



جامعة ابن طفيل  
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Ibn Tofaïl University

2023

# A COMPREHENSIVE INSIGHT INTO IBN TOFAIL UNIVERSITY'S RESEARCH LANDSCAPE

# INTRODUCTION

Welcome to a journey through the vibrant landscape of research at Ibn Tofail University (UIT). At the heart of UIT's academic ethos lies an unwavering dedication to pioneering research that transcends boundaries and addresses the pressing challenges of our time. UIT is not merely a seat of learning but a dynamic hub where ideas are cultivated, collaborations flourish, and innovation thrives. This report stands as a testament to UIT's commitment to excellence in research and its pivotal role in shaping the future of academia and society at large.

UIT's relentless pursuit of knowledge is underpinned by a deep-rooted belief in the transformative power of research. As we navigate through the diverse array of projects and breakthroughs showcased in this report, we gain insight into the collaborative spirit that defines UIT's research ecosystem. From groundbreaking discoveries to interdisciplinary collaborations, UIT's research endeavors are at the forefront of driving positive change and pushing the boundaries of human understanding.

As UIT charts its course towards greater prominence on both national and international stages, it remains steadfast in its mission to enhance research structures and foster a culture of excellence. With the support of university stakeholders and the dedication of its faculty and researchers, UIT is poised to continue its journey towards becoming a beacon of innovation and influence in the global research community.

Join us as we embark on this exploration of UIT's research landscape—a journey marked by curiosity, collaboration, and a relentless pursuit of knowledge. Together, let us celebrate the spirit of inquiry that defines UIT's research endeavors and chart a course towards a brighter, more enlightened future for generations to come.



# RESEARCH AT IBN TOFAIL UNIVERSITY

At the heart of Ibn Tofail University's academic priorities lies a relentless commitment to pioneering research that pushes the boundaries of knowledge and addresses contemporary challenges. This report seeks to provide a comprehensive overview of UIT's research landscape, spotlighting key projects, breakthroughs, and the collaborative spirit that defines its research ecosystem.

Ibn Tofail University is aware that enhancing research structures is an ongoing process that requires constant commitment from all university stakeholders. UIT is determined to continue its efforts to make its research structures centers of excellence and influence at both national and international levels. It is committed to enhancing its research structures by providing them with the necessary resources, promoting collaboration, and encouraging innovation. The center supports, co-organizes, coordinates, and animates the research activities of the 26 laboratories accredited by the university council in the three disciplinary fields organized around three doctoral study centers, as indicated in the tables below :



# RESEARCH AT IBN TOFAIL UNIVERSITY

Research Structure	Staff	Research Axis
Advanced Materials and Process Engineering	44	<ul style="list-style-type: none"> <li>• Water treatment.</li> <li>• Wastewater treatment.</li> <li>• Waste valorization.</li> </ul>
Materials and Subatomic Physics	30	<ul style="list-style-type: none"> <li>• Materials and semiconductor nanomaterials and surface engineering.</li> <li>• Fabrication and characterization of thin-film semiconductors.</li> <li>• Applications in photovoltaics.</li> </ul>
Advanced Systems Engineering	35	<ul style="list-style-type: none"> <li>• Hydrogen and its storage,</li> <li>• Wireless charging of electric vehicles,</li> <li>• Thermoelectric materials for electric vehicles.</li> </ul>
Organic Chemistry, Catalysis, and Environment	26	<ul style="list-style-type: none"> <li>• Organic and macromolecular chemistry Materials,</li> <li>• electrochemistry and environment</li> <li>• Process engineering and catalysis</li> </ul>
Computer Science Research	35	<ul style="list-style-type: none"> <li>• Transmission of multimedia data over mobile networks</li> <li>• Quality of Service in wireless networks</li> <li>• Security of wireless and mobile networks</li> <li>• Data analysis, Artificial Intelligence</li> <li>• Big Data</li> </ul>
Natural Resources and Sustainable Development	35	<ul style="list-style-type: none"> <li>• Natural resources.</li> <li>• Agrophysiology and biotechnologies.</li> <li>• Carbon and nitrogen nutrition of plants/ecophysiology.</li> </ul>
Engineering Sciences	28	<ul style="list-style-type: none"> <li>• Data analysis, Artificial Intelligence.</li> <li>• Operations management.</li> <li>• Modeling and optimization of industrial and logistic systems.</li> </ul>



# RESEARCH AT IBN TOFAIL UNIVERSITY

Research Structure	Staff	Research Axis
Electronic Systems, Information Processing, Mechanical and Energetics	32	<ul style="list-style-type: none"> <li>• Electronic Systems and Telecommunication.</li> <li>• Renewable Energies and Materials Engineering.</li> <li>• Mechanical Engineering.</li> </ul>
Analysis, Geometry and Applications	25	<ul style="list-style-type: none"> <li>• Harmonic Analysis and Geometry</li> <li>• Algebra, Arithmetic, and Mathematics Education</li> <li>• Functional Analysis</li> </ul>
Partial Differential Equations, Spectral Algebra, and Geometry	24	<ul style="list-style-type: none"> <li>• Nonlinear Potential Theory</li> <li>• Noncommutative Algebra</li> <li>• Probability and Stochastics</li> </ul>
Biology and Health	32	<ul style="list-style-type: none"> <li>• Epidemiology and Biostatistics</li> <li>• Health</li> <li>• Environmental Sciences</li> </ul>
Plant, Animal Production, and Agro-industry	16	<ul style="list-style-type: none"> <li>• Study of the ecological dynamics of useful and harmful plant, fungal, and animal species in different agroecosystems;</li> <li>• Improvement of agricultural production</li> </ul>
Geoscience	19	<ul style="list-style-type: none"> <li>• Fundamental Geology</li> <li>• Applied Geology</li> <li>• Georesources</li> </ul>
Language and Society	38	<ul style="list-style-type: none"> <li>• Language Teaching and ICT (Information and Communication Technology)</li> <li>• Oral Cultures and Literatures</li> <li>• Literatures and Societies, Lexicon, Terminology, and Technolexicons</li> </ul>
Didactics of Language, Media, and Dramaturgy	38	<ul style="list-style-type: none"> <li>• Didactics of Language</li> <li>• Media and Dramaturgy</li> </ul>

