a startup focused on recycling textile industry waste. They previously won first place in the "Egypt Summit for Social Investment Projects" and received support and training from the Innovators and Talents Fund. Minister of Higher Education Dr. Ayman Ashour praised the team's achievement, highlighting the importance of student participation in international competitions. The president of Alexandria University, Dr. Abdelaziz Konsowa, emphasized the university's commitment to fostering innovation and creativity among students (November 2023).  
<https://www.facebook.com/MOHESREGYPT/posts/pfbid02fFPJTJ7jCP6DpGtM6HnA5v5QXwVgj4S97BK5sRWGE47USahrLciBRsR5NfjbM75nl>
8. The Industrial Microbiology and Applied Chemistry Program (IMAC) at Faculty Science of Alexandria University organized a scientific visit to El-Shafei Leather Tannery in the Al-Max area of Alexandria on





March 26 and April 30, 2024. This visit was part of the program's applied teaching and learning methods and was included in the practical component of the 'Bioremediation of Pollutants' course (Code: Micb 472). During the visit, the students toured all departments of the company and received a comprehensive scientific explanation of the stages of natural leather production, as well as how to protect the leather from mold during manufacturing and how to manage leather industry waste.

9. Students from the Faculty of Fine Arts at Alexandria University are using environmental waste to create distinctive artistic murals. As part of Alexandria University's community service initiative, the Faculty of Fine Arts contributed to the creation of a sports mural on the wall of the university's stadium. Dr. Nevin Gharib, acting dean of the faculty, stated that the project involved 16 students from the mural photography department as part of their graduation project. The project was supervised by Dr. Mona Rajab and Dr. Donia Medhat, faculty members of the department. The goal of the project is to recycle materials discarded in nature and repurpose them for aesthetic public works, aligning with the principle of sustainability. Mosaics were used to complete the entire mural. Additionally, second-year students from the decoration department implemented other projects that transform environmental waste, such as wood and scrap, into creative models. These models are intended to beautify fields in Alexandria, helping to restore the coastal city's charm through the work of its young artists (April, 2024).
10. The Center for Educational Innovations and Distance Learning organized the fifth edition of the conference titled "Alexandria University for Educational Innovations and Technology-Enhanced Learning," under the theme: Developing Learner Autonomy: Undergraduate Research and Flipped Classrooms as Two Proposed Means. The scientific committee of the conference evaluated the student research presented, which totaled 31 studies (15 in the field of humanities and 16 in natural sciences and life sciences). The judging committee announced that the Faculty of Science won second place for their research titled "Potential Microbial Degradation of PET from Alexandria Solid Waste Landfill." The research was conducted by students Mustafa Abdel Gawad Muhammad Suleiman Abdullah, Ali Muhammad Ibrahim Abdel Moneim, Muhammad Lotfy Ibrahim Muhammad Ibrahim, Maryam Ali Hafez Ibrahim Youssef, Wissam Sabry Abdel Fattah Hasballah, and Yasmine Abdel Aziz Al-Sayed Hasballah, under the supervision of Professor Dr. Hanan Ghazlan.
11. On July 8, 2024, the students from the Faculty of Sport Education, Abu Qir, participate in Initiative to Clean the Eastern Harbour of Alexandria. In line with Alexandria University's commitment to community service and under the auspices of Professor Dr. Abdelaziz Konsowa, President of Alexandria University, and Dr. Yasmine Fouad, Minister of Environment, students from the Faculty of Sport Education in Abu Qir participated in a week-long initiative to clean the eastern harbour of Alexandria. The initiative includes the participation of the El-Raml Rotary Club and the Egyptian Diving and Rescue Federation. The initiative aims to promote sustainable tourism and improve beach enjoyment while supporting local communities in enhancing their waste disposal practices. It also encourages citizens to reduce their use of single-use plastic products and increase recycling efforts. Additionally, the project seeks to educate the public on the importance of maintaining clean and healthy beaches, raising awareness about the threats that plastic and chemical waste pose to marine life, as well as focusing on collecting, classifying, and recycling waste to improve the quality of the coastal environment.
12. Students from the Faculty of Science at Alexandria University have innovated a way to recycle used cooking oil to create an eco-friendly plasticizer, and how can we reuse cooking oil in plastic production.

<https://www.youtube.com/watch?v=LIB1QJ04fqg>

13. The Faculty of Science at Alexandria University held a training course titled "Safety and Security Precautions in Various College Laboratories" for technicians and workers from different departments of the faculty on February 8, 2023. The training was delivered by Prof. Dr. Amal Fawzy El-Husseiny, a professor in the Department of Chemistry and chair of the Occupational Safety and Health Committee at the college. She addressed the objectives and needs for safety and security in the college laboratories, including safe evacuation procedures, optimal use of equipment, mechanisms for dealing with various biological contaminants, and how to avoid accidents in chemistry laboratories and manage them if they occur.

