



REPUBLIC OF IRAQ
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF SUMER



University's President
Prof. Dr. Adel Radi Jaber Al-Zurghani

The Director of the Global Ranking Unit
Prof. Dr. Hussein Kh. Chlaib



Preface

The Sustainable Development Goals (SDGs) are the UN's blueprint for a more sustainable future for all. Their adoption put environmental degradation, sustainability, climate change, and water security under the international spotlight. University of Sumer SDG Report describes which topics with regard to environmental, social and governance issues deal with the 17 SDG goals. The Report is prepared in accordance with the 17 aspects of SDGs in addition to GreenMetric Standards. In relation to the defined material topics reports on its achievements, challenges and progress in sustainability performance made over the year.

Our university SDG Report presents up-to-date performance, activities and plans directed on achieving the targets of the Sustainability Strategy. The Report describes UOS performance in the focus areas of sustainability in relation to the Sustainable Indicators and categories of the SDG goals.

Material topics presented in the SDG Report are structured around 17 focus areas on which THE impact ranking concentrates its efforts which are:

- 
- 1- No Poverty**
 - 2- Zero Hunger**
 - 3-Good Health and Well-Being**
 - 4-Quality Education**
 - 5- Gender Equality**
 - 6-Clean Water and Sanitation**
 - 7-Affordable and Clean Energy**
 - 8-Decent Work and Economic Growth**
 - 9-Industry, Innovation and Infrastructure**
 - 10- Reduced Inequality**
 - 11- Sustainable Cities and Communities**
 - 12- Responsible Consumption and Production**
 - 13- Climate Action**
 - 14-Life Below Water**
 - 15- Life on Land**
 - 16- Peace, Justice, and Strong Institutions**
 - 17-Partnerships for the Goals**

One of University of Sumer important goals is to be a part of the sustainability project in the especial and in the world in general. Therefore it involved itself in many organizations and communities that deal with sustainability and natural resources conservation. These organizations are distributed locally, regionally and internationally.

Our report will be divided into many parts according to the areas with the current situation and the recommendation to reach high level in the sustainability.

Although UOS participated in UI GreenMetric ranking last year for the first time, it is awarded as the 603 world most sustainability university place (Plate 1), and it was in the 22 place from 69 local university. UOS did its best and gave its excellent efforts to gain these ranking in this ranking.



Plate 1: UOS certificate that awarded by UI GreenMetric for its ranking.

No Poverty:

All the UOS students offered free education during all university stages.

Industry, Innovation and Infrastructure:

Our university colleges are distributed in seven sites; they have small buildings with poor infrastructure. The reason of that is because of the general situation in Iraq. our recommendation for this point is we have we start with our new site of the university that location in the east of Al-Referee city with an area of 400 Acres and design and build it using the most advanced designs and according to the most high level infrastructure and standards. In 2022 and beginning of 2023, many building were built to receive the big number of students and staff (Figure 2).



Plate 2: Example of new buildings in UOS faculties.

In 2020, the total planted vegetation area was 5722 m² (20.1%) so we worked hardly to have more planted and green areas to about 40% that mean we should decrease the area to twice, so many new green areas were added to the university (**Plate3**)



Plate 3: Example of new green areas in UOS faculties.

Also we need to growth and plant big trees to cover more than 30% of the total area.

University budget for sustainability effort is good and the average percentage of university budget for sustainability efforts was about 19.5% for last year which is so good and means that our university spends more money to be an active organization in the field of sustainability. UOS work hard with the Iraqi Ministry of Higher Education and Scientific Research to increase the budget of the sustainability researches.

Take caring about the special needs people and disabilities in an important side that all universities have to take an action about it, so we should be more active about this subject. We need more parking areas in the colleges' parks for them and more elevators in all our buildings.

All facilities should be existed in all buildings and are fully operated. We have many female students and employees have children and the university facilities are exist in all buildings and are fully operated

Our university has the following parts of the Security and safety facilities,

- 1-CCTV in entrances.
- 2- Monitoring screen.
- 3-Fire alarm and fire sensors.
- 4-Fire extinguish.
- 5- Fire ball.
- 6- Sand pail.

Hundreds of extra security cameras were installed in all UOS sites. We should work to include all the above in all sites and improve our system to be available and security responding time for accident. Crime, fire and natural disaster less than 10 minutes.

Our health system need to be more advance by having good health infrastructure like big hospital in the main campus or small hospitals in each college. Having our own educational hospital in progress and we expect we will have one in the next close months.

