ISLAMIC UNIVERSITY OF LEBANON

REPORT ON SDG 17

PARTNERSHIP FOR THE GOAL

Scientia - Virtus - Patria
IUL

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SDG 17 - PARTNERSHIP FOR THE GOAL

INTRODUCTION

The Sustainable Development Goals, SDGs, represent basic principles to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. They were gestated at the United Nations Conference on Sustainable Development, held in Rio de Janeiro in 2012, replacing the Millennium Development Goals (MDG, 2000), to create a set of global goals related to environmental, political and political challenges. economic conditions that our world faces. They were launched in January 2016 and will guide the policies and funding of the United Nations Development Program (UNDP) for the next 15 years.

The United Nations Development Program works with governments to integrate the SDGs into their national development plans and policies, and this in turn has led to the need to implement a new agenda to promote Sustainable Development, Agenda 2030. Agenda 2030, is a new tool for sustainable development, which aims to end poverty, promote prosperity and well-being for all people, in addition to protecting the environment by 2030.

More and more institutions are auditing their situation with respect to the SDGs to lay the foundations of the new agenda, Agenda 2030. Those most committed and more aware of this international need will be the best positioned to carry out necessary improvements in the current management model and infrastructures with technical and financial assistance from the United Nations Development Program.

Within these institutions are the universities, where the relationship between the SDGs and the universities can be seen as mutually beneficial and necessary for both parties. On the one hand, anticipating offering training on the SDGs is a way of demonstrating the institution's ability to adapt to these changing circumstances, and on the other, funding entities and sponsors are allocating more and more aid to meeting the Goals.

Sustainable Development Goal 17 "Partnerships for the goals" refers to the need for cross-sector and cross -country collaboration in pursuit of all the goals by the year 2030. SDG 17 is a vision for improved and more equitable trade, as well as coordinated investment initiatives to promote sustainable development across borders. It is about strengthening and streamlining cooperation between nation-states, both developed and developing, using the SDGs as a shared framework and a shared vision for defining that collaborative way forward.

At the Islamic University of Lebanon, we have a strong belief that in order for our country to develop sustainably, we have to abide by and follow these SDGs where people will enjoy a better life as well as a higher standard of living. The Islamic University has already implemented many of the requirements of the SDGs and is much willing and able to implement the remaining and incorporate it in its programs and policies.

At the end, it is extremely important to note that we need as human beings living on earth to live happily and with dignity by partnering together. All of us have to have the ultimate respect and

appreciation of each other's rights; the human right. However, to be able to enjoy that and develop our lives, many elements have to be taken with great consideration. We need as humans living on this planet to care for each other by providing assistance to the less fortunate ones. And what could be better to assist than a collaborative and joint effort among all countries under the United Nations umbrella. This is the reason behind the SDGs: Sustainable Development Goals.

We, countries of the world, need to assist in preventing hunger, stressing the importance of sustainable and drinkable water, being ready to face climate change, protecting life under water and on land, respecting the order of law, treating each other equally and without discrimination, continuously and relentlessly working on looking out for other sources of affordable and clean energy, sustaining city life without having to continuously run away to the suburbs, preserving justice among us all through a good and fair judicial system, consuming and producing responsibly, stressing innovation and creativity, promoting decent jobs and good work environments without any human trafficking or child labor or money laundering, promoting good health and well-being, making education affordable and reflective of the job market demand and assuring each other of zero tolerance for hunger.

When all of these are implemented then the world will be a much better place to live. The quality as well as the standard of living of people will be better leading to a decrease in the gap between the rich and the poor. There will be more respect for the human rights, lesser crime and extremism and finally peace will prevail.

SDG 13 – CLIMATE ACTION

The official wording of the goal is to "Take urgent action to combat climate change and its impacts".

The main targets for SDG 13 are to be ready to reinforce all adaptive capacities and resilience against all-natural disasters that might result as a result of changes to the climate in every country. In addition, certain measures need to be implemented in order to fight the changes in the climate to becoming plans, strategies and policies as well. Adaptation to climate changes should be well pursued with the reduction and minimization of the negative consequences that might happen as a result of climate changes. This could be well executed by increasing the awareness of people in this respect and utilizing education and human capacity to combat the negative consequences, if any, of climate change. Moreover, another target of the SDG is to execute the assurances of the United Nations countries of mobilizing the promised $100 billion dollars on a yearly basis towards the countries of the third world.

Moreover, actions to promote enhancing the capacity towards achieving a better climate planning and management needs to be implemented with the focus on women, the underrepresented as well as youth.

It is critical to mention that climate changes do have a great impact on the development of many countries around the world. There are so many examples historically of countries that were unable to adapt to the climate changes and how their economies suffered so much and that led to famine and many kinds of wars and for longer periods of time.

Many countries do not have the management, planning and the know-how to deal with crises that are related to climate changes. You notice that in third world countries, Sudan for example, still have no clear plans to deal with droughts or unexpected floods thus affecting adversely millions of people especially those that deal directly with the agricultural sector. As a result, not only large numbers of people could die as a result, but also the effect on the economy is indeed going to be disastrous. The economy when hit by its agricultural sector it will also suffer in the other sectors as well as they are directly interrelated. The loss will be translated into a negative turndown in the economy with low or negative growth leading to problems in the business sectors which will escalate towards an increase in job terminations, higher levels of unemployment, social unrest and low or no respect for the human dignity and human rights

Climate change is the global phenomenon of climate transformation characterized by the changes in the usual climate of the planet (regarding temperature, precipitation, and wind) that are especially caused by human activities. As a result of unbalancing the weather of Earth, the sustainability of the planet's ecosystems is under threat, as well as the future of humankind and the stability of the global economy.

