جامعة Université
ابن طفيل Ibn Tofaïl
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2025

SDG 7 REPORT

CLEAN AND AFFORDABLE ENERGY

SUSTAINABLE DEVELOPMENT
IBN TOFAIL UNIVERSITY

Introduction

SDG 7

Ibn Tofail University is firmly aligned with the Sustainable Development Goals (SDGs), particularly SDG 7, which focuses on access to clean and affordable energy. Recognizing the critical importance of energy in all aspects of life, our institution has actively committed to initiatives that promote universal access to modern, reliable, and sustainable energy sources. This report outlines the actions undertaken by the university to contribute to the achievement of this major goal.

7 AFFORDABLE AND CLEAN ENERGY



THE GLOBAL GOALS

Assessment of the Year

Key Figures 2025:

- Total Scope emissions in tCO2e (tonnes of carbon dioxide equivalent): 25 tonnes
- Amount of energy generated annually on campus from renewable sources, in GJ: 1346
- Reduction in electricity consumption costs within the university campus: approximately 63% in 2025
- 4 photovoltaic canopies
- 1 photovoltaic pergola
- 1 solar façade
- 30 solar benches
- The switch to LED lighting was completed across the entire university campus.
- Ten bicycles can reach a speed of 25 km/h and have a battery range of 30 to 70 km.
- Two vehicles can reach a speed of 130 km/h and have a battery range of 150 km.
-

Educational Programs:

- Engineering Degree in Renewable Energies
- Bachelor's Degree in Renewable Energy Engineering
- University Degree in Renewable Energies and Energy Efficiency
- University Degree in Electrical Engineering, Renewable Energy, and Quality Management
- University Master's Degree in Renewable Energies

Autres initiatives

The University has implemented a number of significant actions:

- Established a Smart Building platform at ENSA/ENCG
- Installed an East-West photovoltaic canopy connected to a 70 kWc network
- Added new solar benches for electric charging
- Set up new hybrid photovoltaic/wind installations to power the STEP
- Constructed a pilot positive energy building
- Developed an intelligent supervision and control platform for all Renewable Energy installations

- Strengthen energy efficiency measures by adopting advanced technologies and raising awareness among university members to reduce their energy consumption.
- Increase the use of renewable energy by installing more solar panels on buildings and exploring other green energy sources, such as wind energy.
- Implement new self-consumption photovoltaic installations with a total capacity of approximately 150 kWc.
- Promote the installation of electric vehicle charging stations in university parking lots.

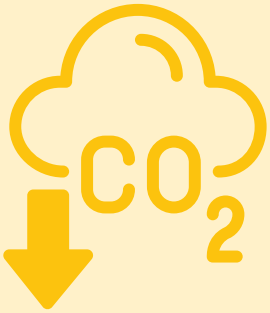
Measure *progress*

63%



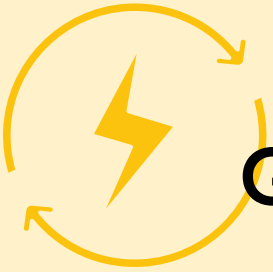
Reduction of electricity consumption costs within the university campus by approximately 63% in 2025.

25 tCo2e



The total Scope 1 and 2 emissions in tCO2e (tonnes of carbon dioxide equivalent) amount to 25 tonnes.

1346



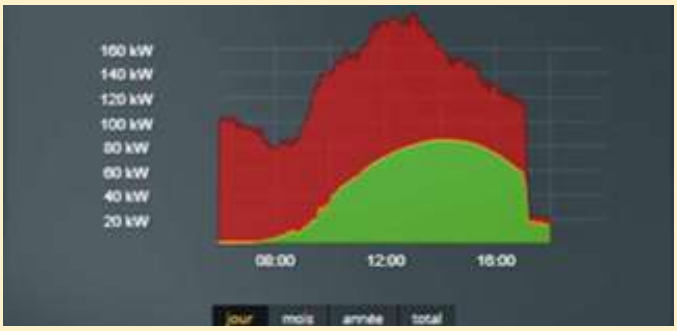
Gj

The amount of energy generated on campus from renewable sources is 1346GJ.

Measure *progress*

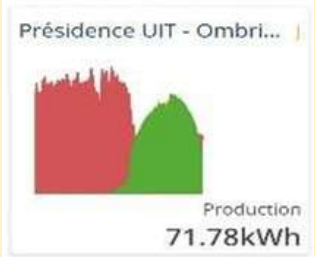
In parallel with these projects, we have implemented our centralized management system, which monitors photovoltaic installations and detects issues before they can have lasting negative impacts, such as inverter downtime or the presence of shaded areas.
Additionally, we have developed our cumulative dashboard. This dashboard provides an overview of all photovoltaic installations, including historical production data, a total overview, and financial performance insights.





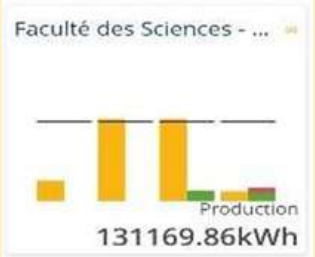












Water & Energy Project

Sustainable Water and Energy Project: An Initiative of Ibn Tofail University in Sidi Taibi

In the context of sustainable development, Ibn Tofail University (UIT) has established a drinking water treatment station using membrane technology powered by photovoltaic energy. The installation took place at Al Anouar High School in Sidi Taïbi to provide the school with drinking water and cover a portion of its electricity needs.
The station will treat brackish water from the region using Nanofiltration membrane technology, with a capacity of 4000 students at a rate of 3 liters per day per student (12 m3/day), as part of a collaboration between the University and the companies BELECTRIC and FIRMUS (specialists in energy production and water treatment).