# RESEARCH AT IBN TOFAIL UNIVERSITY

Research Structure	Staff	Research Axis
Territory, Environment, and Development	18	<ul style="list-style-type: none"> <li>• Territory</li> <li>• Environment</li> <li>• Sustainable Development</li> </ul>
Human, Societies, and Values	31	<ul style="list-style-type: none"> <li>• Psychology</li> <li>• Education</li> <li>• Sociology</li> <li>• Philosophy and Anthropology</li> </ul>
History and Heritage	16	<ul style="list-style-type: none"> <li>• History and Development</li> <li>• Political and Military History</li> <li>• Religion, Economy, and Society</li> </ul>
Literature, Arts, and Educational Engineering	28	<ul style="list-style-type: none"> <li>• Genre, Writings, Representations, and Intermediation</li> <li>• Applied Linguistics and Media</li> </ul>
Religious Studies	18	<ul style="list-style-type: none"> <li>• Islamic Studies</li> <li>• Quranic Sciences</li> <li>• Prophetic Traditions</li> </ul>
Innovation and Research for the Improvement of Teaching and Training Professions	21	<ul style="list-style-type: none"> <li>• Communication and Pedagogy</li> <li>• Education, Didactics, and Epistemology of Education Sciences</li> <li>• Teaching Languages and Communication</li> </ul>
Economics and Management of Organizations	37	<ul style="list-style-type: none"> <li>• Marketing, Logistics, and Organizational Culture</li> <li>• Entrepreneurship, Innovation, and Managerial Techniques</li> <li>• Finance, Audit, Accounting</li> </ul>
Economic Sciences and Public Policies	14	<ul style="list-style-type: none"> <li>• Econometrics and Experimental</li> <li>• Economics Development Economics and Public Policies</li> <li>• Economics and Finance</li> </ul>

# RESEARCH AT IBN TOFAIL UNIVERSITY

Research Structure	Staff	Research Axis
Law and Political Science Studies	27	<ul style="list-style-type: none"><li>• Legal and Judicial Professions</li><li>• Real Estate and Property Rights</li><li>• International Relations and Public International Law</li></ul>
Studies in Legal and Judicial Sciences	31	<ul style="list-style-type: none"><li>• Business Climate and Investment</li><li>• Artificial Intelligence and Law</li><li>• Digital Law</li></ul>
Research in Organizational Management	29	<ul style="list-style-type: none"><li>• Sciences Analysis and Management of Financial Risks</li><li>• Corporate Finance and Market Finance</li><li>• Financial Modeling and Actuarial Finance</li></ul>



# UIT'S COLLABORATIVE JOURNEY IN APPLIED RESEARCH AND INTERDISCIPLINARY SOLUTIONS

UIT strives to strengthen partnerships with industry, research institutions, and government agencies to promote applied research and R&D. Several thematic research projects, such as automotive, materials science, renewable energy, and agro-industry, are in the process of realization with FHE, Xeizhong Morocco Automotive Air Conditioning, and Ecobioplant.

Ibn Tofail University, rich with its 26 multidisciplinary laboratories, is actively engaged in scientific research with various partners in industrial, private, and public sectors. Special attention is given to disciplinary fields such as Humanities and Social Sciences, Economics and Management, Legal Sciences, and Political Sciences to enhance and support research efforts in these areas. The figure and table below illustrate this dynamic.

These collaborations contribute to enhancing the university's reputation, promoting academic excellence, and stimulating socio-economic development in the region and the country as a whole. Ultimately, National Partnership in Scientific Research is a crucial tool for UIT to address future challenges and significantly contribute to societal progress.

Unlike traditional research, which tends to focus on a single discipline, interdisciplinary research seeks to combine insights, methods, and theories from diverse areas to address complex issues and solve problems that cannot be adequately understood or resolved within the scope of a single discipline.

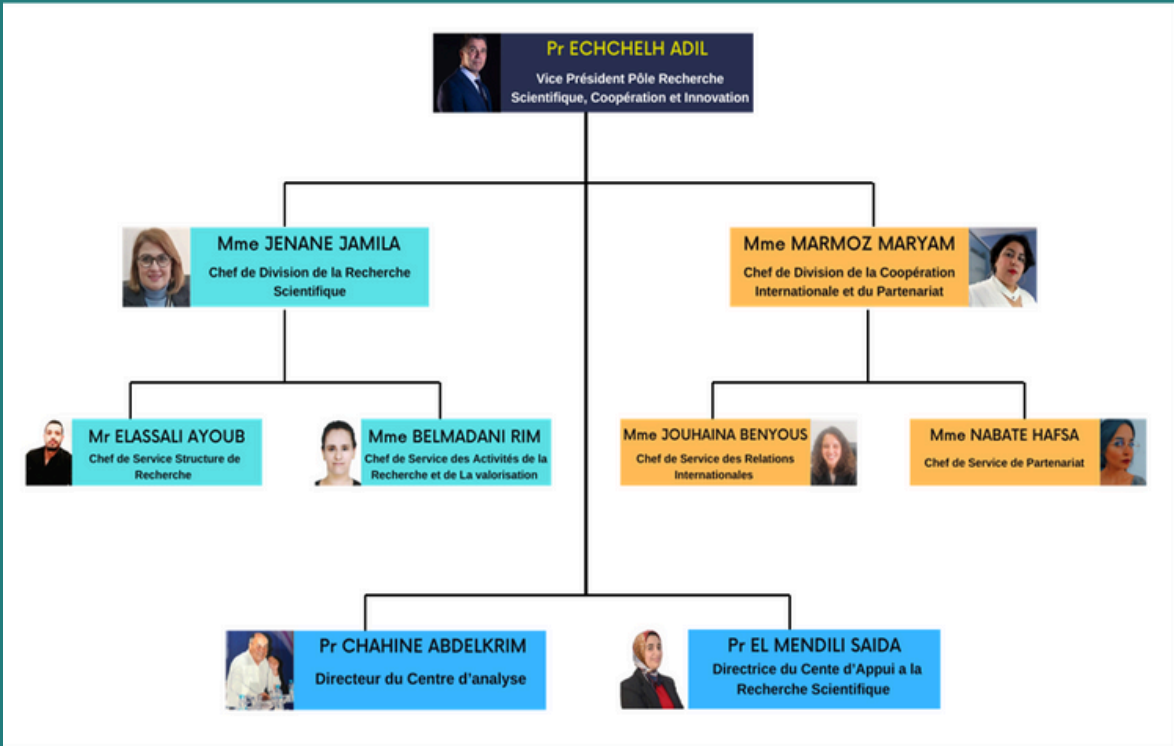
Interdisciplinary research is facilitated through partnerships between different institutions and sectors. Ibn Tofail University is actively involved in a dynamic collaboration, contributing to the development of strong national and regional partnerships. These strategic alliances between scientific research, industry, and regional and national institutions are essential for promoting innovation, economic growth, and technological progress. By fostering these collaborations, UIT strengthens its position as a catalyst for dynamic synergies across various spheres of society. UIT's commitment to the development of national and regional partnerships, as described in the passage, is closely linked to interdisciplinary research across scientific disciplines.

