

# 2022 REPORT



جامعة جدارا  
Jadara University

## SUSTAINABLE DEVELOPMENT GOALS

Jadara University, Jordan

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## Vision

Jadara University proceeds to internationalization and becomes nationally a success story.

## Mission

To pursue internationalization through accreditation by international well-recognized accreditation bodies, as well as meeting global standards of excellence in teaching, research, creativity, community service and leadership, all while preserving our national identity.



## About The Report

 <p><b>1</b> NO POVERTY</p>	<p><b>Goal 1: End poverty in all its forms everywhere.</b></p> <p>In this section, the report reflects Jadara University contributions throughout the academic year 2022-2023 towards achieving SDG1 and helping reducing poverty for learners and community.</p>
 <p><b>4</b> QUALITY EDUCATION</p>	<p><b>Goal 4: Ensure inclusive and equitable quality education and promotion.</b></p> <p>In this section, the report reflects Jadara University contributions throughout the academic year 2022-2023 towards achieving SDG4 and providing quality education for learners and community, in terms of training, vocational training, building capacity, development of curriculum, free sustainability programs and other quality services.</p>
 <p><b>6</b> CLEAN WATER AND SANITATION</p>	<p><b>Goal 6: Ensure access to water and sanitation for all.</b></p> <p>In this section, the report reflects Jadara University contributions throughout the academic year 2022-2023 towards achieving SDG6 and providing clean water for campus population and close community, while reserving water resources in the campus such as (rainwater, clean ground water, and treatment of wastewater). Not only that, but the reuse of tertiary treated water for several uses.</p>
 <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	<p><b>Goal 12: Ensure sustainable consumption and production patterns, lifelong learning opportunities for all.</b></p> <p>In this section, the report reflects Jadara University contributions throughout the academic year 2022-2023 towards achieving SDG12 by reserving resources through responsible waste management, wastewater management, producing energy using renewable (solar) energy, implementing programs and initiatives to reduce gas emission, energy use, plastic, and paper use.</p>
 <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>	<p><b>Goal 17: Revitalize the global partnership for sustainable development</b></p> <p>In this section, the report reflects Jadara University contributions throughout the academic year 2022-2023 towards achieving SDG17, by engaging in national and international partnership with institutions, organizations, government, and NGOs. Partnering up to help in policy making, reserving resources, reducing poverty, providing clean water, improve education and provide support to the community.</p>



# Sustainability Policy

REF# JaU-SDP2018- Revision 1

Last Update March 1<sup>st</sup>, 2021

Jadara University is committed to sustainability and to serving as a positive example through sustainable operations and education. The University will continue to become more sustainable by focusing on

## 4 areas:

- Reducing Gas Emissions & Carbon Footprint,
- Conserving Resources,
- Educating local community, and
- National-International Partnerships for Goals.

Jadara University has tentatively identified goals in each of these areas to achieve results that will reduce its impact on the environment.

## Focus Areas and Goals

### 1. Reducing Gas Emissions & Carbon Footprint

Jadara University is committed to reducing carbon emissions on its campus. The information gathered in the initial inventory will be used to set reduction targets for future years, and a follow-up inventory will be done at regular intervals to track progress. The majority of Jadara campus carbon and other gas emissions are generated from transportation, as well as being significantly influenced by buildings when boilers were used for heating. In the past few years, later cancelled all boilers and replaced with AC systems with converters and are run by a smart system for reduced use of energy.



### 1.1 Energy use:

Jadara does not purchase electricity. There is 200% on-campus electricity generation by Solar Panels and spares 100% of its generated energy to the local provider. Jadara provides over 10++ free charging stations for zero emission cars on campus.

#### Goal:

Reduce energy consumption through installing energy efficient LEDs, refrigerators, AC Units, machines, and Energy Star appliances such as Computers. Also, through conducting awareness informative sessions on and off campus about wise energy consumption.

### 1.2 Transportation:

Jadara's transportation emissions are categorized as either direct or indirect. Direct emissions are the result of university fleet transportation. Indirect emissions result from students, faculty and staff commuting and program transportation. Program transportation includes curricular and co-curricular programs such as study abroad, athletics, speech team, etc. The University fleet currently includes approximately 64 vehicles which don't park inside the Campus as a policy to reduce emission.

#### Goal:

- Reduce emissions generated from the University fleet through use of alternative fuel and hybrid /zero emission vehicles and efficient use.
- Expand opportunities for safe and accessible pedestrians around campus.
- Develop opportunities and implement programs /initiatives to reduce and/or offset emissions from program transportation and study selected opportunities to reduce campus use of vehicles.
- Provide Free Transportation service to visitors, all students, and all staff. The fleet reaches other governorates, even the capital Amman.



### 1.3 Buildings:

Since 2006 the University has committed to considering Energy and Environmentally friendly design in all major campus projects.

#### Goal

- All buildings are green buildings. Solar panels are installed on roofs of all buildings and parking lots for natural cooling systems.
- All heating units and boilers must be replaced by Energy efficient systems.

## 2. Conserving Resources

Conserving resources through decreased use and more efficient use is a key component of reducing Jadara's impact on the environment and becoming a sustainable campus.

### 2.1 Purchasing

Jadara's purchasing choices reflect its commitment to sustainability and impact the broader economy. Jadara already purchases some products that are more environmentally friendly and plans to expand its programs.

#### Goal:

- Include environmental responsibility as a consideration when purchasing goods and services.
- Increase environmentally ethical purchase of products containing recycled content.
- Expand purchase of local and organic food products.
- Continue to purchase Energy Star appliances and products.
- Continue to prevent Water bottles purchases on campus and instead provide free water through fountains and coolers.



## 2.2 Waste Management

Jadara's recycling program began in 2019 as a student initiative but has dramatically increased recently during the last years. Now, the university has more than 5 programs to reduce waste (plastic and paper). The focus now is to continue the growth, increase student participation, and branch into other areas to reduce the amount of waste generated on campus.

### Goal:

- Continue to expand the recycling program and increase the percentage recycled (out of total waste) each year with the help of recycling services or third parties.
- Continue to monitor and measure waste (organic, non-organic, toxic, and nontoxic, etc.)

## 2.3 Water Management

### Goal:

To design campus improvements to better utilize water, manage consumption and treatment, and to provide greater efficiencies in water utilization.

## 2.4 Wastewater Management

### Goal:

To Continue wastewater management (treatment, measurement, analysis, recycling for reuse on campus irrigation and sprinkler systems, cleaning, flushes, and Fleet /car wash).