1- Project Benefits:

The project has positive implications for the university, the high school, the region, and the environment:

- Limits pollution of surface and groundwater;
- Protects the environment and human health;
- Provides a platform for research and training for teachers and students.
- Raises awareness among visitors (students, industrial actors, associations, etc.) about water treatment and environmental protection.
- Provides water supply outside of daylight hours with a production capacity of **500L/h, at a rate of 3 liters/day/student.**
- Provides additional electricity supply to the high school, making it the first energy-autonomous high school.

The project also ensures water conservation and aligns perfectly with the national water strategy, setting strategic objectives to guarantee access to water and sanitation for all:

- Ensures access to drinking water for all at an affordable cost;
- Improves water availability and quality through sanitation measures, international cooperation, awareness of water pollution, and protection of water-related ecosystems.





Water & Energy Project







2- Technical Details:

Water Treatment:	
School Water	Nitrate-rich and relatively brackish
Treatment Technologies	Nanofiltration and potentially reverse osmosis and electrodialysis in the future.
Disinfection Technology	Electrochemical Disinfection.
Capacity:	4000 students at a rate of 3 liters per day per student (12 m3/day). The project will benefit the population of the nearby village on weekends and school holidays.

Production and Storage of Photovoltaic Electricity:	
Photovoltaic Panels	158 photovoltaic panels with individual power of 145 Wc (for 96 panels) and 150 Wc (for the other 62 panels) using "thin-film" technology. They are capable of reacting to low light conditions (cloudy weather) and heavy soiling.
Installed Power	24.3 kWc
Energy Produced	Approximately 50 MWh/year with a Performance Index of 85%
Battery Technology:	Gel Lead (OPzV). 24 cells of 2V each. Lifespan of 4000 cycles. Stored energy is 40 kWh

Water & Energy Project

Wind Power Production	
Technology	Vertical axis wind turbine of the UrWind2.2 type with a highly efficient Darrieus and Savonius design
Installed Power	2.2 kW and it allows for the production of 2,000 to 4,000 kWh/year.





3- 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.

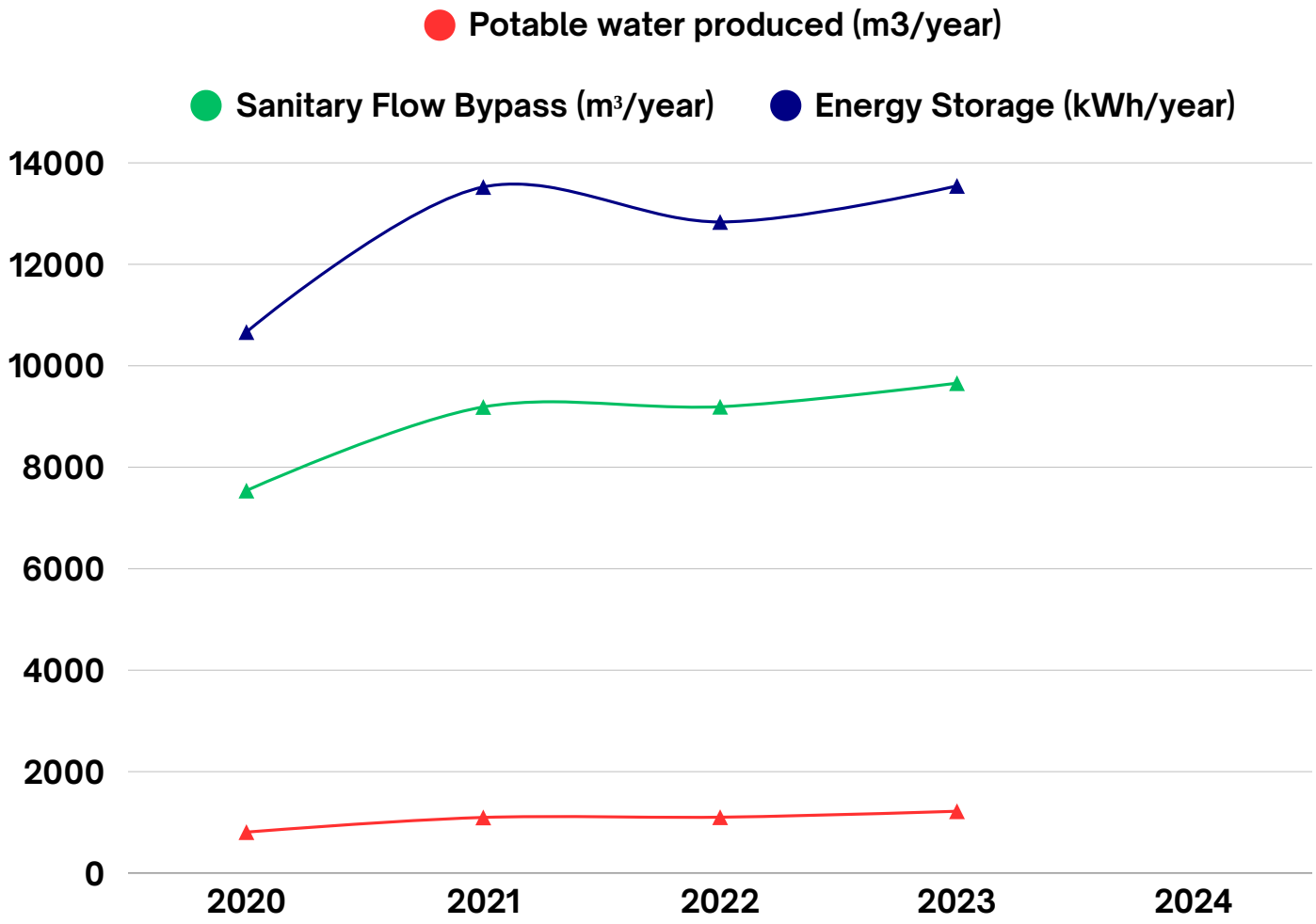


3-1- Impacts already generated by the innovation :

