



JADARA UNIVERSITY

SUSTAINABILITY

REPORT 2023-2024

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About The Green Campus

Introduction

Jadara University, established in May 2005, is situated on a campus of 201,756.77 m². The university is home to 9169 students, 327 Academic Staff including 15 international Faculty Members, and 260 administrators, totaling 9756 individuals.

The University is accredited by the Ministry of High Education and Scientific Research, and accredited by ASIC International, a member of the "Union of Arab Universities" and a member of the "International Association of Universities (IAU)" based in France. The university is a certified member of "International Union of Universities (IUU)", and a member of "Federation of the Universities of the Islamic World (FUIW)" as well. It offers comprehensive education through Undergraduate and Post-Graduate Studies, as it caters to different specializations 40 bachelor programs and 18 active post-graduate Programs.

Jadara University is dedicated to fostering a sustainable and environmentally friendly campus. Through various initiatives, programs and practices, the university continues to enhance its green credentials, ensuring a healthy and vibrant environment for its community. This report outlines the sustainability initiatives and practices implemented at Jadara University during the academic year 2023-2024.

Location and Infrastructure

The campus is located 30 km from Irbid city, the capital of Irbid Governorate, and 50 km from the capital city, Amman. The university comprises five main buildings (A, B, C, D, E which is under construction, and the Gym/Arena building) with Solar Panels installed on all six buildings that provide passive cooling, has 3 large green pitches, 5 main shaded parking areas, three indoor stadiums, and one outdoor stadium. The remaining campus area is adorned with forest trees, olive trees, and over 450 palm trees, creating a green and serene environment.

Green Campus Initiatives

Jadara University is committed to maintaining a green and sustainable campus. The campus features beautiful landscaping with flowers, big trees, palm trees, and lawn-covered areas, providing a pleasant environment for students, staff, and visitors. The entire campus, including closed areas and buildings, has been **smoke-free** since 2019. This initiative is organized both by the university and students, and supported by awareness workshops, informative sessions, posters, and signs.

Transportation and Emission Reduction

To reduce carbon emissions, the university offers free bus transportation for staff, faculty members, and students, minimizing the use of personal vehicles. Parking areas are designated only for staff cars and some visitors, further encouraging the use of public transportation.

Sustainable Building Design

The design of the university buildings maximizes the use of natural sunlight and ventilation, reducing the need for artificial lighting and cooling. Walls are painted in light colors to enhance brightness and decrease the reliance on electrical lighting.

Safety and Surveillance

Jadara University prioritizes safety with comprehensive firefighting and surveillance systems. The Fire Management System ensures a response time of less than 10 minutes, providing a secure environment for all campus occupants.

ICT Systems for Sustainability

The university implements about 38 ICT systems to support education, operations, and process management, contributing to overall sustainability. These systems are regularly revised by Governance, ICT Officials, and Sustainability Office Team, and Relevant Departments to ensure they meet the evolving needs of the university community and track their impact on Sustainability.

35.8%

Forest Vegetation

72000 m²

95.5%

Open Space

192756 m²

34.9%

Sustainability

Effort Funds

Jadara & Energy

Introduction

Jadara University is dedicated to advancing sustainability through various practices, programs, and infrastructure improvements. It is committed to creating a sustainable and environmentally friendly campus through the implementation of solar energy projects, energy-efficient appliances, LED lighting, and advanced air conditioning systems, & continues to lead by example in promoting sustainability and reducing its carbon footprint. This report highlights the significant steps taken by the university to enhance its green credentials and reduce its environmental impact in terms of Energy & Climate Change.

Solar Energy Initiatives

In collaboration with the Building Manager at the Engineering Office, Jadara University has installed solar panels on the roofs of all buildings and in all five parking areas. These solar panels not only provide a natural cooling system and shade for parking areas but also generate 200.3% of the campus's electricity needs. This project underscores the university's commitment to renewable energy and sustainability.

Energy-Efficient Appliances

The university has made substantial investments in energy-efficient appliances. For instance, while a typical desktop PC consumes between 65 to 250 watts of power per hour, the 10ZiG Zero Client used in IT labs consumes only 6 to 14 watts per hour. By utilizing approximately 60 Zero Client units, the university significantly reduces energy consumption.