## 2.5 Forest Vegetation & Plant Vegetation

### Goal:

To Preserve and enhance the natural landscape (forest and plant vegetation) on campus.



## Implementation

- Increase the number of planted trees.
- Increase plant diversity.
- Install landscaped social spaces and seating.
- Involve students and staff in voluntary planting campaigns as part of the social responsibility.
- Promote best management practices on the land used and irrigation.
- Manage and monitor the campus natural “Olive Trees Reserve” including (wild animals) and arrange local community activities relevant to it.

### 3. Educating the Community

Operating in a sustainable manner is essential to reducing Jadara’s impact on the environment and provides a powerful example to the community. However, to affect global environmental change Jadara must impart a sense of responsibility to the community (students, faculty, staff, and surrounding community) to live in a more sustainable manner.

#### 3.1 Students, Faculty, Staff

Students, faculty, and staff should make sustainability a part of their daily lives whether on or off campus. The University can facilitate this transition by making information on sustainability available in a variety of forms both in and out of the classroom.

#### Goal

Expose all Jadara University students, faculty, and staff to the principles of sustainability through special programs, free training, speakers, events, and enhancement to the campus sustainability page on Jadara website.

#### Implementation Plan

This policy will be implemented through the Sustainability Committee reporting to the Vice President (Head of Committee). Each year appropriate university personnel and students will identify specific strategies or sub-goals to achieve the goals outlined in this policy. The success and progress of the strategies or sub-goals will be noted and compiled into the annual Sustainability report and on SDG Report on the University’s “Environment & Sustainability” page on the university’s website.



### 3.2 Community

#### Goal

Jadara University is committed to providing local community with programs, free education, Events related to sustainability.

#### Implementation Plan

This policy will be implemented through the Sustainability Committee, reporting to the Vice President (Head of Committee) as well through Faculties, Centers, and Public Relations' Department at Jadara. Each year appropriate university personnel will identify specific strategies or sub-goals to achieve the goals outlined in this policy. The success and progress of the strategies or sub-goals will be noted and compiled into the annual Sustainability report and on SDG Report on the University's "Environment & Sustainability" page on the university's website.

### 3.3 Anti-Poverty Programs and Financial Aid

#### Goal

To continue providing support for the poor and admit local and international students (Jordanian, Iraqi, Syrian, and Africa) who fall into bottom 20% of household income group or so.

#### Implementation

- Jadara University has a partnership with "Own Charity" to support students of its campus and directly with the Chair of Board of Directors of Jadara University.
- Jadara's "Poor Student Fund" provides financial aid to students who fall into the bottom 20% of household income group or so.
- Jadara provides Free courses about Health, Food, and free Vocational training and programs to reduce poverty.



#### 4. National-International Partnerships for the Goals

##### Goal

Jadara University continues to develop partnerships with other institutions, governments, and organizations to promote sustainable development. This could include partnering with local NGOs or international organizations such as the United Nations or other national & international Universities.

##### Implementation

- Mobilize and share knowledge and technology through partnerships to develop policies and procedures related to sustainable development.
- Internationalize Collaboration for sharing expertise and sustainable practices.
- Participate in Conferences related to Sustainability and Scientific research.
- Participate in Rankings related to Sustainability such as IU Green Metric and THE Impact Rankings for self-assessment and continuous improvements, as well as providing these entities with data that helps in improving sustainability and policy developing around the world.
- Partner up with third party Organizations or government to provide Programs related to Sustainability.

##### ❖ Assessment & Policy Review

The Policy was created in 2018. Reviewed in March 2021. Next review is in March 2024.

The Data in this policy is to be assessed and evaluated by Stakeholders, such as University Board, Sustainability Committee and Engineering Office every 3 years. Any updates on policy must be approved and shared electronically with staff and students via the Sustainable Development page on Jadara's Website as well as emails.





## SDG 1

Jadara University is a beacon of hope for underprivileged and low-income students, as it provides ample support and opportunities to help them pursue higher education. This esteemed institution has taken various commendable initiatives to assist students from disadvantaged backgrounds, and these efforts encompass financial aid programs, special grants, discounts, transportation facilities, and a broad-reaching policy to combat poverty.

To begin with, Jadara University is actively involved in creating low-income student aid programs that are tailored to meet the specific needs of poor and low-income students. These programs are designed to alleviate the financial burden on students who may not have the means to cover their educational expenses. This initiative-taking approach ensures that financial constraints do not become a barrier to accessing quality education.

Furthermore, the university extends a helping hand to Syrian refugees by offering discounts and grants. The Syrian refugee discount is a testament to the university's commitment to inclusivity and supporting those in need. These grants provide much-needed assistance to those who have been forced to flee their home country, offering them a chance to rebuild their lives and access higher education.

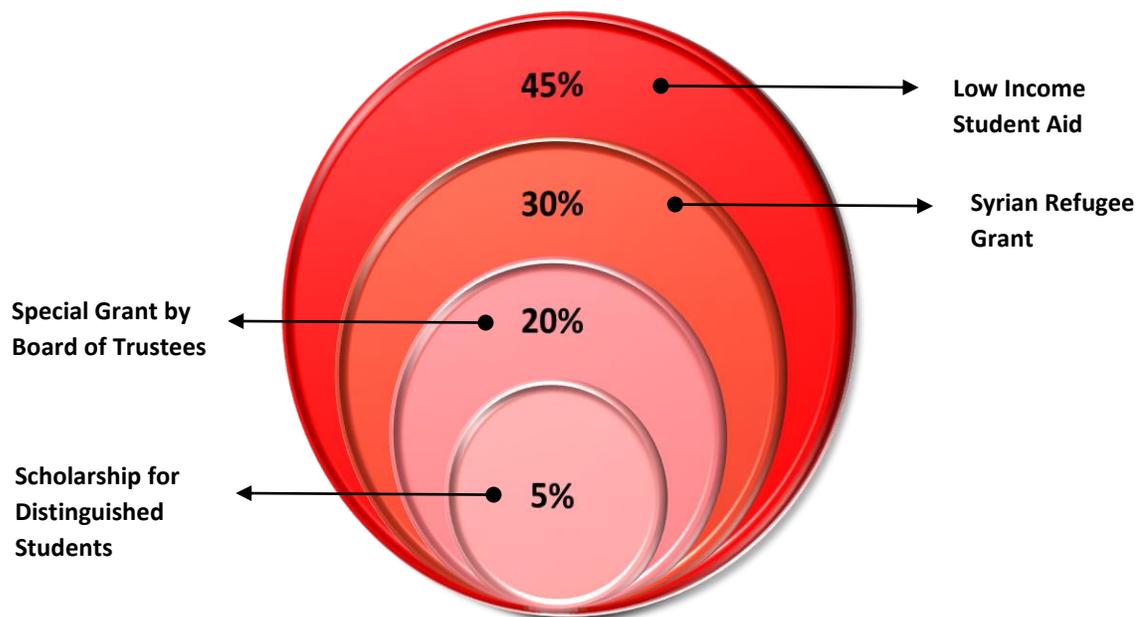
In addition to these targeted initiatives, Jadara University has a board of trustees that is dedicated to distributing special grants to all students. These grants, irrespective of their financial backgrounds, provide an additional layer of financial support to students, enabling them to focus on their studies and achieve their academic goals.

