جامعة البلقاء التطبيقية
Al-Balqa Applied University
المركز الدولي لبحوث المياه والبيئة والطاقة
International Research Center for Water, Environment, and Energy

Climate Action Plan (CAP 1.0) of Al-Balqa Applied University

Prepared by the CAP Committee:

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1 Introduction to Climate Change

Climate changes is considered a world environmental problem have resulted from the consumption of fossil fuel which leads to increase of greenhouse gases emissions like carbon dioxide and methane. The greenhouse gases impacts on the natural resources of terrestrial and aquatic ecosystems, consequently causing environmental and health problem effects on humans. Jordan is among the countries that facing significant challenges due to climate change. The country is already experiencing more frequent and intense droughts, heatwaves, and floods. These events are putting a strain on water resources, agriculture, and infrastructure. Several reports have highlighted the impacts of climate change on Jordan (World Bank, 2022; The National Climate Change Adaptation Plan of Jordan, 2022). These reports emphasize the need for urgent action to address climate change in Jordan. The country needs to invest in sustainable development practices, reduce greenhouse gas emissions, and build resilience to climate-related hazards.

Global climate disruption is anticipated to have far reaching impacts, but it is possible to mitigate and limit the disruptions by adopting environmentally responsible policies and utilizing resources in a sustainable manner. Carbon dioxide is the most prevalent anthropogenic greenhouse gas. Released into the atmosphere through the use of fossil fuels, agricultural practices, and deforestation, CO^2 atmospheric concentrations have risen from pre-industrial levels of 280ppm to 387ppm in 2009. Current scientific consensus is that in order to minimize the effects of global climate change and keep global mean temperatures from rising more than 2.4 degrees Celsius, the concentration of atmospheric carbon dioxide must be stabilized at no m

Al-Balqa Applied University (BAU) is a distinguished state university founded by royal decree on August 22, 1996. Teaching at BAU began in the academic year 1997/1998. The university offers an extensive range of programs, including 184 Associate Diploma, 112 Bachelor's, and 34 Postgraduate programs. Recently, between 2022 and 2024, BAU has established new programs: 22 Associate Diplomas, 4 Bachelor's, 5 Technical Bachelor's,

and 5 Postgraduate programs. BAU's main campus in Salt City includes 12 faculties, while an additional 12 university colleges serve as satellite campuses across the kingdom. Furthermore, BAU oversees 51 private and public community colleges throughout Jordan. BAU is dedicated to providing high-quality applied technical education through inspirational teaching and world-class research, ensuring that its graduates are well-equipped to compete in local, regional, and international markets. The University looks to climate change challenges mitigation as a continuous strategy built on integration between planning and actions. This report describe the BAU current strategic climate action plan for 2024-2028 to reduce the impact of climate change and enhance sustainable use of natural resources.

2 Integrated Climate Change Thinking

Integrated Climate Change Thinking (ICCT) is a comprehensive approach that recognizes the interconnectedness of various systems and sectors affected by climate change. It aims to develop and implement strategies that consider the social, economic, and environmental dimensions of climate change, fostering sustainable and resilient solutions.

BAU has adopted several executive steps that serve the national strategy facing the global and local climatic changes including:

- **Systems thinking:** Understanding the complex interactions between different systems, such as climate, ecosystems, economies, and societies.
- **Interdisciplinary Collaboration**: conferences and workshops to bring together experts from diverse fields like climate science, economics, engineering, and social sciences to develop holistic solutions.
- **Long-term Perspective:** Considering the long-term implications of climate change and the need for sustainable, future-oriented strategies.

- **Risk Assessment and Management**: The International Research Center for Water, Environment, and Energy and Environment Monitoring Center at BAU identifying climate-related risks and developing strategies to mitigate and adapt to them.
- **Innovation and Technology:** Leveraging technological advancements and innovative solutions to address climate challenges such as shifting to solar energy reduce consumption of fossil fuel, and recycle of generated waste.

The ICCT of BAU helps to build resilience to climate impacts, providing cost-effective solutions leading to more efficient resource allocation, and promotes sustainable development by balancing economic growth, social equity and involving stakeholders in the decision-making process leads to more informed and socially acceptable solutions.

3 Policy Framework and Strategy

Sustainability and climate change policy is a key strategic goal in BAU University's current strategic plan for 2021 – 2025 as shown in Annex 1. To achieve our goal this sustainability and climate resilience policy was prepared and approved to manage and plan all components identified as pillars of sustainable environment on our campus.

