جامعة ابن طفيل
Université Ibn Tofaïl
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2025

SDG14 REPORT

LIFE BELOW WATER

SUSTAINABLE DEVELOPMENT
IBN TOFAIL UNIVERSITY

Introduction

SDG 14

In 2025, Ibn Tofail University reinforced its dedication to the Sustainable Development Goals (SDGs) by focusing on SDG 14: Life Below Water. SDG 14 aims to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. Throughout the year, the university initiated various projects and awareness campaigns that underscored the importance of protecting marine ecosystems, reducing pollution, and promoting sustainable practices related to water bodies. This report highlights the university's efforts to support the global objectives of SDG 14 and its commitment to the preservation of marine life.



THE GLOBAL GOALS

Assessment of the Year

Programs:

- University Bachelor's in Water Engineering
- University Bachelor's in Hydro-Agricultural Development
- Bachelor's in Water Science and Techniques in Agriculture
- Master's in Eco-Engineering of Wetlands
- Master's in Techniques for Exploration and Exploitation of Geo-Resources
- Master's in Engineering for Natural Resource Valorization and Quality Management
- Master's in Hydroinformatics and Hydrosystem Management

Wastewater Treatment:

- Two remarkable projects illustrate these initiatives: UIT Wastewater Treatment Plant has a daily capacity of 500 cubic meters. This facility is dedicated to treating liquid discharges from the vast UIT campus, which spans over 65 hectares and serves over 60,000 users. The Hybrid Technology Water Pumping and Treatment Station, combines advanced membrane techniques and utilizes renewable energy sources.

Key Figures:

- 149,000 cubic meters of campus wastewater are treated and reused to water green spaces. Approximately 63% of the campus is comprised of green areas irrigated with treated wastewater.

Research Team: New Materials for Water Treatment

This team focuses on developing innovative materials for the treatment of water and wastewater, with a sustainable and efficient approach. It combines expertise in materials science, chemistry, and environmental technology.

Research Focus Areas:

- Water and Wastewater Treatment: Develop materials to effectively purify drinking water and reduce pollutants in wastewater.
- Nanomaterials for Filtration: Design nanomaterials to enhance filtration and efficiently remove impurities.
- Composites for Disinfection: Create antimicrobial composite materials for chemical-free disinfection solutions.
- Membranes for Reverse Osmosis: Develop more resilient membranes for energy-efficient purification.

These research areas emphasize the team's commitment to eco-friendly solutions for managing water resources.

Water Treatment Project

The Ibn Tofail University (UIT) has installed a wastewater treatment station for its liquid waste generated from its facilities on campus. The chosen purification process is an aerobic biological process coupled with a membrane process (BRM), offering a treatment capacity of 500 m3/day under a contract with WATEC, a specialist in water technologies since 1987. This station will make the university entirely self-sufficient in terms of waste treatment, allowing for their reuse in irrigating green spaces. The selection of the membrane bioreactor (BRM) is based on civil engineering considerations and compliance with standards for the reuse of treated water in irrigation.

1- **Project Benefits:**

The project has positive impacts on the University, the region, and the environment, particularly regarding:

- Limitation of surface and groundwater pollution.
- Protection of the environment and human health.
- Protection of the groundwater table.
- Irrigation of the university campus green spaces using treated water.
- Improvement of the environment.
- stablishment of a research and training platform for teachers and students.
- Raising awareness among visitors (students, industrial actors, associations…) about water treatment and environmental protection.
- Reduction of potable water consumption by irrigating with treated water (with 80% of water reused for irrigation).







Water Treatment Project

2- Project Impact:

Our innovation targets industrial stakeholders, academics, students, users, city/region representatives, and the economic fabric. Furthermore, to broaden the scope covered by this service and increase its efficiency, the idea will not be confined within the university's boundaries but will extend beyond to be implemented at various strategic points throughout the city.

2-1- Impacts already generated by the innovation

The impacts already generated by the innovation during the year 2024:

- Reduction of the pollutant load of wastewater discharged into the receiving environment **(by 91%; 93%; 97% in COD, BOD5, and TSS respectively).**
- Reuse of treated wastewater for irrigation of green spaces **(at a rate of 500m3/day).**
- Total treated volume i**s 149,000 m3/year.**
- **Production of sludge used as fertilizer in agriculture.**
- R**eduction of odors from effluents by 90%.**
- Reductions in potable water consumption **(with an 80% reduction in potable water consumption).**

The table below presents the performance of the treatment plant for the year 2024:

Parameters	Raw water quality	Treated water quality	Total volume of treated water
DCO (mg/L)	540	31	149000 m3/ans
DBO5 (mg/L)	380	23	
MES (mg/L)	500	3,9	









Water Treatment Project

2-2- Innovative Water Treatment Project at Ibn Tofail University: Sustainable Irrigation Solutions with Mipotube Technology

The implementation of the water treatment project at Ibn Tofail University has highlighted our innovative choice to adopt the underground irrigation method using the "Mipotube" system. This choice has proven to be wise for several reasons:

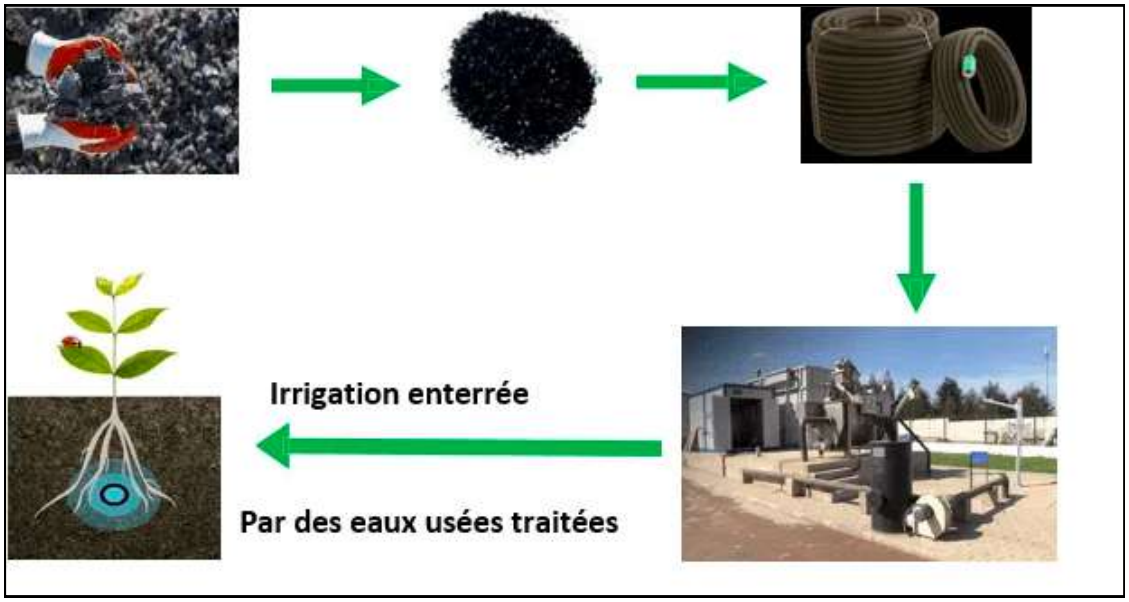
It allows for water savings of up to 50% of the amount typically used for irrigation, thanks to the absence of evaporation and targeted irrigation directly at the plant roots.

Additionally, Mipotube pipes are made from rubber waste from the automotive industry, significantly contributing to the valorization of recycled materials. This innovative approach is not only about water resource conservation but also aligns with a broader environmental agenda, promoting sustainability and ecological responsibility.

The use of this technology represents a step forward towards more environmentally-friendly practices, while also contributing to the reduction of industrial waste and the promotion of circular economy principles.











Wastewater treatment

Installation of a wastewater treatment plant Commune of Tafinghout- Taroudant Province

As part of the rehabilitation of families affected by the earthquake, an emergency plan is underway to build a 15-hectare village in coordination with the provinces of Kenitra and Taroudant. Within this context, Ibn Tofail University is committed to the construction and commissioning of a mobile compact wastewater treatment plant using technology suited to the local conditions in the village of Tafinghout in the province of Taroudant.

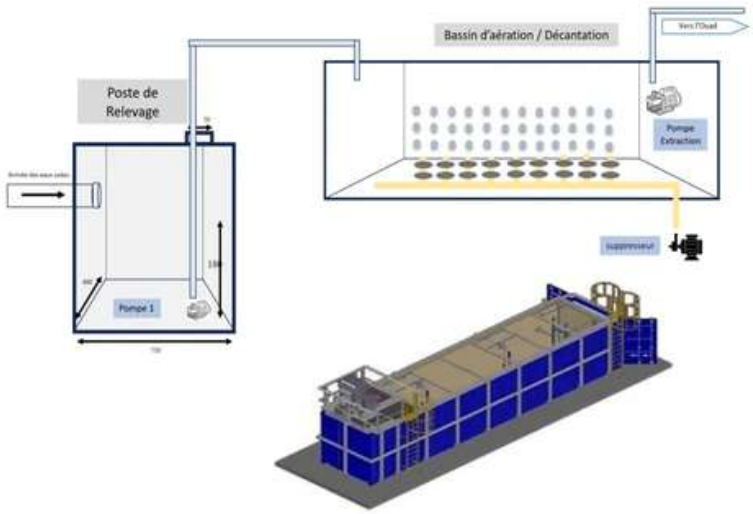
The compact wastewater treatment plant will have a capacity of 180 m3/d and will treat suspended solids (SS), chemical oxygen demand (COD) and biological oxygen demand (BOD5) to produce water that complies with the requirements for discharge into the receiving environment (River) from the village's liquid wastewater network.

This plant is designed to treat a daily water flow of 180 m3/d, with COD, BOD5 and TSS concentrations of 800 mg/l, 400 mg/l and 450 mg/l, respectively, using a low-load SBR (Sequential Batch Reactor) process to separate the treated water from the mixed liquor. This will ensure optimized treatment yields and water quality that meets discharge standards into the natural environment (River), following the following steps:

- Pre-treatment: removal of oil, grease, and sand at the lifting station.
- Biological treatment: Aeration/settling at the compact unit with a capacity of 180 m3/d.

Avantages of the compact unit

- Smaller footprint, reduced surface area;
- High purification efficiency;
- Optimized investment;
- Wide range of process management and operating modes;
- A treatment method that complies with current standards;
- A plant adaptable to peak flows;
- A plant able to withstand fluctuating ground loads;
- Easy system maintenance.



Project

OKEANO – Supporting the All-Atlantic Ocean Research and Innovation Alliance

Project Period : 2023-2026

Funding Partners: Fisheries and Oceans Canada website, European Union, United Nations Decade of Ocean Science for Sustainable Development, Fisheries and Oceans Canada.