Every year, the Sidi Taibi station produces a significant amount of water and energy, making it a valuable resource for the school. This annual production meets the school's needs for drinking water and energy. Indeed, the station plays a crucial role by providing a source of clean and safe water for human consumption, while also supplying various equipment and infrastructure with energy. Thanks to its production capabilities, the Sidi Taibi station significantly contributes to the well-being of the school by ensuring a reliable supply of essential resources throughout the year.
The graph below presents the annual production of water and energy for the period from March 1, 2020, to December 31, 2025.



Water & Energy Project



- The production of drinking water can meet the future needs of 4,000 to 10,000 inhabitants, representing approximately half of the population of the village of Sidi Taibi.

Energy production

Electricity Production via Renewable Energy and Electromobility

Photovoltaic Canopy 1

In addition to its impact on clean energy production, this photovoltaic canopy generates significant savings. Each month, the building connected to the project benefits from an average reduction of 3,200 Dhs on its electricity bill, demonstrating the efficiency and profitability of the solar installation.
Furthermore, due to the reduction in greenhouse gas emissions associated with conventional electricity production, the project results in average monthly savings of 1.49 tons of CO2, actively contributing to the fight against climate change.

Location: Parking in front of the Presidency
Type: Self-consumption with charging stations for 10 electric bicycles and 2 electric cars.
Installed photovoltaic power: 21 kWc
Average daily photovoltaic production estimate: 94 kWh
Average monthly savings on the connected building's electricity bill: 3,200 Dhs
Average monthly CO2 savings: 1.49 tons

This photovoltaic canopy project embodies our ongoing commitment to sustainability and the transition to cleaner, more environmentally friendly energy solutions.





Energy production

Photovoltaic Canopy 2

This photovoltaic canopy provides significant savings. The buildings connected to the project will benefit from an average monthly reduction of 9,100 Dhs on their electricity bills, reflecting the efficiency and positive economic impact of this solar installation. Furthermore, the project will also result in average monthly savings of 4.29 tons of CO2, thereby reducing our overall carbon footprint.
This project represents a further step towards our vision of a green and sustainable university, where renewable energies play a key role in our energy future.

Location: Parking in front of the Faculty of Sciences
Type: Self-consumption
Installed photovoltaic power: 60 kWc
Average daily photovoltaic production estimate: 270 kWh
Average monthly savings on the connected buildings' electricity bills: 9,100 Dhs
Average monthly CO2 savings: 4.29 tons

By integrating this photovoltaic canopy into our campus, we strengthen our commitment to sustainable energy transition and the adoption of innovative technologies to promote a responsible approach to energy.



Energy production

Photovoltaic Canopy 3

The positive impact of this project extends beyond the environment, translating into substantial financial benefits. The buildings connected to the project will enjoy average monthly savings of 5,500 Dhs on their electricity bills, reflecting the efficiency and economic potential of this solar installation. Additionally, the project will lead to average monthly savings of 2.49 tons of CO2, significantly contributing to the reduction of our overall carbon footprint.

Location: Parking in front of the Continuing Education Center
Type: Self-consumption
Installed photovoltaic power: 35 kWc
Average daily photovoltaic production estimate: 157 kWh
Average monthly savings on the connected buildings' electricity bills: 5,500 Dhs
Average monthly CO2 savings: 2.49 tons

This project reinforces our position as a model campus for sustainability, implementing innovative technologies for solar energy self-consumption.



Energy production

Photovoltaic Canopy 4

Beyond the ecological benefits, this project offers significant financial savings. The buildings connected to the project will enjoy average monthly savings of 7,600 Dhs on their electricity bills, demonstrating the efficiency and positive economic impact of this solar installation. Additionally, the project will result in average monthly savings of 3.5 tons of CO2, contributing to the reduction of greenhouse gas emissions.

Location: Parking at the Faculty of Letters and Human Sciences
Type: Self-consumption
Installed photovoltaic power: 50 kWc
Average daily photovoltaic production estimate: 250 kWh
Average monthly savings on the connected buildings' electricity bills: 7,600 Dhs
Average monthly CO2 savings: 3.5 tons

The integration of this photovoltaic canopy in the parking lot of the Faculty of Letters and Human Sciences reflects our ongoing commitment to sustainability and the adoption of renewable energy solutions. By harnessing the benefits of solar energy, we demonstrate our intention to promote responsible practices and foster a culture of sustainability within our university community.



Energy production

Photovoltaic Pergola

Thanks to an average daily photovoltaic production estimate of 201 kWh, this project will have a significant impact on our clean energy supply. But the benefits don't stop there. The financial savings resulting from this initiative will also be remarkable. Each month, the building connected to the project will enjoy average monthly savings of 6,850 Dhs on its electricity bill, demonstrating the efficiency and profitability of this solar installation.

