



Possibility Achieving Sustainable Environmental Development in Iraqi Universities

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Abstract. The Sustainable Development Goals (SDGs), also known as the Global Goals, were endorsed by all UN Member States in 2015 as a worldwide call to action to eradicate poverty, safeguard the planet, and guarantee that all people live in peace and prosperity by the year 2030. To be successful, development must strike a balance between social, economic, and environmental sustainability, and the 17 SDGs are interconnected, so progress in one area will affect outcomes in others. By promising to leave no one behind, countries have pledged to speed up development for those who have lagged behind. The Sustainable Development Goals aim to end all forms of poverty, hunger, illness, and discrimination against women and girls by the year 2030. All parties involved must accomplish this lofty objective. Achieving sustainable development goals in any setting requires study, imagination, expertise, data, and capital. To this end, educational institutions have organized seminars, workshops, and conferences to disseminate the culture of sustainable development goal attainment; they have also organized voluntary campaigns and provided humanitarian aid to help achieve these goals; and they have paid special attention to the upkeep of their campuses' green spaces.

Keywords. Sustainable, Environmental, Economic.

1. Introduction

One definition of sustainable development is "development that does not compromise the ability of future generations to meet their own

requirements." [1]. Environmental, economic, and social development were all included in the process of defining sustainable development, which resulted in a virtuous circle that was successful from an economic

standpoint, fair to society, and beneficial to the environment [2]. Sustainability, as defined by the World Commission on Development and the Environment in 1987, is "a process that satisfies the requirements of the present without jeopardizing the ability of future generations to satisfy their own needs [3]. It is a multifaceted process that includes financial capital, infrastructure, human capital, networks, and natural resources, as defined by the World Bank. The Arab area has a unique potential to make its universities among the best in the world thanks to the Sustainable Development Goals. When it comes to analyzing policy issues and educating future generations about them, universities play a crucial role outside of the political system. This makes them essential to the achievement of sustainable development goals. Teachers provide them with the education they need to go on to instruct students in elementary and secondary schools, prepare engineers and scientists to head cutting-edge technology firms, and assess the issues facing their communities in terms of economic growth, social equity, and environmental responsibility. Increased national initiatives to improve research, teaching, and policy analysis at universities around the world could have a positive impact on the Arab region [4].

2. Iraqi Universities in International Classifications

The results of the British Times Sustainable Development Ranking for 2021 showed 37 Iraqi government and civil universities and colleges in accordance with the United Nations goals of supervision, outreach and education for sustainable development goals. This classification in its current version showed 1115 universities from 94 countries, while 37 Iraqi State and Civil Society colleges registered their attendance in this classification with an increase of 16 universities compared to

the results of 2020. The official classification website marked the advent of University of Basrah in category (301-400) globally and in first place locally, followed by the University of Anbar in second place locally and in class (401-600) globally, while Al-Mustaqbal University College, Babylon, Hilla in third place locally and in category (601-800) globally. The British Times Sustainable Development Classification assesses universities by achieving a number of United Nations goals out of 17, including quality education, health, partnerships, industry, innovation, climate action and gender equality[5]. Al-Mustaqbal University College has achieved results in four objectives: water, environment, sustainable energy, health, and partnerships to achieve the goals.

The impact ratings for 2021 are the third issue and the overall ranking includes 1115 universities from 94 countries. Al-Mustaqbal University College has thus achieved the top ranking results for 2020 - 2021: Green matrix, webometrix, Sismago, RuR, and Scopas Research [6]. Universities are increasingly playing a role in shaping the core of the world's high-tech regions, emulating the long-standing role played by universities such as Stanford and California. Therefore, the quality and ability of universities to attract the best students and faculty is important. According to one of the widespread global classifications of universities (QS), the twenty-two Arab countries have 15 universities in the top five hundred of the world. These universities are listed in Table (1), Table (2) Best Arabic and International Universities 2022 (Shanghai Ranking) and Table (3) Best Arab Universities in the Arab World and Globally for 2022 (QS Rating) [7,8]. The Shanghai ranking of the best Arab universities is Arab and international for 2022.