Transportation is often a significant concern for students, especially for those with limited resources. Jadara University understands this challenge and provides free transportation for all its students. This not only eases the financial burden but also ensures that all students can access the university's campus and facilities without unnecessary obstacles.



The university commitment to assisting low-income students goes beyond financial aid. They have established various programs that cater to the unique needs of these students, as shown in Figure (1.1). These programs encompass academic, personal, and career support, ensuring that students have the resources and guidance they require to excel in their studies and beyond.

**Figure 1.1** Proportion of Students Provided with Financial Aid & Grants



Jadara University has also taken the proactive step of implementing a comprehensive policy to address poverty. This policy reflects the institution's dedication to creating a more inclusive, and equitable learning environment. By addressing poverty at a systemic level, the university seeks to provide a more supportive and nurturing educational experience for all students.

In conclusion, Jadara University commitment to assisting poor and low-income students is truly commendable. Through a combination of financial aid programs, grants, discounts, transportation facilities, and a comprehensive poverty policy, the university is creating an inclusive and supportive environment where every student can excel. Jadara University unwavering dedication to its students is a testament to its vision of promoting education to break the cycle of poverty and empower individuals from all backgrounds.



Table 1.1 Key Engagement Under SDG 1

No	Activity	Description	Partners
1.	Low-income students aid program	Jadara University supports students in reaching their admission and graduation goals through grants and discounts from the Low-Income Student Aid Program.	Students who are of 20% Low income
2.	Special Grants by The Board of Trustees	Jadara University assists low-income students through Special Grants from The Board of Trustees.	Students who are of 20% Low income All Students based on financial status
3.	DAFI Scholarship	Jadara University partners with the DAFI Scholarship to empower Syrian refugees through targeted grants that pave the way for education and a brighter future.	Syrian Student Refugees
4.	Syrian Refugees Grants and Discount	Jadara University supports Syrian refugees through grants and discounts from the Chairman of the Board of Directors.	International Students (Syrians)
5.	"Khidmah Watan" project	The project "Khidmah Watan" is a one-year program FREE training. Jadara Provides the training tools and materials on its own campus and labs.	Government (Ministry of Labor) and Jadara University. The entire local community and the international participants from Iraq and Syria
6.	"ERODITE" project.	Jadara University actively supports the local community by offering financial assistance to start-ups and entrepreneurs through the ERODIT agreement Also, Jadara university provides Curriculum and FREE Training for students, teachers, local training seekers from outside the campus and international students from other universities.	Erasmus Plus program is funded by the European Union, Jadara University, Jordan University of Science and Technology and Al-Balqa Applied University, partnership with universities from Turkey, Algeria, Greece, and Jordan.



7.	Free transportation and internet.	Jadara University ensures equitable access for students by offering complimentary free transportation and internet for all. (Free WIFI in all buildings /all floors)	Students, Staff, Visitors
8.	Blood donation campaign and awareness seminar on breast cancer	Jadara University conducts various programs and training to improve access to essential services for all. These initiatives include a blood donation campaign, seminars on breast cancer awareness.	Students, Schoolteachers, Local Community.
9.	Anti-Poverty general policy	Jadara University is committed to making a positive impact on its campus community and beyond. To address the issue of poverty among its students, the university has established a comprehensive policy through its own charitable initiatives to help all students.	Students, Staff, Local Community
10.	Lecture about Vitamin D: Benefits, Sources, and Causes of Deficiency.	A lecture covering the benefits, sources, and causes of Vitamin D deficiency.	University, Princess Rayah Bent Al-Hussein Girls' High School in Mafraq Governorate.
11.	"OWN" Charity	NGO that is a partner of Jadara University through Jadara's Chair of Board of Directors. This charity organization provides charitable support to local community to reduce poverty on and off campus.	Students, Initiatives, Sustainability events in local community. Poor Families in Community.

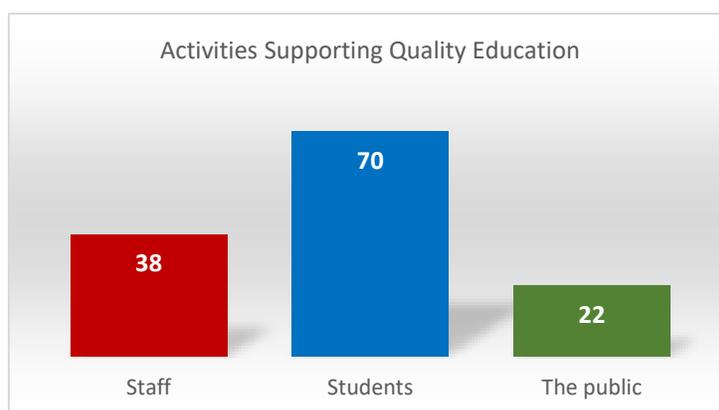




## SDG 4

Jadara University emphasizes that sustainable development involves active support and partnership with the local community, so that everyone can access quality education. The university is committed to producing high-quality learning outcomes by implementing policies and procedures to achieve independent lifelong learners.

The university has organized various educational workshops and volunteer activities that serve the staff, students, and local community as shown in Figure (4.1). Many former graduates who have been trained through courses have successfully entered the job market.



**Figure 4.1** Activities Provided to the Partners in Support of Quality Education

Jadara University offers comprehensive education through Undergraduate and Post-Graduate Studies. The University caters to more than **34** different specializations in Undergraduate Program and **16** Specializations in Post-Graduate Program. The campus gathers more than **4300+** students and **360+** staff. The staff members are 80% PhD holders, while the rest are master's degree holders. The ratio of academics to students is 1:12, which is excellent when it comes to quality interaction and individualized education provision.



