



# **USEK** **SUSTAINABILITY** **REPORT** **2018 - 2021**



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## OUR COMMITMENT

University has acted to inspire and encourage environmental sustainability, both academically and administratively. Our attitude towards sustainability and the significance we place on it are an integral part of the mission of our Catholic institution.

We are on our way to becoming a university which can achieve significant sustainability through knowledge, proactivity, collaboration, and creativity. Our community, staff, students, and alumni are learning to understand the principles of sustainability – it is becoming rooted in our operations and gives hope for a positive sustainable existence. Great things happen when we work together, and we are steadfast in remaining faithful and strong to our commitment for succeeding generations.

*“The small choices we make each day will have the largest impact on our community and our environment”*

**USEK President Father Talal Hashem**

## WELCOME TO THIS SUSTAINABILITY REPORT.

We have been working logistically on many internal levels towards our goals to cultivate the mindset of our community for sustainability. Now is the time to step back and take stock.

The establishment of the Office of Sustainability and academic and research centers in 2010, and The Green Committee in 2016, consolidated efforts between on-campus partners who recognized the worth of harnessing ideas from the community and building a robust sustainability strategy. These partners work to advance the environmental management of the institution, increase its environmental and social performance, and engage the university community as a whole in sustainable development.

In 2018 we committed to the UN Sustainable Goals (SDGs) and the UN Global Compact to help frame and guide our activities. Sustainable practices have a place in the heart of USEK and influence every decision we make and every action we take. USEK will continue to make a difference.

# WHAT IS IN THIS REPORT?

The purpose of this report is to outline USEK's sustainability roadmap and to give information and details about what has been achieved so far and what is planned for the future. The importance of this report is to demonstrate USEK's actions and initiatives and to provide insights into improving our performance for long-term sustainability strategies. This report will address the following topics in this order: **Our Three Sustainability Principles | The USEK Way | Commitment of On-Campus Units | What Has Been Done | UN Sustainability Goals and Ranking, UN Global Impact and IU GreenMetric Rankings | What is Next?**

## USEK ROADMAP TO A SUSTAINABLE CAMPUS

Emissions & Energy	Campus Operations	Nature & Ecosystems	Health & Well-Being	Culture & Learning
Greenhouse Gas Emissions	Student Life	Landscape Operation	Personal Well-Being	Legislative Action
Energy Reduction	Purchasing	Campus Design	Food Habits	Curricula
Renewable Reduction	Transportation	Conservation		Research
	Building Operation			Public Awareness
				Professional Development
				Community Outreach
				Partnerships

# OUR THREE SUSTAINABILITY PRINCIPLES

To embed sustainability on economical and operational levels, we base our strategy on three foundational principles: respect for the human condition, respect for the conservation of natural resources, and respect for the economic viability of the university, all to ensure USEK can continue on its sustainability journey. These strategies can succeed only if the USEK community embraces this vision and takes action.

**Consistent with its sustainability aims, USEK approached the effort from its three fundamental perspectives:**

## **Respect for the human condition**

Building knowledge and capacity.

Caring and sharing  
awareness | events | engagement |  
on-campus partners

## **Respect for the conservation of natural resources**

Making the most of resources by  
reduced energy consumption through  
conservation and efficiency.

Green living matters  
energy task force | building &  
construction | transportation

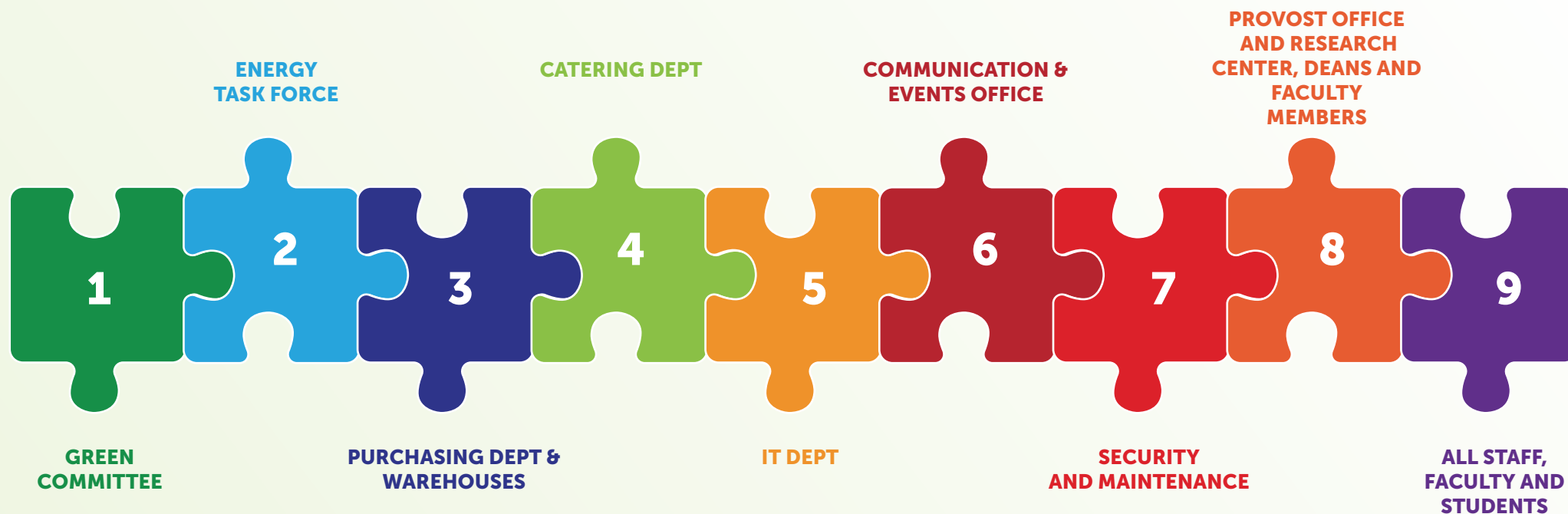
## **Economic viability**

Increasing growth of a sustainable  
economy through intelligent purchasing  
power and cost reductions.

Best value for money  
procurement | consumption |

## OUR APPROACH – THE USEK WAY

We believe the key to success in increasing sustainability is community awareness and engagement. Without community involvement, little can be achieved. The University must not only engage its students, faculty, staff, and alumni to work toward these goals and plans but must also collaborate with all its on-campus units which are integral to achieving sustainability and developing greater participation and outreach.



# COMMITMENT OF ON CAMPUS UNITS

Alone you can go fast, together we can go far

UNIT	RESPONSIBILITIES
<p><b>GREEN COMMITTEE</b></p>	<p><i>Upholding environmental responsibilities, building partnerships, building knowledge capacity.</i></p> <ul style="list-style-type: none"> <li>- Support the university's environmental responsibilities in its vision and mission by playing a leading role in establishing and actively pursuing a policy of environmental best practices.</li> <li>- Promote a green environment that is healthy, safe, and conducive to excellent education and provides good occupational conditions.</li> <li>- Compile a yearly report of all our sustainability initiatives and action plans to be submitted to GreenMetric.</li> <li>- Support/follow up on the implementation of sorting campus recyclables and managing the Materials Recovery Facility (MRF)</li> <li>- Support/follow up on the implementation of the action plan for sustainability and climate change mitigation by holding regular meetings with concerned stakeholders.</li> <li>- Oversee the implementation of sustainability principles related to energy management.</li> <li>- Raise awareness on sustainability issues among staff, faculty, and students.</li> <li>- Ensure the conservation of the living environment on campus.</li> <li>- Educate members of the community, both within and outside of USEK, about the importance of co-existing with the natural environment, and the importance of preserving this environment for future generations.</li> <li>- Increase the appreciation of the campus as a sanctuary for living things (especially birds and bees) and to serve as a model for a sustainable relationship between people and nature.</li> <li>- Develop a transportation initiative to decrease private vehicles on campus - Organize Green Events</li> </ul>

UNIT	RESPONSIBILITIES
ENERGY TASK FORCE	<p><i>Managing energy and conservation.</i></p> <ul style="list-style-type: none"> <li>- Manage the implementation of sustainability principles applicable to energy management, water conservation, infrastructure, and operations and budgeting.</li> <li>- Implement green building principles in all renovation and construction projects and assess its effectiveness.</li> </ul>
PURCHASING DEPT AND WAREHOUSES	<p><i>Implementing environmentally preferable purchasing.</i></p> <ul style="list-style-type: none"> <li>- Apply green and environmental sound purchasing principles.</li> <li>- Strategize towards zero-waste procurement. <b>(Appendix 1 – Procurement Report)</b></li> </ul>
CATERING DEPARTMENT	<p><i>Implementing catering best green practices and applying no plastic policy.</i></p> <ul style="list-style-type: none"> <li>- Adopt sound environmental catering principles <b>(Appendix 2 – Catering Report)</b></li> <li>- Apply green “no to plastic” practices <b>(Appendix 3 – No Plastics Policy)</b></li> </ul>
IT DEPARTMENT	<p><i>Implementing a paperless campus and less consumption of server power.</i></p> <p>Digital transformation through automated processes and workflows resulting in no printing:</p> <ul style="list-style-type: none"> <li>- Online forms</li> <li>- Green PCs</li> </ul> <p>Reduce printing</p> <ul style="list-style-type: none"> <li>- One shared printer (with monitored access) per department</li> <li>- Virtual Desktops (through Citrix VDI)</li> <li>- Virtual Environment (Virtualization) meaning less servers and less power consumption</li> <li>- Digital Signature</li> <li>- Cloud Computing</li> </ul>



UNIT	RESPONSIBILITIES
<b>COMMUNICATION AND EVENTS OFFICE</b>	<p><i>Raising awareness and maintaining positive presence on social media.</i></p> <ul style="list-style-type: none"> <li>- Sustain awareness campaigns to promote sustainability and environmental protection, in collaboration with the Green Committee and other stakeholders.</li> <li>- Organize Green Events.</li> <li>- Publicize green initiatives, events and success stories on social media.</li> </ul>
<b>SECURITY AND MAINTENANCE OFFICE</b>	<p><i>Managing green spaces and safe removal of waste.</i></p> <ul style="list-style-type: none"> <li>- Use green tools and equipment into all work and facilities.</li> <li>- Sort demolition waste.</li> <li>- Reduce parking areas on campus and ensure an efficient use of all parking spots.</li> <li>- Manage green transportation on campus to reduce private vehicles on campus <b>(Appendix 4 – Carpooling)</b></li> <li>- Increase and manage green areas at USEK.</li> <li>- Ensures proper disposal of all campus waste to the MRF</li> </ul>
<b>PROVOST OFFICE, RESEARCH CENTER, DEANS AND FACULTY MEMBERS</b>	<p><i>Building knowledge capacity within the community.</i></p> <ul style="list-style-type: none"> <li>- Allocate research funds related to sustainability topics.</li> <li>- Incorporate sustainability principles in courses offered in all university majors and programs.</li> <li>- Organize conferences, workshops, educational sessions, awareness campaigns and training on sustainability.</li> <li>- Incorporate sustainability in department budgets.</li> <li>- Ensuring that faculty, staff and students are equipped with the required knowledge to abide by the sustainability initiatives, including identifying training needs and ensuring training appropriate to each individual's responsibility is available and attained.</li> </ul>
<b>ALL STAFF, FACULTY AND STUDENTS</b>	<p><i>Engaging in and promoting sustainable practices.</i></p> <ul style="list-style-type: none"> <li>- Engage with university's sustainability policy and practices.</li> <li>- Take an active role in promoting sustainability.</li> <li>- Refrain from activities that may cause pollution.</li> <li>- Participate in events related to sustainability.</li> </ul>

# WHAT HAS BEEN DONE - SOWING A GREENER TOMORROW

So far we have outlined our principles, strategies and goals. Now we will look at what has been achieved in more detail, which will be broken down into two parts: the Green MasterPlan (**Appendix 5**) and Student Engagement and Capacity Building.

Our Green MasterPlan written in 2010 and developed over the last decade, highlights different initiatives and strategies that aim to incorporate sustainability principles into the improvement of campus life and spread a green message to the wider community.

The Green MasterPlan promotes measures including:

**Energy Efficiency and  
Emission Reduction**

**Renewable Energy**

**Student Engagement and  
Capacity Building**



# PART 1 THE GREEN MASTERPLAN

## ENERGY EFFICIENCY AND EMISSION REDUCTION

The need and use of energy have had a major impact on the earth's environment, climate and resilience. While the University historically has relied heavily on nonrenewable fuels, we now better understand the negative impacts on the environment. Therefore, we are striving to reduce our energy demand by increasing our energy efficiency and the percentage of our energy fueled by renewable and sustainable energy sources. To this end, we have developed a number of economic energy and emission strategies.