Location: Terrace of the University Library
Type: Self-consumption
Installed photovoltaic power: 45 kWc
Furthermore, this photovoltaic pergola will lead to average monthly savings of 4.40 tons of CO2, significantly contributing to the reduction of greenhouse gas emissions.
Average daily photovoltaic production estimate: 201 kWh
Average monthly savings on the connected building's electricity bill: 6,850 Dhs
Average monthly CO2 savings: 4.40 tons

Additionally, this photovoltaic pergola will lead to average monthly savings of 4.40 tons of CO2, significantly contributing to the reduction of greenhouse gas emissions.



Energy production

Solar Facade

Each day, the average daily photovoltaic production estimate of 112 kWh demonstrates the significant potential of this installation to generate clean and renewable energy. Beyond its environmental impact, this project offers substantial financial benefits. The building connected to the project will enjoy average monthly savings of 3,800 Dhs on its electricity bill, reflecting the efficiency and profitability of this solar installation.

Location: South facade of the University Library
Type: Self-consumption
Installed photovoltaic power: 25 kWc
Average daily photovoltaic production estimate: 112 kWh
Average monthly savings on the connected building's electricity bill: 3,800 Dhs
Average monthly CO2 savings: 2.45 tons

Furthermore, this installation will lead to average monthly savings of 2.45 tons of CO2, actively contributing to the reduction of greenhouse gas emissions.



Energy production

Solar Benches

The UIT has recently installed innovative new benches on its campus, equipped with photovoltaic modules that produce green electricity, stored for continuous availability, 24/7. These modern benches offer a multifunctional space where students and staff can work, study, or simply relax while benefiting from convenient power sources. Each bench is equipped with a 220V power outlet for charging laptops, as well as USB ports (1A and 2A) for charging phones and tablets.

Location: Covering the entire university campus
Number of benches installed: 30
Number of 220V power outlets on each bench: 1
Number of USB ports (1A and 2A) on each bench: 2

As the first of their kind on a national scale, these smart benches represent a significant advancement for the university, allowing all users, especially students, to charge their electronic devices at any time of day. This initiative reinforces our commitment to renewable energy solutions and our desire to provide a sustainable and practical environment for the university community.





Energy Efficiency

Transition to LED Lighting

The transition to LED lighting at Ibn Tofail University is a bold initiative focused on sustainability. By implementing this project, our university demonstrates its commitment to responsible energy management and its desire to reduce its environmental impact. The shift to LED lighting, carried out across the entire university campus, is a crucial step toward achieving our energy efficiency goals and budget savings.

Location: Covering the entire university campus
Reduction in electricity consumption: Approximately 50% to 80% compared to conventional lighting
Average monthly financial savings: Ranging from 30% to 70% on the electricity bill related to lighting
Reduction in CO2 emissions: About 50% to 80% of CO2 emissions related to lighting can be reduced

With energy consumption reduced by 6 to 10 times compared to conventional lighting, we achieve significant energy savings while optimizing our operating costs. The integration of occupancy sensors in key areas of the campus, combined with LED lighting, further enhances energy efficiency, as lighting will only be used when needed. These concrete measures improve our environmental footprint by reducing greenhouse gas emissions associated with electricity consumption. Moreover, this project provides a more pleasant and secure learning and working environment, thanks to optimal illumination of common areas.





Projects

Sustainable biomass conversion into bioenergy through pyrolysis (PyroBioFuel)

The project, scheduled for the period 2022-2025, aims to transform animal slaughtering activities into environmentally friendly and sustainable practices. Key objectives include optimizing fast pyrolysis, developing processes for converting pyrolysis products into fuels, and creating decision-making tools based on models. To achieve these goals, the project relies on robust pyrolysis technologies that ensure consistent product quality.
Funded by the Ministry of Higher Education and Innovation, the project, named PyroBioFuel, is organized into five integrated work packages. These packages aim to enhance the conversion pathway of biomass into fuel using innovative technologies and digital tools. The project aspires to utilize residual biomasses, such as date palm waste, cotton stalks, corn straw, and olive residues, as raw materials for the pyrolysis process.
Beyond technical aspects, PyroBioFuel anticipates significant impacts. At the micro level, the project promotes small investments led by women, encourages job creation, and contributes to the development of rural communities.
The evaluation of social impacts will encompass effects on individuals and community interactions with their socio-cultural, economic, and biophysical environment. Special attention will be given to potential benefits in terms of women's empowerment and gender equality.
Ultimately, PyroBioFuel aims to validate new biomass conversion technologies with a modular approach. This modularity will help reduce capital costs and facilitate the scalability of units, making them suitable for rural and remote areas disconnected from the traditional electrical grid.





Projects

Treatment of High-Pollution Industrial Effluents through Anaerobic Digestion

The Rabat-Salé-Kénitra (RSK) region, with its prominent position as an agricultural area, is characterized by sustained demographic and economic growth, hosting numerous agri-food industry units. However, this industrial expansion is not without consequences, as these industries are often identified as major polluters.

A concrete example of this issue is reflected in the effluents generated by the Gharb Molasses Processing Company (Sotrameg), which are characterized by high levels of Chemical Oxygen Demand (COD) and Biochemical Oxygen Demand over 5 days (BOD5), reaching approximately 60,000 mg/L and 40,000 mg/L, respectively. Alarmingly, when discharged into the sewage system, these industrial effluents mix with domestic wastewater, significantly negatively impacting the quality of groundwater and soil.

The fundamental objective of this project is to conduct an in-depth study of the treatment and valorization of industrial effluents from a food alcohol production unit using molasses as a raw material, which is a by-product of the sugar industry.

This innovative initiative seeks to assess the feasibility of anaerobic digestion as a treatment method, aiming to produce biogas while generating a valuable by-product in the form of a biofertilizer that can be used in agriculture.

