

Mutah University



Sustainability Report

2023

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Introduction

We proudly present the 2023 Sustainability Report for Mutah University, which will be the 4th annual sustainability report. This report comes at a time of substantial academic milestones and an ever-deepening commitment to environmental sustainability. It is with great pride that we reflect on our achievements by integrating sustainable practices throughout every facet of our institution.

In 2023, Mutah University was ranked in the Times Higher Education Impact Rankings and notably excelled in Sustainable Development Goal No. 17: Partnerships for the Goals, as the leading University in Jordan within this category. This recognition is a testament to our efforts in developing meaningful partnerships that have driven positive change locally and regionally. During the past three years, our consistent performance in SDG 17 underlined our commitment to effective partnerships that fall within the United Nations' sustainable development agenda. Different initiatives and research projects taken up by our University contributed to sustainable development internally and externally and united our mission with the greater purpose of community service and the development of the southern region in Jordan.

Further evidence of our commitment to sustainability is its exceptional performance in SDG 7: Affordable and Clean Energy. On the national level, Mutah University is ranked first, while on the world level, with over 800 universities, it is ranked 58th. This is strong evidence that the strategic focus on advancing research and translating it into practical applications is a valuable addition to our immediate environment and the world at large.

We are delighted to present this report in celebration of our past achievements while being focused on the future. We shall continue to Mutah University as one of the centers of excellence and sustainability within the academic world. I would conclude with our announced mission: "To create a university environment that promotes leadership and innovation, supports capacities of outstanding teaching and learning, and applied scientific research, and achieves sustainable development for society, whose graduates are capable of taking on challenges and competing in local, regional and global labor markets."



Prof. Salama Al-Naimat, President of Mutah University

SDG1: No Poverty

SDG 1 aims to end poverty in all its forms and dimensions everywhere, acknowledging that poverty goes beyond the mere lack of income but also encompasses the inaccessibility to education and other essential services. The goal will ensure social protection for the poor and vulnerable, increase access to essential services, and support communities affected by conflicts and natural disasters. The commitment of Mutah University to fighting against SDG 1 means that education becomes the tool for empowering individuals and societies, thus contributing to the elimination of poverty.

One of the most substantial contributions to addressing this SDG at Mutah University is the accessibility of various types of funding for Mutah University students. These include scholarships and loans from internal funds, such as the Royal Hashemite DIWAN Grants that cover full scholarships except for the first semester, and distinguished students from pockets of poverty and different regions to ensure complete coverage. Other support is provided through the Student Support Fund to students from central and northern regions studying in southern universities, covering provisions amounting to a maximum of 45 credit hours. It is also worth mentioning that the Hashemite Fund for Jordanians provides educational support through full scholarships or partial covering of academic hours, allowing it to continue its message of making education accessible and providing equal opportunities for all students at the University.

Directorate of Scholarships - Internal Scholarships and Grants Section

The Hashemite Kingdom of Jordan
Ministry of Higher Education and Scientific Research

Latest News

results of students nominated to benefit from diwan

Internal Grant and Loan Funds

- Royal Hashemite Court Scholarships/Full Scholarship (except for the first semester).
- Poverty Pocket Areas Schools Scholarship/Full Scholarship.
- Kingdom Pioneers and Brigades Scholarship/Full Scholarship.
- Student Support Fund Scholarships for Central and Northern Regional Students Studying in Southern Universities / Full Scholarship.
- Student Support Fund scholarships in official Jordanian universities with a maximum of 45 hours.
- Student Support Fund Scholarships in Official Jordanian Universities (Official Community Colleges Diploma for Applied and Professional Specializations).
- Student Support Fund loans in official Jordanian universities, covering a maximum of (45) credit hours for the eligible student.
- Jordanian Hashemite Fund scholarships covering a maximum of (45) study hours.
- Jordanian Hashemite Fund Scholarships / Full Scholarship.

Those eligible to apply for grants and loans for this year are students of the following official Jordanian universities/community colleges:

- University of Jordan
- University of Jordan / Aqaba
- Yarmouk University
- Mutah University
- Jordan University of Science and Technology
- The Hashemite University
- Al al-Bayt University
- Al-Balqa Applied University and its Colleges
- Al-Hussein Bin Talal University

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Internal Grant and Loan Funds

Help

Guidance Bulletin for Applying for Grants and Internal Funds

Official Jordanian Universities

Frequently Asked Questions

Important dates and announcements

Steps to apply for benefit

Such financial aid is an example of Mutah University's work in decreasing economic disparities and improving educational outcomes, both integral parts of poverty reduction.

Scholarship funds and loans available to Mutah University students

1. Royal Hashemite DIWAN Grants: Full scholarships to all qualified students except the first semester.
2. Students from Poverty Districts Scholarships: Full scholarships are available to the brightest students from poor areas.
3. Top Students of the Kingdom and Provinces Scholarships: The student gets a full scholarship if he or she ranks highly at the kingdom or province levels.
4. Student Support Fund Scholarships for Students in Central and Northern Regions: Full scholarships are made available to students from these regions who study at universities in the southern part of Jordan, covering up to 45 credit hours.
5. Student Support Fund in Official Jordanian Universities: Provides a grant to cover a maximum of 45 credit hours at official Jordanian universities for eligible students.
6. Community College Scholarships for Applied and Professional Specializations: Offers scholarships to students studying for diplomas in applied and professional specializations at accredited community colleges.
7. Student Support Fund Loans: Offers educational loans covering up to 45 credit hours for needy students attending recognized Jordanian universities.
8. Jordanian Hashemite Fund Scholarships: Offers scholarships covering up to 45 credit hours, full scholarship.
9. Army Scholarships: Allocated to the children of the Jordanian Armed Forces employees.
10. Children of Employees Scholarship Program: This scholarship is funded by Mutah University, and it covers the full tuition of the children of university employees during their undergraduate studies.

Scientific Research to Address SDG1

Mutah University's engagement in scientific research to address SDG 1 is evident in the research output in different scientific journals, e.g., "Obstacles Facing Women Working in The Jordanian Construction Industry: Women's Perspective." This study conducted by Sultan Tarawneh from Mutah University and Aswan S. Al Dalaeen from Al Balqa Applied University and published in the International Journal of Construction Supply Chain Management addresses the societal managerial and economic barriers that impede women's participation in the Jordanian construction sector. It emphasized challenges such as societal conventions, difficult working conditions, and the high cost of living and advocated for policies that address these issues to enhance women's involvement and promote equality in this traditionally male-dominated

industry. This research is a testament to Mutah University's commitment to fostering inclusive and sustainable economic growth, contributing directly to the global effort to eradicate poverty and empower all individuals in society regardless of gender.

References

1. Al Dalaeen A. S. & Tarawneh S. (2022). Obstacles facing women working in the Jordanian construction industry: women's perspective. *International Journal of Construction Supply Chain Management* 12(2) 1 15.
2. AL Tkhayneh K. M. Ellala Z. K. Al takayneh F. M. Abu Attiyeh J. H. & Alsalhi N. R. (2023). The Attitudes of Working Mothers Towards the Negative Aspects of Working for Long Periods of Time on Behavioral Counseling for Their Children.

SDG2: Zero Hunger

The second SDG on the list announced by the UN is Zero Hunger; it aims to fight hunger, attain food security, and achieve sustainable agriculture. It is about creating the foundation for ensuring future generations can meet their own needs. Mutah University is committed to contributing to SDG 2 through the different restaurants offering hot meals at meager prices for students, administrative staff, and others. It also arranges daily Iftar with international students in RAMADAN, The Holy Month in Islam, for all Muslims and non-Muslims. The University supports the creation of novel approaches to agricultural practices through its initiatives aimed at improving the yield of crops, reducing food loss, and making local farming systems more viable. This includes working with farmers to implement sustainable farming methods and stimulating innovation for food production to enhance access to nutritious food by all. Further, integrating advanced agricultural research at Mutah University provides future generations with knowledge and tools to address food security challenges, aligning its mission to meet global zero hunger goals and sustainable agricultural development.

Mutah University also produces various food products sold to the local community at affordable prices, including vegetables, fruits, olive oil, and dairy products. All these products are cultivated and produced on the lands and in the livestock farms belonging to the Faculty of Agriculture and are managed by the faculty's students, technicians, and engineers. This is part of the students' academic curriculum and practical training to prepare them as agricultural engineers and nutrition specialists.

Example of activities to address SDG2

On April 3, 2023, Mutah University launched, as customary, a charitable food distribution initiative under the leadership of former president Prof. Arafat Awajan aimed at supporting low-income families in the Southern Jordan Valley. Such charitable acts, powered by donations from students and staff at the University, assisted in creating a culture of empathy, generosity, and social responsibility within the academic community to deal with immediate problems of food insecurity. Mutah University reinforces its efforts toward Sustainable Development Goal 1: No Poverty through involvement in such diverse social activities. These actions reflect the UUniversity's commitment to social solidarity and its role in promoting sustainable development through direct community engagement.



