



# SUSTAINABILITY REPORT 2018 -2020

## MUTAH UNIVERSITY

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**Mutah University**

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# MESSAGE FROM THE PRESIDENT

Based on the vision of Mutah University and its mission to develop a sustainable community environment, the university has been keen, since the issuance of the royal decree to establish it in 1982, to employ its teaching activities and research efforts to achieve this vision and deepen it. We are proud that Mutah university achieved very well in the THE impact ranking 2020, **Mutah university has been ranked among the top 100 universities** all over the world in the SDG16, peace, justice and strong institutions.

During the past years, Mutah University Strived to meet the needs of the individuals of the local community by providing opportunities to learn, work and actively participate in making the people feel safe, healthy and ultimately happy. Therefore, many initiatives have emerged to promote the appreciation, protection and enhancing the environment. Moreover, Mutah University has worked hard to enhance economic success by building capacity for students to do business without causing any environmental damage, encouraging volunteer work among student communities and bodies, moving towards clean sources of energy, and making the university's scientific and recreational facilities available to the local community.

***Towards a competitive university that is distinguished by leadership in the fields of academic and military education, scientific research and sustainable development of society.***

His Majesty King Abdullah II emphasized that sustainable development has become a vital demand. Henceforth, Mutah University has set its sights on launching strategically in a system that aims to address poverty, unemployment, climate change, food security, environmental pollution and heritage preservation, through teaching courses, research projects and integration with the industrial sector in order to enhance the knowledge economy and sustainable development.

Thank you for taking the time to read this report and for everything you do to make our University and global community a more sustainable place.

**Prof .Arafat A. Awajan**  
**President**

# ABOUT THIS REPORT

This summary report shows examples of progress made towards each of the 17 goals set in Mutah's environmental sustainability strategy. The report is sectioned into Academics, Operations, and Engagement and marks out the relevant projects and initiatives carried out at Mutah University up to during the last two years.

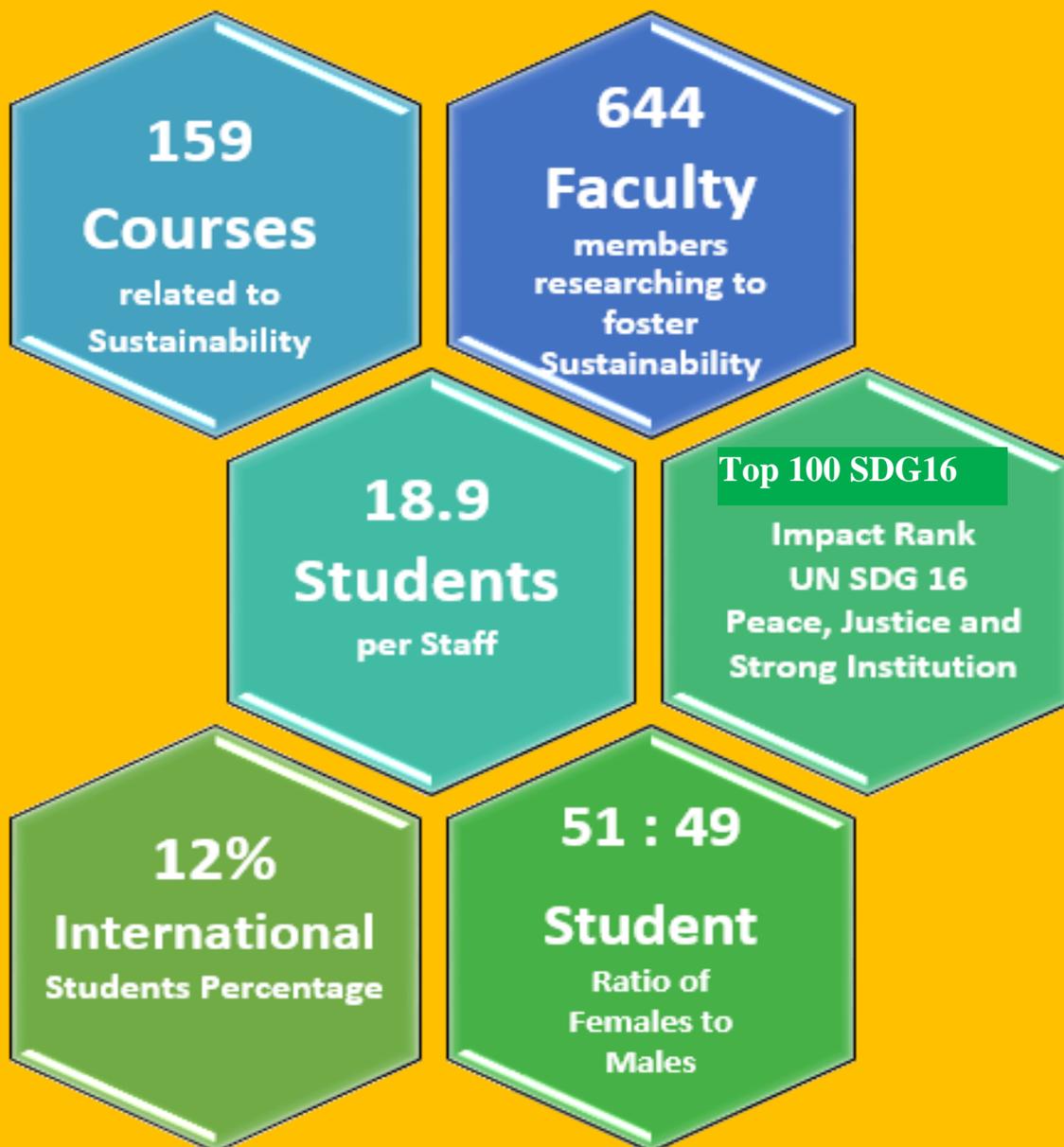


By definition, sustainability means maintaining the integral health of the environment, society and the economy today and in the future. While this report focuses on environmental performance related to Mutah University, it recognizes the mutually reinforcing links to financial and social sustainability.

We are proud to present the first sustainability report highlighting the University's shift towards a more comprehensive definition that allows us to incorporate sustainable development best practices into our academic, research and participatory work. Thus, this report covers a wider range of activities than in previous years.

Mutah University is dedicated to coordinate the data within this report to meet the United Nations Sustainable Development Goals (SDGs), as well as the Environmental Sustainability objectives established under Mutah's University Strategy (2020-2025).