Computer Labs and Office Equipment

Jadara University boasts 22 computer labs equipped with 540 PCs and an additional 300 PCs in offices, all of which are Energy Star-certified. This certification ensures that the equipment meets strict energy efficiency guidelines, further contributing to the university's sustainability goals.

LED Lighting

The university has undertaken a comprehensive project to replace traditional lighting with energy-efficient LED lamps. A total of 15,200 LED units were replaced in buildings, along with 200 outdoor LED units. These LEDs save up to 80% of electricity consumption and have a high durability.

Air Conditioning and Heating Systems

Central air conditioning with inverter technology has been installed in all buildings. These systems are more energy-efficient and help reduce overall energy consumption. Additionally, the university has implemented the ICT System (Wems-York CAC Management System) for air conditioning, which includes an app for online monitoring and control. This system helps manage air quality and energy usage effectively. All heating systems now use electricity generated by solar panels, and traditional boilers have been eliminated to reduce CO2 emissions on campus.

Greenhouse Gas Emission Reduction Programs

Jadara University has implemented several programs to reduce greenhouse gas emissions. The following initiatives demonstrate the University's commitment to sustainability and reducing its carbon footprint: Car Sharing or Carpool (Scope 3); Air Travel Policy (Scope 3); Bus Services (Scope 1 and Scope 3); High Parking Fees for temporary parking and specific access for non-staff discourage car use, contributing to emission reductions (Scope 3); and Solar Panels (Scope 1 and Scope 2).

93.4%

Energy Efficient

Appliances

200.3%

Solar Energy

Supply

<0.10 Metric ton per person

Carbon Footprint

By Campus Population

Jadara & Waste Management

Introduction

Jadara University is committed to sustainable waste management practices including ICT System to Monitor and Evaluate the process. The university continues to enhance its waste management and recycling efforts, demonstrating a strong commitment to sustainability. Through the initiatives, the university aims to reduce its environmental footprint and promote a greener campus. This report outlines the various recycling and waste treatment & reduction initiatives implemented on campus to promote environmental sustainability.

Single Stream Recycling

Jadara University follows a simple Single Stream Recycling system, enabling staff and students to recycle materials such as plastic, cans, paper, and other waste. Regular waste is collected by our service contractor and then sorted and treated by a third party based on the material type.

Paper Use Policies

Since 2018, the university has implemented policies to regulate paper use, including double-sided printing and the use of emails as an alternative for correspondence. Digital archiving, initiated same year and ongoing, has significantly reduced paper waste. Previously, the campus generated about 5 tons of paper waste annually, which has now been reduced by 50% to 2.5 tons. All paper waste is collected by a contractor for treatment.

Plastic Reduction Program

The university has banned plastic bags on campus and promotes the use of pure groundwater through fountains and coolers, reducing the need for bottled water. This initiative has decreased plastic use by 40%, from over 0.5 tons previously.

Organic Waste Management

Jadara University produces and treats a significant amount of organic waste annually. Organic waste, including food and plant waste, is fully treated into compost by a contractor. The compost is then reused as fertilizer for campus plants, contributing to a circular waste management system. The total volume of organic waste produced and treated is 309.5 tons per year. All organic waste is collected and recycled

by a third party, ensuring that 100% of the entire 309.5 tons of waste is effectively treated and repurposed.

This includes:

- **Food Waste:** 296 tons from the cafeteria, based on a population of 5,920, with 50 kg per person per year.
- **Olive Tree Waste:** 0.80 tons from 134 olive trees, with each tree producing 6 kg of waste/year.
- **Palm Waste:** 11.25 tons from 450 palm trees, with each tree producing 20 kg of waste/year.
- **Grass Waste:** 1 ton from eight areas, with each area producing 125 kg/year.

Inorganic Waste Management

Inorganic waste on campus such as e-waste and electrical waste is generated and treated 100%.

A total of 299.33 tons of inorganic non-toxic waste is generated and treated annually. This includes:

- **Paper/Cardboard Carton:** 2.5 tons (reduced), collected and recycled by a third party.
- **Soft Plastic (Gloves) and Old Files:** 0.05 tons, collected and recycled by a third party.
- **General Waste Trash:** 296 tons, collected and recycled by a third party.
- **Hard Plastic/Glass:** 0.18 tons (reduced), collected and recycled by a third party.
- **Scrap Metals/Glass from Renovations:** 0.6 tons, collected and recycled by a third party.