The College of Agriculture and Dar Abu Abdullah ink cooperation deal

On Tuesday, 15/12/2022, a cooperation agreement was signed between Mutah University and Dar Abu Abdullah for charitable work, signed by the former President of MU, Prof. Arafat Aajawn, and Mr. Samer Balkar, Director-General of the Association, in the presence of the Dean of the Faculty of Agriculture, Prof. Atef Al Mahadeen. This agreement aims to work on implementing projects and studies on actual ground-based economic feasibility in order to contribute towards

developing the local community, particularly in the fields of food security, poverty reduction, and unemployment, in addition to increasing the students' skills at the Faculty of Agriculture, Training, and Applied, and opening future job opportunities.

The Islamic Charitable Organization in Kuwait visits the College of Agriculture

On the 9th of October 2023, the Dean of the Faculty of Agriculture-Mutah University received a delegation from the Islamic charitable organization Kuwait. He talked about the nature of cooperation represented by the donation of the Authority of seven agricultural houses for low-income families to benefit from them for seven years, then to devolve to the University, and there is a house for hydroponics for training students in modern agricultural methods. The visiting delegation praised the cooperation at the University with the Authority for implementing its role in charitable work, which proves the depth of the relationship between brothers translated on the ground while donating these agricultural houses was an expression of great desire to deliver charitable work to the deserving.



Scientific Research related to SDG2:

The following examples show the research output by Mutah University researchers towards the achievement of sustainable development goal No. 2:

1. Hammoud F. Abdullah M. Al Bakheit A. A. Al Awwad N. J. Dabbour I. & Al Jawaldeh A. (2023). Nutrition knowledge attitudes and practices (KAPs) among Jordanian elderly—a cross-sectional study. *Nutrients* 15(9) 2220.

2. Al Atiyat R. M. Al Rawashdeh M. Abu Alruz K. Alasasfa M. Salameh N. Al Nawaisah F. Tabbaa M. J. (2023). Phenotypic characterization and genetic diversity of indigenous chickens of Jordan in comparison with native and commercial breeds for conservation and breeding purposes. *Online Journal of Animal and Feed Research* 13(6) 416-425.

SDG3: GOOD HEALTH AND WELL-BEING

Situated in the middle of Al Karak, Jordan, Mutah University rises high as a lighthouse of medical education and medical services, aiming to promote good health and well-being as outlined in SDG3. Mutah University has an array of faculties and programs in the health sciences, namely Medicine, Pharmacy, laboratory sciences, Nursing, and the newly established Dentistry, in addition to the Faculty of Allied Medical Sciences. The uniqueness of Mutah University is the deep commitment it has undertaken, not towards education alone but to the betterment of the health scenario in reality. From the quality of medical training to transforming local hospitals into learning centers to championing community health projects, one thing is quite clear: the University is not about turning out health professionals but leaders who will make a difference. In due course, this will add to the much-awaited Faculty of Dentistry, enabling Mutah University to scale up more integrated health education and services for the well-being of its community.

Mutah University also places great importance on the mental health of its students, considering students' well-being as important as the academic side of university life. In line with this approach, the University established the Queen Rania Al Abdullah Center for Educational and Psychological Studies, which has been running since 2017. The Center aims to provide psychological counseling to students through professional psychologists, helping them to express their emotions. It also supports students with special needs enrolled at the University in achieving the highest levels of psychological and social adaptation and academic success. The Center also offers students academic solutions, particularly during exam periods. The Center's professional psychologists are available 24/7 and can be reached easily by students through the Center's website (<https://www.mutah.edu.jo/ar/qrc/Pages/Psychological-support-team.aspx>).

Activities by Mutah University to support the SDG3

Southern Branch of National Centre for Diabetes and Endocrinology

In 2023, Mutah University started the most ambitious journey from the heart to confront one of the most pressing health issues in Al Karak: diabetes. The laying of the foundation stone for the Southern Branch of the National Center for Diabetes and Endocrinology was symbolic, a beacon of hope for many. This initiative, championed by Prince Hassan bin Talal, aims at fighting head-on the rising tide of diabetes, hypertension, and obesity. These are all too common in southern Jordan, and the new Center is pledged to fight back. More than a response to a health crisis, the creation of this Center is a promise to the community commitment to premier specialized healthcare, targeting not only treatment but prevention from the very beginning. It is intended to be a pillar within the community, with its package of diagnostic, educational, and therapeutic services that will extend much-needed healthcare interventions to populations that, until now, have been shamefully neglected. However, this is a team effort. The program

connects the gaps among several bodies entrusted with health concerns: Mutah University, local hospitals, and the Ministry of Health. Weaved together, they are catching in their net those at risk of chronic health issues. Combining care with a strong emphasis on community education and outreach, Southern Branch lights the torch in healthy life directions. This would mean raising awareness about the risks of these conditions, championing healthier lifestyle options, and thus securing better health prospects for the future. This logic of collaboration underlines a deep-seated belief in a healthcare model that places the community at the forefront. Mutah University thus goes beyond contributing to the region's physical health; it nurtures the well-being of its people, heart, and soul. This effort is an essential stride toward attaining Sustainable Development Goal 3, which dreams of health and well-being for all, regardless of age.



The Pharmacovigilance Center at Karak Governmental Hospital will be opened to enhance health care.

On October 20, 2022, Mutah University stepped forward to be a key player in launching the Pharmacovigilance Center at Karak Governmental Hospital. This means going to advanced stages in the community's healthcare standard. Via a partnership with the Ministry of Health, MU plays a crucial role in vigilantly monitoring pharmaceutical preparations' safety and side effects. This will ensure better health for one and all; more to the point, it follows that Mutah

University does not confine itself to academic knowledge development but is deeply committed to transforming the healthcare infrastructure and medical research. This, in turn, perfectly aligns with the globally set vision for ensuring good health and well-being for all, as outlined in SDG 3.



Public Safety and Occupational Health Workshop

On February 15, 2023, Mutah University held a workshop under the slogan "Public Safety and Occupational Health" to shed light on establishing a general system of safety in order to protect workers from occupational hazards necessary for preserving the human element within institutions. Knowledge will be generalized within safety and health teams that include different departments, units, colleges, and centers at the University. This team will collaborate with the Human Resources Unit to ensure constant attention to the safety protocols on campus.

Publications Related to SDG 3 by Mutah University:

- 1- Al Damen H. & Majali M. (2022). "COVID-19 Pandemic Occupational Health and Safety Practices in Industrial Companies (Case of Jordan)." *Dirasat: Human and Social Sciences* 49(6) 219239.
- 2- Alkhwaldi A. F. & Abdulmuhsin A. A. (2022). "Crisis centric distance learning model in the Jordanian higher education sector: Factors influencing the continuous use of distance learning platforms during the COVID 19 pandemic." *Journal of International Education in Business* 15(2) 250 272.
- 3- Murugan B. Rahman M. Z. Fatimah I. Lett J. A. Annaraj J. Kaus N. H. M. ... & Sagadevan S. (2023). "Green synthesis of CuO nanoparticles for biological applications." *Inorganic Chemistry Communications* 111088.

SDG4: Quality Education

SDG 4 of the United Nations Sustainable Development Goals focuses on ensuring quality at different levels of education: undergraduate, postgraduate, and continuous learning. Quality education is indispensable for social and economic development, improving living conditions, enhancing social justice, and fostering sustainable community growth. First on the list among the strategic goals published on the newly updated strategic plan at Mutah University is to achieve the highest standards in education. The University of Mutah is firmly committed to achieving SDG 4 in quality education through all its programs. This is testified to by the relentless effort put into achieving international accreditation. The Faculty of Pharmacy at Mutah University has gained accreditation from the Accreditation Council for Pharmacy Education, or ACPE, showing how committed the institution is to compliance with the set international standards of education. Further, there are continuous accreditation processes for engineering programs through ABET, in addition to efforts to ensure that the standards of the University's educational policies are top-notch. The University also meets all the national accreditation requirements outlined by the Jordanian Accreditation and Quality Assurance Commission for Higher Education Institutions, AQACHEI.

Activities Supporting SDG 4 at Mutah University

Celebrations for International Arabic Language Day

On International Arabic Language Day, under the patronage of the University President, Prof. Salama AlNaimat, and the Dean of the Faculty of Arts, Prof. Maher AlMubaidin, the Faculty of Arts at Mutah University celebrated the same day. This event showcased the cultural and historical significance of the Arabic language. Dr. Ibrahim Abdel Jawad, a professor of Modern Arabic Criticism, moderated it. The event emphasized the role of the University in boosting linguistic diversity and cultural heritage through its commitment to inclusive and quality education.