**Energy Efficiency:** High performance green buildings with the aim to satisfy the six categories of LEED protocol: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation in Design.

**Emission Reduction:** Eco-transportation and reduction of fossil fuels as an energy source, decreasing the heat island effect.



USEK has implemented these measures to increase energy efficiency and reduce emissions

- Since 2014, USEK began retrofitting all existing lighting systems with LED systems to reduce its average energy consumption by more than 60%. Currently more than 85% of the lighting system is based on energy efficient lighting technologies such as LED.
- HVAC systems are being retrofitted with VRV systems to reduce their energy consumption by around 40%. Currently around 90% of the HVAC systems are based on energy efficient technologies such as VRV or chillers.
- Our IT systems are being replaced with lower energy consumption systems, which includes cloud storage for emails, its web and other critical services such as Moodle and Active Directory, etc. In addition a new service was created by the university offering an online pre-registration option and a new system called MyDegree powered by DegreeWorks by Ellucian for energy efficiency and reduction of paper use.
- The hardware including servers and computers, etc. are typically green, utilizing minimum power consumption and using green materials.
- The Server Farm itself is optimized to consume less energy i.e., LED lighting, small UPS, least number of servers, green networking devices, etc.

## GREENHOUSE GAS (GHG) EMISSION REDUCTION PROGRAM

Our GHG emission reduction program that aims at decreasing the environmental impact is explained by these three scopes:

▶ **Scope 1** - The stationary combustion. USEK aims at lowering GHG emissions by using 1 megavolt amperes (MVA) generators. Each generator (6 in total) contains a heat recuperation system that reuses some of the waste heat.

▶ **Scope 2** - Reduction in electricity consumption. A 212 kWp of Photovoltaic (PV) system was installed to lower the amount of electricity purchased from the national grid. Since 2004, all the installed HVAC systems were switched to energy efficient systems combining VRV systems or chiller systems. It is to be noted that all HVAC systems are CFC free.

USEK is studying the possibility of installing ground heat pumps to lower even more the energy consumption of the HVAC systems while taking advantage from renewable energies.

▶ **Scope 3** - Lowering GHG emissions from waste. This objective is realized through recycling program described in the corresponding section (WS).

## OUR LOW CARBON TRANSPORTATION AND COMMUTER FACILITIES PROJECT

This project encourages low-carbon transportation methods with new pathways and a pedestrian commuter facility that holds showers, lockers and electric vehicle charging stations.

### Transportation initiatives to decrease private vehicles on campus:

- Car-pooling program that allows students, faculty, and employees to commute to and from the university and lower GHG emissions (<https://www.facebook.com/groups/usekcarpool/>).
- Sustainable transportation systems, covering campus fleets, student/employee modal split and programs promoting sustainable transportation.
- Electric shuttle transportation system for students and employees based on electrical cars that use on-board rechargeable Energy storage. The shuttle cars are available and free for all faculty members, staff, students, and visitors; the shuttles make approximately 300 trips each day, covering the whole campus. In 2019, USEK bought two new shuttles: one for 6 persons and another one for 8 persons bringing the total number of shuttles to 10.

## ALTERNATIVE METHODS OF TRANSPORT.

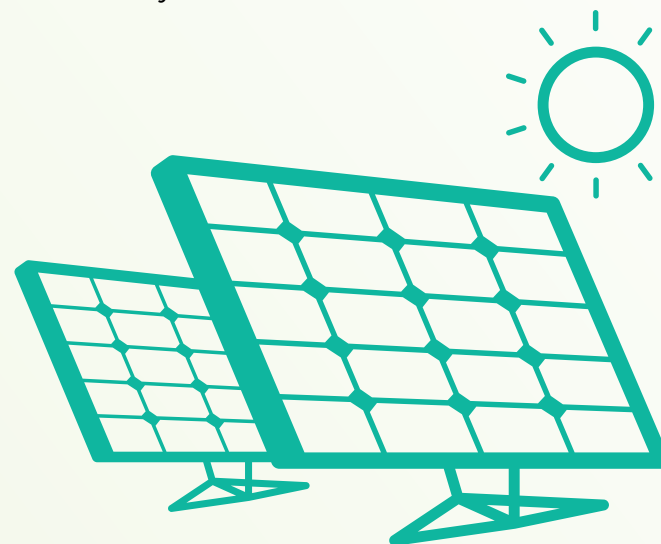
To promote alternative methods of transportation, USEK is trying to be more bicycle-friendly and initiated activities to promote bicycle riding with limited success because Lebanon is wildly car-centric. The number of bicycles entering the campus is almost none.

#USEKCyclingTour 2017 was organized to foster a cycling mindset. The event an energetic and exciting eco-adventure for those in the community who enjoy a sports challenge. This a green travel event connected all 4 USEK campuses by bike, promoting two wheels as a healthy and alternative mode of travel, as well as highlighting Lebanon's tremendous environmental diversity along the way. Cycling took place over 4 days, covering 470 km along the following route: Day 1 Kaslik – Rmeich (145 km) Day 2 Rmeich – Zahle (135 km) Day 3 Zahle – Chekka (137 km) Day 4 Chekka – Kaslik (47 km) (Photos).

In September 2018, USEK was granted **“Energy Ambassador Award for the year 2018, for the category of Lebanese NGO/ Public Institution/ Not for Profit”**. This award is given to the leading figures in the energy sector for their achievements. This award is granted in recognition of all the efforts done on the sustainability level especially when it comes to energy consumption (<http://beirutenergyforum.com/awards/>).

## RENEWABLE ENERGY

**Renewable Energy:** Implement renewable energy options to meet the University's Carbon Neutral Challenge Project. As designed, the new sustainable layout of the campus will enable its students and staff to adopt a more ecologically aware, lower carbon lifestyle the Masterplan employs a variety of renewable power resources, including wind power, solar energy, and other alternate energy sources like biomass energy. The use of mini wind turbines in the park area will provide a source of clean and renewable energy for the entire campus without disturbance. Photovoltaic panels are being used as another alternative source of energy; modules have been placed on rooftops where possible to provide supplemental clean solar energy resulting in a significant contribution to energy production efficiency and reductions in CO2 emissions.





## SOLAR ENERGY AT USEK



### Solar Panels

The 212 kWp PV farm was commissioned in July 2017 ([http://www.cedro-undp.org/content/uploads/event/161004092443773~UNDP CEDRO\\_BEf\\_2016.pdf](http://www.cedro-undp.org/content/uploads/event/161004092443773~UNDP CEDRO_BEf_2016.pdf)) and has already delivered more than 279 MWh as shown in the real data acquired by the monitoring system. **In 2019, it reached 350 MWh.**

This source will be extended to cover the students' parking with a farm of around 650 kWp that is supposed to higher even more the participation of renewable energies within the energy mix of USEK.

- Installed a photovoltaic solar power system.

**(Appendix 6 - Energy Audit Report)**



### Solar Water Heating

Solar water heating system was installed to provide 800 liters of hot water.

## — OUR ENERGY TASK FORCE —

In 2018 the energy task force started to prepare the energy policy for USEK. An inventory was completed, and consists of the electrical and mechanical drawings of building H (2018-2019), building C and D (2020-2021) and the single line diagram of the main electrical room (2019).

A study was then performed to evaluate the Energy Performance Indicators (EnPI). The study encountered some difficulties due to the absence of energy meters. For that, a monitoring system is currently being deployed to measure the electric energy and performance of the emergency generators. The Electricité du Liban (EDL) consumption continues to be measured by the main counter of the university. Different tenders have been prepared to equip the main electrical room with counters to calculate electrical energy consumption for each building at the campus (2019).

**The Energy Task Force team members were provided with the following training:**

- Energy Management Systems ISO50001:2011 in 2018
- Internal Audit of Quality Management Systems ISO19011 in 2020
- Brainstorming and proposal writing sessions where team proposed different actions to be taken to reduce energy consumption.



## SMART BUILDINGS

In accordance with our Green MasterPlan, our building incorporate eco-design and features. The inspired Green Buildings both direct and indirect benefits. The immediate and most direct benefit is the reduction of energy use and water cost for the entire life cycle of the building. An explanation of these designs and features follow.

### Natural Ventilation / 3. Full-Day Natural Lighting

USEK relies on the natural ventilation across all its buildings. All buildings are designed to provide natural ventilation and full-day natural lighting.

- ▶ **Building D, the University Restaurant and the new library** have the latest green design features, and includes the energy efficient VRV building energy management system.
- ▶ **Building E** softly integrates welcoming spatial configuration which includes a central hall with an interior garden and a zenithal lighting. As integral design feature of the building, the circular garden extends the visual perspectives, and links the various functions. This design creates an inner environment rich with a variety of plants that change with the seasons, providing an organic ambiance.
- ▶ **Building F** (Residence Hall) can accommodate 200 female students, and provides an environment conducive to green living and study. Offering maximum natural light and ventilation. The design incorporates an urban strategy which consists a large atrium, a well-protected, convivial, safe and enclosed monospace.
- ▶ **Building H** is one of the most modern buildings at the University. It offers natural ventilation and full-day lighting. This building is supported by a complete VRV energy management system.



## SMART PARKING DESIGN

USEK parking areas are a combination of open spaces, buildings incorporating smart design:

### Combination of open space and building

- Students parking / FLOOR 1 (10,000 m<sup>2</sup>) open space
- Students parking / Ground Floor (10,000 m<sup>2</sup>)
- Students parking / Underground (10,000 m<sup>2</sup>)

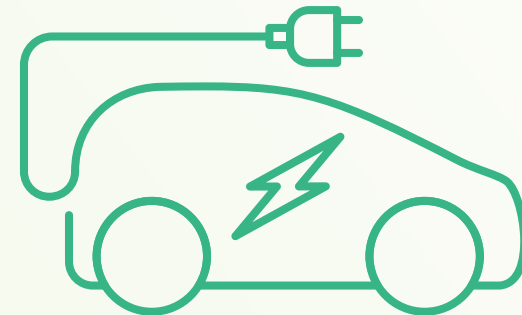
### Open space

- Area P1 (1000 m<sup>2</sup>) / For administration only
- Area P2 (1500 m<sup>2</sup>) / For staff only
- Area P3 (3000 m<sup>2</sup>) / For staff only

### Building (Underground)

- **Building F** (1500 m<sup>2</sup>) / 3 FLOORS / For staff only
- **Building H** (4000 m<sup>2</sup>) / 3 FLOORS / For staff only and dorm students

**Total parking area = 15500 m<sup>2</sup>** (open space)  
**Ratio 25%**



## WASTE MANAGEMENT AND RECYCLING

Waste Management and Recycling: We are committed to instilling a waste management and recycling mindset in our community, which includes a program that complies with the LEED materials and resources requirements. The Green MasterPlan allocates a specific wide area within the campus which is dedicated to the recycling program where general collection, sorting and storage of material takes place.

The success of our waste management system has exceeded all expectations. All our waste is placed at our Materials Recovery Facility (MRF). Our Lebanese employees sort and dispatch all waste it to local industries, 60% of which is solid waste.

This is what we have done:

- Implemented sort from the source system (promoting awareness to all our community and janitors).
- Implemented a print management program to reduce paper consumption and work towards a paperless campus.
- Reduced single use plastic and packaging.
- Worked towards green catering and procurement.
- Composted our organic waste
- Disposed biological laboratory waste according to our agreement with "ARC en Ciel".

**(Appendix 7 - Waste Management Report)**





## PART 2 STUDENT ENGAGEMENT AND CAPACITY BUILDING

### ACADEMICS | VOLUNTEERING | EVENTS AND PUBLIC AWARENESS LECTURES

**GREEN ACADEMICS** – Since 2010 We have worked on integrating sustainability and practice in the curriculum and held an educational session on this topic, offering several programs directly linked to sustainability: MS energy Studies, MS environmental science, MS food security, MS applied energy, BS agribusiness, and biochemistry.

Our sociology course SOC217 and general social information SOC 201, SOC 210 and DRT 214, have a big impact on the students' behaviour and habits, and environmental practices related to food, transportation, waste, water, energy, purchasing and other sustainable matters.