The anaerobic digestion process relies on the mesophilic fermentation of molasses by Saccharomyces cerevisiae, resulting not only in biogas production but also in the formation of ethanol as a by-product.

By implementing this integrated approach, the project aspires to provide a holistic and sustainable solution, contributing to mitigating environmental issues while exploring innovative opportunities for local agriculture.



Projects

Study of Appropriate Technologies for the Conversion of Organic Waste and Biomass into Renewable Energy and Sustainable Bio-Fertilizer

Funding Partners: CNRST- Ibn Tofail University – Sidi Mohamed Ben Abdellah University– Hassan 1St University.

Description:

The university catering sector is one of the largest producers of bio-waste from food. The enormous amount of waste poses a risk to the environment and public health if it is thrown directly into the environment. Anaerobic digestion is a possible solution for the better management of this type of food waste.

Project Objectives:

Design of a pilot prototype for the methanization of organic waste from the university restaurant in Kenitra.
Project beneficiaries: Restaurants
Means necessary for the realization of the project:

- Human resources: Biomass and Biogas Energy Team, Faculty of Sciences Kenitra-Morocco: Professors, Doctors, and PhD Students. Environmental Biotechnology Team, Biotechnology Laboratory, Sidi Mohamed Benabdellah University: Professors, PhD Students and Students.
- Material resources: CSTR Digester and Scientific laboratory equipment.

Project Status: Prototype, Sample

Project Assessment:

- Innovative aspect: A first university-scale digester for waste treatment
- Environmental Impact: Treatment of university restaurant waste, reduction of greenhouse gases and production of renewable energy
- Development prospects: Pilot scale, capacity expansion, diversification of treatment and recovery types
- Sustainability prospects: Provide the university restaurant with a prototype for processing their waste.



Projects

The project of Hybrid Biochemical and Thermochemical conversion of Slaughterhouse Biowaste for Renewable Energy production (BIOTHEREP)

Funding Partners : Leap-Re program

Description:

The BIOTHEREP Circular is a project that aims to create novel and economically viable integrated processes that will help convert slaughterhouse activities into environmentally friendly sustainable practices and reduce the risk of soil, climate, and water pollution.

The project, set to unfold between 2022 and 2025, aims to develop an integrated strategy to produce bioenergy from slaughterhouse wastes and implement solutions that respond concretely to the global and regional sustainable development objectives from a circular economic perspective.

The project's primary ambition is to propose effective, optimized, and innovative multidisciplinary technological solutions to the current problems of SHW management that seriously affect climate, soil, and water resources.
What is the expected impact of the project?
Among the project's primary outcomes will be the creation of an integrated waste management and energy generation system that is ideal for slaughterhouses.

The slaughterhouses in Africa might employ this method directly, or it might be extended to other slaughterhouses that deal with comparable issues like improper disposal of waste heat or inadequate energy supply, particularly in remote regions.
Overall, in BIOTHEREP, several sustainable development goals are targeted. The project has an environmental and social impact on the African continent and responds to population needs. By implementing this integrated approach, the regional slaughterhouse sector can strengthen its competitiveness and growth by becoming more energy efficient. Results obtained could be used beyond this project for investigation in further R&D or international development projects.

Projects

Energy Recovery from Organic Waste through Methanization, Gasification, and Combustion (VLORMAC)

Project Hosting Institution:
Institute of Combustion, Aerothermics, Reactivity and Environment (ICARE), Orléans, France

Project Overview:
This project is a collaborative effort between the Institute of Combustion, Aerothermics, Reactivity and Environment (ICARE) in Orléans, France, and Ibn Tofail University in Kenitra, Morocco.

Partners:
.ICARE: Institute of Combustion, Aerothermics, Reactivity and Environment, Orléans, France
. Ibn Tofail University, Kenitra, Morocco

Project Objectives:
The scientific objectives of the VLORMAC project are as follows:

- To develop renewable energies by utilizing biomass and waste, while reducing greenhouse gas emissions;
- To decrease waste volume and reduce the pollutant load of digested waste;
- To deepen understanding of gasification and methanization systems to improve the management of bioprocesses;
- To characterize olive residues in terms of their thermo-physical properties;
- To compare energy recovery processes—gasification, methanization, and direct combustion—both energetically and economically, to select the most appropriate process;
- To characterize the combustion of the obtained products in terms of heat quantity and pollutant emissions based on the composition of the produced gases.

Human Resources:

- SETIME Laboratory, Renewable Energies and Materials Team, Faculty of Sciences, Kenitra, Morocco: Professors, PhDs, Doctoral Candidates, and Students.
- ICARE Laboratory, CB2 team – Biomass Combustion and Biofuels

Outlook and Future Perspectives:
The project aims to treat olive oil waste in an integrated way by combining the biochemical recovery of margines by methanization (liquid fraction) and the thermochemical conversion of the resulting digestate and olive groats (solid fraction) by combustion and gasification. This approach respects the objectives of the circular economy, as it results in zero waste. We propose to study the possibilities the valorization agricultural and agri-food residues, and in particular waste from olive oil production. The concept is to produce biogas and syngas from these wastes for use as biofuels in boilers, either on an industrial scale, or on the scale of small groups of dwellings (hamlets). The aim of the VALORMAC project is to determine the optimum conditions for using these residues to produce biofuels and burning them in specific boilers, in order to verify burner performance.