# UIT'S COLLABORATIVE JOURNEY IN APPLIED RESEARCH AND INTERDISCIPLINARY SOLUTIONS



# RESEARCH STRUCTURE AT IBN TOFAIL UNIVERSITY

The Pole of Research, Cooperation, and Innovation of Ibn Tofail University has undertaken a structured reorganization in strict compliance with the organizational chart recommended by the Ministry of Higher Education, Scientific Research, and Innovation. This new configuration attests to our commitment to operate efficiently while adhering to the highest quality standards, thereby strengthening our position as a major player in the field of research and innovation.



By aligning its structure with the national standards, UIT aims to enhance efficiency and uphold the highest quality norms. This strategic initiative signifies UIT's dedication to becoming a major influencer in research, innovation, and interdisciplinary research, echoing the university's mission to encourage collaboration and exploration across diverse scientific disciplines.



## Scientific Publication Support Center: Promoting Excellence in Research Dissemination

The Scientific Publication Support Center is a dynamic entity aimed at providing essential support to researchers to promote excellence in the dissemination of scientific work. It accompanies researchers by providing them with the necessary tools and resources.

### Missions:

- Providing support and guidance to researchers.
- Funding publications.
- Promoting publication ethics.
- Promoting interdisciplinary research.
- Offering training and workshops.
- Collaborating with publishers and scientific journals.
- Subscribing to specialized bibliographic databases.
- Evaluating the impact of university research through bibliometric analysis of research indicators.

### Services:

- Support in researching an indexed journal
- Assistance with writing and editing papers.
- Translation Assistance
- Financial support for publication
- Access to bibliographic resources.



## University Center for Analysis, Technology Transfer Expertise, and Incubation

The University Center for Analysis, Technology Transfer Expertise, and Incubation (CUAE2TI) has as its main mission to federate activities such as analysis, expertise, service provision, or research for the benefit of its academic and industrial partners to encourage interdisciplinary research. It also provides researchers with assistance in patent filing procedures and encourages, through various means, the valorization of scientific research and the incubation of innovative projects.

The center's mission is to federate all activities of analysis, expertise, and service provision within the University in order to promote interdisciplinary research:

- Analyses: water, air, soil, food, chemical, biological, physical, etc.
- Studies, Expertise, Consultancy: legal, social, linguistic, technical, etc.
- Technology Transfer: identify and assess sector constraints, feasibility studies (prototype), techno-economic study, support companies in their development projects, etc.
- Incubator: creation of small businesses for young researchers and a platform for companies to establish a subsidiary or diversify their products.



# DIVERSIFICATION OF ACADEMIC OFFERS & OPPORTUNITIES

Interdisciplinary research is crucial for stimulating innovation. By encouraging cooperation between scientific disciplines, UIT facilitates the development of innovative ideas that can lead to technological advancements. UIT establishes a system of education that encourages training and education directed to interdisciplinary research.

In this regard, UIT launched the operational deployment of several priority initiatives of the ESRI-2030 Pact. It saw the launch of 7 new Centers of Excellence. These centers aim to enhance the value of open-access faculties and provide an opportunity for students to redirect their academic paths, develop skills in various fields, and enhance their prospects for employment.



Ibn Tofail University's support for research is evident through initiatives like facilitating project setup and management, and offering access to shared resources. The emphasis on creating a supportive ecosystem for interdisciplinary collaboration extends to both students and early career researchers within the Centers of Excellence.



# DIVERSIFICATION OF ACADEMIC OFFERS & OPPORTUNITIES

The establishment of Centers of Excellence at UIT is intended to enable outstanding students to pursue targeted training programs that can improve their prospects for successful integration into the job market. The establishment of Centers of Excellence at UIT not only enhances educational opportunities but also aligns with the university's commitment to supporting early career researchers in exploring interdisciplinary research between science subjects. These centers serve as dynamic hubs where students, including early career researchers, can forge interdisciplinary connections, develop skills across various domains, and explore collaborative research initiatives.

The emphasis on targeted training programs within these centers allows researchers to deepen their expertise while fostering collaboration between diverse scientific fields. These centers play a crucial role in redefining academic pathways, offering opportunities for students and future researchers to navigate between disciplines, and contributing to the holistic development of their skills. This integrated approach not only benefits early career researchers in their academic pursuits but also enhances their prospects for successful integration into the job market by cultivating a well-rounded skill set that spans multiple science subjects.

# EVALUATION INDICATORS FOR LABORATORIES

The evaluation of the scientific production of the 26 laboratories was established based on indicators proposed by the scientific commission, taking into account, on one hand, indexed publications, the number of books, the number of supported theses, the number of supervised theses, the number of patents, the number of citations, and the number of published chapters, and on the other hand, the number of human resources comprising teachers, supervisors, and doctoral students.

UIT assesses interdisciplinary collaboration by tracking the number of research projects involving teams of researchers from different scientific disciplines. UIT also examines the frequency of joint publications among these researchers, as well as their impact in specialized journals.