All inorganic waste is managed through recycling programs at university offices and by students, ensuring effective waste treatment and recycling. Metal, aluminum, and glass waste is 100% stored and collected by contractors for recycling and treatment .

Hazardous and Toxic Waste Management

Jadara University has only two medical programs that utilize 8 labs only. So, the amount of toxic waste is pretty small and easy to handle and dispose of. Yet, managing hazardous and toxic waste is a top priority on campus due to its potential impact on the environment and campus safety. Laboratory waste, though minimal, is stored temporarily in designated storage rooms. Lab supervisors ensure safe packaging and adherence to Ministry of Health and Environment regulations. Hazardous medical and chemical waste is sent to a third-party incineration unit with a design capacity of 4 tons per day, conforming to European emission standards.

Jadara University produces and treats a total of 0.55 tons of toxic waste annually, ensuring safe and effective disposal.

This includes:

- **E-waste:** 0.5 tons, collected and recycled by a third party.
- **Laboratory Chemicals/Liquids:** 0.051 tons (51.5 kg), collected by a third party for incineration.

>11 Programs

Reduction
Paper & Plastic

50%

Less Paper

40 %

Less Plastic

Jadara Water Resources

Introduction

Jadara University has achieved a significant milestone in becoming water self-sufficient through the implementation of an advanced water conservation system. The University's comprehensive approach to water self-sufficiency and conservation demonstrates its commitment to sustainability and environmental stewardship. Through innovative ICT systems and efficient resource management, the university not only meets its water needs but also sets a benchmark for other institutions to follow. This report outlines the key components and strategies that have enabled the university to meet its water needs sustainably.

1. Water Coolers and Rainwater Harvesting

Jadara University has installed water coolers across all common areas on campus. These coolers provide filtered water sourced from the university's artesian well, allowing students and staff to fill reusable containers and reduce plastic waste. This system ensures that 100% of the drinking water needs are met.

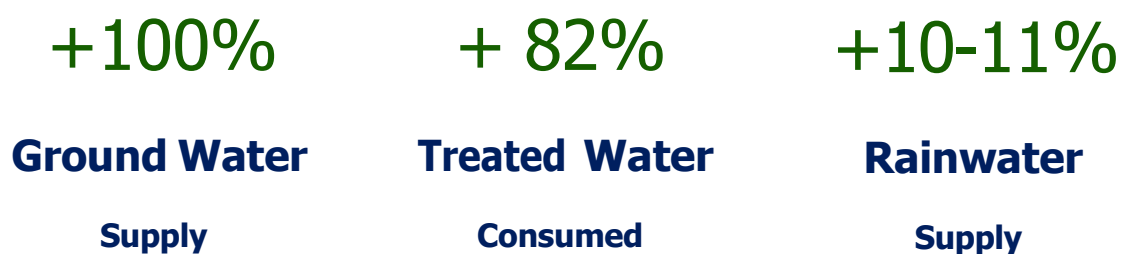
Additionally, rainwater is collected from the roofs of the four main buildings and stored in a 200 m³ in-ground tank. The collected rainwater undergoes tertiary treatment and is then used for irrigation, vehicle cleaning, and toilet flushing. This seasonal collection, primarily during winter and spring, contributes approximately 10% to the university's water consumption. Combined with tertiary-treated sewage wastewater, which accounts for 72% of water consumption, the total treated water used is 82%.

2. Artesian Well

The university owns an artesian well that provides a reliable source of clean, drinkable groundwater. The well, which is over 440 meters deep, supplies 130 m³ of water per day, operating for 12-13 hours daily. This renewable water source, replenished every 10 years, covers more than 100% of the university's water consumption needs. The water is distributed through a specialized piping system to coolers, drinking fountains, kitchens, WC faucets, labs, and other facilities.

3. Water Efficiency and Hygiene

To further enhance water conservation and promote hygiene, Jadara University has installed 450 sanitizers in halls, hallways, and rooms across all buildings. This initiative aims to decrease water usage and encourage proper hygiene practices. Additionally, water-efficient appliances have been installed in all five buildings on campus, achieving a **99.2 %** efficiency rate.