UOS provides health services through the emergency rooms that distributed in all the university parts and for entire academic staff and students community in addition to the first aid indoor kit boxes in all rooms, classrooms and laboratories.

Our Conservation system consists of two parts, the first one is a green house for planting vegetables for campus residents and an animal house for chicken growth for campus residents which provide a fresh products for the campus population with a supported price. Our plan to increase the quantity and quality of these systems. We looking for expand the numbers and areas of the green houses and the animal houses. Also, UOS has a plane to open a number of artificial lakes for fish growth.

Affordable and Clean Energy

Energy efficient appliances are used in our university community and all parts of the UOS using the energy efficient appliances to save the energy for example, insulation, LED lighting and the deployment of sustainable technology. UOS obligating all procurement committees in the university and its faculties to purchase environmentally friendly and low-pollution goods and equipment.

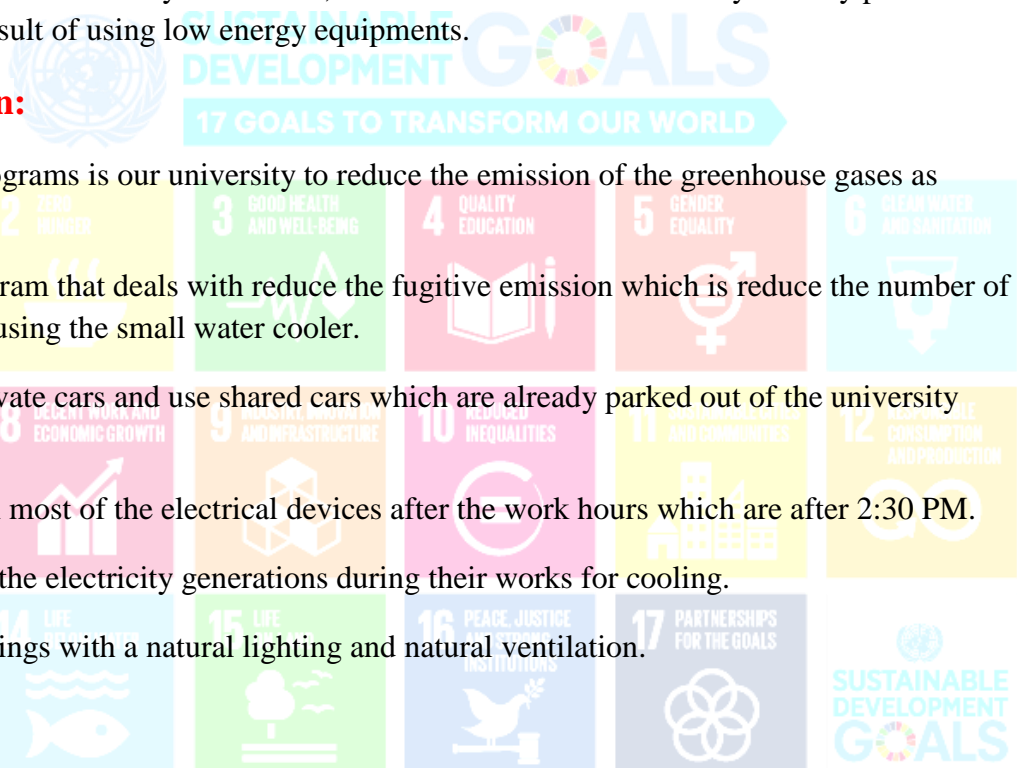
The number of the installed LED lamp was 600, while the total number of the energy efficient applications was 897, so the percentage is 66.8%. The number of the installed LED bulbs was 860, while the total number of the energy efficient applications was 1813, so the percentage is 46.8%. The number of the installed fans (ceiling and wall) was 500, while the total number of the energy efficient applications was 745, so the percentage is 53.5%. The average percentage of the energy efficient applications was 55.7%. According to this percentage, we have to increase the

type and number of these application to reach the percentage of >75%. These numbers were for 2020, while for the year of 2021 all these numbers were duplicated.

UOS has to start establish smart buildings. Also, our university has to use the renewable energy such as solar energy and wind energy; both of these sources are applicable in our environment. We have a hot and dry summer and have open areas out of the cities and are suitable for establishing wind fans. Many building in UOS were made inside from wood. Also there are many buildings has a natural lighting and natural ventilation.