# Key Statistics



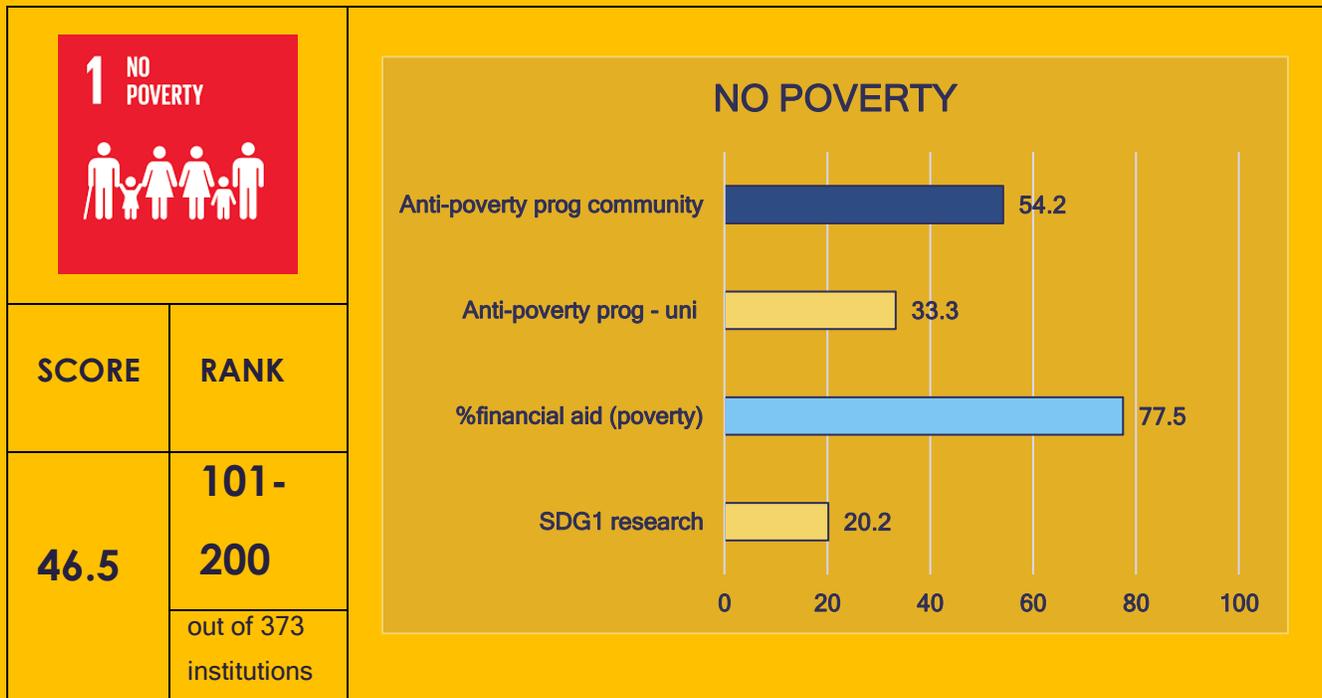
# THE Impact Ranking 2020



## Sustainable Development Goals Breakdowns



# SDG1



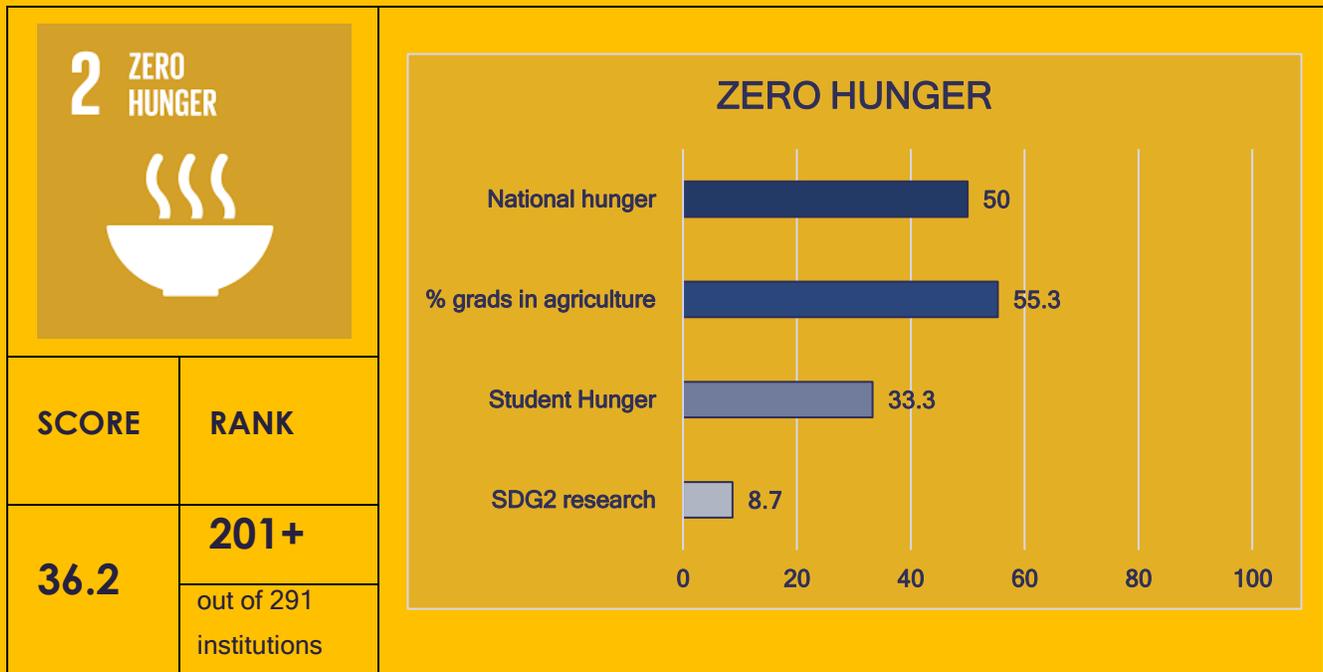
Mutah University has started its anti-poverty efforts since its beginning in 1986; these efforts have targeted the people inside the camp (students and employees as well as the local community). During the past two years, many efforts have been done; these efforts can be divided into three streams as follows:

1. Supporting programs: various divisions in Mutah University such as Loans and Assistance Division and Career Guidance and Alumni Office and well Financial Affairs Unit. have provided some of the programs. These programs have been modified and expanded by instructions to cover more slices of stakeholders.
2. Workshops, Events and Conferences aimed to deal with Poverty: Mutah University launched many activities that aimed to identify the real reasons behind poverty phenomena in Jordan. One of these activities is the poverty survey developed by a team of Mutah's University researcher within the tasks of JOB-JO Project directed by Mutah University. More Than A Job Project is another project supported by the European Union

where Mutah University participated to solve poverty by tackling unemployment problem.

3. Research and Educational courses have targeted the poverty phenomena by pursuing to identify the indicators affecting the poverty level in Jordan. These efforts are translated by many initiatives to equip the individuals of the local community to face challenges by training as the initiative started in 20<sup>th</sup> April 2018 targeting young people from the local community in Karak Governorate, which would qualify them for the labor market, and take advantage of the quarantine period imposed by the current circumstances, in providing a training and rehabilitation program, through remote communication applications.

# SDG2



There is an urgent need for major transformations in food systems and behaviors to ensure food security, and to achieve the United Nations Sustainable Development Goals. Technological innovation is a prerequisite for the transition to sustainable food systems. But technology alone cannot achieve the required transformation, which will require the strategic use of economic incentives, new forms of governance, and changes in existing values and behaviors.

Applying Sustainable Food Systems

- To increase the proportion of all on-campus food and beverage that are produced locally.
- To ensure that that all food and beverage used conform with sustainability requirements.
- To deliver new programs, services, and events to strengthen communication to campus users on the health and environmental impacts of everyday food choices.

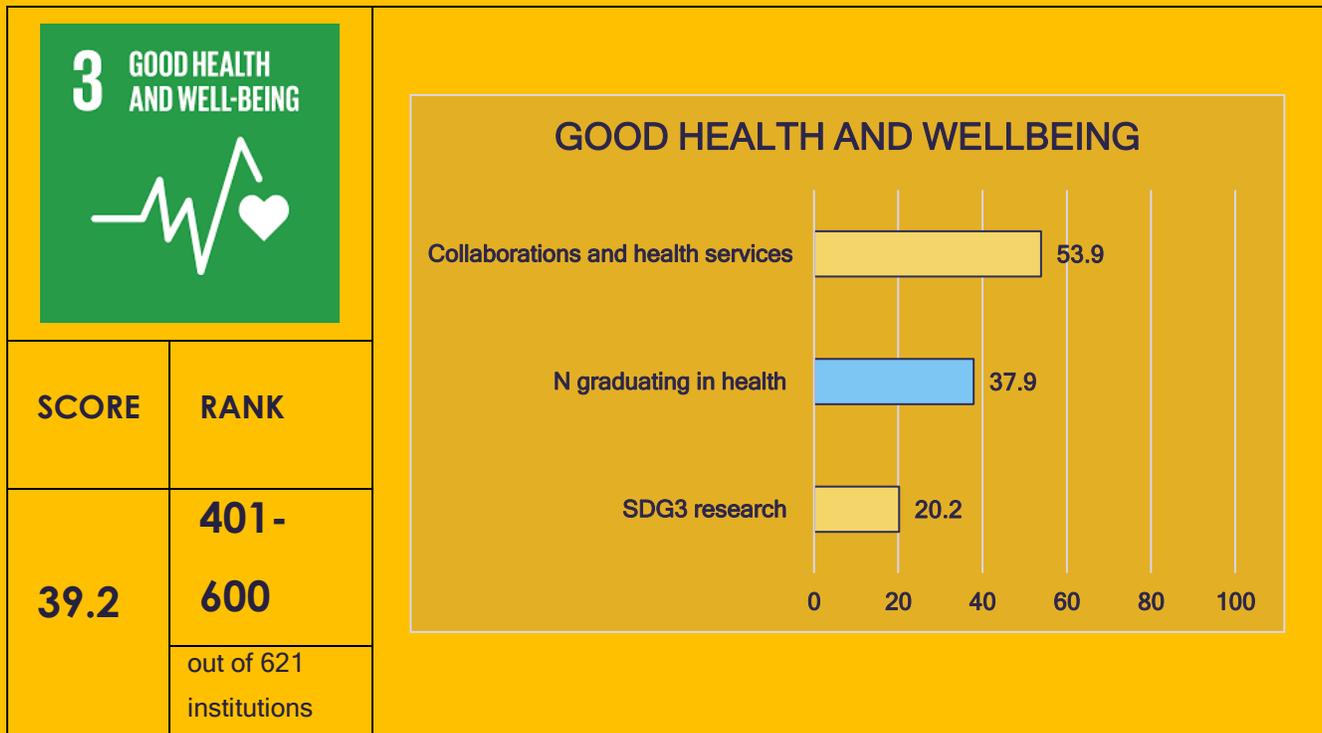
Training

- Holding periodic training courses for students and the local community on how to conduct sensory examinations for meat and training them in the health and safety checks of fresh and cooked meat in the College of Agriculture
- Holding nutritional counseling workshops on a regular basis for students and the community on diseases of the age such as diabetes, hypertension, hyperlipidemia and malnutrition.
- Holding Scientific activities that promote the sustainable of services of environmental systems

Department of Supply and Nutrition

- Prepare meals for students, faculty members and administrators, as well as for conferences and parties that are held at the university.
- Providing restaurants and cafeterias within the university with the necessary materials to manufacture food and drinks in accordance with health conditions and the sustainable development goals
- Follow-up of the manufacturing mechanism of meals and the mechanism of work within the conditions of public health and safety, follow-up and control the safety of the meals and sandwiches provided, and write periodic reports

# SDG3



- **Research on health and well being**

The number of students in medical undergraduate programs in Mutah University has increased from 2993 in 2017 to 3597 in 2019. While the students of graduate medical programs increased from 37 in 2017 to 67 in 2019. The research papers in health and well-being fields have increased from 43 to 96 in 2020 according to Scopus database.



Many healthcare projects have been funded either locally or internationally such as:

- The effectiveness and feasibility of using high-fidelity simulation in enhancing the clinical training of nursing students.
- Assessment of infection prevention and control in operating rooms at Karak governmental Hospital.

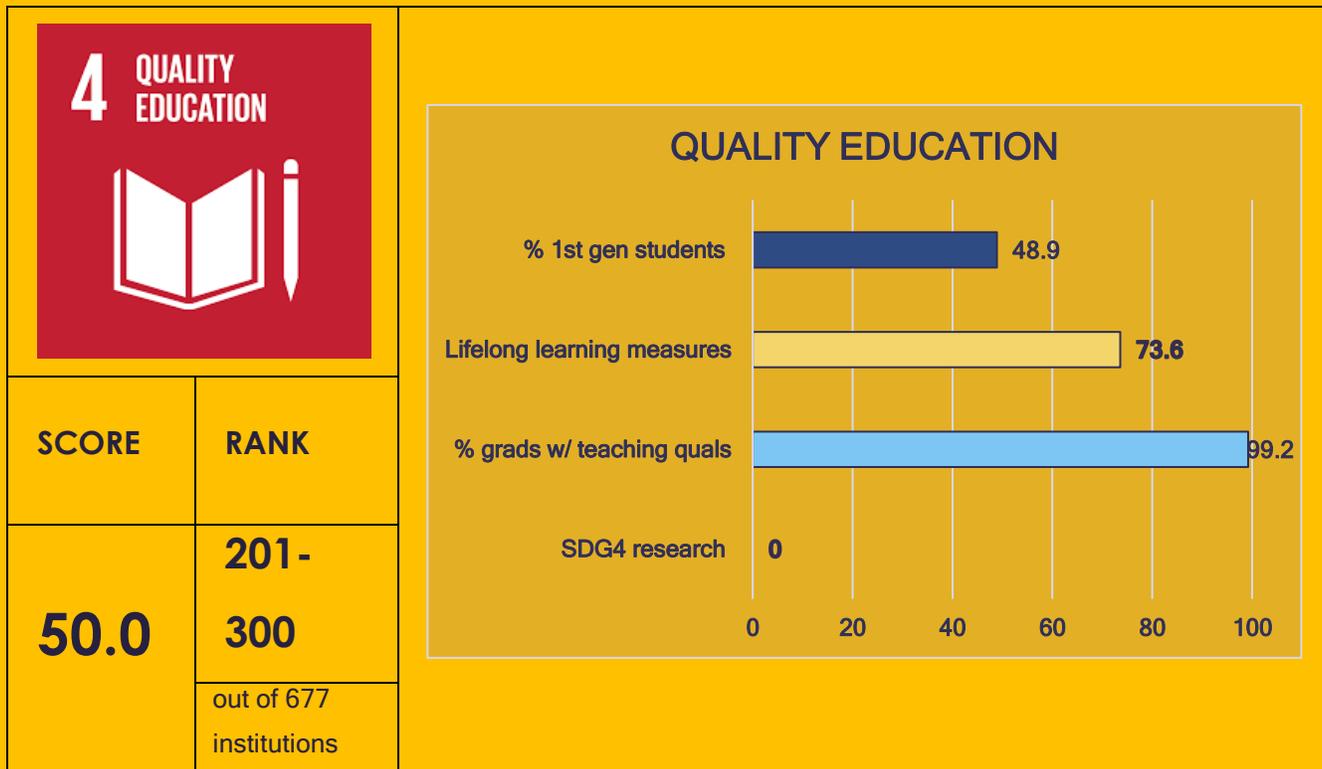
- The prevalence of iron deficiency anemia and its association with vitamin D deficiency among Jordanian children in Karak governorate.
- Patient protection culture in accredited primary health centers in Jordan.
- **Number graduating in health professions**

Mutah University has witnessed a considerable increase in the number of the graduates as the number jumped from 470 in 2017 to 678 in 2019. Teaching halls equipped with the latest technologies were established for medical students, and computerized halls containing about 700 computers were established with the aim of making a qualitative leap in the process of providing computerized exams at the college and making it easier for students to submit their exams easily and easily. Moreover, a laboratory, the first of its kind in the region, for clinical skills in the college was opened to teach the student how to make a correct diagnosis and perform elaborate medical treatments for the patient, and the laboratory is considered a pioneering achievement in the march of medical education in Jordan and the region.