The policy is not merely a set of guidelines; it represents a profound commitment to managing BAU's relationship with the natural environment and life-sustaining ecosystems. It lays out meticulous procedures for the maintenance, restoration, and advancement of an environmentally friendly campus—a testament to BAU's dedication to being a responsible global citizen.

The University Environment Policy outlines seven crucial areas of sustainable practices. Applying international health and environmental standards, using clean energy, rationalizing water consumption, expanding green spaces and gardens, reducing toxic gas emissions, managing waste properly, and preserving and maintaining university property

to create a safe and sustainable university environment, components are practical manifestations of BAU's dedication to operational sustainability.

BAU demonstrates a strong commitment to continuous improvement through a thorough review and revision process of its Environmental Sustainability Policy. Regular assessments are conducted to evaluate progress against the baseline data. This regular assessment will allow the university to track achievements and adapt strategies in response to emerging environmental challenges. The policy, with clear goals, effective mechanisms, and key performance indicators, establishes a transparent and accountable framework for reducing the university's ecological footprint. However, the successful implementation of this ambitious policy is contingent on a collective and cooperative effort from every stakeholder within the BAU community. From the administration to the teaching staff, employees, and students, each plays a vital role in ensuring that the outlined goals are not just aspirations but tangible achievements.

Our Sustainability Strategy sets out the commitments we have made to 2025. However, a sustainable future for all requires a change in behavior and a combined effort forever. We understand that being sustainable creates value and that it’s more than reducing our environmental impact; it’s about resilience and intelligence – building the links between students, research, and our operations, so that we can make a positive difference. In 2018 we committed to a new global initiative, the SDG Accord, which is the higher education sector’s collective response to the United Nation’s Sustainable Development Goals (SDGs) Figure 1. The aim of the initiative is to embed the goals across post education, recognizing and advancing the critical role that education has in delivering the goals and the value this brings to governments, business, and wider society. The SDGs aim to achieve a better and more sustainable future for all, addressing the global challenges that face societies, including poverty, inequality, climate change, environmental degradation prosperity, peace, and justice. There are 17 goals and the UN aim to achieve all by 2030. For the University in the coming year, we aim to map our activities to the goals to identify which

we are supporting through our activities and implement a delivery program. This committee resulted in signature the partnership and social responsibly with UN impact

Al Balqa Applied University (BAU) is a member of United Nations Academic Impact (UNAI) and adopts a sustainable continuous improvement policy, that aims to implement SDGs in all strategic and action plans through a lot of initiatives, projects, and programs, and by improving the research infrastructure, funding the scientific activities and studies, as well as strengthening international collaboration and partnerships.

As these collaborative efforts unfold, BAU envisions itself not just as an institution of higher learning but as a sustainable, modern, and green campus—a living embodiment of its commitment to environmental responsibility. By setting this standard, BAU seeks to inspire other institutions globally to follow suit, fostering a ripple effect that contributes to a more sustainable future for academia and the planet at large.