Project Description:
The objectives reflect the Alliance motto 'Connecting-Cooperating-Acting', OKEANO, will serve to scale and transit the Alliance to a long-term, sustainable, and highly impactful international partnership capable of delivering transformative science, innovation and concrete benefits for Atlantic communities.
The AAORIA's core operations will receive expert support from this initiative, along with guidance on legacy and long-term governance structures. Create an All-Atlantic Strategic Research and Innovation Agenda to support the coordination of marine and maritime research and innovation activities with All-Atlantic stakeholders. Consolidate and strengthen current initiatives that are in line with the priorities of the All-Atlantic Declaration. Encourage systematic dialogue and coordination between the AAORIA and All-Atlantic stakeholders at national, regional, and international levels. Design and implement inclusive capacity development initiatives for Atlantic communities.

OKEANO will also support the organization, monitoring, communication, and outreach activities of three All-Atlantic Fora.
The consortium, which consists of fifteen organizations, guarantees a thorough geographic coverage of countries that support the All-Atlantic Declaration along and across the Atlantic Ocean.
In addition, the consortium offers a well-balanced combination of special skills, expertise, and connections to pertinent citizen and stakeholder networks that are necessary to achieve the project's goals.

Project Objectives:
- Management and Coordination, and Professional Support for the AAORIA Governance
- Structured Dialogue at Local, National, International, and Multilateral Levels
- Support and Consolidation of Existing AAORIA Activities, Including Atlantic Early-Career Ocean Professional (ECOP) Communities Capacity Building
- Supporting the Coordination of Marine and Maritime Research and Innovation (R&I) Activities with Atlantic Stakeholders.

Project

ActinOmics: Bioprospecting and Genomics of Actinobacteria Isolated from the Marchica Lagoon

Funding Partners:

- Morocco: MESRSI (Direction of Scientific Research and Innovation)
- Switzerland: The Leading House for the Middle East and North Africa (LHMENA)

Description:

The ActinOmicsproject, proposed as part of the cooperation program between Switzerland and Morocco, is an original and innovative initiative to study the biotechnological potential of a unique ecosystem: the Marchica Lagoon. The isolation of new indigenous strains will lead to the discovery of novel natural compounds with potential therapeutic applications. Furthermore, the project will provide the first scientific insights into the microbial biodiversity of this unexplored habitat through an in-depth genomic analysis of selected actinobacteria strains.

Expected Outcomes:

This project will expand current scientific knowledge and provide new data on the microbial biodiversity of Moroccan aquatic environments, specifically the Marchica Lagoon. Exploring these habitats will facilitate their valorization through the discovery of biotechnologically relevant compounds with applications in various technological fields, including therapeutics.

Activities Undertaken:

- A sampling campaign was conducted in December 2023.
- Preliminary screening of actinobacteria isolates was performed to determine their capacity to produce bioactive molecules.
- Morphological and cultural isolates were characterized, along with partial sequencing of the 16S rRNA gene.

Scientific, Environmental, and Economic Impact:

This project is designed to significantly contribute to the scientific community by providing new insights into the microbiological biodiversity of the Marchica Lagoon. It also aims to exploit the biotechnological potential of this marine environment as a source of novel, potentially valuable molecules, especially for applications related to human health. Moreover, the project is not just about scientific discovery. It aims to generate significant socio-economic benefits, adding value through enhancing the efficiency of academic research and aligning it with environmental, economic, and social concerns. This alignment ensures that our work will have a positive impact beyond the scientific realm.



Project

Observatory of the Sebou River Hydrosystem: O'Sebou - Science, Youth, and Water Governance

The study's approach is focused on continuously detecting and measuring biohydrochemical indicators in the receiving environment. A prototype station for online water quality monitoring will evaluate the actual chemical state of the water body located on the Sebou River at Mechra Bel Ksiri, downstream from the main urban areas of the basin.

This alternative strategy aims to solve the problems associated with the traditional method of spot sampling. The primary limitation of sampling measurements, apart from the expenses and possible issues with transportation and preservation, is that they only offer a single view of the water quality at the moment of collection

The effective management of water resources in the Sebou basin is essential for the national strategy, especially in light of climate change and growing urbanization. Despite being abundant in water resources, this basin encounters significant challenges in preserving and regulating these valuable assets. The complexities within this hydrological system are intricately linked to the interactions between socio-economic systems and ecosystems.
The management of this basin is guided by three essential questions:
1. What are the contributions of climate change and socio-economic activities to changes in biodiversity and the functioning of hydro systems?

2. How do human practices interact with ecosystem services?
3. What are the relationships between resource availability, access to those resources, and the structuring of human populations?

To address these questions, the O'SEBOU Observatory has been established. Its fundamental role is to ensure continuous monitoring of the Sebou's water quality, sediments, and aquatic environments. Equipped with high-resolution in situ devices, the observatory acts as an early warning system capable of quickly detecting any pollution or degradation of these environments, thereby enhancing vigilance and the preservation of this vital resource.

OBSERVATOIRE DE L'HYDROSYSTEME FLUVIAL DU SEBOU : O'SEBOU

SCIENCE, JEUNESSE ET GOUVERNANCE POUR L'EAU

Coordinatrice du projet au Maroc : Pr Souad HAIDA

Project

Protection of Drinking Water Supply Pipelines

The project we are presenting aims to establish the conditions and necessary procedures for diagnosing the degradation of concrete drinking water structures. We will pay special attention to the issues of early corrosion affecting prestressed concrete pipes, especially in semi-arid areas such as Ouarzazate, Er-Rachidia, Taourirt, Oujda, Smara, and Agadir. Additionally, the project includes the inspection of water storage structures, such as tanks and reservoirs, in these areas.