- **Collaborations and health services**

- Accrediting Karak Governmental Hospital as a teaching hospital and providing it with 33 specialized doctors from the college in all different medical specialties.
- The agreement with the Royal Medical Services represented by Prince Ali Military Hospital in Karak, stipulating that the faculty members of the college work in medical and surgical work in the hospital supervise clinical training for students.
- The college of Medicine won the Prince Saud bin Nayef bin Abdulaziz Prize for cancer research in the Middle East and the Arab world, as well as the recognition of the California Medical Council.
- In January 2020 Professors of the Faculty of Medicine in the Orthopedic Department started training the specialist cadre and residents of the Ministry of Health to conduct joint replacement operations to sustain their routine implementation as they were not performed in this quantity and type in Karak Governmental Hospital, which makes it easier for citizens in the southern governorates to obtain distinguished medical services.
- Academic cooperation with the University of Navarra, Spain, with the aim of promoting education in the field of public health administration in the medical faculties to serve the educational process in them.

# SDG4



Mutah University offers each graduate an opportunity to get engaged with sustainability challenges during his study. Issues like climate changes, clean energy, social justice and world peace are tackled and prevalent among all disciplines. Courses like “Environmental Education (0801103)” is a University Perquisite course for all colleges of Mutah which synchronizes with UN Sustainable Development Goal 4.

Many educational programs have launched to reinforce the concept of Sustainability utilizing innovation and integration with the industry. Among these programs, “Master in Sustainable Development and Renewable Energy”. The main goal of the program is to provide a high quality education for Jordanian students in the key aspects of Renewable Energy and Energy Efficiency (REEE), therefore, enabling them to take responsible, creative, challenging and stimulating

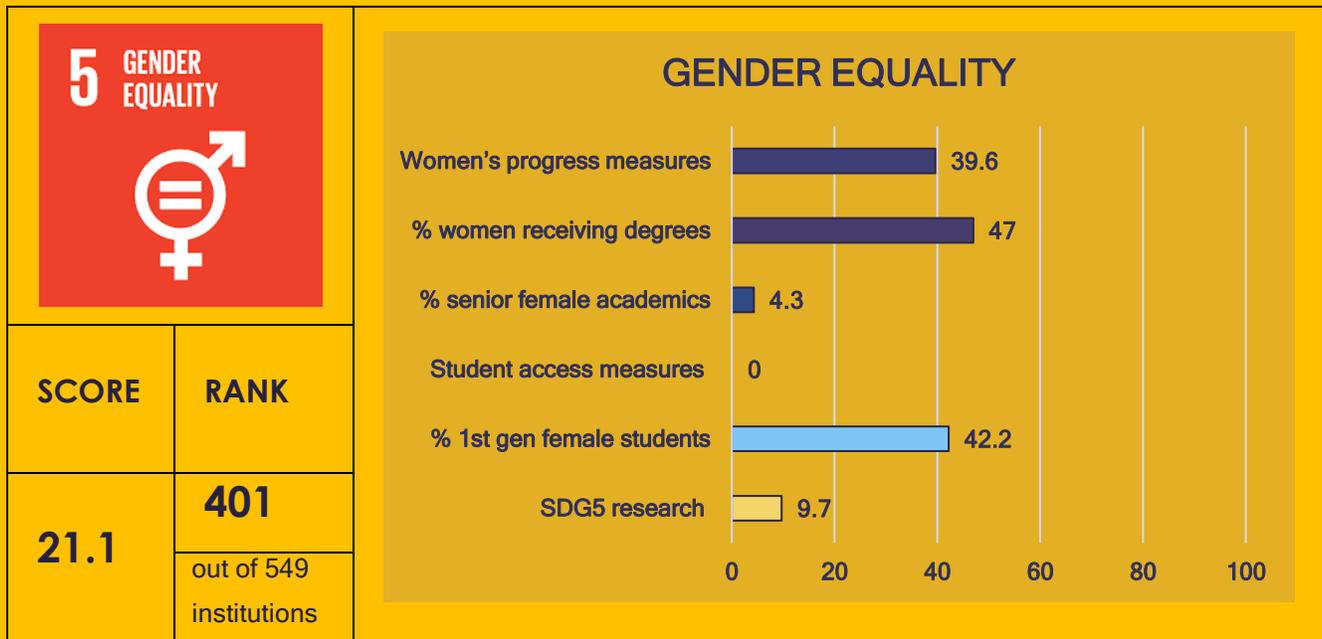


posts in industry or research in this exciting field. So, UN Sustainable Development Goals 9 & 17 are achieved with other programs offered by Mutah where most of the Master Theses addresses real and practical environmental issues across the country.

- Enhancing research opportunities, grants and solutions for sustainable development
- Ensuring sustainability in daily research practice
- Boosting the curricula with sustainability related courses
- Ensuring undergraduate students from any program of study will have the opportunity to learn about sustainability in their courses.
- The research projects provided by the researchers of Mutah University encapsule a wide range of disciplines that mainly concentrate on topics tackling sustainability related topics.
- Confereces, workshops and scientific days are continually in-campus to demonstrate sustainable development challenges and solutions.
- Scientific centers in cooperation with Scientific Research Deanship at Mutah University strive to make partnership with organizations that interested to promote sustainability solutions in the local community and world -wide. Many scientific initiatives were started that provide such a great contribution in addressing and solving environmental issues.



# SDG5

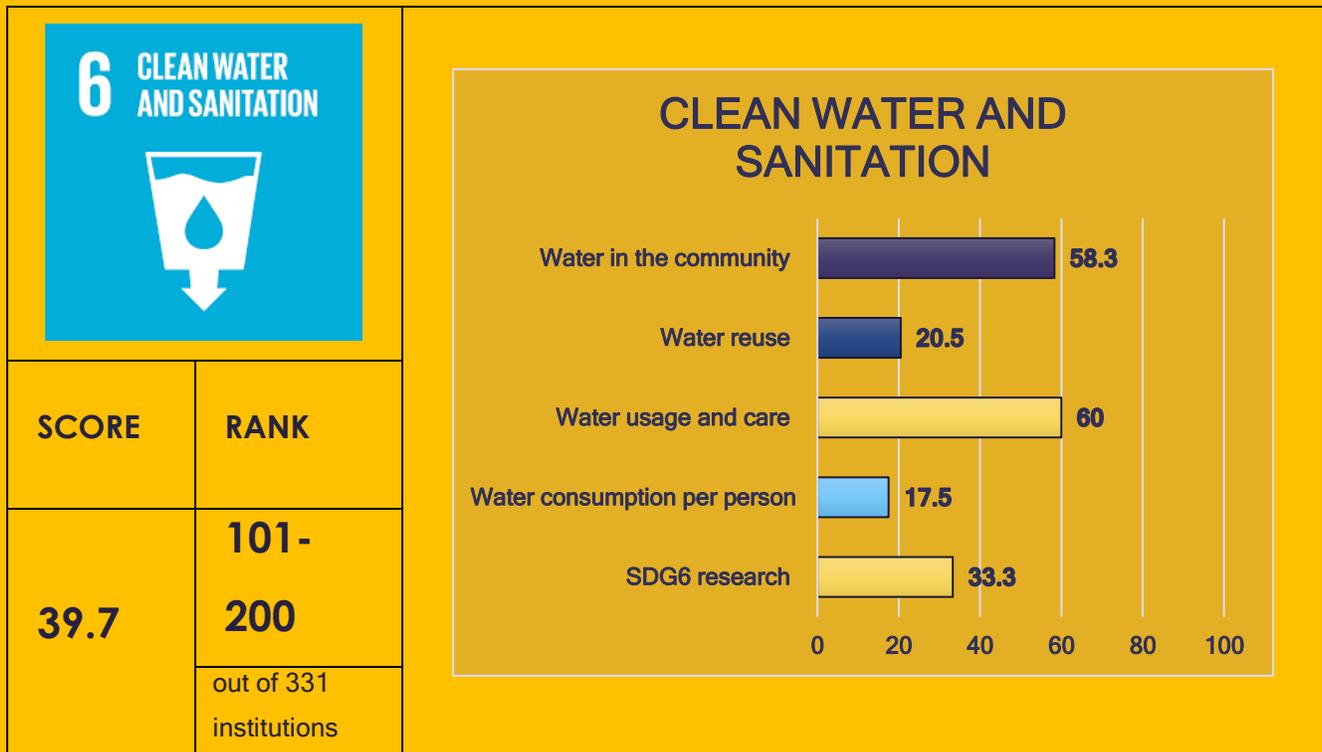


Many conferences and workshops were prepared and attended by researchers in Mutah University; an example is the workshop in July 2019 that discussed enabling women within the Erasmus+ project (JOB JO). Moreover, many researchers from Mutah University have participated in initiatives that pursue to Activate national strategies that can help improve the performance of the women's sector.



In 2019, many symposiums were held in Mutah University discussed issues related to Women such sexual harassment. Participation of women in political life, mental health of women and children and the role of family problems and their reflection on children. Moreover, the research papers related to gender equality has increased by 60.71% compared to 2017. As well as, the percentage of women academics has increased by 13.3% compared to 2017. Queen Rania Center for Educational and Psychological Studies developed many initiatives that tackle issues related to gender equality. The financial support of the research projects of the Female students was equal to 71.4% of the total support provided by Mutah University for students

## SDG6



According to Scopus database, the number of published article in the field of water has raised to 69 document in 2019 compared to 52 documents in 2018. Moreover, Mutah University has financially supported many research projects from academic staff and students of Mutah University in the field of clean water, such as:

- Evaluating the level of a group of heavy metals and various ions in the water and silt of the Tannour Dam in Tafila Governorate.
- The effect of reuse of treated wastewater for irrigation on soil and plants.