4 Initiatives on Sustainability and Climate Action

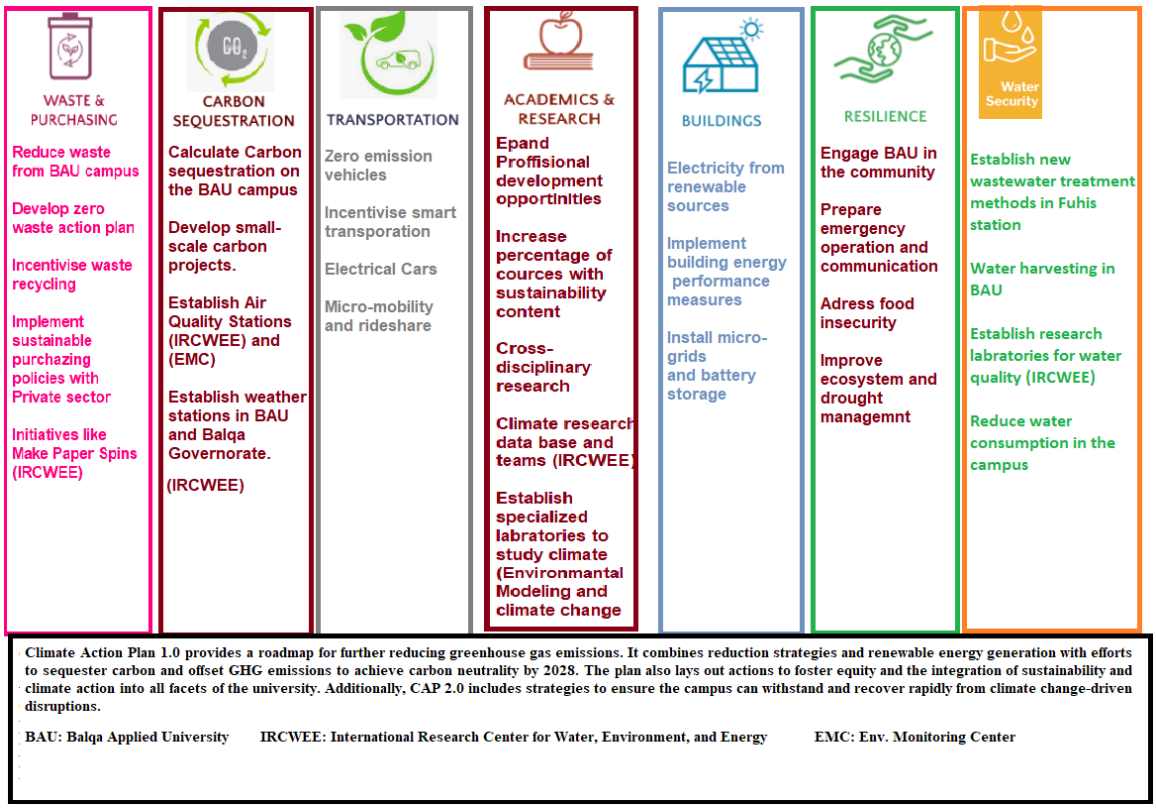
- Our primary goal in implementing smart buildings is to reduce energy costs. We achieve this by early detection of equipment faults and inefficiencies, as well as by establishing a database to track energy consumption and environmental information. Currently, more than half of BAU's buildings are classified as smart buildings.
- Enhancing green areas by developing policies and initiatives to expand campus vegetation.
- Security and Safety facilities in which the University is committed to following all applicable workplace safety, health, and environmental rules and regulations, as well as respecting and caring for the environment without compromising future generations' ability to meet their needs.

- Facilities for disable special needs and maternity care is ensured in the university to create a safe environment for individuals in order to enable staff to perform their tasks and responsibilities efficiently and competently.
- Energy conserving by implement small-scale solar systems in different university buildings, including innovative solutions, such as substitute sheets of photovoltaic glass or photovoltaic coverage of building roofs.
- Climate Change, in both its adaptation and mitigation aspects, is a priority for the university. We are not just addressing this issue, we are pioneering new solutions. Our water and draught research, capacity development, and technology transfer initiatives are at the forefront of innovation. From solar energy to wastewater treatment for reuse, to intelligent agriculture, we are leading the way. We have established academic and technical programs with a focus on smart agriculture, water treatment, smart buildings, electric and hybrid vehicles, and we regularly conduct various awareness activities in climate change.
- Water: as part of our commitment to sustainability, we are developing and implementing water harvesting techniques to collect rainwater from building roofs and store it in tanks for agricultural reuse. We need your support in this initiative. By installing various technologies to effectively reduce water consumption, improving sewage treatment plants to enable the use of treated water for irrigation purposes, and raising awareness about the necessity of rationalizing water consumption at the University, we can all contribute to a more sustainable future. (Sustainable Management of Available Water Resources with Innovative Technologies) SMART-Move provides fund to BAU to sustain, operate, maintain, and monitor the facility and other technologies SMART-Move is one of the pioneer and unique development projects in Jordan, and in the Middle East.
- A representative group of sustainable development partners was formed, consisting of 20 representatives from all sectors of the Kingdom, and the International Research Center for Water, Environment, and Energy, represented by its director,

was chosen as a member in drafting the national report on sustainable development in the Jordanian Ministry of Water and Irrigation.

- Transportation: developing and implementing a zero-vehicle plan which decrease the influx of vehicles onto campus. This is achieved through purchasing electrical cars and various initiatives, including restricting vehicle access in particular streets, minimizing parking spaces, and transforming some into green spaces. Additionally, staff, both administrative and academic, who commute from distant locations, group together and arrive in a single-vehicle
- Education: BAU is dedicated to achieving the fourth Sustainable Development Goal (Quality Education) by providing inclusive education that enhances the skills of all learners, regardless of gender, race, or religion. The university ensures access to lifelong learning through flexible educational approaches. BAU supports individuals facing educational barriers, including housewives, people with disabilities, those in remote areas, and working professionals. It offers open educational resources and a global database aligned with international standards, enabling the attainment of accredited certifications. The university collaborates with communities and emphasizes teaching sustainability through various courses. BAU incorporates sustainability into its curriculum and has developed diplomas in renewable energy, smart buildings, organic agriculture, and wastewater treatment. Your support is essential to our mission, and we invite you to join us on this journey.
- Waste: The University has introduced several initiatives aimed at reducing paper usage and lowering carbon dioxide emissions. One significant step is the implementation of an electronic correspondence system that promotes a paperless environment. Additionally, the e-learning system allows for online classes and electronic tests, further decreasing paper waste. To support recycling efforts, special containers for paper recycling are available on campus. Employees are also encouraged to use reusable mugs and bags, opting for coffee and canvas bags instead of paper cups and bottled water. The University promotes duplex printing, emphasizing double-sided printing and verifying data accuracy before printing. Furthermore, the number of exams has been reduced from three to two, comprising mid-