Furthermore, this project encompasses the development of a specific approach for selecting and ensuring compliance with the materials used during manufacturing. These choices will be tailored to each installation site's environmental conditions and characteristics.

As the project owner, O.N.E. E – Water Branch has installed large-diameter prestressed concrete pipes for nearly forty years. These pipes have so far demonstrated exemplary performance in some coastal regions such as Bouregreg, Casablanca, Daourat-El Jorf, and others. However, degradation issues, mainly related to corrosion, have been observed in other areas, such as Ouarzazate, Er-Rachidia, Taourirt, Oujda, Smara, and Agadir, affecting both prestressed concrete pipes and some concrete storage structures.

The observed failures, such as breaks and cracks, sometimes occur immediately after the pipes are installed, jeopardizing the lifespan of the facilities, which may vary from one area to another. These failures have direct repercussions on the security of the water supply.

The project aims to thoroughly assess the degradation issues specific to concrete structures, especially prestressed concrete pipes and water storage facilities. It also aims to develop clear guidelines to ensure the sustainability of these installations, covering components, manufacturing methods, transportation precautions, excavation, and protection. Additionally, the project will establish compliance control protocols for materials upon receipt to verify their conformity with technical specifications. It will also provide guidelines and instructions for installation.



Project

PROMEDRICE

PROMEDRICE aims to develop and promote the adoption of innovative and environmentally friendly agricultural practices and to produce evidence to support policymakers in making decisions regarding water resource management.

The main objective of PROMEDRICE is to develop and promote the adoption of site-specific agricultural practices that reduce contamination and salinization of soils and water bodies while maintaining or improving water use efficiency and productivity in rice agroecosystems.

The project will identify and quantify the primary pollutants affecting surface water and groundwater concerning rice production under specific pedological and environmental conditions. Effective and sustainable agricultural practices will be developed and demonstrated to reduce water pollution risks and salinization in seven case studies across the Mediterranean region, from Turkey and Egypt in the East to Portugal and Spain in the West.

Detailed studies on soil salinity management will be conducted in cases where it is a significant issue for rice cultivation (namely, Spain, Egypt, and Morocco).
The trade-offs between salts and nitrates leached with vertical water flows, salt accumulation, and the reuse of nitrates through recirculation concerning surface drainage.
The ultimate goal is to identify on-farm management solutions to minimize the effects of nitrate leaching and salinization of water and its pollution while also addressing rice productivity.

The consideration of on-site water treatment methods, such as chemical or electromagnetic techniques, will be assessed when restoring water quality. Economic sustainability and social acceptability will be evaluated to ensure the profitability of rice production.

Project

FUNZYbio

FUNZYbio, an innovative project that explores the Fungal and enzymatic degradation of antibiotics, is a collaborative effort involving partners from Morocco, Tunisia, Italy, and France. The project, set to unfold between 2023 and 2026, aims to introduce groundbreaking biotechnological solutions for treating livestock residues, manure, and anaerobic digestates. These solutions are designed to:

1. Allowing safe reuse of water and organic matter for agriculture;
2. Exploiting this potential for soil health and durability;
3. Limiting their adverse environmental effect as potential sources of salinization and pollution, such as from antibiotics (ABs).

The FUNZYbio Consortium proposes technical solutions that could significantly impact "land and water sustainability" and "smart and sustainable farming." By addressing the issue of AB pollution, which leads to the rise of AB-resistant bacteria (ARB) and AB resistance genes (ARGs), FUNZYbio could play a crucial role in preventing and limiting a significant threat to human and animal health worldwide: AB resistance.

Scientifically speaking, FUNZYbio could lead to the following impacts:

1) Direct contamination reduction of ABs by livestock waste reuse

2) Indirect reduction of water salinization by wastewater reuse

3) Development of green biotechnologies with near-zero costs to improve the two major existing and widespread processes for manure treatment: composting and anaerobic digestion.

4) Provide the proof of concept for obtaining safe (AB-free) water, liquid or solid fertilizers, and compost for safe use in the agri-food sector.

These impacts would be felt at the farm level, with downstream effects on the whole water basin area, considering the different sources of water contamination related to the agri-food activities.

PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION
IN THE MEDITERRANEAN AREA

Project

Expertise on Scaling Issue

"This collaborative project, conducted in partnership with the National Office of Electricity and Drinking Water (ONEE), focuses on the critical scaling issue. To this end, the project plans to establish a pilot treatment process and identify and assist in implementing preventive and corrective measures."

The project revolves around two essential components. First, the preventive component aims to adapt drinking water supply systems, their operations, and equipment to the characteristics of the water, particularly those with high scaling potential. Second, the corrective component identifies and implements various intervention techniques for descaling and regenerating clogged facilities.

In a broader perspective, the project aims to develop specific treatments tailored to water quality and the national context.

This project will generate significant impacts at several levels from 2021 to 2023. It will enable the mastery of innovative drinking water treatment technologies through a rigorous assessment of their qualitative, quantitative, and energy performance.

The design of a pilot scaling treatment unit tailored to the centers under ONEE and the Moroccan context represents a significant advancement.



Project

Safe and Sustainable Water Reuse Practices Enhance Agriculture, Food, and Environmental Security

Due to the growth of the global population, farmers face increasing pressure to boost their productivity and ensure food security. However, climate variability, climate change, water scarcity, and land degradation complicate agriculture.