Next, UIT measures the success of interdisciplinary projects in terms of funding obtained. A great importance is given to the researchers' ability to secure grants for interdisciplinary projects from national and international funding agencies.

The performance indicators used by UIT to measure the success of its interdisciplinary research, include:

- The number of research projects involving teams of researchers
- The rate of participation in national and international calls for bids
- The number of provided services
- The number of signed research contracts
- The rate of patent applications
- The number of accepted patents
- Budget evolution
- The execution rate of research contracts
- The number of mobilities
- The number of scientific events carried out by the university
- The evolution of the amount reserved for publication support

# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

UIT places a strong emphasis on facilitating and maximizing the effectiveness of research teams through extensive administrative support. The university recognizes the complexities associated with collaborative endeavors across disciplines and has implemented various measures to streamline processes, enhance resource access, and nurture a conducive environment for interdisciplinary research.

Ibn Tofail University has a clear strategy for the promotion and structuring of research, which is based on the networking of research structures within the framework of interdisciplinary projects and the pooling of means and equipment. This works to group opportunities and avoid resource dispersion. UIT has several collaborative workspaces equipped with state-of-the-art technologies, designed to encourage creativity and cooperation among researchers from different disciplines. The university provides interdisciplinary laboratories equipped with a diverse range of scientific and technological instruments. These laboratories offer researchers the opportunity to explore multidisciplinary approaches to solving complex problems.





# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

Ibn Tofail University provides specific physical facilities for all the interdisciplinary research teams between scientific disciplines in accordance with their needs. These facilities include: collaborative workspaces, shared laboratories, meeting rooms, conference rooms, specialized research equipment, etc.

In this context, to promote excellence, UIT has set up different initiatives and projects. Examples of these include:

- The creation of the city of innovation to encourage collaboration between disciplines and also, reward researchers who participate.
- Encouraging participation in interdisciplinary conferences: UIT encourages researchers to participate in interdisciplinary conferences and present their work to increase the visibility of interdisciplinary research.
- Recruitment of interdisciplinary staff to enrich the diversity of skills and competencies.
- Financial support for interdisciplinary research, such as research grants, to encourage collaboration between disciplines.

The CUAETTI center has qualified staff that work to support the researchers and meet the requirements of its partners in terms of analysis, expertise, and delivery of service and research.

Ibn Tofail University has approximately invested 114 MDH over the past years to support interdisciplinary research and has recruited, in addition to contract employees, several permanent executive employees to fulfill its commitments towards its industrial and university partners.

# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

Ibn Tofail University provides tailored administrative support to the research teams. This support includes dedicated administrative personnel and departments equipped with the needed knowledge and expertise. These administrative staff members assist research teams in navigating complex funding opportunities and ensure that research projects receive the necessary administrative support.

The implementation of interdisciplinary research at Ibn Tofail University is supported by dedicated physical facilities for the research teams. The 26 laboratories are designed to encourage collaboration between scientific disciplines, fostering the exchange of ideas and the implementation of interdisciplinary research projects. These facilities provide an environment conducive to innovation and cooperation among researchers from different scientific fields. This includes:

- ❖ UIT offers comprehensive administrative assistance for interdisciplinary research. This support includes aiding research teams in the planning phase, budgeting processes, monitoring project progress, and preparing and submitting required reports. By providing administrative expertise, UIT ensures that interdisciplinary teams can focus on the scientific aspects of their projects without being encumbered by bureaucratic hurdles.
- ❖ UIT has a dedicated administrative personnel with the aim to provide interdisciplinary research funding mechanisms and grant application processes.
- ❖ UIT assists interdisciplinary research teams in setting up and managing their projects. This support encompasses logistical aspects, coordination of team members, and ensuring that all necessary resources are allocated appropriately.

# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT



# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

❖ In collaboration with CNRST, UIT provides free access to bibliographic databases, equipping interdisciplinary teams with valuable resources for literature reviews, data analysis, and staying updated on relevant research. Additionally, UIT offers access to shared resources, including state-of-the-art laboratories, computer facilities, and the central library.





# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

❖UIT recognizes the importance of continuous skill development for interdisciplinary researchers. The university provides ongoing educational opportunities for researchers to enhance their skills and competences. This includes workshops, seminars, and training sessions tailored to their evolving needs.





# PHYSICAL FACILITIES AND ADMINISTRATIVE SUPPORT FOR RESEARCH AND INTERDISCIPLINARY RESEARCH AT UIT

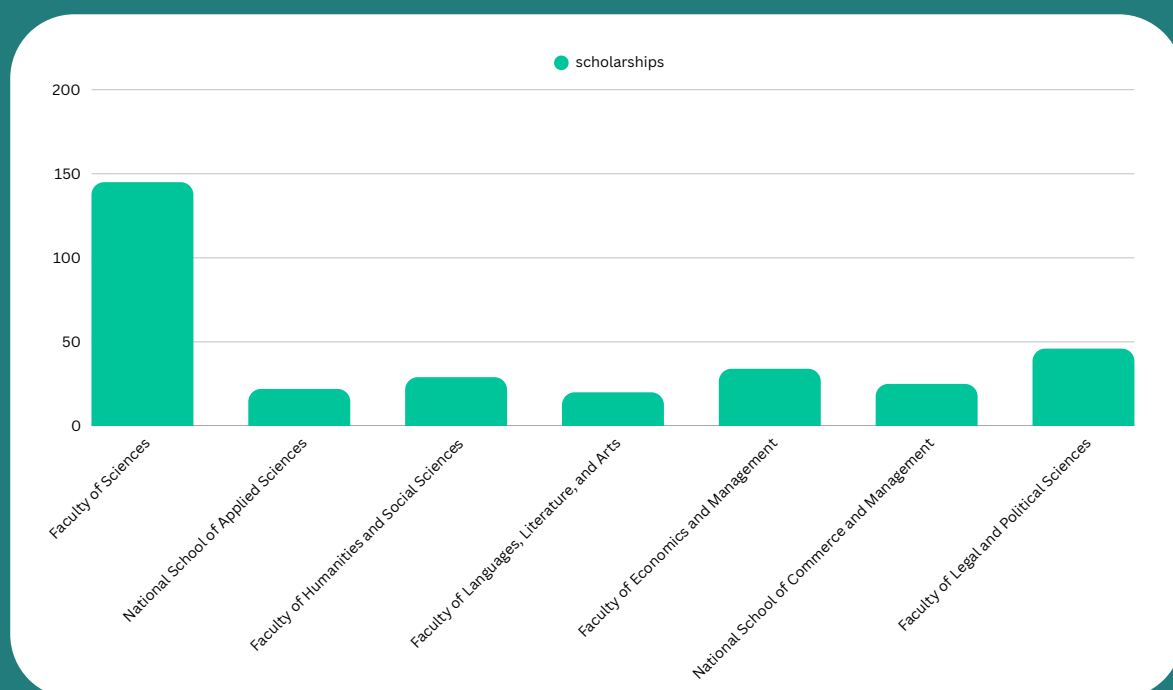
❖Through international collaborations, UIT extends its support to facilitating mobility opportunities for researchers, enabling knowledge exchange, and building relationships with international partners. By fostering global connections, UIT enhances the reach and impact of interdisciplinary research conducted at the university.