term and final exams. These collective efforts reflect the University's strong commitment to sustainability.



Climate Action Plan 1.0 provides a roadmap for further reducing greenhouse gas emissions. It combines reduction strategies and renewable energy generation with efforts to sequester carbon and offset GHG emissions to achieve carbon neutrality by 2028. The plan also lays out actions to foster equity and the integration of sustainability and climate action into all facets of the university. Additionally, CAP 2.0 includes strategies to ensure the campus can withstand and recover rapidly from climate change-driven disruptions.

BAU: Balqa Applied University IRCWEE: International Research Center for Water, Environment, and Energy EMC: Env. Monitoring Center

5 Categories of sustainability

The Climate Policy at Al- Balqa' Applied University revolves around six essential categories of sustainability as shown in Annex 2. These categories form the bedrock of our commitment to fostering a climate-resilient and sustainable campus. Each category represents a key aspect that guides our climate action efforts, ensuring a comprehensive approach to address the challenges posed by climate change. Emphasizing these pillars, we aim to seamlessly integrate sustainability principles throughout our institution's academics, operations, community engagement, and more. By proactively implementing strategies aligned with each category, we aspire to make a significant and enduring impact on our university's climate resilience and contribute to global climate change mitigation and adaptation efforts

- Energy Management and Carbon Emission.
- Water management and sustainable solutions.
- Green buildings.
- Student Experience.
- Research and Education for Sustainability.
- Risk management.

6 Baseline Emission Inventory (BEI)

6.1 Baseline Emission

A Baseline Emission Inventory (BEI) is a comprehensive assessment of greenhouse gas (GHG) emissions produced by the university over a specific time frame. It serves as a critical tool for understanding a university's carbon footprint, identifying key emission

sources, and developing strategies for emissions reduction. For instance, it allows to identify the principal anthropogenic CO_2 emission sources and to priorities the reduction measures accordingly. In addition, BEI provides a clear picture of where emissions are generated, including energy use in buildings, transportation, waste management, or other campus activities. This understanding is essential for effective management and reduction efforts. With a well-defined baseline, Al-Balqa Applied University can set realistic and measurable emissions reduction targets. This allows aligning our sustainability goals with broader climate initiatives and policies. Regular updates to the BEI allow tracking the university progress over time. By comparing new inventories to the baseline, Al-Balqa Applied University can evaluate the effectiveness of its sustainability initiatives and adjust strategies as required. A transparent BEI can foster engagement among students, faculty, staff, and the surrounding community. It can serve as a foundation for sustainability education and encourage collaborative efforts towards emissions reduction.

The inventory typically categorizes emissions into three scopes:

Scope 1: Direct emissions from university-owned sources, such as natural gas combustion in heating systems or emissions from university-owned vehicles.
Scope 2: Indirect emissions from the generation of purchased electricity.
Scope 3: Other indirect emissions that occur in the university's value chain, including transportation, waste disposal, and emissions from purchased goods and services.

Accurate data collection is essential for a reliable BEI. This process encompasses gathering energy-consumption records, transportation logs, waste generation statistics, and other pertinent metrics. Engaging various departments and centers within the university ensures comprehensive data coverage. To support this goal, Al-Balqa Applied University has established an Environmental Monitoring Center. This initiative aims to integrate the

university with institutions and productive sectors, fostering new investment opportunities aligned with the university's vision, mission, and strategic goals, while addressing its community responsibilities. Notably, the Environmental Monitoring Center is the first of its kind in the region, serving as a competitive hub that collaborates with partners to enhance environmental policies and raise awareness of environmental issues. The center's objectives include monitoring and analyzing environmental changes, supporting scientific research on environmental issues, and developing sustainable solutions to environmental challenges. Additionally, it is equipped to respond to environmental emergencies and protect biodiversity.