Lebanon signed the accord of Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC), which tackles greenhouse gas emissions mitigation, adaptation, and finance on 5th February 2020.

We also have a platform named Lebanon Climate Act (LCA) that brings all non-state climate leaders together to assist Lebanon in achieving the country's climate change ambition.

IUL and climate action:

The university, through the strategy it adopted, has been working to reduce the effects of climate change through the adoption of several policies, including relying on green spaces outside and inside the university campus to reduce the percentage of carbon, interest in afforestation of the surrounding lands and motivate students to care about the environment by engaging them in multiple activities aimed to protect the environment and educate them environmentally through holding several seminars and workshops aimed at introducing them to the effects of climate change and the available means to reduce its negative effects on the environment and people.

IUL has taken several measures aimed at alleviating pollution on campus because it relies on public transportation to transport students to and from the university, and took into account in its design all the means that reduce the carbon level, its dependence on alternative energy, ventilation and natural lighting.

The university relies on three main sources to feed the electric energy, and these sources are: State Electricity EDL _ Generators _ Solar energy, and the university's total consumption is 218479 KWH, and the solar energy provides 23616.KWH from it.

The University strategy states the following "The promotion of sustainable and balanced development across Lebanese territory and the evolution toward global" and which is from the major social challenges that are tackled in the strategic plan of IUL. Also, it is mentioned in the

letter of the President of the University which states that: "IUL has issued new specializations that are harmonized with the global changes".

IUL has organized several events and conferences in the domain of sustainable development. Moreover, some of IUL faculty members are working with NGOs.

Events

Whereas most of the environmental problems are due to wrong behavioral patterns that are attributed to the lack of environmental awareness.

Whereas the university believes that the solution to these problems can only be achieved by increasing the environmental awareness of the human being because the latter is an essential element in this environment and the only beneficiary of it and the direct cause of its problems. Therefore, the university has included in its educational decisions many courses that aimed at introducing the environment and its regulations such as environmental law, ENVIRONMENT FOR ENGINEERS, and other courses.

In order to ensure the proper behavior of its students towards their environment and rationalize this behavior, the university has set up programs that contribute to serving the environment with the aim of increasing its students' knowledge of how to deal with and preserve the environment, increase their awareness of the impact of their activities on the environment and the climate, especially those that affect its degradation.

For example, the University organized 'The fifth international conference to be held in Lebanon, About: Environment and Sustainable Development - Challenges and Solutions" [1].

Figure 1. Taken from [1]

In addition to this, the university has been explaining and informing its students about the dangers and disasters that may result from climate change, which has become a reality that must be confronted either by adapting to it or by knowing the reasons to mitigate its harmful effects on humans and nature. The first step was establishing an environmental club in 2017 including students from all specializations to make the university environmentally-friendly through sorting and recycling, reducing plastic consumption, securing environmentally friendly alternative energy, and managing violations.

Figure 2. Taken from [2]

13 CLIMATE ACTION

Under the title We Will Create a Green Tomorrow, the students of a second year in the Faculty of Economics and Business Administration organized a manual art exhibition as all the contents of the exhibition were intended for perishability, where they were recycled and used in a beneficial way [3].

Figure 3. Taken from [3]

In order to achieve these goals, the university organized training workshops on preparing source-sorting programs.

Figure 4. Taken from [4]

One of the events that has been held on April 2019 at Wardanieh campus and was related to the sustainability is titled "Public Safety Culture (education, implementation and oversight)". Figure shows a part of the poster of the event which has been organized in collaboration with the Order of Engineers and Architects in Lebanon [5].

The objectives of this workshop were:

- Discuss how to fill the gap between education and implementation.
- Exchange experiences related to the way the public safety culture is transferred to students.
- Explore the challenges faced in implementing the Lebanese public safety decree #7964.
- Discuss the future of the Lebanese public safety norms and decrees.

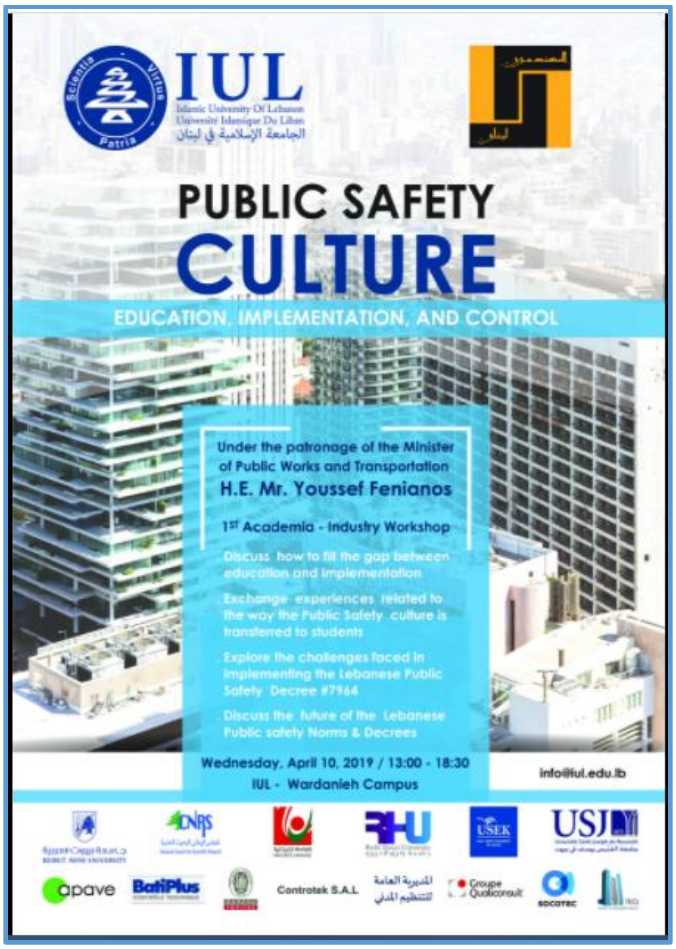

Figure 5. Taken from [5]