Honoring Teacher Educators for International Accreditation Achievement

Mutah University held a conference for educators of the Higher Diploma in Teacher Preparation to obtain international accreditation to teach the diploma program. The event was patronized by Prof. Salama Al Naimat, President of the University, in addition to the Dean of the Faculty of Educational Sciences, Prof. Abdul Nasser Al Qaralleh, and its Vice-Dean, Dr. Khadra Al Ja'afari. Being the first University in Jordan to adopt the Higher Diploma Program for Pre-Service Teacher Preparation, Mutah University has once again set a benchmark by obtaining international certification to ensure quality training in service of prospective educators.



Participation in the Egyptian and International Universities Forum - Edu Gate

Mutah University participated in the Egyptian and International Universities Exhibition Forum (Edu Gate), Alexandria, Egypt. This visit came within the context of the University's strategic plan to attract students from various countries at the beginning of every academic year. The conference allowed Mutah University to introduce its academic programs and review its scientific development and research abilities. It was now the right time for this University to demonstrate its commitment to quality education through its pavilion, present the global standards of excellence and competitiveness, and at the same time, make enough provisions to support incoming students from all walks of life. This exemplifies the commitment of MU to improve the quality of education by assuring quality in education, preserving cultural heritage, acquiring international accreditations, and giving equal opportunities for the enrollment of students from various backgrounds. In this way, the University will establish inclusive and equitable learning opportunities that enhance the educational and academic mission in a quest for quality education.

Scientific research related to SDG4 :

1. Al Tammemi A. A. B. Nheili R. Jibuaku C. H. Al Tamimi D. A. Aljaberi M. A. Khatatbeh M. & Fakhouri H. N. (2022 September). Qualitative exploration of university students' perspectives on distance education in Jordan: An application of Moore's theory of transactional distance. In *Frontiers in Education* (Vol. 7 p. 960660). Frontiers Media SA.
2. Alsoub M. A. W. (2023). Motivation to Words Success and its Relationship with Academic Achievement among the Students of the Sports Rehabilitation Department at Mu'tah University. *Revista iberoamericana de psicología del ejercicio y el deporte* 18(5) 618 621.
3. ALTarawneh R. K. (2022). Friendship Skills among Students with Learning Disabilities in Jordan. *Journal of Educational and Social Research* 12.

SDG5: Gender Equality

The Jordanian constitution guides the governmental organizations for addressing the gender equality issue. Mutah University adopts an Equality Promotion Policy meant to fight against any form of discrimination within the institution for a proper and non-exclusive environment both for the students and the staff. This policy is of great importance to the University in its commitment to creating equal opportunities for all, with no discrimination based on gender. In addition, women at Mutah University effectively participate in the governance of the University by holding such positions as members of the Trustees Council represented by Prof. Rana Abu Alzahab, Deans as represented by Dr. Nisreen Mowafi, Vice Deans, and heads of departments among others. Inclusion into such leadership positions allows decisions made at the higher levels of university administration to be informed by diverse perspectives; hence, it fosters gender equity. Secondly, female students within Mutah University can participate in the Student Association through elections, where several female students have been elected. This also proves the institution's interest in encouraging women to participate in leadership and representation. These activities are part of Mutah University's bigger plan concerning international sustainability standards and support the participation of women in all fields of university life that contribute significantly to achieving gender equality.

Example of Women's Empowerment at Mutah University

Under the patronage of Her Highness Princess Sumaya bint Al Hassan, the British Council, in collaboration with the Royal Scientific Society and Higher Council for Science and Technology, held an event in Amman to celebrate the successes of the Newton Khalidi Fund and look at the future of Jordan research.

The winning researchers were given a prize from Newton Khalidi, including Dr. Esraa Radhi Al Tarawneh from the Faculty of Engineering at Mutah University for the joint project with Sheffield Hallam University entitled "Watershed Management for Water Security." Prof. Marwan Al Moussa, Vice President of the University for Research and Development, and a group of scientists and personalities from Britain and Jordan also attended the ceremony on 22/3/2022.



The "Producers' Market Platform" was launched by MU to enhance ties with society and economically empower women during the closing ceremony of the

Another example of activities during 2022-2023 was the "Social Protection Enhancement Project in Karak Governorate," which occurred on December 27, 2022. Organized in cooperation with Galaxy Technology Organization and the Al Qasr Women's Association, this event helped to enhance ties with the community and economically empower women. In the ceremony, the former President of Mutah University, Prof. Arafat Awajan, underscored the significance of engagement in a local community along the cultural, social, economic, and intellectual dimensions. He added that Mutah University represents one of the vital knowledge and learning centers in society, whereby it plays an essential role in developing local capabilities and is a leader in accomplishing social reform. It also highlighted the University's effective interaction with civil society institutions to create mutual support and enablers in social work. Anas Al Hijawi, Director of Galaxy Technology Organization, expressed his gratitude to Mutah University for its continuous support in enabling community partnerships, especially for projects to improve social protection and development. The project was devoted to empowering women in Karak by assisting in establishing income-generating projects. The head of Al Qasr Women's Association, Mrs. Maysar Al Majali, emphasized the need to support their initiatives aimed, among others, at developing a digital marketing platform for selling their hand-made products. Mutah University provided the necessary expertise and consultation to encourage women to deal with various craft and manual projects and market them innovatively.

It highlights the central role of Mutah University's commitment to empowering women by improving their economic status, thus integrating them into the wheel of development. The University provides resources, knowledge, and a platform for women to showcase their products, hence playing an instrumental role in the path of empowering women, promoting gender equality in line with attaining Sustainable Development Goal No. 5. Cooperation with civil society and local organizations helps Mutah University to develop highly effective programs further to uplift women and contribute to their support for sustainable development in the region.

SDG6: Clean Water and Sanitation

In order to ensure that there is availability and sustainable management of water and sanitation for all, a significant milestone has been taken at Mutah University during the last few years, which is crucial for providing clean water, i.e., the Wastewater Treatment Plant (WTP) project. The WTP treats the water and serves the university residents. This plant treats approximately an average of 1600 cubic meters of wastewater daily; inefficient treatment, as much as 90% of biological oxygen demand (BOD) can be reduced, while it receives 960 kg of BOD daily. The unit is designed using the sludge blanket filtration technology, incorporating all the advanced features of extended aeration-activated sludge processes like super activation, denitrification, phosphorus absorption, and high-flow sludge blanket filtration. This will provide a compact solution for wastewater treatment that is cost-effective without causing environmental damage and with ease of operation. Treatment includes:

1. Chlorine Treatment System Supply two chlorination feed units, one operating and one standby, capable of thoroughly disinfecting treated water for public health and safely reusing it for various purposes.
2. Reinforced Concrete Skimming Tank: A particular type of tank has been developed to remove oil and grease from wastewater. It helps reduce pollutants that could affect the efficiency of treatment processes and the quality of the treated water.
3. Flow equalization tank: The proposed approximately 300 cubic meters-capacity tank will treat the excess flow by storing and treating more wastewater. Provisions for cleaning to flush residuals are incorporated into the tank, along with mild mixing and aeration to block aerobic digestion.



This project thus demonstrates that Mutah University is committed to pursuing sustainable solutions for clean water and sanitation and making valuable contributions towards reducing its overall environmental impact. Further, advanced wastewater treatment technologies at the University serve as a model for managing a genuinely sustainable campus to ensure effective treatment and reuse of water resources directly supporting SDG 6. These reflect Mutah University's commitment to improving water management practices as part of the more excellent vision of sustainable development.

Selected examples of research topics during 2023 to address the clean water and sanitation SDG6

1. Photocatalytic Efficiency of Titanium Dioxide for Dyes and Heavy Metals Removal from Wastewater
2. Effect of hydrogel on corn growth water use efficiency and soil properties in the semi-arid region
3. Forward Osmosis Membrane: Review of Fabrication Modification Challenges and Potential
4. Activated carbon from sugarcane as an efficient adsorbent for phenol from petroleum refinery wastewater: Equilibrium kinetic and thermodynamic study
5. Specifying cascade water demand forecasting model using time series analysis: case of Jordan
6. Parameters Synthesis of Na Magadiite Materials for Water Treatment and Removal of Basic Blue 41: Properties and Single Batch Design Adsorber
7. Biochar as Cadmium Scavenger in the Aquatic Environment Remediation: Date Seeds as Raw Material
8. Metal Toxicity Reduction on Seed Germination and Seedling Growth of Raphanus sp. and Arabidopsis sp. Using Date Seed Biochar
9. Assessing drinking water quality in Al Karak province in central Jordan based on water saturation indices
10. Simulation and optimization of medium-scale industrial reverse osmosis desalination system
11. Springs Water Quality Assessment for Drinking Purposes: Case Study of Bsaira Jordan
12. Brackish water treatment by ceramic TiO₂ low-pressure nanofiltration membranes
13. Assessment of polycyclic aromatic hydrocarbon in runoff from different land use at Amman Zarqa Basin Jordan
14. Water as Source of Minerals: Contribution of Wells Water for Mineral Nutrition in Broilers
15. Statistical analysis of flash flood events for designing water harvesting systems in a highly arid environment

SDG 7: Affordable and Clean Energy

Mutah University is committed to attaining SDG 7, ensuring access to affordable, reliable, sustainable, and modern energy for all. It implements this commitment through strategic partnerships and innovative training initiatives that have marinated its curriculum and research with sustainable energy practices.