The number of courses/modules related to environment and sustainability offered in fall 2019 included 625 sections for 304 unique subjects / courses. The total number of courses offered in fall 2020 included 2819 sections for 1407 unique subjects / courses. For each unique subject / course, one or more section could be offered.

It is worth mentioning that all the projects in architecture and engineering are in alignment with environment and sustainability standards. All our engineering programs at USEK are accredited by ABET and the architecture program is engaged with the NAAB accreditation.

The Civic Engagement & Citizenship course is mandatory for all undergraduate students as part of their general education. Students

are motivated and encouraged to work on projects related to the promotion of green initiatives under the guidance of the Green Committee.

### **VOLUNTEERING:**

With the help of the head of department of Psychology & Social Sciences - Faculty of Arts and Sciences, as chapter of Civic Engagement and Community Services, we were able to introduce the concept of volunteering with Green USEK. Volunteers complete 10 hours of community services, assisting in the environmental work on campus or solving environmental challenges through research and coming up with practical solutions for daily issues.

Student dedicated showed we can quickly adapt and change our routines in the face of significant challenges and make a positive difference. Facing the devastation of the Beirut blast on the 4 August, 2020, when 2750 tons of ammonium nitrate exploded in the port of Beirut, killing more than 200 people, wounding 5000 others, and leaving 300,000 residents temporarily homeless. Students armed with brooms and shovels, took to the streets of Beirut to clean up their city.



## EVENTS:

USEK with the help of its agricultural students labelled all of USEK's tree on campus

Public Awareness lectures: We organize birdwatching activities and events related to ecosystems sustainable design and birdlife habitat on campus and critical locations in Lebanon.

**Planting Cedars in North of Lebanon:** Each year around 1000 students graduate from USEK, leaving behind history, a place where they were taught, nurtured, grasped their ultimate vision, goals and values; in order for them to symbolize their clinging to their roots (National and institutional), we aimed to plant a tree, in a specific land marked for USEK Community.

To enforce the bond between the USEK community and the national environment, to reinstall the natural healer of climate change and to replant Lebanon. In 2018, USEK teamed up with USAID, Lebanese Reforestation Initiative, and the Municipality of Ehmej to plant the cedars; USEK community planted 126 trees and 200 trees in 2019.



Several events and studies have been published and broadcasted on national television and international ones, to tackle persistent environmental issues, all of these were conducted by Dr. Nabil Nemer, Faculty member at USEK Faculty of Agricultural and Food Sciences, showing once again the importance of faculty:

October 2019, LBCI:

**Could we make Lebanon green again? (After Lebanon Wildfires 2019, a series of about 100 forest fires)**

August 2019, TF1:

**Global warming hurts cedars in Lebanon** [Link](#)

April 2019, AlJazeera TV:

**Can Lebanon's cedars outlive climate change and a pesky insect?** [Link](#)

December 2018, The Telegraph UK:

**Climate change is destroying Lebanon's biblical cedar trees** [Link](#)

September 2018, France TV :

**Réchauffement climatique : les cèdres millénaires du Liban désormais menacés** [Link](#)

August 2018, Brut Nature FR:

**Emblème du Liban, le cèdre est reconnu pour sa résistance. Mais le réchauffement climatique pourrait avoir raison de lui.**



## RESEARCH FUNDS DEDICATED TO SUSTAINABILITY RESEARCH.

We invest in supporting innovative product development and help build a more just and sustainable financial system. In 2019, around 54% of the research funds signed by the Office of Grants and Contracts were dedicated to sustainability issues.

This section covers faculty and department sustainability research and initiatives for open access research.

		USD	LBP
TOTAL	Total Research Funds Dedicated to Sustainability Research (in US Dollars)	\$ 39,743.72	LBP 190,900,000.00
	Total Research Funds (in US Dollars)	\$ 231,616.18	LBP 395,000,000.00



# UN SUSTAINABILITY GOALS AND RANKINGS - RECOGNIZING OUR COMMITMENT

Our contribution towards fulfilling the UN Sustainable Development Goals (SDGs) was recognized with our recent success in the 2021 Times Higher Education (THE) University Impact Rankings where we were awarded 1<sup>st</sup>, joint-1<sup>st</sup> and 2<sup>nd</sup> in Lebanon. We demonstrated significant positive impact across 3 SDGs, highlighting our holistic approach to embedding sustainability and equity through our teaching, operations, research, and outreach within the community.

## 2021 GLOBAL IMPACT RANKINGS SUCCESS



1<sup>st</sup> in Lebanon






Joint-1<sup>st</sup> in Lebanon









2<sup>nd</sup> in Lebanon

USEK organizes its activities in alignment with the SDG goals. More than 30 events related to sustainability are organized by USEK yearly.

SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 1</b> <b>No Poverty</b></p>	<p><b>December 2018 – Christmas Market</b> - Outreach. A cross-section of different NGO stands raising money for families in need in Lebanon.</p> <p><b>Fall 2019 “Mi Casa es su Casa”</b></p>
 <p><b>SDG 2</b> <b>Zero Hunger</b></p>	<p><b>December 2018 annual food drive</b> - The Student Affairs Office</p> <p><b>Fall 2019</b> – Launching of our outreach program: “ T3ish w Yekol Ghayrak” (Care Beyond Family) - sharing food, reducing food waste and support for the community.</p> <p>T3ish w Yekol Ghayrak/ تعيش وياكل غيرك /Care Beyond Family is a food bank initiative in partnership with the Social Service Office and the Green Committee and will help reduce hunger and support food recovery.</p>
 <p><b>SDG 3</b> <b>Good Health &amp; Wellbeing</b></p>	<p><b>USEK Vélo-Paper 2018</b> – Pastoral event The 5th edition, hosted by the USEK Pastoral, included physical, cultural, social, and ecological sports activities in Bickfaya (Metn District).</p> <p><b>March 2019 - Fitness Awareness Day – Student Affairs Office</b> The fitness day in the green space next to the campus restaurant included live fitness classes, fitness competitions, dietitian consultations, physical therapy, and supplements consumption awareness sessions, and many more activities.</p> <p><b>April 2019 Free taster workshop about ENCÉFAL brain-training method.</b></p> <p><b>May 2019 – Awareness lecture: Healthy Voice in a Healthy Body: Talking about Performing Arts Medicine.</b> Delivered given by Alfonso Gianluca Gucciardo, MD., a performing arts medicine expert and bioethics/sexology specialist.</p>






SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 4</b> <b>Quality Education</b></p>	<p><b>October 2018 – 2<sup>nd</sup> International colloquium on educational sciences - ‘Ended Adolescence, Endless Adolescence?’</b> Faculty of Philosophy and Humanities with the University of Picardie Jules Verne (France)</p> <p><b>February 2019 Accreditation for Reshaping Business Education in the MENA Region</b> conference - in partnership with The Association to Advance Collegiate Schools of Business (AACSB), and under the patronage of the President of the Council of Ministers, H.E. Mr. Saad Hariri, Link to website: <a href="https://www.usek.edu.lb/bemenabeirut2019">https://www.usek.edu.lb/bemenabeirut2019</a></p> <p><b>September 2019 – The 1st National Workshop on UI GreenMetric for Lebanese Universities</b> - UI Green Metric and the University of Indonesia, with experts of UI GreenMetric in the University of Indonesia and the Coordinator Regional of UI GreenMetric for Middle Eastern Universities and Professor of King Abdul Aziz University. A tree was planted under the workshop title.</p>
 <p><b>SDG 5</b> <b>Gender Equality</b></p>	<p><b>March 2019 Girls and Math: An Illuminating Equation – Workshop</b> with The Agence pour l’enseignement français à l’étranger (AEFE) and USEK. Hosted by the Faculty (School?) of Arts and Sciences.</p>
 <p><b>SDG 6</b> <b>Clean Water and Sanitation</b></p>	<p><b>USEK-talaya Waterfull Initiative</b> We teamed up with talaya (who are they?) to provide fresh drinking water all year round from fountains across campus. To encourage the reuse of bottles, the initiative campaigned to cut down on the landfill plastics by encouraging students to refill rather than single use.</p>

SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 7</b> <b>Affordable Clean Energy</b></p>	<p><b>Ceremony of Signature of the Memorandum of Understanding between USEK and IPTEC Energy Center</b>          Hosting of the event: Sustainable Energy in Lebanon: From 2020 Concrete Targets to 2030 Vision organized by the Ministry of Energy</p>
 <p><b>SDG 8</b> <b>Decent Work &amp; Economic Growth</b></p>	<p><b>2019 Annual Job Fair– Careers Services Office</b></p>
 <p><b>SDG 9</b> <b>Industry, Innovation &amp; Infrastructure</b></p>	<p><b>February 2019 - Ethics of Research Involving Human Subjects and Biosamples</b> - three-day workshop. Hosted by the Center for Ethics and Bioethics of the Higher Center for Research, in partnership with the Lebanese National Consultative Committee on Ethics, the Ministry of Public Health, the National Council for Scientific Research, the UNESCO Office in Beirut, and the World Health Organization.</p> <p><b>March 2019 – lecture - “Entrepreneurship and Innovation Technology”</b> given by H.E. Mr. Nicolas Sehnaoui, Chairman of UK Lebanon Tech Hub. Hosted by the Faculty of Sciences and the Asher Center for Innovation and Entrepreneurship (ACIE)</p> <p><b>April 2019 –Digital Technologies in Educational Models: Realities, Challenges and Prospects</b>          - International Colloquium -          As part of the 50th anniversary of the International Federation of Teachers of French (FIPF). Organized by The Lebanese Association of Teachers of French (ALEF), in partnership with the Lebanese University’s Foreign Languages Bureau, the Holy Spirit University of Kaslik (USEK), the Jinan University and the Institut français du Liban.</p>

SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 10</b> <b>Reduced</b> <b>inequalities</b></p>	<p><b>December 2018 - The Promotion of Human Rights</b> - panel discussion For the seventieth anniversary of the Universal Declaration of Human Rights. Hosted by the School of Law and Political Sciences. The panel included:</p> <ul style="list-style-type: none"> <li>- Andre Chidiac, Esq., President of the Beirut Bar Association</li> <li>- Prof. Antoine Messara, member of the Constitutional Council</li> <li>- Mr. Martin Borgeaud, Chief Technical Adviser, Access to Justice and Rule of Law, UNDP</li> <li>- Joe Karam, Esq., Director of the USEK Human Rights Center, lawyer at the Beirut Bar Association</li> </ul> <p><b>December 2018</b> – panel discussions on ‘Human Life: Ethics of the Beginnings’ presentation given by Dr. Zaki Ghorayeb, Head of Pediatric Surgery at the Centre Hospitalier Universitaire Notre-Dame des Secours (CHU-NDS) and Associate Dean for Medical Affairs at the USEK School of Medicine and Medical Sciences. Hosted by the Center for Ethics and Bioethics of the Higher Center for Research.</p> <p><b>April 2019</b> - lecture - Autism is not a disability, it is a different ability for World Autism Awareness Da, USEK organized a lecture entitled “Autism is not a disability, it’s a different ability”. Hosted by the Department of Psychology of the Faculty of Philosophy and Humanities, and the Center for Ethics and Bioethics of the Higher Center for Research.</p>
 <p><b>SDG 11</b> <b>Sustainable Cities</b> <b>and Communities</b></p>	<p><b>May 2019 - Hike to Bentaël Biosphere Reserve: In Their Footsteps.</b> Hike in the Bentaël Reserve to honor the memory of Father Etienne Sacre. USEK installed permanent information boards about the life of Rev. Fr. Sacre, the history of the region, the architecture of the hermitages, and the biosphere of the reserve.</p> <p><b>Green Reporters</b> - To enthuse future Journalists of USEK about environmental causes and issues.</p> <p><b>Recycling - awareness sessions for St. Rock School – campus visit/training</b> USEK welcomed students, teachers and staff, janitors, and maintenance staff to offer them awareness sessions about recycling and planting for sustainability</p>



SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 12</b> <b>Responsible Consumption and Production</b></p>	<p><b>2018-2019</b> USEK students participate in a variety of national and international contests.</p> <p><b>May 2019 - USEK Faculty Members Research Awards,</b> USEK organized the USEK Faculty Members Research Awards. This event, hosted by the Higher Center for Research, took place on Monday, May 6, 2019.</p> <p><b>October 2019 – Green Committee awareness activities -</b> organized fun and engaging activities related to the environment and waste sorting, aimed at promoting awareness in an easy approachable way. (Hyperlink to Appendix)</p>
 <p><b>SDG 13</b> <b>Climate Action</b></p>	<p><b>2018 Gaia Award and Colloquium hosted by USEK -</b> colloquium on sustainable development. Under the High Patronage of His Excellency the President of the Republic General Michel Aoun, and upon the initiative of the MED 21 Program.</p> <p>During this event, USEK received the GAIA Award 2018 for the protection of the Mediterranean environment <a href="http://www.usek.edu.lb/photo-gallery/gaia-award-2018">http://www.usek.edu.lb/photo-gallery/gaia-award-2018</a></p>
 <p><b>SDG 14</b> <b>Life Below Water</b></p>	<p><b>June 2019 Maritime and Marine Governance in Lebanon: Taking Stock for Action - colloquium</b> In collaboration with Robban Assafina, a leading Arabic-English magazine specialized in shipping and marine technology. On the importance of sound maritime and marine governance policies and laws, this colloquium will address the merits and challenges of the Lebanese nation as a country bordering the sea.</p> <p><b>August 2020 No to plastic – ‘Clean our Sea’ litter picking event at Raouche, Beirut</b> – in collaboration with Mr. Samer Halwani, his team and our students to bring to light the quantity of plastic in our sea.</p>

SUSTAINABLE DEVELOPMENT GOALS	OUR PROJECTS
 <p><b>SDG 15</b> <b>Life on Land</b></p>	<p><b>October 2018 Fly among our Cedars</b> - birdwatching event at Tannourine Reserve– organized by the Green Committee in Tannourine Reserve.</p> <p><b>August 2019 - Sawweb Sawtak for Sustainable Hunting, August 2019 - conference</b> In the presence of H.E. Mr. Fady Jreissati, Minister of Environment. Birdwatchers exhibited their photos of birds and talked about birdwatching as an alternative to hunting.</p>
 <p><b>SDG 16</b> <b>Peace, Justice and Strong Institutions</b></p>	<p><b>October 2018 UNIFIL: 40 Years in Southern Lebanon – Lessons and Future Prospects</b> - Conference with Brigadier General Raouf Sayah, Mr. Sultan Sleiman and Dr. Nassif Hitti, moderated by Dr. Nicolas Badaoui. Hosted by the Higher Institute of Political and Administrative Sciences (affiliated to the School of Law and Political Sciences).</p> <p><b>March 2019 - Latin American Contributions to Peace and International Law</b> - lecture delivered by H.E. Mr. Mauricio Alice, Ambassador of Argentina to Lebanon, and moderated by Dr. Joseph Al Assad, Associate Professor at the Faculty of Engineering. Hosted by the School of Law and Political Sciences and the International Affairs Office.</p> <p><b>April 2019 International Colloquium on Commercial Law: Capital Markets Law</b> - A continuation of the study conducted for two consecutive years in the context of the 75th anniversary of the Code of Commerce and brought together experts from the world of education, research, business, and economics.</p> <p><b>April 2019 Writing and Geopolitics in the Contemporary Arab and Mediterranean World - Symposium</b> Hosted by the Faculty of Letters, in collaboration with the Institut national des langues et civilisations orientales – INALCO (France) and the Ibn Tofail University (Morocco).</p>
 <p><b>SDG 17</b> <b>Partnerships for the Goals</b></p>	<p><b>2021 off-campus partnerships:</b> The Scouts of Lebanon - Civic Engagement Project IPTEC - Biodiesel Project</p>

## USEK ALIGNMENT WITH THE UN GLOBAL COMPACT

CATEGORY	INDICATORS FOR 2019	VALUES, BENCHMARKS AND COMMENTS
General environment	Total area on campus covered in planted vegetation (%)	35%
	The total open space area divided by total campus population	22 m2
Energy Efficiency and Climate change	Rate of energy efficient appliances used on campus	75%
	Smart building implementation rate	70%
	Number of renewable energy sources in campus	1 PV system
	The total electricity usage divided by total campus population (kWh per person)	830kWh/person
	The ratio of renewable energy production divided by total energy usage per year	2017/2018 consumption: 6520352kWh
	The total carbon footprint divided by total campus population	0.22
Safety and well being	Number of safety related events per year	
	Overall result of the safety culture assessment	
Waste	Electronic waste collected per year 2019 (AC's, Washing machines, Equipment's, Computers, etc.)	4 trucks
	Number of fluorescent lamps stored safely at the MRF per year	5000 lamps
	Plastic (PET, HDPE, Nylon, Flex, etc.)	3, 737 Tons
	Estimated number of water bottles saved through the installed drinking water fountains per year	4,800,000 bottles
	Organic waste converted into compost for the year 2019	12,000 Kgs
	Glass collected from bins for the year 2019	40 bags of 50 L capacity
	Metal Collected (Aluminum, construction waste from campus)	6, 955.5 T
	Paper and carton board	26,535 T
	Styrofoam	5 trucks
	Wood (Desks, furniture and tree pruning)	6 trucks

<b>Water</b>	Rate of water efficient appliances used in the University	30%
<b>Social Transportation</b>	Number of social events linked to SDGs conducted per year	30+
	Number of Transportation Initiatives to Decrease Private Vehicles on Campus	4
	Total number of zero emission vehicles	10
	Total parking area = 15500 m2 (open space)	25%
<b>Education</b>	Ratio of sustainability courses to total courses / subjects	9.27%
	Ratio of sustainability research funding to total research funding	64%
	Total number of scholarly publications on sustainability per year	90
	Total number of events related to sustainability per year	75
	Number of student organizations related to sustainability	

## IU GREENMETRIC RANKING

Within a year of the creation of the Green Committee, USEK was ranked by GreenMetric World University for the following rankings:

- 2017 - 1<sup>st</sup> Green University in Lebanon and among the 10 'Greenest' Universities in the Arab World.
- 2018 - 1<sup>st</sup> Sustainable and Green University in Lebanon and 8<sup>th</sup> Most Sustainable University in the Arab World.
- 2019 - 1<sup>st</sup> Sustainable and Green University in Lebanon and 3<sup>rd</sup> Most Sustainable and Green University in the Arab World of that year.
- 2020 - 1<sup>st</sup> Sustainable and Green University in Lebanon for the fourth consecutive year and 3<sup>rd</sup> Most Sustainable and Green University in the MENA region.

In order to track the implementation of the greening initiatives and impacts at USEK, several indicators were adopted by the University. These indicators were derived from the UI GreenMetric initiative and cover all the components targeted at USEK long-term sustainability plans. These indicators help when setting up future plans and projects.

## INDICATORS ADOPTED BY USEK

CATEGORY	INDICATOR	VALUES, BENCHMARKS AND COMMENTS	REMARKS
General environment	Total area on campus covered in planted vegetation (%)	35%	
	The total open space area divided by total campus population	22 m2	
Energy Efficiency and Climate change	Rate of energy efficient appliances used on campus	75%	
	Smart building implementation rate	70%	
	Number of renewable energy sources in campus	1	PV system
	The total electricity usage divided by total campus population (kWh per person)	830kWh/person	2017/2018 consumption: 6520352kWh Students: 6825 Staff: 337 Instructors: 692
	The ratio of renewable energy production divided by total energy usage per year	4.14%	
	The total carbon footprint divided by total campus population	0.22	2017/2018 Co2 emission: 1727.92tons Students: 6825 Staff: 337 Instructors: 692

## What next?

Despite the recent disturbing political, and economic upheavals in Lebanon, and not to forget the global pandemic, our commitment to sustainability remains strong. It creates opportunities for our staff and students, makes us more efficient, and is the right thing to do.

Through developing more partnership and student collaboration we can build knowledge and capacity and learn to make the most of resources. We understand that being sustainable generates worth. It means more than lowering our environmental impact; it's about spirit, soul and brainpower, building the human connections to make a positive difference in protecting the earth.

We continue to measure our progress and achievements against our foundational strategy, rankings, the UN Sustainable Development Goals (SDGs) and Global Contact. A review of the work we are doing across our operations, research, teaching, and outreach is imperative to advance university sustainability practices and to recognize what has been done, and what is yet to be achieved.

Our future plans include work in these areas:

### **CIVIC ENGAGEMENT PROJECTS:**

It is very clear to us that it is time to develop our partnerships within the community.

**Scouts** – educate and train scouts to instill a sustainability mindset to advance our activities to national level, thus investing in the youth to ensure their rightful future.

**Students** – initiate a circular economy through a repurpose store initiative where students will buy used products, up-cycling/repairing/recycling and put for sale in a walk-in store. The store will serve as a living laboratory for student to gain experience in their study areas and embed sustainability ethos.





## BIODIESEL FUEL

Exploring new energy resources is of a growing importance during the last few years, such as biodiesel fuel. Biodiesel is recommended as a substitute for petroleum-based diesel and mainly as carbon neutral energy, compared to fossil fuel diesel.

### **Biodiesel Project: Continuous prototype unit converting waste cooking oil into biodiesel (WCO)**

This project objective is to build a continuous prototype unit which converts waste cooking oil (WCO) into biodiesel. Simultaneously, there will be a study of biodiesel market in Lebanon will be performed by surveying and collecting data from different governmental or nongovernmental database resources. These assessments are necessary to demonstrate the feasibility of biodiesel production from WCO in the Lebanon case.

#### **The project will be developed in two stages:**

1. Implementation of a control system and build a reactor which is adequate for a small scale industry
2. Use of a method to recycle un-reacted reagents and purify the biodiesel product.

Link to the Biodiesel project:

<https://www.iptgroup.com.lb/Library/Assets/Biodiesel20%Brochure20%-IPTEC20%and20%USEK20%-last085339-.pdf>

We will continue to work hard to expand the university's goals by demonstrating and spreading good environmental practice on a local and national level. It remains USEK's top priority to continue growing a culture of sustainability among students, faculty, and staff, empowering them to be green actors in helping reduce environmental footprints through their actions and initiatives.

Thank you for reading our report.

For updates please visit us on <https://www.usek.edu.lb/about-usek/sustainable-office/about-us> and follow us on Instagram@green.usek

# APPENDICES



# APPENDIX 1 - SUSTAINABLE PROCUREMENT REPORT

## USEK SUSTAINABLE PROCUREMENT

USEK is currently working on finalizing its official procurement policy. This document gives an overview of what our sustainable procurement goals are, and outlines what is needed to facilitate the shift to sustainable procurement.

Our Vision is to reduce the generation of greenhouse gases and overall sustainability, and USEK have placed sustainability at the heart of the procurement process. It is now time for sustainable procurement to become the standard operating procedure across the campus.

The most important environmental and social challenges today are:

Reducing the emissions of greenhouse gases		Reducing the emissions of hazardous chemicals
Avoiding over-consumption of resources and limiting the volume of waste		Stopping the use of ozone depleting substances
Safeguarding biodiversity		Promoting safe and equitable work environment
Supporting local entrepreneurs.		

In procurement, it is therefore important to manage:

Consumption of raw materials and energy		Chemicals in products
Polluting emissions		Waste generation
Work conditions		Diversity of supplier

### Fields of action include:

- Physical assets: buildings, equipment, vehicles, etc.
- Management processes: procurement, travel requirements, management systems, etc.
- Organizational culture: day-to-day behavior of staff

# APPENDIX 1 - SUSTAINABLE PROCUREMENT REPORT

## The major goods procured by USEK System are:

Food		Generator sets
Pharmaceutical supplies		Chemical and petroleum products
Medical equipment		Air conditioning/heating/plumbing
Vehicles and transportation		Laboratory equipment
Telecommunications equipment		Rental/lease equipment
IT equipment		
Shelter and housing		

## The major services procured are:

Security		General management
Construction		Freight and air transportation
Engineering services		Maintenance and repair
Leasing or rental		Consultancy
Telecommunications		Outsourced personnel services (catering, cleaning, travel)

## TRANSITIONING FROM PROCUREMENT TO SUSTAINABLE PROCUREMENT

### Our sustainable procurement policy directly supports two of the four basic procurement principles:

- Best value for money
- In the best interest of USEK

# APPENDIX 1 - SUSTAINABLE PROCUREMENT REPORT

## **Purchasing Power**

Ultimately, when buying a product, the purchase price must be considered. The price calculation must include all the costs relating to the product throughout its life. When products are examined from a life-cycle perspective, those that meet sustainability criteria are better value for money.