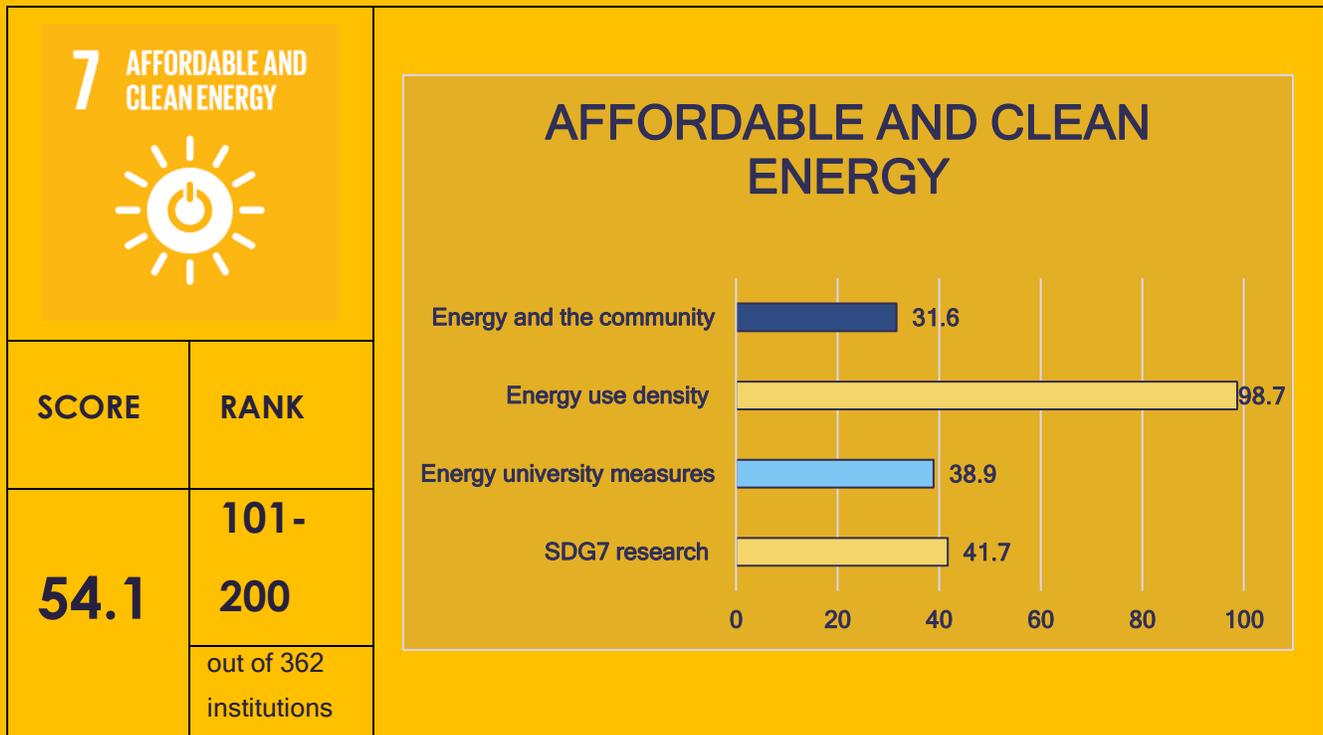
Mutah University has a Water Treatment Station that plays an important role in providing the University with clean water for irrigation purposes as well as there do the employees Club

located in the campus of the University to provide drinking water direct a desalination plant. Prince Faisal Center participates greatly in water research projects at both national and international levels.

Faculty of Engineering has performed many projects in applying renewable energy in producing water by either the students or academic staff of the university such as TRI-GENERATION PLANT.



# SDG7



Mutah has launched the first stage of its solar energy project to produce 5 MWe satisfying 80% of its needs of electricity. The second stage will also utilized clean energy resources to reach its full demand. Moreover, Mutah turned to LED lighting equipment that increases the efficiency of electrical power usage. As well as, LED lighting participates in reducing heat emissions that contribute to face global warming reduction.

In 2018, Mutah started to consider strategies for climate change adaptation, in areas of Air, water, waste and public health. Certain agreements have been signed to utilize these strategies in best way.

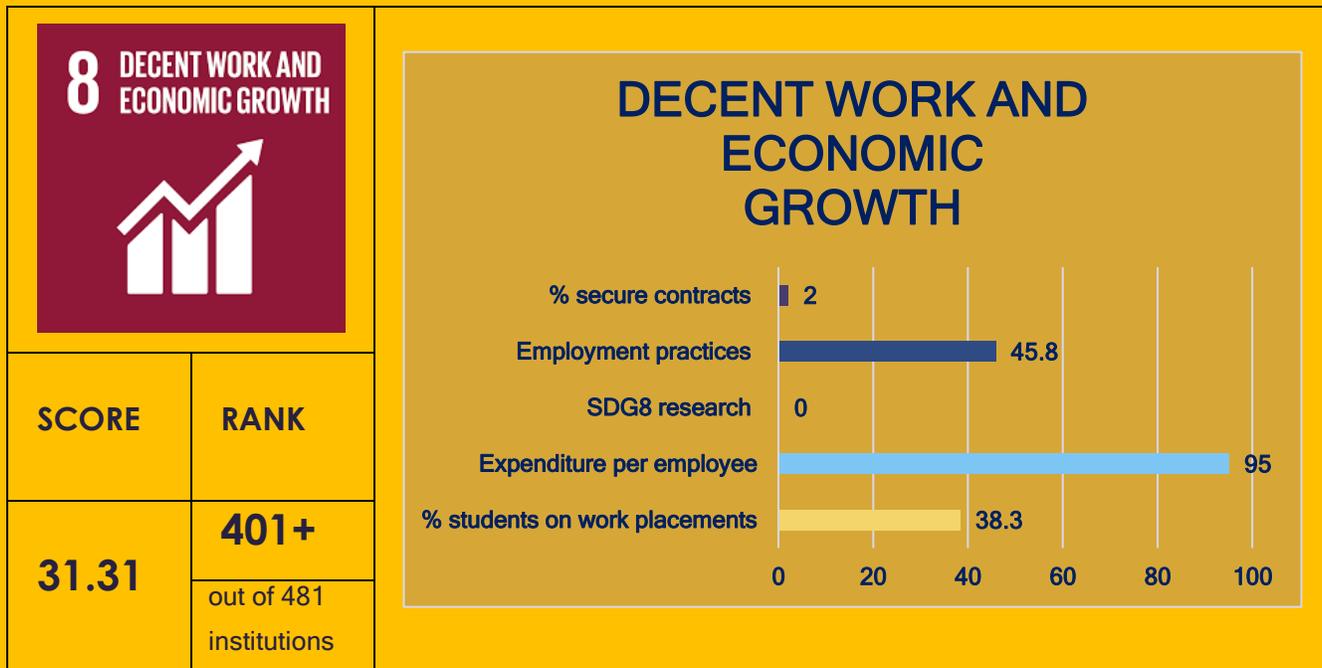


All academic and operational sustainability efforts for Mutah begin and end with people. Learning, research and action come by embedding sustainability practices into campus culture. During 2018 and 2019, Mutah continued its efforts to engage students and staff in campus practices to advance common goals. Among them are the Green Energy Academy program in cooperation with the South Korea Energy Corporation Ltd. (KOSPO) and the Korea Trade and Investment Promotion Agency (KOTRA).

Mutah pursue to develop programs for incoming students during orientation and in residences to encourage sustainable living on campus. As well as, by the end of 2021 it will establish a sustainability leaders program in partnership with students from residences, clubs and societies, student government, and for students in off-campus housing.



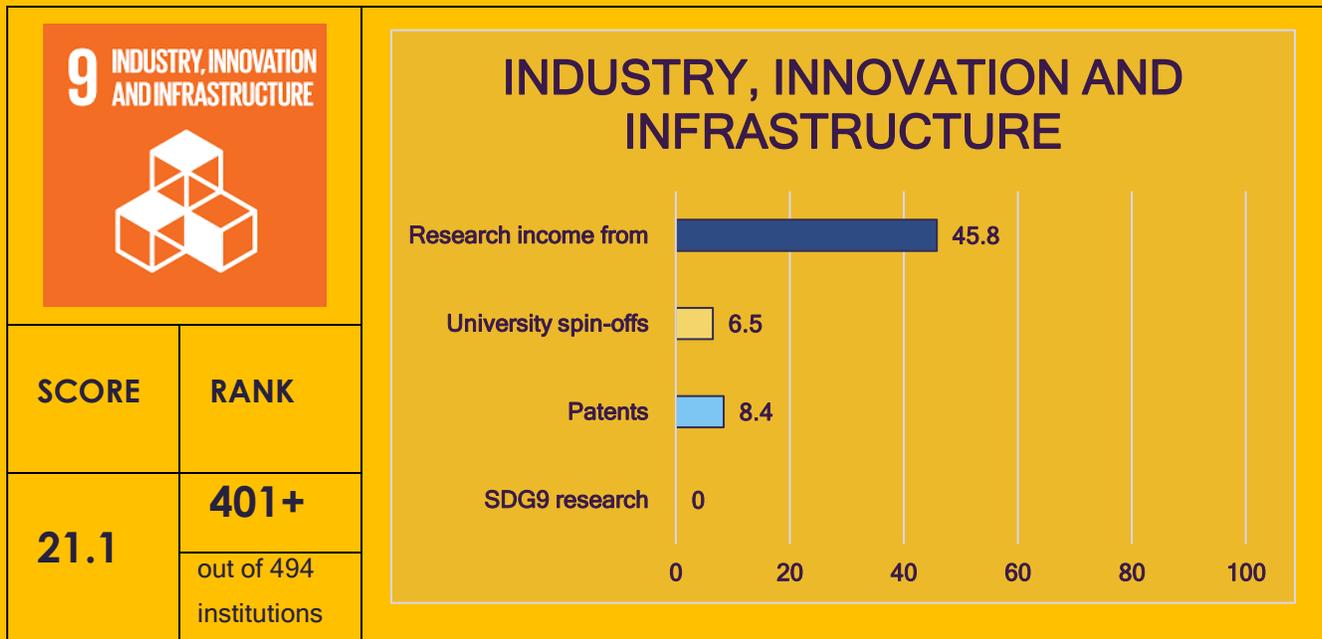
# SDG8



TechMiners Initiative :This initiative aims to enrich students' qualification for the labor market and spread the spirit of cooperation and leadership among them, as it works according to a well-thought-out plan that aims to train students to create sustainable projects within a simulated environment of the labor market environment so that the student - upon graduation - is able to manage any project in addition to their qualification To compete for career opportunities.

Mu'tah University, in cooperation with the Creativity Center and the Family Association, launched an initiative targeting young people from the local community in Karak Governorate, which would qualify them for the labor market, and take advantage of the quarantine period imposed by the current circumstances, in providing a training and rehabilitation program, through remote communication applications.