The University of Utah has also established a solar power station at 5 million JOD to supply the University with electricity and entirely rely on clean, renewable energy while addressing the high financial cost of conventional energy. Additionally, an agreement has been signed to connect Mutah University's solar energy station with the Jordanian Electricity Distribution Company to sell the surplus electricity produced by the station.

Activities done by Mutah University in achieving SDG 7

An agreement has been signed to foster Academic Cooperation and Training Courses in the energy sector. The agreement, signed on 2/10/2023 by Mutah University with the leading players within the energy sector of South Korea and headed by the executive manager of Qatraneh Power Station and supported by officials from Jordan, will have it strengthen its engineering curriculum to house more vocational and industry-specific knowledge. The said relationship would allow training courses to be provided to the students within the Qatraneh Power Station for hands-on training in energy generation. This agreement included:

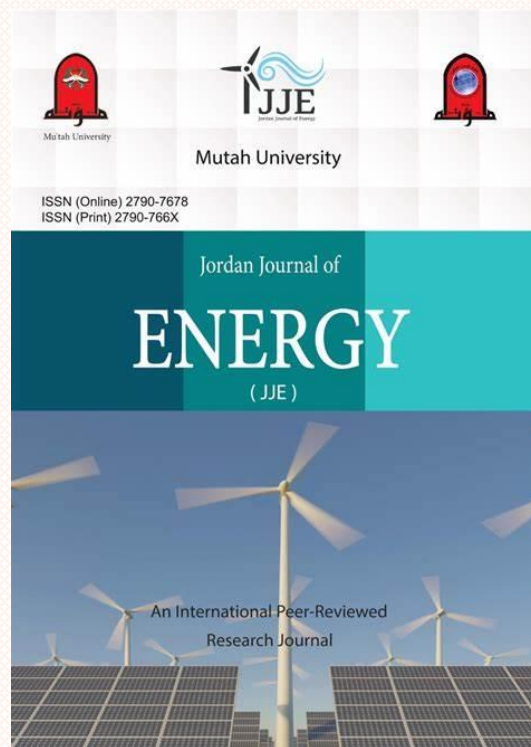
- **Field Visits and Learning on Shared Knowledge:** It would facilitate scheduled field visits to energy production facilities, enhancing the technical ability of the students as well as their understanding of present energy challenges and their proposed solutions. During the field visit, students would meet the veteran engineers face to face, who might be a source to present their ideas and practically learn from them.
- **Renewable Energy Workshops** Besides field training, there are combined workshops by Mutah University and its South Korean partners, updating them with modern knowledge about renewable energy resources and methods of their sustainable usage. It thus equips the students with the latest scientific knowledge and abilities in energy generation, particularly renewable energy sources, meeting global sustainability standards in education.

These broad-based education programs mean that, in addition to contributing to the global effort toward attaining SDG 7, Mutah University will also be adequately preparing its students to meet all the forthcoming challenges of this evolving energy sector. Therefore, the proactive approach to education and international collaboration constitutes the University's mission of fostering sustainable energy solutions at both the local and global levels.

Increase in Commitment to SDG 7 through Academic Publishing



In this regard, and as a commitment to attaining the commitment to SDG 7 on ensuring access to affordable and clean energy, Mutah University has been publishing a scientific journal entitled "Jordan Journal of Energy." This reflects the interest taken by the University in developing research and debate on matters concerned with energy. It also acts as an opportunity for scholars, researchers, and practitioners to avail themselves of a platform to publish their results and innovations concerning sustainable energy solutions. By encouraging scholarly debates, Mutah University aspires to join the global effort toward better energy efficiency and broader uses of renewable sources. The effort is, but one serving the academic community in its involvement with the most updated energy issues and flows from strategic goals set by the University toward shaping a positive energy future and securing a greener future.



SDG8: Enhancing Economic Growth and Employment

During the last academic year, Mutah University has contributed to enhancing the economic growth and employment of the community in Al-Karak governorate. On December 15, 2022, Mutah University, in cooperation with the Entrepreneurship and Innovation Center and Karak Girls Center, launched the Jordan River Foundation-supported "Hirfati" initiative-the one that was so important and constituted one of those strategic activities in implementing the SDGs, precisely Goal 8 on enhancing entrepreneurial opportunities toward sustainable economic activities at the community level.

This also allowed participants in digital entrepreneurship to develop marketing, especially towards maintaining their craft-based businesses. One of the most critical impacts of the "Hirfati" project was the provision of training on integrating digital tools so that artisans and craft entrepreneurs can expand possible marketplaces both at a local and international scale.

It also included a presentation on the role of digital technology in entrepreneurial crafts by Dr. Ola Al Limoun and Dr. Abeer Al Khawaldeh from the Department of Information Systems, demonstrating that it may redevelop traditional crafts into thriving, small-scale businesses capable of competing in larger markets.

Dr. Walid Al-Rawadeh explained the role of the University in setting up the entrepreneurial culture in students and those around them. He stressed that the project was important in creating future jobs that would be added to the economic entities in the Karak region.

It also outlined success stories of local entrepreneurs who could take an idea from concept to market, and develop the real steps of how to design and develop entrepreneurial projects. In fact, this was quite an inspiring part-to show the real-world examples to participants in deriving tangible benefits from applying learned skills to the craft and business practices. The event concluded with the opening of the Exhibition for Crafts by Youth of Karak and Karak Girls' Centre directors, Dr. Yacoub Hijazin and Ms. Israa Al Dheisat, respectively, representative of several crafts symbolizing the rich cultural heritage in the area in addition to the creative new products from the participants of "Hirfati" initiative. Therefore, even as confidently declared by Mutah University, "Hirfati" is one holistic avenue toward realizing economic growth with decent work, enshrined under SDG 8. The University ensures a supportive enabling environment that equips people with the needed innovative skills to compete successfully in the digital marketplace, hence contributing to meaningful improvements in the local economy and the greater pursuits of sustainable economic development.



SDG9: Industry Innovation and Infrastructure

Develop resilient infrastructure to advance inclusive and sustainable industrialization and foster innovation. These are solid steps being taken by Mutah University in all aspects of this particular SDG, but mainly via the Entrepreneurship and Innovation Center. The latter holds various activities, from workshops to competitions and collaboration, to enhance the students' and broader society's entrepreneurial and innovative capacity. Additionally, Mutah University has introduced an elective course in entrepreneurship, equipping students with the knowledge and skills to develop innovative and sustainable projects. These initiatives reflect the University's commitment to enhancing industry, fostering creativity, and contributing to sustainable economic growth.

Events that address SDG9

1. Conclusion of "Business Simulation" Workshop for Mutah Model School Students (18/10/2023):

Mutah University organized "Business Simulation" training to develop students' knowledge from Mutah Model School regarding how actual business processes are conducted. In addition, it should be an opportunity for the youngsters to learn through interaction through hands-on simulation of real-world business scenarios, developing entrepreneurial thinking and decision-making skills.

2. Summarize and Close the Case: Mutah Entrepreneurship Award 2023, 3/9/2023:

The Muta Entrepreneurship Award, as summarized and celebrated in the event held in 2023, had innovative ideas brought forward by participants. Such an event should underline top-rated projects as winners, focusing on the University's commitment to creativity and innovation within and outside the university environment. It would, therefore, lead to a culture of entrepreneurship.

3. Mutah Entrepreneurship Award 2023 (30/8/2023)

The call for the Mutah Entrepreneurship Award for the year 2023 was geared toward developing entrepreneurial thinking and finding viable business ideas. The projects focused on sustainability, innovation, and technology; thus, the winners were selected based on creativity and the potential impact it may cause. This indicates the commitment of the University to support entrepreneurship for economic growth.

4. Artificial Intelligence and IoT - Introductory Workshop: 15/12/2022

An introductory workshop on Artificial Intelligence and the Internet of Things was conducted, focusing on them as drivers of present times. This workshop showcased how these technologies change industries and daily life, intending to raise awareness and improve participants' knowledge of technological changes.

5. 3D Printer Crown Prince Foundation/Idea Factory, 13/12/2022:

The Idea Factory of the Crown Prince Foundation equipped the Entrepreneurship and Innovation Center with a 3D printer that would help develop innovation through access to the means students and inventors need to make their ideas real and spur practical learning and technological ingenuity.

6. MOU between Digital Platform Company and Entrepreneurship and Innovation Center: (13/12/2022)

This is through a cooperation agreement that Mutah University has signed with the Digital Platform Company for more training and enhancing innovation to qualify students and young entrepreneurs for better job opportunities, helping consolidate the relationship between the educational institution and the labor market.

7. Visit by members of Karak Governorate Council to the Entrepreneurship and Innovation Centre 13/12/2022:

Members of the Karak Governorate Council visited the Entrepreneurship and Innovation Center to explore its facilities and discuss potential collaboration opportunities. The visit focused on enhancing community ties and leveraging the Center's capabilities to support local economic and entrepreneurial development.