Table 1. World University Ranking QS 2018.

University	Classification	Country
King Fahd University of Petroleum and Miner	173	Kingdom of Saudi Arabia
King Saud University	221	Kingdom of Saudi Arabia
American University of Beirut	235	Lebanon
King Abdulaziz University	267	Kingdom of Saudi

		Arabia
Qatar University	349	Qatar
University of the United Arab Emirates	390	United Arab Emirates
American University in Cairo	395	Cairo
American University of Sharjah	411 – 420	United Arab Emirates
Arab Gulf University	411 – 420	Bahrain
Khalifa University	451 – 460	United Arab Emirates
Sultan Qaboos University	451 – 460	Oman
King Khalid University	471 – 480	Kingdom of Saudi Arabia
Cairo University	481- 490	Cairo
St. Joseph's University	491 – 500	Lebanon

Table 2. Best Arabic and International Universities 2022 (Shanghai Ranking).

University	Sequence	Country
King Abdulaziz University	1	Kingdom of Saudi Arabia
King Saud University	2	Kingdom of Saudi Arabia
King Abdullah University of Science and Technology	3	Kingdom of Saudi Arabia
Cairo University	4	Cairo
King Fahd University of Petroleum and Miner	5	Kingdom of Saudi Arabia
Al-Taif University	6	Kingdom of Saudi Arabia
Al-alexandria University	7	Cairo
Qatar University	8	Qatar
King Khalid University	9	Kingdom of Saudi Arabia
Al-Mansoura University	10	Cairo

Table 3. Best Arab Universities in the Arab World and Globally for 2022 (QS Rating).

University	Sequence	Country
King Abdulaziz University	1	Kingdom of Saudi Arabia
King Fahd University of Petroleum and Miner	2	Kingdom of Saudi Arabia
Khalifa University	3	Dubi
Qatar University	4	Qatar
American University of Beirut	5	Lebanon
King Saud University	6	Kingdom of Saudi Arabia
University of the United Arab Emirates	7	United Arab Emirates
Sultan Qaboos University	8	Oman
American University of Sharjah	9	Al- Sharjah
American University in Cairo	10	Cairo

These 15 universities account for 3% of the top 500, while the Arab world, with a population of 430 million, accounts for 5.5% of the world's population. Although there are many distinguished colleges in the Arab world, public representation among the best universities at the moment is not enough. At this time, there is no university in the Arab region among the world's top 100. It is indisputable that the decline in the status of Arab universities is certainly one of the factors

behind the decline in the Arab region's representation in research and development efforts worldwide. The latest data published by the UNESCO Data Institute indicates that Arab countries do not contribute 8.0% to research and development efforts globally. Global R&D centres are North America at 65.35% and Europe at 16.25% and East and Southeast Asia at 1.32% of the world's research and development investments. of course, the decline in the region's performance in this area

reflects many other considerations, including inadequate government funds for research and development[9].

3. Challenges of Sustainable Development Goals in the Arab Region

Challenges to achieving the sustainable development goals vary widely across the Arab area, posing new and significant difficulties. There are still states working to ensure their citizens have access to basic necessities and are lifted out of poverty. The need to transition away from fossil fuels and toward renewable energy sources has put many countries in the region in an awkward position as major oil hubs. Included in this group are the countries of Algeria, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. The Arab world's lines are regularly broken by foreign influences, and a third group of Arab states is tragically ground down by conflicts. Iraq, Lebanon, Libya, Palestine, Somalia, Syria, and Yemen are among the countries caught in the cycle of violence and conflict. There are two issues that affect the entire region. One major problem is that, with a few notable exceptions, the Arab region is arid and vulnerable to water scarcity and climate change. This means that freshwater supply and adapting to the effects of climate change are regional concerns that must be recognized everywhere. The second problem is that the Arab world, like much of the rest of the globe, has to deal with the necessity of gender equality, which necessitates women's full involvement in economic, social, political, and cultural life. Central to the pursuit of sustainable development goals are the difficulties of eliminating poverty, transitioning to carbon-neutral energy sources, putting an end to violence and conflict, managing freshwater supplies, and achieving gender equality. The Arab area places a high focus on the Sustainable Development Goals and the Sustainable Development Plan as a framework for development in 2030 [10].

