



# FAFS — ANNUAL REPORT

## 2019 – 2020



**American University of Beirut**  
Faculty of Agricultural and Food Sciences

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## I. Executive Summary

Dear FAFS Family and Friends,

Academic year 2019-20 marked the outbreak of the economic crisis in the country as well as that of the uprising and the global COVID-19 pandemic. FAFS, through the hard work and devotion of its administration, faculty and staff members, had a **remarkable year** and emerged leaner and more resilient. Despite these challenges, FAFS members rolled up their sleeves, tackled challenges head-on in an agile manner, and delivered a very successful year: be it in milestones reached or in contributing to the betterment of the livelihood of the community as well as to the learning and discovery mission of FAFS and AUB. During this academic year, FAFS initiated multiple synergies with other faculties across AUB and hit a new record in terms of publications, external research grants, and service contracts. In addition, FAFS was keen to continue to lead the work with international partners on different initiatives and activities and make an impact on different sectors at the national, regional, and the global levels. Rigorous efforts targeted building partnerships that will improve our global synergies while focusing on dryland and semi-arid regions, especially those of the Mediterranean region.

**At the research level**, academic Year 2019-20 has been a remarkable year regarding research funding and publications at FAFS. During this period, FAFS received **\$4,591,130** in local, regional and external funding from different local, regional and international organizations. During the year 2019, **85 papers** were published in international refereed journals: 13 by the Dean, 49 in NFSC (10 FM), 19 in AGRI (9 FM) and 4 in LDEM (3 FM). Seven of these publications addressed the COVID-19 global pandemic.

A new **FAFS Research Strategy** is being developed to lead the way in Food, Agriculture, and Environment Systems (FAES) in arid and semi-arid areas with strategic pillars of establishing the Research Support Unit, new graduate students' guidelines; Industry – Academia partnerships; and establishing FAFS interdisciplinary research clusters. FAFS continued with its online lecture series where prominent guest speakers provided lectures to AUB Community and beyond.

Academic recognition was granted to several FAFS faculty members for their noteworthy contributions to advances in scientific research

**At the administrative level**, in light of the aforementioned circumstances, and building on FAFS 2025 strategic plan, FAFS has engaged in a dynamic process for the prioritization and implementation of FAFS 2025 through regular meetings and discussions with Administrative Committee, Strategic Plan Committee, and faculty members through faculty meetings, town hall meetings, and faculty retreat. The plan included initiatives for **balancing the budget**, out of which was: devising a **budget calculator** to study different budget scenarios and corresponding implications on various FAFS programs and centers and help in the decision-making process, **program restructuring and consolidation**, as well as **fundraising efforts** that



focused on student scholarships and infrastructure (Total gifts received during AY 2019-20 was **\$642,837**). The plan also included activating **online-learning** plans, **service learning** initiatives and **new graduate and undergraduate programs** including a new Accreditation Board of Engineering Technology (**ABET**) accredited Bio-Systems Engineering degree jointly offered with MSFEA as well as continuing education, training, and professional development plans.

In parallel, and as part of FAFS **Student Recruitment Plan**, Dean's Office team members together with selected FAFS faculty and students visited many schools across Lebanon and started building a network with private and public schools. FAFS also worked rigorously to develop marketing material for our programs and disciplines; material included: promotional videos, flyers, social media visuals, alumni testimonials among others as we moved to online marketing and e-campaigns. FAFS continued to work hard, in close coordination with AUB Office of Admissions, to increase quality and number of incoming students, by conducting phone interviews as well as online informative Q/A sessions with freshman, major-less and other potential students in search for passionate leaders that strive to make a societal impact. In addition, FAFS took the lead across AUB to work collaboratively with IT to build an online **Student Hardship Application** to automate the process of requesting financial support at the level of the faculty as well as have a single source of consolidated financial assistance information of our students.

Despite the numerous challenges during this period, FAFS was able to continue the work on **infrastructure and facility** related projects and lead new additional projects in this sphere. These projects include improving the capacity of food safety at main campus and at AREC (funded by ASHA), integrated water resource management for Semi-arid Condition: A Demonstration Project at AREC (ASHA FY 2019), renovation of the iodine lab and the animal physiology and pathology lab as well as renovation of the Creamery at AREC supported by the Turkish Cooperation and Coordination Agency (TIKA). The Environment and Sustainable Development Unit (ESDU) was awarded the Khalifa International for Date Palm Award and Agricultural Innovation. The funds will be used to establish, in the previously designated animal houses structure, a unit that will house offices, meeting rooms, an outdoor reception area, and green roof and will run sustainably on renewable energy. Additionally, and as of March 2020, AUB EVL or Core lab moved from AUB's Faculty of Medicine to FAFS, where it was renamed as Laboratories for the Environment, Agriculture, and Food (LEAF). LEAF strives to be a reference lab for Lebanon and the Region in analytical testing.

**At the academic level**, FAFS progressed on several of its strategic initiatives including **1)** The approved online graduate diploma in Food Security and application for NYSED registration; **2)** The FAFS Capstone Course (Global Design Teams) was launched and FAFS student teams will be collaborating during Spring 2021 on projects with counterparts at Purdue and TAMU universities; **3)** The project for the development of a new Master's program in Global Supply Chain Management for Southern Mediterranean was approved to be funded by Erasmus+; **4)** Developing gender courses; **5)** Developing an interfaculty (FAFS and MSFEA) Bio-systems Engineering undergraduate program in alignment with ABET standards and requirements; **6)** Exploring synergies between Landscape Design and Ecosystem Management Department

(LDEM) and MSFEA's Department of Architecture and School of Design; **7)** Exploring synergies between the Agriculture Department Agribusiness program and OSB for potential joint offering and accreditation of FAFS Agribusiness degree under The Association to Advance Collegiate Schools of Business (AACSB) accreditation; **8)** The implementation of the new Agriculture curriculum in alignment with ABET requirements; **9)** Consolidation of graduate programs; **10)** Re-activated discussions on establishment of a Development Studies entity at FAFS and discussions with the Faculty of Medicine on Doctor of Veterinary Medicine (DVM) degree; **11)** LDEM's ongoing accreditation process of the Bachelor of Landscape Architecture (BLA) by the LAAB (Landscape Architectural Accreditation Board), proposal of the Masters of Landscape Architecture (MLA), and proposal for a new undergraduate program in LDM (B.Sc. in Eco-tourism); **12)** Exploring a PhD program jointly with Purdue University; **13)** The Commission on Dietetic Registration (CDR) removing the requirement for students in IDE International Dietitian Programs to complete part of the supervised practice hours in the United States, so our Nutrition and Food Science (NFSC) IDE students will be able to complete all required supervised practice hours in our accredited program's home country; **14)** NFSC receiving the European Association for the Study of Obesity (EASO) international affiliation for obesity management accreditation; **15)** Hosting MSFEA student internships at AREC; and **16)** FAFS has successfully transitioned to distance learning during this exceptional year through successful utilization and incorporation of current and innovative technologies.

**At the engagement level**, building on what ESDU has done, FAFS updated its **Engagement Strategy** and continued to make an impact nationally, regionally and globally through partnerships that reached to 25 in number during AY 2019-20. During this period, FAFS has taken the initiative to gather experts from different sectors and disciplines to bring forward dietary recommendations in times of crisis that are cost-effective and which do not jeopardize the health and wellbeing of the Lebanese population. In addition, a Land Food initiative was launched by LDEM department and the Food Security Program to support vulnerable communities impacted by Beirut Blast in August 2020. FAFS has also been very active in providing support to the Lebanese Ministry of Agriculture (**MoA**) to update its strategy integrating the UN-Sustainable Development Goals (SDGs) in its National Agricultural Planning (2019-2020). Furthermore, FAFS is leading the **Colistin Project** across AUB and nationally, and the Food security Program launched **Lebanon Food Security Portal** to help understand food security in Lebanon.

Through **ESDU, Ardi Ardak initiative** was launched this year in partnership with the Lebanese League for Women in Business (LLWB), the Food Heritage Foundation (FHF) and Zico House, aiming at reviving the food security sector by supporting small-scale holders with a special focus on rural women and youth. ESDU was selected by Food Tank as one of the initiatives **Redefining Food and Agriculture Across the Middle East**. ESDU was also awarded the **Khalifa International** for Date Palm Award and Agricultural Innovation.

At the regional level, FAFS continued working on the "**Mashreq Digital Transformation of the Agricultural Sector**" initiative: a project in partnership with World Bank (WB), FAO,

ESCWA, and Center for Mediterranean Integration (CMI) to revitalize the agriculture sector in Lebanon, Jordan and Iraq through the use of digital technologies.

**At the global level**, FAFS held a Governor seat at the World Water Council (**WWC**) and Chairmanship of the Integrated Water Resources Management (**IWRM**) taskforce that worked on a new vision and developed terms of reference (ToR), a framework of activities, and an action plan for IWRM. With the Rural Development Pilot Group, members from FAFS co-authored a concept note with Food and Agriculture Organization (**FAO**) presenting a framework for addressing water management as a catalyst for rural development. The concept note is to be discussed at the 9th edition of the **World Water Forum** in Dakar, Senegal 2021. In addition, a global **mobile application (AgSAT)** to determine daily water requirements of crops and improving field water management was developed and launched by Dr. Hadi Jaafar.

**AREC** was selected by FAO as a hub for “Train the Trainer” workshops on sustainable vegetable production. In addition, during this year, AREC was the hub for around 100 farmers and vineyard owners from the region who attended outreach sessions conducted by the René Moawad Foundation.

**At the University level**, FAFS continued to lead the AUB-wide Water-Energy-Food-Health Renewable Resources Initiative (**WEFRAH**), the Sustainable Development Goals (**SDG**) Initiative as well as the **Transforming Higher Education Project**.

With this introduction, I leave you to read in detail what made AY 2019-20 a successful year at FAFS despite the many challenges and uncertainties we faced. I would like here to thank all FAFS faculty and staff for their continued efforts and hard work, which resulted in advances at the academic, administrative, research, and engagement levels. Finally, I would like to extend my utmost appreciation to FAFS’ larger family of alumni and friends as none of these accomplishments would have been possible without their continued support.

Sincerely,

Rabi H. Mohtar  
Professor and Dean

## II. Office of the Dean

### A. Non-Academic Personnel

Thirteen non-academic employees serve the Dean's office (Table1):

**Table 1:** Non-Academic Personnel

Name	Title
Alameddine, Alia	Career Services Officer
Chediac, Rola	Communications Officer
El-Ashi, Dania	IT Manager
El Labban, Sibelle	Executive Assistant for Research Services
Haddad, Tharwat	Students Record Officer
Haidar, Imad	Junior Clerk
Houri, Laila	Financial and Facilities Officer
Khoury, Wafa	Executive Officer
Koubayssi, Rabia	Assistant for Student Services (until June 2020)
Nakib, Nisrine	Administrative Officer
Nabhani, Maya	Director of Continuous Academic Improvement
Shaib, Houssam	Laboratory Manager
Shamseddine, Alhan	Assistant to the Dean

### B. Standing Committees

#### 1. The Administrative Committee

*Prepared by: Ms. Laila Houry, Financial and Facilities Officer and Ms. Alhan Shamseddine, Assistant to the Dean*

#### **Membership:**

Rabi Mohtar, Chairperson  
 Yaser Abunnasr (starting February 2020)  
 Issam Bashour  
 Mustapha Haidar, Ex-Officio  
 Shady Hamadeh, Ex-Officio  
 Omar Obeid  
 Ammar Olabi, Ex-Officio  
 Rami Zurayk (till Jan 2020 as LDEM Chair and then starting August 2020 as Ex-Officio)

#### **Actions:**

The Committee held 19 meetings during the academic year 2019-20 and made the following discussions and decisions:

- LEAF officially under FAFS.
- Move towards offsetting faculty, staff, and student costs on grants.



- Enforcing that PLO's be posted online for all courses.
- Capital Budget submissions.
- Operating Budget restrictions for 20-21.
- Scrutinizing Faculty Workload to full-timers and Part-timers.
- Restructuring of FAFS programs in response to dropping enrolment.
- Launching the official FAFS Hardship Committee.
- Distance learning challenges and solutions.
- Requirements and expected outcomes for FAFS graduate students.
- Developing Gender courses at FAFS.
- Internships at AREC.
- Communication channels with faculty members.
- Faculty retreat and FAFS 2025 implementation.
- Reopening of AREC and FAFS following the lockdown.
- Promotion and Tenure mentoring and mid-term review.
- FAFS partnerships with industry.

## **2. The Advisory Committee**

*Prepared by: Ms. Wafa Khoury, Executive Officer*

### **Membership:**

Rabi Mohtar, Chairperson  
Youssef Abou Jawdeh  
Mohamad Farran  
Nahla Hwalla  
Ammar Olabi (Associate Dean)  
Salma Talhouk  
Imad Toufeili  
Rami Zurayk

### **Actions:**

The Committee held ten meetings during the academic year 2019-20 and has approved the following :

- Appointment of new Chairperson for the LDEM department effective January 2020.
- Re-appointment of two faculty members at the NFSC department effective September 1, 2021.
- Re-appointment of one faculty member as Research Assistant Professor effective June 2020.
- Appointment of Program Coordinator of the Graduate Environmental Sciences Program (Major: Ecosystem Management) at the LDEM Department effective Spring semester 2020.
- Appointment of Director for the Food Security Program effective July 1, 2020.
- Departmental recommendations for appointment of part-time instructors and lecturers during fall, spring, and summer terms.
- Departmental recommendations for renewal of appointments of full time instructors.

- One request for leave without pay for AY 2020-21 as well as extension of leave without pay also for AY 2020-21.
- Establishment of External Advisory Board for FAFS Laboratories for the Environment, Agriculture and Food (LEAF).
- Recommendations of departments for URB Visiting Scholars during Spring 2020.

### **3. The Academic and Curriculum Studies Committee (ACC)**

*Prepared by: Ms. Tharwat Haddad, Students Record Officer*

#### **Membership:**

Ammar Olabi, Chairperson

Yaser Abunnasr

Isam Bashour

Mohamad Farran, Coordinator of Undergraduate Studies

Omar Obeid

Maria Gabriella Trovato

Kassahun Wondim

Maya Nabhani Zeidan, Director of Continuous Academic Improvement

Registrar's Representative

Student Representative

Rabia Koubayssi, Secretary

#### **Actions**

Several committee meetings were held during the academic year 2019-20 and the following actions were taken:

- Course offerings and introduction of new courses  
The Committee reviewed and approved the lists of course offerings submitted by the respective departments for spring 2019-20, summer 2019-20 and fall 2020-21. Also, the committee approved the following new course in Agriculture:
  - AGSC 205 "The Food Odyssey" (3 cr.)
- Eligible students to go to AREC  
Nineteen students from the Agriculture program were deemed eligible by the ACC to go to AREC during the spring semester of 2019-20.
- Change of Status for Students from NTDT to NDCP  
The Committee approved to change the status of 6 students from NTDT to NDCP.
- Academic status  
Based on AUB probation rules and regulations, the Committee placed three students on strict probation whereas two were removed from probation.
- PHIL 209 course for Agribusiness  
The Committee recommended that the Agriculture Department revisit the curriculum of Agribusiness program to assign a course substitute to PHIL 209.
- Awarding BS degrees  
The Committee recommended to the Faculty to award BS degrees to 114 students distributed as follows: 41 in Nutrition and Dietetics, 12 in Nutrition and Dietetics – Coordinated Program, 14 in Food Science and Management, 16 in Landscape

Architecture and Diploma of Ingenieur Agricole, 16 in Agriculture and Diploma of Ingenieur Agricole, and 15 in Agribusiness.