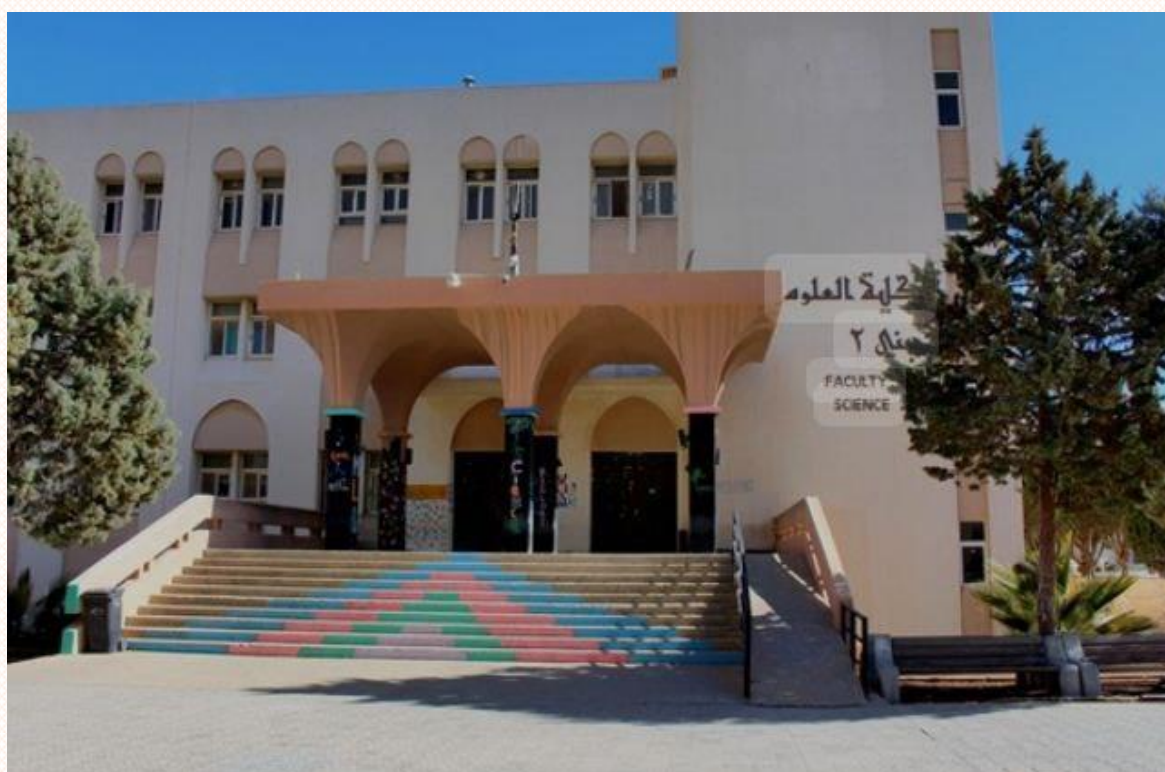
8. MoU between Mutah University and Business Development Center, 13/12/2022. Meanwhile, Mutah University has signed a memorandum of understanding with the Business Development Center to actualize entrepreneurship and enterprise development. Such collaboration will facilitate appropriate training programs, mentorship, and the creation of an entrepreneurial ecosystem that would enable the students and local entrepreneurs to develop skills to become successful in their respective venture activities. 9. "I declare the Technical Exhibition at the Center of Entrepreneurship and Innovation, Mutah University, now open." Recently, Mutah University opened a technical exhibition within the Entrepreneurship and Innovation Centre, emphasizing SDG 9: Industry, Innovation, and Infrastructure. Speaking at the time, the former President, Prof. Arafat Awajan, commented: "The university attaches great importance to instilling an innovative spirit among students and society through the sharing of entrepreneurial ideas and the creation of incubators for businesses." Meanwhile, the director Dr. Walid Al

Rawadhiya speaks about challenges standing in front of entrepreneurs. One such discussion entitled "Entrepreneurship in the South: Between Reality and Ambition" contributed to helping youth support in combating economic difficulties and furthering sustainable development.



SDG10: Reducing Inequalities at Mutah University

The accomplishment of this goal represents the cornerstone of institutional policy here at Mutah University, in treating every member with dignity and respect; university opportunities are strictly merit-based. Inclusion and Access Promotion The core effort of Mutah University policies is to ensure access and inclusion in all programs and services to all. This policy attaches importance to equal opportunity provision, non-discrimination, and equity towards persons with disability conditions. The university facilities and buildings are access-friendly. Research within the UUniversity has proved that students enjoy a high level of psychological and social compatibility, pointing out the effectiveness of the UUniversity's inclusivity measures.



The buildings at Mutah University are building slopes for the movement of people with disabilities.

Activities in 2023

Students with Disabilities Workshop

On 2nd May 2023, a workshop, mainly for students with disabilities, was held at Mutah University. This was meant to enable this category of students to overcome some peculiar challenges and advance their academic and social lives while at the University. Community Rehabilitation Strategy: The National Centre for Community Rehabilitation at Mutah University occupies an essential place in broader society, raising awareness to

support people with disabilities and their families in the Southern Jordan Valley. The Center has been devising, since coming into the hands of Dr. Anas Al Dalaeen, a community strategy that would complement its awareness programs and is foreseen to increase volunteers and community workers in the effective delivery of rehabilitation services. This has also emphasized the enhancement of the support and services for individuals with disability through the use of local communities.



SDG 11: Sustainable Cities and Communities

At Mutah University, primarily through its cultural activities and initiatives for resilient, inclusive, and sustainable community-building, significant steps have been taken to attain SDG 11: Sustainable Cities and Communities. The University nurtures cultural knowledge that will support inclusivity and foster collaboration with the institutions in the locality to build the community's resilience and create cultural awareness. The following are the major activities undertaken in 2023:

Activities and Impact

- “Reading for All Festival” in cooperation with the Karak Culture Directorate, Mutah University organized the "Reading for All Festival" within the framework of the Jordanian Family Library initiative on December 24, 2023. The festival aimed to raise cultural awareness through reading and make reading available for everyone.



- Community Rehabilitation Projects: The National Institute for Community Rehabilitation, Mutah University, in cooperation with Abu Ghazaleh Center, provided the community members with some necessary classes and training.

- The first cultural week at Mutah University: In cooperation with Dar Al Usra for Publishing and Distribution, Mutah University held its first cultural week. More than 500 book titles were displayed at the University; traditional food products and folk crafts were also showcased during this event. The students and local people also collaborated with the Karak Culture Directorate to display the artwork. This activity involves the promotion and preservation of culture and an increase in community participation in different cultural events.



This initiative involved the facilitation of access to university facilities, providing sign language interpreters for deaf students, and offering services that cater to the needs of students with disabilities.

These initiatives of Mutah University in 2023 fully express their commitment to promoting SDG 11 in a meaningful direction: building a sustainable, inclusive, culturally rich environment.

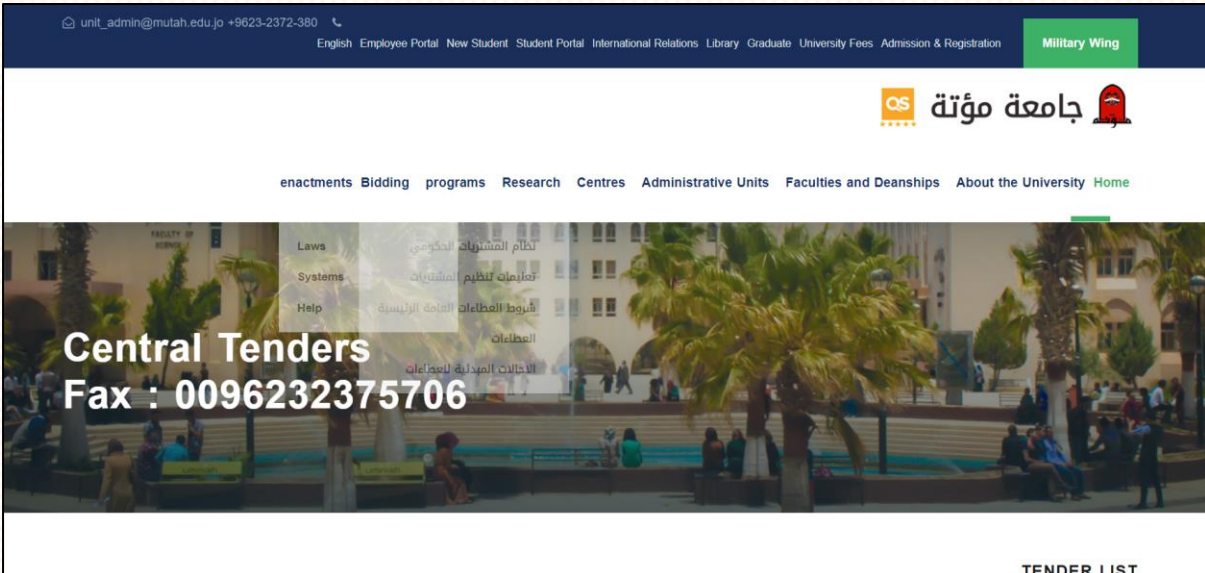
Example of published research that server SDGs 11 according to Scopus;

Al Mubaidin M. Al Hamaiedeh H. & El Hasan T. (2022). Impact of the Effluent Characteristics of Industrial and Domestic Wastewater Treatment Plants on the Irrigated Soil and Plants. *Jordan Journal of Earth & Environmental Sciences* 13(3).