4. The Role of Universities in the Region

Universities in various Arab countries express a keen interest in engaging in this complex agenda as well as entering into partnerships with universities in the world. Monash University in Melbourne, Australia, has

prepared a very useful four-pronged guide for universities to participate in the Sustainable Development Goals, entitled "Launching the Sustainable Development Goals in Universities", as follows:

- Introduction of new educational programmes to teach tomorrow's leaders about the multifaceted challenges of sustainable development.
- Strengthening research programmes in universities on sustainable development, including poverty, renewable energy and conflict resolution.
- Establishment of new institutions at the university level to coordinate the activities of the sustainable development goals between the various departments of the university.
- As part of its commitment to community service and leadership development, the University convenes government and business leaders, representatives from civil society, and University faculty and staff to discuss and strategize ways to achieve global sustainability objectives.

Additionally, the sustainable development goals present a constructive and optimistic chance to address the challenges of our day. All throughout the world, people are wasting their time and energy on pointless rivalries and covert wars. For the world to finally put an end to its wars and focus on the common concerns of climate change, severe poverty, and social justice, we must put science and cooperation front and center. In the coming years, universities in the Arab area can help their communities achieve the sustainable development goals thanks to the region's rich historical traditions and high moral standards [11]. The Sustainable Development Goals of 2030 rely heavily on the contributions of universities and other institutions of higher learning. While SDG 4 emphasizes the importance of ensuring that all children have access to a quality education, the impact that universities have on society as a whole is evident in the teaching, learning, and research that take place there, as well as in the initiatives taken by their students. Institutions of higher learning are powerful agents of

positive social, environmental, and economic change because they serve as a breeding ground for innovative approaches to pressing global issues. Since the world community agreed on the 2030 development agenda, some universities have begun dialogues with local communities, students, and research and innovation hubs to discuss sustainable development goals and strategies. However, the Arab area has made very little headway[12]. As shown in table (4), an Iraqi university (University of Kufa) along with the University of Baghdad, Mustansiriyah, and other Iraqi universities have played a role in achieving the sustainable development goals for each goal and in clarifying the role of the university in achieving these goals and what has been accomplished at the university level [10].

Alternatively, universities host conferences and symposia on sustainable development to

build the necessary capacities in the field, discuss the role of partnerships in supporting scientific research and community service, and highlight economic, social, and environmental research developments related to integrating sustainable development concepts into science. The Conference's themes include the realities, challenges and the role of higher education and environmental policy in developing States and the role of sustainable development in supporting poverty eradication, Targeting the poorest as well as focusing on sustainable economic development and entrepreneurship research and health development and its role in achieving sustainable health systems associated with disease diagnosis, treatment, vaccines, governance and governance in resource management, renewable energy as a strategy to support sustainable development and environmental development[13].

Table 4. Shows the University's role in achieving sustainable development goals.

No.	Goals	The role of universities	University-level initiatives
1	Eradicate poverty	Increasing poor people's access to information technology, providing sustainable agriculture models	Initiative of Agriculture college in Providing Fertilizer Alternatives to the Poor
2	Eradicate hunger, provide improved food security and nutrition, and promote sustainable agriculture	Food Security Research, Sustainable Agriculture Research	Studies on food security, ration card reform and social protection programmes
3	Ensure everyone's well-being and healthy lifestyles at all ages	Participation in the Visiting Doctor Program, which allows for the exchange of medically-related information between the University and the Iraqi Ministry of Health	Collaboration with regional health departments and use of their visiting physician service
4	Ensure quality, equitable and inclusive learning for all, and promote lifelong learning opportunities for all	Contributing to the reduction of the illiteracy rate	University's contribution to literacy programme and establishment of literacy center, continuing education programs
5	Gender equality and the empowerment of all women and girls	Girls' and women's empowerment programmes	Human Development Unit programme to promote gender equality and empower girls and women, organizing women's university meetings
6	Ensuring the provision and sustainable management of water and sanitation for all	Provision of studies and research in sanitation and water	Research and university theses (master's and doctoral), on water and sanitation at the governorate level