# SDG9



Mutah University has established a Technology Transfer Office at Deanship of Scientific Research to protect, develop and commercialize the scientific research efforts of the researchers of Mutah University. The office is responsible to execute the intellectual property instructions of Mutah University. Moreover, the office cooperate with WIPO by providing workshops in building Business models, patenting and commercialization.

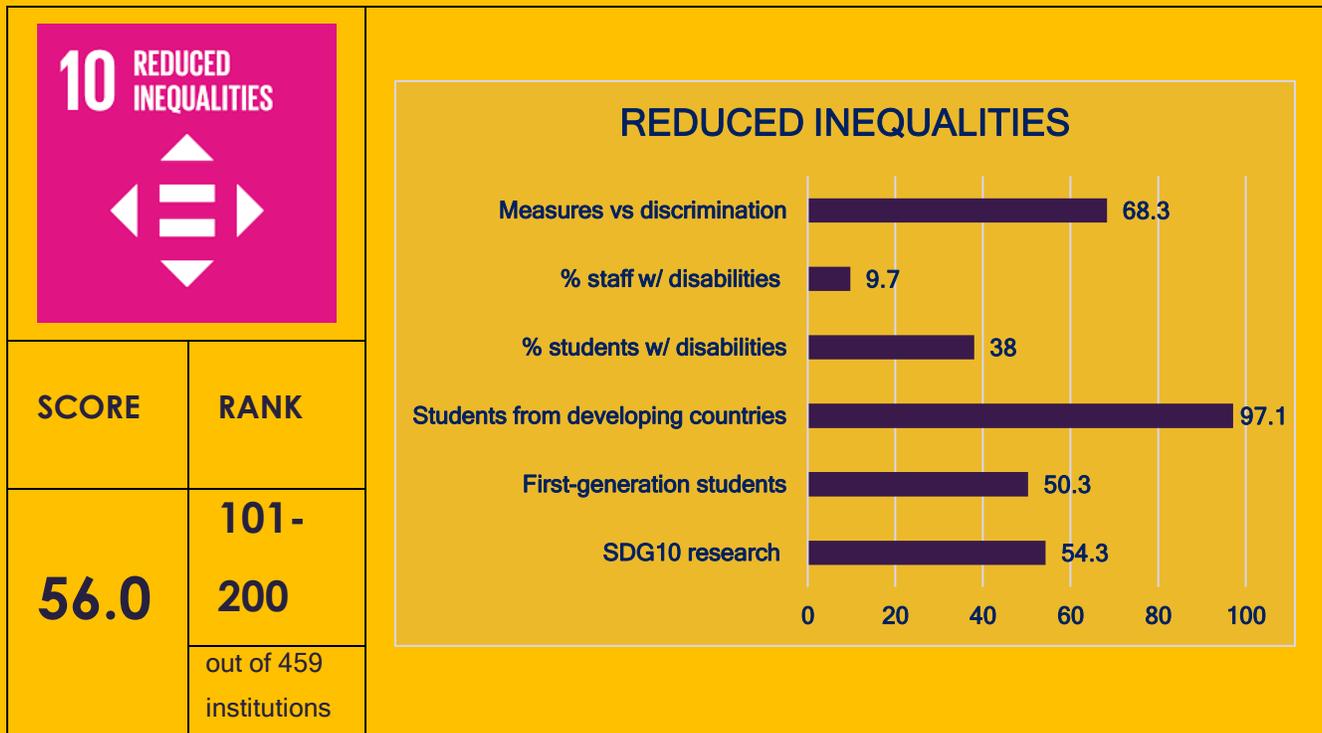
Technology and Innovation Support Center (TISC) provides innovators in Mutah University with access to locally based, high quality technology information and related services, helping them to exploit their innovative potential and to create, protect, and manage their intellectual property (IP) rights.



The Entrepreneurship Center was established to meet the reality of developing innovative ideas and projects by providing an appropriate environment for successful projects that aim to provide the target population with all possible material facilities and infrastructure that would raise the level of innovation, development and creativity around entrepreneurship. The Center considers a very important environment for the development of this knowledge and skills and the qualification of emerging knowledge partnerships resulting from the outputs of innovation and scientific research, which qualify them to contribute to the development of the local community and the knowledge economy, and to reduce the gap between university outputs and the renewed needs of the labor market. Especially since the world now no longer believes in traditional projects and that jobs that are scarce no longer meet the need, which calls for directing students to entrepreneurial projects and cultivating a culture of creative projects for graduate students.



# SDG10



In 2018, Mutah University has issued the Non-Discrimination Policy. Mutah University is committed to the highest principles of academic freedom, equal opportunity and human dignity the matter that requires that decisions involving students and staff be based on merit and not be subject to all forms of unwanted discrimination. This nondiscrimination policy applies to admission, employment, access, and treatment through university programs and activities.

Mutah University has developed a comprehensive plan aimed at integrating students with special needs into its educational programs and extracurricular and extracurricular activities. Mutah University has been keen to put in place legislation, courses, financial and moral support, and special equipment for the various types of disabilities that these students.

The research in this field has gained much concern from the researchers of Mutah University from College of Social Sciences, College of Educational Sciences and Queen Rania Center for Psychological and Educational Studies. Most of these studies came in the Arabic language to address societies and leaderships in their own language, so that they can make a difference in policies, procedures and strategies among cultures that may be characterized by closed-mindedness towards oneself and rejection of pluralism. This is what made the percentage of researches in internationally ranked journals somewhat small, as these journals are only accessible to the interested academic elite and far from the decision-making circles in the region.

It is important to mention that Jordan has witnessed a great development in the field of education. This led to a significant decrease in illiteracy rates among the population, as the illiteracy rate decreased from 11.0% in 2000 to 5.1% in 2019. Illiteracy is concentrated in Jordan in the age group 60 and over, reaching 26.7%. Jordan recently witnessed a steady increase in university admissions, which is reflected in the increase in the numbers of the first generation of students. This indicates that the percentage of first-generation students will decline over the next ten years. Accordingly, Mutah University provided university admission to students from less fortunate regions and provided many programs to attract them to achieve its mission in the development and sustainability of the local community.

During 2019, Mutah University has provided programs to attract developing countries, especially those that are subject to wars and crises. It has assisted to Syrian students, as well as to many needy students from countries such as Malaysia and others. There are also postgraduate programs to attract students from the Arab Gulf and abroad.

The Deanship of Student Affairs represented by the Special Needs Club, in cooperation with

"USAID", organized a campaign aimed at removing obstacles so that the special needs student could enjoy his/her rights and practice his/her university life on an equal basis with the rest of the students. As well as, Mutah University holds university proficiency

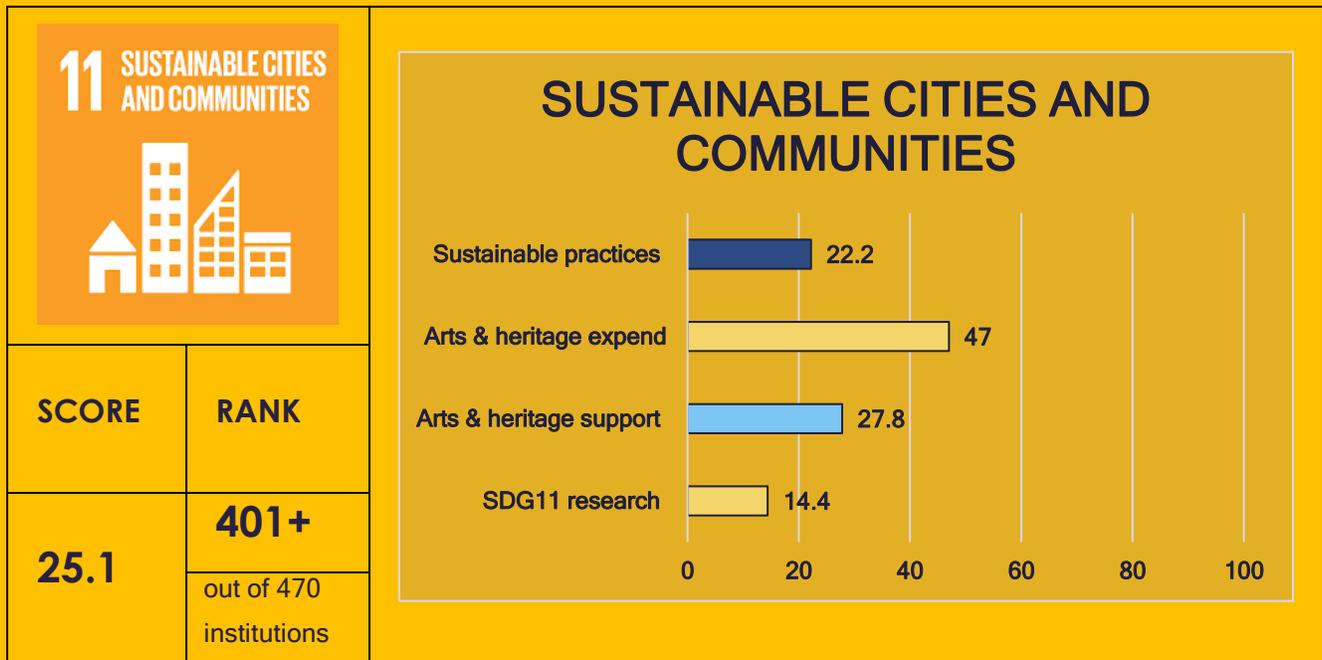


examinations (Arabic, English and computer) for students with special needs at times that suit them and in a way, that suits their needs.

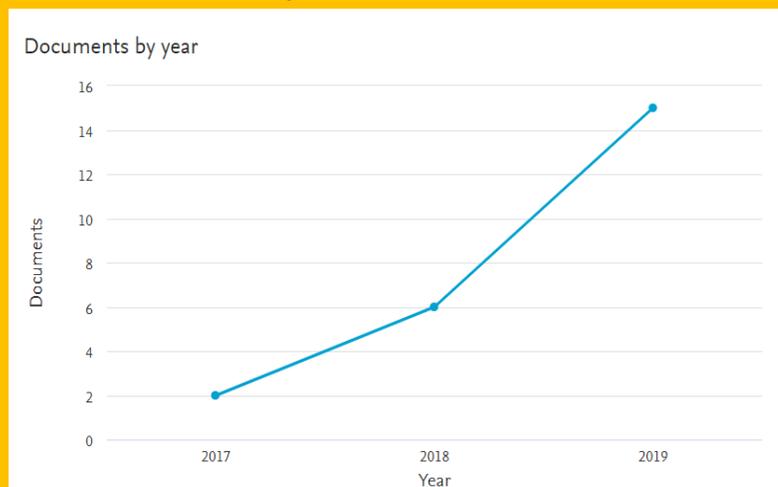
The Special Needs Division at the Deanship of Student Affairs/Mutah University was developed to carry out the following tasks: Respect the rights of students with special needs in obtaining education and knowledge; Psychological support for university students with special needs in their three categories: visual, auditory, and motor impairment.