Alnhoud O. T. Al Harahsheh A. M. Al Harahsheh M. S. & Irshaid F. I. (2021). Animal solid waste as potential renewable biomass energy source: case study of Jordan. *Biomass Conversion and Biorefinery* 1 10.

SDG 12: Responsible Consumption and Production

Target 12 of SDGs calls for responsible consumption and production to ensure natural resources are managed sustainably and utilized effectively. Indeed, the target calls for sustainable practices in every area of production and consumption to minimize impacts on the environment, wastes, and ecological balance. At Mutah University, this becomes a critical goal in all procurement and tendering processes. The University is committed to considering sustainability criteria for the tendering practices it intends to follow in such a way that procurement decisions should support environmental sustainability and responsible resource management. The sustainability pledge is expected to attain a set of global sustainability goals and be an excellent example of spreading eco-friendly practices in this educational sector. Accordingly, Mutah University actively contributes to sustainable growth and ecological footprint reduction by adopting sustainability criteria in tendering.



The image is a screenshot of the Mutah University website. At the top, there is a dark blue navigation bar with contact information (unit_admin@mutah.edu.jo +9623-2372-380) and a 'Military Wing' button. Below this is a white header with the university's logo and name in Arabic (جامعة مؤتة) and English (Mutah University). A secondary navigation bar lists various university departments. The main content area features a large banner image of a university courtyard with palm trees. Overlaid on this image is a semi-transparent menu with options: 'Laws', 'Systems', and 'Help'. Below the menu, the text 'Central Tenders' and 'Fax : 0096232375706' is displayed in large white font. At the bottom right of the banner, the text 'TENDER LIST' is visible.

Scientific Research Contributing to SDG12

At the forefront of embedding sustainability into its research agenda, Mutah University directly aligns with Goal 12 of the Sustainable Development Goals, which covers responsible consumption and production. One outstanding study, led by Feras W. Al Awabdeh and funded by the Deanship of Scientific Research at Mutah University, is an excellent example of this commitment since it focuses on using recycled glass in concrete. Besides enhancing new recycling methods, it underlines the very principle of SDG 12 by showing exactly how sustainable materials can be applied to construction practices.

Treated recycled glass used in concrete provides some critical environmental benefits, as it reduces water absorption and enhances the durability of concrete, directly contributing to more environmentally friendly construction methods. The project thus represents the realization of SDG 12, ensuring that resources are utilized sustainably with minimum waste. Emphasizing resource use efficiency and the requirement for a shift towards sustainability, the research work at Mutah University epitomizes the core values of responsible production and efficient use of resources.

Examples of research output that are classified as SDG12 and indexed by Scopus

1. Al-Awabdeh F. W., Al-Kheetan M. J., Jweihan Y. S., Al-Hamaiedeh, H. & Ghaffar, S. H. (2023). Comprehensive investigation of recycled waste glass in concrete using silane treatment for performance improvement. *Results in Engineering*, 16, 100790.
2. Alrwashdeh S. S. (2023). The effect of environmental albedo on the energy use of a selected house in Amman Jordan. *AIMS Environmental Science*, 10(5), 628-643.
3. Qadourah J. A. (2023). Evaluating solar active shading solutions: study of energy performance in Mediterranean residential architecture. *Architectural Engineering and Design Management*.

SDG 13: Climate Action

SDG 13 calls for immediate action by all against climate change and its impacts through global cooperation and sustainable practices. This is one of the drivers that call for integrating climate action into both academic and operational strategies at Mutah University. The University of California enhances a severe approach to sustainability through research, curriculum development, and community engagement to mitigate climate change and enhance resilience to environmental change. Moreover, hosting international conferences on climate change and sustainability means that Mutah University contributes not only to global discourse but also stands firm in its commitment to educating and mobilizing its community in line with the objective of SDG 13.

Conference Activities and Impact

On November 7, 2023, Mutah University held its second international conference on Climate Change and Sustainability, marking its commitment to Sustainable Development Goal 13: to fight climate change and its impacts. It brought together scholars from all parts of the world to deliberate on state-of-the-art research and field practices in climate change, pointing out the key role of the academe as a driver toward global environmental sustainability. Sponsored by the university president, Prof. Salameh Al Nuaimat, a wide range of conference activities were put forward to understand further and apply climate action strategies. Prof. Al Nuaimat began by emphasizing how fundamental it is that climate change be brought to the fore, an issue emanating from the natural pattern, aside from human activities. Then he explained the University's role in hosting experts to foster a multidisciplinary approach toward sustainability.



The key participants were well-known figures from academia, industry, and the government. Among them was Dr. Firas Al Zyoud, of the Faculty of Agriculture, who updated on the important global challenge in this century: climate change. The conference was not only focused on presenting scientific research; the stress was also laid on practical applications to transfer knowledge to the stakeholders to maximize the research results.

The first day of the conference brought together notable speakers, including government officials and industry representatives, who discussed what was being done corporately to handle the climate challenge through collaboration and hands-on measures. Other continuity for the conference included various scientific sessions encompassing different aspects of climate change and sustainability fueled by the strong relationships that Mutah University maintains with several scientific institutions.

This symposium had all the hallmarks of a global discussion on climate change by Mutah University in support of SDG 13 through informed policies and actions with international collaboration and knowledge exchange. The conference fortified the UUniversity's commitment to embed climate change within its academic and outreach programs to equip students and participants to engage in climate action meaningfully.

SDG14: Life Below Water

Mutah University is very concerned with global sustainability challenges, especially in the context of attaining the Sustainable Development Goals, Goal 14, on the conservation and sustainable use of oceans, seas, and marine resources. The contribution of Mutah University to the protection of life below water is also outstanding, having established the specialized research institution "Prince Faisal Center for Dead Sea, Environmental and Energy Research." This Centre has been actively involved in research activities to protect the marine environment, particularly along the shores of the Red Sea in Aqaba. It mainly concerns itself with research activities aimed at keeping track of different marine ecosystems, studying the effects of human activity in those areas, and drawing up suggestions for sustainable management of aquatic resources in these vital areas.

In addition to the effort by the Prince Faisal Center, Mutah University also has a wide scope toward environmental concerns through educational and research-based conferences highlighting the importance of preserving natural ecosystems, including marine habitats. The first concrete example was the First Geographical Conference on 25th October 2022 by the Faculty of Social Sciences under the heading "Climate Change and Its Impact on Water and Environmental Resources," with the active participation of leading scholars, scientists, and ecologists in various fields. This proved the commitment of the University to raising joint research efforts toward solving the impact of climate change on natural resources in general and hydro ecosystems in particular.



The conference was an essential step towards bridging the knowledge gap and coming up with pragmatic recommendations that could be applied to reduce the impact of climate change on water and environmental resources. The conference was addressed by the Dean of the Faculty of Social Sciences, Dr. Satam Al Shaqour, who sternly warned about the alarming rate at which climate change is taking place, saying it was a driving force behind most natural disasters across the globe. He referred to the melting Arctic ice caps due to rising temperatures worldwide as evidence of the extreme nature of these changes. Such happenings only prove that there are emerging reasons for global collaboration while, at the same time, universities like Mutah have a great role in fostering scientific knowledge and searching for appropriate solutions for such problems. The discussions during the conference emphasized that it has become imperative to adopt scientific methods of monitoring the effects of climate change, specifically regarding water resources, as these have a direct bearing on marine and coastal environments.

One of the essential speakers who led the discussion was Prof. Ibrahim Al Aroud, a climate studies and remote sensing expert who presented a comprehensive lecture on the implications related to climate change for marine and water ecosystems. His work contributed extensively to the knowledge of drivers of change in the aquatic system, emphasizing the importance of remote sensing technology toward effective monitoring and analysis of such changes. This approach not only helps in deciphering the actual status of marine environments but also assists in devising evidence-based policies regarding conservation. The event also stressed that there is a need for collaboration between different sectors of varied nature but with common interests in the conservation of the environment. Chair of the Preparatory Committee, Prof. Firas Al Zyoud, explained that the conference should be research-oriented and application-focused, requiring genuine collaboration among the participating universities. This would be one v collaboration in translating research findings into practical measures to protect marine ecosystems and deal with increasing pollution, overfishing, and a changing climate. Conceived in its broader sense, SDG #14 offers this conference organized at Mutah University as a venue for knowledge exchange and regional collaboration toward better protection of marine resources.