7	Ensuring universal access to reliable and sustainable modern energy services at an affordable cost	Research in clean energy	Adopt solar technology at the university and adopt wind energy
8	Advancing full and productive employment for everyone, as well as decent work for all, in an economy that is growing steadily and sustainably.	Employment for the poor	The University's initiative to employ vulnerable and poor groups in daily contracts and wages
9	Promoting inclusive industrialization, strengthening existing infrastructure, and fostering new ideas	Investing in ICT	Improved utilization of computer investment
10	Reducing inequality in and among countries	Facilitating access to relevant sources of information for persons with special needs	Publication of some research on (the safeguarding of religious and ethnic minorities) in tandem with foreign and Iraqi civil society organizations, thanks to funding from the European Union, and the launch of an effort to create a library tailored to the requirements of students with disabilities.
11	Cities and human settlements should be inclusive, safe, resilient and sustainable	Protection of the national heritage	Establishment of a center for the maintenance and preservation of manuscripts and establishment of a private museum in the city
No.	Goals	The role of universities	University-level initiatives
12	Ensuring sustainable consumption and production patterns	Rationalization of electrical power consumption	Launch of Energy Rationalization Programs
13	Urgent action to address climate change and its impacts	Protection of Iraq's environment	Encourage scientific research in topics of climate change and environmental protection and establish environmental departments in science college and develop master's studies in environmental sciences
14	Conservation and sustainable use of oceans, seas and marine resources for sustainable development	Stimulating scientific research in ocean and sea conservation	University research and thesis in the Gulf's sustainable use
15	Protect and restore land-based ecosystems, promote their sustainable use, also manage forests sustainably, combat desertification and halt and reverse land degradation and halt the loss of biodiversity	Biodiversity databases in Iraq	Establishment of the Biodiversity Database, in partnership with the Ministry of Environment
16	Promoting peaceful and inclusive societies for	Promoting opportunities for interreligious and	In cooperation with some Iraqi and international civil society organizations

	sustainable development, universal access to justice and effective, accountable and inclusive institutions at all levels	interreligious dialogue and creating active dialogue spaces	and with support from the United Nations Development Programme in Iraq (UNDP), the University of Koufa established a Civil Society Department in the Faculty of Arts, offering bachelor's and master's degrees in the field, and also established a UNESCO Chair for Interfaith Dialogue, publishing a number of studies on (peacebuilding). Sustainable development will be achieved through the establishment of twinning agreements, partnerships, and scientific, cultural, and humanitarian exchange with a variety of universities in Iraq and around the world.
17	Strengthening and revitalizing the means of implementing the global partnership for sustainable development	Strengthening the partnership for sustainable development	

Academics have advocated for a new approach to combating the radical ideology that has emerged as a barrier to progress in Iraq. They pointed out that releasing people from radical tendencies and ensuring security, justice, and equality are cornerstones of sustainable growth. Universities, they stress, may produce research that aids Iraq's integration with the industrialized world. They can take their vital and outstanding role in establishing a knowledge base that contributes to building a contemporary educational system capable of building a society adapted to the knowledge and scientific revolutions that the world is witnessing. Science could not be used in an unstable security environment, and the diversity of affiliations was an important factor leading to complementarity in development. Universities and educational institutions were the first and effective tools for accelerating society's development in all its political, security, social and educational spheres. All conferences aim to provide a platform for discussion and interdisciplinary dialogue on sustainable development at the national and global levels for academics, practitioners and decision makers and to propose multidisciplinary strategies for scientific research, economic development and social, cultural and institutional changes in Iraq and sharing experiences and research findings of the Conference's stakeholders on all aspects of environmental, social and economic sustainable development, Discuss practical challenges to promoting Iraq's sustainable development, adopt appropriate