Practical and affordable management of wastewater use and treatment is crucial for addressing water scarcity and reducing the operational costs of sanitation systems. However, this management can lead to the introduction of organic micropollutants, high nutrient content, and salinity in wastewater, which can have a negative impact on agricultural production, product quality, and soil health.

Thus, improving irrigation water quality is crucial for ensuring food security, preserving biodiversity and soil microorganisms, and increasing the crop yields of small farmers.

SAFE addresses these challenges by examining decentralized wastewater treatment through natural solutions (NBS), assessing water reuse for crop irrigation, promoting environmentally friendly practices, and evaluating local biodiversity and co-benefits.

The major challenge is to support farmers in improving yields through high-quality wastewater effluents for irrigation, soil and pest management, and access to better-quality salt-resistant plants with enhanced agricultural practices.

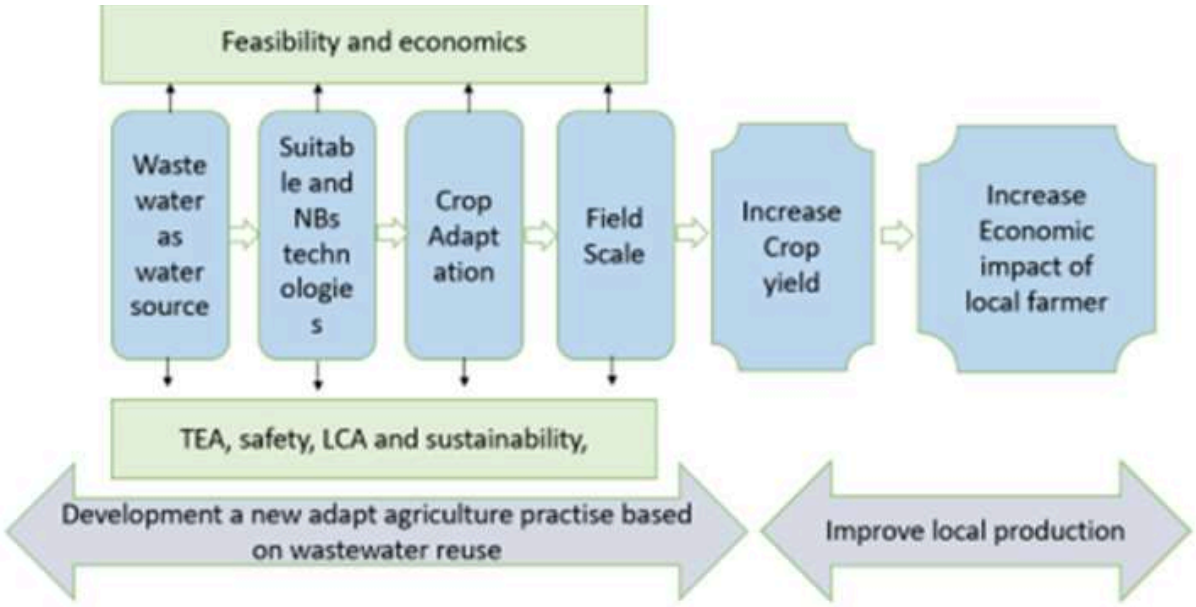


Figure 1 *Overall Methodology of the SAFE project*

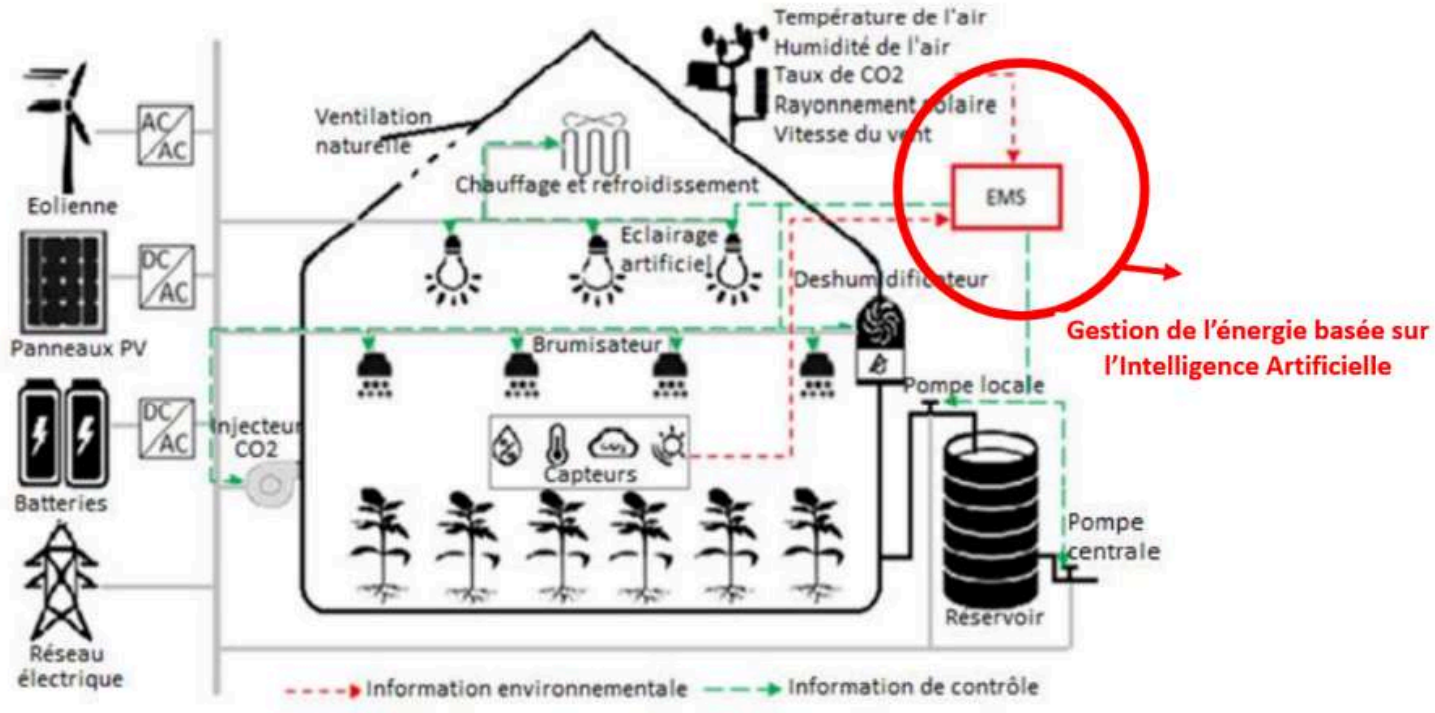
Project

Advanced Control System for intelligent and Sustainable Management of Connected Agricultural Greenhouses Linked to Hybrid Microgrids

Among the 61 projects selected as part of the Multidisciplinary Research Project Call (APRD), jointly initiated by the Ministry of Higher Education, Scientific Research and Innovation, the OCP Foundation, Mohammed VI Polytechnic University, and the National Center for Scientific and Technical Research, stands out the project from the Advanced Systems Engineering Laboratory (LISA). From 2022 to 2024, this project is titled 'Advanced Control System for Intelligent and Sustainable Management of Connected Agricultural Greenhouses Linked to Hybrid Microgrids.

The main objective of this project is to design and validate an intelligent management product for a network of greenhouses connected to a hybrid microgrid. This objective will be achieved by implementing an innovative centralized predictive control algorithm that considers stochastic production models and advanced predictions based on artificial intelligence.

A management platform for the system, utilizing Machine Learning, will enable real-time monitoring of the greenhouses' bioclimatic indicators.
The system will be equipped with optimized control and decision-making modules for heterogeneous energy systems that host various renewable energy sources, smart greenhouses, energy storage devices, pumps, water tanks, smart meters, and sensors. The main objective is to facilitate the transition to precision and smart agriculture by developing integrated information and control technologies based on consistent data analysis and high-performance control systems.



Project

Treatment of Industrial Effluents With High Pollutant Loads Through Biomethanation

The Rabat Salé Kénitra (RSK) region, due to its prominent position as an agricultural area, is characterized by sustained demographic and economic growth, hosting numerous agri-food industries. However, this industrial expansion has consequences, as these industries are often criticized for being significant polluters.