Figure 6. Taken from [5]

Since the beginning of its foundation, the university had a commitment to a climate action plan in order to adapt to the effects of climate change. Therefore, it took this into consideration as we can see in its design and took into account the adoption of green spaces to alleviate the heat of the sun and increase the proportion of oxygen in the air, so that the percentage of green spaces reached more than 75% of the total area of land allocated to the campus, i.e. about 103,000 cubic meters and includes more than 2,200 trees. The adoption of green spaces was not limited to the exterior

spaces only, but also it was designed in a way that overlaps with the buildings intended for students.

Concerning the irrigation of these areas, the university relied completely on rainwater harvesting through the construction of tanks to collect rainwater to re-pump it and use it for irrigation and at last filtering the remaining to meet the water needs of buildings.

The engineering designs for the shape of the buildings took into account having natural ventilation. As for outdoor lighting at night, the university has relied on a renewable energy system through solar panels as an alternative to fossil fuels to reduce the carbon level.

Figure 7. Map of green spaces - Wardenieh Campus [6]

Figure 8. IUL Wardenieh Campus [6]

Total Campus Area:

The following figure (in yellow) shows the total campus area of Wardanieh campus that is about 158.413.9-meter square.

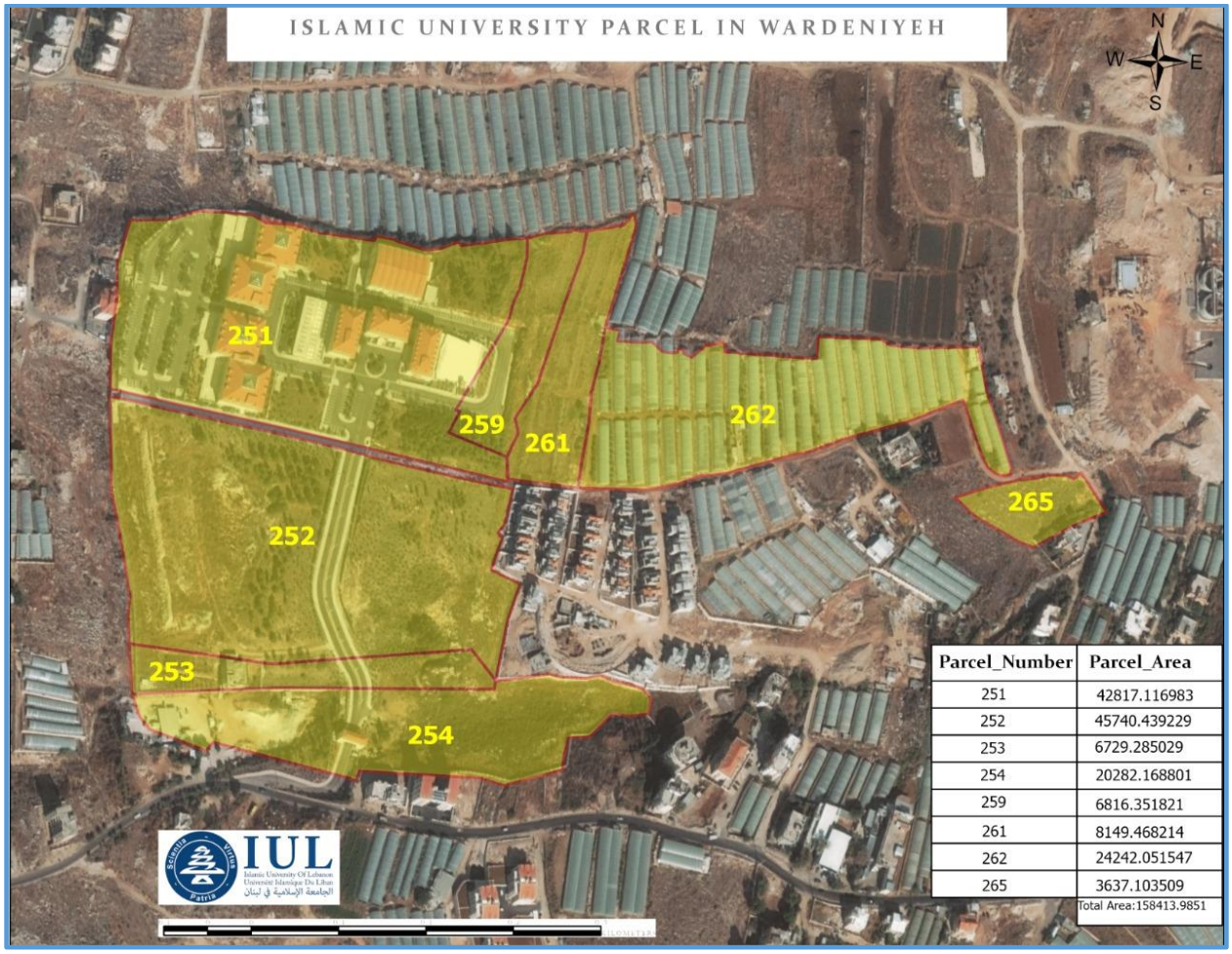

Figure 9. Total Campus Area

Total area on campus covered in forest and Ratio of Total area on campus covered in forest to total area:

(In our calculations, we assume the tree's coverage radius = 7.5 m).