#### **4. The Graduate Studies Committee (GSC)**

*Prepared by: : Ms. Tharwat Haddad, Students Record Officer*

##### **Membership:**

Ammar Olabi, Chairperson

Gumataw Kifle Abebe

Nayla Al-Akl

Isam Bashour (Coordinator for Graduate Studies)

Ali Chalak

Lamis Jomaa

Martin Keulertz

Maya Nabhani Zeidan, Director of Continuous Academic Improvement

Admission's Representative

Registrar's Representative

Student Representative

Rabia Koubayssi (Secretary)

##### **Actions:**

Several committee meetings were held during the academic year 2019-2020 and the following actions were taken:

- Program of study and thesis titles  
The Committee reviewed and approved the program of study and thesis titles for 17 students
- Acceptance of graduate students  
The Committee accepted 278 students out of 405 applicants. Of the accepted candidates, 40 students enrolled as follows: 8 Nutrition; 8 Food Technology; 3 Food Safety, 3 Plant Science, 1 Plant protection, 1 Poultry Science, 2 Irrigation; 3 Food Security; 4 Ecosystem Management, 4 Rural Community Development, and 3 Public Health Nutrition.
- Awarding the MS degree  
The Committee recommended awarding the MS degree to 32 students in their respective majors: 4 in Nutrition, 2 in Food Safety, 5 in Food Technology, 5 Public Health Nutrition, 2 in Agricultural Economics, 3 in Irrigation, 1 in Plant Science, 2 in Plant Protection, 1 in Poultry Science, 1 in Ecosystem Management, 1 in Food Security, and 5 in Rural Community Development.
- The Food Security Diploma  
The Committee recommended to the Faculty the proposal for an online diploma in Food Security
- Mandatory Library Sessions for Graduate Students  
The Committee approve the mandatory library sessions for graduate students
- Graduate Students Research Requirements

The Committee approve the Graduate Students Research Requirements except for the part that indicates “Every graduate student is expected to prepare a manuscript for submission to a peer-reviewed journal for graduation”

### 5. The Undergraduate Admissions Committee (UAC)

*Prepared by: Ms. Tharwat Haddad, Student Records Officer*

#### **Membership:**

Ammar Olabi, Chairperson

Isam Bashour (Faculty representative on University Admissions Committee)

Beata Dreksler

Walid El Kayal

Samer Kharroubi

Admission's Representative

Registrar's Representative

Student Representative

Tharwat Haddad, Secretary

#### **Actions:**

The Committee held two meetings during the academic year 2019-20 and has taken the following actions:

- Acceptance of Transfer Students  
The committee accepted a total of 80 transfer students from within AUB as well as from other universities:
  - During the Spring semester 2019-20, a total of 30 transfer students were accepted; 17 of which have registered.
  - In the Fall semester 2020-21, a total of 50 transfer students were accepted; 25 of which have registered.
- Enrollment Target and Strategy  
The committee voted to approve the departmental chairs' recommendations on composite scores and enrolment targets for the academic year 2020-21:

**Table 2.** Enrollment Target and Strategy

	AGRI	AGBU	LDAR	FSMT	NTDT
Number of new incoming fall 2020 undergraduate students the Faculty can accommodate in various majors	30	25	25	40	40
Number of undergraduate transfers (from within AUB and from outside AUB)	15	15	10	20	20
<b>Total number of undergraduate students that the Faculty can admit in various majors during the Fall and Spring of 2020-2021</b>	<b>45</b>	<b>40</b>	<b>35*</b>	<b>60</b>	<b>60</b>
<b>Minimum cumulative average for transfer students</b>	<b>70</b>	<b>70</b>	<b>75</b>	<b>73</b>	<b>78</b>

\* The cut-off composite scores that LDEM Department would like to adopt for new sophomore acceptances: between 540 and 525 (a portfolio is required for students with a

composite score between 525-530)

## **6. The Faculty Research Committee (FRC)**

*Prepared by: Dr. Farah Naja, Chair of FRC*

### **Membership:**

Dr. Farah Naja, Chairperson  
Dr. Giuliano Martiniello  
Dr. Walid El Kayal  
Dr Beata Dreksler

### **Actions:**

During the academic year 2019-20, the FRC held several meetings during which it took a number of actions as outlined below:

- Approval of faculty research leave requests
  - Dr. Ali Chalak for a paid research leave, Spring 2020.
  - Dr. Youssef Abu Jawdeh for a paid research leave, Spring 2020.
- Taking note of several external proposals approved by the FRC Chairperson and forwarded to the Dean for required processing and submission.
- Reviewing the corresponding year's FAFS research proposals and submitting recommendations to the Dean. FRC has received and approved four applications for renewal of proposals (three applications from NFSC Department and one application from LDEM). Furthermore, the committee reviewed, ranked, and approved the funding of 12 new proposals from the various departments at FAFS.

## **7. The Student Affairs Committee (SAC)**

*Prepared by: Dr. Lamis Jomaa, Chairperson*

### **Membership:**

Mohamad G. Abiad  
Beata Dreksler  
Mustafa Haidar  
Lamis Jomaa, Chairperson  
Samer Kharroubi  
Student Affairs Representative  
Student Representative  
Tharwat Haddad, Secretary

### **Actions:**

The Committee met five times during AY 2019-20. The Committee members discussed several student disciplinary actions, reviewed and made recommendations regarding the annual FAFS awards and the new Ali Nehme Nesr Award. The SAC recommended to the FAFS Dean the following items:

- Disciplinary Actions

The Committee recommended to the FAFS Dean granting:

- **A 'Written Reprimand'** to three undergraduate students for breaching the "Student Code of Conduct" by plagiarizing PHIL 209 final term paper during the Fall semester 2019-20. The SAC recommendation to give the three students a Dean's Warning along with six secondary disciplinary actions was reverted by the Committee based on further investigation.
- **A 'Dean's Warning'** along with the fifth secondary disciplinary action (*The student may be given a failing grade in a course or a test or any other form of academic assessment*) to two undergraduate students for violating the "Student Code of Conduct" by plagiarizing AGSC 219 final term paper during the Summer semester 2019-20. The AGSC 219 course instructor was recommended to fail one of the students who also attempted to cheat in the AGSC 219 final exam during the Summer semester 2019-20.

- **FAFS Awards:**

The Committee recommended the following students to receive FAFS awards:

- **Joana Haidar Award**  
The Committee recommended to FAFS Dean and Faculty granting **Ms. Eliana Al Kharat** the Joana Haidar award.
- **Edgcombe Memorial Prize**  
The Committee recommended to FAFS Dean and Faculty granting **Mr. Abdul Razzak Doughan** the Edgcombe Memorial Prize.
- **Kashadurian Award**  
The committee recommended to FAFS Dean and Faculty granting **Mr. George Rahal** and **Mr. Youssef Beik Saade** the Kashadurian award.
- **The Dr. Musa Najib Nimah Endowed Award for Academic Excellence**  
The committee recommended to FAFS Dean and Faculty granting **Mr. Jad Kaj** the Dr. Musa Najib Nimah Endowed Award for Academic Excellence.
- **The Nehme Moujaess Student Award in Landscape Architecture**  
The committee endorsed the recommendation of the Chair of the LDEM department granting **Ms. Nour El-Zein** the Nehme Moujaess Student Award in Landscape Architecture.
- **Abdul Hadi Debs Award**  
The committee recommended to FAFS Dean and Faculty granting **Mr. Ibrahim Bahati** the Abdul Hadi Debs Endowment Award.
- **Dean Thomas Thuserland Prize for Graduate Excellence**  
The committee recommended to FAFS Dean and Faculty granting **Ms. Sarah Karam** and **Mr. Abdallah Alhaj Sulaiman** the Dean Thomas Sutherland Prize.
- **The Dean Nuhad Dagher FAFS Graduate Student Award:**



The committee recommended to FAFS Dean and Faculty granting **Mr. Walid Al Hakeem**, Poultry Science, the Dean Nuhaad Dagher FAFS Graduate Student Award.

○ **Penrose Award**

The committee voted to endorse these nominations and recommended to the Dean and FAFS faculty four nominees (**Ms. Nour Hammad, Mr. Abdul Razzak Doughan, and Ms. Samiha Wehbi**) for the Penrose Award to present during the Faculty meeting so that faculty members evaluate and vote for one recipient.

○ **FAFS Alumni and Friends Award for Academic Excellence**

This is an annual award granted to a graduating student at the undergraduate level. The awardee's gender and discipline are to be decided upon on an annual basis by the donor. The awardee must be in the top 20% of his/her discipline and be engaged and/or demonstrate extra-curricular involvement, leadership, entrepreneurship, and teamwork skills. For this year, this award was frozen since there were no donors to open the call for nominations.

○ **Ali Nehme Nesr Award**

Taking into consideration that no applications were received for this year, the committee members raised the following concerns regarding the guidelines for the Ali Nehme Nesr award. The Dean's Office will reconsider the Award's proposal and then share the revised file with the Advancement Office to be later followed up with the donor.

- Ensuring that the scope of this award can be inclusive to all FAFS students from various disciplines.
- Consider flexibility for students to use the allocated 4,000 USD budget for expenses other than tuition fees for subsequent semesters (when not applicable), for example, cover travel costs to present thesis or research project in conferences, cover expenses related to the thesis or graduate studies, etc.).
- To consider regions other than Sub-Saharan Africa, including Lebanon and the MENA.

SAC will judge the candidates' proposals according to the below criteria:

- Originality/Innovation
- Background/Context
- Goals and Objectives
- Design, Methodology, and Implementation
- Societal, Environmental, and Economic Impacts
- Feasibility and Sustainability
- Clarity & Format

### **III. The Faculty**

#### **A. FAFS 2025 Implementation and Prioritization**

Building on FAFS 2025 strategic plan, FAFS conducted a one-day retreat on October 12, 2019 whereby FAFS departments and programs presented their accomplishments and broad actions that took place during the past year in alignment to the Faculty's strategic plan. The outcome of the retreat was a roadmap for implementing the FAFS 2025 strategic plan. The road map highlighted initiatives for research, community engagement, workload/life balance, new programs, sustainability of existing programs, and strategic space needs. It also identified the focal person for each of these initiatives. In the wake of the economic crisis, subsequent meetings took place with FAFS strategic Planning committee as well as with Administrative Committee whereby FAFS 2025 Prioritization and Implementation plan was presented highlighting the proposed subcommittees that will flush out the plan.

The FAFS 2025 prioritization and rightsizing plan included balancing the budget at FAFS through the following:

##### **1. Budget Calculator**

FAFS devised a budget calculator to study different budget scenarios for each of FAFS programs and centers as well as the corresponding impact of each change in the budget components (conversion rate of the dollar, number of incoming students, and faculty and staff attrition). Discussions took place at the level of the faculty (Town Hall meetings), and Chairs and Directors (Administrative Committee meetings in addition to 1:1 meetings) and decisions were made accordingly.

##### **2. Programs Restructuring and Consolidation**

Financial data, enrollment numbers as well as assessment of all of FAFS graduate and undergraduate programs were analyzed; Chairs were consequently requested to submit consolidation plans of the academic programs in their respective departments to improve financial efficiency.

##### **3. Fundraising:**

A Fundraising Plan targeting scholarships, engagement activities, naming opportunities and AREC was prepared and implemented. Below, are the main initiatives and raised amounts in AY 2019-20:

- Carmen and Ray Debbane Scholarship  
Two full scholarships at \$25K each per year for four years to support FAFS undergraduate students.
- IFANCA Current Scholarship

A three-year current scholarship by Dr. Muhammad Chaudry, at \$10,000 per year, was established to partially support the tuition of an undergraduate student (or students) majoring in Food Sciences – effective Fall 20-21.

- Food Safety (Colistin project) donations  
Seed fund for 3 years at \$70K per year plus \$60K of infrastructure/ equipment donated by Mr. Ray Debbane and additional LBP 60,600,000 by members of FAFS EAB Food Safety subcommittee were secured.
- FAFS Student Solidarity Fund  
The amount raised towards FAFS is \$15750.
- Emergency Appeal  
An appeal was made for FAFS community following the President Emergency appeal.
- External Advisory Board (EAB) activities  
Several meetings were held with FAFS External Advisory Board on several initiatives including offering open enrollment courses, accreditation and sustainable certification services for agri and agro-industrial sectors/ Agriculture stewardship support and marketing of the Laboratories for the Environment, Agriculture and Food (LEAF), and plans related to
- AREC
  - AREC proposal prepared by the AUB AREC Taskforce (AAT) was submitted to the US governmental Development Finance Corporation through Ms. Jennifer Steel at the AUB's Washington, DC office.
  - Regenerative Agriculture Center at AREC in partnership with Unifert was discussed.
  - Submitted a proposal to MasterCard Foundation on Agro-industry.
- Established the Ali Nehme Nesr student award (a competitive, graduate or undergraduate level award for research or development tutorial/capstone/FYP topics in the MENA and Sub-Saharan Regions) and started working on establishing other student awards to be supported by Boecker.

Total gifts received during AY 2019-20 is: **\$642,837**

## **B. FAFS Activities**

### **1. Academic Matters**

#### **a. Accreditation, Program Reviews and New Programs**

- **Accreditation**

FAFS proceeded with the accreditation process of the Bachelor of Landscape Architecture (BLA) by the Landscape Architectural Accreditation Board (LAAB) whereby the site visit was approved to be done virtually in March 2021, and with the implementation of the new Agriculture curriculum in alignment with ABET requirements. Moreover, the Commission on Dietetic Registration (CDR) removed the requirement for students in IDE International Dietitian Programs to complete part of

the supervised practice hours in the United States, and NFSC received the European Association for the Study of Obesity (EASO) international affiliation for obesity management accreditation.