An example that highlights this issue is the effluents produced by the Gharb Molasses Processing Company (Sotrameg). These effluents are known for their high levels of COD (Chemical Oxygen Demand) and BOD5 (Biochemical Oxygen Demand over five days), reaching levels of approximately 60,000 mg/L and 40,000 mg/L, respectively. When these industrial effluents are discharged into the sewage system, they combine with domestic wastewater, leading to a significant adverse impact on groundwater and soil quality.

The fundamental objective of this project is to conduct a comprehensive study on the treatment and valorization of industrial effluents from a food alcohol production unit that uses molasses as a raw material, a by-product of the sugar industry.
This innovative initiative aims to evaluate the feasibility of biomethanation as a treatment method, targeting biogas production while generating a valuable by-product in the form of a biofertilizer that can be used in agriculture.
The biomethanation process relies on Saccharomyces cerevisiae's mesophilic fermentation of molasses, resulting in the production of biogas and the formation of ethanol as a by-product. By implementing this integrated approach, the project aims to provide a holistic and sustainable solution, thereby contributing to the mitigation of environmental issues while exploring innovative opportunities for local agriculture.



Project

UNIMED Food and Water

Food and water are critical issues in the Mediterranean, particularly in agricultural production facing climate change. Sustainable water management, monitoring of degraded areas, and integrating bioenergy and agro-industrial sectors are major concerns. These issues impact rural development, the fight against desertification, and socio-economic challenges.

The University of Evora, through UNIMED, has established a sub-network on food and water, bringing together research centers and academics. The aim is to promote scientific cooperation, the exchange of experiences, and the establishment of collaborations. The relevant disciplines include agricultural, environmental, natural, and soil sciences, hydrology, geology, biotechnology, economics, geography, demography, sociology, anthropology, spatial analysis, remote sensing, and land management.

The sub-network supports Euro-Mediterranean economic and social cohesion, encouraging cross-border cooperation and local sustainable development.

Objectives of the sub-network:

- Collaborate with initiatives such as the PRIMA program for research and innovation
- Gather information and best practices, contributing to a dedicated database;
- Conduct studies on water management, rural development, and sustainable agriculture
- Encourage dialogue among universities, businesses, social actors, and policymakers
- Organize international events and promote student and faculty mobility.

Climate-U Network collaboration

The Climate-U network, a one-of-a-kind international platform, plays a crucial role in promoting climate action and sustainable development through education and research. It brings together committed universities from around the world to combat the climate crisis.

Since its inception in February 2020, the network has experienced significant growth, expanding from its origins in the original Climate-U project, Transforming Universities for a Changing Climate. This expansion was made possible by the support of the Global Challenges Research Fund.