A BEI is usually conducted over a defined period (often annually), to establish trends and assess the impact of implemented sustainability measures.

6.2 6.2 Data Gathering, analysis, and reporting

Data Gathering, analysis, and reporting: Through the collaboration between various departments/centers, necessary data are collected, utilizing existing sustainability reports, energy bills, and transportation surveys. Which helps to estimate the total emissions using the collected data and appropriate emission factors. The data will be analyzed to identify the largest sources of emissions. Subsequently, a detailed report summarizing the findings, methodologies, and recommendations will be prepared, which will be accessible to all stakeholders. Based on the BEI findings, the university will develop/update an action plan that includes strategies for reducing emissions, such as improving energy efficiency, increasing renewable energy use, and promoting sustainable transportation options.

7 Green Buildings

Al-Balqa Applied University is committed to ensuring that all new buildings are smart and environmentally friendly. The university's Climate Policy prioritizes energy and water management, emphasizing the importance of enhancing efficiency and moving towards sustainability. This commitment is realized through the implementation of energy- and water-saving practices, innovative construction methods, and the use of renewable energy sources. In recent years, the university has made notable progress with the development of advanced smart and green buildings. In 2024, Al-Balqa Applied University signed an agreement to award a tender to establish the building of the Faculty of Artificial Intelligence and the building of Prince Abdullah bin Ghazi Faculty of Information and Communication Technology, and several other buildings, encompassing an expansive area of more than 90,000 m^2 and distributed over the Hashemite Kingdom of Jordan. These buildings will incorporate state-of-the-art facilities and smart technologies, using sensors to remotely monitor and manage systems, lighting, and security. By leading the way in smart building applications, our university offers integrated solutions that improve management, efficiency, sustainability, and comfort. These ambitious projects highlight the university's dedication to technological advancement in pursuit of sustainability.

As part of its goal for 100% energy independence, Al-Balqa Applied University has recently been established electric power production station at the Princess Tasnim bint Ghazi Agricultural Research Station in Hamrat Al-Sahn, with a production capacity of 7 megawatts, which is the largest solar energy project among Jordanian universities. These renewable energy solutions significantly reduce reliance on conventional energy sources, reinforcing the university's commitment to creating a sustainable and climate-resilient campus.

Through these initiatives and technologies, our university is paving the way for a greener, more energy- and water-efficient future. The smart and green buildings project not only ensures long-term economic and environmental sustainability but also focuses on two key areas: smart building design and optimal energy techniques. The design of the new buildings harnesses natural resources to create comfortable environments for users, while optimal energy-saving techniques enhance the efficiency of electromechanical systems, reducing overall energy and water consumption.

8 Water Management and sustainable solution

8.1 8.1 Introduction

Jordan is one of the most water-stressed countries in the world, with water resources limited by arid conditions and a high water deficit, estimated by the Ministry of Water and Irrigation to be around 18% of total demand. The presence of approximately 1.4 million Syrian refugees has further exacerbated this scarcity, increasing water demand by an estimated 20%. Given these challenges, Al-Balqa Applied University (BAU) must prioritize water management and sustainability to ensure efficient water use and support Jordan's environmental resilience goals.

8.2 Objectives

To develop and implement sustainable water management practices that reduce consumption, enhance water efficiency, and secure a resilient campus environment through water-saving measures, infrastructure upgrades, and innovative technologies.

8.3 Water Saving Initiatives

8.3.1 Awareness Campaigns:

- Launch a series of educational campaigns to raise awareness about water scarcity and promote water-saving habits among students, faculty, and staff.

- Introduce workshops, seminars, and signage around campus to inform the community of the importance of water conservation.

8.3.2 **Efficiency Measures:**

- Retrofit existing campus facilities with low-flow faucets, dual-flush toilets, and water-efficient appliances.

- Implement real-time monitoring of water usage in key areas to identify and address any potential leaks or excess usage.

8.3.3 Target**:**

Achieve a 20% reduction in water consumption by 2025.

8.4 **Upgrading Water Infrastructure**

8.4.1 Leak Detection and Repairs:

- Conduct regular assessments of the water distribution network on campus to identify and repair leaks promptly.

- Implement advanced metering and sensors to monitor water flow and pressure, allowing for quick identification of water loss points.

8.4.2 **Pipeline Upgrades:**

- Upgrade and replace aging water infrastructure with modern, durable materials to reduce leaks and increase water distribution efficiency.

8.4.3 **Target:**

Minimize water losses by 25% by 2030.