solutions, and create global partners for research cooperation and future work. Using scientific research towards sustainable development, investment, private sector engagement in sustainable development, surface and groundwater management and strategic storage to provide sustainable water resources, reconstruction of infrastructure projects for sustainable development, renewable energy applications to maintain a clean environment, information technology, database applications and other aspects of sustainable development[14]. Universities and colleges seek to ensure that research at conferences is aimed at strategically planning the country's needs for all sustainable development requirements that are geared towards the country's economic development and recovery. The aim of the conferences is to develop strategic plans and visions that can be adopted by decision makers, whether in the Iraqi Parliament or other ministries[15]. Integration, also known as settlement, is crucial to ensuring inclusiveness throughout Iraq, and achieving Iraq's 17 development goals is essential to the country's long-term prosperity and development. Such efforts must be coordinated at the national and local levels, not just in Baghdad and the major provinces. UNDP has launched a program to involve local partners, such as universities and research institutes, in the governorates most in need of development so that the 17 Sustainable Development Goals can have the greatest possible impact on the lives of their residents. Given the importance of local partners in

implementing and monitoring SDGs, the UN Development Programme (UNDP) in 2019 launched an initiative to engage them in the governorates of Basra, Anbar, and Karbala. This is a significant step towards localizing SDGs at the local level through collaboration with government institutions, planning services, and statistical offices. In order to plan, analyze, and assess local needs in accordance with the 2030 agenda, the government enlisted the aid of three universities: Basra University, Karbala University, and Al-Anbar University. The selection of these three governorates was based on the unique difficulties encountered by each of these localities. Because of its high poverty rate at 52% according to the latest data from the Central Statistical Agency, the governorate of al-Muthanna was brought into the discussion in early 2020 after meetings involving the UNDP and the Ministry of Planning. The program seeks to involve all relevant sectors in the formulation of policies and development of plans in the selected governorates by providing them with statistics and analytical data on the difficulties facing the governorates. Improved public services, lower poverty rates, and lasting progress can all result from addressing these issues and implementing these programs. Involving universities is crucial because it promotes idea sharing between policymakers, decision-makers, and academics, and it places a premium on making use of all economic and social research, studies, and analysis that contribute to a better understanding of local reality and the identification of priorities that are consistent with the development agenda. Al-Muthanna, in particular, has a high poverty rate and severe service shortages, however these problems will be alleviated as a result of the governorate's efforts to implement the 2030 plan. The business sector must work with policymakers and planning departments to identify innovative solutions and build on prior experiences if the sustainable development goals are to be realized. A project for achieving sustainable development goals is making connections between educational institutions, government offices, policymakers, and

planners at the governorate level. Decision-makers and policy-makers can benefit from the research and analysis conducted at universities to inform their policymaking. The initiative's stated purpose is to "bridge gaps" in order to "accelerate localization of sustainable development goals, identify governorate priorities, and form true partnerships with all parties to find new solutions to development." challenges [16]. The SDGs are a framework for ensuring social harmony, economic growth, and environmental safety. Because of their focus on education, research, and innovation, universities may make significant contributions to the Sustainable Development Goals (SDGs) [17].

5. Discussion and Conclusions

Some colleges in universities have placed the phrase sustainable development only on their official website and incorporated research but we have not found any research related to sustainable development. We note that most Iraqi universities seek to achieve sustainable development goals in one way or another through their initiatives to achieve sustainability objectives, which in turn raise the university's profile in international classifications, including research, studies and partnership with the private sector, as well as holding conferences and seminars on the same subject.

Recommendations

- Providing support to universities and colleges to achieve sustainable development goals in line with the university's role in serving the community.
- To pursue each of the objectives by linking the University with society and the private sector to achieve the goals as complete as possible as required.
- A table of sustainable development goals has been worked on the website of the University showing the achievements of the goals and how to achieve them while updating the table periodically.

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