It emphasized how climate change threatens both marine and freshwater ecosystems, but above all, it allowed experts to devise concrete recommendations that could reduce these impacts. Events of this kind prove the leading role of Mutah University concerning the protection of scientific research and collaboration for global shared goals of sustainability.

SDG15: Life on Land at Mutah University

SDG 15 calls for the protection, restoration, and sustainable use of terrestrial ecosystems, underlining the need to ensure that forests are managed sustainably, desertification is combated, and land degradation and biodiversity loss are halted and reversed. The commitment to SDG 15 at Mutah University is part of the University's operational activities, which influence various educational, research, and community engagement activities geared toward promoting sustainable use of land and conservation of biodiversity.

Mutah University Initiations for Supporting SDG 15

Arbor Day Celebration by the Faculty of Agriculture In tune with the life on land theme of SDG 15, the Faculty of Agriculture at Mutah University organized an Arbor Day program to draw attention to the ecological importance of tree planting in combating desertification and land degradation. Prof. Arafat Awajan, the former university president, highlighted that increasing the area of tree cover has a symbolic meaning. However, it also plays an essential role in ensuring the sustainability of agricultural systems and hence is part of food security, a foundational element in sustainable ecosystems.



Strategic Partnerships for Sustainable Agriculture The University also developed a partnership with the Islamic Charity Organization of Kuwait, focusing on agreed sustainable agriculture. This initiative targeted appropriate community-based approaches that would strengthen the role of

agriculture in supporting local economies and ecosystems. Dr Mohammad Al Saraira cites the above initiative as an example of how academic and external partnerships can support improved academic outcomes and ensure sustainable land management practices.

Faculty of Agriculture Celebrated Arbor Day

The former President of the University, Prof. Arafat Aajawn, sponsored the celebration held by the Faculty of Agriculture on Arbor Day (13/3/2023). Aajawn added that the epitome of giving, or goodness, would be tree planting, an expansion in which the care of the land is deepened as a responsibility of national institutions toward highlighting how vital the agricultural sector is in any national economy and food security.

Research Impacting Biodiversity and Sustainable Agriculture

Biodiversity Research: The following paper, to be presented by Prof. R. M. Al Atiyat and entitled Geographical Distribution and Biodiversity of Domesticated Animals of Jordan, discusses past and present biodiversity regarding domesticated animals in Jordan. This research contributes to knowledge on biodiversity conservation within agricultural practices to meet the focus of SDG 15 to see life on land sustained through informed land and species management.

Crop Protection Innovations: Current Advances in the Fall Armyworm, *Spodoptera frugiperda*, Management in Crops by Dr. F. Al Zyoud et al., the authors describe environmentally friendly methods of managing crop pests. This work is important for continued crop health without using methods that may harm the ecosystem.

References

1. Geographical Distribution and Biodiversity of Domesticated Animals of Jordan: History of the First Millennium and Current Situation : Al Atiyat R. M. (2022). Geographical Distribution and Biodiversity of Domesticated Animals of Jordan: History of the First Millennium and Current Situation. *The Arab World Geographer* 25(2 3) 137 153.
2. Current Advances in the Fall Armyworm (*Spodoptera frugiperda*) Management in Crops: Comprehensive Review : Al Zyoud F. Al Dawood A. Al Atiyat R. & Mamkagh A. (2022). Current advances in the fall armyworm (*Spodoptera frugiperda*) crop management: comprehensive review.

SDG16: Peace, Justice, and Strong Institutions

Among the key activities comprising this value integration, Mutah University, as a commitment to attaining Sustainable Development Goal 16 that promotes peaceful, just, and strong, accountable institutions, has arranged an interactive workshop on integrity and anti-corruption measures that underline its commitment to fostering an academically transparent and ethical environment.

Key Initiative: Interactive Workshop on Integrity

On December 27, 2022, Mutah University held an important workshop in cooperation with the Anti-Corruption Commission to deepen understanding and application of standards related to integrity and anti-corruption in the university framework. This was part of a wider campaign to raise awareness and involvement of academic and administrative leadership regarding the commitment to adherence to and implementation of legal and ethical standards in daily practices and wider administrative functions.



Workshop Content and Impact

- Educational Presentations: Anti-Corruption Commission representatives explained the modus operandi within the Commission, with a bias toward law enforcement integrity, prevention, and compliance. These subjects of discussion included the fine details in investigating corruption cases and the roles of various directorates within the

Commission, such as the Investigation Directorate and the Operations and Witness Protection units.

- **National Integrity Standards:** The workshop also highlighted the national integrity standards taken up by the Commission, including the rule of law, accountability, justice and equality, equal opportunity, transparency, and good governance. Indeed, the aforementioned tenets are quite indispensable in nurturing a culture of integrity at Mutah University and beyond.
- **Compliance and Preventative Measures:** Compliance with these standards and prevention measures established by the Anti-Corruption Commission were discussed. Compliance is a prerequisite for any risk assessment and one of the most important activities in preventing corruption in many sectors, including higher education.

National Integrity Index: briefing on the National Integrity Index launched in August of the same year to measure compliance with integrity standards in 100 government entities, including universities. This index should be a very important tool for ensuring that institutions like Mutah University, hold themselves to a high degree of integrity and accountability.

The workshop represents one very important step for Mutah University in its commitment to SDG 16 regarding providing an appropriate standard of academic excellence and enabling an institutional culture that prides itself on justice, transparency, and accountability. Participation by Mutah University in such initiatives means it is developing better administrative practices while contributing to the broader goal of establishing solid corruption-resistant institutions in Jordan and beyond. Efforts toward this noble end are instrumental in establishing a just, peaceful, and inclusive society, as envisioned in SDG 16.

SDG17: Partnership to achieve the goals Goal

Mutah University is considered one of the major academic institutions in Jordan in promoting sustainable development through education, research, and community service. This commitment reflects a range of initiatives and policies aimed at achieving the Sustainable Development Goals (SDGs) in parallel with its commitment to developing a sustainable learning environment, reflecting its commitment to its academic and social responsibilities. The University aspires to establish an academic environment that supports building such a sustainable society through education, research, community involvement, and strategic partnerships. On equal measure, these efforts bear testimony to the fact that higher education is indispensable for attaining sustainable development and enhancing life quality for future generations.

The following activities highlight some of the most outstanding ones carried out by Mutah University during the year 2023 to attain the goal of sustainable development No. 17

IREEDER Workshop on Erasmus Plus-funded project

Under the patronage of the University's Vice-President, Prof. Marwan Al Mousa, a workshop was held at the College of Engineering concerning the Erasmus Plus-funded project, which aimed at enhancing the capacity of higher education institutions in Jordan that includes ten partners, five Jordanians, and five Europeans, led by Al Hussein Bin Talal University. The modernization of university curricula through the introduction of modern technologies aims to equip graduates with skills relevant to labor market needs. Advanced laboratories and the development of teaching materials, teaching, and training are also part of this; the participants are open to cooperation between universities to achieve common scientific goals. 5/10/2022.

Mutah participates in Edu Track Exhibition – Sultanate of Oman

The ninth edition of the Edu Track Oman Higher Education and Training Exhibition, which was opened under the patronage of the Ministry of Higher Education Scientific Research and Innovation in the Sultanate of Oman, started today and will continue until the 12th of this month in Muscat. The Undersecretary visited the pavilion of Mutah University and expressed his admiration for the variety of its specializations and academic reputation. Prof. Saif Al Nawaisa presented the University's achievements and efforts to attract students from Oman. On an equal footing, the Jordanian Ambassador to the Sultanate of Oman visited the university pavilion and praised efforts to improve academic programs. The pavilion also included introductory films and publications about the University's faculties. This was within the

Jordanian pavilion organized by the Jordan Tourism Board and the Ministry of Higher Education in Jordan, 11/10/2022

Seminar on Domestic Violence: Prevention and Treatment Queen Rania Center for Psychological and Educational Studies

The scientific symposium entitled "Domestic Violence: Prevention and Treatment" was held in cooperation between the Family Protection Department and the Danish Refugee Council as part of the "16 Days Against Gender-Based Violence" campaign. Dr. Wejdan Al Karaki, Director of the Queen Rania Center for Psychological and Educational Studies, indicated that domestic violence is an increasing phenomenon, which calls for highlighting its causes and ways of prevention and treatment. The symposium included scientific papers about the mechanism of work at the Protection Department, Family factors that lead to domestic violence, and the role of the Danish Refugee Council in providing psychological support. Finally, a seminar discussion was held emphasizing concerted efforts in family protection to attain community safety. 21/12/2023

Selected Examples of Scientific research supporting SDG17

Mu'tah University emphasizes research, particularly in achieving the 17th Sustainable Development Goal through enhancing academic partnerships. The University seeks to collaborate with local and international institutions, strengthening its research capabilities and facilitating the exchange of knowledge and expertise. Through these partnerships, innovative research projects are developed that contribute to sustainable development, ensuring the provision of sustainable solutions to contemporary challenges. Below are some of these published studies:

Alghababsheh M. Butt A. S. & Ali S. M. (2023). The role of buyers justice in achieving socially sustainable global supply chains: the perspective of apparel suppliers and their workers. *Journal of Purchasing and Supply Management* 29(2) 100820.