**Reducing Carbon Footprint:** Many sustainably produced products also have a smaller carbon footprint, i.e. they are produced with less energy or consume less energy. As USEK is committed to reducing its carbon footprint through purchasing products or services that have low carbon impacts.

**Labor:** Compliance with fundamental labor standards (UN SDG's and Global Compact, and the ILO conventions) throughout the supply chain during contract execution supports both goals of "in the best interests of USEK" and "best value for money".

## **Sustainable procurement is a priority.**

Emission of harmful and toxic substances into water or atmosphere, the generation of waste, the consumption of natural resources and damage to, or destruction of, ecosystems are elements of unchecked consumption. Increasingly USEK and surrounding communities are bearing the brunt. USEK is finalizing its draft policy and activities specifically developed to address these negative impacts through a changes in production and consumption patterns.

## APPENDIX 2 - CATERING REPORT

The targets set out in this document are considered as a starting point, subject to ongoing scrutiny and revision. They intend to address, in the first instance, the needs and policy that will affect the internal food service operations on campus.

The definition of sustainable development is to meet the needs of the present without compromising the ability of future generations to meet their own needs'.

Sustainability encompasses three distinct areas, financial, social, and environmental durability. All these areas are to bear in mind when considering sustainable food and catering services.

we will tackle the advanced sustainability criteria intended for use by procurers who seek to purchase the most advanced environmentally friendly and socially responsible products available on the market and may require additional administrative effort.

In practice, this means thinking carefully about what the true needs are, as a first step. Then, basing purchasing decisions for products, services and works on the lowest environmental impact and most positive social impact which make the most economic sense over the lifetime of the product. Therefore, the guidance covers the following: key environmental impacts, key social considerations, most appropriate means of verification and information on the availability of sustainable products and lifetime costs (where available).

An important area for changes that can be made to the sustainability of the catering operation are made through the food procurement

process. Selecting the most sustainable ingredients to work which has significant impact. These decisions are made when menus are planned. This responsibility is often with the chef, demonstrating the importance of training and development in sustainable food procurement for chefs. Both institutional menu planning policies and practical assistance for chefs are required to reduce the environmental impacts of a menu.

The factors which have to be considered when menu planning is fairly complex. Cost, preparation time, kitchen skill, storage, wastage, kitchen equipment, health, and consumer demand to name a few must all be taken into consideration. The factors that should be added to this are, increasing carbohydrate-based meals reducing meat, fish, and dairy content, using available local and seasonal goods were produced sustainably, limiting processed foods and the use of eco-labelled or equivalent goods. Restricting ingredients to those available from more sustainable sources when menu planning, rather than planning a menu and then looking to source sustainable ingredients, is the preferable option.

### **Three broad environmental concerns relate to food production / catering:**

#### **1.1) Use of finite resources.**

#### **1.2) Disruption of ecosystems, considering climate change and modern agriculture.**

#### **1.3) Release of waste.**

## APPENDIX 2 - CATERING REPORT

### 1.1) Use of finite resources

Agriculture is a resource intensive industry, occupying more than 50% of the world's habitable land mass, and as much as 8% of the global water use. Each item of food that we consume, as well as the ancillary items required in the growing, cleaning, processing, preparation, cooking and serving of it, requires the use of finite natural resources.

Fertilizer is added to soil (and crops) to increase the levels of mineral elements required for the growth of the crop, where soil health is poor and unable to naturally restore the levels of these elements. Many minerals are extracted for use in fertilizer, with lime and potassium being amongst the most proliferate.

Steel and aluminum are widely used for packaging and kitchen equipment, as well as agricultural machinery. Whilst widely recycled, these metals are also finite resources which need to be used with caution.

Wood is a particular area of concern within the catering industry due to its extensive use for napkins, disposable tableware, furniture, and packaging. Wood is a resource which is very slow to replenish, but which is fast growing enough to be relatively easily managed sustainably, with good forest management, allowing an equal amount of re-growth for the timber removed annually.

Local and seasonal foods that are grown locally potentially reduce energy use for transport, growing and storage; There are a number of advantages to buying foods that are grown and/or processed closer to the point of consumption.

### 1.2) Disruption of ecosystems, considering climate change and modern agriculture and threat to biodiversity.

The variety of species, genes and ecosystems in existence worldwide are threatened in various ways by modern lifestyles and agricultural practices. 4,000 species of plants and animals and over 87% of bird species are threatened by agriculture; as 15, 33% of livestock varieties have disappeared or are close to it, 30,000 vegetable varieties have become extinct in the last century; one is lost every 6 hours. 16.

#### *Wild Fish Harvesting*

In summary the aims for sustainable fish and seafood are as follows:

- Maintenance of species population
- No bottom trawling, poisons, or explosives
- No significant, measurable increases or decreases in aquatic life dependent on the species for food or as a predator.
- Compliance with international and local laws
- Use of equipment designed to minimize by-catch.
- Live release of by-catch or where dead declare and land.
- Limit loss of equipment, oil ....

**Climate Change:** Commercial agriculture is energy intensive, requiring powered tractors, irrigators, sprayers, and harvesters. Agrochemical production also requires energy and water. Ruminant livestock raised for meat and dairy, release methane as part of their digestive process. In fact, methane emissions from livestock produce 18% of total GHGs emissions.



## APPENDIX 2 - CATERING REPORT

31% of climate change can be directly attributed to food, drink, tobacco, and narcotics consumption, 27 and 1.6bn tons of CO<sub>2</sub> can be attributed to changes in land use such as deforestation.

*Heating / cooking, cooling, and lighting*, as well as mechanical food preparation are all energy intensive processes, which are undertaken in kitchens.

### Modern Agriculture

Change of land use Intensive agriculture destroys natural habitats, replacing them with monoculture crop or animal production. As well as instigating changes in grassland ecosystems, significant areas of rainforest have been, and are continually being, removed for agricultural usage. Up to 70% of previously forested land in the Amazon is used as grazing pasture, and feed crops cover the majority of the remainder. 33% of arable land is taken up with livestock feed growing and 30% of the world's (ice free) surface area is used for livestock production.

### Agrochemicals:

*Fertilizer* use has grown tenfold since 1950, with a corresponding increase in food production of only three times. As much as 50% of artificial fertilizers can leach into rivers and streams causing eutrophication, a process that starves fish and other water-based animals of oxygen due to excessive plant or algae growth. In extreme cases, this can result in dead zones 'devoid of all plant and animal life. Modern agriculture is reliant on the use of pesticides (including herbicides, fungicides, and bactericides) to ensure that the chosen crop or animal (including fish) is subject to as little competition or attack within its growing environment.

Hormones are administered to livestock to improve growth rates, or production.

Routine use of antibiotics in intensive meat production is common and is undertaken for a number of reasons, as a preventative measure, to minimize animal illness, but also to promote growth (usually in chickens).

**Key principles behind organic farming are health, ecology, fairness, and care. More specifically organic farming requires the following:**

1. Minimized agrochemical input.
2. Protection of ecosystems, including maintenance of soil health.
3. Avoidance of antibiotics, no hormones
4. Natural animal behavior and good welfare standards
5. Organic feeds
6. Minimal waste and water efficiency
7. Breeds and varieties to support all of the above.

### 1.3) Release of waste

*Sorting its waste.* Waste creates a number of problems for people and the environment, including contributing to ground and water pollution, increased space demands for landfills, potential leaching of toxins, and increased greenhouse gases.

The University's current goals are to divert 50% of all waste by the end of 2017 and 95% by 2022; we should continue to work toward these goals. Although the University has been actively combating waste on a number of fronts, there is much opportunity for improvement, including moving toward setting an informed goal.

## APPENDIX 2 - CATERING REPORT

**Single-stream recycling** is a system in which all recyclables, including cardboard, plastic, aluminum, mop cloths, plastic gloves, cleaning supplies, hair nets, etc. ., are placed in a single bin or cart for recycling. These recyclables are collected by a single truck and taken to a Materials Recovery Facility (MRF) to be sorted into various commodity streams for sale to markets, where it is processed into feedstock, which can be used in the manufacture of new products. All organic waste goes into composting. Some food waste can be converted into compost aerobic digestion (rotting in an environment with oxygen, sometimes with added heat and oxygen and or bacteria/ yeasts/fungi), it is also used to convert the food waste into usable fertilizer, soil conditioner.

The simpler it is to recycle, the more likely a person is to participate. The University attempts to make recycling as simple as possible for its community by, among other things, providing single-stream recycling for most of its waste products. Single-stream recycling relieves users from having to separate their recyclable waste into categories. Rather, all recyclables can be commingled in the same containers (Blue bag for all recyclable materials and Black bag for all organic materials).

**Deep Frying Oils:** Oils are still valuable, even when they have served their useful purpose for deep-frying. They can be used, almost immediately (if filtered) as biodiesel, or otherwise in power station.

**Fats, Oils and Grease** Fats, oils and grease accumulate in various locations in kitchens and are notoriously difficult to remove. Traditionally surfactants, and highly toxic solvents and acids are used

to clean and clear ventilation and drainage systems. An alternative solution is enzyme application, through a constant dosage system, and/or in combination with a colony built up around a traditional grease trap (mechanical grease removal system used in kitchen drainage to capture grease).

### **Prevention methods to reduce waste:**

Eating seasonally and locally can reduce the carbon footprint by up to 10%.

Changing diet could help reduce the carbon footprint of food:

- Eliminating waste by eating what you buy — 25%
- Going vegan — 25%
- Eating in-season, while avoiding hothouses and air freight — 10%
- Recycling and avoiding excessive packaging — 6%
- Reducing waste by buying items from the front of the shelves,
- Reduced-price items, and misshapen fruit and vegetables — 2%
- Cooking using less energy— 5%

**Handling leftovers:** As you seek to minimize the cost of doing business for your restaurant, discover how reducing the food wastage is important. You cannot afford to continue spending too much money due to the rising cost of food every day. While you cut down on monetary costs, you reduce the rampant dumping of waste in the environment.

## APPENDIX 2 - CATERING REPORT

### *Pre-Cooling Hot Items before storing:*

Bacteria can easily grow on foods that you place in the refrigerator while hot. It is prudent to pre-cool hot foods first. Take advantage of an ice bath, cooling paddle or a chill blaster. This effectively reduces the volume of food going bad.

*Storing products properly:* Most wastage occurs because of cross contamination. This is especially true if you do not store food in a standard box or packaging wrap. Make sure you store foods at the right temperatures. Most frozen foods require 0 degrees Fahrenheit and below while refrigerated ones require 41 degrees Fahrenheit and below.

*Keeping everything labeled and organized:* Having labels on food containers will help you and your restaurant staff identify the contents inside. This way, you will know the perishable foods and cook them first before they go bad.

*Organizing your ways to store foods:* Adopt the first in first out policy (FIFO) in for storing items in your refrigerator, pantry, kitchen etc. For this reason, place new orders behind older ones so that you use up the older products first.

*Ensuring that your refrigerator and freezer maintain appropriate temperatures:* Before you invest in a refrigerator, ensure it comes with a freezer/refrigerator thermometer. If your current one does not have one, buy the gadget immediately. This helps you to effectively monitor and control the performance of your food storage and cooling equipment.

*The use of HRC's Hydrofluocarbons:* Hydrofluorocarbons (HFCs) are a group of industrial chemicals primarily used for cooling and refrigeration. HFCs were developed to replace stratospheric ozone-depleting substances that are currently being phased out under the Montreal Protocol on Substances that Deplete the Ozone Layer.

Many HFCs are very powerful greenhouse gases, and a substantial number are short-lived climate pollutants with a lifetime of between 15 and 29 years in the atmosphere.

*Initiating proper portion control:* Take advantage of portion control scales to save on money and food. These give you the opportunity to specify certain measurements of food. To increase efficiency, ensure your employees use the specified portions every time.

*Anticipating and creating:* It is prudent to anticipate the food that your restaurant will actually sell in each day. This controls the amount of food going into the kitchen. If you realize that you will not sell as much as you have prepared then create a temporary special menu. This motivates your customers to buy more of the food, allowing you to obtain returns on investment.

*Donating food you will not use:* It is inhuman to throw away food while some people in your community or elsewhere have none to eat. For this reason, donate food in your refrigerator before it actually goes bad. One resource states that more than a billion people went hungry in 2009. The predicament of having foods that are about to go bad could be an opportunity for giving back to the society.



## APPENDIX 2 - CATERING REPORT

Ensuring clarity over your policy on leftovers, and stock containers for storage, as necessary.

