

# Sustainable Development at University of Anbar



## **Introduction**

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University of Anbar seeks to be one of the best Iraqi, Arab and international universities known for its authenticity, solidity and excellence in the field of university education, scientific research and community service, in a way that achieves comprehensive and sustainable human development in the region.

## **Collaborations**

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In order to achieve Goal 17 of the Sustainable Development Goals, UOA has activated global partnership for sustainable development with many Arab and international scientific institutions. MOA has formed collaborations with numerous universities and institutions globally to enhance its academic and research endeavors. It has established Memoranda of Understanding (MoU) with institutions across several countries, including Switzerland (GCSP), the UK (Liverpool John Moores University and the University of Nottingham), Malaysia (UKM, USM, UITM), South Korea (Hang Yong University), Qatar (University of Qatar), the UAE (University of Sharjah), Egypt (University of Cairo), Jordan (multiple universities including the University of Jordan and Yarmouk University), Tunisia (University of Sousse and University of Monastir), Palestine (An-Najah National University and others), and Yemen (Taiz and Seiyun Universities). The university is also planning to expand its collaborations to include more institutions, particularly in Malaysia (UTM, UM, UPM), as well as universities in France, Germany, and Spain.

## **Education Quality**

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The university is working on implementing training courses and workshops that contribute to building the university's institutional capacity. By holding conferences, seminars and lectures to spread awareness about promoting a culture of quality, development and continuous improvement in the performance of the university and its various colleges. Programs have been developed to continuously improve the quality of teaching, learning, scientific research and community service processes. The university believes that education is the key to achieving many other sustainable development goals. Obtaining a good education enables people to escape the cycle of poverty and helps reduce inequality and achieve gender parity. It also enables people everywhere to live healthier and more sustainable lives. Education is also of great importance in promoting tolerance among people and contributes to building more peaceful societies. The university's goals are in line with goal No. 4 of the sustainable development goals.

## **Gender Equality**

In the context of achieving the fifth goal of sustainable development goals, the university seeks to achieve gender equality. The university calls for complete gender equality, and eliminates all legal, social and economic barriers that prevent women from playing their role in the university and society as a whole. The university considers gender equality a basic human right and healthy family. In this sense the university goals meet with goal No. 3 in making great progress in improving people's health. The number of female faculty members accepted constitutes 36% of the number of male faculty members. Females receive equal wages to males without any difference because salaries at the university are determined according to the job ladder regardless of gender. On the other hand, the number of female students is greater than the number of male students. Females constitute 58% of the total number of students.

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## **Green Oasis**

The university administration aims, through its programs and strategic plans in general, to create a sustainable green university city with clear features and prominent formation. On September 1, 2020, the university president launched the major project (University of Anbar: A Green Oasis) to enhance and develop positive aspects and address challenges and obstacles to reach the ultimate goal (a sustainable green university). The project aims to improve the integration of university buildings with their surroundings, creating a comfortable academic environment through green and blue infrastructure, such as green spaces and artificial lakes. It seeks to enhance the university's reputation regionally and internationally while boosting its rankings in global sustainability indices by promoting sustainable practices, energy efficiency, emission reduction, and effective waste management. Thus, the objectives of this project meet with Goal No. 13 and 3 of the Sustainable Development Goals in climate action and reducing climate crises to improve people's health, especially since the university and all its sites are located in Anbar Governorate, which has a desert climate and environment.

## **Nature Reserve**

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As part of its efforts to promote environmental sustainability and preserve biodiversity, a project has been created to establish a nature reserve within the university campus. The University's Construction and Projects Department is supervising the implementation and follow-up of the project. The project aims to transform part of the university grounds into a protected natural environment that includes a variety of local plants and animals. This reserve is expected to provide unique educational and research opportunities for students and researchers, in addition to enhancing environmental awareness among members of the university community. Thus, the objectives of this project meet with the tenth goal of the Sustainable Development Goals in preserving wildlife, protecting the environment, and reducing climate crises in Goals 13 and 16, especially since the university and all its sites are located in Anbar Governorate, which has a desert climate and environment.

## **Water Harvesting**

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A water harvesting system has been established in many university buildings to collect rainwater to be used in irrigating gardens and green spaces to achieve sustainability and rationalize water consumption. The examination showed very encouraging results for the completion of this pioneering and important project. The university has been encouraged to work on spreading this culture in society, which can greatly contribute to achieving the goals of sustainable development by providing water and increasing green space, leading to reducing the impact of emissions and global warming, in addition to the possibility of using the roofs of tanks in these systems to install solar cells that can contribute to supplying irrigation systems with electrical energy. Thus, the objectives of this project meet with Goal 6 of the Sustainable Development Goals in improving the efficiency of water use to reduce water stress and reduce climate crises in Goal 13. This project also aligns with goal 14 on the conservation and sustainable use of water resources, especially since the university and all its sites are located in Anbar Governorate, which has a desert climate and environment.