## Alexandria University Program to Reduce the use of Paper and Plastic in Campus

**Program 1:** Development of electronic archiving system; the university faculties and the main campus are moving toward the electronic archiving system to reduce paper consumption.

**Program 2:** University decrees to reduce the use of paper in the campus:

2.1: The president decree to use the e-mails for communications inside the campus and between the university main campus and all the other campuses.

2.2: In the situations, the university or any of its faculties need to print the official documents; this has to be on recycled paper (2 faces copy).

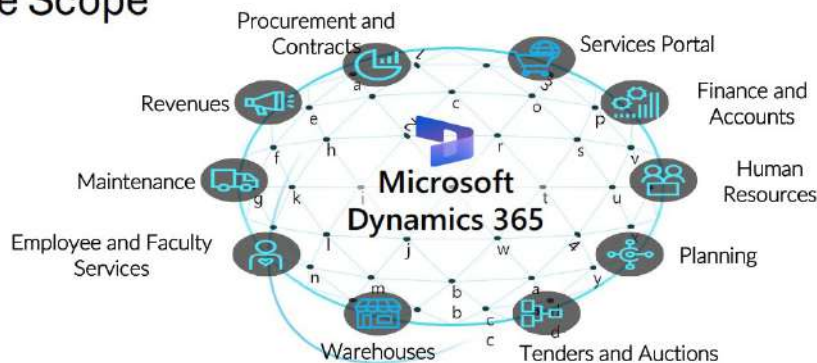
2.3: The University formulated a community for administrative reform to minimize the administrative processes and decrease the use of papers except in who are relevant to financial process.

2.4. Digital transformation of Alexandria University.

### Digital Transformation of Alexandria University



### The Scope



Digital transformation of Alexandria University involves monitoring, governance, and improving institutional efficiency in managing human and financial resources. It aims to transform the university into a 'Paperless University' model, contributing to making it a green, environmentally friendly university.

The digital transformation of Alexandria University marks a significant step towards creating a more sustainable and efficient academic environment. By transitioning to a paperless system, we not only





streamline our operations but also play a crucial role in reducing our carbon footprint. This initiative demonstrates our commitment to environmental stewardship and positions the university as a leader in promoting sustainable practices in higher education. Embracing technology in this way not only enhances the learning experience for students but also contributes to a greener future for our community.

**Program 3:** Digital transformation toward electronic exams to reduce paper consumption (mentioned in detail in the Education evidences).

**Program 4:** Digital transformation toward electronic course to reduce paper consumption and books printing (mentioned in detail in the Education evidences).

**Program 5:** Electronic administration of student courses by about 50% instead of written administration to reduce paper consumption (mentioned in detail in the Education evidences) .

**Program 6:** Raising students' awareness of reducing paper and non-organic waste consumption through initiatives.

**Program 7:** Chemical Use and Disposal Policy of Alexandria University.

**Program 8:** An initiative of the Infection Control Unit at the Faculty of Medicine, Alexandria University. The reuse of jerry cans as safty boxes for the disposal of syringes, needles, scalpels, and similar tools that have the ability to penetrate the skin or body tissues.

### **Chemical Use and Disposal Policy of Alexandria University**

The Occupational Safety and Health Unit is responsible for managing chemical hazards and minimizing associated risks. The unit oversees the procedures for handling chemicals across various faculties. Attached is a report from the Faculty of Science outlining the unit's mechanisms for managing chemicals.

#### **Mechanism of the Occupational Safety and Health Unit at Alexandria University for use and dispose Chemicals:**

##### **1. Chemical Classification:**

- Chemicals have been classified and cataloged both physically and electronically across the various departments to facilitate proper handling.
- A Material Safety Data Sheet (MSDS) has been prepared for all chemicals in the faculty's laboratories.
- Instructional posters and labels have been created and posted in the labs to provide guidance on the safe handling of chemicals.

##### **2. Training Courses and Awareness Seminars:**

- Regular training activities and awareness seminars are conducted to provide safety training on handling chemicals for assistant staff members, technicians, workers in the faculty's laboratories, and students.



### 3. Safe Disposal of Expired Chemicals:

#### a. Solvents:

- Large, dark-colored bottles (brown or green) are provided for collecting used solvents. These bottles are securely placed inside boxes and then transferred to a designated room in preparation for transport to the Nasiriyah disposal site, in accordance with the contractual agreement with the landfill.