The following figure shows the total area on campus covered in forest which is about 76.526.5-meter square.

The ratio of total area on campus covered in forest to total area = 76526.5/158413.9= 48.3%.

Figure 10. Total area on campus covered in forest

Total area on campus covered in planted vegetation:

The figure shows the Total area on campus covered in planted vegetation. This area is about 103.578-meter square.

The ratio of total area on campus covered in planted vegetation to total area = 103578/158413.9= 65.3%.

Figure 11. Total area on campus covered in planted vegetation.

Efficient Energy Appliances and Energy Saving Campaign

As the campus is newly built and is equipped in 2016, the University has put a policy to use energy efficient electric appliances (rated 5 certified for energy savings), including luminaries where LEDs are used in the whole campus (100%). This will use at least 75% less energy, and last 25 times longer, than incandescent lighting according to US Energy Saver.

Smart Building

The Wardanieh campus is considered a smart building facility by using various technologies.

Safety

S2 – Fire-fighting system: it is available in all indoor buildings, through extinguishers, sprinklers, fire hose reel.

Figure 12. Firefighting system.

S2 – Fire Suppression system: critical zones such as Datacenters and telecom rooms are equipped with fire suppression system (FM200) in case of any fire incident.

S2 – Fire Alarm System: all indoor locations (rooms, corridors, auditoriums, …) are equipped with addressable Smoke/Heat detectors connected via fire rated cables to a central panel in each building (block), then all panels are connected together. Therefore, any fault will trigger a voice and an alarm to catch the attention of the responsible agent to interact. The system is also connected to both GSM and IP network to send emergency messages to the responsible.

Figure 13. Smoke detector – Fire detection system.

S3 – Video Surveillance: the campus is equipped with up to 390 HD CCTV cameras that provide almost 100% coverage of all areas where public move, including administrative areas, classrooms halls, auditoriums, student facilities, open spaces, gardens, parking, roads, …

The monitoring is accomplished through an intelligent system that saves recording from all cameras up to 30 days, and provides a big wall screen (210cm x 371cm) to make real time supervision located in the "Campus Control Room"

Figure 14. CCTV Wall screen monitoring

Energy

E1 – Monitoring: the university uses an automatic acquisition and logging system of energy consumption for different sources of energy.

Figure 15. Energy monitoring and management

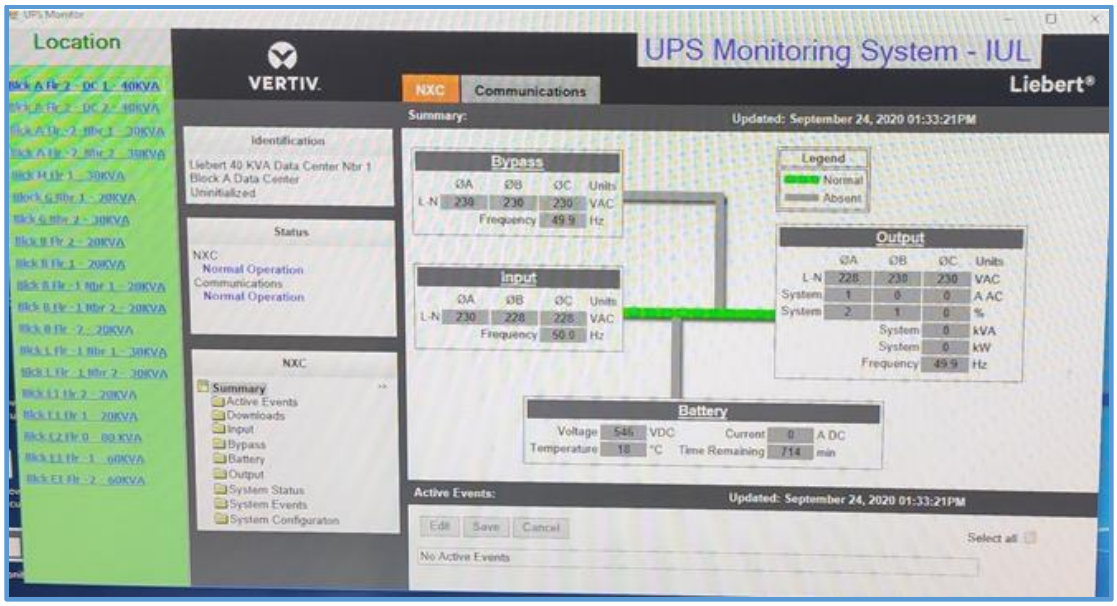

Figure 16. UPS Monitoring & Management System

E2 – Management: the university uses a high availability automatic management system to manage the electricity usage from the different energy sources.

Figure 17. Electricity Control and Management devices.

Water

A1 – Water management system: to monitor the level of water in the different tanks throughout the campus via the campus control room.