In 2022-2023, courses related to sustainability and embedded in curricula were 290 courses, while total courses for all programs were 1350 courses. Consequently, the ratio of sustainability courses versus total courses was 21.48% as shown in Figure (4.2).



**Figure 4.2** Ratio of sustainability courses versus total courses

Same year, research fund dedicated to sustainability was 156,000 JOD, about 219,726 US Dollars.

In addition, Jadara University holds many events every year that are relevant to sustainability with a focus on different areas such as environment, culture, and education. Such as conferences, workshops, awareness campaigns, training-based activities, environmental related activities, programs and collaborations with local community and other partners, and internationally.

The university also opens its facilities, such as the library and sports halls, to the local community for free.

Jadara’s key engagements and activities that contribute to SDG in 2022 are shown in Table (4.1).



Table 4.1 Sample of Key Engagements Under SDG4

No	Activity	Description	Dates	Partners
1.	Jadara University Library Open to Public	Jadara University opens its library to the public, inviting the public to access its resources.	November 01, 2022	University, public.
2.	Informative session on Prostate and Breast Cancer: Prevalence, Causes, and Prevention	An informative lecture on the prevalence, causes, and prevention of prostate and breast cancer for the local community.	November 01, 2022	University, local.
3.	Lecture on ISO 9001: 2015	A course focusing on ISO 9001:2015 for administrators within and outside the university.	November 07, 2022	All the administrators within the university and outside the university.
4.	Lecture on Plagiarism detection system	A lecture discussing the importance and usage of a plagiarism detection system.	December 14, 2022	Faculty members on and off campus
5.	Workshop: E-learning system	A workshop focusing on the implementation and utilization of the e-learning system.	December 18, 2022	Faculty members on and off campus
6.	Workshop: Curriculum preparation	A workshop guiding faculty members on the preparation of course materials.	January 16, 2023	Faculty members on and off campus
7.	Workshop: E-learning, exam proctoring, and e-learning platforms	A workshop covering e-learning, exam proctoring, and various e-learning platforms.	January 18, 2023	Faculty members on and off campus
8.	The project "ERODITE" is funded by Erasmus and in partnership with universities from	Jadara university is a partner in the ERODITE project. Jadara university provides Curriculum and FREE Training for students, teachers, local training seekers	Academic Year 2022/2023	Erasmus Plus program funded by the European Union, Jadara University, Jordan University of Science and Technology and Al-Balqa Applied University,



	Turkey, Algeria, Greece, and Jordan.	from outside the campus and international students from other universities.		partnership with universities from Turkey, Algeria, Greece, and Jordan, public.
9.	Project “Khidmah Watan” in partnership with Ministry of Labor (Renewable Energy Training) and for local and international students.	The project “Khidmah Watan” is a one-year program FREE training. Jadara Provides the training tools and materials on its own campus and labs.	Academic Year 2022/2023	Government (Ministry of Labor) and Jadara University. The entire local community and the international participants from Iraq and Syria
10.	Lecture on Vitamin D: benefits, sources, and causes of deficiency.	A lecture covering the benefits, sources, and causes of Vitamin D deficiency.	March 20, 2023	University, Princess Rayah Bent Al-Hussein Girls' High School in Mafraa Governorate.
11.	Lecture on school bullying	A lecture addressing the issue of school bullying for teachers, students, and the community.	April 16, 2023	University, teachers of the Aisha Um Al-Mumineen Mixed Elementary School / Al-Taybeh Governorate. Female students of the Aisha Um Al-Mumineen Mixed Elementary School / Al-Taybeh Governorate. Head of the Activities Department at the Directorate of Social Development.
12.	Lecture on career counseling	A lecture providing career counseling for tenth-grade female students, schoolteachers, and the local community.	May 22, 2023	University, Tenth-grade female students, schoolteachers, the educational counselor. The local community.
13.	Workshop on concrete science	The meaning of concrete science and the achievements of its members at the local, Arab, and global levels in the field of concrete engineering were presented. The significance of university students joining the institute and the positive impact it will have on them soon, were also highlighted.	August 01, 2023	University, the College of Engineering at Yarmouk University, and the American Concrete Institute (ACI).





## SDG 6

Jadara University provides clean water to campus population and close community, while reserving water resources in the campus such as (rainwater, clean ground water, and treatment of wastewater). Not only that, but the reuse of tertiary treated water for several uses.

The University is water self-sufficient and has a water conservation system through these practices:

First, water coolers that provide filtered water (which is pure ground water that comes from the University's artisan well allow students and staff to fill up reusable containers replacing bottled water (to reduce plastic) in all Buildings. These coolers are available in all public areas on the Campus and provide 100% of need.

Rainwater is collected from the roofs of the four main buildings at the campus and is then saved in an In-Ground Tank of a size of 200 m<sup>3</sup>. The water is tertiary treated and pumped into a special piping system and then down cycled for irrigation, reused in cleaning vehicles and toilet flushes.

The collection of rainwater is only seasonal, in winter and spring time about 10% of water consumption which is added to the Sewage wastewater that is tertiary treated in a special station at the campus of about 72% of water consumption, this concludes to 82% total treated water consumed as shown in Figure (6.1). For Water Reuse at the Campus, volume of treated water collected from sewage is recycled and distributed for beneficial use in the following:

- Agricultural Irrigation (mainly for Olive Trees Field)
- Landscape Irrigation (2 green pitches, sidewalks, common areas on campus, water-drought flowers, Palm trees, Forest trees)
- Car Wash (Buses and Cars owned by Jadara University)
- Fire Protection & Toilet Flushing



Second, the campus has an Artesian Well that is owned by Jadara University, provides ground water of an amount of water supply = 130 m<sup>3</sup>/day. (12 -13 hours of Operation working hours)

The well is more than 440 m depth. The water is clean and drinkable. Also, the water source is renewable every 10 years. The well covers the University with 100% water consumption as shown in Figure (6.1). This is pumped through special pipes for coolers, drinking water fountains, kitchens, WC faucets for washing, labs, and others.

Figure 6.1 Water Key Percentages



Third, Jadara has installed 450 sanitizers in halls, hallways, and rooms at all buildings.

To decrease water-use and encourage hygiene. Water Efficient Appliances are installed in all 5 buildings this year of a percentage equal to 97%.