This ensures that interdisciplinary researchers have the necessary tools and infrastructure to conduct their work effectively. Through these initiatives, the university creates an environment where researchers can thrive, exchange ideas, and contribute meaningfully to addressing complex challenges through interdisciplinary approaches.



# FINANCIAL SUPPORT FOR RESEARCHERS AT UIT

Financial support is a crucial element for the development of research performance, as it allows doctoral students to fully focus on their studies and research without being burdened by financial concerns. The following table shows the statistics regarding the number of scholarship recipients at the university.

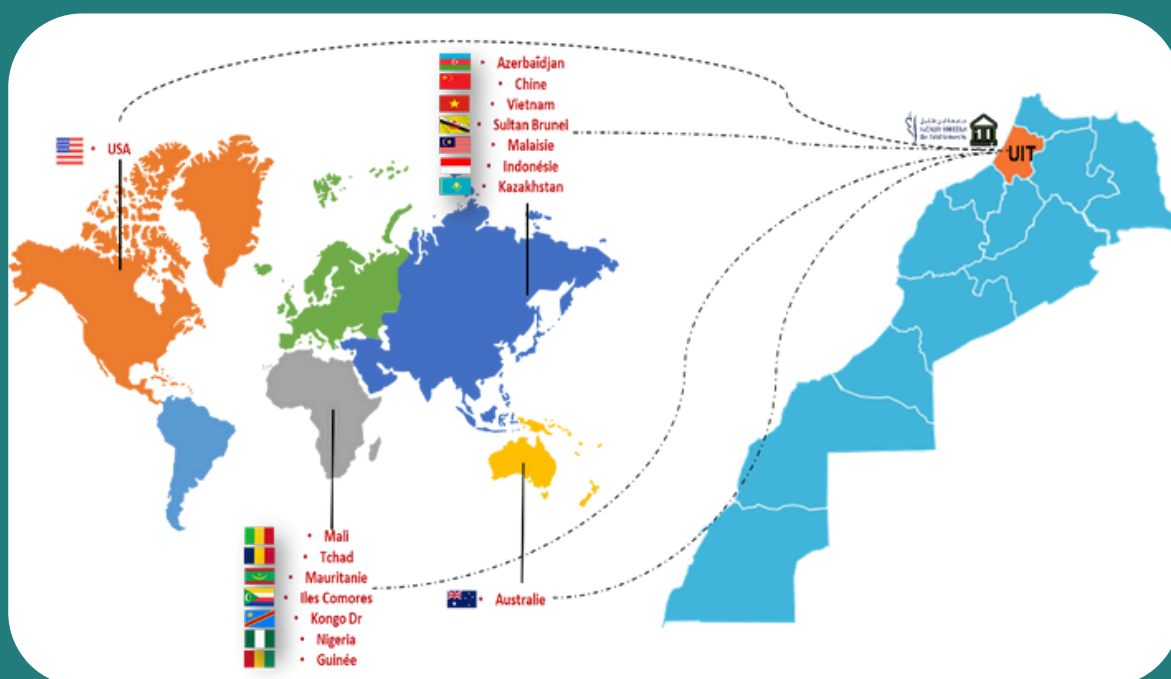


The provision of scholarships and funding opportunities by UIT shows its commitment to nurturing the next generation of scholars and researchers. It reflects a recognition of the importance of investing in academic talent and fostering an environment where students can thrive academically and contribute meaningfully to their respective fields of study. Interdisciplinary research often requires resources beyond what is typically allocated for single-discipline projects. Researchers may need access to specialized equipment, databases, or facilities from different fields, which can incur additional costs. The financial support provided by UIT enables researchers to procure these resources and conduct comprehensive interdisciplinary investigations.

# UIT GLOBAL TIES AND SYNERGISTIC COLLABORATION FOR RESEARCH

The support provided by UIT to interdisciplinary research aligns with its efforts to strengthen the university's global ties. Additionally, the university's commitment to continuing education and international collaboration, complements the goal of building lasting partnerships and reinforcing UIT's position as a hub for interdisciplinary excellence.

In 2022, UIT received a considerable number of delegations. These visits facilitated the establishment of both national and international partnerships, promoting academic cooperation and fostering cultural and scientific exchanges. They also played a crucial role in enhancing the university's reputation as a center of academic and scientific excellence, potentially leading to fruitful collaborations in research and innovation.



# INNOVATION

“

*Transforming  
Ideas into Impact:  
UIT's Innovation  
Ecosystem*

”

# INNOVATION CITY

Ibn Tofail University has also distinguished itself in terms of innovation by becoming the first Moroccan public university to complete the transfer of an invention patent to a private company. Furthermore, Ibn Tofail University has signed a framework agreement with the Ministry of Industry, Trade, and New Technologies for the establishment of an innovation city aimed at promoting expertise, research and development, technology transfer, entrepreneurship, and the incubation of innovative projects.

The innovation city focuses on 5 priority themes: renewable energies, new information and communication technologies, agri-food, materials science and environment, and sustainable development. It covers a total area of 5,000 square meters and includes research and analysis platforms, a fablab, a coworking space, office spaces for incubation, office spaces for startups, training rooms, and a Business Center.