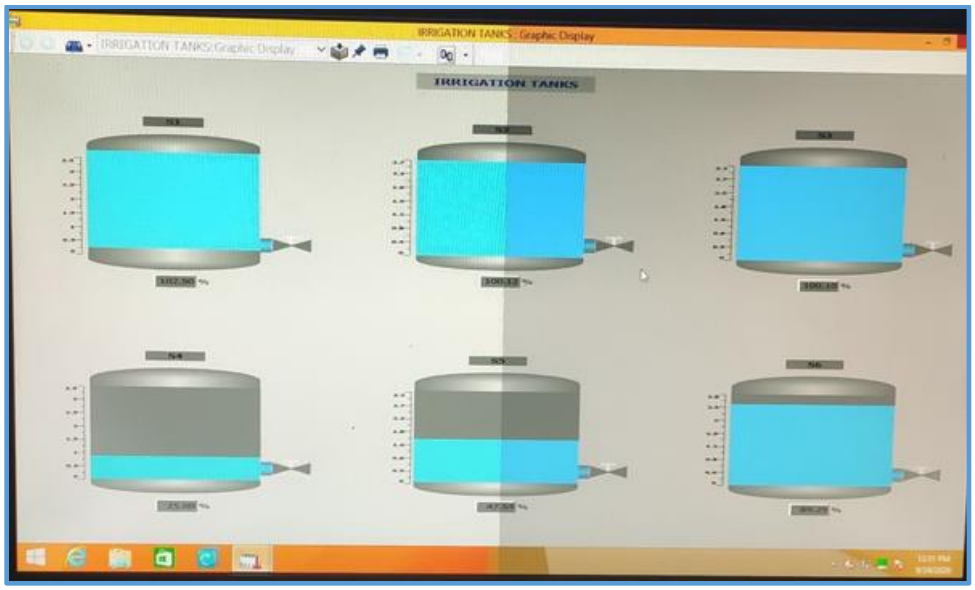

Figure 18. Water distribution monitoring and management system

A2 – Water Recovery: the university has built a rainwater recovery system for covering the flushing and irrigation for the whole campus. The rainwater fallen on the building roofs and on the roads is collected in 11 tanks having a total volume up to 4987 cubic meters. The collected water is used on the campus for irrigation and services purposes.

Figure 19. A water recovery underground tank

Indoor environment

I4 – Passive System: Lebanon has a Mediterranean climate characterized by a long, semi-hot, and dry summer, and a cold, rainy and snowy winter. Fall is a transitional season with a lowering of temperature and little rain; spring occurs when the winter rains cause the vegetation to revive. A South west wind provides relief during the afternoon and evening; at night the wind direction is reversed, blowing from the land out to sea.

Air movement is the most important element of passive cooling. It cools people by increasing evaporation and requires both breeze capture and fans for back-up in still conditions. It also cools buildings by carrying heat out of the building as warmed air and replacing it with cooler external air.

The well-designed openings (large windows, doors and vents) and unrestricted breeze paths inside the buildings provide a passive cooling for all indoor locations.

Figure 20. Large windows help in natural ventilation of buildings

Lighting

L1 – LEDs: As the campus is newly built, all indoor and outdoor luminaries are LEDs, even the road lighting.

Figure 21. LED luminaries set in classrooms

Figure 22. Internal roads and yards are equipped with LED lights

L2 – Sensors: All streets LED lights are equipped with LDR sensors to illuminate automatically at night.

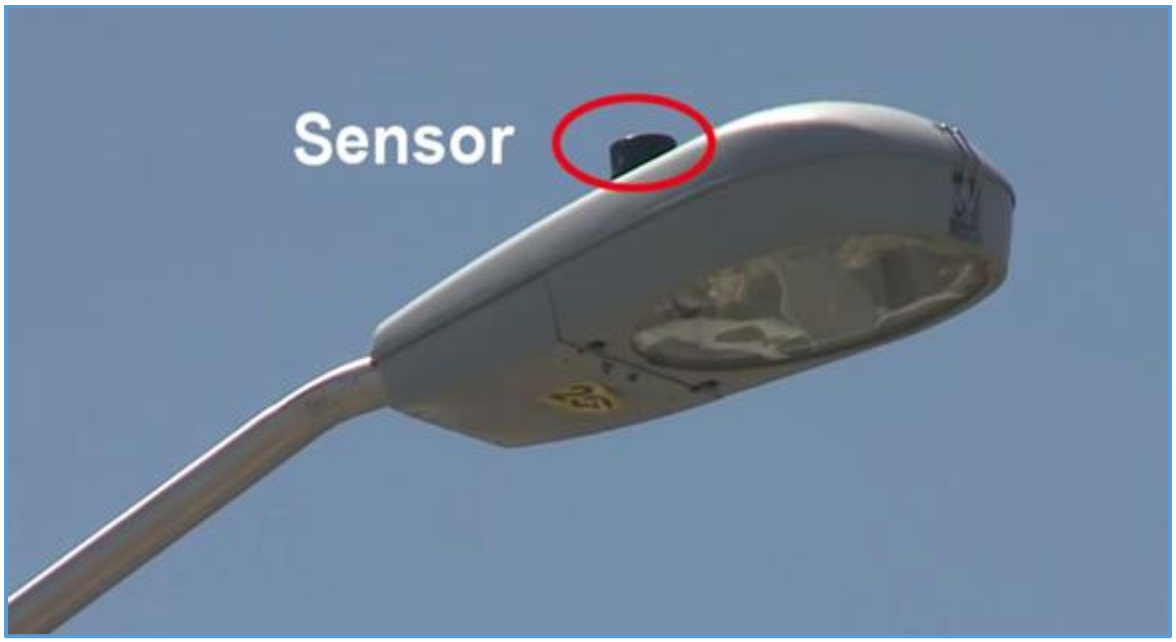

Figure 23. Street lights are equipped with LDR sensors

L4 – Natural Light: The locations of the buildings were directed in relation to the north and south points. It is the appropriate direction according to the location of Lebanon. Where the sun rises from the east and sets to the west, passing through the south. This will provide natural lighting starting at 7 am and throughout the year. The square shape of the educational buildings with a

courtyard in the middle, and wide glass windows in the east and the west walls, provides ideal natural daytime lighting for the entire building.