As shown in Table (6.1), water efficient appliances are installed in all 5 buildings, washing areas and on the outdoor of the Campus as follows:

- Dual flush system: All toilets at the campus have the Dual Flush System which is 100% off all **250 flush units** in all washrooms. (WCs)
  - \* Building A: 22 units      \* Building B: 45 units      \* Building C: 97 units
  - \* Building D: 60 units      \* Arena & Gym Building: 24 units      \* Cafeteria: 2 units
- Water efficient faucets are 258 in WCs and kitchens + 10 units in Medical and Pharmacy Labs Total of = 268 out of 290 faucets all together
- Water coolers that provide filtered water (which is ground water that comes from the University's artesian well allow students and staff to fill up reusable containers replacing bottled water in all Buildings. These coolers are available in all common areas at the Campus.



- Swimming pool (closed not open) filters: (Cartridge Type) since cartridges can be rinsed and water can remain clear and clean as long as possible. This can also save us a back washing step. Therefore, saves up to 25-50% of water waste in the long run.
- In addition, a Water Efficient Pumping system through using misers in the 4 main buildings and Pumping Control System is connected to both Artesian Well (Ground Water) & (Rainwater) in-ground tank.

**Table 6.1** Water Efficient Appliances Usage

Appliance	Total Number	Total number water Efficient appliances	Percentage
Toilet Flush System	250	250	100%
Faucets	290	268	85 %
Coolers	20	20	100%
Swimming Pool (Cartridge Type) Water Filter	1	1	100%
Shower Heads	9	9	100%
<b>Average Percentage</b>			<b>97%</b>



## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



### SDG 12

Jadara University employs multiple strategies to enhance the efficiency of both consumption and production across its campus. This includes introducing several policies related to this objective, as well as implementing a system for recycling different types of waste through a third-party service. Those policies aim to reduce the negative environmental impacts of campus waste, to reduce landfill waste and to ensure disposal of waste materials (Plastic, Paper, Glass, and Metal) in an environmentally responsible manner. Jadara works on reducing the unnecessary use of raw materials and enables waste recycling, composting, and energy recovery to assist in reducing landfill waste. The university is committed to the implementation of an effective waste management program that meets or exceeds all legislative and regulatory requirements placed upon it.

Jadara university purchases choices related to goods and services and food products to reflect its commitment to sustainability and impact the broader economy. Jadara already purchases some products that are more environmentally friendly and plans to expand its programs (Table 12.1).

**Table 12.1** Energy Efficient Appliances

Appliance	Total Number(unit)	Total number energy Efficient appliances	Percentage
LED Lamp	15200	12200	80%
EnergyStar –certified computers HP/Dell	550	550	100%
Zero Client (Lower Energy Consumption)	60	60	100%
AC / Inverter split unit	50	25	50%
Ac/ Inverter Central	5 buildings	4 buildings	80%
Fridges (Full Inverter)	13	10	%77
<b>Average Percentage</b>			<b>81.2%</b>



Jadara university follows simple Single Stream Recycling, helping staff at their offices and students to recycle the waste according to materials whether it is plastic, cans, paper, or other waste (rubbish). Regular waste (rubbish) is gathered in waste collectors by the service contractor, then is collected by a third party responsible for sorting and treatment depending on the materials being recycled.

Policies since 2019 have been regulated & followed regarding paper use, such as double-sided printing and if necessary, with the use of emails as an alternative option for correspondence. Digital archiving started in 2018 to decrease the amount of paper waste. Paper waste at campus was about 5 tons in the past year and now the amount has decreased by 50%, down to 2.5 Tons only. All papers are collected by a contractor for Treatment as in Figure (12.1).

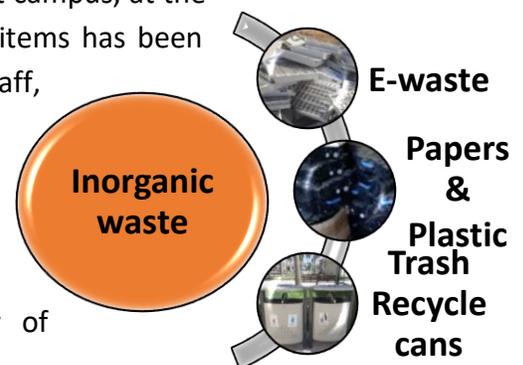
“No plastic bags are allowed on Campus” is an initiative program to reduce plastic use along with offering pure water from Ground Water through fountains and coolers. This has decreased the purchase of water bottles. Campus population use of Plastic was 0.5++ tons in the past. This has decreased by 40% lately as in (Figure 12.1).

**Figure 12.1** Paper & Plastic Reduction Percentages



To maintain the university goal in eliminating using plastic items at campus, at the beginning of each academic year, the elimination use of plastic items has been circulated via the university presidency to students, academic staff, administrative staff, and service suppliers.

Also, the university intends to arrange different awareness workshops related to the role of recycling phenomena in overcoming the current national environment challenges in Jordan with the participation of governmental sectors like Ministry of Environment, Greater Amman Municipality, etc.



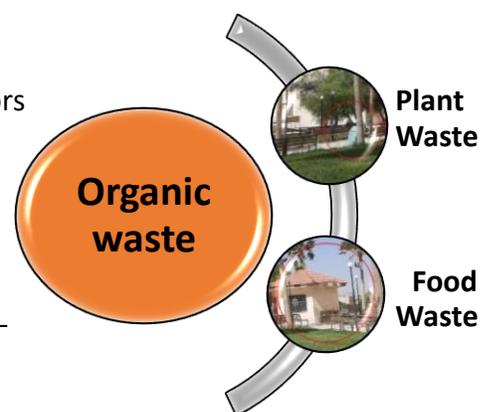
Organic waste (such as Food and Plant waste) is fully treated into compost by a contractor, of which is reused by Jadara as fertilizer for the plants at the campus. For the academic year 247 Tons out of 247 Tons of organic waste (plant and food wastes) were produced and treated as per (Table 12.2).