- **On line Graduate Diploma in Food Security Program (FSP)**  
The online graduate diploma in Food Security was approved by BOT in AY 19-20 and processed for NYSED registration.
- **FAFS Capstone Course (Global Design Teams)**  
The FAFS Capstone Course (Global Design Teams) was launched in AY 2019-20 and FAFS student teams will be collaborating on projects with counterparts at Purdue and Texas A&M universities.
- **Proposal for a New Undergraduate Program in LDEM**  
LDEM department headed by Dr. Talhouk prepared a proposal for a new undergraduate program to be offered by LDEM upon approval. The suggested program is a B.Sc. in Eco-tourism. Being a unique program in Lebanon, it is expected to attract a good number of students. Submission of the proposal through the proper channels is expected end of Summer 2019/2020 or early Fall 2020/2021
- **Proposal of the Masters of Landscape Architecture (MLA)**  
The program is benchmarked with similar ASLA accredited programs across the US. It was processed through the proper university channels in Fall 2019-20 and currently awaiting upper administration decision.
- **FAFS and MSFEA Bio-systems Engineering undergraduate program**  
FAFS started developing an interfaculty (FAFS and MSFEA) Bio-systems Engineering undergraduate program in alignment with ABET standards and requirements.
- **Agribusiness undergraduate program jointly with OSB**  
FAFS is working towards offering the Agribusiness undergraduate program jointly with OSB under AACSB accreditation.
- **Restructuring and integration of graduate programs**  
Several discussions took place with Agriculture Department and with FAFS' External Advisory Board and the recommendation is to integrate the Agriculture graduate programs into one overarching degree with subspecialties to capture the agricultural sciences and technology aspects of the programs. Discussions also started on the establishment of a Development Studies Institute at FAFS which integrates Agricultural Economics, RCODE and Food security graduate programs.
- **New Master's program in Global Supply Chain Management**  
The project for the development of a new Master's program in Global Supply Chain Management for the Southern Mediterranean was approved for funding by Erasmus+.
- **Two Gender courses** to be developed by FAFS.

- **Transition to distance learning**

FAFS has successfully transitioned to distance learning during this exceptional year through successful utilization and incorporation of current and innovative technologies. In order to assess the effectiveness of online teaching and learning at the faculty, FAFS has developed faculty and student surveys, which were deployed mid and end of term, both internally, as well as with the help of AUB's Office of Institutional Research and Assessment (OIRA). Survey results were summarized by the Dean's Office, and shared with Chairs of departments, so that these may be discussed with the departments and relevant action may be taken, where recurrent challenges were observed.

The results of FAFS (and other faculties) surveys and plans of action were also shared and discussed at the level of the Board of Associate Deans, so that the various academic units may benefit from the experience across campus, and help the Board in its continuous monitoring of online teaching and learning at the university.

## **b. Faculty Affairs**

- **Faculty Recruitment and Count:**

The Faculty Full-Time Equivalent (FTE) for the AY 2019-20 (based on fall data) included those full-time faculty with professorial rank: 11 professors, 8 associate professors, and 12 assistant professors. The distribution of FTE's by department is shown in Table 3.

**Table 3:** FTE Distribution by Department

		AGRI	LDEM	NFSC	RCOD	FSEC	Total
Full-time	Professorial Rank	13	6	11	0	1	31
	Lecturer and Instructor	2.5	1	4	0	0.5	8
Part-Time (FTE)		2.75	3.90	2.18	0	0	8.83
Total		18.25	10.9	17.18	0	1.50	47.83

- **Tenured Faculty Members:**

Drs. Mohamad Abiad and Ammar Olabi received the rank of Tenured Associate Professor and Tenured Full Professor at the NFSC department, respectively, effective September 1, 2020.

- **Promoted Faculty Members:**

Drs. Hadi Jaafar and Issmat Kassem were promoted with tenure to the rank of Tenured Associate Professor at the Departments of Agriculture and Nutrition and Food Sciences, respectively, effective September 1, 2020.

- **Academic Appointments:**

**Chairpersons of FAFS Departments:** Dr. Yaser Abunnasr was appointed as Chairperson of LDEM Department as of January 28, 2020 for a period of 3 years.

**Other Academic Appointments:** Dr. Rami Zurayk was appointed as Director of the Food Security Program replacing Dr. Martin Keulertz as of July 1, 2021. Dr. Zurayk

was also appointed as Program Coordinator of the Graduate Environmental Sciences Program (Major: Ecosystem Management) at LDEM Department. Drs. Mohamad Farran and Isam Bashour continued serving as Coordinators of the FAFS Undergraduate Programs and Graduate Programs, respectively.

- **Recognitions:**

During this period:

- ESDU won the Khalifa International Date Palm and Agricultural Innovation Award in Abu Dhabi for executing and managing “CLIMAT” project. CLIMAT is a one-year Food For Training project implemented during 2019 in Northeast Baalbeck and West Bekaa Lebanon, funded by the German Cooperation through the World Food Programme.
- ESDU was selected by Food Tank as one of the initiatives Redefining Food and Agriculture Across the Middle East.
- Dr. Hadi Jaafar and AUB team were awarded the Google AI Impact Challenge to develop a smartphone application that helps farmers irrigate their fields precisely using remote sensing and machine learning. This mobile app allows farmers to reduce their pumping costs, manage water more efficiently, and better adapt to climate change while protecting the environment.
- Dr. Nahla Hwalla is the second person outside the US to ever receive the Medallion award from the US Academy of Nutrition and Dietetics. This was granted in recognition of her dedication to the high standards of the nutrition and dietetics profession and her active participation, leadership and devotion to service through, dietetics, and its allied health fields.
- Dr. Salma Talhouk was invited together with LDEM associate Dr. Jalal Makhzoumi to participate in the first ‘Landscape Middle East Awards Ceremony’ at which they received the ‘Life Time Achievement Award’ in a ceremony organized by Landscape Middle East Magazine in Dubai. The event was held in November 2019. Dr. Makhzoumi, one of the main founders of the Landscape Design and Ecosystem Management program at FAFS and current Associate to LDEM department, also received the ‘European Council of Landscape Architecture Schools (ECLAS) Lifetime Achievement Award’ during the ECLAS conference 2019 for her outstanding contribution to landscape architecture education. The conference was held during September 16-17, 2019, in Oslo, Norway.
- The NFSC Department has been granted ‘EASO International Affiliate COM status’ for the duration of two years effective February 1, 2020 till January 31, 2022. The NFSC Department will therefore be recognized by EASO as a leading obesity management center throughout this period.
- Dean Mohtar was awarded the American Society of Agriculture and Biological Engineers (ASABE) Paper award in first place. Co-written with John Blake, Amjad Assi, Erik Braudeau and Cristine Morgan, the paper was about *the Quantification of Available Water Capacity Comparing Standard Methods and a Pedostructure Method on a Weakly Structured Soil*.
- Ms. Rachel Bahn, FAFS’ Agribusiness Program instructor, and co-authors Florent Saucède and Fatiha Fort (Institut Agro, Montpellier, France) were



awarded runner-up status for best paper at the American Collegiate Retailing Association (ACRA) Conference 2020.

- The FAFS Alumni Chapter, in collaboration with FAFS held the eighth Distinguished Alumni Honoree ceremony. This event is held to honor exceptional faculty alumni across all disciplines of FAFS who have distinguished themselves on a national or international level and have contributed through their profession to academia; the public or private sector; or international organizations. In AY 2019-20, the honorees included Dr. AbduRahman Saghir, Dr. Amir Ibrahim, Mr. Michel Bayoud, Dr. Mona Chaya, and Mrs Nadine Khoury. Also honored was Mr. Tony Sleiman Freiji.
- Agribusiness students Hala El Moussaoui, Fatima Keserwani, and Ramzah Chammout received first place in the IBDA Award in Agribusiness for their project "Waste-To-Nourish". The team successfully developed organic fertilizer from food waste and chicken feed from fly larvae also raised on food waste.

### c. Faculty meetings

*Prepared by: Dr. Sandra Yanni, Assistant Professor, Secretary*

During the period of this report, September 1, 2019 – August 31, 2020, eight faculty meetings were convened, three of them convened online due to Covid-19 restrictions. The following actions were taken:

#### Actions:

- **Voting of degrees**

Voted unanimously based on the recommendations of the ACC representatives to award B.S. degrees in Agriculture and Diploma of Ingenieur Agricole, Agribusiness, Landscape Architecture and Diploma of Ingenieur Agricole, Nutrition and Dietetics, Food Science and Management, Nutrition and Dietetics - Coordinated Program effective September 2019, January 2020, and June 2020, consecutively. M.S. degrees were unanimously voted to be awarded based on the recommendations of the GSC representative to award M.S. degrees in AGECE, IRRG, NUTR, RCODE, ECOM, FSEC, FTCH, FSAF, PLSC, PLPT, POSC, and PHNU effective September 2019, January 2020, and June 2020, consecutively.

- **Elections** to replace members who were on leave or resigned from FAFS standing committees and University Committees for the AY 2019-2020 took place in February 2020.

- **FAFS Distinguished Awardees for AY 2019-20**

- **Abdul Hadi Debs Endowment Award for academic excellence:** Mr. Ibrahim Bahati, RCODE
- **Dean Thomas Sutherland Prizes for graduate excellence:** Ms. Sarah Karam, RCODE, Mr. Abdallah Alhaj Sulaiman, FTCH
- **Dean Nuhad Dagher FAFS Graduate Student Award:** Mr. Walid Al Hakeem, POSC
- **Edgecombe Memorial Prize:** Mr. Abdul Razzak Doughan, AGRI IV

- **Kashadurian Award:** Mr. George Rahal, AGRI IV and Mr. Youssef Beik Saade, AGRI IV
- **The Joana Haidar Award:** Ms. Eliana Al Kharrat, AGRI IV
- **Dr. Musa Najib Nimah Endowed Award for academic excellence:** Mr. Jad Kaj, AGRI IV
- **The Nehme Moujaess Student Award in Landscape Architecture:** Ms. Nour El Zein, LDAR IV
- **Penrose award:** Ms. Nour Hammad, NTCP IV
- **Presentations:**
  - Laboratories for the Environment, Agriculture, and Food (LEAF): presentation by LEAF director, Dr. Mohammad Abiad, after moving LEAF management to FAFS effective March 10, 2020.
  - 'Faculty Workload Policy' and 'Policy and Procedures for Pre-Tenure Reviews' by Associate Provosts Zaher Dawy and Lina Choueiri
  - Internal Funding from URB, CNRS-L, HITS for AY 2019-2020 by Associate Provost Zaher Dawy
  - Talal and Madiha Zein AUB Innovation Park Strategic Plan by Dr. Salim Chahine, Director of AUB-iPark, and Mr. Elias Boustani
  - The Food Security Online Diploma by Dr. Martin Keulertz
  - Grade Conversion from a numerical to letter system presented by Associate Dean Ammar Olabi
  - Updated University Calendar after the October 17, 2019 events in the country was presented by Associate Dean Ammar Olabi
  - E-learning readiness at FAFS presented by FAFS IT director, Ms. Dania El-Ashi, and AUB's E-learning team.
- **Food Security Online Diploma:** Approval of The Food Security Online Diploma after a vote on April 8, 2020.
- **Guidelines on Research and Development Activities at AREC:** Approval of the regulations of the conduct of research and development activities at AREC: Dean Mohtar presented the regulations document, which had previously gone through several revisions. After a discussion and Q/A session with the faculty members, Dean Mohtar decided to get further feedback and bring back the document for a vote.
- **Graduate Students Research Requirements:** Dean Mohtar presented the document which includes requirements for all graduate students to defend their research plans before the end of the second semester, to have the thesis committee meet at least once every semester, and to prepare a scientific manuscript ready for submission for publication before they graduate. After a discussion with faculty members, some concerns were identified; it was decided to get further feedback and bring back the requirements document for discussion with the faculty members again.
- **FAFS Dean's Updates by Dean R. Mohtar:**
  - FAFS academia-industry-research portfolio encouraging faculty members to submit ideas to be included in the portfolio for which funding will be sought.
  - Update about FAFS budget based on the Provost's plan which was developed in response to the events of October 17, 2019. This includes measures to accommodate financial aid, hiring and the faculty development plans, and other measures.

- Prioritizing the implementation of FAFS 2025 and the FAFS budget by the strategic planning, advisory, and administrative committees.
- Student's concerns as shared by the students about all academic issues facing them in difficult times and the special circumstances being faced since October 17, 2019.

## 2. Research Grants and Service Contracts

- **FAFS Research Strategy**

A new FAFS Research Strategy is being developed to lead the way in Food, Agriculture, and Environment Systems (FAES) in arid and semi-arid areas with strategic pillars of establishing the Research Support Unit; new graduate students' guidelines; Industry – Academic partnerships; and establishing FAFS interdisciplinary research clusters.

- **Published Papers**

In 2019, a total of 85 papers were published in international refereed journals: 13 by the Dean, 49 in NFSC (10 FM), 19 in AGRI (9 FM) and 4 in LDEM (3 FM).

- **Research Funding**

During this period, FAFS received \$4,591,130 in local, regional, and external funding from different local, regional, and international organizations such as URB, WFP, ACTED, EU, FAO, WBG, IHE, TIDES, IAEA, and IIE. The funding were earned by: Dr. Hamadeh [\$1,667,967 from WFP and \$852,424 from ACTED], Dr. Abunnasr [\$1,030,884 from EU], Dr. Jaafar [\$483,019 from TIDES, \$22,331 from USDA and \$19,071 from IHE], Dr. Mohtar [\$119,480 from FAO and \$40,000 from WBG], Dr. Naja [\$99,248 from FAO, \$44,480 from QU and \$13,250 from URB], Dr. Obeid [\$30,000 from URB], Dr. Jomaa [\$24,000 from URB], Dr. Akl [\$23,350 from URB], Dr. Nasreddine [\$9,791 from IAEA and \$12,300 from URB], Dr. Hwalla [\$17,000 from URB], Dr. Kassem [\$15,000 from URB], Dr. Martiniello [\$14,300 from URB], Dr. Chalak [\$13,925 from URB], Dr. Fares [\$12,500 from URB], Dr. Abiad [\$12,000 from URB], Dr. Olabi [\$10,632 from URB], and Dr. Chaaban [\$4,178 from IIE].

- **Large-scale Multidisciplinary Proposals (from 482,249 USD to 6,994,115 USD)**

In AY 2019-20, the proposals included integrated water resource management project at AREC funded by ASHA (received preliminary approval); USAID Agriculture and Rural Empowerment (ARE) Activity; USAID Initiative to Deliver Essential Assistance and Services (IDEAS); in addition to ESDU projects with World Food Program (WFP) and with U.S. Department of State Bureau of Population, Refugees, and Migration (PRM).