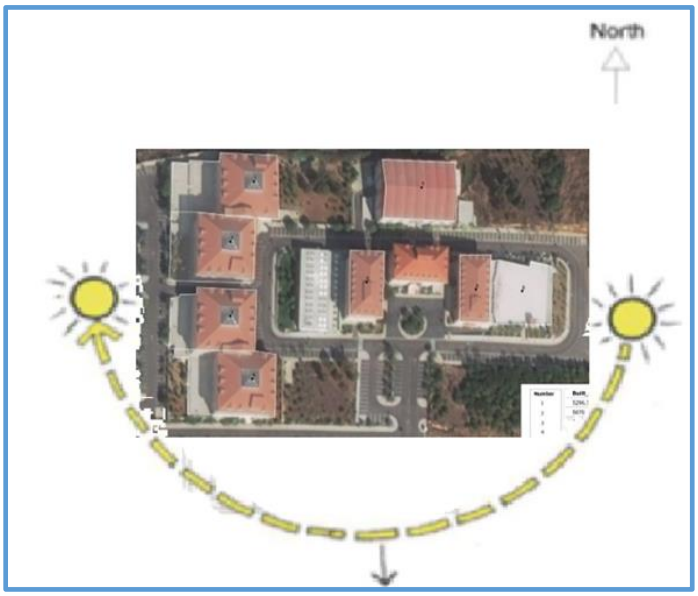

Figure 24. Daylight in Wardanieh campus in relation to the sun direction

Figure 25. The courtyard in the center of the building provides a high level of natural Illumination

Figure 26. Large glass doors provide good lighting to the entrance and corridors

Figure 27. Classroom are naturally lighted through large glass windows

Renewable energy produced on campus per year

The amount of renewable energy produced by the campus renewable sources is calculated as follow:

- Solar Power: there are 150 solar panels installed on 78 lighting poles, where each panel provides between 50 to 60 Wh. Therefore, the campus benefits from a total power of: 21,600 KWh per year
- In Total the annual amount of energy produced from renewable sources is: 21,600 KWh per year

Electricity usage per year

The electricity supplying the campus comes from three sources, the first is provided by EDL (Electricité Du Liban), the Lebanese public electricity provider, the second source is the university generators and the third from the renewable energy sources:

- Electricity consumed from EDL and from university generators (Figure 2.18): 717,176KWh = 717MWh (h.1)
- Total energy produced from renewable sources: 21600 KWh (h.2)

The total electricity usage per year in the campus: (h.1) + (h.2) = 738,776 KWh

Total energy consumption summary report

Campus:	IUL - Wardanieh
Source of Data:	Electricity Monitoring and Management System
Period:	September 2018 - August 2019
Energy sources:	EDL + Generators

	Monthly consumption per block in KWh						
Month	Block E	Block B	Block L	Block A	Block M/T	Outdoor	Monthly Total
Sep-18	23032	13426	6621	12209	3203	11208	69699
Oct-18	22053	12230	6147	11380	3199	11203	66212
Nov-18	20049	12041	5879	11246	3250	11249	63714
Dec-18	24087	14699	5931	11342	3127	11232	70418
Jan-19	25102	15864	6081	11249	3256	11936	73488
Feb-19	24180	14857	5495	11137	2984	12486	71139
Mar-19	12800	12003	4206	8940	3157	12739	53845
Apr-19	10370	11328	3730	8870	3038	13079	50415
May-19	12140	9947	3869	8634	3243	14059	51892
Jun-19	12307	9870	3423	8525	3026	14283	51434
Jul-19	10600	8096	2662	8534	3690	14270	47852
Aug-19	10700	8123	2670	8203	3180	14192	47068
Total	207420	142484	56714	120269	38353	151936	717176
						Grand Total	717,176.00

Figure 28. Table showing the total energy consumption for the academic year 2018-2019

Ratio of renewable energy produce/production towards total energy usage per year

The ratio of renewable energy produced towards total energy usage per year

= 21,600 KWh/ 738,776 KWh = 2.923%

Elements of green building implementation as reflected in all construction and renovation policy

The green building elements implemented in the campus as reflected in construction policies comprises four axes: site design, indoor air quality, energy savings, and water.

Site design:

- The campus design works with natural features, protecting trees, streams and soils such as gardens, efficient drainage, and energy-saving shade. Most of the buildings are connected to sun and wind to achieve significant energy. Buildings E1-E2 (Faculty of Engineering) and Buildings B and S (Faculty of Business and Faculty of Sciences) are connected via an underground path (buildings 3 and 2).
- The buildings were brought together to reduce impacts, and to provide more green space for the community

Figure 29. Campus design showing the buildings distribution

The design of each building facilitates the ventilation and the natural light

Figure 30. Natural light is facilitated through the glass courtyard

IUL works on increasing green area inside and outside of the buildings

Figure 31. Indoor planted green areas improve air quality

- Buildings were oriented to take advantage of the dominant angles of the sun and the wind.
- Rainwater was managed by natural drainage and gathered into underground tanks for agriculture and service usage. The relatively small built areas beside the wide planted areas reduce impermeable surfaces.
- Landscaping for sustainability: the university planned to plant more trees and to reduce the grass areas correspondingly. The planted trees are selected carefully to reduce watering and maintenance needs.