The inauguration of the training program for psychometric tests (Stanford), which the National Institute for Community Rehabilitation intends to implement in order to achieve the visions related to community service that are an integral part of Mutah University's philosophy and mission.

# SDG11



The Figure to the right illustrates the number of documents published in the field of Sustainable Cities and communities. Although the number is still below the ambition, but one should recognize that the trend of these publication is increasing in rapid rate that an encouraging indication. As well as this graph, represents only published articles classified by Scopus and there are plenty articles that are not Scopus indexed.



The Local Community Development Unit preserves the vocabulary of the Jordanian heritage, especially in the southern region, and works on everything that contributes to deepening the authenticity of this heritage.

Mutah University holds many documentary studies on heritage buildings in Karak governorate and their role in tourism development, organized by the Renaissance and Heritage Club in the Department of Student Authorities and Activities at the Deanship of Student Affairs



In 2020, under the patronage of Prof. Dr. Arafat Awajan, President of the University, a memorandum of understanding was signed between the Prince Faisal Center for Research on the Dead Sea, Environment and Energy, Karak Star Recycling Company and Qotof Vocational Training Corporation. In 2018, Instructions for Reducing Plastic Waste - Mutah University were issued and continually reviewed.

A group of students at the University of Mutah decided to initiate a "book exchange" initiative in their colleges, in order to help students each other, and that the support be self-supporting. This is but one of the good sustainability practices in Mutah University. Mutah University issued

the followings in order to participate in reducing the bad effects of solid wastes and plastics instructions and Solid waste handling policies.

جامعة موتة  
Mutah University

GREEN SOLUTION

مستودع دعم البحث العلمي  
Bolanillo Research Support Fund

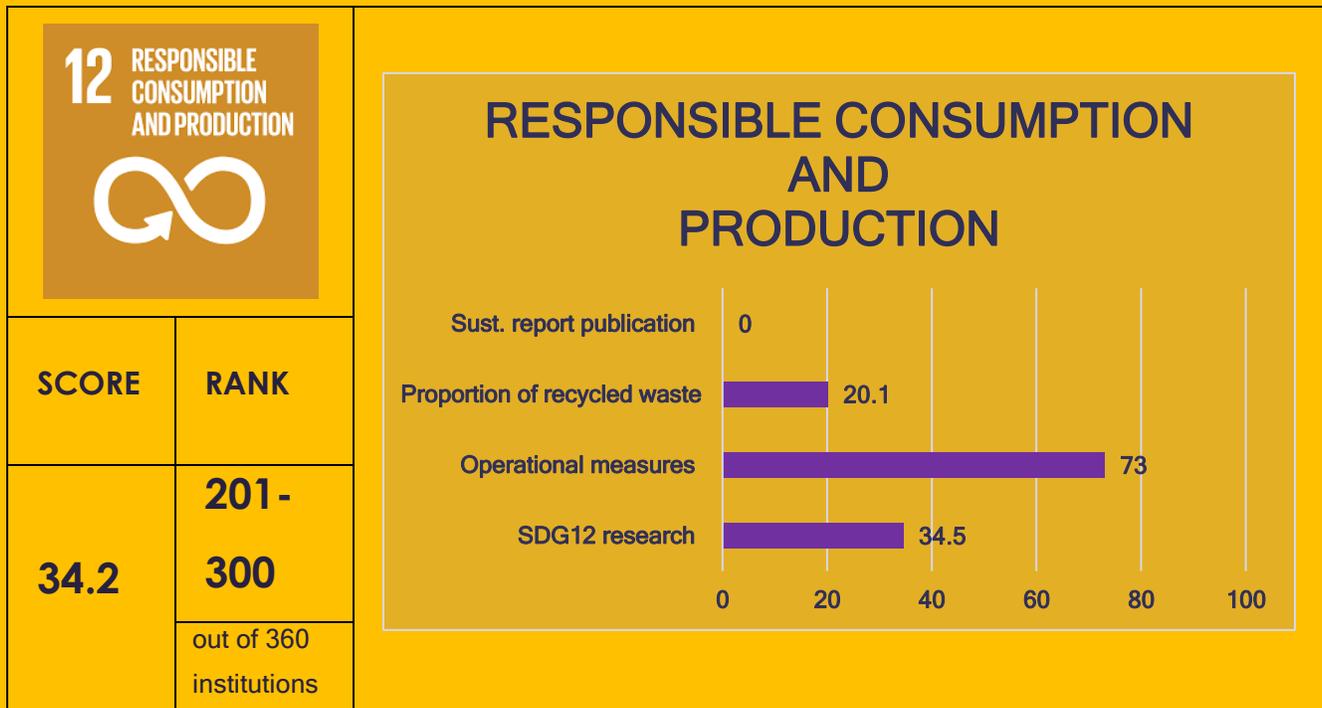
## Effect of olive mill wastewater (OMW) spreading on soil and plant growth under rainfed condition

Osama Mohawesh<sup>1</sup>, Husam Al-Hamaiedeh<sup>2</sup>, Samer Qaraleh<sup>3</sup>,  
Maisaa Haddadin<sup>4</sup>, Doaa Almajali<sup>4</sup>, Abdelraheem Bawalize<sup>4</sup>

<sup>1</sup>Department of Plant Production, College of Agriculture, Mutah University, Jordan.  
<sup>2</sup>Civil Engineering Department, Mutah University, Jordan.  
<sup>3</sup>Department of Nutrition and food technology, Mutah University, Jordan.  
<sup>4</sup>National Center for Agricultural Research and Extension (NCARE), Jordan.

International Conference on Water Management in Arid and Semi-Arid Land, 2017  
7-10 October 2017, Irbid, Jordan.

# SDG12



Mutah University has launched many policies that address topics such as ethically supplying supplies and food, dealing with solid and liquid waste and rainwater, as well as dealing with plastic waste and reducing the supply chain, which contributes to controlling spending and rationalizing consumption on campus. As well as, Mutah University started waste recycling in 2020.

Mutah University directed its cadres to apply sustainable procedures in all department such as:

- The number of internal and external transport trips at the university has been reduced in 2019 despite the



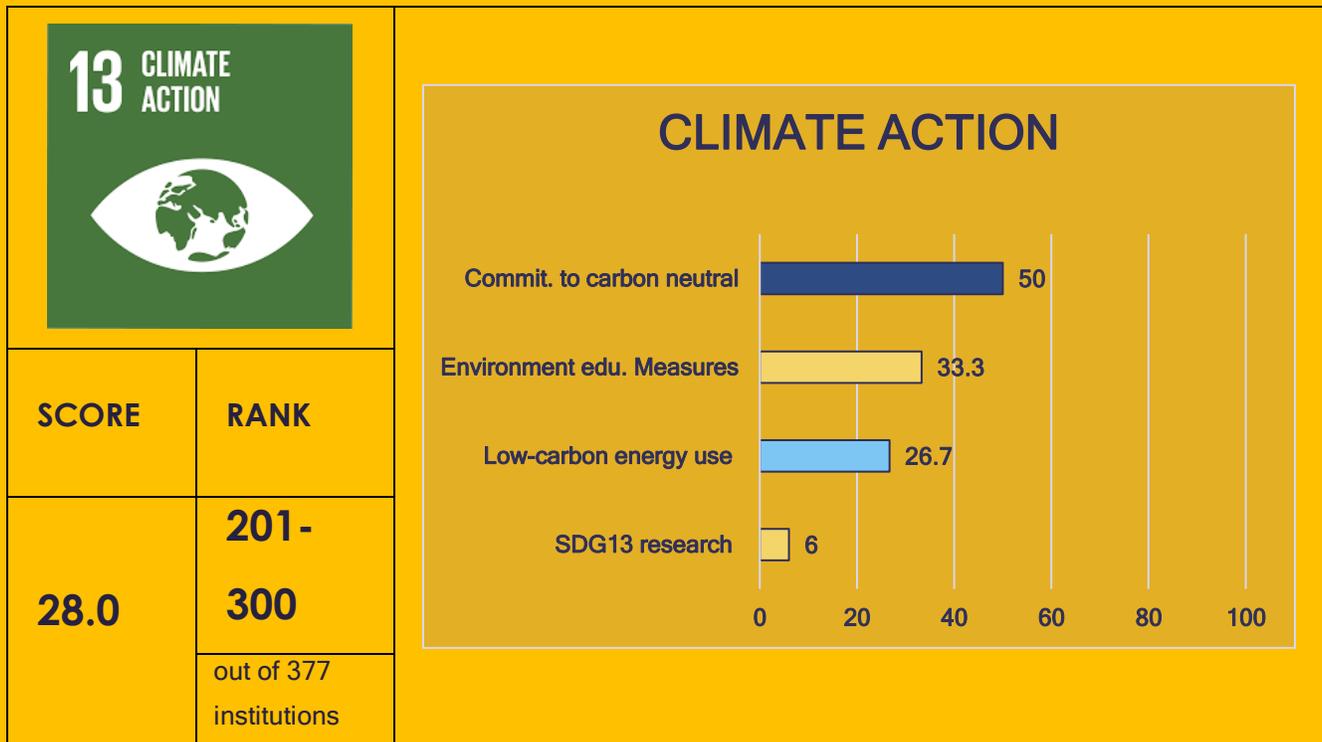
increase in the need for transportation, and thus the costs are reduced, in response to the directions of the university administration in achieving administrative and financial control, which is done by reducing the value of monthly spending.

- Establishing and operating a vehicle tracking system (GPS), to manage the fleet of (136) vehicles, as a tracking device for (23) vehicles was installed as a first stage rationally by controlling speeds, distances, operating and stopping hours, and geographical areas.
- Combining excursions (group trips) whenever possible to reduce fuel consumption.

Programming preventive maintenance operations and focusing on them (twice a year) that are reflected in vehicle performance and fuel consumption and reduce as much as possible the vehicle emissions.

- Controlling vehicle use and fuel consumption rates, and we suggest working on a gradual use of transport modes that run on electricity and others on the (Hybrid). As well as installing digital fuel meters on all university vehicles, so that vehicle fuel spending is controlled.
- The Faculty of Engineering at Mutah University organized workshops on the topic of energy management with smart systems and their applications in public life, especially in the field of energy consumption. Mutah University, as part of its educational strategy, launched a master's program in teaching energy management with smart systems during 2017, with the aim of completing the system of applied scientific education in the college and creating an educated generation that is ready for the local and global labor market, and this program is the first of its kind at the level of Arab universities. In the year 2019, the first batch of students of this program graduated.