## **Clean Energy**

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The objectives of this project meet with Sustainable Development Goal No. 7 on access to clean energy and Goal 12 on ensuring sustainable consumption and production patterns. UOA has established more than six programs to reduce paper use and recycle plastic and metals on campus. These projects have varied to include the use of double-sided printing. Using the printer for essentials. Not using plastic bags. Working to distribute free water. Working to collect electronic waste. Working to collect metals.

## **Waste Recycling**

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In its response to Goal 15 of conserving life on land, UOA is working to spread the culture of (Do not increase waste) within the university campus through many guidance programs and workshops. In this context, the university has established a working mechanism through the Construction and Projects Center and the Computer Center to collect aluminum, metals and electronic waste respectively. The university has also circulated the need to reduce the use of paper and rely more on electronic services (pdf, email, smart board, and data display screens). The university has also encouraged recycling and how to collect waste (paper, plastic and cans) in special boxes distributed on the campus grounds. Organic waste (food, tree parts, tree leaves) is now being recycled within the university's colleges and centers (College of Science, College of Agriculture, Renewable Energy Center, Computer Center) and converted into fertilizer or gas.

## **Biofertilizer (Compost)**

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It is an eco-friendly method of converting plant waste, such as fallen leaves and pruning residues, into a valuable natural fertilizer. By composting these materials aerobically rather than burning them, they become rich in nutrients and can be used as an organic fertilizer to enhance soil properties. This process relies on adjusting the carbon to nitrogen ratio. Key to this process are mycorrhizal fungi, which form symbiotic relationships with plant roots, aiding in the absorption of water and nutrients, reducing water stress, increasing drought resistance, and combating agricultural pests. This project comes in response to goals 7 and 11 of Sustainable Development Goals in accessing to clean energy and avoid all pollutants for sustainable, livable cities. Also this project goes along with goal 9 in promoting sustainable manufacturing, and encouraging innovation.

## **Challenge Project (Cultivation of Four Field Crops in Dry Saline Soils)**

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This project came in response to Goals No. 1 and 2 of ending poverty and creating a world free from hunger through food security among farmers to help them improve the quality of their production and enable them to grow in difficult dry saline soils. A research team from the Desert Studies Center succeeded in growing four main crops - tomatoes, eggplant, cucumber and hot peppers - using a greenhouse and drip irrigation, despite delays caused by the COVID-19 pandemic. The project, which was conducted from March to September 2020, overcame difficult environmental conditions, with eggplant proving to be the most productive, followed by hot peppers, tomatoes and cucumbers. Success was based on removing existing vegetation, managing surface salts, chemically controlling insects, and using biostimulants. A subsequent experiment also successfully grew cabbage and broccoli under the same conditions.

## **Other Projects**

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1. Rehabilitation of buildings: UOA is one of the first educational institutions in Iraq to adopt the principle of green buildings, as its buildings were designed on well-studied foundations subject to environmentally friendly building standards.
2. Establishing and rehabilitating artificial lakes and increasing blue spaces in the university.
3. Establishing and rehabilitating plastic houses for scientific research purposes
4. Establishing and developing the Museum at the university.
5. Using renewable energy: Anbar University is one of the first universities to be interested in renewable energy in line with its vision of using renewable and environmentally friendly energy sources such as solar and wind energy and providing alternatives to reduce costs related to electricity consumption.

6. Implementing the project of wind turbines.
7. The project of optimal use of water by using optimal irrigation methods and reducing water consumption.
8. Al-Hamira Water Station Project and the transmission pipe from the Euphrates River to the university main site.
9. Land cultivation project such as planting olive fields and pistachio fields within the university campus
10. Recycling Wastewater in Mosques: This project involves the recycling of gray water from mosques for uses such as irrigation and sanitation.
11. Smart Village Project: This project involves creating a technologically integrated and sustainable community, likely incorporating smart infrastructure for efficient resource management.
12. Hydrological study to assess the quality of groundwater and its suitability for agricultural use in the Jleeb Al-Sheikh area within the Western Desert, Iraq

### **University Global rankings on sustainable development**

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- UOA ranked first among Iraqi universities and 146th in the world in the Indonesian (UI Green-metrics) ranking for 2022 and the first in Iraq and 141st in the world for 2023.
- UOA ranked second among Iraqi universities and 400-600th in the world in the British (THE Impact Ranking 2020) ranking for 2020.

Research conducted at the university related to sustainable development: (2552)

For more information please scan QR. Code SDGs in University of Anbar