Indoor Air Quality:

- The buildings design has taken into consideration giving all offices and classrooms direct access to fresh and clean air coming from the windows. The campus location helps keeping the air cool and fresh, it is located on a hill facing the Mediterranean Sea (around 1 km away) at an altitude up to 100m. It is also located on a place that is away from sources of exhaust and moisture.
- Direct ventilation is available for heating equipment, furnaces and bathrooms.
- The university has implemented a no-smoking policy and use entrance mats that remove dirt from shoes.

Energy savings:

- Trees surrounding buildings can provide shade in summer and repel wind in winter.
- Daylighting replaces electric lights for hours due to the buildings shape and large windows.

Water:

- Efficient irrigation equipment and landscaping techniques were used outdoor to minimize water use.
- Rainwater is taken advantage in irrigation.
- Dual flush toilets were used to preserve water.
- Most planted trees are drought-resistant and supplement sols to improve water retention.
- Drip irrigation and stream-rotator spray are the techniques used for irrigation.

Waste (WS)

Program to reduce the use of paper and plastic in campus:

Program 1: All the papers and cartons in the university stores, and after a certain period, are sold to a factory to be recycled.

Program 2: Plastic bottles are collected for later recycling. The objective is to help deaf persons from the collected amount of this program.

Figure 32. The baskets used to collect plastic bottles for later recycling

Sewerage disposal

The Sewerage on the university campus is treated conventionally and is connected to the sewage network of Wardanieh municipality.

Water (WR)

Water conservation program implementation

The rainwater fallen down on the campus internal roads and parking areas and on the buildings floors are gathered in 11 underground tanks.

Figure 33. Tanks to collect rainwater

The following Figure shows the location of the 11 tanks (named R1 to R4 and S1 to S7). The volume of these tanks is about 4,987 cubic meters.

This amount of rainwater is collected from the inside roads, parking and from the roofs of the buildings. Each area is highlighted by a color related to the tank that collects rainwater of this area.

The collected water is used as follows: 80% for irrigation and 20% for service.

Figure 34. Tanks and Area for collecting rainwater

Use of water efficient appliances

Several means are used to reduce water loss in Wardanieh campus:

To reduce water loss in irrigation, drip irrigation and stream-rotator sprinkler technologies are used for about 90% of the plantations and trees throughout the campus.

Figure 35. Stream-rotator sprinkler and Drip irrigation devices.

In all WC rooms dual-flush toilets are used to reduce the service water loss.

Figure 36. Dual-flush toilet

An electronic system is used to monitor, operate and manage the water distribution between the main tanks and the building water tanks to reduce the loss in water distribution.

The following Figure shows the electronic system used to monitor, operate and manage the water distribution.

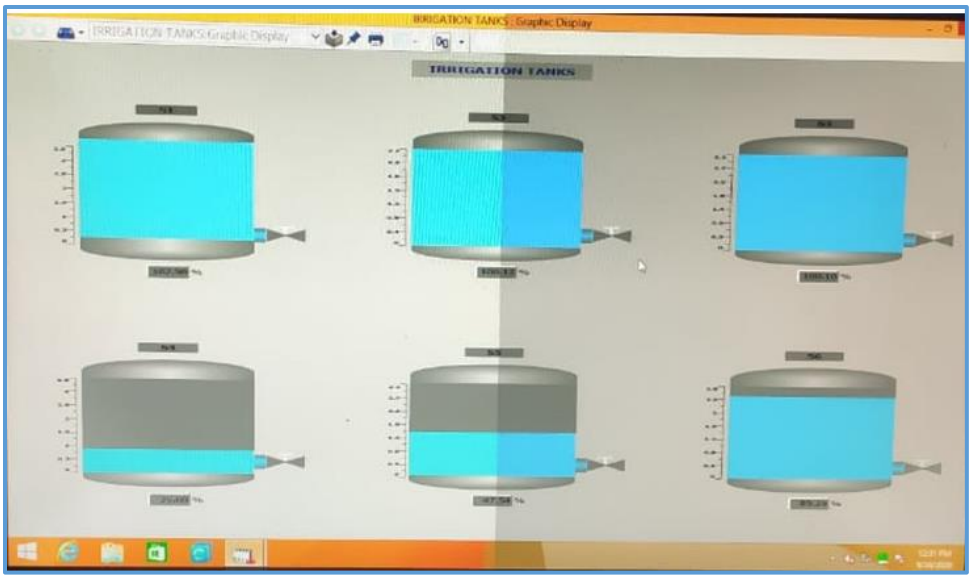

Figure 37. Electronic system used to monitor, operate and manage the water distribution

Transportation (TR)

Number of cars actively used and managed by the University

There are 3 cars used and managed by the university in Wardanieh campus, these cars are used for the shuttle service of the students.

Figure 38. A bus used and managed by the university

Number of cars entering the university daily

All vehicles entering the Wardanieh campus should have tags with university logo. These tags are available for students, professors (fulltime and part time) and administrative staff who want to access the university with their cars. The number of cars having university tags is up to 235 cars. The percentage of cars with tags entering daily the campus is around 80% from the total cars.