Projects

The Advanced Control System for Intelligent and Sustainable Operation of Connected Agricultural Greenhouses

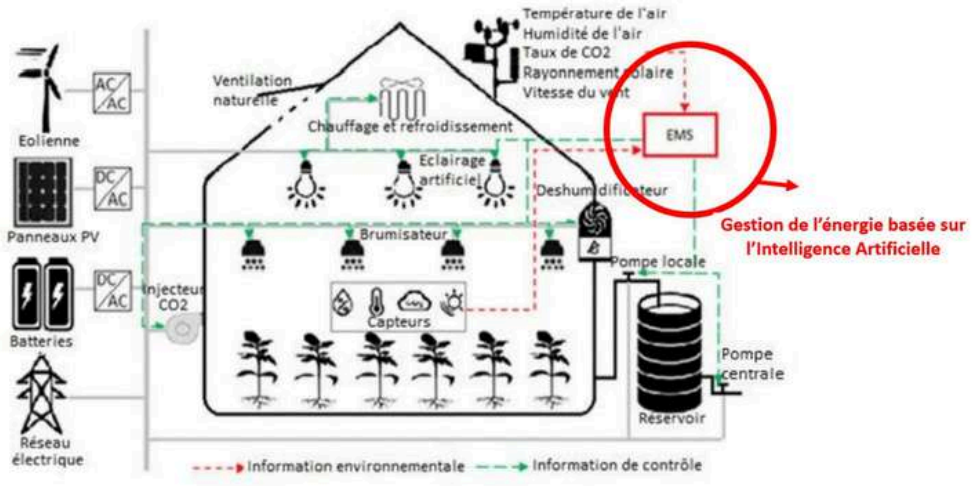
Project Partners: CNRST- MESRSI- UM6P- OCP

Description:

Among the 61 projects selected under the Multi-Thematic Research Call for Projects (APRD), jointly initiated by the Ministry of Higher Education, Scientific Research and Innovation, the OCP Foundation, Mohammed VI Polytechnic University (UM6P), and the National Center for Scientific and Technical Research (CNRST), the Advanced Systems Engineering Laboratory (LISA) project stands out. This project, spanning the period from 2021 to 2025, is titled "Advanced Control System for Intelligent and Sustainable Operation of Connected Agricultural Greenhouses Connected to Hybrid Micro-Grids."

Project Objectives:

This project aims to develop and validate a smart management product for a network of greenhouses connected to a hybrid micro-grid, based on an innovative centralized predictive control algorithm. taking into consideration stochastic production models and advanced prediction models based on artificial intelligence.
The entire system control platform is based on machine learning to provide real-time management of the entire system. It should enable the real-time collection and analysis of greenhouse bioclimatic indicators. The control platform includes control and decision-making modules developed and optimized for heterogeneous energy distribution systems that can accommodate a large number of renewable energy sources, smart greenhouses, energy storage devices, pumps, water tanks, smart meters, and sensors. The objective is to support the transition to precision and smart agriculture by developing integrated information and control technologies based on both consistent data analysis and high-performance control systems.



Events

Ibn Tofail University Hosts African Week on the 17 Sustainable Development Goals in Partnership with the NEF Einstein Forum

Ibn Tofail University, in collaboration with the National School of Chemistry and the Next Einstein Forum (NEF), has proudly hosted the African Week on the 17 Sustainable Development Goals (SDGs). This groundbreaking event brought together thought leaders, researchers, students, and policymakers from across Africa to discuss and advance the United Nations' SDG agenda.

A Platform for Sustainable Development in Africa
The African Week aimed to highlight Africa's crucial role in addressing global challenges by focusing on localized solutions for sustainable development. It provided a dynamic platform for sharing insights, experiences, and innovative approaches to achieving the 17 SDGs, which tackle critical global issues like poverty, inequality, climate change, and education.

This collaboration between Ibn Tofail University and NEF underscores a shared commitment to nurturing a new generation of African scientists and innovators who can address the continent's unique challenges.

Highlights of the Week

- ***Workshops and Training Programs:***

A series of interactive workshops offered participants practical training on renewable energy, sustainable agriculture, and green technologies.

- ***Panel Discussions:***

Experts from diverse fields participated in discussions about integrating SDGs into local and regional policies, emphasizing Africa's potential as a leader in global sustainability efforts.

- ***Youth Engagement:***

Students from the National School of Chemistry and other institutions presented projects showcasing innovative solutions aligned with the SDGs, such as clean energy alternatives and waste management systems.

- ***Networking Opportunities:***

The event facilitated connections between academia, industry, and civil society to promote collaborative efforts and funding opportunities for SDG-related projects.

Advancing Africa's Role in Global Goals
The African Week highlighted the importance of regional collaboration in achieving sustainable development. With some of the fastest-growing economies and populations, Africa's role in the global SDG agenda is critical and transformative. Events like these demonstrate the continent's capacity to lead and innovate, particularly in areas such as renewable energy, sustainable cities, and inclusive education.





Events

Scientific Synergies: Ibn Tofail University Expands its Research Horizons with IRESEN

The President of Ibn Tofail University welcomed the Director of the Institute for Research in Solar Energy and New Energies (IRESEN). During this meeting, both parties explored several collaborative projects in the field of scientific research.

This high-level meeting provided a valuable platform for the exchange of ideas and the planning of future joint research initiatives. Discussions focused on innovative projects aimed at promoting sustainable development and addressing contemporary energy challenges.

The promising outcomes of this meeting with IRESEN will positively impact Ibn Tofail University, paving the way for new research opportunities and further strengthening the institution's position as a leader in scientific and technological innovation.