Keep an inventory. To have a clear picture of how much food your restaurant wastes, conduct an inventory of the volume you order as compared to the volume you take out in trashcans. Other ways of reducing costs include recycling and investing in a food composter. Additionally, contact Compactor Management Company and buy a trash compactor for your restaurant.

### **Reduce, reuse and recycle.**

The most common approach to the reduction of waste, in all areas, is to reduce, reuse and recycle. Whilst this section focuses on actions that can be taken within the catering operation, changes can also be instigated further up the chain by speaking to suppliers and requesting that they consider making changes based on the same principles.

Reduce the usage of disposables is relatively straightforward; simply encouraging the use of reusable crockery and tableware by providing that option as standard, rather than the disposable option is the first step. Sandwiches and salads in particular should be provided on plates as standard, and then in take away containers as a secondary option.

Discourage users from taking multiples of items by using napkin dispensers dispensing one napkin at a time and ensuring that cups are of the correct thickness to be safe and stable when filled with the

intended drink (too thin plastic cups for hot drinks are too hot to hold and result in people taking two or three as insulators – cardboard insulators or thicker cups would be preferable).

When selecting packaging or disposables, aim to use the lightest and most minimal possible. A simple paper wrap may suffice for a sandwich, rather than a complex box system.

Completing the recycling loop by choosing recycled materials is also very important. The most common items in a foodservice context are recycled paper napkins, kitchen towel, and bags and cardboard sandwich boxes and hot beverage cups.

Using a water bottle. Where on site filtration is not possible, drinking water should be procured in the largest possible containers for internal distribution, with individual sealed water bottles a last resort.

## APPENDIX 2 - CATERING REPORT

### SUSTAINABLE CATERING CHECKLIST FOR EVENTS

• Glasses	For water and soft drinks
• Pitchers	Filled with water and ice
• Cold / Hot Beverages	China ware / mugs / glass cups Teapot - Container keeps tea hot and has self-serve nozzle. Coffee pot - container keeps coffee hot and has self-serve nozzle. Milk container - jugs Hot water container - container keeps water hot and has self-serve nozzle. Coffee diffuser - grain Sugar diffuser - grain Tea diffuser - loose Wooden mixers / stencil spoons
• Straws	No plastic straws or paper
• Napkins	Not bleached / recycled material
• No Cling Film – No Foil Aluminum	Beeswax wraps, glass jars, reuseable containers
• Hand Sanitizer	Diffuser
• Tablecloths	No plastic
• Centerpieces.	Small plants -natural
• Dinner Plate Cover	These cover plates and keep food warm for formal events.
• Stainless Cutlery & Plates - reusable Crockery	Spoons, forks, knives, tableware, etc.
• Ditch Plastic Wraps	Encourage natural healthy eating – local fruits, nuts, vegetables

## APPENDIX 2 - CATERING REPORT

- |  |   |
|--|---|
| • Water Carafe   | Serve water and other beverages in an attractive way.   |
| • Chalk or Letter Board                                    | Attractive way to list your catering menu               |
| • All printed materials such as place cards, menu, program | Reduce – encourage black board – chalk – reusable board |

### SUSTAINABLE CATERING CHECKLIST FOR COFFEE STANDS

- |   |   |
|---|---|
| • Reused Mugs   | Offer the chance to buy / rent  |
| • Cup Holders   | Paper or carton   |
| • Carton Boxes  | To carry small items away   |
| • Plastic Cups  | Glasses or paper cups for juice and cocktails<br>Wooden mixers / stencil spoons |
| • Straws  | No plastic straws or paper  |
| • Napkins   | Not bleached / recycled material  |
| • No Cling Film –<br>No foil Aluminum                   | Beeswax Wraps, glass jars, reusable containers                                  |
| • Hand Sanitizer  | Diffuser  |
| • Signage   | To promote sustainable consuming.   |
| • Stainless Cutlery<br>& Plates –<br>re-usable Crockery | Spoons, forks, knives, tableware's, etc.  |
| • Ditch plastic wraps                                   | Encourage natural healthy eating – local fruits, Nuts, vegetables               |

## APPENDIX 2 - CATERING REPORT

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Chalk or Letter Board</li> </ul>                                    | <p>Attractive way to list your catering menu</p>               |
| <ul style="list-style-type: none"> <li>• All printed materials such as place cards, menu, program</li> </ul> | <p>Reduce – encourage black board – chalk – reusable board</p> |

### SUSTAINABLE CATERING CHECKLIST FOR SANDWICH FOOD STAND

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Reused Cups</li> </ul>                      | <p>Optional paper ones</p>                          |
| <ul style="list-style-type: none"> <li>• Paper Package</li> </ul>                    | <p>Salt – gel – cutlery (optional)</p>              |
| <ul style="list-style-type: none"> <li>• Carton boxes</li> </ul>                     | <p>To carry small items away</p>                    |
| <ul style="list-style-type: none"> <li>• Paper Sauce Holder</li> </ul>               | <p>Salads</p>                                       |
| <ul style="list-style-type: none"> <li>• Straws</li> </ul>                           | <p>All kind of sauce – Humus – Garlic and dips</p>  |
| <ul style="list-style-type: none"> <li>• Napkins</li> </ul>                          | <p>Wooden mixers / stencil spoons</p>               |
| <ul style="list-style-type: none"> <li>• No Cling Film – No foil Aluminum</li> </ul> | <p>No plastic straws or paper</p>                   |
| <ul style="list-style-type: none"> <li>• Hand Sanitizer</li> </ul>                   | <p>Not bleached / recycled material</p>             |
| <ul style="list-style-type: none"> <li>• Salt Diffuser</li> </ul>                    | <p>Beeswax wraps, glass jars, reused containers</p> |
| <ul style="list-style-type: none"> <li>• Ketchup</li> </ul>                          | <p>Font trays for covering and heating</p>          |
| <ul style="list-style-type: none"> <li>• Mustard</li> </ul>                          | <p>Diffuser</p>                                     |
| <ul style="list-style-type: none"> <li>• Toothpick</li> </ul>                        | <p>Diffuser</p>                                     |

## APPENDIX 2 - CATERING REPORT

• Gloves	
• Plastic Apron	Material washable aprons
• Hair Net	Material washable hair hat
• Signage	To promote sustainable consuming.
• Stainless Cutlery & Plates - re-usable Crockery	Spoons, forks, knives, tableware, etc.
• Ditch Plastic Wraps	Encourage natural healthy eating – local fruits, Nuts, vegetables
• Chalk or Letter Board	Attractive way to list your catering menu
• all printed materials such as place cards, menu, program	Reduce – encourage black board – chalk – reusable board

*N.B: straws optional, cutlery optional when asked, Unscrew skewered mashawe on bread.  
Multiple stations for dispensers to avoid jamming.*

## APPENDIX 3 - NO-PLASTIC POLICY GUIDELINES

Policy to cut on the distribution of [Single Use](#).

A proposition by what we can replace the existing single USE by a more sustainable product:

PRODUCT	USED BY	TO BE REPLACED BY	REMARKS
Plastic Cutlery: <ul style="list-style-type: none"> <li>• Spoons</li> <li>• Forks</li> <li>• Knives</li> </ul>	All offices	<ul style="list-style-type: none"> <li>• Each employee can bring its own.</li> <li>• Stainless cutlery in case of events</li> </ul>	Cost wise is much better for USEK.
Plastic coffee stirrer	President's office Vice President's office Cafeteria Maintenance	<ul style="list-style-type: none"> <li>• To get small stainless spoon (small)</li> <li>• Wooden stirrers (In extreme cases)</li> </ul>	
Plastic plates	All offices	<ul style="list-style-type: none"> <li>• Each employee can bring his or hers.</li> <li>• China ware / ready to be washed.</li> </ul>	
Plastic gloves	Laboratories M.R.F. Phoenix Biblioteque Music	<ul style="list-style-type: none"> <li>• Except in Labs and MRF.</li> <li>• Library and dry places can use / cotton materials gloves / reusable</li> </ul>	



## APPENDIX 3 - NO-PLASTIC POLICY GUIDELINES

PRODUCT	USED BY	TO BE REPLACED BY	REMARKS
Coffee or water paper cups Plastic cups	All offices	<ul style="list-style-type: none"> <li>Each employee can bring his or her cup.</li> <li>To encourage the use of glass cups in all events.</li> <li>In specific events, to use paper cups</li> </ul>	For Christmas instead of card to give away reused cups.
Sticker notes	All offices	<ul style="list-style-type: none"> <li>Reused papers with metal clips.</li> </ul>	
Paper clips	All offices	<ul style="list-style-type: none"> <li>To use the simple paper clips.</li> <li>Not the colored paper clips.</li> </ul>	
Rubber band	All offices	<ul style="list-style-type: none"> <li>Replace by ribbons or reused rubber band.</li> </ul>	
Plastic belts	Maintenance office	<ul style="list-style-type: none"> <li>To be replaced by the metal wire.</li> <li>To be replaced by the burlap threads.</li> <li>Except for long time usage.</li> </ul>	

## APPENDIX 3 - NO-PLASTIC POLICY GUIDELINES

PRODUCT	USED BY	TO BE REPLACED BY	REMARKS
Envelopes	All offices	<ul style="list-style-type: none"> <li>To be replaced internally by reused envelopes.</li> </ul>	
Rubbish bags		<ul style="list-style-type: none"> <li>To be replaced by Bio-Degradable.</li> </ul>	They are inevitable with our state of waste management / Bio-degradable is better than others.
Plastic ribbons / stop signs	Security Maintenance	<ul style="list-style-type: none"> <li>To be replaced by reused no stop chains.</li> <li>Burlap ropes.</li> </ul>	
Personal tags / events	For event staff/ attendees	<ul style="list-style-type: none"> <li>To use the actual business card with corporate chain.</li> </ul>	

## APPENDIX 4 - CARPOOLING INITIATIVE

### CARPOOLING INITIATIVE TO DECREASE PRIVATE VEHICLES ON CAMPUS



**a. Green shuttles**



**b. USEK Car Pool** ([link](#))

Since transportation is a major source of greenhouse gas emissions and other pollutants, USEK is moving towards a sustainable transportation system. The aim is for a car-free campus coupled with a university-wide private shuttle system to constitute the first and the most vital milestone towards sustainability. USEK strives to push the university community towards alternative transportation programs like carpooling, walking, bicycling, living on campus or taking public transportation to replace single-occupancy vehicle transportation.

#### **a. Green Shuttle:**

a system relying on electrical shuttle for students and employees based on the usage of electrical cars that use on-board rechargeable Energy storage.

#### **b. Carpooling:**

so far we got around 500 members and the average of 10 cars per day using the program; and in return USEK offers for these people a secured parking spot and a reward scheme.

#### **c. Carpooling results:**

Spring Semester 2018-2019	
Carpoolers Total	675
Carpool Total	295

## APPENDIX 5 - USEK GREEN MASTERPLAN

Universities are the candles of progress and in an ideal position to halt the current trend that is harming the environment because of often irresponsible development. The USEK's Carbon Neutral Challenge Project encompasses different initiatives and strategies aimed to improve the quality of life inside its campus and spread a green message to the wider community.

By assuming such a leadership role in Lebanon, USEK will become a model institution and show by example how the wider community can move towards a more sustainable way

of living. As part of the challenge the new Campus Masterplan has been designed to optimize the external spaces and improve the quality of life inside the University's campus. This will be by sustainable strategies that have been integrated to maximize the environmental benefits using the highest standards of sustainable design and focusing specifically on daylight, solar access, wind environment, energy reduction and thermal comfort.

In fact, the Masterplan has created opportunities with the natural environment, deferring to contextual issues such as climate, site conditions, hardscape areas, orientation. It also promotes measures such as reducing emissions associated with transportation, protecting surrounding habitats, providing and maintaining open spaces, managing storm water runoff, reducing the heat island effect and eliminating light pollution. As designed, the new sustainable layout of the campus will enable its students and staff to adopt a more ecologically aware, lower carbon lifestyle. The wide eco-garden will encourage students to spontaneously walk around the campus and enjoy different facilities and panoramic views. The objective

of the Masterplan designs is to build High Performance Green Buildings with the aim to satisfy the LEED protocol requirements in its six categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources Indoor Environmental Quality, Innovation in Design.

The inspired green buildings will have both direct and indirect benefits. The immediate and most direct benefit is in the reduction of energy use and water costs right from the first day and during the entire life cycle of the building.

