6.5.3 Water conservation off campus

Alexandria University is advancing water conservation and water management through a data-driven model that analyzes rain patterns and water resources using remote sensing data and environmental analysis. The system supports better water supply, wastewater handling, and reduced pollution across campus and surrounding areas. By integrating modern technology and sustainable methods, the university enhances performance, strengthens environmental protection, and supports long-term sustainable development. This integrated approach helps improve drinking water quality, manage runoff, and protect local ecosystems.

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

Remote sensing technology was used to know the current values of Rain and assess the current situation with thehelp of satellites. This is done with the help of the following artificial satellites:

-TRMM and GPM are two of the NASA satellites. (Administration National Aeronautics and Space Administration,United States of America)

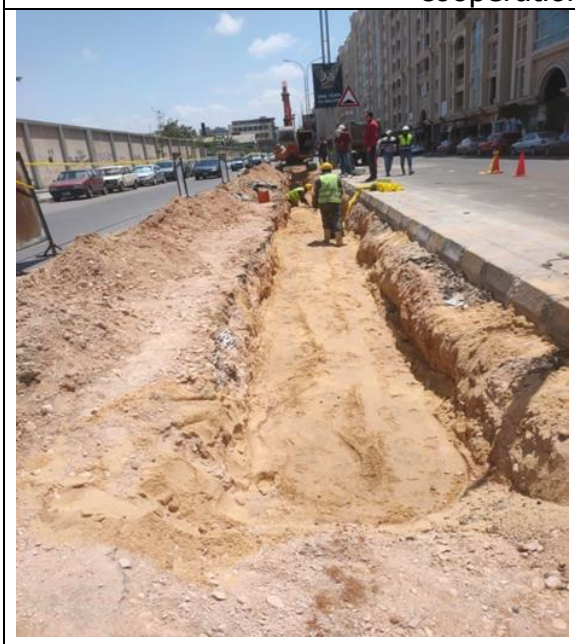
- NOAA (National Oceanic, Atmospheric, and Space Administration, United States of America)
- NCEI (National Center for Environmental Information in the United States of America)

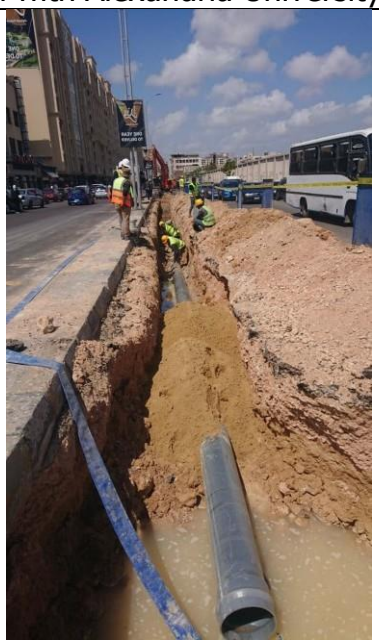
Proposed rain management strategy

A separate network will be created to drain rainwater for the nearest body of water for areas close to the body ofwater. The first area is the Corniche, where rainwater is collected and discharging it into marine estuaries. The second area is on both sides of the Mahmoudiyah and Beheira axis near the airport. The rainwater is collected and part of it is drained on the canal and the other part on the airport lake. In the third stage of the project, the two projects on the airport lake to exploit rainwater will be linked to the New Delta project. The rainwater will beused to irrigate the crops, vegetables, and fruits in the New Delta.

م	البيان	الوحدة	الكمية	ما تم تنفيذة	المتبقى
١	خطوط انحدار (٢٠٠ ـ ٨٠٠ مم)	متر	٣٥٠٠	٢٣٣٦	١١٦٤
٣	خط طرد (٧١٠ مم)	متر	٢٥٠	-	٢٥٠
٤	محطات رفع	عدد	١	-	١
٥	مطبق	عدد	٢٤	٢٤	٠
٦	شنايش مطر	عدد	٩٨	٥٠	٤٨
٧	أسفلت	م٢	٥٢٠٠٠	-	٥٢٠٠٠

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

- The Center of Excellence for Water is organizing a training program for scholarship students. This training is conducted in collaboration between the Water Excellence Center at Alexandria University and EPROM Company to provide a course for a group of students from the Water Excellence Center. This initiative reflects Alexandria University's commitment to equipping its students with practical skills related to water management, ensuring they possess the competencies needed by the business sector while aligning their studies with labor market requirements. The Center of Excellence for Water at Alexandria University has organized a training program for students in the Water Excellence Center

Scholarship and the Civil and Environmental Engineering Program. Alexandria University, EPROM Company, and the students are participating in the following two training programs:

- Water Treatment for Industrial Applications
- Wastewater Plant Operations and Troubleshooting.

- Evaluate the effectiveness of water conservation programs by leveraging data analysis tools and feedback systems to assess performance and outcomes.
- By integrating ICT into water management, university campus can promote sustainability, reduce water waste, and ensure the reliable supply of high-quality water. These systems not only improve efficiency but also support long-term environmental and financial goals.

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.

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.


EcoFab

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.