Events

The 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 will address several critical themes that intersect with environmental challenges, renewable energy, and materials science, including:

- ***Corrosion Inhibitors: Formulation, Cooling Circulation, and Modeling***

Experts will discuss the formulation and application of corrosion inhibitors, particularly in industrial settings like cooling systems, and will explore new modeling techniques to assess their effectiveness.

- ***Renewable Energy***

In line with the global transition to sustainable energy, discussions will focus 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 will be highlighted.

- ***Organic Compounds for Photonic and Optoelectronic Applications***

The congress will explore the emerging field of organic compounds and their potential applications in photonics and optoelectronics, which have significant implications for advanced communication and energy technologies.

- ***Environment and Water Treatment***

Focusing on environmental protection, the congress will cover the latest techniques in water treatment and management, especially regarding corrosion's impact on water quality.



From Dialogue to Action: Ibn Tofail University as a Case Study at the Erasmus+ National Seminar on SDGs

The Erasmus+ National Office Morocco, in collaboration with the Ministry of Higher Education, Scientific Research and Innovation, organized the national seminar "Sustainable Development Goals and Climate Change: What Role for Higher Education?" on 9–10 October 2025. Bringing together Moroccan and European experts, the event examined how universities can contribute to building a sustainable and climate-resilient future.

Held within the framework of Morocco's ongoing reforms, aligned with the New Model of Development and the Strategic Vision for Education 2015–2030, the seminar positioned universities as central actors in promoting inclusion, innovation, and environmental responsibility. Over two days and 14 thematic panels, more than 220 participants discussed SDG integration into university missions, sustainable campus development, governance models, research and innovation for climate action, and tools for measuring institutional impact. The diversity of participants including university leaders, ministry officials, sustainability experts, Erasmus+ coordinators, researchers, and doctoral students enriched the dialogue and reinforced the need for coordinated, long-term commitment in higher education.

Ibn Tofail University, Kenitra, contributed through a case study presented by Professor Saida El Mendili, illustrating its integrated approach to sustainability across education, research, campus life, and governance. Initiatives in water management, waste reduction, energy efficiency, and inclusive education reflected a holistic model grounded in coordination, monitoring, and evidence-based assessment.

The seminar ultimately emphasized the transition from strategic alignment to practical implementation, encouraging universities to embed sustainability into curricula, research agendas, governance structures, and measurable indicators. It reaffirmed the decisive role of higher education in addressing climate challenges and advancing inclusive, resilient development.





Events

Bouchra Zoubaa from UIT Wins First Prize for Innovative Ammonia-Fueled Furnace Project at Prestigious Hackathon

Bouchra Zoubaa, a talented student from the National School of Chemistry at Ibn Tofail University, has achieved a remarkable milestone by securing first prize at a prestigious hackathon. This event was jointly organized by the Institute for Solar Energy and New Energies Research (IRESEN) and Mohammed VI Polytechnic University (UM6P). The competition focused on the innovative theme of an "Ammonia-Powered Furnace," highlighting the growing global interest in sustainable energy solutions.

A Revolutionary Concept in Energy Innovation

The hackathon, held as part of a collaborative effort between leading Moroccan institutions, aimed to explore practical and sustainable applications of ammonia as an alternative fuel source. Ammonia has gained attention in recent years for its potential to provide a carbon-free energy solution, particularly in industrial and transport sectors.

Zoubaa's winning project stood out for its innovative approach to designing and optimizing a furnace powered by ammonia. Her concept combined chemical engineering expertise with a focus on efficiency, safety, and sustainability, addressing key challenges in adopting ammonia as a clean energy solution.

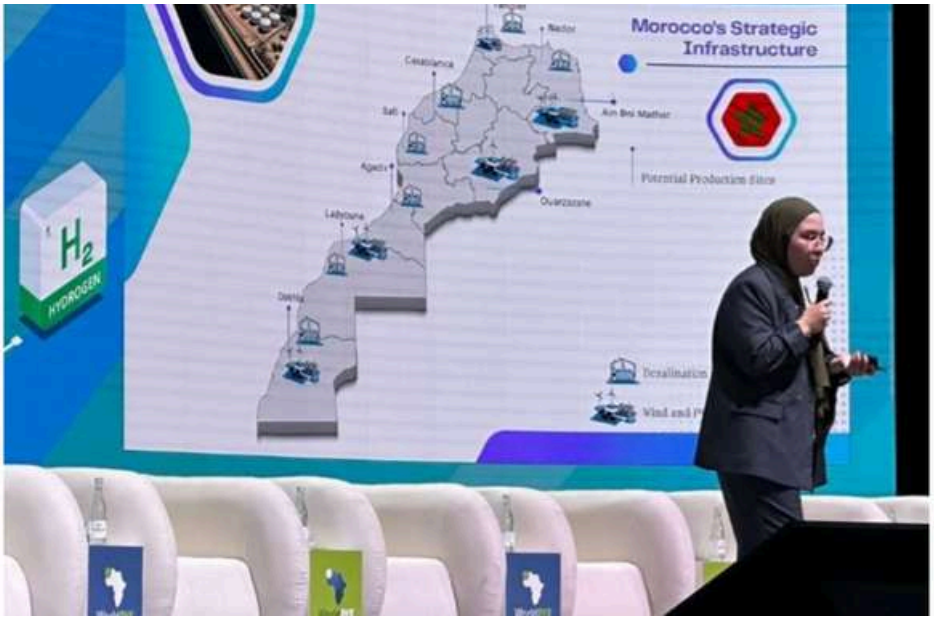
Collaboration and Expertise

The hackathon brought together multidisciplinary teams from across Morocco, creating a dynamic environment for collaboration and knowledge sharing. Participants included students, researchers, and industry professionals, all working to tackle the technical and environmental challenges associated with ammonia-based energy systems.