**Table 12.2** Organic Waste Measurements

Type of inorganic non-toxic waste	Total Produced (ton)/Year	Total Treated Collected & recycled by A third party
Paper /cardboard carton	2.5 Tons	2.5 Tons
Soft plastic (gloves) + old files	0.5 Tons	0.5 Tons
General Waste Trash without //paper and plastic	234 Tons	234 Tons
Hard Plastic/ Glass	0.18 Tons	0.18 Tons
Metal scrap/Glass from renovations	0.6 Tons	0.6 Tons
<b>Total</b>	<b>237.33 Tons</b>	<b>237.33 Tons</b>

Inorganic waste, like E-waste, is stored and picked up by contractors for recycling. Metal, Aluminum, and glass waste is about +/- 0.6 ton per year. Hazardous and toxic waste is one of the university's main priorities due to the high levels of toxicity and dangerous impact on campus and the surrounding environment. For the academic year 237.33 Tons out of 237.33 Tons of inorganic-nontoxic waste were produced and treated as per (Table 12.3).

**Table 12.3** Inorganic Non-Toxic Waste Measurements

Type of Organic Waste	Total Produced (ton)/Year	Total Treated Collected & Recycled by a Third Party
Food waste (Cafeteria) (4680 population) 50 kg per person /year	234 Tons	234 Tons
Waste from Olive Trees (134 tree) 6Kg/tree	0.80 Ton	0.80 Ton
450 Palm Waste leaf (Sizing: Cutting, Shredding, Grinding) 20Kg /Tree	11.25 Tons	11.25 Tons
Grass (125 Kg per area /year) for 8 areas	1 Ton	1 Ton
<b>Total</b>	<b>247 Tons</b>	<b>247 Tons</b>

To encourage students' participation in the recycling process, the university presidency, at the beginning of each academic year, increases the number of recycled trash cans to cover the demands.



Labs' Waste (quite small amounts) is stored temporarily in storage rooms and places designated for that purpose. Lab supervisors are responsible for packaging the waste safely, following the safety protocol and adhering to Ministry of Health and Environment regulations. Hazardous (medical) and (chemical) waste is sent through a third party to one of the largest medical waste incineration units that operates with a design capacity (4 tons / day) and conforms to the European standard specifications for gas emission. For the academic year 2022-2023 0.55 Tons of toxic material were produced and treated as per (Table 12.4).

**Table 12.4** Toxic Waste Measurements

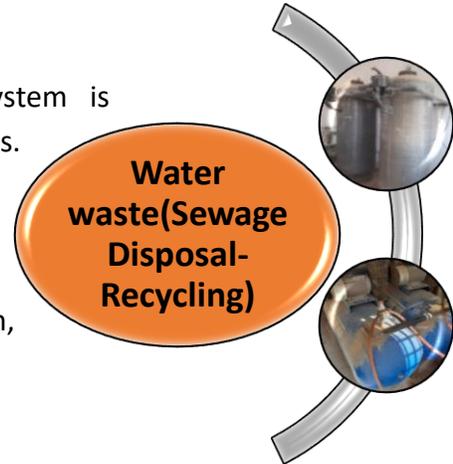
Type of Toxic Waste	Total Produced (ton)/Year	Total Treated Collected & Recycled by a Third Party
e-waste	0.5 Tons	0.5Tons
lab. Chemicals /liquids: (51.5 kg whole year only)	0.051 Tons	0.051 Tons
<b>Total</b>	<b>0.55 Tons</b>	<b>0.55 Tons</b>



To design campus improvements to better utilize water, manage consumption and treatment, and to provide greater efficiencies in water utilization, and to Continue wastewater management (treatment, measurement, analysis, recycling for reuse on campus irrigation and sprinkler systems, cleaning, flushes, and Fleet /car wash) water management and wastewater management programs have been introduced.



A Water Recycling Program through sewage treating system is introduced to achieve the goal of zero wasted water on campus. Sewage water goes through drainage system and pipes carry the sewage to the Tertiary treatment station at the campus. All treated water is pumped through a piping system then recycled for multiple purposes (irrigation and sprinkler system, reused in (toilet flush, and bus/ car wash).





## SDG 17

Jadara University strengthens the means of implementation and revitalizes the global partnership for sustainable development in various aspects of cooperation, such as finance, technology, trade, policy, data, and multi-stakeholder partnerships. Achieving SDG 17 on campus means that Jadara University and other higher education institutions play an active role in advancing the global sustainability agenda through research, education, outreach, and operations.

Jadara contributed to SDG 17 in many ways for the past years, such as:

- Providing quality education that equips students with the knowledge, skills, values, and attitudes that enable them to become responsible global citizens and agents of change for sustainability.
- Engaging with local, national, and international partners from the public, private, and civil society sectors to exchange knowledge, resources, and expertise, and to implement joint projects and initiatives that support sustainability.
- Aligning Jadara's institutional policies, strategies, and operations with the principles and objectives of the UN's sustainable development goals, and reporting on Jadara progress and impacts using transparent and accountable methodologies.

The university collaborates with various national & international partners to promote sustainability awareness, action on campus, and in the community. The records of 2022-2023 show that Jadara University has engaged in more than 80 partnership agreements since 2018 (the year that the sustainability policy was created), with international and national institutions towards pursuing overall sustainability goals as shown in Table (17.1).



**Table 17.1** Key Partnerships Under SDG 17

No	Partner	Country	Activity	Date	Term
1.	Agreement with the European Union - Erasmus Plus project	Romania	Exchanging scientific experiences and scientific consultations	2022-Present	5 years
2.	HULT-PRIZE Jadara Students & Faculty Members	Portugal	CORD – Sustainability Program By Jadara Students aim to change innovative ideas into entrepreneurship (this project is about recycling and reusing clothes waste)	21/07/2023	Long Term
3.	International Organization for Islamic Marketing - London	Jordan	Marketing Jadara university programs	01/09/2023	5 years
4.	Agreement with the Jordan Institute for Creativity and Innovation	Saudi Arabia	Exchanging scientific experiences and scientific consultations	25/05/2023	5 years
5.	Agreement with Sabratha University	Libya	Exchanging scientific experiences and scientific consultations	22/05/2023	5 years
6.	UNESCO -IRCAI  Center of Development & Innovation-Jadara University	Slovenia	Startup:  An AI-based Cervical Cancer Prediction Using Machine Learning Techniques) Prize Winning Project.	6/5/2023	Long Term
7.	UNESCO -IRCAI  Center of Development & Innovation-Jadara University	Slovenia	Startup:  An AI based Classification System for Aggregate using Image Processing and Artificial Neural Network)Prize Winning Project.	6/5/2023	Long Term
8.	An agreement with Aydin University/ Istanbul	Turkey	Exchanging scientific experiences and scientific consultations	08/04/2023	5 years
9.	Agreement with Istanbul Commerce University	Turkey	Exchanging scientific experiences and scientific consultations	08/03/2023	5 years
10.	Agreement with Ahlia University	Bahrain	Exchanging scientific experiences and scientific consultations	23/02/2023	5 years
11.	Agreement with Universiti Kebangsaan Malaysia (UKM)	Malaysia	Exchanging scientific experiences and scientific consultations	12/02/2022	5 years
12.	An agreement with Royal Medical Services Directorate	Jordan	Training for pharmacy students, Doctor of Pharmacy and allied medical sciences specialties	15/09/2022	5 years
13.	An agreement with Bogdan Voda University / Cluj-Napoca	Romania	Exchanging scientific experiences and scientific consultations	14/09/2022	5 years
14.	The College of Elders of Iraq for Transitional Justice	Iraq	Exchanging scientific experiences and scientific consultations	28/08/2022	5 years
15.	An agreement with Arab Institute for Accountants & Legal	Dubai	Exchanging scientific experiences and scientific consultations	20/08/2022	5 years
16.	An agreement with University of Technology Malaysia	Malaysia	Exchanging scientific experiences and scientific consultations	19/08/2022	5 years
17.	An agreement with Duhoki Polytechnic University	Germany	Exchanging scientific experiences and scientific consultations	05/08/2022	5 years
18.	An agreement with the University of Economics for Management (HDWM)	Germany	Exchanging scientific experiences and scientific consultations	05/08/2022	5 years