Other Proposals: included a total of 18 pre-proposals PRIMA (Partnership for Research and Innovation in the Mediterranean Area). Full proposals (stage 2) were invited for 7 of these (~40%). An Erasmus+ Capacity Building in Higher Education proposal (New Master's program in GLOBal Supply Chain Management for Southern Mediterranean) was funded at 745,800 Euro; a proposal with USAID Land O'Lakes on chickpea at AREC; and an Erasmus+ Capacity Building in Higher Education proposal in addition to other investment proposals for learning, research, and capacity building at AREC (including proposals to MCF, Unifert, and to Mr. Mutaz Sawaf and to TIKa that were accepted and funded/ to be funded).

- **The Water-Energy-Food-Health Renewable Resources Initiative (WEFRAH)**

WEFRAH coordination team helped in generating and collecting data for the making up of an AUB sustainability report for the years 2019 and 2020. This report and other meaningful assistance provided, helped in raising AUB ranking on sustainability. In summer 2020, FAFS hosted students from MSFEA to conduct internships on multidisciplinary design projects related to WEFRAH. In February 2020, A WEFRAH delegation visited key institutions in Qatar to develop research, extension, and educational opportunities that address the common interests of Lebanon and Qatar. The visit followed an earlier visit to AUB by representatives of the Texas A&M Energy Institute and Texas A&M-Qatar, also with the purpose of implementing the existing MoU. WEFRAH has 9 teams of multidisciplinary AUB researchers working each on a different project related to WEFRAH nexus with a component at AREC. Our partnership with Waterlution, enabled the addition of a 10<sup>th</sup> team composed only by Students. A first edition of waterlution took place at AREC in 2019 and another took place summer of 2020 and led to the selection of student-led research projects.

- **Empowering Teaching and Research at AREC**

AREC welcomed 19 undergraduate Agriculture students on February 23, 2020. Seven AUB faculty members from three different schools at AUB ran several experiments most of them were funded by WEFRAH. Projects included Mapping Water Use; Phenology and Productivity in Agricultural Landscapes by Fusing Multi-Sensor Data Products; Smart irrigation; Integrated aquaculture-agriculture system: biological control of insects with *Amblyseius swirskii* and *Phytoseiulus persimilis* in pepper; Integrating aquaculture with multiple cropping system; Cover crops for Orobancha management in potato; Organic Weed Management in broad beans; Management of potato growth with fertilizers; Poultry Management; and Effect of cover crops on soil health between stone fruits.

During summer 2020, AREC hosted three MSEFA student internships for the first time under the supervision of Dr. Haidar, AREC Director. Ms. Mariam Saber successfully designed and established a [composting plant at AREC](#), while, Mr. Ali H. Merhi and Ms. Sevana Sarraf designed a demo rooftop rainwater harvesting unit and saffron harvesting equipment, respectively. AREC also hosted WEFRAH and [Research Day](#) during that period.

- **FAFS Lecture Series**

Under the framework of FAFS Lecture Series, several prominent national, regional, and international speakers from academia, UN organizations, industry, public sector, civil society, and the diplomatic circle were invited to present their research work and projects, as well as popular regional topics, and instigate or foster collaborations with FAFS faculty members. Lecture topics covered a wide array of disciplines from agriculture, nutrition, disaster risk reduction, water-energy-food-health nexus, water and food security, climate change effects on landscape architecture, food safety and food waste, artificial intelligence and big data in agriculture, circular economy, food politics, regional resource conflict and allocation, encapsulation technologies and applications in food and agricultural systems, forestation, to integrated pest management.

This year, and prior to the global COVID-19 pandemic, FAFS was among the first faculties to host lectures and panel sessions that addressed emerging and crucial topics arising from Lebanon's uprising 2019, gathering a large audience of 80+

attendees. Topics included: Dietary recommendations to enhance resilience of communities in times of crisis; FAFS, AUB, and the Thawra: Beyond Protesting in the Streets; Diagnosis of the Lebanese agriculture in light of the latest financial crisis impact on 2019–20 agricultural campaign; and the Role of Agri-Food Clusters in Crisis. In addition, FAFS hosted the launch of The Oxford Handbook on Water, Food and Society (on November 11), co-edited by Assistant Professor Martin Keulertz, FAFS Food Security Program.

- **AUB's FED Talk:**

FAFS launched AUB's FED Talk (Food, Environment and Development) weekly sessions moderated by Dr. Carla Habib Mourad and posted on AUB's YouTube channel.

- **FAFS Projects with FAO**

During AY 19-20, these projects included:

- **Pilot Study on Evapotranspiration and Trade-offs in the Water-Energy Food Nexus in Bekaa Valley in Lebanon:** The W-E-F-H Nexus case study in Lebanon has gotten a no-cost extension until September 30, 2020. We are expected to submit a draft of the final report by August 30, 2020. The project is going well on its way. Over the spring of this year all the data from the farmers' surveys was collected and compiled. The linkages that constitute the framework for the nexus tradeoff analysis have been built using the data collected from the surveys. Several scenarios will be considered to assess best options of agricultural production and import based on the general requirements of the Mediterranean diet and restricted by the climatic conditions and available land areas for production in Lebanon. The scenarios will include variations and combinations of energy and water sources and assess feasibility and environmental footprint. Additionally, and considering the novel COVID-19 pandemic situation and financial/economic crisis in Lebanon, an additional scenario will be assessed that will look at the devalued Lebanese Pound and its impact on the feasibility of local production versus import on agricultural products.
- **Balancing the trade-offs for a Sustainable and Healthy diet: the case of Lebanon:** The main aim of the project is to identify the elements of a Sustainable Healthy diet in Lebanon. The first activity in this project will consist of a situation analysis and data mining exercise to identify the sources of data available in the country to characterize current food consumption and its environmental footprints (Green House Gas (GHG) emissions, water and energy use), cost, cultural acceptability. The second activity will consist of adapting and optimizing a FAO developed tool to balance the tradeoffs among the various sustainability dimensions in Lebanon. In order to assess the magnitude and scale of trade-offs among the different principles, a third activity will be undertaken, which includes the upgrade of the diet optimization tool available at FAO in order to integrate different constraints in the tools (such as environmental aspects, cost or cultural and social acceptability). The main deliverable of this activity will be an analytical tool that could assimilate the various dimensions of Sustainable Healthy Diets and allow for the evaluation of tradeoffs among these dimensions. The fourth activity will encompass selecting the context-specific limits for these tradeoffs and using

the analytical tool developed in the previous activity in order to identify the Sustainable and Healthy diet in Lebanon. Vetting on the tool and the indicators will happen through a national workshop. The fifth activity will involve the formulation of recommendations to enhance the adherence to Sustainable Healthy diet(s) identified in the third activity. The followings will be undertaken in order to disseminate these recommendations, namely: 1) development of policy briefs to be communicated with policy makers, 2) multistakeholders workshop and 3) preparation of scientific reports.

- **Visiting URB Scholar**

Dr. Shafiq Islam, professor in the department of civil and Environmental Engineering and a professor of water diplomacy at the Fletcher School of Law and Diplomacy at Tufts University, visited FAFS in January 2020 as a URB Visiting Scholar where he presented to FAFS and AUB Community lectures on 1- Engineering Diplomacy: A Principled Pragmatic Approach to Govern and Manage Complex Societal Problems; 2- On Developing a Sustainable Solution Space to Resolve Water Crisis in Arid Environments and 3- Understanding and Shaping Environmental Scarcity and Security: Interactions of Climate and Water Security Using Complexity Lens. In additions to these presentations, Dr. Islam also met with several FAFS faculty members and discussed several research topics.

- **Conferences**

FAFS organized sessions and took active parts in several conferences during AY 19-20, among which:

- The Annual International Meeting of the American Society of Agricultural and Biological Engineers (ASABE), in Boston, USA (July 7-10).
- Transforming Lebanon's Agriculture: Challenges and Opportunities in collaboration with FAO, the World Bank group (WBG) and the Lebanese Ministry of Agriculture at the Grand Serail on October 4.
- A Precipitation Estimation from Remote Sensing Information using Artificial Neural Networks (PERSIANN) workshop on the remotely sensed observation of precipitation using AI on October 9 – 11. The workshop was organized in collaboration with UNESCO groups, including the Regional Bureau for Science in the Arab States, the International Hydrological Program's (IHP) Global Network on Water and Development Information for Arid Lands (G-WADI), UN-ESCWA's Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-economic Vulnerability in the Arab Region (RICCAR), and CHRS-UCI.
- The first Sustainable Development Goals (SDGs) research day at AUB took place at FAFS on September 18. The event featured outcomes from seven AUB research teams sponsored by the Global Compact Network Lebanon and producing action-oriented research related to one or more of the SDGs. Dr. Mirella Aoun, SDGs focal point at AUB, introduced the event and highlighted its importance in harnessing the AUB community for SDG activity. During the event, seven students, all winners of the United Nations Millennium Fellowship were able to present their projects to the attending stakeholders, faculty and other guests. They were the first cohort of AUB students to



generate creative, student-led initiatives in various SDG related projects with high social impact.

- FAFS hosted the launch (November 11) of The Oxford Handbook on Water, Food and Society, co-edited by Assistant Professor Martin Keulertz, FAFS Food Security Program. During the panel discussion, FAFS' Dean Mohtar, Dr. Keulertz, Dr. Rami Zurayk, and FAS' Dr. Tariq Tell described their respective approaches to the challenge of water security and techniques that society can use to achieve a healthier water supply in such regions.

Faculty members from the different departments were invited speakers at regional and international conferences. With the lockdown due to COVID-19, FAFS faculty members participated in virtual online webinars. Highlights of these activities are as follows:

- **FAFS at the 10th GCHERA Conference: Transforming Higher Education:** During the 10th GCHERA Conference on Transforming Higher Education in Nanjing, China, Dr. Roula Bachour presented an overview of the progress made by AUB and in partnership with W.K. Kellogg Foundation, GCHERA, and EARTH University toward that transformation.
- **FAFS at Water JPI workshop: Cooperation beyond Europe: the water-energy-food nexus:** Dean Mohtar was keynote speaker at the Water JPI workshops (December 3-4) on cooperation with countries beyond Europe in research and innovation in the water sector. Dean Mohtar participated in two sessions, during which he highlighted the importance of the water-food-energy nexus in identifying the new sources of water, such as treatment, recycling, use and reuse, to aid in addressing the scarcity challenge, and the importance of global partnership. He shared a recommendation for the global south to be a knowledge, dissemination and education partnership for our global knowledge networks.
- **Challenges and Opportunities of Landscape Architecture Education in the Arab World:** The LDEM faculty members presented a symposium session entitled 'Challenges and Opportunities of Landscape Architecture Education in the Arab World: The Experience of the American University of Beirut' at the European Council of Landscape Architecture Schools (ECLAS) conference 2019 which was held on September 16 and 17, 2019 in Oslo, Norway.
- **Experiential Learning Webinar, June 2, 2020:** The Transforming Higher Education project, led by FAFS/AUB and the Asia-Pacific Association of Agricultural Research Institute (APAARI) organized the "Experiential Learning in Agriculture Education" webinar. The webinar featured experiential learning experiences from leaders in the field such as Professor Saouma BouJaoude (AUB), Professor Michel Wattiaux (University of Wisconsin-Madison, USA), Professor Daniel Sherrard (EARTH University, Costa Rica), and Professor Frank Robinson (University of Alberta, Canada). The webinar's main objective was to discuss the role of experiential learning in transforming higher education. Topics discussed included theoretical foundations and objectives of experiential learning, implementing experiential education, getting faculty involved, experiential learning in the classroom, learn to discuss and discuss to learn, and experiences in inquiry-based learning in animal agriculture. More than 260 participants from the AUB-W.K. Kellogg project

and the Global GCHERA network of more than 45 institutions in 26 countries attended the webinar and actively engaged in the discussion moderated by FAFS' Dr. Roula Bachour.

- **Dean Mohtar at FAO Zoominar: How can digital innovation help smallholder farmers cope with impacts of COVID-19 in NENA?** Dean Mohtar participated (April 16-23) in the first of a series of Zoominars, organized by the FAO-RNE Regional Initiative for Small-Scale Family Farming. Dean Mohtar co-presented with Dr. Armine Juergenliemk, Agriculture Specialist at World Bank, on the topic of “Revitalizing the agri-food sector through digital technologies in Mashreq countries”. Speakers highlighted the important role of public action to facilitate adoption of digital technologies for agriculture in Mashreq countries.
- **FAFS at the Water Future Conference: Towards a Sustainable Water Future-Bengaluru, India Q&A on the Water-Energy-Food (WEF) nexus:** FAFS presence was exceptional at the Water Future conference 'Towards a Sustainable Water Future' held in Bengaluru, India (September 25). Dean Mohtar organized a special session on bridging social and physical sciences to address interconnected water, energy, and food (WRF) security challenges: Innovatively addressing WEF challenges. The session was followed by a Q&A session.
- **Other Conferences:**
  - Associate Dean Ammar Olabi participated in the annual conference of the Arab Forum for Environment and Development (November 14-15). The conference provided the first comprehensive survey of environmental material in school and university curricula across the Arab countries
  - Dr. Giuliano Martiniello participated in the New Regionalisms and the Middle East Workshop, with a presentation entitled: “Manufactured Regional Scarcity: The Middle East and North Africa under Global Food Regimes, organized by the Arab Council for the Social Sciences, Beirut - Le Bristol on Feb. 8-9, 2020;
  - Dr. Rami Zurayk (LDEM) was an invited participant at the 46<sup>th</sup> annual meeting of the Committee on World Food Security (CFS), held at FAO headquarters in Rome, Italy. The CFS session brings together food security and nutrition stakeholders from across the world to network, review global progress, share experiences and agree on policy guidance
  - In response to the various challenges posed by the COVID-19 pandemic for food and nutrition security, the FSP launched a webinar series entitled “The Impact of COVID-19 on Global Food Security” (April 23-June 18, 2020). Its seven sessions addressed topics including trade and supply chains, agricultural production and water resource scarcity, MENA-specific concerns, and gender and other vulnerability dynamics; and channeled via Zoom, Facebook, and YouTube to reach a global audience.

### 3. Outreach and Societal impact

- **FAFS Partnerships and Agreements:**

In AY 2019-20, FAFS expanded its international partnerships promoting student and faculty exchange, excellence in education, and the advancement of knowledge through research and outreach. FAFS has entered into several partnership agreements and signed a number of new Memoranda of Understanding (MoUs), aimed at expanding the advancement of knowledge through research and outreach in the MENA, Europe, and North America. These secured partnerships were signed with Waterlution, University of Nottingham, University of Arizona Global, ETC-University of Malaga, Sher-e-Bangla Agricultural University Bangladesh, SEAL, QOOT, Lebanese Ministry of Industry, ICARDA, Frem Foundation, FAO and CEWAS. Moreover, agreements were signed with FAO, Georges N. Frem Foundation (GNFF); The European Topic Center on Spatial Analysis and Synthesis at the University of Malaga, Spain (ETC-UMA); Creal (Centre de Recherches et d'Etudes Agricoles Libanais – CREAL S.A.L.); SWI-NIBRAS; EBI-CBCMED & Region Autonoma de Sardinia; INRAE; Penn State University; Action Against Hunger; SAWA for Development & Aid; SHER-E-BANGLA Agricultural University, Bangladesh; and LSE (The London School of Economics & Political Science). The current number of total active partnerships is 25.