# SDG13



Mutah University has funded many projects related to climate change such as “Recent Climate Change and its Influence on Vegetation Cover in Wadi Araba North, Jordan,” and “Hydro-geophysical and hydrochemical study of the effect of phosphate washing water on groundwater in Al-Abyadh mine.”

There are many studies published by Mutah University researchers that started from applied scientific studies and global initiatives such as the Jordanian Biochar Research Initiative, which aims to start a research project concerned with the application of Bio-Carbon technology in Jordan to help farmers in the optimal management of agricultural and water resources, which is reflected in Crop productivity and sustainable resource management in a positive way. According to the Strategic Sustainability Plan of Mutah University many initiatives have been considered such as: Fuel gauges have been installed in all Mutah’s University vehicles to control fuel depletion, Outbound flights are fine-tuned by merging shared destinations, There are studies to replace existing vehicles with hybrid vehicles, Preventive and periodic maintenance is in progress for vehicles, Work is underway to equip internal housing and increase its capacity to reduce the use of vehicles to and from the university, The campus walking culture is being promoted to alleviate the use of cars on campus.

Future projects for biochar

- Application of biochar in wastewater purification and polluted soil reclamation
- The application of biochar in purifying wastewater from olive presses
- The application of biochar to improve water resource management and soil fertility improvement in the Jordan Valley region

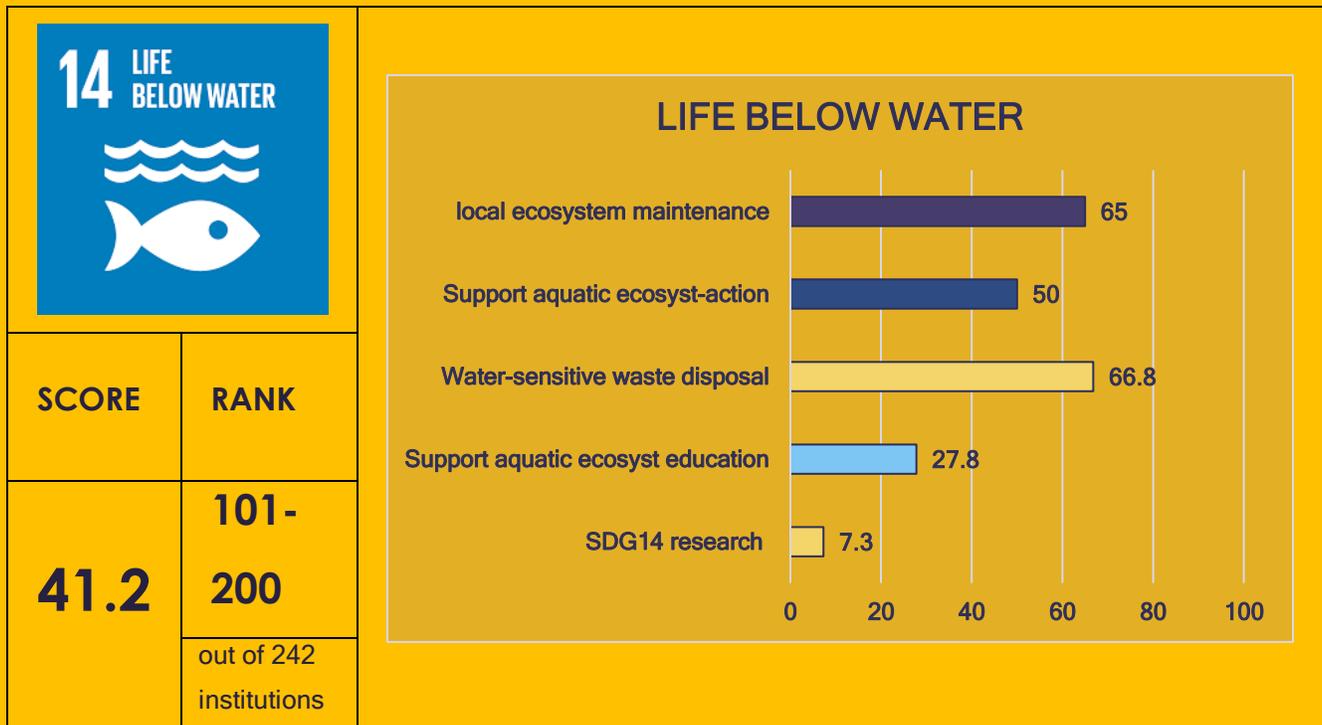
The Department of Geography at the College of Social Sciences / Mutah University offers many courses specialized in climate science, such as climatic geography, environmental hazards, dry lands, climate change, local climate and environmental education. As well as, Mutah University is in a process to develop a Climate Action Plan that is orchestrated with Mutah Sustainability Strategy to be issued at the end of 2020.

There are many research projects in the field of climate change funded by Mutah University such as “The vegetation composition of the natural cover and the cultivation and sowing of some local pastoral plants in Al Muhaisin Reserve.”

The road to low-Carbon University is stated at Mutah University by installing solar systems for electric power generation. As well as, installing renewable energies apparatus such as Fuel Cell Apparatus in Mechanical Engineering Laboratories. Moreover, reduction of vehicles usage inside the campus and encouraging walking culture.



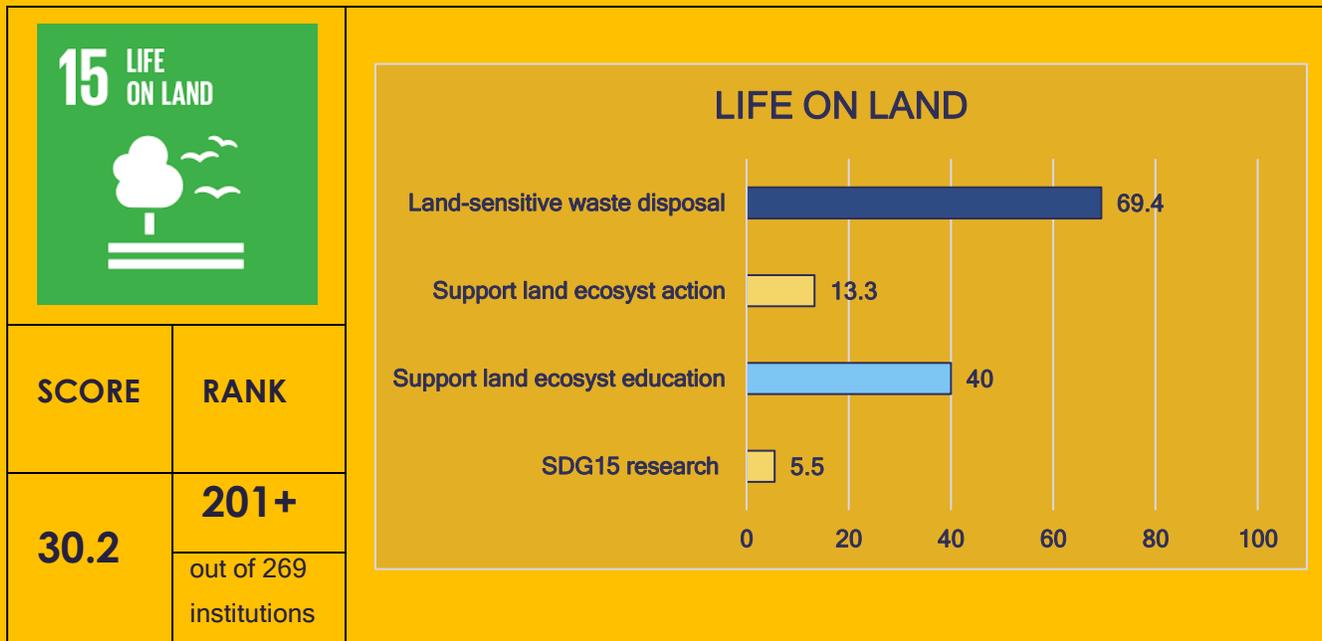
# SDG14



The mission of Prince Faisal Center for Dead Sea, Energy and Environmental Studies (PFC-DSEER) is to encourage, conduct, and coordinate Dead Sea, environmental, water and energy research and related activities. With primary emphasis placed on Dead Sea critical problems, PFC-DSEER programs expand to encompass national and international water, environmental and energy issues of common concern. PFC-DSEER goal is to be a nationally and internationally recognized center of excellence, with programs incorporating research, education and intelligence services directed toward finding solutions to the Dead Sea, environmental and energy problems in different areas. In addition, the Center serves as regional and national educational institution with ambient related research facilities. Although PFC-DSEER does not grant degrees, its affiliated faculty members/researchers serve as mentors and advisors for undergraduate and graduate students who will ultimately receive their degrees from their departments and faculties at Mutah University.



# SDG15



A campaign to plant seeds of forest trees in the Al-Muhaisin Pastoral Reserve of the Faculty of Agriculture at Mutah University in Karak Governorate, on Saturday 21-12-2019. More than (18,000) seedlings were produced within the university nursery for the year (2018/2019) in order to cover the university's needs and the needs of the local community.

The Horticulture and Gardens Division plant trees and plants of various kinds in the university's squares and gardens and in various locations. It also takes care of the trees and plantings planted on the university campus in terms of irrigation



service, cultivation, weeding, fertilization and pruning, and through a trained team in order to maintain their sustainability. It also cooperates with government institutions and volunteer bodies in the local community, with a contribution from the university, to prepare and design

plans for gardens and plant them and send specialists to institutions for shaping and pruning trees.