Al Okaily M. Alkhwalidi A. F. Abdulmuhsin A. A. Alqudah H. & Al Okaily A. (2023). Cloud-based accounting information systems usage and its impact on Jordanian SMEs' performance: the post COVID 19 perspective. *Journal of Financial Reporting and Accounting* 21(1) 126 155.



Conclusion

Through various targeted initiatives and policies, Mutah University has committed itself to the cause of sustainability to ensure alignment with the United Nations Sustainable Development Goals. The University works on enhancing energy efficiency, promoting renewable energy, reducing carbon emissions, fostering gender equality, supporting academic freedom, and combating discrimination, among other areas of its comprehensive commitment to sustainable development. This report presents the proactive role played by the University in contributing toward the SDGs through challenges and practical solutions developed within various domains.

Besides this, the University has also carried out plans such as the "Energy Efficiency Plan", "Carbon Management Initiatives", and "Mutah University Climate Action Plan 2021 - 2025" that underline a commitment towards energy sustainability and reduction of environmental impact. Policies such as the "Equality Promotion Policy" and "Policy Against Slavery and Human Trafficking" ensure a supportive and safe environment for all, hence supporting social sustainability.

For more information about recent sustainability initiatives at Mutah University, please visit: <https://www.mutah.edu.jo/SustainabilityGoals/List.aspx>. This page overviews ongoing and past initiatives, including sustainability reports, energy management plans, and other strategic efforts to create a more sustainable and equitable future.

Selected examples of events during 2022 2023 and the addressed SDG

	Event/Activity	SDG Classification	Date	Hyperlink
1.	Mutah University: Al Majali sponsors the graduation of the Young Entrepreneurs Course Yes Jo	SDG 4: Quality Education	2022 09 06	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=516
2.	Karak Governorate Council visits the University.	SDG 4: Quality Education	2022 09 12	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=518
3.	Memorandum of Understanding between Mutah University and Aoun National Cultural Association	SDG17	2022 09 13	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=519
4.	Mutah University: Scientific research partnerships with prestigious universities	SDG 17; SDG4	2022 09 25	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=522
5.	The Faculty of Business at Mutah University obtains quality assurance certificate	SDG 4: Quality Education	2022 09 25	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=521
6.	Honoring ceremony for one of the pillars of the College of Nursing	SDG 8:	2022 10 03	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=523
7.	IREEDER Workshop on Erasmus Plus funded project	SDG 17: Partnerships for the Goals	2022 10 05	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=524
8.	Mutah participates in "Edu Track – Sultanate of Oman" exhibition	SDG 17: Partnerships for the Goals	2022 10 11	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=526
9.	Educational Sciences celebrates Teacher's Day .	SDG 17: Partnerships for the Goals	2022 10 12	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=528
10.	Graduation of graduate students at the Royal Police Academy	SDG 4: Quality Education	2022 10 12	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=527
11.	Mutah: The College of Nursing holds its eleventh scientific day	SDG 17: Partnerships for the Goals	2022 10 18	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=530
12.	Mutah: College of Sharia celebrates the anniversary of the birth of the Prophet	SDG 17: Partnerships for the Goals	2022 10 18	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=529

	Event/Activity	SDG Classification	Date	Hyperlink
13.	Mutah: delegation from the Doha Institute for Graduate Studies visits the University.	SDG 4: Quality Education	2022 10 18	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=531
14.	Opening of the Pharmacovigilance Center for the Southern Region at Karak Governmental Hospital.	SDG 3: Good Health and Well being	2022 10 20	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=532
15.	The University Hosts the Closing Day of the I Am Energy Not Disability Project	SDG 4: Quality Education	2022 10 20	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=533
16.	Mutah University participates in the activities of the Egyptian and International Universities Forum (Edu gate).	SDG4; SDG17	2022 10 20	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=534
17.	Mutah University hosts the dialogue meeting on the map of modernization of the public sector .	SDG 8	2022 10 25	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=535
18.	Mutah University: The Faculty of Social Sciences holds its first geographical conference .	SDG 15; SDG13	2022 10 25	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=538
19.	Mutah opens the First International Conference on Science and Pharmacy	SDG 16: Peace Justice and Strong Institutions	2022 10 27	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=536
20.	Agreement between the University of Mutah and Sfax Tunisia .	SDG 4: Quality Education	2022 10 27	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=537
21.	Mutah University: Opening of IEEE Day	SDG 4; SDG17	2022 10 27	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=539
22.	Mutah celebrates new students	SDG 17: Partnerships for the Goals	2022 10 30	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=540
23.	On behalf of the President of the University Prof. Amin Akl Dean of the Faculty of Pharmacy sponsored the awareness campaign about breast cancer	SDG 3: Good Health and Well being	2022 10 31	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=541
24.	Mutah hosts the third Sports and Health Conference	SDG 3: Good Health and Well being	2022 11 01	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=543
25.	Mutah University: The Faculty of Engineering organizes scientific workshop specialized in energy storage	SDG 7	2022 11 01	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=542

	Event/Activity	SDG Classification	Date	Hyperlink
26.	Inauguration of the Technical Exhibition of the Center for Entrepreneurship and Innovation at Mutah University	SDG 9	2022 11 21	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=544
27.	Deputizing for the Minister of Higher Education and Scientific Research Aujan sponsors the opening of the international conference "Emerging Trends in Computing and Engineering Applications"	SDG 4: SDG17	2022 11 23	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=545
28.	Human resources represented by the Department of Personnel Services and the Rehabilitation and Training Division hold an Excel course for the purposes of qualification and skills development.	SDG 8	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=546
29.	Mutah University : Faculty of Agriculture and Dar Abu Abdullah sign joint cooperation agreement	SDG2: SDG15	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=549
30.	Queen Rania Center for Psychological and Educational Studies in cooperation with the Drug Control Administration Al Rashid Hospital for Psychiatry and Addiction and the College of Educational Sciences. Holds seminar entitled (The Scourge of Drugs: Prevention and Treatment)	SDG 3: Good Health and Well being	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=548
31.	Mutah University: The Faculty of Sharia holds competition ceremony for memorizing Surat Al Nur.	SDG 4: Quality Education	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=550
32.	Mutah University : The National Center for Community Rehabilitation launches community strategy	SDG 10	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=551
33.	Mutah University: Al Riyada Center and Karak Youth Center launch the Herfaty initiative	SDG 9 SDG10: SDG8	2022 12 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=547
34.	Mutah University : Workshop on the modernization and development of the political system in Jordan	SDG16	2022 12 18	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=552
35.	Mutah University: Workshop on Job Compliance	SDG 8	2022 12 18	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=554
36.	Mutah University honors outstanding students	SDG 4: Quality Education	2022 12 19	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=555
37.	Mutah University: Launching the TEDx event at the University for the first time	SDG 4; SDG 9	2022 12 21	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=556

	Event/Activity	SDG Classification	Date	Hyperlink
38.	Mutah University : Aujan sponsors the closing ceremony of the project to strengthen social protection in Karak Governorate	SDG 4: Quality Education	2022 12 27	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=558
39.	The President of Mutah University receives Saudi military delegation	SDG 17	2022 12 28	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=559
40.	Mutah: The UUniversity celebrates the graduation of its international students .	SDG 4: Quality Education	2023 01 11	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=560
41.	Mutah University : Al Jafot President of the Asian Society for Endometriosis	SDG 3; SDG17	2023 02 14	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=565
42.	Mutah University : research team participates in the Cairo Science Forum	SDG 17	2023 02 14	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=562
43.	Mutah University Participates in the Leadership Development Program	SDG 4: Quality Education	2023 02 14	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=561
44.	Mutah University: Tarawneh represents Mutah University in the Study UK Alumni Award	SDG 4: Quality Education	2023 02 14	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=564
45.	Mutah University : Faculty of Information Technology and Center for Entrepreneurship and Innovation	SDG 9	2023 02 14	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=563
46.	In cooperation with the College of Engineering Human Resources holds workshop entitled Public Safety and Occupational Health .	SDG 3: Good Health and Well being	2023 02 15	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=566
47.	Human Resources holds workshop on the ethics of electronic publishing .	SDG 12: Responsible Consumption and Production	2023 02 20	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=569
48.	Mutah University : MU president participates in the launch of the European project AGRO TEC	SDG 4: Quality Education	2023 02 20	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=567
49.	Mutah University participates in the closing ceremony of the work of the I Participate program .	SDG 4: Quality Education	2023 02 22	https://www.mutah.edu.jo/Lists/News/Disp_Form.aspx?ID=573