8.5 **Expansion of Solar-Powered Water Desalination**

8.5.1 **Desalination Plant Development:**

- Partner with environmental and engineering experts to enhance BAU's solar-powered desalination facilities.

- Aim for the upgraded desalination plant to produce 80 m^3 of water per hour, meeting a portion of the campus's water demand with renewable energy.

8.5.2 **Funding and Collaboration:**

- Seek funding from governmental and international organizations supporting sustainable water projects to facilitate further upgrades.

8.5.3 **Target:**

Fully operational solar desalination plant by 2030.

8.6 Rainwater Harvesting and Sustainable Construction Standards**

8.6.1 **New Building Requirements:**

- Integrate rainwater harvesting systems in all new campus constructions to collect, filter, and store rainwater for non-potable uses, such as landscape irrigation and cleaning.

8.6.2 **Retrofit Existing Buildings:**

- Where feasible, retrofit existing buildings with rainwater collection systems to reduce reliance on fresh water sources.

8.6.3 **Green Infrastructure:**

- Implement sustainable landscaping that incorporates native, drought-tolerant plants to further reduce irrigation needs.

8.6.4 Target:

All new buildings to incorporate rainwater harvesting by 2025, and retrofit existing buildings progressively.

8.7 **Monitoring and Evaluation**

- Establish a Water Sustainability Committee at BAU to track the progress of each initiative, evaluate water usage data, and ensure goals are met within established timelines.

- Conduct an annual report on water management practices and outcomes, allowing for adjustments to strategies based on findings.

8.8 Conclusion

By adopting this comprehensive action plan, Al-Balqa Applied University will contribute to Jordan's broader climate resilience goals and set a model for sustainable water management in educational institutions. The efforts will help mitigate water scarcity issues while fostering a culture of sustainability within the campus community.

9 Enhancing scientific research to mitigate the consequences of climate change

9.1 Introduction:

This action plan aligns with Al-Balqa Applied University's strategic goals, aiming to position BAU as a leader in climate research within Jordan and contribute to national and international climate resilience efforts.

9.2 Objective:

Develop scientific research capabilities and foster innovation to address climate change challenges, supporting both national and global priorities.

9.3 Action Plan

9.3.1 1 Research Capacity Building

- Objective: Strengthen research infrastructure and skills to address climate change.

- **Actions:**
  - Invest in laboratory equipment, data analysis tools, and software focused on climate change research.

- Provide specialized training and workshops for faculty and students in areas such as climate science, environmental engineering, and data analytics.
- Establish interdisciplinary research groups within BAU to promote cross-departmental collaboration on climate-related topics.

- **Timeline:** 2024–2025
- **Key Performance Indicators (KPIs):**
  - Number of new research tools acquired.
  - Number of trained faculty and students in climate-related fields.

9.3.2 Research Funding and Scholarships

- **Objective:** Increase funding opportunities and scholarships for climate-focused research.
- **Actions:**
  - Identify and apply for national and international research grants focused on climate change mitigation and adaptation.
  - Establish university-funded scholarships and fellowships specifically targeting climate change research.
  - Create incentives for faculty to publish in high-impact journals on climate-related topics.
- **Timeline:** 2024–2028
- **KPIs:**
  - Total research funding received for climate-related projects.

- Number of scholarships awarded in climate change research.

9.3.3 Climate-Focused Research Partnerships

- **Objective:** Collaborate with national and international organizations to advance climate research.
- **Actions:**
  - Establish partnerships with universities, government agencies, and NGOs involved in climate change studies.
  - Join regional research networks to access climate data, share findings, and participate in joint research projects.
  - Organize annual symposiums on climate change to share research and attract potential partners.
- **Timeline:** 2024–2028
- **KPIs:**
  - Number of partnerships and collaborations formed.
  - Annual participation rate in regional climate networks and symposiums.

9.3.4 Student and Faculty Engagement

- **Objective:** Encourage active involvement of students and faculty in climate change initiatives.
- **Actions:**
  - Develop a climate research internship program for students to gain practical experience.

- Launch climate-focused student clubs and societies to raise awareness and promote engagement.
- Introduce climate change topics and projects in various university courses.

- **Timeline:** 2024–2028
- **KPIs:**
  - Number of students participating in climate research internships.
  - Number of climate-related activities organized by student societies.

9.3.5 Community Outreach and Awareness

- **Objective:** Increase community engagement and public awareness on climate issues.
- **Actions:**
  - Conduct workshops and seminars for local communities on climate resilience and mitigation practices.
  - Develop a climate awareness program targeting high schools and local organizations.
  - Engage in policy dialogue with government stakeholders on climate mitigation and adaptation strategies.
- **Timeline:** 2024–2028
- **KPIs:**
  - Number of community events held.