19.	An agreement with University of Applied Management Studies	Germany	Exchanging scientific experiences and scientific consultations	05/08/2022	5 years
20.	An agreement with Abbey College	Unitet Kingdom	Exchanging scientific experiences and scientific consultations	05/08/2022	5 years
21.	An agreement with İstanbul 29 Mayıs University	Turkey	Exchanging scientific experiences and scientific consultations	06/06/2022	5 years
22.	Agreement to provide technical support services and maintenance of the academic system, financial and administrative systems	Jordan	Maintenance of university electronic systems	06/09/2021	5 years
23.	An agreement with Aoun National Cultural Association	Jordan	Helping and supporting university students	23/06/2021	5 years
24.	An agreement with the University of North America	USA	Exchanging scientific experiences and scientific consultations	20/06/2021	5 years
25.	International Balkan University	Turkey	Exchanging scientific experiences and scientific consultations	24/05/2021	5 years
26.	University of Yalova	Turkey	Exchanging scientific experiences and scientific consultations	24/05/2021	5 years
27.	Bayan University BNU / Erbil - Kurdistan	Iraq	Exchanging scientific experiences and scientific consultations	17/05/2021	5 years
28.	Income Sales Tax Department/ Ministry of Finance	Jordan	Training for students of customs and tax sciences	15/03/2021	5 years
29.	An agreement with Jahan University	Turkey	Exchanging scientific experiences and scientific consultations	07/03/2021	5 years
30.	Kandi university	Turkey	Exchanging scientific experiences and scientific consultations	07/03/2021	5 years
31.	Memorandum of understanding with the Al-Quds Institute of Higher Education, Afghanistan	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
32.	An agreement with Mirwais Neeka Institute of Higher Education	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
33.	An agreement with Salam University	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
34.	An agreement with Jami University	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
35.	An agreement with Jahan University Kabul	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
36.	Memorandum of understanding with Asia Higher Education Institute	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
37.	Memorandum of understanding with "Jatan Tolo Aftob" Afghanistan Higher Education Institute	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
38.	Memorandum of understanding with Rokhan Institute of higher education (RIHE)	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
39.	Memorandum of understanding with Bayazid Rokhan Institute of Higher Education	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
40.	Memorandum of understanding with Tanveer Institute of Higher Education	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
41.	Memorandum of understanding with Hekmat Higher Education Institute	Afghanistan	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years



42.	An agreement with Marmara University	Turkey	Exchanging scientific experiences and scientific consultations	06/03/2021	5 years
43.	An agreement with Techno Park University Ankara	Turkey	Exchanging scientific experiences and scientific consultations	07/02/2021	5 years
44.	كلية شط العرب Shat Al-Arab-College	Turkey	Exchanging scientific experiences and scientific consultations	07/02/2021	5 years
45.	An agreement with Al Qalam University College	Kirkuk/Iraqi Kurdistan	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
46.	An agreement with Cihan university	Erbil/Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
47.	An agreement with Salahaddin University	Erbil/Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
48.	An agreement with Alnoor University	Mosul/Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
49.	An agreement with Al-Rasheed University College	Baghdad/Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
50.	An agreement with Bilad Alrafidain University College	Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
51.	An agreement with Bayan University	Iraq	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
52.	An agreement with Al Furatain University	Turkey	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
53.	An agreement with Al Furatain University	Ankara / Turkey	Exchanging scientific experiences and scientific consultations	02/12/2020	5 years
54.	Memorandum of understanding with University of Putra Malaysia UPM	Malaysia	Exchanging scientific experiences and scientific consultations	05/10/2020	5 years
55.	Memorandum of understanding with Tenaga National university	Malaysia	Exchanging scientific experiences and scientific consultations	05/10/2020	5 years
56.	Memorandum of understanding with Multimedia University (MMU)	Malaysia	Exchanging scientific experiences and scientific consultations	05/10/2020	5 years
57.	Memorandum of understanding with Orange, a mobile network operator company	Jordan	Internet service provider	23/09/2020	5 years
58.	An agreement with Yarmouk University	Jordan	Exchanging scientific experiences and scientific consultations	15/08/2020	5 years
59.	An agreement with The Hashemite University	Jordan	Exchanging scientific experiences and scientific consultations	26/07/2020	5 years
60.	International Engineering Company for Occupational Safety and Health Consultation and Training	Jordan	Student training	03/07/2020	5 years
61.	Memorandum of cooperation with the Arab Academy in Denmark	Denmark	Exchanging scientific experiences and scientific consultations	19/04/2020	5 years
62.	Agreement with Edraak for Education and Community Development - electronic platform	Jordan	Electronic platform	09/03/2020	Unlimited
63.	Agreement with E-learning system	Jordan	E-learning platform	09/03/2020	3 years
64.	Agreement with Adaptive Techsoft (ATS)	Jordan	Electronic Software & Systems	25/02/2020	5 years
65.	Egyptian Economic and Entrepreneurship Association	Egypt/ Cairo	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
66.	Agreement with Heliopolis University	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years