Annually, all our university sites use about 852000kWh. So we still around the preferred personal usage ratio which is <279kWh. This electricity is used for lighting, cooling, heating and laboratory appliances. For the year of 2021, we must decrease the electricity used by person which was as a result of using low energy equipments.

Climate Action:



There are five programs is our university to reduce the emission of the greenhouse gases as below

- 1- There is a program that deals with reduce the fugitive emission which is reduce the number of refrigerators and using the small water cooler.
- 2- Reduce the private cars and use shared cars which are already parked out of the university buildings.
- 3- Shutting down most of the electrical devices after the work hours which are after 2:30 PM.
- 4- Give a rest for the electricity generations during their works for cooling.
- 5- Establish buildings with a natural lighting and natural ventilation.

The Total Carbon Footprint (CO₂ emission in the last 12 months, in metric tons)

$$\begin{aligned}
 \text{CO}_2 (\text{electricity}) &= ((\text{electricity usage per year (kWh)}/1000)*0.84 \\
 &= ((700000 (\text{kWh})/1000)*0.84 \\
 &= 588 \text{ metric tons}
 \end{aligned}$$

CO₂ (bus)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

CO₂ (cars)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

CO₂ (motorcycle)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

CO₂ (total)= 588 +0+0+0= 588 metric tons

Carbon footprint in 2022= 588 metric tons

because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges
CO₂ (motorcycle)= 0 metric tons because our university colleges do not have any parking or road for cars, buses and motorcycle and no any vehicles can inter and travel inside the university colleges

There were many impactful university programs on climate change such as:

- 1- Install group of seismic station which using for monitoring the seismic risk in the area close to the university.
- 2- Holding workshops about the desertification and climate change to give information about climate.
- 3- Training workshops about the hydroponic agriculture which enhance the sustainability.

We are looking to reduce the carbon footprint for the next years.

Responsible Consumption and Production

University of Sumer uses local recycling small private shops, which has implemented Single Stream Recycling, allowing students and faculty to easily determine what they can and cannot recycle. Additionally, this program allows all types recyclables (plastic, paper, and glass, aluminum) to be placed in different containers. These private shops also promote the recycling of Electronic Waste and ink-cartridges from printers. 1-2- Trash containers and paper shredder machine are available everywhere within the university. 3- Also, the internal GTTC program encourages the students and staff to exchange each 10 kgs of useless paper with 250 A4 white papers. With theses effective programs, more the 75% of the wastes are recycled.

For 2021, UOS established a new program to reduce the plastic bags.

University of Sumer supports paperless system to reduce paper in daily workplace. It can reduce a lot of paper use that mean University of Sumer can reduce CO₂ emissions and save the world, this can be done due:

- 1-Print in A5 size paper instead the A4 paper which mean reduce the paper by 50%.
- 2- Using online system and Electronic Correspondence instead of the hard copy correspondence.
- 3- Using double sided printing, and always rechecks your data before print.

We do not using any plastic bags in our educational community.

In the UOS, the organic waste is very little, collects the organic waste can be collected with special containers after that it delivered to the college of Agriculture for treatment.

1- Use barrels and bags for fermentation the waste.

2- Use the traditional method in the open space for fermentation the waste.

All the organic waste finally will be an organic fertilizers and Patmos. These materials will be used for agricultural researches and purposes and for the UOS vegetation areas.

University of Sumer uses local recycling small private shops, which has implemented Single Stream Recycling, allowing students and faculty to easily determine what they can and cannot recycle. Additionally, this program allows all types recyclables (plastic, paper, and glass, aluminum) to be placed in different containers. These private shops also promote the recycling of Electronic Waste and ink-cartridges from printers. 1-2- Trash containers and paper shredder machine are available everywhere within the university. The useless garbage (it is very few) is collected by the city municipality and burned in open with these effective programs, more the 75% of these wastes are recycled.

The toxic and hazardous (chemical and biological) waste and useless printer cartridges in the UOS collected in special containers as a permanently storage. After that all these wastes handled by the agent from the Directorate of Thi-Qar Environment (DOTE)/ Ministry of Environment for treatment, and this task is one of the DOTE responsibility.

All the sewage disposal in the UOS is treated conventionally by collected them in a subsurface reservoirs and goes out the university to sewage channels. This is a traditional way to get rid of the sewage water. We are planning to establish water purification systems and using the water harvesting in all UOS buildings.