The Climate-U network is guided by the following objectives:

- To assess existing coverage of climate change in the curricula, research, and community engagement activities of universities in the four countries;
- To contribute to theory and understanding of the impact of higher education on climate change and sustainable development;
- To build and strengthen national, regional, and global university networks and knowledge exchange on climate change.

The network aims to strengthen climate action within each institution and create new collaborative ventures through international dialogue and exchange.

It also aims to benefit communities in four low—and middle-income countries by enhancing universities' contributions to addressing climate change. Collaborating with other networks, it coordinates events with international stakeholders and policy-makers.

The collaborative efforts between UIT and the Climate-U network have significantly impacted the university's academic programs and research. This partnership has facilitated the exchange of knowledge, resources, and best practices, fostering a robust ecosystem for developing innovative solutions to combat climate change. By leveraging its international partners' diverse expertise and resources, UIT has enriched its academic programs with a strong emphasis on sustainability and environmental studies. This integration has enhanced the quality of education and equipped students with the necessary skills and perspectives to become active contributors to the global sustainability agenda.

UIT's partnership with this network is a testament to its global significance in the fight against climate change.

Climate-U

Transforming Universities

for a Changing Climate

Project

Establishment of a Wastewater Treatment, Purification, and Recycling Station

At Ibn Tofail University in Kenitra, the motto "zero water discharge" is firmly embraced, reflecting a commitment to contribute to national efforts in preserving water resources. As part of its social and ecological responsibility, the university has initiated the construction of a wastewater treatment station to reuse water for irrigating the campus green spaces, demonstrating its commitment to sustainable development.

This treatment station will ensure complete wastewater recycling, providing the university and surrounding communities with total autonomy in managing these resources.

This facility has a recycling capacity of approximately 500 m³ per day, which aligns perfectly with the national water strategy. It enables substantial savings and represents an industrial wastewater treatment station capable of meeting the needs of a population comparable to that of a small town of 2,000 to 3,000 residents, or about 30,000 to 40,000 students daily.

Before starting construction, the project team reconfigured the entire university's sanitation system to efficiently collect all wastewater directed to a central reservoir for treatment.





Events

The Atlantic in Focus: A National Gathering to Rethink Research, Innovation, and Cross-Border Cooperation

Ibn Tofaïl University hosted a national workshop on July 3, 2025, under the theme: "Research and Innovation for the Atlantic Ocean: Catalyzing National Synergies for Enhanced Scientific Cooperation." This timely gathering, organized in partnership with the European Union, within the Horizon Europe programme and the OKEANO project, became a stage for scientists, researchers, activists, and institutions to come together, not only to reflect but to act.

Throughout the day, the university's conference hall transformed into a vibrant center of thought and purpose. The opening session brought forward the voices of institutional leaders, including representatives from the Ministry of Higher Education and Ibn Tofaïl University's presidency. These opening remarks set the tone: saving the ocean is not a technical topic; it's a national mission that demands commitment at all levels.

What followed was a sequence of insightful presentations and open discussions. Experts such as Dr. Laura Mcdonagh from the Marine Institute in Ireland presented the broader framework of AAORIA, the All-Atlantic Ocean Research and Innovation Alliance. Then, Prof. Zebakh Sanaa, coordinator of the event, gave an overview of the OKEANO project and Morocco's active participation within it. The conversation turned to national perspectives with Dr. Zina El Malki from INRH (National Institute for Fisheries Research), who highlighted national marine priorities and research programs. Each speaker helped weave together a broader picture of Morocco's efforts in oceanic research and its strategic role in Atlantic cooperation.

A particularly engaging moment came with presentations on real case studies and institutional experiences. Prof. Benmohammadi from FS-UIT explored the role of ocean research at Ibn Tofaïl University, while representatives from the IOI Ocean Academy and ECOP Morocco stressed the importance of youth engagement and the need to build a strong ocean culture across sectors. The final scientific talk by Prof. Leila Alem from the University of Technology of Sydney tackled the challenge of transdisciplinary research and how intellectual property and technology adoption can either accelerate or limit ocean preservation efforts.

A key theme that emerged throughout the day was the need to involve ordinary citizens, especially those directly affected by marine policies, such as coastal communities, youth, and small-scale fishermen. Several experts raised the importance of creating innovative ways to integrate non-specialists into the scientific and conservation process. Because without public understanding and inclusion, even the most advanced research risks falling short. This inclusive approach was framed not just as a civic gesture but as a cornerstone of academic progress and long-term resilience.

By the time the closing session arrived, the energy in the room had evolved from analysis to responsibility. The final messages emphasized the urgency of collective action, the importance of building lasting institutional bridges, and the necessity of moving from words to results. This event was more than a dialogue; it was a joint commitment, a reminder that the Atlantic's fate depends on what we choose to do now, together.

The OKEANO project (2024–2027), backed by 15 institutions from Europe, Africa, and Latin America, is a living example of this commitment. Through transatlantic collaboration, it aims to strengthen marine science ecosystems, promote innovation, and offer practical tools for tackling the world's most urgent ocean-related challenges. Morocco's leadership within this initiative is strategic, and its academic institutions, especially Ibn Tofaïl University, are rising to the occasion.