- Increase in public knowledge and engagement based on post-event surveys.

9.3.6 Monitoring and Evaluation

- **Objective:** Track progress and effectiveness of climate-related research initiatives.
- **Actions:**
  - Establish a Climate Research Committee to monitor and evaluate the impact of the climate-focused research.
  - Publish annual reports on climate research progress and achievements.
- **Timeline:** Ongoing
- **KPIs:**
  - Completion of annual reports.
  - Measured impact of research on climate mitigation outcomes.

10 Risk and Vulnerability Assessment

10.1 Risk and Vulnerability Assessment

The Risk and Vulnerability Assessment in BAU's Climate Action Plan was determined by collecting the following data:

10.1.1 Climate Data.

For example, a smart agricultural weather station was established at Agricultural Research Station located at Humrat Al-Sahen (with a total area of 10 thousand dunums).

10.1.2 Socioeconomic Data.

Demographic and economic profiles, including vulnerable populations were conducted through the Development and Community Service at BAU.

10.1.3 Infrastructure and Environmental Data.

BAU holds all maps to the main campus as well as all community colleges that are under the umbrella of BAU. In addition, to the Agricultural Research Station. These maps were provided by the Royal Jordanian Geographic Center.

According to the data, the following risks have been determined:

10.2 Physical Climate Risk:

BAU's physical climate risks include: tropical storms, flooding, droughts, wildfires, extreme wind and cold events as well heat waves. It is worth mentioning that due to university colleges that are distributed overall the Hashemite Kingdom of Jordan, some university colleges are more exposed and vulnerable to certain risks. For examples: flooding and wildfires are of more risk for the university colleges in the northern parts. Rising sea levels could be a risk in Aqaba.

10.3 Transition Climate Risk:

BAU's transition climate risks include: policy and legal risks, technology risks, market risks. For example, expanded requirements, increased costs and new regulations are BAU's policy and legal risks.

10.4 Financial Climate Risk:

Adopting new technologies, green buildings, purchasing electric vehicles, changing the infrastructure, and established buildings toward a smart climate change represent high financial risks at BAU.

11 Mitigation Actions

BAU adopted the following actions to mitigate the impacts of climate change:

11.1 Energy Efficiency and Conservation:

This included improving insulation, lighting, heating, and cooling systems in buildings to reduce energy consumption. As well as promoting the use of energy-efficient appliances in offices, labs, lecture rooms and buildings. BAU also implemented technology to balance electricity demand with supply efficiently, reducing wastage.

11.2 Renewable Energy Transition:

BAU installed solar panels at the Agricultural Research Station in 2024. All vehicles currently purchased are electric vehicles.

11.3 Agricultural Practices:

Some agricultural practices were changed at the BAU's Agricultural Station. For example, compost is now manufactured instead of using chemical fertilizers thus reducing the water requirements and improving the soil physical and chemical properties.

11.4 Forest Conservation:

A total of 10000 trees were planted the last two years at BAU's Agricultural Station. The planted trees have low water requirements and are an excellent forage to the honeybee hives such as *Ziziphus*.

11.5 Damps:

To mitigate the water scarcity three damps are currently being established at BAU's Agricultural Research Station. The project started in 2024 and it is expected to end in 2025.