Sustainability in Education & Research

Jadara University provides a comprehensive education through its Undergraduate and Post-Graduate programs, offering over 40 specializations for undergraduates and 18 for post-graduates. In the academic year 2023-2024, the university hosted more than 9169 students and 587 Faculty Members & Administrators.

This report highlights the university's commitment to sustainability and its proactive approach to integrating environmental consciousness into its educational and operational practices that is managed and evaluated through implemented ICT Systems since 2018. The **Sustainability Efforts, Programs & Initiatives** include - but not limited to-:

- **Courses:** 21.48% of the total courses offered are focused on sustainability.
- **Research Funding:** The university dedicated 160,000 JOD (approximately 225,104 USD) to sustainability research.
- **Events and Community Engagement:** Jadara University organizes numerous events annually, including conferences, workshops, and training sessions related to culture, environment, and sustainability. These events foster collaborations with local and many international partners. Number of community services related to sustainability organized by university and involving students is 14 services. As well as an average of 60 events related to sustainability in the last 3 years.
- **Student Involvement:** Since 2022, students have been actively involved in over 11 sustainability startups, working closely with faculty and the Innovation Center. Number of university programs with international collaborations is 21 programs. Number of activities organized by student organizations related to sustainability per year is 26 activities. As well as an average of 60 events related to sustainability in the last 3 years.
- **Travel Policy:** The university's travel policy aims to reduce environmental impact by encouraging virtual meetings and conferences, thereby minimizing travel-related emissions and costs. The saved funds are redirected towards sustainable practices and research.

Jadara's International Rankings in Sustainability

Jadara University is keen to participate in **International Sustainability Ranking** systems every year such as:

- **UI-GreenMetric** World University Ranking:

Proudly, Jadara ranked 182nd internationally and 4th locally.

Link: <https://greenmetric.ui.ac.id/rankings/overall-rankings-2023>

- **THE Impact Rankings:**

Proudly, Jadara ranked 301-400 internationally and 2nd locally (1st in the north of Jordan)

Link: <https://www.timeshighereducation.com/world-university-rankings/jadara-university>

- **Schimago Ranking :**

78thOverall, 45thResearch, 91stInnovation, & 70thSocietal percentile

Link: <https://www.scimagoir.com/institution.php?idp=78772>

- **World University Ranking for Innovation WURI:**

- ✓ Leadership: 38th
- ✓ Social Responsibility: 33rd
- ✓ Generative AI App: 28th

Refer to pages 11-13-15 via Link:

https://www.wuri.world/files/ugd/a35fe8_34a646e0e7854bf292b577a3280c423d.pdf

- **CFI.CO Award** : “ Best University Award for Pursuing Internationalization via working towards the UN's SDGs” in 2023-2024.

Link: <https://cfi.co/awards/middle-east/2024/best-university-in-the-middle-east-in-pursuing-internationalisation-via-working-towards-the-uns-sdgs/>

- Due to the outstanding sustainability endeavors of Jadara University, the Chairman of Board of Directors “Dr. Shukri Marashdh” has been delegated as the Official **Ambassador of Sustainability in the Middle East for the Year 2023-2024**

Link: <https://petra.gov.jo/Include/InnerPage.jsp?ID=286087&lang=ar&name=news>

- **Remark:** Sustainability & Environment section on Jadara’s webpage, and surely updated and reviewed regularly.

Link: https://www.jadara.edu.jo/eng/main.php?type=mod_gmetric

Sustainability Office Members

Prof. Iman Basheti (Vice Rector - Head)

Prof. Belal Zaqibeh (Dean of Information Technology - Member)

Dr. Rabah Ismail (Vice Dean of Engineering - Member)

Dr. Saleh Al-Omari (Vice Dean of Information Technology - Member)

Dr. Nader Al-Jawarneh (Vice Dean of Scientific Research – Member)

Dr. Saleh Al-Omr (Director of Quality Assurance- Member)

Mrs. Lama Haddad (Director of International Relations – Member & Reporter)

Eng. Amjad Marashdeh (Director of Engineering & Campus Management)

Ms. Inas Shannaq (Administrator/Data Collection)

Data Source:

Sustainability Office

International Affairs & Relationships

Quality Assurance

Building Manager /Engineering Office

Finance Department

Jadara Bureau/Head Office

Admission & Registration

Faculty of Scientific Research

Public Relations Department

Agriculture Department

IT -ICT Departments

Students' Affairs