Events

Global Excellence and Water Sovereignty: Ibn Tofail University's Leadership in Scientific Research and Climate Action

Event : 3 December 2025

A Convergence of Innovation

Morocco's higher education and scientific research landscape is witnessing a transformative era, marked by international accolades and the hosting of high-level global policy forums. At the heart of this evolution is Ibn Tofail University (UIT), which recently achieved historic success on the global stage. This academic momentum coincides with the upcoming XIX World Water Congress, set to take place in Marrakech from December 1–5, 2025. Both milestones, held under the High Patronage of His Majesty King Mohammed VI, underscore Morocco's commitment to a "knowledge-based society" and its role as a global leader in addressing the challenges of a changing world.

Ibn Tofail University has solidified its reputation for world-class research through the outstanding performance of its students at the Early Career Lightning Talk and Global Networking Event. Zakaria Dahbi, an elite researcher from the M2IA (Master in Artificial Intelligence) program, secured the Golden Award in a highly competitive poster competition.

Competing against 71 prestigious international entries, Dahbi's work earned UIT a shared #1 global ranking with institutions from the United States. The success was further amplified by a collective sweep of the podium:

- Golden Award awarded to **Shamali Rewari** and to **Zakaria Dahbi** from Ibn Tofail university
- Silver Award awarded to **Jihane Briji** and **Sabir Oussaoui**

These honors demonstrate the effectiveness of the Moroccan university system in fostering innovation, particularly in the realm of Artificial Intelligence and digital discourse. By achieving parity with the world's leading scientific powerhouses, UIT has provided a powerful motivation for the entire academic community and enhanced the visibility of Moroccan scholars internationally.

While UIT leads in digital innovation, Morocco is also preparing to serve as the "world's water capital." Co-hosted by the International Water Resources Association (IWRA) and the Ministry of Equipment and Water, the XIX World Water Congress will convene under the theme "Water in a Changing World: Innovation and Adaptation."

The Congress aims to address the dynamic interconnections between natural ecosystems, energy, agriculture, and human activities. In the face of climate change and political upheavals, the event highlights the necessity of resilient infrastructure and smart governance. The discussions will be organized around seven critical thematic pillars:

1. Governance & Financing: Planning during periods of uncertainty.
2. The WEFE Nexus: The vital link between Water, Energy, Food, and Ecosystems.
3. Security & Risk: Managing water-related hazards.
4. Smart Future: Driving innovation through technology.
5. Groundwater: Navigating challenges and opportunities.
6. Sustainable Development: Water as a driver for the 2030 Agenda.
7. One Health: Integrating water quality and public health.







Events

3rd International Congress on Corrosion Inhibitors and the Environment

Partners : CNRST – Servichim – BioLogic – Hassan II Academy of Sciences and Techniques – ENSAK – ESTK – LABO TEST – ENSCK- AMACOPE

The 3rd International Congress on Corrosion Inhibitors and the Environment was set to take place at Ibn Tofail University in Kenitra, Morocco, on December 11-12, 2024. This prestigious event was organised by the Laboratory of Organic Chemistry Catalysis and Environment (LCOCE) in collaboration with various partners from within and outside Ibn Tofail University. The event brought together leading researchers, scientists, engineers, and industry professionals to explore the latest advancements in corrosion inhibitors and their significant role in environmental sustainability.

Themes of the Congress

The congress addressed a variety of critical topics that intersect with environmental challenges, renewable energy, and material science. The key themes include:

- Corrosion Inhibitors: Formulation, Cooling Circulation, and Modeling

Experts delved into the formulation and application of corrosion inhibitors in industrial settings, particularly in cooling systems, and explore new modeling techniques for their effectiveness.

- Renewable Energy

In line with the global shift towards sustainable energy sources, discussions focused on the role of corrosion inhibitors in enhancing the efficiency and longevity of renewable energy systems, such as solar and wind energy.

- Materials and Their Applications

Advances in materials science and the development of innovative, corrosion-resistant materials were highlighted.

- Organic Compounds for Photonic and Optoelectronic Applications

The congress explored the emerging field of organic compounds and their potential in photonics and optoelectronics, with implications for the development of advanced technologies in communication and energy.

- Environment and Water Treatment

With a focus on environmental protection, the congress addressed the latest techniques in water treatment and management, particularly in relation to corrosion and its impact on water quality.



Clubs

Anir: A Wave of Change for a Cleaner Planet

Anir has always been committed to making a difference, and this Saturday, November 23rd, 2024, we are dedicating an entire day to the preservation of our precious coastline.
Our mission: to restore the natural beauty of our beach by removing waste and pollutants that threaten its purity and ecological balance. This action is not just about cleaning a beach; it's about protecting our planet and preserving it for future generations.

Why it matters:
Every piece of trash removed is a step toward a cleaner, healthier environment. Coastal pollution affects marine life, ecosystems, and even our health. By coming together as a community, we can create a **lasting impact** and inspire others to take action.
How you can help:

- **Join us** on November 23 for this cleanup campaign.
- Bring your enthusiasm, some gloves, and a love for nature!
- Together, we can turn small gestures into a big change.

Let's make waves for a better tomorrow. Be the wave of change!



Conclusion

SDG 14

In conclusion, the activities carried out by Ibn Tofail University in 2025 in support of SDG 14, Life Below Water, demonstrate our unwavering commitment to preserving marine ecosystems. Through research projects, environmental campaigns, and community engagement efforts, we have raised awareness of the importance of protecting oceans and coastal areas. By advancing conservation efforts, fostering sustainable practices, and educating the next generation, our university aims to safeguard marine biodiversity, combat pollution, and promote the sustainable use of ocean resources for the benefit of current and future generations.



THE GLOBAL GOALS

LIFE BELOW WATER

SUSTAINABLE
DEVELOPMENT
IBN TOFAIL UNIVERSITY