# ORGANIZED INNOVATION AWARDS

3RD GRAND PRIX  
HASSAN II CLASS  
INVENTIONS AND  
PRACTICAL TECHNIQUES  
- PR OUAZZANI  
TOUHAMI AMINA

Participation in the 7th Edition of the Competitiveness Award, University-Enterprise Partnership Award (PC/PPUE) organized between the Ministry of Higher Education, Scientific Research, the Ministry of Industry and Commerce, in partnership with the Association for Studies and Research for Development (AERED), the Hassan II Academy of Sciences and Techniques, and the R&D Morocco Association.

2ND UNIVERSITY-  
ENTERPRISE  
PARTNERSHIP  
COMPETITIVENESS  
AWARD, PROF. ALLAL  
DOUIRA FROM UIT IN  
PARTNERSHIP WITH DR.  
ABDELMOTI ALBATNAN,  
CEO OF ATRACO  
COMPANY.

Distinction of Ibn Tofail University in the University-Enterprise Competitiveness Award, 2022 Edition.

Second prize was awarded to a project related to the "Industrial valorization of bio-fungicide production processes based on *Trichoderma asperellum* and quality control", initiated by Ibn Tofail University - Faculty of Sciences and "ATRACO SARL".

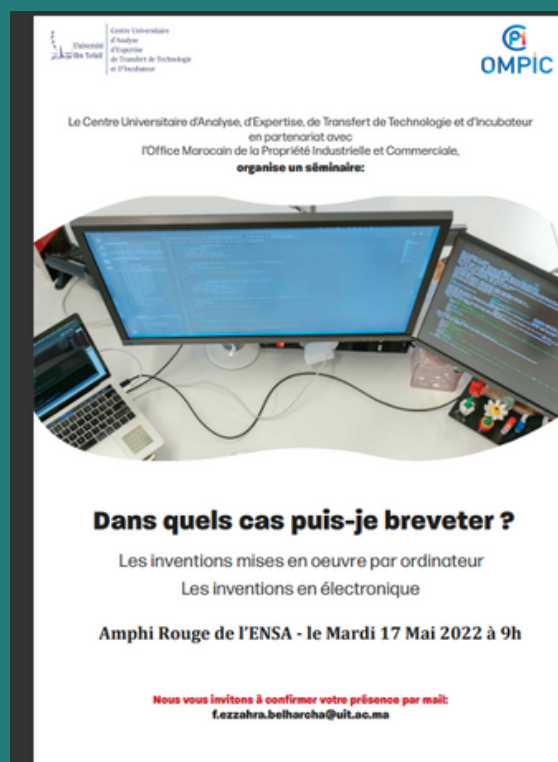
# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Number of ideation and emergence campaigns for innovative projects and number of beneficiaries by geographical origin and gender

The University Center for Analysis, Expertise, Technology Transfer, and Incubation (CUAETTI), in partnership with the Moroccan Office of Industrial Property (OMPIC), organized a training day on Tuesday, May 17, 2022.

The training focused on the following domains: Computer-implemented inventions and Electronics.

This training was intended for researchers, doctoral students, and engineering students.



# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Number of projects in incubation, by categories of promoters .

Two Incubator Structures:

### DIGITAL WORDS

This project aims to develop an application that can convert an Arabic manuscript into a computer file, either in text or PDF format. The complexity of recognition is addressed progressively. This corresponds to a proven need among researchers and institutions dealing with Arabic manuscripts, both nationally and internationally.

### GUDRANTO

A platform where everyone can share, sell, and find travels or travel experiences. This way, people can earn money by selling their trips and they can also share their travel experiences with the whole world, not just with their friends and family. Everyone can share their favorite restaurants and places.

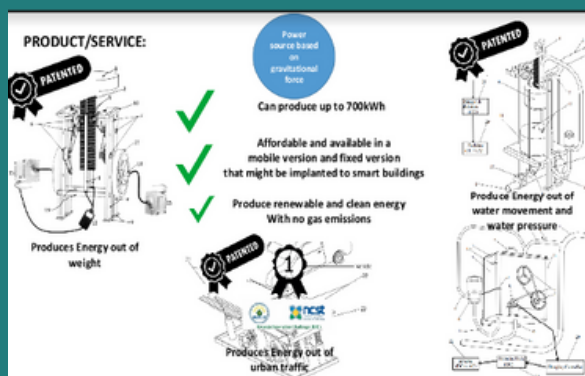
# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Number of startups created by categories of entrepreneurs

Since its inception, CUAETTI has been responsible for raising awareness among students about the importance of entrepreneurship as a possible career option. In this context, the center supports UIT students in national and international competitions.

**Startup Competition** is a contest between entrepreneurial ideas. This competition aims to encourage participating teams from universities on both sides of the Mediterranean to present innovative ideas in the field of entrepreneurship. The Center selected one team out of five during the selection organized by the Center at Ibn Tofail University. This team is selected nationally by the international organization that organizes this competition for universities from both sides of the Mediterranean. Our team managed to reach the final. Our work included:

- Preselection at the UIT level
- Preparation of the business plan
- Preparation of the presentation with the candidates
- Preparation of the pitch We were the only Moroccan university selected among six foreign universities (Palestine, Italy, Lebanon).



# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Launch of the new Tatwir Startup call for applications initiated by the Solar Cluster in partnership with Morocco Pme

The support program for industrial startup project holders "Tatwir - Startup" was launched on Monday, February 15, 2021, in Rabat by the Minister of Industry, Trade, and Digital Economy, Mr. Moulay Hafid Elalamy.

This program is part of the deployment of the Industrial Recovery Plan 2021-2023, which includes among its strategic axes the development of industrial entrepreneurship and the emergence of a new generation of Moroccan industrialists. It aims to develop innovative, industrial, and high value-added projects driven by startups.