During this year, FAFS was involved in a multiple of outreach and societal impact activities. Highlights below:

- **National role in revitalizing the Agriculture sector**

FAFS played a major role to support the Ministry of Agriculture (MoA) in updating its strategy integrating the SDGs in its National Agricultural Planning (2019-2020). FAFS role included leading a meeting with Deans of Agriculture schools of prominent Universities in Lebanon and chairing the discussions for a coherent feedback on the National Agricultural roadmap. In addition, the senior Advisors to the Lebanese Minister of Agriculture have been, for several years, faculty members from FAFS including the current Advisor. Furthermore, Based on a discussion with Ms. Wafaa El Khoury (IFAD) and Dr. Mohamad Farran (FAFS), FAFS has proposed to convene a parallel consultation meeting for an inclusive discussion with FAFS graduates who have presence in the Agriculture sector and are willing to relay their ideas to FAO and MoA.

- **Dietary recommendations in times of crisis**

FAFS has taken the initiative to gather experts from different sectors and disciplines to bring forward dietary recommendations that are cost-effective and which do not jeopardize the health and wellbeing of the Lebanese population. This initiative took the form of a panel session entitled "Dietary recommendations to enhance the resilience of communities in times of crisis: Lebanon's uprising 2019" (December 17) as part of FAFS Lecture Series. The session featured a presentation by Dr. Farah Naja (FAFS), who disclosed five key dietary recommendations to adopt in times of crisis in order to achieve a healthy and resilient food plan. The panelists included Dr. Rami Zurayk (FAFS), Dr. Roula Majdalani, director of Sustainable Development Policies Division (SDPD) at the United Nations Economic and Social Commission for Western Asia (UNESCWA), and Soha Zaiter, executive manager at the Lebanese Food Bank.

- **Sustainable Development Goals (SDG) Initiative**

The first SDGs research day at AUB took place on September 18, 2019 (mentioned earlier in this report under “Conferences”). Currently working with AUB leadership to develop an AUB SDGs plan synergistic with VITAL vision that covers the four core functions of the university: research, teaching, operations, and external leadership.

- **Ardi Ardak and other ESDU Initiatives**

The faculty’s engagement arm ESDU (Environment and Sustainable Development Unit) has been working diligently in supporting small-scale producers interested in starting home-gardening and urban agriculture practices, as well as vulnerable quarantined consumers. Through the Ardi Ardak initiative, being implemented throughout Lebanon, ESDU has been able to distribute food parcels to 700 households, and seeds/seedlings (amounting so far to 7,500 seed-bags and 62,000 seedlings) to 970 households, in under-served communities across the country. ESDU is also supporting the Lebanon Food Security and Agriculture Sector led by FAO and WFP, by reporting on their COVID-19 in-kind food assistance to beneficiaries (host communities and refugees) in Beirut, Mount Lebanon and South on monthly basis.

ESDU was selected by [Food Tank](#) as one of the initiatives [Redefining Food and Agriculture Across the Middle East](#). ESDU was also awarded the Khalifa International for Date Palm Award and Agricultural Innovation. ESDU is currently leading a community supported National Food Security Initiative “[Ardi Ardak](#),” in partnership with the Lebanese League for Women in Business ([LLWB](#)), the Food Heritage Foundation (FHF), and Zico House. This initiative aims is to revive the food security sector by supporting small-scale holders with a special focus on rural women and youth (FAO policy brief [here](#)).

- **FAFS’ Action Against COVID-19**

- In response to the various challenges posed by the COVID-19 pandemic for food and nutrition security, the Food Security Program launched a webinar series entitled “The Impact of COVID-19 on Global Food Security” (April 23-June 18, 2020). Its seven sessions addressed topics including trade and supply chains, agricultural production and water resource scarcity, MENA-specific concerns, and gender and other vulnerability dynamics; and channeled via Zoom, Facebook, and YouTube to reach a global audience.
- Conducted 10 interviews on Lebanon's Food, Water, Agricultural Challenges, food security, nutritional immunity, beach pollution amidst COVID-19.
- Published on Nutrition Amid COVID-19 pandemic and the lurking threat of COVID-19 in Syrian war refugee camps.

- **World Water Council**

As Governor of the World Water Council and Chair of Integrated Water Resources Management (IWRM) Taskforce, Dean Rabi Mohtar worked with the IWRM Taskforce members on a new vision and developed terms of reference (ToR), a framework of activities, and an action plan for IWRM. As co-chair of the Rural Development Pilot Group, Dean Mohtar coauthored, with Dr. Sasha KooOshima (FAO), Dr. Sandra Yanni (FAFS), and Dr. Roula Bachour (FAFS), a concept note presenting a framework for

addressing water management as a catalyst for rural development. The concept note is to be discussed at the 9th edition of the World Water Forum in Dakar, Senegal 2021.

- **Cooperation and Initiatives with UN Organizations**

- **Mashreq Agricultural Initiative (MAI):** This Initiative is supported jointly by the World Bank Group (WBG), the United Nations Economic and Social Commission for Western Asia (UN-ESCWA), the Food and Agriculture Organization of the United Nations (FAO), and the Center for Mediterranean Integration (CMI) in partnership with AUB, the Hashemite University of Jordan, the University of Babylon (Iraq), and the Ministries of Agriculture of Iraq, Jordan, and Lebanon. The Outcome is the development of a background paper entitled “Harnessing the Power of Digital Agriculture Transformation in Mashreq - Focus on Iraq, Jordan, and Lebanon”. A high-level ministerial meeting to launch the report is expected to be held in February 2021.
- **Cooperation with ESCWA:** Engaged in a policy brief and developed a set of policy recommendations on consumption and production patterns post COVID-19 from an agriculture perspective, while identifying knowledge gaps.
- **Cooperation with FAO:** Conducted meetings to explore new ideas and modalities for collaboration, building on mutual strengths and strategic partnership: Ten projects and areas of cooperation were identified and proposed by FAFS, some of which can be initiated under ongoing FAO projects in Lebanon.

- **MOU with GNFF NGO to enhance academia-private sector collaborations**

Led by Dr. Mirella Aoun, FAFS recently concluded a Memorandum of Understanding with the Georges N. Frem Foundation (GNFF). The objectives of the five year MoU are threefold: strengthen collaboration between the agri-food private sector and academia; identify and create opportunities for applied research, development and outreach in the agri-food sector; and create venues for student engagement with local communities within the project frameworks. The MoU facilitates engagement and the work toward food production resilience during *and in the aftermath of Covid-19 pandemic*.

- **AUB joined the Global Framework on water scarcity in Agriculture (WASAG)**

A partnership established in April 2017, and hosted by the Land and Water division of the Food and Agriculture Organization of the United Nations (FAO). Partners include government agencies, international organizations, research institutions, advocacy groups, and professional and membership organizations. WASAG brings together key players and sectors to identify priority actions for collaboration related to the 2010 Sustainable Development Goals (SDGs) and the adaptation and scaling up of successful responses to increased water scarcity and threats of climate change, especially as relates to agricultural production and water.

- **Academia-Industrial research portfolio**

FAFS prepared a portfolio of concept notes to the USAID multimillion dollar sub-grants for academic-industry partnerships and engaging with Chemonics and DAI on

building strategic partnerships and alliances for being the implementing partner of USAID projects.

- **Colistin Initiative**

A multidisciplinary committee composed of faculty from FHS, MSFEA, and FAS and led by FAFS, has been formed to tackle the multifaceted problem of colistin, known as the last resort antibiotic, which is emerging as a global health threat since its abuse has resulted in microbial resistance. The flow of colistin in the food chain poses severe impacts on the food system and the environment. Hence, it is a wicked and urgent problem in Lebanon and the region and has the potential of placing AUB on the map in the world. The committee aims to address colistin through a systems-of-systems approach, linking various aspects of the problem: from technology (treatment, alleviation, etc.), food production system, environment and human health, to policy and governance. Faculty will be drawing on their own experience and expertise in tackling this multifaceted problem from a social, design, planning, supply chain, modeling, and alternative farming systems perspective. Such collaboration will manifest as a campus-wide initiative and a signature project for AUB that will spearhead knowledge creation and transfer and will catalyze a national and regional dialogue around this challenge. The first milestone for this initiative or signature project would be the establishment of a food safety center at AUB, led by FAFS, to map and generate the most needed information on colistin antibiotics release and antibiotic resistance in Lebanon.

- **Water Solutions by Young Arab Leaders**

FAFS collaborated with Waterlution for the second year in a row for the Water Innovation Lab (WIL) Lebanon - 2020 for youths (in Lebanon and diaspora) to develop solutions to the Litani River challenges.

- **The Land Food Project**

An initiative launched by LDEM department and the Food Security Program to support vulnerable communities impacted by the Beirut Blast.

- **Daskara – because nature and heritage are timeless**

A free nature and heritage phone application “Daskara” ([Facebook](#) and [Instagram](#)) was released following the devoted work of faculty at LDEM department, the Nature Conservation Center, and “Fondation Diane”.

- **AREC, a hub for FAO’s theoretical training**

The Food and Agriculture Organization of the United Nations (FAO) selected AREC as a hub for theoretical training during four consecutive training sessions delivered to the engineers of the Ministry of Agriculture (MOA) as well as nearby farmers between (January-February 2020). The purpose is to train the engineers on best practices in vegetable production and to provide them with the required skills and knowledge to better help the local farmers and other stakeholders.

In addition, AREC was also the hub for around 100 farmers and vineyard owners from the region who attended outreach sessions conducted by the René Moawad Foundation.



- **Earth Day 2020 Celebrated at FAFS**

Joining celebrations around the world in observance of the 50th anniversary of International Earth Day, FAFS conducted a social media campaign to raise awareness and promote the importance of maintaining a healthier and sustainable Earth: always at the core of FAFS' mission and vision.

- **FAFS-AUB Seeds of Hope Initiative**

The second Seeds of Hope plantation event took place on October 5, 2019 in collaboration with AUB's Nature Conservation Center (NCC) and the Lebanese Center for Special Education (CLES), headed by Ms. Carmen Debbane whereby CLES planted in 20 different areas of Kefraya in celebration of their 20-year anniversary.

In addition, FAFS received Additional funding form W.K. Kellogg Foundation in the amount of 65,000 USD to strengthen the capacity of the Lebanese community to advance economic empowerment and enhance resilience in Lebanon vis a vis the impacts of COVID-19.

#### **4. External Advisory Board (EAB)**

Several meetings were held with EAB members and major activities during this reporting period include working on a plan for fund-generating initiatives to support student scholarships. The plan involves offering open enrollment courses, accreditation and sustainable certification services for agri and agro-industrial sectors/ Agriculture stewardship among other initiatives. EAB were also heavily involved in activities for supporting LEAF in terms of revitalizing LEAF, upgrading existing equipment, procuring new and modern equipment to speed up the processes, developing new products, and streamlining its business engagement in the business community as well as providing support in achieving international accreditation.

#### **5. Recruitment**

As part of FAFS Student Recruitment Plan, FAFS team consisting of staff, faculty and students, started the academic year with visiting more than 10 schools and started building a network with private and public schools across Lebanon before the visits were stopped due to road blockage and later due to the country's COVID-19 lockdown procedures. FAFS then moved to online marketing campaigns and e-communications with schools and prospective students. For that purpose, FAFS worked rigorously to develop a complete marketing material portfolio for our programs and disciplines: promotional videos, flyers, social media visuals, and alumni testimonials among others. FAFS continued to work hard to increase the quality and number of incoming students by conducting phone interviews as well as online informative Q/A sessions with freshman, major-less, and other potential students. A FAFS virtual Open House event was prepared to be conducted beginning of AY 2020-21.

#### **6. Space and Facilities**

Throughout AY 2019-20, and despite all the challenging circumstances, FAFS worked on the below project related to infrastructure and facilities:

- **Improving the capacity of food safety at main campus and at AREC**

- The renovations of the Food Safety Facility at FAFS were significantly impacted by the sequence of events during this period, namely: the deteriorating financial situation, Beirut's seaport explosion, and the Corona virus resurgence. Nevertheless, FAFS Team was determined to overcome the aforementioned obstacles. Layouts and charts of the Satellite Lab at AREC, including cost estimation, were finalized by FPDU and PPD and approved by EHSRM and FAFS Team. The electromechanical works at the Microbiology Lab section at FAFS Wing B were launched after lengthy process of collecting bids from local suppliers. In parallel to construction, FAFS team negotiated a package deal for several major equipment, with the suppliers in order to reduce cost as much as possible. The equipment are being purchased in order of importance for the Microbiology, Chemistry, and Satellite Lab at AREC. Discussions are currently taking place with USAID to reallocate budget in order to start with the AREC satellite Lab electromechanical works in parallel with FAFS Wing B activities.
- Colistin project (mentioned above)

- **Integrated Water Resource Management for Semi-arid Condition**

FAFS is leading a demonstration Project at AREC on the integrated Water Resource Management for Semi-arid Condition also funded by ASHA (ASHA FY 2019).

- **Laboratories for the Environment, Agriculture and Food (LEAF)**

As of March 2020, EVL or Core lab moved from AUB's Faculty of Medicine to be under the jurisdiction of FAFS, where it was renamed: Laboratories for the Environment, Agriculture, and Food (LEAF). LEAF has supported the Lebanese Industry, the government, and other governmental and non-governmental organizations. LEAF serves the public and private sector, as well as individuals. The LEAF team maintains high-quality international standards and provides analytical testing and training services for food, animal feed, pharmaceuticals, water, soil, wastewater, and compost. LEAF's services cover food chemistry, food microbiology, nutritional analysis, rheology, labeling, packaging permeability and migration, pesticide residues, heavy metals, colorants, allergens, endotoxins, aflatoxins, pollutants, volatile organic compounds, etc.

- **Creamery renovation**

The Creamery rehabilitation proposal was approved to be funded by Turkish Cooperation and Coordination Agency – TIKA.

- **Other facilities**

FAFS also completed the renovation of the iodine lab and the animal physiology and pathology lab. With the receipt of the Khalifa award, ESDU secured funds to establish a unit in the previously designated animal houses structure. The unit will

accommodate offices, meeting rooms, an outdoor reception area, and green roof. Most important, the unit will run sustainably on renewable energy.