Therefore, the average total number of cars entering daily the university is about 188 cars (235*0.8).

Number of motorcycles entering the university daily

The average number of motorcycles entering the university daily is about 15 motorcycles.

Shuttle services

The shuttle service from Khaldeh campus, Saida old city and from Saida-Beyrouth highway to Wardanieh campus, is available regularly and without any charge for all students, professors and employees.

Number of shuttles operated in IUL University

There are two types of shuttles to transport students, professors and employees:

- Three shuttle buses owned by IUL University.
- Four shuttle buses operated by a transportation company, having a contract with the university to transport students.

Therefore, the total numbers of shuttle buses are 7.

Average number of passengers of each shuttle

The capacity of each shuttle bus is about 20 passengers.

Total trips of shuttle services each day

For each working day, there are:

- 6 daily trips to transport passengers from Khaldeh campus to Wardanieh campus.
- 6 daily trips to return back passengers from Wardanieh campus to Khaldeh campus.
- 15 daily trips from Wardanieh campus to Beirut-Saida highway.
- 15 daily trips from Beirut-Saida highway to Wardanieh campus.
- One daily trip from Saida old city to Wardanieh campus.
- One daily trip from Wardanieh campus to Saida old city.

Totally, the number of daily shuttle service trips is up to 44 trips

Total trips of shuttle services each day:

From Khaldeh Campus to Wardenieh Campus	6 Trips daily
From Wardenieh Campus to Khaldeh Campus	6 Trips daily
From Saida City to Wardenieh Campus	1 Trip daily
From Wardenieh Campus to Saida City	1 Trip daily
From Beitut-Saida highway to wardenieh campus	15 trips daily
From wardenieh campus to Beitut-Saida highway	15 Trips daily

Figure 39. Number of daily shuttle service trips

The issue of climate change has become a global challenge, and a joint response to this problem has become an urgent necessity at the global level.

Based on the importance of this thorny issue and its multiple direct and indirect negative effects on ecosystems, including oceans and biological diversity, as well as on sustainable livelihoods and sustainable consumption and production patterns,

Given Lebanon's commitment to the international community towards environmental issues, especially the issue of climate change, which is represented in achieving the goals of the Paris Agreement on Climate Change and Reducing Emissions, Lebanon issued Law No. 115 of March 29, 2019, which provides for the approval of concluding the Paris Agreement annexed to the United Nations Framework Convention on Climate change.

On September 30, 2015, Lebanon signed the Nationally Determined Contribution of the General Secretariat of the United Nations Framework Convention on Climate Change. Lebanon's contribution presents the goal of reducing greenhouse gas emissions by 30 percent by 2030, and this percentage is divided between a 15 percent reduction as an unconditional goal and an additional 15 percent reduction in emissions conditional on international support.

Within the context of Lebanon's commitment to international issues, it should be noted that the Lebanese Ministry of Environment participated in the Climate Change Summit that was held in New York on 9/23/2019, where the Secretary-General of the United Nations called on the participating countries to present concrete and realistic plans to enhance their nationally determined contributions by the year 2020. In line with reducing gas emissions by 45 percent in the next decade, leading to zero emissions in 2050, pointing out that the world is in a race to confront climate change and achieve the goals of the Paris Agreement.

IUL has taken every measure to meet these goals and adopt government policy concerning climate change.

At last, everyone is taking climate action with great consideration. We have no choice. We all need to act on climate change to secure a future for upcoming generations. Thousands of businesses and cities all around the world have committed to bold climate action. In Lebanon, four summits were organized concerning this issue in Tripoli, sour, Beqaa and in Beirut.

Within the framework of the challenge to the impacts of climate change, the university has been cooperating with the local community, especially with the municipalities, on activities that contribute to adaptation and reducing the risks of climate change, so it organized several campaigns, including the Cleanling Campaign along the southern shore in cooperation with the Union of Municipalities of Tire [7].

Figure 40. Taken from [7]

Whereas the phenomenon of climate change is a global phenomenon that is not limited to a specific country or region, it was a focus of attention from all countries. Therefore, the Islamic University in Lebanon was a pioneer in hosting conferences related to sustainable development and climate change, including the conference that was held in the university campus under a title "Environment and Sustainable Development" on October 29, 2018, which included scientific sessions and

various workshops on renewable energy, geographic information systems, and data of the natural and human environment [8].

Figure 41. Taken from [8]

After climate change in Lebanon took a negative turn and caused a national water crisis, it had a negative impact on all sectors, especially the agricultural sector. The Islamic University in Lebanon played a prominent role in addressing the phenomenon of water scarcity through its cooperation with non-governmental organizations in order to rationalize water consumption. For this purpose, it organized a symposium on water crisis to present problems and solutions, in cooperation with the Bekaa Water Foundation and the Italian Civil Voluntary Work Association [9].

Figure 42. Taken from [9]

Conclusion and perspectives

The Islamic University of Lebanon adopts all the measures that the Ministry of Health takes concerning climate change. Moreover, the university will take all possible opportunities to reduce greenhouse gas emissions and transform into a sustainable source of energy. It will also be always aware of the future climate impacts that are and will take all suitable steps to adapt to it.

Moreover, IUL will develop a climate action strategy within a year from now, and work on to implement it will include climate change information in all our internal and external communication, and build awareness on this issue among all employees, partners, students and Doctors and institutions. Moreover, IUL will try its best to become ambassadors on climate change and encourage others to take bold climate action.

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