**CLUSTER SOLAIRE Maroc Pme**

**APPEL A CANDIDATURES**

**TATWIR STARTUP**

**VOUS AVEZ UN PROJET GREEN?**

*Join Us*

**CANDIDATEZ AVANT LE 30 OCTOBRE 2021**

Avec le soutien

Royaume du Maroc  
Ministère de l'Industrie,  
de l'Investissement, du Commerce  
et de l'Économie Numérique

المملكة المغربية  
وزارة الصناعة  
والتجارة والاستثمار  
والاقتصاد الرقمي

Technopark



# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

**Joint R&D and innovation units with the company and the project portfolio for each unit**

Project	Organization
Treatment of industrial effluents with high pollutant load through biomethanization	SUTRAMG
Expertise on the problem of scaling	ONEE
Production, Formulation, and Recycling of a Biofungicide and Biostimulant Product	ATRACO SARL
Advanced control system for smart and sustainable operation of connected agricultural greenhouses linked to hybrid microgrids	CNRST-MESRSI-UM6P-OCP
Amendments to phosphoryls: a promising solution to mitigate the effects of saline stress in orchards	CNRST-MESRSI-UM6P-OCP

# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Supported innovation projects

Project	PhD Students Involved
<p><b>RESEARCH AND EXPERTISE CONTRACT BETWEEN IBM TOFAÏI UNIVERSITY KENITRA AND AGRICULTURAL AND TRADING COMPANY, ATRACO SARL:</b></p> <p>Theme: Scientific and Technical Cooperation in the Agricultural Field.</p> <ul style="list-style-type: none"> <li>• The work to be carried out within the framework of this project:</li> <li>• Production and formulation of biological products;</li> <li>• Field experimentation: Chemical and/or biological treatments, followed by laboratory analyses.</li> <li>• Mycological analyses of plant samples from different fields, nurseries, and production areas.</li> </ul>	02
<p><b>RESEARCH PROJECT ENTITLED "ADAPTATION OF THE OLIVE TREE TO CLIMATE CHANGE: USE OF GENOMICS AND ASSOCIATION GENETICS FOR VARIETAL SELECTION (CLIMGENOLIVE)"</b></p> <p>Between:</p> <ul style="list-style-type: none"> <li>• The Ministry of Higher Education, Scientific Research, and Innovation, Rabat,</li> <li>• Hassan II Academy of Sciences and Techniques, Rabat,</li> <li>• Cadi Ayyad University, Marrakech,</li> <li>• Ibn Tofail University, Kenitra</li> <li>• the National Institute for Agronomic Research, Rabat</li> </ul>	02

# DEVELOPMENT OF COLLABORATIVE SPACES FOR INNOVATION

## Supported innovation projects

Project	PhD Students Involved
<p><b>RESEARCH AND EXPERTISE CONTRACT BETWEEN IBN TOFAIL UNIVERSITY KENITRA AND IRIS AGRO SARL ON THE THEME OF SCIENTIFIC AND TECHNICAL COOPERATION IN THE AGRICULTURAL AND BIOTECHNOLOGICAL FIELD</b></p> <p>Actions to be carried out within the framework of this project:</p> <ul style="list-style-type: none"> <li>• Exchange of scientific and technical information and documentation;</li> <li>• Conducting taxonomic, biotechnological, phytochemical, phytosanitary, waste management studies and technical and administrative assistance.</li> </ul>	02
<p><b>RESEARCH PROJECTS IN THE FIELD OF VALORIZATION OF MEDICINAL AND AROMATIC PLANTS: 'DEVELOPMENT OF A BIOFERTILIZER AND BIOPESTICIDE PRODUCT, BASED ON ENDOPHYTIC FUNGI, ADAPTED TO THE PROTECTION AND IMPROVEMENT OF SAFFRON PRODUCTIVITY IN MOROCCO'</b></p>	03

# HIGHLIGHTS

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*Unveiling  
Excellence:  
Highlights of ULT's  
Collaborative  
Endeavors.*

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# PARTICIPATION OF UIT RESEARCHERS AT THE FORUM OF THE CHAMBER OF YOUTH ADVISERS

In 2022, UIT researchers and ECRs participated in the Forum of the Chamber of Youth Advisers. This event saw significant participation from parliamentary, governmental, and relevant constitutional institutions, as well as civil society organizations, along with a panel of experts, national figures, and representatives from partner international institutions. This meeting falls within the framework of promoting the active propositional contribution of the Chamber in the support and institutional integration of Moroccan youth, listening to their concerns, and interacting with their numerous aspirations and ambitions in all areas of political, social, cultural, artistic, and developmental action.

UIT researchers' participation in the Forum of the Chamber of Youth Advisers exemplifies a significant university engagement in the formulation and implementation of sustainable development goals at both national and regional levels. Through their involvement in this forum, UIT researchers bridge the gap between academic research and real-world policymaking, demonstrating the university's dedication to fostering interdisciplinary approaches to addressing complex challenges.

This participation highlights the university's role in the crucial tasks of monitoring and reporting on the effectiveness of various interventions, fostering an adaptive management approach.

By facilitating an environment where researchers from various scientific disciplines can come together and collaborate, UIT actively encourages innovative and cross-cutting research initiatives. The university provides researchers with access to cutting-edge facilities and resources, fostering an environment conducive to impactful research across disciplines. These facilities enable researchers to conduct experiments, gather data, and analyze findings with precision and efficiency. Moreover, UIT's investment in research infrastructure reflects its dedication to supporting researchers in their quest to address pressing societal challenges and contribute to sustainable development goals.





# FOSTERING SUSTAINABILITY: UIT'S INTERDISCIPLINARY COLLABORATION WITH CLIMATE- U NETWORK

Many of today's most pressing societal challenges, such as climate change, public health crises, and technological innovation, require interdisciplinary approaches for effective solutions. Through its strategic collaboration with the Climate-U network, an international platform dedicated to fostering climate action and sustainable development through education and research, UIT has reinforced its dedication to interdisciplinary research. This partnership not only amplifies the university's role as a leader in sustainability-focused education but also opens up a plethora of opportunities for researchers to engage in cutting-edge research and development projects with a global impact.

The collaborative efforts between UIT and the Climate-U network have facilitated the exchange of knowledge, resources, and best practices, thereby fostering a robust ecosystem for the development of innovative solutions to combat climate change. Through collaborative research and development projects facilitated by the partnership, researchers at UIT now can contribute their expertise to the development of innovative solutions to mitigate the impacts of climate change and promote sustainable practices.