Despite the continuing hurdles, efforts will continue, tirelessly, during 2021 to overcome the hurdles on two fronts: renovations and acquiring equipment.

## 7. AUB-Wide Initiatives

In addition to leading the **WEFRAH** and **SDG** Initiatives (mentioned earlier in this report) across AUB, FAFS continued leading AUB's **Transforming Higher Education project**; Activities including:

- Organizing and hosting a two-day workshop (September 5-7, 2019) on Experiences and Advances in University Transformation as part of the Kellogg-funded, Transforming Higher Education Project. Forty-eight participants from 30 academic institutions and international organizations in the United States, Canada, Latin America, Europe, Africa, and Asia participated in the workshop, shared their commitment and advances to higher educational transformation. Project partners also addressed issues around strengthening and scaling up transformation efforts globally in response to the challenges arising in the 21<sup>st</sup> century.
- Started a series of Webinars around the 5 key elements of success, the first one on "Experiential Learning in Agriculture Education" was held on June 2<sup>nd</sup>, 2020. More than 260 participants from the AUB-W.K. Kellogg project and the Global GCHERA network of more than 45 institutions in 26 countries attended the webinar and actively engaged in the discussion moderated by FAFS' Dr. Roula Bachour.
- Developed a communication strategy and key communication materials.
- The project team developed a Theory of Change for the project to assist in understanding and explaining how change takes place and how the interventions lead to desired outcomes and goals.

## C. Student Statistics

### 1. Student Enrollment (2019-2020)

The total undergraduate student enrollment in the Faculty for the year 2019-20 was 405 distributed among the departments as follows: NFSC (235), AGRI (114), LDEM (55), and visiting student (1). The undergraduate enrollment was 6% lower than that of AY 2018-19 (430); this drop is attributed to the country's financial situation and the COVID-19 pandemic crisis. Whereas, the number of newly enrolled students has increased by 14% as compared to the year 2018-19.

The total graduate student enrollment for the year 2019-20 was 137 distributed among the departments as follows: NFSC (60), AGRI (21), LDEM (20), FSEC (16), the interdisciplinary Rural Community Development (RCODE) program (19) and visiting student (1). At the graduate level, enrollment was slightly lower than that of AY 2018-19 (146) due to the

country's financial situation and the COVID-19 pandemic crisis. The low enrollments were mostly in some of the programs offered by the Agriculture Department and Food security major.

**Table 4:** Total Student Enrollment in various FAFS programs during the academic year 2019-2020

<b>Undergraduate Enrollment</b>	<b>AY 2019-2020</b>
Nutrition and Dietetics (NTDT)	140
Nutrition and Dietetics – Coordinated Program (NTDT-CP)*	31
Food Science and Management (FSMT)	64
Agriculture (AGRI)*	67
Agribusiness (AGBU)	47
Landscape Architecture (LDAR)*	55
Visiting Student	1
<b>Total Undergraduate</b>	<b>405</b>
<b>Graduate Enrollment</b>	
Nutrition (NUTR)	15
Food Safety (FSAF)	17
Food Technology (FTCH)	15
Public Health Nutrition (PHNU)	13
Agricultural Economics (AGEC)	4
Animal Science (ANML)	1
Irrigation (IRRG)	5
Plant Protection (PLPT)	7
Plant Science (PLSC)	2
Poultry Science (POSC)	2
Food Security (FSEC)	16
Rural & Community Development (RCODE)	19
Ecosystem Management (ECOM)	20
Visiting Student	1
<b>Total Graduate</b>	<b>137</b>
<b>Total (UG &amp; GR)</b>	<b>542</b>

\* Agriculture, Landscape Architecture, and Nutrition & Dietetics – Coordinated Program are 4 years programs

## 2. Historical Perspective (2019-2020)

This considerable change in the undergraduate enrollment as compared to the peak enrollment year 2015-16 (521) was mainly due to the country's financial situation and the COVID-19 pandemic crisis and to the lower number of newly enrolled students in the preceding Academic Years. The undergraduate enrollment in the past 5 years is shown in Table 5.

**Table 5:** Number of Enrolled Undergraduate FAFS Students for the Last Five Academic Years

<b>Program</b>	<b>15-16</b>	<b>16-17</b>	<b>17-18</b>	<b>18-19</b>	<b>19-20</b>
NTDT	142	133	120	134	140

NTDT-CP	44	36	41	36	31
FSMT	77	79	68	63	64
AGRI (4 years)	88	85	71	67	67
AGBU	59	63	61	59	47
LDL (4 years)	106	90	81	70	55
Visiting	5	12	2	1	1
<b>Total Undergraduate</b>	<b>521</b>	<b>498</b>	<b>444</b>	<b>430</b>	<b>405</b>

Graduate enrollment increased tremendously from 77 students in 2015-16 to 146 in 2018-19 (Peak year). But due to the country's financial situation and the COVID-19 pandemic crisis during the year 2019-20, the graduate enrollment has slightly decreased. The graduate enrollment in the past 5 years is shown in Table 6.

**Table 6:** Number of Enrolled Graduate FAFS Students for the Last Five Academic Years

Program	15-16	16-17	17-18	18-19	19-20
NUTR	21	26	24	22	15
FSAF	-	-	5	10	17
FTCH	19	19	17	20	15
PHNU				9	13
AGEC	6	6	5	6	4
IRRG	4	6	9	1	1
PLPT	2	4	7	6	5
PLSC	4	2	3	10	7
ANML	3	3	1	3	2
POSC	1	2	3	3	2
RCOD	7	12	12	19	16
FSEC	-	6	17	17	19
ECOM	9	8	10	19	20
VISIG	1	2	1	1	1
<b>Total Graduate</b>	<b>77</b>	<b>96</b>	<b>114</b>	<b>146</b>	<b>137</b>

### 3. Student Admissions (2019-2020)

- Undergraduate New Applicants:**

During the academic year 2019-20, a total of 1390 new applications were received for FAFS majors of which 634 (46%) were accepted and 79 (12%) of the accepted enrolled. In the Fall semester of 2019-20, the yield of admittance was 12% (71 enrolled out of 612 accepted students) whereas, in the Spring semester of 2019-20, the yield of admittance was 36% (8 enrolled out of 22 accepted students). A slight increase in the number of enrolled undergraduate students (79 students) compared to the previous year 2018-19 (74 students). This main increase was most noticeable within AGRI, FSMT and LDAR. Table 7 shows the numbers and percentages of undergraduate new students who applied to the different FAFS programs, those who were admitted, and those who enrolled in Fall and Spring 2019-20.

**Table 7:** Number of New Undergraduate Applicants, Admitted and Enrolled during the

## Academic Year 2019-2020

First Semester 2019-2020				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	448	276	26	9%
FSMT	333	108	18	17%
AGRI	160	62	13	21%
AGBU	199	80	5	6%
LDAR	197	86	9	10%
<b>Total</b>	<b>1337</b>	<b>612</b>	<b>71</b>	<b>12%</b>
Second Semester 2019-2020				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	12	7	3	43%
FSMT	12	3	2	67%
AGRI	10	5	2	40%
AGBU	16	6	1	17%
LDAR	3	1	0	0%
<b>Total</b>	<b>53</b>	<b>22</b>	<b>8</b>	<b>36%</b>

- Undergraduate Transfer Applicants:**

During the academic year 2019-20, a total of 150 transfer applications were received at FAFS of which 100 (67%) were accepted with 38 (38%) of those accepted having enrolled. A significant decrease in the number of enrolled undergraduate transfer students (38 students) compared to the previous year 2018-19 (42 students). This considerable decrease was most noticeable within AGRI, FSMT and LDAR programs. Table 8 shows the numbers and percentages of undergraduate transfer students who applied to the different FAFS majors, those who were admitted and those who enrolled in Fall and Spring 2019-20.

**Table 8:** Number of Undergraduates (Second Degree and Transfer) Applicants, Admitted and Enrolled during the Academic Year 2019-2020

First Semester 2019-2020				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	36	21	10	48%
FSMT	18	12	4	33%
AGRI	14	13	4	31%
AGBU	15	13	2	15%
LDAR	12	7	1	14%
<b>Total</b>	<b>95</b>	<b>66</b>	<b>21</b>	<b>32%</b>
Second Semester 2019-2020				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	18	7	6	86%
FSMT	14	12	4	33%
AGRI	7	6	3	50%
AGBU	9	7	4	57%
LDAR	7	2	0	0%
<b>Total</b>	<b>55</b>	<b>34</b>	<b>17</b>	<b>50%</b>

- **Graduate Applicants:**

During the academic year 2019-20, a total of 323 graduate applications were received at FAFS of which 175 (54%) were accepted and 40 (23%) of those accepted enrolled. This year, the number of enrolled new graduate students slightly decreased as compared to the 2018-19 year but the percent yield has increased from 21% in AY 2018-19 to 23% in AY 2019-20. Table 9 shows the numbers and percentages of graduate students who applied to FAFS, those who were admitted and those who enrolled.

**Table 9: Number of Graduate Applications and Admissions**

Fall, Spring 2019-2020					
Program	Applications	Admissions	% Admitted out of applicants	Enrollment	% Yield
NUTR	53	29	55%	8	28%
FTCH	22	9	41%	4	44%
FSAF	47	22	47%	8	36%
PHNU	23	8	35%	1	13%
AGEC	19	11	58%	1	9%
ANML	14	5	36%	0	0%
IRRG	6	3	50%	2	67%
PLPT	7	4	57%	0	0%
PLSC	11	4	36%	0	0%
POSC	4	1	25%	0	0%
ECOM	24	17	71%	5	29%
RCOD	49	33	67%	6	18%
FSEC	44	29	66%	5	17%
<b>Total</b>	<b>323</b>	<b>175</b>	<b>54%</b>	<b>40</b>	<b>23%</b>

#### 4. Graduation (2019-2020)

FAFS graduated 117 undergraduate students in 2019-20 distributed over the different majors as follows: Nutrition and Dietetics (28), Landscape Architecture (21), Agriculture (19), Agribusiness (18), Food Science and Management (17), Nutrition and Dietetics–Coordinated Program (14). The number of undergraduate graduates has slightly decreased this year (117 graduates) compared to the previous year 2018-19 (124 graduates). This considerable decrease was most noticeable within the Agriculture and Food Science and Management. This drop was mainly attributed to the drop in the enrollment of students in those programs.

FAFS also graduated 32 graduate students distributed over the different programs as follows: Nutrition (4), Food Technology (5), Food Safety (2), Public Health Nutrition (5), Agricultural Economics (2), Irrigation (3), Plant Protection (2), Plant Science (1), Poultry Science (1), Ecosystem Management (1), Rural Community and Development (5) and Food Security (1). The number of graduates remains the same (32 graduates) compared to the previous years. Tables 10 and 11 show the distribution of graduated students in the different disciplines at FAFS during the past five years.

**Table 10:** Number of Graduated FAFS Undergraduate Students for the Last Five Academic Years

Major	15-16	16-17	17-18	18-19	19-20
NTDT	38	40	26	29	41
NTDT-CP	17	14	19	9	12
FSMT	15	16	26	25	14
AGRI	21	30	21	22	16
AGBU	13	15	11	18	15
LDAR	25	21	24	21	16
<b>Total Undergraduate</b>	<b>129</b>	<b>136</b>	<b>127</b>	<b>124</b>	<b>117</b>

**Table 11:** Number of Graduated FAFS Graduate Students for the Last Five Academic Years

Major	15-16	16-17	17-18	18-19	19-20
NUTR	6	8	2	11	4
FTCH	6	4	5	6	5
FSAF					2
PHNU					5
AGEC	1	2	0	1	2
ANML	1	1	2	0	0
IRRG	1	0	3	1	3
PLPT	1	0	1	2	2
PLSC	3	1	3	0	1
POSC	0	1	1	1	1
ECOM	4	2	0	1	1
RCOD		1	1	2	5
FSEC			1	7	1
<b>Total Graduate</b>	<b>23</b>	<b>20</b>	<b>19</b>	<b>32</b>	<b>32</b>

## IV. Centers and Units

### A. Advancing Research Enabling Communities (AREC)

*Prepared by: Mr. Nicolas El Haddad, AREC Farm & Facilities Manager*

#### Personnel:

- **AREC Administration:**

Haidar, Mustapha – Ph.D.	Director
El-Haddad, Nicolas	Farm & Facilities Manager
Yazbeck, Mirna	Administrative Secretary
Sleiman, Samar	Administrative Assistant
Hajj Hasan, Hussein	Sales Attendant/Store Keeper
- **AREC Physical Plant:**

Ghosn, Hisham	Watchman
---------------	----------



- |                           |                                           |
|---------------------------|-------------------------------------------|
| Haidar, Naji              | Mechanical and Maintenance Foreman        |
| Hajj Hasan, Ali G.        | Head of Watchman                          |
| Hajj Hasan, Mohamad       | Watchman                                  |
| Hamiyeh, Walid            | Field Foreman                             |
| Masri, Ali                | Gateman/Watchman                          |
| Mussawi, Kuzhayyah        | Gateman/Watchman                          |
| Nasser, Haidar            | Janitor                                   |
| Rumeh, Abdel-Karim        | Farm Attendant                            |
| Shukr, Khalil             | Food Service Worker                       |
| Sindian, Ali              | Head Mechanic                             |
| <br>                      |                                           |
| • <b>AREC Production:</b> |                                           |
| El Ali, Ibrahim           | Animal Attendant                          |
| Hajj Hasan, Ahmad Kassem  | Livestock Production Head                 |
| Hajj Hasan, Ahmad Khalil  | Creamery Operator                         |
| Hajj Hasan, Ali T.        | Gardener                                  |
| Harb, Mohamad             | Animal Attendant                          |
| Mussawi, Abbas            | Machine Operator                          |
| Safar, Shady              | Livestock & Poultry Production Supervisor |
| Takesh, Nayef             | Machine Operator                          |
| Yazbeck, Ali              | Agronomy Foreman                          |
| Yazbeck, Hussein          | Animal Attendant                          |
| Zureik, Mohamad           | Poultry Production Head                   |
| <br>                      |                                           |
| • <b>AREC Library:</b>    |                                           |
| Sleiman, Samar            | Administrative Assistant                  |
| <br>                      |                                           |
| • <b>AREC Clinic:</b>     |                                           |
| Sayyed Ahmad, Mariam      | Staff Nurse                               |
| Yazbek, Mona              | Clinical Assistant                        |
| <br>                      |                                           |
| • <b>Student Affairs:</b> |                                           |
| Hamieh, Yussuf            | Entrance Monitor                          |

### **Highlights:**

- As part of the Transforming Higher Education Project on Experiences and Advances in University Transformation and in partnership with the W.K. Kellogg Foundation, EARTH University and GCHERA, forty eight participants from 30 academic institutions and international organizations in the United States, Canada, Latin America, Europe, Africa, and Asia visited AREC on September 7, 2019. AREC Director, Dr. Mustapha Haidar gave an overview of the role of AREC in providing opportunities for agriculture students to obtain practical experience (Hands-on experience) in all activities and practices pertaining to the agricultural operation at AREC as well as its role in advancing research and engaging with the community. Speakers from ICARDA and Saint Joseph University talked about their latest achievements in the field of research. At the end of the gathering, each participating institution planted a pine tree.