#### b. Non-Solvents:

- Other expired chemicals are placed in large bottles, clearly labeled with their contents. These bottles are also securely placed inside boxes and then transferred to a designated room in preparation for transport to the Nasiriyah disposal site, in accordance with the contractual agreement with the landfill.

## An initiative of the Infection Control Unit at the Faculty of Medicine, Alexandria University

1. Waste sharp tools, which include syringes, needles, scalpels, and similar tools that have the ability to penetrate the skin or body tissues, are disposed of by throwing them in the designated yellow safety box.
2. When there was a shortage in the amount of safety boxes, communication was made between members of the infection control teams to use empty soap jars from our homes.
3. By referring to the National Guide to Infection Control and the Guide to the Supreme Council of Universities, we found that the jerry cans that we will compile meet the specifications in these two guides.
4. We have contacted hospital workers who wish to donate these jerry cans to cover the shortage.

This allows as much waste as possible to be recycled and exploited instead of disposing of it in landfills, which will ultimately lead to its burning and the resulting environmental pollution and increased greenhouse gas emissions. Our university promotes maintaining the campus environment in a clean condition using high-quality, non-toxic detergents and cleaning materials.

#### Additional evidence link:

Maintenance Unit for lab apparatus and electronics:

[https://alexu.edu.eg/index.php/?option=com\\_content&view=article&id=5912&catid=21&lang=ar-AA](https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5912&catid=21&lang=ar-AA)

<https://www.alexu.edu.eg/index.php/en/community-development-and-environmental-affairs/6435-alexandria-university-initiative-to-separate-and-recycle-waste>



## The University Strategy for Disposal of Inorganic Waste

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### Recycling of Solid and Electronic Waste in the Faculties and Institutes of Alexandria University

According to the decision of Alexandria University to transfer all solid waste to institutes, colleges, hospitals and university cities of the University at the Agricultural Research and Experiments Station in Abis as a central storehouse for the collection of iron priests (Wood - Iron - Alumetal - Computers - Projectors - Photocopiers - Printers - Fire Extinguishers - Doors - windows - wires, lighting poles, electric panels.....etc.), which are considered valuable solid waste worth recycling.

Recycling of solid waste is a good investment project, and with the increase of environmental awareness worldwide, the demand of recycled materials will rise. Alexandria University can save



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Community Service & Environment Development

production and energy costs and reduce the negative impacts that the extraction and processing of virgin materials has on the environment.

Recycling old devices saves energy. It also means that fewer raw materials need to be drawn from nature to create new devices. Reusing old devices prevents e-waste by keeping it out of landfills.

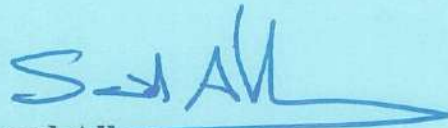
**The environmental aspect:** The process of recycling solid and electronic waste mainly contributes to reducing the percentage of pollution of all kinds, by reducing the accumulation of waste, which contribute greatly in pollution of the environment due to the release of polluting gases and toxic elements in the air, water, and land. The process of recycling solid and electronic waste contributes in reducing the impact of human activity on the planet Earth.

**Economic aspect:** The process of recycling solid and electronic waste plays an important role in the reduction of economic expenditures, helping countries to meet the challenges related to the high prices of raw materials such as oil and coal. Recycling reduces the reliance on the export of the primary resources of many industries, thus reducing the cost of production. Which result in lower bill of taxes, customs duties, insurance premiums, transportation. On the other hand, the recycling process helps in reducing the consumption of natural raw materials used in different industries. Accordingly, the Energy consumption for manufacturing and production processes will be reduced.

**The treatment Program**

- A specialized committee is selected including a member from the Engineering Department, according to the devices or tools under investigation.
- In case the devices are not useful, the committee recommends that the items will be transferred to the Agricultural Research and Experiments Station in Abis.
- Recycling warehouses are divided into sections according to the type of materials being recycled, for example: Calculators, printers, wood, Aluminum, etc.
- Working teams are selected from the university faculties' maintenance units to benefit from these solid and electronic waste.

Sincerely,



**Prof. Said Mohamed Allam**

**Vice PRESIDENT**

**Community Service & Environment Development**

**Alexandria University**





VICE PRESIDENT  
Community Service & Environment Development

## Alexandria University Program to Reduce the use of Paper and Plastic in Campus

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Sincerely,

**Prof. Said Mohamed Allam**  
**Vice PRESIDENT**  
**Community Service & Environment Development**  
**Alexandria University**