Indirect benefits of the Green Building include increasing productivity and improving the learning environment for students. As an example, the double envelope facade of the new Medical Building is designed to maximize daylight while controlling solar gain – a condition typical of medical faculties dominated by internal heat gains. The interstitial space is used as a protected enclosure for operable vertical shading devices that might otherwise suffer from wind damage and weather exposure.

Solar energy absorbed by the shading devices is returned to the exterior environment by stack ventilation of the entire facade. In parallel, the optimized passive



## APPENDIX 5 - USEK GREEN MASTERPLAN

design strategy is adapted to greatly reduce the energy costs of heating, cooling, ventilation and lighting. For example in the new Medical Building, the saved energy obtained just from the passive design is estimated to be around 30% of the building's total needs.

### **The passive design has two major aspects:**

**1.** The use of the building's location and site to reduce the building's energy profile.

**2.** The design of the building itself - its orientation, aspect ratio, massing, fenestration, ventilation paths, and others measures and factors, including latitude, altitude, solar insulation, heating and cooling degree days, humidity patterns, annual wind strength and direction, the presence of trees and vegetation, and the presence of other buildings.

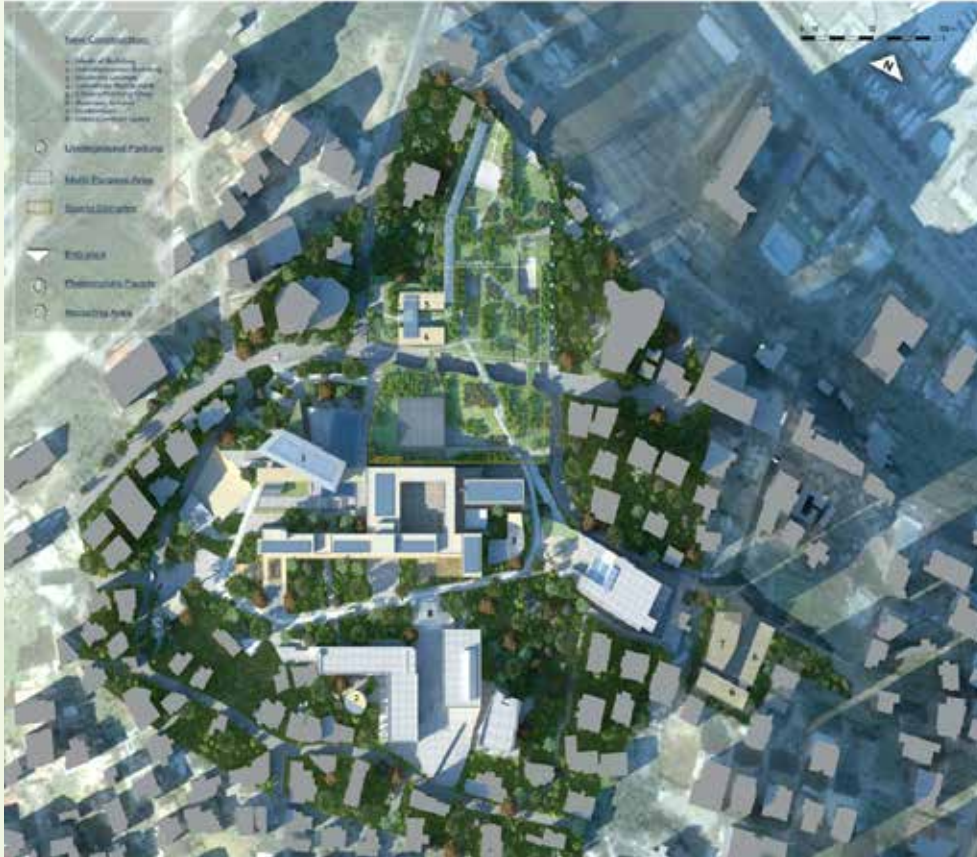
Central to the Masterplan is the aim to implement renewable energy options to meet the University's Carbon Neutral Challenge Project. The Masterplan employs a variety of renewable power resources, including wind power, solar energy, geothermal & other alternate energy sources like biomass energy. The use of mini wind turbines in the park area will provide a source of clean and renewable energy for the entire campus without disturbance. Photovoltaic panels will be used as another alternative source of energy; modules will be placed on rooftops where possible to provide supplemental clean solar energy resulting in a significant contribution to energy production efficiency and reductions in CO2 emissions.

To comply with LEED requirements for the recycling programme under its 'Materials and Resources' category, the Masterplan allocates a specific wide area within the campus which will be dedicated to the recycling programme where general collection, sorting and storage of material can take place. In addition there will be educational programmes to create awareness and understanding about the linkage between lifestyle, consumption, waste and environment. The idea is to spread a sense of responsibility among the students by raising awareness of such practices.

A major aspect of the Masterplan is to integrate part of the campus with the neighbouring community by sharing its park, the entertainment area and the multipurpose spaces. The new design will help the University to foster a positive relationship with the community and play a role as a provider of cultural events and facilities within the community.



## APPENDIX 5 - USEK GREEN MASTERPLAN



## APPENDIX 6 - ENERGY AUDIT REPORT

To view the full Energy Audit Report, please click [here](#)

# APPENDIX 7 - WASTE MANAGEMENT

## PURCHASING DEPARTMENT AND WAREHOUSES

Waste is a problematic issue for humankind and the environment, as it contributes to land and water pollution, increased demand for landfill space, potential leaching of toxins, and increased greenhouse gases.

The University's current goal is to achieve 95% waste reduction by 2022. Much progress has been made on several fronts, yet there is still room for improvement and for setting an informed waste management goal.

### IMPROVE SINGLE-STREAM RECYCLING ACROSS CAMPUS

Single-stream recycling is a system in which all recyclables, including cardboard, plastic, aluminum, junk mail, etc., are placed in a single bin or cart for recycling. These recyclables are collected by a single truck and taken to a Materials Recovery Facility (MRF) to be sorted into various commodity streams for sale to markets, where they are processed into feedstock, which can be used in the manufacture of new products.

Instead of sorting recyclable waste into categories, organic and recyclable waste each have one container respectively (blue bag for all recyclable materials and black bag for all organic materials). Yet, even with the more simplified system, which is intended to boost community engagement in recycling, the on-campus single-stream recycling rate remains lower than the national average. Adding to the problem is our lack of knowledge of more specific recycling practices.

Waste is not a one-source or one-person problem, nor is it merely an "end-of-product-life-time" problem. The products we choose to bring on campus have an impact on our waste volume and disposal.

To meet the University's waste sustainability goals, all divisions should strive for reducing waste in their individual operations. This entails thinking beyond the amount of waste generated by taking action earlier in the process for more tangible results.

### RESPONSIBLE CONSUMPTION AND PRODUCTION

USEK promotes sustainable consumption and production practices through the following:

- Waste management system through its MRF, where 60% of the University's solid waste is sorted and dispatched to local industries.
- Source sorting system (promoting awareness among all community members).
- Reduced paper use, by replacing it with online memos.
- Avoiding single-use plastic and packaging.
- Green catering and procurement.
- Organic waste composting.

# APPENDIX 7 - WASTE MANAGEMENT

## PURCHASING DEPARTMENT AND WAREHOUSES

### ACHIEVEMENTS

- Increasing single-stream recycling rate in keeping with overall University objectives.
- Mapping and tracking current recycling signs and containers across all campus facilities.
- Standardizing signage and containers for easier use.
- Conducting routine and standardized waste and recycling audits in more specific areas.
- Promoting recycling during various events by creating a data baseline, providing packaging and service ware options, and improving targeted messaging.
- Tracking and reporting single-stream diversion rates by more specific type and user groups.
- Promoting accountability and responsibility on campus for measurable increased recycling, decreased waste production, and decreased waste sourcing.
- Adapting the P.D.C.A program into a discrepancy tracking scheme:
  - Waste for each building is gathered in one location and transported to the MRF using a cart marked by the code of the building.
  - Each trash bag is sealed by one color tag.
  - MRF staff report any discrepancy based on the cart code and trash bag seal color.
  - The students undertaking the recycling audit visit each unit/office at the said building to identify the source of the discrepancy.
- Once the source is identified, a creative and positive approach is developed to improve sorting behavior.
- G.A.E.A – Green and Environmental Art
- Students create works of art out of trash.



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### EVENTS RELATED TO ENVIRONMENT AND SUSTAINABILITY

This report gives an overview of green events related to environment and sustainability prepared by USEK in alignment with the SDG goals in 2018-2019. Over 60 events related to sustainability took place on and off campus. Here we will present some of these major events.

Before that, a note on 2020. Economic and political collapse in Lebanon along with Coronavirus, and with that, lockdowns and curfews, public events have been temporarily stymied. However, we have seen how quickly we can adapt and change our way of life in the face of such significant challenges. We also see hope in adversity, and how the human spirit of compassion and the willingness to act against the odds has not been thwarted.

On August 4th, 2020, 2750 tons of ammonium nitrate exploded in the port of Beirut, killing more than 200 people, wounding 5000 others, and leaving 300,000 residents temporarily homeless. The explosion, which left Lebanon's main port and surrounding homes and businesses in ruins, has exacerbated the COVID-19 pandemic in a country that's also grappling with inept leadership, a worsening economic crisis, and a 55% poverty rate.

In sympathy and solidarity with the people of Beirut, USEK students and faculty members, armed with brooms and shovels, joined the brigade of civilian volunteers and took to the streets to clean up the city so reconstruction could begin.



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### USEK GREEN EVENTS IN ALIGNMENT WITH UN SDGS FROM 2018-2019

#### SDG1 – No Poverty:

In December 2018, USEK organized the Christmas Market with different NGO stands, Christmas catering, games and music knowing that through his initiative, USEK supports many families that are in need.

In the Fall of 2019 – “T3ish w Yekol Ghayrak” aimed to share food, reduce food waste and support the needy ones.



### IN FALL OF 2019: “MI CASA ES SU CASA”



#### SDG2 – Zero Hunger:

Food drive: The Student Affairs office organized the yearly campaign of food drive in December 2018.

#### SDG3 – Health and Wellbeing:

*Healthy Voice in a Healthy Body: Talking about Performing Arts Medicine, May 2019*

USEK organized a lecture entitled: “Healthy Voice in a Healthy Body: Talking about Performing Arts Medicine”, given by Alfonso Gianluca Gucciardo, MD., a performing arts medicine expert and bioethics/sexology specialist. This event, hosted by the School of Medicine and Medical Sciences, in collaboration with the Faculty of Music, took place on Friday, May 3, 2019.

*USEK Vélo-Paper 2018, April 2019*

USEK organized its 5th edition of the USEK Vélo-Paper. This event, hosted by the USEK Pastoral, included physical, cultural, social, and ecological sports activities and was held on Saturday, April 6, 2019, in Bickfaya (Metn District).



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### *Fitness Day, March 2019*

USEK organized a Fitness Day, including live fitness classes, fitness competitions, dietitian consultations, physical therapy and supplements consumption awareness sessions, and many more activities. This event, hosted by the Student Affairs Office, in collaboration with Corebox Gym, took place on Thursday, March 28, 2019 at the green space next to the Restaurant.

### *Free taster workshop about ENCÉFAL brain-training method.*

### *Ended Adolescence, Endless Adolescence?, October 2018*

USEK in collaboration with the University of Picardie Jules Verne (France), organized the 2nd international colloquium on Educational Sciences entitled: "Ended Adolescence, Endless Adolescence?"

This event, hosted by the Faculty of Philosophy and Humanities, took place on October 26 and 27, 2018.

### **SDG4 – Quality Education:**

#### *The 1st National Workshop on UI GreenMetric for Lebanese Universities, September 2019*

The Holy Spirit University of Kaslik (USEK), in collaboration with UI Green Metric and the University of Indonesia, organized the 1st National Workshop on UI GreenMetric for Lebanese Universities, in the presence of Prof. Gunawan Tjahjono and Dr. Muhammad Fuad, both experts of UI GreenMetric in the University of Indonesia and Prof. Habib Fardoun, Coordinator Regional of UI GreenMetric for Middle Eastern Universities and Professor of King Abdul Aziz University. In this occasion, a tree was planted under the workshop title. This event took place on Tuesday, September 24, 2019. [Album](#)



Accreditation for Reshaping Business Education in the MENA Region BE mena - Beirut 2019, February 27 and 28, 2019

Under the patronage of the President of the Council of Ministers, H.E. Mr. Saad Hariri, USEK organized a conference entitled "Accreditation for Reshaping Business Education in the MENA Region", in partnership with The Association to Advance Collegiate Schools of Business (AACSB). Link to website: <https://www.usek.edu.lb/bemenabeirut2019>

## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### **SDG5 – Gender Equality:**

*Girls and Math: An Illuminating Equation, March 2019*

The Agence pour l'enseignement français à l'étranger (AEFE) and USEK organized a workshop, entitled "Girls and Math: An Illuminating Equation". This event, hosted by the Faculty of Sciences, took place on Tuesday, March 12, 2019.