- Dean Mohtar visited AREC on June 11 and June 12, 2020 where he visited all facilities at AREC, met with AREC students and toured their projects. Students and professors joined Dean Mohtar for lunch at AREC in a very encouraging atmosphere.
- As known, AREC campus is FAO preferred place in Bekaa to conduct their workshops, training, and projects. Thus, 4 consecutive training workshops entitled UTF-LEB-028-LEB were held at AREC in January 2020 and 4 on sustainable potato production in collaboration with MOA in May and June 2020. Over 100 farmers attended the workshops.
- AREC welcomed 19 undergraduate agriculture students on February 23, 2020 to spend spring and summer semesters in order to obtain practical experience in various sectors of agriculture provided by available opportunities and facilities within the 100-hectare farm.  
Unfortunately and due to Corona virus pandemic, the classes were suspended from March 16 until May 31<sup>st</sup> and courses were offered online during this period.  
After lockdown, the students were back to AREC on June 1 to proceed with their hands-on spring and summer courses. Their hands-on agricultural projects include the establishment of a permanent hydroponic unit for vegetable production, urban agriculture for origanum production by verticulture system, multiple vegetable productions and integrating aquaculture with vegetable production were launched as of June 8, 2020.
- Dr. Martin Wafler, project manager and trainer at CEWAS, visited AREC on February 14, 2020 where he toured to explore the possibility of building a partnership with AUB by focusing on sustainable sanitation and water management project.
- The winter season witnessed heavy rainfall pattern and most of the rivers and the springs flowed back again. Unfortunately, Sbat water, that crosses beside block A and between block A and B flooded around 50% of plots A2, A3, and B7 and the plants were covered by a thick layer of clay. The up-to-date precipitation (522 mm) exceeded the total average (503 mm) by 19 mm and the thickness of the snow layer which was accumulated on top of the mountain chains exceeded 2 meters. It is worthy to mention that AREC wells are mainly fed by melting snow and this source is essential for cropirrigation during summer.
- FAFS leadership, faculty, staff, students from Department of Agriculture, the WEFRAH group, the UNIFERT team, and other guests were invited to an exceptional FAFS research and UNIFERT open field day (July 31, 2019) during which they learned about the projects and ongoing research of AREC students, celebrated the end of summer courses, and attended UNIFERT's field day on the topic of their wide variety of vegetables and fruits at AREC.
- AREC was a hub for around 100 farmers and vineyard owners from the region who attended an outreach session conducted by the René Moawad Foundation Bekaa regional team on Thursday, February 6<sup>th</sup>. The session comes under the "Strengthening Exports of Fruits and Vegetables from Lebanon to European and Regional Markets" program funded by the Kingdom of the Netherlands to upgrade the export-enabling environment of the 4 main agricultural value chains, Grape, Avocado, Cherry, and Potato.
- AREC Christmas "Pot-Luck" lunch this year was different! Mansaf, Chicken Stroganoff, Tabbouleh, Kebbeh.... and a variety of tasty Lebanese food were prepared by AREC staff in order to celebrate the end of year Lunch together at AREC lounge.

- As part of the LDEM 249 “Site Engineering III - Design Implementation” course that takes place every summer, the second year LDEM students developed a playful structure in AREC, Bekaa. The permanent installation, which was constructed under the supervision of LDEM 249 professors Dr. Beata Dreksler and Wissam Melhem, aims to revive the pine area located near the students’ dorms at AREC. The installation provides an exciting experience to people visiting the campus of all ages. The project consists mainly of two elevated walkways and a hanging bridge.
- Funded by the FAO and the Japanese Embassy, ICARDA organized a training course on crop management skills and seed production in Lebanon from June 24 until July 2, 2019.  
20 Ph.D. students and agricultural engineers from different districts in Syria participated in this course.  
3 days of this training took place at AREC and encompassed lectures and practical demonstration on farm machinery, introduction to the different types of seeders and chemical equipment along with calibration and safety measurements provided by Nicolas El Haddad, AREC Farm and Facilities Manager.
- Two scientists, from Adstarocket – Costa Rica, Dr. Jose Castronieto and Mr. Juan Del Valle visited AREC on September 11, 2019. The aim of this visit is to identify potential applications of new technologies that combine renewable energy and hydrogen production. The visitors found that there is a great potential for designing a scalable and innovative system that would be sustainable from a technical and financial point of view.
- In collaboration with NCC, 100 pear trees were planted on December 19, 2019 using the cocoon system. This system, which consists of a biodegradable vessel made from paper pulp and crop byproducts, is mainly utilized in arid regions to support seedlings during their most vulnerable stage of development.
- The ND Traffic Consulting generously donated a solar room, known as the Village Kit to AREC. This system will be used as a model to promote green energy in the Beqaa plain and provide solutions for farmers suffering from an unreliable energy supply network. Potential future training/research with students/faculty members is also applicable.
- Following to FAFS Retreat Day held on October 12, 2019 at Reynolds Building AUB, FAFS Dean, faculty and staff along with their families moved to AREC to spend a relaxing, lovely night before the harvest day. Dr. Haidar invited all the guests to a delicious rural dinner which was catered by Lakkis Farm and served by AREC staff under the Bedouin tent.
- Sponsored by FREEZE, the long loved Harvest Day was hosted on Sunday October 13, 2019. AUBites, Faculties, Staff and families joined the event and enjoyed picking sweet corn and apples, craving pumpkins, painting, dancing, buying processed food prepared by neighboring cooperatives and had a delicious lunch.
- A generous donation was dedicated to AREC – FAFS from Mr. Fadi El Khoury. Three shipments of 26 olive trees reached AREC from Amyoon – Koura on October 10, 12 and 14th, 2019.  
The trees were transplanted around the villa and in the administration garden.
- On September 28<sup>th</sup>, 2019, Balamand University in collaboration with UNICEF organized at AREC the Child Rights Convention Bekaa Mini Summit.

- Planting different types of cereal and legume crops such as wheat, chickpeas, and lentils.
- Establishing a new forest of around 1 hectare that encompasses 400 trees of pine and Cypress.
- Removing the saffron corms from the old plot and establishing a new 1 hectare field.
- AREC hosted Ms. Bridget Ireland, a graduate student from St. Lawrence University N.Y. -U.S.A, as well as Mr. Imad Keniar, AUB graduate student, in order to conduct their field experiments to obtain their Master degree.
- On September 20, 2019 a meeting was held at FAFS in the presence of Dr. Haidar and Mrs. Samar Sleiman, Rola Chediak, Marwa Jaber and Dania El Ashi to discuss Dr. Haidar's plan to revive AREC website and promote AREC services and accommodation.

#### **Training Workshops:**

- Mrs. Zeina Tomey and Mr. Wassim Abiad visited AREC on September 19 to provide AREC staff with the mandatory Harassment & Discrimination training course.
- Dean Mohtar and Dr. Haidar approved Mr. Nicolas El Haddad's visit to the international agricultural fair that took place in Germany-Hannover from 10-16 November 2019. Agritechnica is the world's number 1 and largest leading trade fair for agricultural machinery and equipment and in the introduction of innovations.

#### **Teaching:**

- Sixteen AGR III students continued their spring and summer semesters at AREC.
- Acquainting the students with different practical farm operations on daily basis.
- Preparing the necessary tools for different labs.
- Demonstrating the different systems of engines and the use of farm machinery.
- Providing assistance to the students in the implementation of their projects.
- Providing accommodation and teaching facilities to AUB visiting-professors and students.
- Helping the students in their undergraduate and graduate projects.
- Helping students in opening their own business in vegetable production.

#### **Services:**

- Performing various operations at the botanical garden, saffron, vineyard, apples, stone fruits and pomegranate.
- Providing assistance to Drs. Bashour, Haidar, Farran, Saoud, Salam to carry on their research trials:
  - Cover crops for *Orobanche* management in potato, Dr. Mustapha Haidar
  - Management of potato growth with fertilizers, Dr. Isam Bashour
  - Mapping water use, Phenology and Productivity in Agricultural Landscapes by Fusing Multi-Sensor Data Products, Dr. Hadi Jaafar
  - Breeder pullets trial, Dr. Mohamad Farran
  - Integrated aquaculture-agriculture system: biological control of insects with *Amblyseius swirskii* and *Phytoseiulus persimilis* in pepper, Drs. Imad Saoud, Mustapha Haidar and Yusuf Abu-Jawdeh
  - Broiler production and management in solar poultry house, Dr. Darine Salam
- Assisting ICARDA staff in various operations.

- Providing accommodation to ICARDA staff & several research assistants .
- Performing various operations at the conservation agriculture plots.
- Performing various operations at the botanical garden, saffron, vineyard, apples, stone fruits and pomegranate.
- Providing assistance to UNIFERT company in their seed trials.
- Providing lodging and assistance to different faculty members and students.
- Long-term taking care of ewes, rams and pigs for the experiment conducted by Drs. Bassem Youssef and Omeis (Department of Radiation Oncology, Medical Center).
- Supplying AUB community with super sweet corn, apples, and potato.

#### **Strategic Challenges:**

- Limited water supply-Tackle low water table with alternatives.
- Making AREC financially sustainable.
- Looking for more alternative energy production systems in order to reduce AREC's generated power.
- Operating the newly rehabilitated and remodeled conventional poultry house using alternative energy.

#### **Future Goals and Plans:**

- Establishing, renovating and acquiring commodities for an Integrated Water Resource Management for Semi-arid Condition: A Demonstration Project, funded by ASHA, will be implemented at AREC, to enhance water harvesting and water security. ASHA support will allow the university to continue to deliver high standards of education, research and health services, and to increase its outreach and community service to the underserved population in Lebanon including refugees and their host communities. AUB as a not-for-profit institution of higher learning (School) intends to invest in a low-energy rainwater-harvesting unit and a wastewater treatment and reuse unit.
- Becoming a regional hub for technology development and experimentation.
- Establishing a composting plant recycling farm wastes and technology transfer for the neighborhood.
- Becoming a regional reference for consultation on opportunities in renewable resources, the Water-Energy-Food-Health Nexus, and sustainability.
- Converting AREC to a complete green energy center so as to become a showcase of various renewable energy applications.
- Widening the partnership base with NGOs and the private sector.
- Transforming AREC into a financially stable center of excellence.
- Becoming a platform for rural development.
- Enhancing Ecotourism.
- Digging a new well or making a huge pool to be fed by Sbat River and the available water at the different wells during winter.

### **B. Environment and Sustainable Development Unit (ESDU)**

*Prepared by: Dr. Shadi Hamadeh, ESDU Director, Dr. Mabelle Chedid, ESDU Executive Officer and Mrs. Hind Naim, Communication Officer*

**Personnel:**

Shadi Hamadeh, PhD, Director  
 Mabelle Chedid, PhD, Executive Officer  
 Diana Abi Said, MS, Admin and Financial Officer  
 Sarah Karam, MS, Monitoring and Evaluation officer  
 Juliette Amidi, MS, REEF Facilitator  
 Hind Naim, BS, Communication Officer  
 Marwa Soubra, MS, Nutrition Officer  
 Nadim Rawda, MS, Trainer  
 Petra Chedid, BS, Rural Tourism and Outreach Officer  
 Omar Jarroush, BS, Field and Outreach Officer  
 Yasmina Olabi, MS, Food Safety Officer  
 Haydar Sleiman, MS, Agriculture Team  
 Joanna Elias, MS, Outreach Officer  
 Zein Khatoun, MS, Outreach Officer  
 Ingrid Abou Zeid, BS, Marketing Officer  
 Nicolas Gholam BS, Outreach Officer  
 Lea Saleme, BS, Assistant Project Coordinator  
 Gaëlle Abboud, BS, M&E Officer  
 Anky Keyrouz, Admin and financial officer  
 Cynthia Kreidy, Project Coordinator  
 Lamiisse Khairallah, Assistant Project Coordinator  
 Tatiana Awad, M&E Officer  
 Pierre Farhat, Site Manager  
 Hussam Taha, Outreach Officer  
 Yara Ibrahim, Outreach Officer  
 Afif Wehbe, Outreach Officer  
 Jihad Moussawi, PhD, Outreach Officer  
 Maguy El Hajj Hassan, Outreach Officer  
 Sarah Hamieh, Outreach Officer  
 Dalia Mahmoud, Field Officer  
 Yara Ibrahim, Outreach Officer  
 Abdelkarim Al Ajal, Outreach Officer  
 Youmna Iskandarani, MS, Trainer  
 Noura Saboun, Trainer  
 Maha El Solh, Trainer  
 Hanna Mkhayel, Trainer  
 Youssef Abou Nakad, Trainer  
 Rebecca Khoury, Trainer  
 Walid Al Hakeem, Trainer  
 Suheil Rawda, Trainer  
 Simona Antonios, Trainer  
 Jameel Dabbagh, Copywriter  
 Samar Bou Ghanem, Graphic Designer  
 Ghida El Dirany, Marketing officer  
 Carla Chami, Marketing officer

**Highlights on ESDU Activities during 2019-20:**

- In response to the catastrophic explosion that devastated Beirut on August 4th, ESDU and FHF launched an emergency relief effort called “Food For Beirut” under the Ardi Ardak initiative to offer daily hot meals to the vulnerable victims of the Beirut blast. The operation continued by distributing mouneh boxes to displaced citizens who are not able to cook in their kitchens or live in temporary shelters. The ingredients of the mouneh boxes were from local farmers and producers and local SMEs and coops in rural areas. More than 3000 hot meals and 730 mouneh parcels were distributed.
- In partnership with ACTED, ESDU received early June, a UNDP grant for the implementation of “Addressing immediate socio-economic impacts of COVID-19: Subsistence support for Host and Refugee Populations in Lebanon” over 6 months starting July 2020. The **832,600 USD** grant will provide livelihood assets support as well as technical support and market linkages to 28 entities (including MSMEs, small-holder farmers and cooperatives) and 590 direct beneficiaries (as either MSME/cooperative members, farmers or laborers) to expand production and continue to produce food for the communities and generate income in the South and Bekaa.
- Within WFP’s Program, Enhancing the Livelihoods of Vulnerable Lebanese Host Communities and Syrian Refugees through Food Assistance for Training (FFT) Activities, ESDU was granted a **1,667,967USD** to implement Window 1 Short Term FFT activities focusing on enhancement of vulnerable individuals and Window 2 Long-Term Capacity Building Support activities focusing on cooperatives and SMEs. This project extends over a 10 months period (June 2020 – March 2021) and will be implemented in Bekaa, Northeast Baalbek and the North by ESDU in partnership with LLWB and COSPE. In light of the current socio-economic crisis, this project aims at promoting the local food system by addressing the main gaps in the targeted value chains (dairy and fruits and vegetables) through promoting small-scale farmers/producer, enhancing product quality, integrating innovation in authentic food production, promoting sustainable agricultural practices, and facilitating market linkages.
- ESDU together with the LDEM department are still implementing MedSNAIL a grant of **€360,840** from the ENI CBC Mediterranean Sea Basin Program. MedSNAIL aims to tackle the socio-economic and environmental challenges in the agro-food sector by fostering the valorization and developing small-scale traditional agro-food value chains using enhanced market potential and socio-environmental sustainability. Project activities kicked off since the beginning of 2020, it built on the well-established experience, principles, and methods of SlowFood (project partner), an international grassroots organization promoting traditional food with a strong focus on biodiversity preservation.
- ESDU with its partners ACTED, ABAAD and DOT received from the UNDP two grants of **1,130,445 USD** and **1,300,000 USD** to implement their project entitled "Strengthening Women’s Resilience in a Time of Crisis" to be implemented in the South and Bekaa respectively. The project seeks to increase vulnerable women’s access to economic opportunities in South Lebanon while building stakeholders’ engagement to address existing barriers and advocate for inclusive economic development planning. ESDU is specifically building the capacity of Lebanese and

displaced women on different value chains including freekeh and aromatic plants production, vegetables, rural tourism and handcrafts. Project activities started in the beginning 2020 and will stretch over 28 months.

