MUTAH UNIVERSITY

P.O.Box 7 Karak, Mu'tah, Jordan, 61710

Carbon Reduction and Sustainability Plan

2024

Committee Members:

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Working Team:

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- Director of Alumni Affairs Office

Mutah University is deeply committed to enhancing its sustainability performance and significantly reducing its carbon footprint. As part of its strategic vision, the university seeks to improve its standing in the QS Sustainability Ranking while contributing to national and global efforts to combat climate change. This plan presents a detailed framework for achieving substantial reductions in Scope 1 and Scope 2 emissions by 2050, integrating sustainable practices across academic, administrative, and operational sectors. It outlines short-term and long-term initiatives designed to embed sustainability within the university's core mission, ensuring that every stakeholder actively participates in this transformative journey.

Carbon Reduction Targets

- Achieve a 50% reduction in Scope 1 and Scope 2 emissions by 2035, laying the foundation for a greener campus.

- Attain net-zero emissions by 2050 through a combination of energy efficiency improvements, large-scale renewable energy adoption, and the development of sustainable infrastructure.

- Set incremental targets every five years to assess progress and refine strategies, ensuring alignment with best practices in environmental management.

Strategies for Carbon Reduction

1. Renewable Energy Transition

- Expand the solar power infrastructure, aiming to supply at least 70% of the university's total electricity demand from renewable sources by 2030, progressively increasing this percentage.

- Conduct feasibility studies for wind energy projects, particularly in collaboration with governmental and private sector partners to diversify energy sources.

- Implement energy storage solutions, such as battery storage systems, to enhance efficiency and ensure a stable, reliable power supply from renewable sources.

- Explore geothermal energy applications for heating and cooling systems, reducing reliance on conventional energy sources.

2. Energy Efficiency Measures

- Upgrade and modernize all HVAC systems, lighting, and equipment to ensure optimal energy consumption.

- Establish an intelligent energy management system, integrating automated sensors and AI-driven analytics to monitor and reduce unnecessary energy usage in real time.

- Retrofit older buildings with thermal insulation, double-glazed windows, and efficient ventilation systems to minimize energy waste.

- Encourage faculty, students, and staff to adopt energy-conscious behaviors, such as turning off unused appliances and optimizing classroom temperature settings.

3. Sustainable Transportation Initiatives

- Transition the university's vehicle fleet to 100% electric or hybrid vehicles by 2035, supported by the installation of EV charging stations on campus.

- Promote carpooling, cycling, and walking through awareness campaigns and incentives, such as reduced parking fees for carpooling participants and subsidies for bicycle purchases.

- Develop a campus-wide electric shuttle system to replace fossil-fuel-powered buses, reducing emissions from transportation.

- Work with local authorities to improve public transportation access, facilitating greener commuting options for students and staff.

4. Green Building and Infrastructure Development

- Implement LEED (Leadership in Energy and Environmental Design) standards in all new campus buildings and conduct energy efficiency audits on existing structures.

- Increase the presence of green roofs, vertical gardens, and reforestation efforts within the university, enhancing natural carbon sequestration and cooling urban areas.

- Establish a comprehensive water recycling system, focusing on rainwater harvesting, wastewater treatment, and reduced reliance on groundwater sources.

- Upgrade waste management systems by expanding composting and recycling programs to achieve a zero-waste campus goal.

5. Awareness and Engagement Programs

- Launch a university-wide Sustainability Education Campaign, incorporating workshops, interactive sessions, and digital outreach to encourage environmentally responsible behaviors among students and faculty.

- Integrate sustainability principles into existing coursework, ensuring that environmental literacy becomes an essential part of the university's academic mission.

- Establish student-led sustainability clubs to foster grassroots engagement, encourage participation in green initiatives, and provide hands-on learning opportunities.

- Organize annual sustainability competitions to reward innovative projects and ideas aimed at reducing the university's carbon footprint.

6. Carbon Offsetting and Partnerships

- Develop large-scale reforestation projects to naturally absorb carbon dioxide, restoring biodiversity while reducing the university's net emissions.

- Partner with government agencies, NGOs, and private-sector leaders to implement sustainability initiatives and secure funding for green projects.

- Engage in international sustainability networks, such as the UN Sustainable Development Goals (SDGs) framework, to align university efforts with global best practices and share knowledge with other institutions.

- Conduct collaborative research on climate change mitigation, supporting faculty and student projects that contribute to the advancement of environmental science.

Monitoring and Evaluation

- Sustainability Office will be the responsible for tracking and reporting carbon reduction progress, implementing policies, and ensuring long-term adherence to environmental goals.

- Publish an annual sustainability report, detailing successes, challenges, and data-driven insights to inform ongoing improvements.

- Develop a dashboard system that provides real-time tracking of energy consumption and emissions, making sustainability efforts transparent and engaging for the university community.

- Regularly review and update policies to ensure compliance with QS Sustainability Indicators, positioning Mutah University as a leader in academic sustainability rankings.

Mutah University's unwavering commitment to sustainability represents an investment in the future of its students, faculty, and the broader Jordanian community. By implementing this comprehensive carbon reduction plan, the university seeks to enhance its QS Sustainability Ranking while making a meaningful contribution to the fight against climate change. Through continuous innovation, collaborative efforts, and institutional leadership, Mutah University aspires to be at the forefront of sustainability and climate action, serving as a model for higher education institutions worldwide. By 2050, the university envisions itself as a fully sustainable campus, setting a benchmark for excellence in environmental stewardship and academic responsibility.

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