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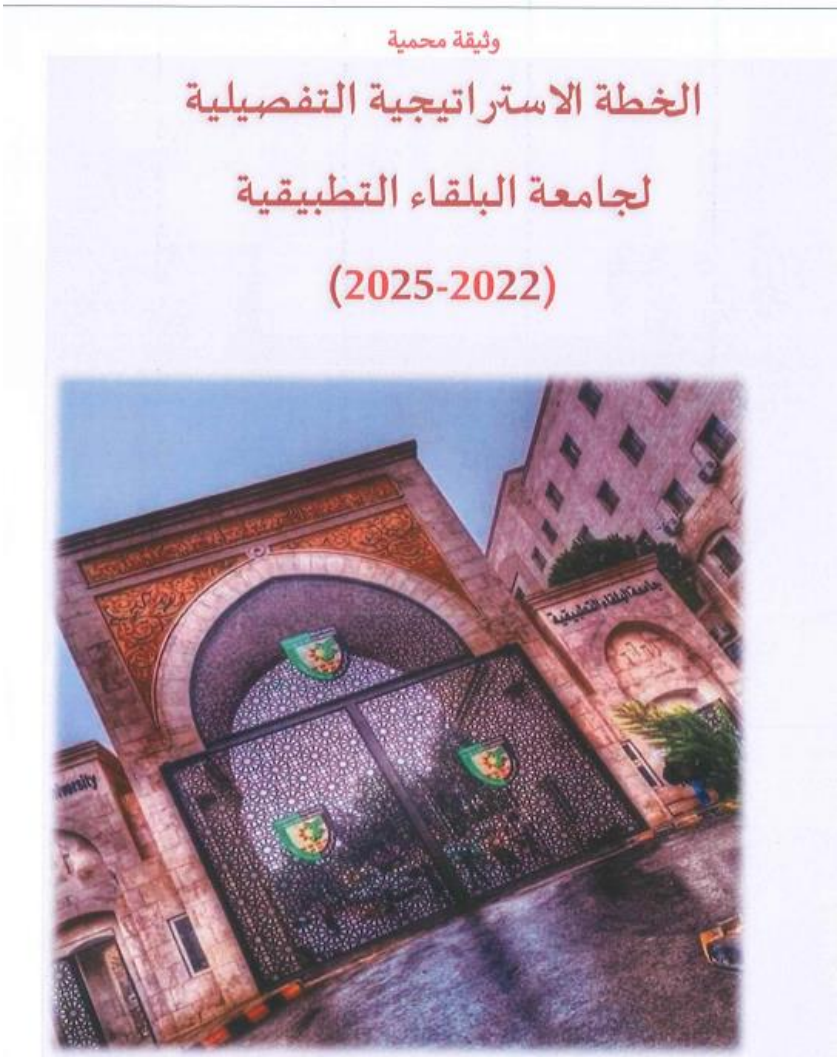
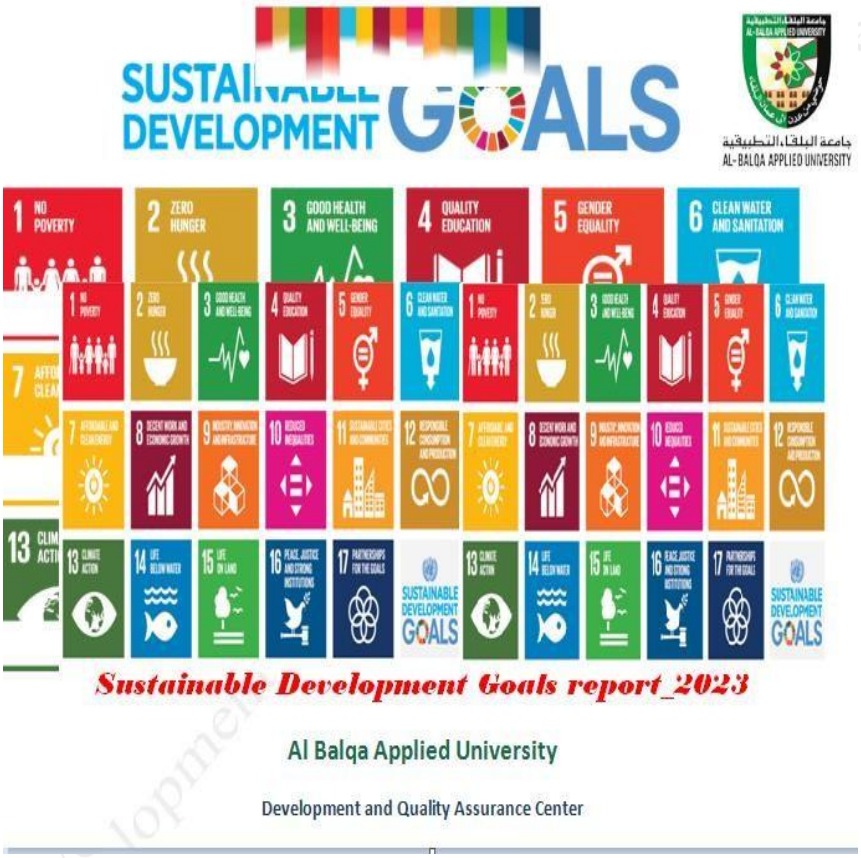
Annex 1:


وثيقة محمية
الخطة الاستراتيجية التفصيلية
لجامعة البلقاء التطبيقية
(2025-2022)

Annex 2


SUSTAINABLE DEVELOPMENT GOALS
جامعة البلقاء التطبيقية
AL-BALQA APPLIED UNIVERSITY
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
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