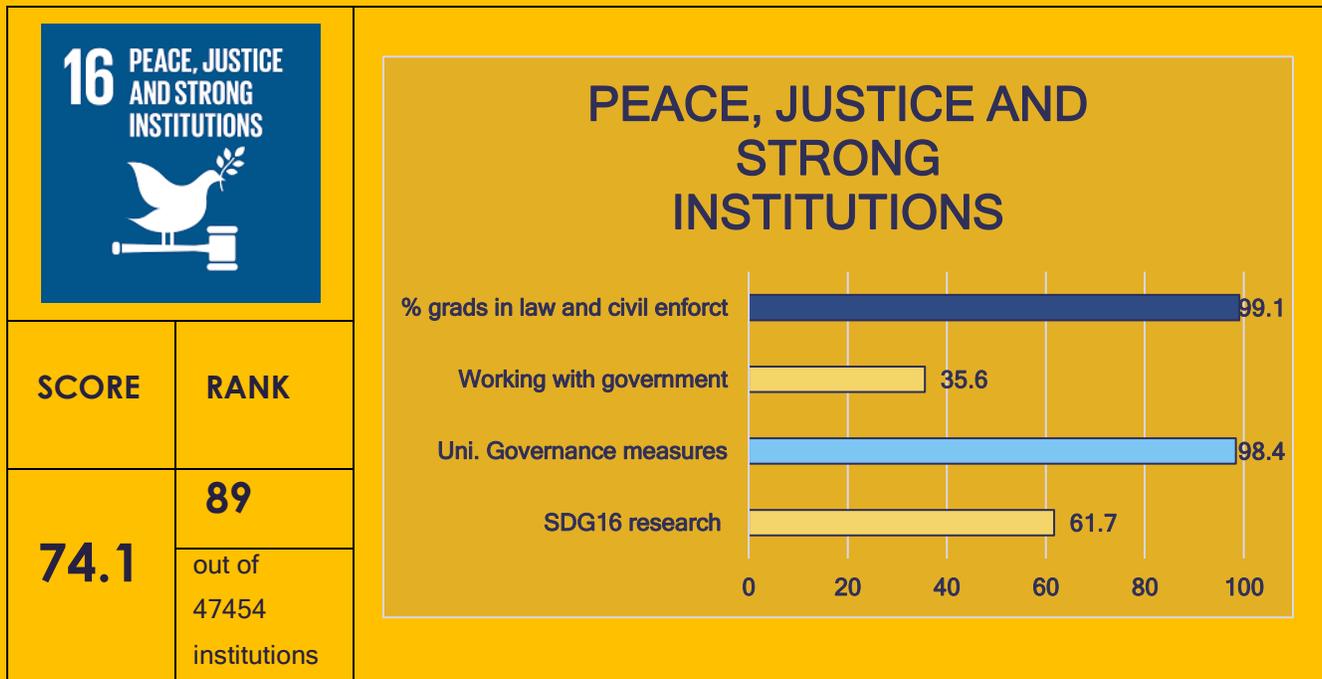
The Agricultural Research, Training and Extension Center of the College of Agriculture in the Southern Ghor region - Ghor al-Mazra'a, which has an area of 27 hectares, trains students in plantings and modern agricultural systems, as well as training and counseling farmers. An area of (30) hectares has been allocated in Ghor al-Safi for the implementation of projects and applied scientific research in cooperation with the institutions supporting scientific research and researchers from the college and the Kingdom.

Projects funded by Mutah University in 2019 related to Life on Land:

- Evaluation of some palm varieties (*Phoenix dactylifera* L) within the environmental conditions of Ghor Al-Mazra'ah / Karak Governorate.
- Genotype and selection of high-yielding strains from the Mixed Lycopene communities in Jordan.
- The effect of reuse of treated wastewater for irrigation on soil and plants.
- The effect of seaweed extract and humic acid on the growth and yield of sweet pepper under greenhouse conditions.
- The effect of degradable agricultural mulch on the growth and production of tomato crop under open cultivation conditions. The effect of color shading on pepper growth and water use efficiency.

The College of Science / Mutah University held the first wildlife exhibition organized by the College of Science in the mosque, with the aim of raising awareness and introducing wildlife in Jordan and its important elements, the nature of environmental diversity and the flora, fauna and natural patterns. It also aims to enhance the general understanding of wildlife, its diversity and richness, which strengthens cooperation to protect nature and build a national network of protected areas to preserve Jordan's biodiversity, is a national and cultural mission. The protection and development of pastures and wildlife is among the priorities of Mutah University, by extending bridges of cooperation with national bodies and institutions aiming to serve Jordan in all fields.

# SDG16

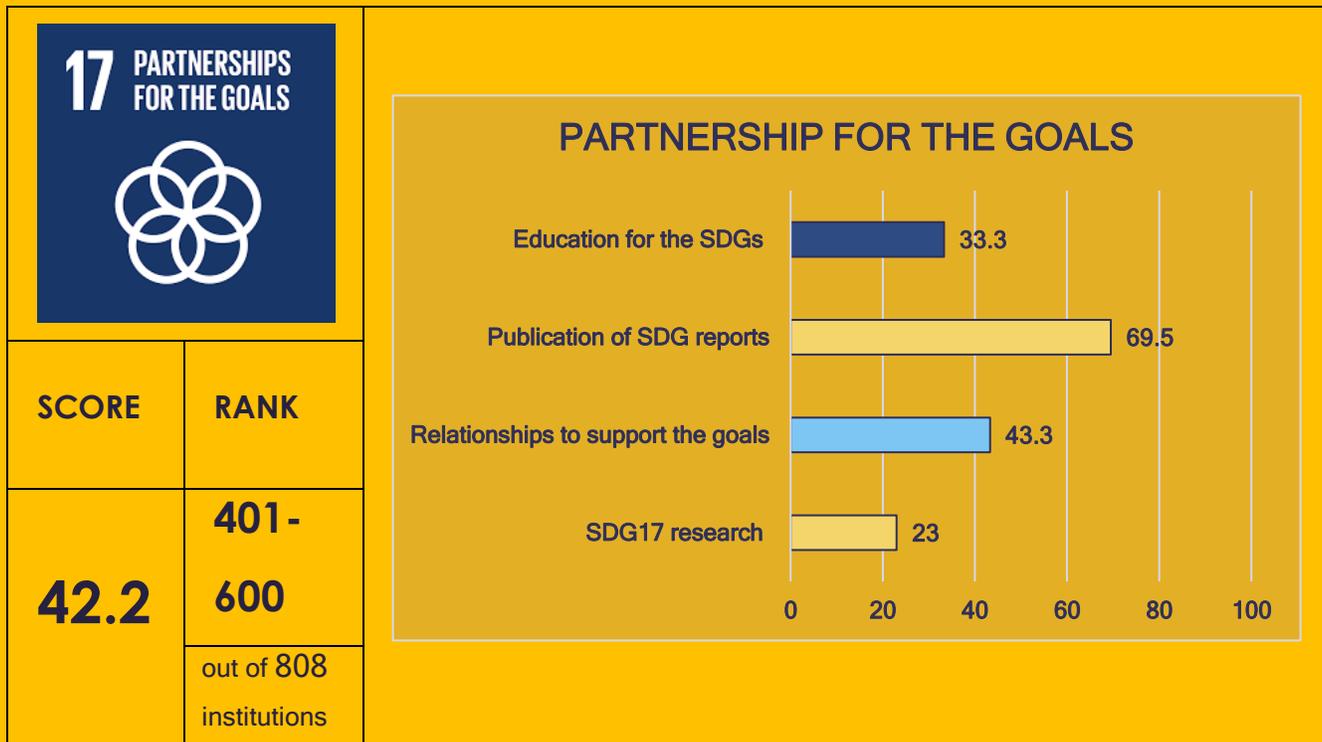


One of the core values of Mutah University is Governance based on transparency and accountability. Based on the role of the Financial and Administrative Control Department at Mutah University, specialized seminars are organized on good governance, where topics are discussed that demonstrate the importance of implementing governance standards within institutions. To advance its business and its activities in a manner that takes into account the fundamentals of good governance. This is to enhance the concept of governance; governance contributes to self-development and access to an institution that leads to real achievements that benefit and benefit the course of institutions of all kinds and names in the public and private sectors.

The University Student Union Council, in coordination with the Deanship of Student Affairs, aims to achieve the following goals:

- 1- Representing university students, preserving their gains, adopting their issues, and working to solve them with the university administration through the Deanship of Student Affairs
- 2) Participating in supporting the academic, social and cultural path of the university, advancing it and raising its efficiency
- 3 Providing opportunities for positive interaction between students, the faculty, staff and university administration
- 4-Development of the student's integrated personality that is aware of the nation's issues and the promotion of belonging to the nation, the homeland and the university
- 5- Promoting dialogue, respecting other opinions and enhancing cooperation and teamwork.

# SDG17



Mutah University seeks to create a state of integration between the sustainable development goals launched by the United Nations through learning, education, scientific research and partnerships with international organizations, civil society institutions, and good governance. In order to achieve its mission of creating and developing a sustainable environment. The Mutah University, despite its heavy financial burdens, has struggled to fulfill its social responsibility from its various departments and units and through coordination and prioritization, which was at the top of which was setting environmental sustainability standards.

In addition to dedicated efforts to integrate sustainability into teaching and research, Mutah also incorporates sustainability principles and concepts into its own practices to ensure sustainable campus management. These efforts are essential to ensure the long-term effectiveness of the campus, to enhance student and staff satisfaction and well-being, as well as to be an example of innovative sustainability that provides of the University and fosters the university's academic experience.

The research projects provided by the researchers of Mutah University encapsulate a wide range of disciplines that mainly concentrate on topics tackling sustainability related topics.

Conferences, workshops and scientific days are continually in-campus to demonstrate sustainable development challenges and solutions.

### Education & Research

- Enhancing research opportunities, grants and solutions for sustainable development
- Ensuring sustainability in daily research practice
- Boosting the curricula with sustainability related courses
- Ensuring undergraduate students from any program of study will have the opportunity to learn about sustainability in their courses.

### Practicing sustainably in the Campus

- Creating current and future SDG implementation
- Promoting Practices that support sustainability among Mutah's stakeholders
- Boosting Go-Green Practices inside the Campus

### Incorporate Sustainability into the Culture of the Campus

- Embodying the Principles of SDGs through organizational governance, operations and culture
- Developing Leaders of Sustainability

Scientific centers in cooperation with Scientific Research Deanship at Mutah University strive to make partnership with organizations that interested to promote sustainability solutions in the local community and world -wide. Many scientific initiatives were started that provide such a great contribution in addressing and solving environmental issues.



More than 12 conferences were held in-campus & more than 24 scientific activities addressed sustainability issues

Research Partnerships with local industry and foreign supporter have widen new horizons for facing sustainability issues



Research financial support has been promoted by focusing more on innovative sustainable projects



Citation haven been increased from 2467 3004 from sustainability related scientific papers from 2018 – 2019.

**Effect of olive mill wastewater (OMW) spreading on soil and plant growth under rainfed condition**

Osama Mohawesh<sup>1</sup>, Husam Al-Hamaiedeh<sup>2</sup>, Samer Qaraleh<sup>3</sup>,  
Maisaa Haddadin<sup>4</sup>, Doaa Almajali<sup>4</sup>, Abdelraheem Bawalize<sup>4</sup>  
<sup>1</sup>Department of Plant Production, College of Agriculture, Mutah University, Jordan.  
<sup>2</sup>Civil Engineering Department, Mutah University, Jordan.  
<sup>3</sup>Department of Nutrition and food technology, Mutah University, Jordan.  
<sup>4</sup>National Center for Agricultural Research and Extension (NCARE), Jordan.

Journal of Water Management in Arid and Semi-Arid Regions

# CONCLUSIONS

As shown in the previous sections, sustainable development actions are being taken in many areas in Mutah University. These efforts are essential to change behavior, increase participation, create a culture based on sustainability, and develop sustainable infrastructure.

Mutah is also developing policies and practices to better integrate resilience into institutional decision-making, to support existing actions and address areas of opportunity.

In order to evaluate the performance, Times Impact Ranking 2019 give a clear picture of areas of strength and that of weakness. Mutah strives to improve its situation to be one of the first 10 Arab universities in this Ranking.



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