Clean Water and Sanitation:

Water is a very important part of the UOD's daily life. All buildings of the University of Sumer should have separated sewerage system, for waste water and for clean water (rainwater). We are studying a plan to apply the rainwater harvesting, it need a financial support. Rain water can collected from the roofs of the buildings and is then discharged into the local ponds and canals around the buildings. Till this moment, the university has not any buildings where all the rainwater is collected for toilet flushing and for watering the plants inside the building. At our campus we have a separate sewerage system. We collect rainwater from the roof, parking area etc. and discharge this in the sewage channels out of our campus.

RO system to treat drinking water, Also this water can be used for chemical experiences in the college laboratories. The low quality water can be used for irrigation, Toilet use, and for car washing. This can be helpful to recycle the water.

Some examples of water conservation measures include (garden sprinklers) which can reduce the irrigation water. The total number of them is 80 and the Total number water efficient appliances are 80 (100%).

Also, RO system to treat drinking water, Also this water can be used for chemical experiences in the college laboratories. This treated water is consumed by student and staff

During COVID-19 pandemic, and to keep the campus population healthy, we increased the percentage of additional handwashing and sanitation facilities. Disinfectant chambers provide on the campus main gate and several faculty buildings. Meanwhile we have handwashing facilities placed inside every buildings and hand sanitizer containers place beside the handwashing facilities. Many new handwashing facilities were installed. Recently, we added 3 Disinfectant chambers and 40 additional handwashing Facilities. Total number of facilities/total number of buildings) = $43/10=3.4$.

During 2021, more hundreds of handwashing facilities were established.

The total number of vehicles (cars and motorcycles) is so small because our university is a small and closed university. We have just 38 cars and no cars and neither motorcycle entering the university. This is a good indicator to make our university (partially) green at this point.

So the ratio of the total number of vehicles / total campus' population = $38/3407=0.011$ that mean it less that 0.045 which is the perfect ratio in this criteria.

Shuttle service is partially provided by the university according to the college budget. For the students that stay in the university housing, the shuttle service is available and free. In other hand, the student that lives far of the colleges, the travel service is not free and provided by other parties. Sometimes the university contributes a part of the cost for students and staff.

The total number of shuttle services in the university is 5 and the average number of passengers of each shuttle is 10 passengers while, the daily total trip for each shuttle is 4 trips.

All University of Sumer sites are cyclist and pedestrian friendly. No any internal roads. Many close living students come to the university by bicycles. The private bicycles can inter the university sites.

The parking area in the UOS sites is so small because, as we mentioned before, all the sites are small and just have places for the high position staff cars.

Total main campus area: 28428 m^2

Total parking area = 210 m^2

Ratio = 0.0078 this is a perfect ratio.

To limit and decrease the parking area on campus, our university did the following:

- 1-Offer students housing which already lead to limiting their private cars number which mean limiting the parking zone for students.
2. Offer academic housing that lead to limiting their private cars which mean limiting the parking zone.
3. Offering sharing cars for students and staff which decrease the parking areas.

We offered Shuttle/bus campus service to our students, academic and administrative staff to decrease private vehicles on campus.

The pedestrian paths one campus is available and designed for safety.

The transportation aspect will be the same for the year of 2021.

Quality Education:

Number of Courses/Subjects related to Sustainability offered in our university because of the policy of our ministry of higher education and scientific research. The total number of courses with sustainability embedded for courses running in 2020 was 109 courses out of 835 total courses. All these courses in fully with the sustainability subject such as (soil environment) and (environment and pollution) or included chapters of essays about the sustainability and related subjects. There is an increase growth in the academic courses from the 2017-2018 to 2019-2020 academic years. They were 790, 800 and 835 for 2017-2018, 2018-2019 and 2019-2020 respectively.

For the year of 2021, many chapters were added to some scientific subjects in many colleges of UOS.

Total research fund dedicated to sustainability research in 2018, 2019 and 2020 was 30000 \$, 40286 \$ and 40286 \$ respectively. The averaged annum last 3 years of research fund dedicated to sustainability research = 110572 \$

While the total research fund in 2018, 2019 and 2020 was 101114 \$, 150000 \$ and 165000 \$.

The averaged annum last 3 years of research fund = 416114 \$

We are looking for increasing the overall funds and the sustainability research funds to improve our sustainability researches.

For the 2022, the fund dedicated to sustainability research still the same.

In the last year, the number of scholarly publications on sustainability for our research and academic staff for the past three years was 25 scientific researches. Actually, this is not a good number and we have to increase it to more than 300.