# BUILDING CAPACITY FOR PARTICIPATORY ACTION RESEARCH ON CLIMATE CHANGE IN MOROCCO

The « Building capacity for participatory action research on climate change in Morocco » is a research project between Ibn Tofail University and University College London, taking place from 01 January 2022 to 31 December 2022. The project is part of The British Council Research Environment Links (REL), which is designed to provide financial support for the development and implementation of pilot activities to promote capacity-building collaboration between Morocco and the UK.



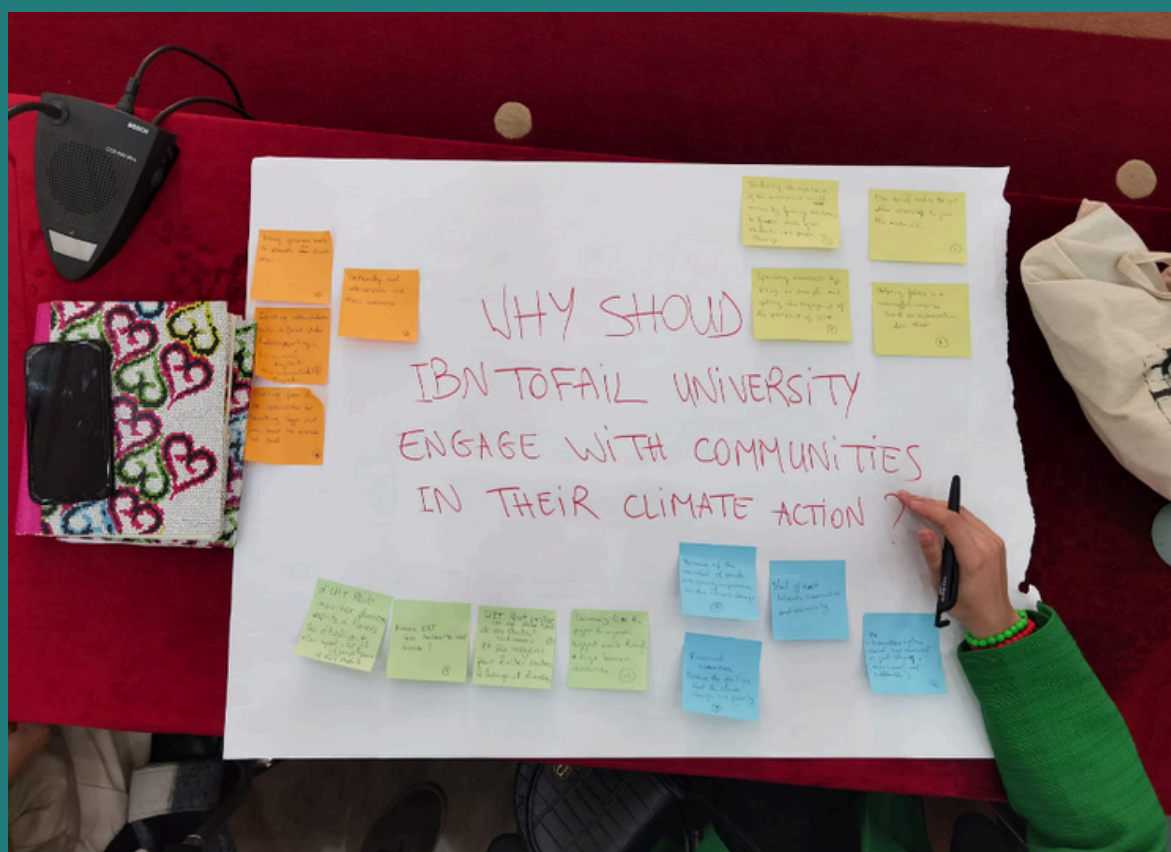
Being part of the Going Global Partnerships, the British Council Research Environment Links (REL) programme aims to:

- Support dialogue and knowledge exchange on academic standards, research governance and strategic research policy development
- Help promote an academic and research environment between partner countries and the UK, conducive to achieving maximum impact from high-quality research
- Build opportunities for the universities and institutions in the UK and partner countries to engage with the wider community and with policymakers
- Enable researchers to be more responsive to development needs in their countries and enable up-to-date research evidence to support policy decisions
- Support skills development to communicate and translate research into benefits for social welfare and economic growth
- Amplify researchers' ability to conduct excellent research in areas most relevant to national priorities and fully realize its impact.

# A SERIES OF WORKSHOPS ON "KNOWLEDGE EXCHANGE BETWEEN UK & MOROCCO: UNIVERSITIES, PAR & CLIMATE JUSTICE"

In the framework of the project 'Building Capacity for Participatory Action Research on Climate Change in Morocco' funded by the British Council, Ibn Tofail University, in collaboration with University College London and the International Institute for Environment and Development, organized a workshop from the 14th to the 17th of March 2022, under the theme: "Knowledge Exchange Between UK & Morocco: Universities, PAR & Climate Justice."

With an overarching emphasis on the imperative need for sustainable action, the workshops delved into multifaceted discussions on participatory action research (PAR) methodologies, collaborative educational strategies, and community-centered approaches to address the challenges posed by climate change.



# A SERIES OF WORKSHOPS ON "KNOWLEDGE EXCHANGE BETWEEN UK & MOROCCO: UNIVERSITIES, PAR & CLIMATE JUSTICE"

Through interactive sessions and collaborative activities, participants gained insights into the interconnected nature of environmental and developmental issues, emphasizing the importance of interdisciplinary approaches in finding sustainable solutions. This interdisciplinary approach not only enriches the quality of research conducted at UIT but also contributes to the development of comprehensive and effective strategies for addressing complex challenges at the intersection of science, policy, and society.



The outreach activities associated with this project were designed to extend the benefits of this knowledge exchange beyond the immediate participants, reaching a broader audience both within academic circles and the wider community in the region. By fostering partnerships and creating avenues for the dissemination of information, the workshop aimed to empower local communities and stakeholders, fostering a sense of ownership and involvement in addressing pertinent climate challenges.





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Ibn Tofaïl University