67.	Agreement with Merit University	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
68.	Agreement with Beni-Suef University	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
69.	Egyptian Association for Economic Development	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
70.	Memorandum of cooperation with Al Mostafa Company	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
71.	Agreement with Boshia Company to study abroad	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
72.	Agreement with Mosa Trade Logistics International	Egypt	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
73.	Agreement with Khaled Jaradat Company	Kingdom of Bahrain	Exchanging scientific experiences and scientific consultations	20/02/2020	5 years
74.	Jordanian Customs Department Agreement	Jordan	Exchanging scientific experiences and scientific consultations	07/02/2020	5 years
75.	Legal Network Association for Arab Women	Jordan	Exchanging scientific experiences and scientific consultations	27/01/2020	5 years
76.	Agreement with ALDAR University College for Vocational Education	Dubai/United Arab Emirates	Exchanging scientific experiences and scientific consultations	21/12/2019	5 years
77.	Agreement with Moscow State University (MSU)	Russian Republic	Exchanging scientific experiences and scientific consultations	28/11/2019	5 years
78.	Agreement with Belarusian State University	Republic of Belarus	Exchanging scientific experiences and scientific consultations	26/11/2019	5 years
79.	Agreement with Picasso International University Italy	Malta/Italy	Exchanging scientific experiences and scientific consultations	20/10/2019	5 years
80.	Agreement with Alkitab University	Kirkuk/Iraqi Kurdistan	Exchanging scientific experiences and scientific consultations	09/07/2019	5 years
81.	The Association of Arab universities /Arab Impact Factor	Egypt	Exchanging scientific experiences and scientific consultations	12/02/2019	5 years
82.	Agreement with Jordan News Agency	Jordan	Training students of the College of Information and Communication	10/06/2018	5 years
83.	Islamic University of Europe (IUE)	Notre Dame/Netherlands	Exchanging scientific experiences and scientific consultations	12/01/2018	5 years



## Closing Remarks

Since COVID-19 pandemic, and the disrupted normal operations that it caused at Jadara University campus, governors of Jadara, leaders, staff, sustainability committee and students worked together and harder to advance sustainability at the campus. So, to serve as a community leader in the northern part of Jordan, as well as helping to educate and inspire the next generation of problem-solvers become more vital than ever.

As of 2022 -2023 academic year end, Jadara has shown a great progress, toward the Campus's reduction of carbon footprint to less than  $< 0.2$  metric ton per person (having initiatives and programs such as carpool, no buses on campus, high parking fees and free transportation for all students and staff and community). As well as a 200% Solar Energy supply for campus and spares energy for local community as well and a ratio of 92.8% of appliances are Energy efficient. In the same year, a smart energy monitoring & controlling system was installed in all 5 buildings of the campus. All lightening bulbs were replaced as well with LED in buildings, and Solar Energy Bulbs outdoor.

Policies since 2018 have been regulated & followed until present regarding paper use such as double-sided printing only if necessary and use emails as an alternative option for correspondence. Digital archiving started in 2018 to decrease the amount of paper waste. Paper waste at the campus was about 5 tons in the past year and now the amount has decreased by 50% to 2.5 Tons only. All papers are collected by a contractor for treatment. Also, no plastic bags are allowed on campus, programs and student initiatives have been undertaken to reduce plastic use along with offering pure water from Ground Water through fountains and coolers. This has decreased the purchase of water bottles. The use of Plastic on campus was 0.5++ tons; this has decreased by 40%.

For Solid & Liquid wastes, Jadara treated waste to a produced waste ratio of 100%, which means no waste is not treated on campus and off campus by the help of contractors, NGOs, Municipality of Irbid City, and local community.



Since 2018, Jadara University has been water self-sufficient through a water conservation system. The measurements in the AY 2022-2023 were: 100% ++ clean ground water supply that covers the campus population and reserved in external ground tanks to support other local entities near Jadara and using A water Tank Truck (owned by the university) to transport water when needed. Not only that but the measurement of rainwater indicates a 10-11% of water supply. Also, 82% of (in-house) tertiary treated water was consumed.

From the beginning of 2022, Jadara students have been actively working in affiliation with Faculties and Innovation Center in more than 6 Sustainability startups and more than 11 programs. Mostly, offered for free to the students and youth on and off campus.

The University allocated in 2022 about 220,000 USD to fund sustainability efforts on & off campus. The allocation is used responsibly in training, awareness sessions, scientific days, conferences, and research that can reach over 100 events per year.

Additionally, it embedded 290 courses related to sustainability in the education system ending with a ratio of sustainability courses to total courses of about 21%.

Great achievement towards (SDG 1/4/17): 2 projects won UNESCO -IRCAI prize in Slovenia. First was an AI-based Cervical Cancer Prediction Using Machine Learning Techniques, and AI based Classification System for Aggregate using Image Processing and Artificial Neural Network, both were developed and implemented by Jadara students and the Center of Development & Innovation on campus.

The records of 2022-2023 show that Jadara University has engaged in more than 100 MoUs and Agreements since 2018 (the year that the sustainability policy was created), with International and national institutions towards pursuing overall sustainability goals.

Highlighting some, but not limited to, sustainable actions and achievements made across operations, education, research, and community engagement during the academic year 2022-2023, can demonstrate the university's commitment to creating a more sustainable future at the campus and beyond.

## Committee

- Prof. Dr. Iman Basheti (Vice Rector-Head)
- Prof. Dr. Belal Zaqaibeh (Rector Assistant-Member)
- Dr. Saleh Al-Omr (Director of QA-Member)
- Dr. Nesreen Thalji (QA Director's Assistant-Member)
- Dr. Maen Al-Rashdan (Deputy Dean of Graduate Studies-Member)
- Dr. Issam Trad (Dean of Engineering-Member)
- Dr. Rana Abid (Assistant Professor/Engineering-Member)
- Dr. Nader Jawarneh (Deputy Dean of Scientific Research- Member)
- Dr. Saleh Al-Omari (Deputy Dean of Science & Technology – Member)
- Dr. Imran Al-Jarrah (Dean Assistant/Head of CS Department-Member)
- Mrs. Lama Haddad (Director of IRO-Member)
- Mr. Mohammad Bani Issa (IT Support)

## Data Source

- Quality Assurance
- Center of Development & Innovation
- Building Manager /Engineering Office
- Finance Department
- Jadara Bureau/Head Office
- Admission & Registration
- Faculty of Scientific Research
- Deanship of Student Affairs
- Computer Center/IT
- Public Relations Department
- Agriculture Department
- Center of Training, Consultation & Community Service