In this year UOS hold its first international scientific conference on pure and medical sciences 2023 (Plate 5). It had many researches related to the sustainable topics which increase the total

number of UOS researches. The below links are the Google scholar accounts for the UOS researchers and academics that have researches on sustainability, environment and pollution.

Below the links of these researches

<https://scholar.google.com/citations?user=PqWDs-gAAAAJ&hl=en>

<https://scholar.google.com/citations?user=AFpIC8cAAAAJ&hl=ar>

<https://scholar.google.com/citations?hl=ar&pli=1&user=YPNn17sAAAAJ>

<https://scholar.google.com/citations?user=NeKu9dkAAAAJ&hl=ar>

https://scholar.google.com/citations?view_op=list_works&hl=en&authuser=1&hl=en&user=2YLTZRgAAAAJ&authuser=1&gmla=AJsN-F7ErL3u38TynXdEMpTkLF6PpkHcQeTUaczubdX_DWJ5FG9-YW9oOkjbav6ypn7wHs5sdnLjZZ1kxrr2s4_87MQPTPxchwDQNaEbiq8_j0_P94i3_gQ&sciund=4580217002824611545&gmla=AJsN-F4y-U5cGxhhmEYFaerMqYwfwBOKN6zNrMwN74HCkQJ7aDFUOalUa9mr24vQzfw_HbFM_KuR9w9oj9Cm3wm-nuMNsuljB-ec_oHyjY-IU8ZwanjaEo&sciund=3048378869985107132

<https://scholar.google.com/citations?user=3sSflxkAAAAJ&hl=en>

https://scholar.google.com/citations?user=QrI__g4AAAAJ&hl=en

There are tens of the events related to environment and sustainability hosted or organized by the University of Sumer in the academic years from 2018 to 2020.

Total number of sustainability/environment related events in:

2018: 30

2019: 35

2020: 42





Plate 5: UOS's first international scientific conference on pure and medical sciences 2022 and some of its activities

The student organizations related to sustainability had been increased during 2021 and 2022. Each college has its own student's organizations.

You can find the complete text of University of Sumer 2021 Annual Sustainability Report available on this link [70.pdf \(uos.edu.iq\)](http://uos.edu.iq). This report has the final sustainability status of our university.

About the Number of cultural activities on campus (e.g. Cultural Festival) including virtual activities, UOS has continuous like programs.

Total number cultural activities on campus organized by the University: more than 3 events

- 1- Distribute awareness posers.
- 2- Visite schools and encourage the students about the sustainability distribute small plant.
- 3- Holding many seminars and workshops about the sustainability.
- 4- Holding meetings and cultures about the festival activities.

During the Covid-19 pandemic, we have Number of university programs to cope this pandemic situation as below:

- 1- Using sterilization room to sterilize the students and staffs, College of Medicine.
- 2- Temperature test to check the staff and students temperature.
- 3- Distribute free masks and gloves for all.
- 4- Sterilize all buildings floors, classrooms, free spaces and gardens by chlorine.
- 5- Awareness posters about COVID- 19 distributed within the UOS facilities.
- 6- Awareness posters distributions for public by the UOS staff and students.
- 7- Asking all the university population to have one of the COVID-19 vaccines.
- 8- Using Google classroom for teaching and contacting with the students.
- 9- Using Zoom, Free conference call meeting for virtual meeting and conferences.
- 10- Using WhatsApp and Telegram for contacting and send the homework and discuss the materials.

We should use additional platforms for education and communication such ad blackboard and Admodo due to their advanced services.

Number of sustainability community services project organized and/or involving students

Project name	participants	Project duration	Project area
1- first international scientific conference on pure and medical sciences 2022	500	2 days per year	ED
2-UOS cultural week	500	1 week	IS
3- From Desert to Garden	100	The whole year	ED
4- 1 Million Trees	10	The whole year	IS
5- The annual agricultural exhibition	150	2 days per year	ED

Recommendations:

- 1- Increase the green areas and the open spaces.
- 2- Decrease the number of the students to be suitable with the buildings area.
- 3-Increase the overall funds and the sustainability support funds, also, encourage staff to publish original papers related with the sustainability and include the words (green, sustainability ...etc) in their papers.
- 4-Expand water recycling programs.
- 5-Expand the renewable energy resources.
- 6-Increase the number of the zero emission vehicles.
- 7-Applied the smart building designs in some sites as a first step.

- 8-Improve and expand the sustainability website and update it continuously.
- 9- Do much cooperation with other government offices about the sustainability.