### **SDG6 – Clean water and sanitation:**

*Waterfull Initiative*

You have the right to clean drinking water, and at USEK, we take this to heart, as we do our commitment to a more sustainable earth. That's why we've teamed up with talaya to ensure that every member of our community has access to fresh drinking water all year round. Using top-of-the-line food and beverage-grade piping, we now deliver crystal-clear drinking water straight to you through a network of 5 fountains, so you can have refill your bottle at any time of the day. We have called it the USEK-talaya Waterfull Initiative, because it truly is a wonderful way to make sure our bottles are always full of water. By encouraging the reuse of bottles, the initiative also helps us all cut down on the plastics sent to our landfills and protect our health and environment. Thirsty? Just grab your bottle, fill it up, and have a Waterfull day



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### SDG7 – Affordable and clean energy:



Ceremony of Signature of the Memorandum of Understanding between USEK and IPTEC Energy Center



Hosting of the event: Sustainable Energy in Lebanon: From 2020 Concrete Targets to 2030 Vision organized by the Ministry of Energy

### SDG8 – Decent work and economic growth:

*2019 Job Fair, May 2019*

The Career Services Office (CSO) organized the annual Job Fair on Thursday, May 9, 2019. This Job Fair is a window opportunity – an employment strategy – for employers and job seekers to come together to establish professional relationships, discuss potential job and/or internship opportunities.

### SDG9 – Industry, innovation and infrastructure:

*Entrepreneurship and Innovation Technology, March 2019*

USEK organized a lecture on "Entrepreneurship and Innovation Technology", given by H.E. Mr. Nicolas Sehnaoui, Chairman of UK Lebanon Tech Hub. This event, hosted by the Faculty of Sciences and the Asher Center for Innovation and Entrepreneurship (ACIE), took place on Thursday, March 28, 2019 at 11:00 a.m. in the Jean El Hawa Auditorium.



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### *Digital Technologies in Educational Models: Realities, Challenges and Prospects, April 2019*

As part of the 50th anniversary of the International Federation of Teachers of French (FIPF), the Lebanese Association of Teachers of French (ALEF), in partnership with the Lebanese University's Foreign Languages Bureau, the Holy Spirit University of Kaslik (USEK), the Jinan University and the Institut français du Liban, organized an international colloquium on "Digital Technologies in Educational Models: Realities, Challenges and Prospects." This event took place from April 3 to April 5, 2019.

### *Ethics of Research Involving Human Subjects and Biosamples, February 2019*

USEK organized a three-day workshop entitled: "Ethics of Research Involving Human Subjects and Biosamples", from Thursday, February 14 to Saturday, February 16, 2019. This event was hosted by the Center for Ethics and Bioethics of the Higher Center for Research, in partnership with the Lebanese National Consultative Committee on Ethics, the Ministry of Public Health, the National Council for Scientific Research, the UNESCO Office in Beirut, and the World Health Organization.

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### **SDG10 – Reduce inequality:**

#### *Autism is not a disability, it's a different ability, April 2019*

On the occasion of World Autism Awareness Day, USEK organized a lecture entitled "Autism is not a disability, it's a different ability". This event, hosted by the Department of Psychology of the Faculty of Philosophy and Humanities, and the Center for Ethics and Bioethics of the Higher Center for Research, took place on Tuesday, April 2, 2019.

#### *Panel discussion on the Promotion of Human Rights, December 2018*

On the occasion of the seventieth anniversary of the Universal Declaration of Human Rights, USEK organized a panel discussion on the promotion of human rights. This event, hosted by the School of Law and Political Sciences, took place on Tuesday, December 4, 2018. The panel was composed of:

- Andre Chidiac, Esq., President of the Beirut Bar Association
- Prof. Antoine Messara, member of the Constitutional Council
- Mr. Martin Borgeaud, Chief Technical Adviser, Access to Justice and Rule of Law, UNDP
- Joe Karam, Esq., Director of the USEK Human Rights Center, lawyer at the Beirut Bar Association

## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### *Human Life: Ethics of the Beginnings, December 2018*

As part of the "Ethics for All" series, USEK organized a panel discussion on "Human Life: Ethics of the Beginnings", given by Dr. Zaki Ghorayeb, Head of Pediatric Surgery at the Centre Hospitalier Universitaire Notre-Dame des Secours (CHU-NDS) and Associate Dean for Medical Affairs at the USEK School of Medicine and Medical Sciences. This event, hosted by the Center for Ethics and Bioethics of the Higher Center for Research, took place on Monday, December 3, 2018.

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### **SDG11 – Sustainable cities and communities:**

#### *Hike to Bentaël: In Their Footsteps, May 2019*

The purpose of this event was to rekindle USEK's ties to the Bentaël Reserve and to honor the memory of Father Etienne Sacre. As part of this day, USEK installed permanent information boards that shed light on the history of the region, the architecture of the hermitages, the journey of Rev. Fr. Sacre, and the biosphere of the reserve.

Green Reporters: To motivate the future Journalists of USEK to the environmental causes and issues; matters which can be beautiful as much as harmful. An award was giving to the first four Journalists.

Welcoming St Rock School to provide them with Awareness Sessions: USEK welcomed a group of students, teachers and staff, janitors and maintenance staff to offer them awareness sessions:

- Session to a small Club to prepare them to be themselves the caretakers of this project.
- Session to all teachers and staff
- Session to all janitors and maintenance.
  - At later stage, this club will teach the students along with teachers.
  - This club will customize the info according to each section and comprehension.
  - Adopting new and innovative ideas.
  - To state all over the school campus on the state of School:
    - We are Recycling.
    - The how
    - The contact, in need to ask questions.



## APPENDIX 8 - GREEN EVENTS ON CAMPUS

- Green Pots: Planting new and flowery cement flower pots (Existing)
- Each section will adopt these planters and make sure it is healthy and thriving.
  - This will nurture at the students the sense of greenery, dedication and commitment.
- Maybe to do a competition for best planter.

### **SDG12 – Responsible consumption and production:**

Highly engaged in extracurricular activities as well as academic pursuits, USEK students participate in a variety of national and international contests. During 2018-2019, the University was honored by many achievements.

In October 2019 – Green Committee organized a set of games which can relate to the environment and to sorting the waste, in a fun and playful way. It aimed to promote awareness in an easy approach way.



## APPENDIX 8 - GREEN EVENTS ON CAMPUS



### *USEK Faculty Members Research Awards, May 2019*

USEK organized the USEK Faculty Members Research Awards. This event, hosted by the Higher Center for Research, took place on Monday, May 6, 2019.

### **SDG13 – Climate action:**

#### *Gaia Award 2018 hosted by USEK*

During this event USEK received the GAIA Award 2018 for the protection of the Mediterranean environment

<http://www.usek.edu.lb/photo-gallery/gaia-award-2018>

Under the High Patronage of His Excellency the President of the Republic General Michel Aoun, and upon the initiative of the MED 21 Program, the Holy Spirit University of Kaslik (USEK) organized the GAIA Award 2018 for the protection of the Mediterranean environment, followed by a colloquium on sustainable development.

This event took place on Tuesday, June 5, 2018.





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### SDG14 – Life below water:

August 2020” No to plastic – Clean our Sea” – in collaboration with Mr. Samer Halwani, his team and our students; an event was set to clean our famous site “ Raouche” in an aim to clean our sea, chores and showcase the quantity of plastic floating in our sea.



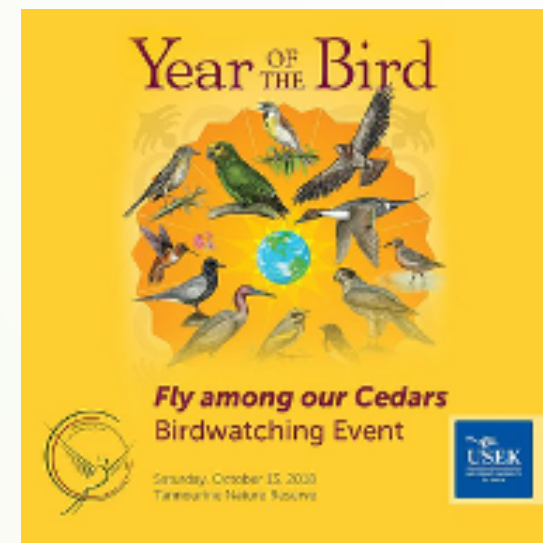
*Maritime and Marine Governance in Lebanon: Taking Stock for Action, June 2019*

USEK organized a colloquium entitled “Maritime and Marine Governance in Lebanon: Taking Stock for Action” in collaboration with Robban Assafina, a leading Arabic-English magazine specialized in shipping and marine technology.

Lebanon is still grappling to tap into the prospects of offshore oil and gas exploration and development in the hope of making comeback as an effective player in the regional and global maritime and logistics arena. Meanwhile, Lebanon’s coastal features have witnessed large-scale devastation from the combined effects of wars, instability and misguided public policies. Today, Lebanese communities along the coast experience some of the highest rates of environmental pollution and health hazards ever recorded.

In order to shed light on the importance of sound maritime and marine governance policies and laws, this colloquium will address the merits and challenges of the Lebanese nation as a country bordering the sea.

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### **SDG15 - Life on land:**

*Fly among our Cedars: This birdwatching event* – organized by the Green Committee was held on Saturday 13th of October, 2018 in Tannourine Reserve

Among the rules: P.S: bring your own camera or binoculars, Wear dark colored or natural shades clothes, Jacket for chilly weather, No shining objects or loud instruments.

*Sawweb Sawtak for Sustainable Hunting, August 2019*

In the presence of H.E. Mr. Fady Jreissati, Minister of Environment, USEK organized a conference entitled "Sawweb Sawtak for Sustainable Hunting". A group of birdwatchers were exhibiting their bird photos to offer an alternative to hunting and to promote birdwatching.

## APPENDIX 8 - GREEN EVENTS ON CAMPUS

### **SDG16 – Peace, Justice and Strong institutions:**

*3rd International Colloquium on Commercial Law: Capital Markets Law, April 2019*

USEK organized its 3rd international colloquium on commercial law, entitled “Capital Markets Law”.

This research activity is a continuation of the study conducted for two consecutive years in the context of the 75th anniversary of the Code of Commerce and brings together several eminent personalities from the world of education, research, business, and economics. Our 3rd edition of the colloquium will focus on Lebanese capital markets law and on the various international experiences of this new and highly technical set of rules.

*Writing and Geopolitics in the Contemporary Arab and Mediterranean World, April 2019*

USEK organized an international symposium on “Writing and Geopolitics in the Contemporary Arab and Mediterranean World”. This event, hosted by the Faculty of Letters, in collaboration with the Institut national des langues et civilisations orientales – INALCO (France) and the Ibn Tofail University (Morocco), took place on April 11 and 12, 2019.

*Latin American Contributions to Peace and International Law, March 2019*

USEK organized a lecture on “Latin American Contributions to Peace and International Law”, delivered by H.E. Mr. Mauricio Alice, Ambassador of Argentina to Lebanon, and moderated by Dr. Joseph Al Assad, Associate Professor at the Faculty of Engineering. This event, hosted by the School of Law and Political Sciences and the International Affairs Office, took place on Thursday, March 7, 2019.

*UNIFIL: 40 Years in Southern Lebanon – Lessons and Future Prospects , October 2018*

USEK organized a conference entitled “UNIFIL: 40 Years in Southern Lebanon – Lessons and Future Prospects”, given by Brig Gen Raouf Sayah, Mr. Sultan Sleiman and Dr. Nassif Hitti, moderated by Dr. Nicolas Badaoui.

This event, hosted by the Higher Institute of Political and Administrative Sciences (affiliated to the School of Law and Political Sciences), took place on Tuesday, October 30, 2018.