Bouchra Zoubaa's success underscores the high level of education and research being carried out at the National School of Chemistry at Ibn Tofail University. It also highlights the value of fostering partnerships between academic institutions and research organizations to drive innovation in renewable energy.

Recognition and Impact

Winning this competition not only showcases Zoubaa's individual talent but also reinforces Morocco's commitment to leading the way in renewable energy innovation. Her project contributes to the ongoing dialogue on reducing carbon emissions and transitioning to sustainable industrial processes.



Events

Hackathon 2nd Edition : Nexus Water Energy

Funding Partners: IRESEN – Crédit Agricole du Maroc

Ibn Tofail University organized the second edition of the Hackathon Hack@UIT, but this time the purpose was different from the first edition. The hackathon focused on creative water solutions projects using renewable energy sources.

Candidates were tasked with preparing new projects targeting sustainable development in green energy solutions to address the water scarcity crisis. This event targeted a large population of participants at a national level. The second edition of Ibn Tofail University's hackathon was distinguished by the quality of innovative student projects in the field of water resource management.

The president of Ibn Tofail University, along with the vice president, the general secretary of the university, and other prominent personalities, participated in the final of the second edition of the hackathon. The final took place on Friday, November 8, 2024, at 3 PM in the conference room at the Code 212 Center.

Funding partners for events like hackathons play a crucial role in supporting initiatives and ensuring their success. In the case of the second edition of the Hackathon at Ibn Tofail University, the involvement of major companies like Crédit Agricole du Maroc and IRESEN would be essential for both financial backing and providing expertise or resources.

Crédit Agricole du Maroc is a prominent banking institution in Morocco, and it is part of the Crédit Agricole Group—one of the largest financial institutions in the world. Crédit Agricole du Maroc focuses on providing a wide range of financial services, including retail banking, corporate banking, investment solutions, and financing for agricultural and rural development.

IRESEN is a company specializing in renewable energy and sustainable development solutions. The company provides services related to the design, construction, and management of projects focused on solar energy, wind power, energy efficiency, and other environmentally-friendly technologies. IRESEN's work is aligned with Morocco's goal to be a leader in renewable energy in Africa and globally.
Crédit Agricole du Maroc and IRESEN represent two key sectors of Morocco's economy—finance and renewable energy. Their partnership with the Ibn Tofail University Hackathon is a strong demonstration of the country's growing support for innovation, technology, and sustainability. By funding and sponsoring this event, they help foster a culture of entrepreneurship and technological development, while encouraging students to develop solutions that can have a real-world impact.



Climate, Environment, and Health: Scientific Dialogue for Sustainable and Inclusive Territories



From November 27 to 29, 2025, the Faculty of Sciences at Ibn Tofail University hosted the 3rd edition of the Scientific Days of the Environment, an international conference held in Kenitra and at the Exotic Gardens of Rabat. Organized under the theme “Climate, Environment and Health: For Sustainable, Green and Inclusive Territorial Development,” the event brought together researchers, academics, experts, and practitioners to engage in collective reflection on the environmental and health challenges shaping contemporary societies.



The conference highlighted the growing interconnection between climate change, environmental conditions, and human health, particularly within local and regional contexts. Scientific discussions highlighted how climate variability, environmental degradation, and pollution are directly influencing ecosystems, living conditions, and public health. Through these exchanges, the event emphasized the urgent need to rethink development pathways in a way that balances environmental protection with social well-being.



Throughout the sessions, participants explored environmental challenges such as the degradation of natural resources, waste accumulation, ecosystem vulnerability, and environmental risks affecting communities. These issues were examined not only from a scientific standpoint, but also through their concrete implications for territories and populations. The discussions underscored the importance of sustainable management of water, soil, and natural ecosystems, as well as the preservation of fragile environments, including coastal and terrestrial areas.

A defining strength of this third edition was the interactive dimension of the conference. The event fostered open dialogue between researchers, professionals, and institutional actors, enabling the exchange of experiences and perspectives across disciplines. These interactions allowed participants to connect scientific research with real environmental challenges, encouraging thoughtful discussion on how knowledge can support territorial planning, environmental governance, and informed decision-making.





The conference also served as a space for proposing practical orientations and solutions. Participants stressed the importance of preventive approaches to environmental and health risks, the adoption of responsible and sustainable practices adapted to local realities, and the integration of scientific expertise into public and environmental policies. Collaboration between universities, institutions, and civil society was repeatedly highlighted as a key factor for ensuring long-term and inclusive environmental solutions.

Health remained a central concern throughout the discussions, reinforcing the idea that environmental protection and human well-being are inseparable. The exchanges emphasized that sustainable development must place people at its core, recognizing that environmental policies are effective only when they contribute to improved living conditions while safeguarding ecosystems for future generations.

Conclusion

SDG 7

Through our dedicated efforts toward SDG 7, we have solidified our position as a key player in the transition to clean and affordable energy. The projects and partnerships we have established demonstrate our commitment to energy sustainability, reflecting our responsibility to present and future generations. As we conclude this report, Ibn Tofail University remains determined to play a leading role in creating a future where energy is more accessible, efficient, and environmentally friendly.

7 AFFORDABLE AND CLEAN ENERGY



THE GLOBAL GOALS

SUSTAINABLE ENERGY, SUSTAINABLE FUTURE

SUSTAINABLE
DEVELOPMENT
IBN TOFAIL UNIVERSITY