- In light of the current socioeconomic crisis, ESDU launched Ardi Ardak national food security initiative in collaboration with LLWB, FHF & Zico House. Ardi Ardak aims at reviving the food security sector by promoting small scale holders with a special focus on rural women and youth. The national initiative has a network of initiatives that promotes self-sufficiency & access to markets.
- During 2019 ESDU continued empowering local and small-scale agro-food processors all over Lebanon not only through capacity building but also its marketing network and its farmers' markets "Souk aal Soul".
- On the academic level, ESDU continues to support the RCODE MS program by linking the students to its development projects and activities. It also hosted several lecturers from Lebanon and abroad to share their experience in innovations in the development sector. ESDU also organized different workshops linked to Ardi Ardak project.
- ESDU won the Khalifa International Date Palm and Agricultural Innovation Award in Abu Dhabi for executing and managing "CLIMAT" project. CLIMAT is a one-year Food For Training project implemented during 2019 in Northeast Baalbeck and West Bekaa Lebanon, funded by the German Cooperation through the World Food Programme.
- ESDU in partnership with FHF, LLWB and Berytech, received in July 2020 a UNDP grant for the implementation of the project "Responding to the Socio-Economic Crisis: Promoting Self-Sufficiency and Enhancing Production". The project aims to promote the self-sufficiency of vulnerable communities and enhance local production (sustainable agriculture and food processing) by establishing urban agriculture demo-units in Beirut and Tripoli and an agri-food lab in Zico House. The project will also serve to expand the production and sustain the self-sufficiency of 50 entities including farmers, cooperatives, MSMEs and start-ups through short-term labor force support and it includes a "cash for work" and a "cash for training" for 420 Lebanese and Syrians.

#### **Strategic Challenges:**

- Establish the engagement unit in the greenhouse area.
- Adapt to the financial and Covid-19 crises.

### **C. Rural Community Development (RCODE) MS Program**

*Prepared by: Dr. Giuliano Martiniello, RCODE Coordinator, Diana M. Abi-Said, RCODE, Senior RA, Liaison officer ESDU/RCODE*

#### **Academic Updates and Students' enrollment:**

- The program offered six core graduate courses (RCOD341, RCOD342, RCOD 343, RCOD 344, RCOD305, RCOD304, and four FAFS specialized electives (AGSC 376, 389, LDEM 630, and FSEC 310), during the reporting period.
- Received a total of 47 new applications to the RCODE program: (Fall: 5 applicants – Spring: 43 applicants- Approved 31, rejected 16 no. of applicants).
- Twenty one graduate students are enrolled in the RCODE program.



- Graduating students who completed their RCODE masters graduate requirements:
  - Fall 2019: Sarah Karam, and Ibrahim Bahati
  - Spring 2020: Lamisse Khairallah, and Shalimar Sinno
  - July 2020: Martina Angella

**Personnel:**

- Full-time Faculty / RCODE committee members:

Giuliano Martiniello	Assistant Professor/ RCODE coordinator
Shady Hamadeh	Professor
Rami Zurayk	Professor
Ali Chalak	Associate Professor
Lamis Jomaa	Assistant Professor

- RCODE RAs:

Diana Marroush Abi-Said	Senior Research Assistant
Sarah Karam	RA – Co-instructor – RCODE344

- Graduate Fellowship Assistants (GFA)/Master Card Foundation programs (MCF) and Middle East Partnership Initiatives (MEPI):

Sarah Zayat	Fall 2018, Spring 2019, Fall 2019
Nicolas Gholam	Spring 2019, Fall 2019, Spring 2020
Lamisse Khairallah	Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019
Ghida Al Dirani (new)	Fall 2019-2020, Spring 2020

- MCF /MEPI Students:

Shukri Islow	MCF
Ibrahim Bahati	MCF
Hikmat Al Khansa	MCF
Rania BouSaid (Fall 2019-2020)	MEPI
Aya Hamzeh (Fall 2019-2020)	MEPI

**Services (Dr. Martiniello):**

<b>AUB</b>	<b>Other</b>
Working Committee on the New Social Sciences Department.	Member of Advisory Board and Researcher (2016-2020): Narratives of Conflict, Climate, and Development: Reenvisioning Sustainability from Post-War Northern Uganda. AHRC/ESRC PaCCS Conflict Theme Innovation Award, Reference AH/P008232/1, in collaboration with Dr. Adam Branch, Centre for African Studies, University of Cambridge.
Working on extending scholarship opportunities provided by the Master Card Foundation to	Editorial Assistant, Agrarian South: Journal of Political Economy, 2016-present

African Students	
Working in close collaboration with the librarians at FAFS, to expand and develop the library collections on rural development references, particularly with regard to the MENA region AUB Publication Committee (2017-Present) Member of the AUB Faculty of Agriculture and Food Sciences Research Committee since 2016	Contributing Editor, Review of African Political Economy, 2011-present  Member of the IIPPE - Africa Group - (International Initiative in Promoting the Study of Political Economy).  Journal Refereeing: Journal of Peasant Studies, Journal of Agrarian Change, Journal of Rural Studies, Third World Quarterly, Geoforum, Community Development Journal, Sustainability, Land Use Policy, Review of African Political Economy, Canadian Journal of Development Studies, Journal of Contemporary African Studies, Africa Security Review.

**Thesis Supervision (Dr. Martiniello) - MSc Rural Community Development:**

Student Name	Thesis Title
Alam Janbein	Family Farming in Lebanon among challenges and opportunities: the case of Baalback – Hermel ( <i>requested Leave of absence</i> )
Shalimar Sinno	The productive Campus: The potential of an urban agricultural initiative at the American university of Beirut, Lebanon – Co-advisor ( <i>completed, Spring 2020</i> )
Sarah Karam	The effect of the protected areas on rural communities. Jabal Moussa Biosphere Reserve Case Study ( <i>completed Fall 2019-2020</i> )
Ibrahim Bahati	Rethinking Rural Development from a Smallholder's Perspective: How has the Commercialization of Sugar impacted on Rural Livelihoods in Hoima, Uganda? ( <i>completed Fall 2019-2020</i> )
Lamisse Khairallh	Role of microfinance on small-scale farmers and dairy processors: A case study on the goat sector in West Bekaa and Shouf areas in Lebanon. ( <i>completed, Spring 2020</i> )
Elias Arja	The Effect of Information and Communication Technology (ICT) on Agrarian Livelihoods in North-East Baalbek ( <i>in progress</i> )
Shukri Ahmed	Project: Livelihoods in Mogadishu: Exploring Humanitarian Aid and Internally Displaced Women" A qualitative Study ( <i>in progress – changed to Non-thesis</i> )
Martina Angella	Implications of largescale land acquisition on agro-pastoral livelihoods in Karamoja; a case of mining in Rupa Subcounty in Moroto district ( <i>Defense Date: July 2020</i> )

**Research: Publications, Distinctions, Events and Funding:**

<b>Conferences, Special Lectures, Workshops and Travel Activity</b>
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**Workshops**

Dr. Martiniello participated in the New Regionalisms and the Middle East Workshop, with a presentation entitled: “Manufactured Regional Scarcity: The Middle East and North Africa under Global Food Regimes, organized by the Arab Council for the Social Sciences, Beirut - Le Bristol on Feb. 8-9, 2020.

Dr. Martiniello participated in the workshop on Structural Transformation of the Countryside, Berlin’s Freie Universität, organized by Freie Universität and the “Glocon: Global change-Local Conflicts”. where he talked about: Agrarian Contestations at the Sugarcane Frontier in Eastern Africa. Hotel Aquino, Berlin 24th and 25th October 2019.

**Funding**

Dr. Martiniello received a URB Grant for a one year project (14,300USD) – entitled: **“The Effect of Protected Areas on Rural Community Development; Jabal Moussa Biosphere Reserve Case Study”** July 1, 2019 – June 30, 2020

Narratives of Conflict, Climate, and Development: Reenvisioning Sustainability from Post-War Northern Uganda. AHRC/ESRC PaCCS Conflict Theme Innovation Award, Reference AH/P008232/1, in collaboration with Dr. Adam Branch, Centre for African Studies, University of Cambridge.(Member of Advisory Board and Researcher. 2016-2020

**Research Publications:**

(2020) Bitter sugarification: sugar frontier and contract farming in Uganda, *Globalizations*, <https://www.tandfonline.com/doi/full/10.1080/14747731.2020.1794564>

(2019) Social conflict and agrarian change in Uganda’s countryside, *Journal of Agrarian Change*, 19, 3, 550-568 <https://onlinelibrary.wiley.com/doi/full/10.1111/joac.12306>

(2019) Contracting sugarcane farming in global agricultural value chains in Eastern Africa: debates, dynamics and struggles, *Agrarian South: Journal of Political Economy*, 8:1-2, 208-231

**Collaborations:**

RCODE and ESDU collaborates together by providing support to RCODE graduate students enrolled in the practicum course and providing graduate students with internships at the different ongoing ESDU projects

**Strategic Challenges:**

- To rethink teaching practices and students’ field work, during the current occurring COVID-19 crisis, where social interaction and field work are fundamental.
- Applying new strategies that encourage the enrollment of new students, especially international students.
- To secure more scholarships.
- Increase in the GFAP credits.
- RCODE program needs to proceed with the development of a strategy for providing an exchange program with international universities working in the field of rural development.

- The program needs to establish a form of external visiting experts' participation, international organizations and leading scholars in the field of rural development, migrations and sustainable ecologies in the Mediterranean area.
- The program would benefit from an increase in funding for students' fieldwork activities that will help the program start developing an initial documentation of rural development challenges and case studies in Lebanon, to consolidate the profile of the research activities undertaken in MENA region.

#### **Major Initiatives or Accomplishments:**

Two RCODE students received the following awards:

- Ibrahim Bahati: Abdul Hadi Debs Endowment Award for Academic Excellence.
- Sarah Karam: Dean Thomas Sutherland Prize for Graduate Excellence.

Students travel grant:

- Ibrahim Bahati has received the student travel grant for year 2018-2019.
- Sarah Karam is nominated for the student travel grant for year 2019-2020.

### **D. Food Security Program (FSP)**

*Prepared by: Rachel Bahn, FSP Coordinator, Abed Al Kareem Yehya, RA, Dr. Martin Keulertz, Assistant Professor and Chairperson of Food Security Program*

#### **Personnel:**

Martin Keulertz, Assistant Professor; Rachel Bahn, Coordinator; Abed Al Kareem Yehya, Research Assistant.

#### **Highlights of Food Security Program Activities during 2019-20:**

The Food Security Program (FSP) continued its successful oversight of the MS in food security degree, with a total enrollment of 26 students (including four MasterCard Foundation Scholars) as of spring 2020. Ten students have satisfied the requirements to graduate from the MS in food security degree since launch.

The FSP has hosted events and expert speakers on topics relevant to food and nutrition security in 2019/2020, including a launch event for the book *The Oxford Handbook of Food, Water and Society* (November 8, 2019); and a visit of Dr. Eckart Woertz, Director of the Institute of Middle East Studies at the German Institute of Global and Area Studies, who delivered a lecture on "Food Politics in the Middle East" (March 11, 2020). In response to the various challenges posed by the COVID-19 pandemic for food and nutrition security, the FSP launched a webinar series entitled "The Impact of COVID-19 on Global Food Security" (April 23-June 18, 2020). Its seven sessions addressed topics including trade and supply chains, agricultural production and water resource scarcity, MENA-specific concerns, and gender and other vulnerability dynamics; and channeled via Zoom, Facebook, and [YouTube](#) to reach a global audience.

Faculty associated with the FSP continue to publish academic and policy-relevant research, including: "[Governing the 'Water-Energy-Food Nexus' on the National Level](#)" in *Emirates Diplomatic Academy's Arab Region SDG Index and Dashboards Report 2019* (Mohtar &

Keulertz, 2019); “Water and Covid-19: flattening the much bigger curve” in *Water International* (Keulertz, Mulligan, & Allan, 2020); “New estimates of water footprint for animal products in fifteen countries of the Middle East and North Africa (2010-2016)” in *Water Resources and Industry* (Jaafar & Daghir, 2019); “Food retail expansion patterns in Sub-Saharan Africa and the Middle East and North Africa: Institutional and regional perspectives” in *Agribusiness* (Bahn & Abebe, 2019); “Food insecurity is associated with lower adherence to the Mediterranean dietary pattern among Lebanese adolescents: a cross-sectional national study” in *European Journal of Nutrition* (Naja et al., 2019); and “Drivers for the implementation of market-based food safety management systems: Evidence from Lebanon” in *Food Science and Nutrition* (Abebe et al., 2020).

Recent grant funding awarded to FSP and its associated faculty members and staff includes an Erasmus Plus grant in the amount of EUR 30,000 to support collaborative research and exchange between AUB and Kassel University.

### **Strategic Challenges and Advances:**

In light of extensive disruptions to the academic setting during 2019/2020, the FSP worked with its contributing faculty members and students to ensure satisfactory delivery of courses and to carefully guide students enrolled in the MS in food security degree program. Students were contacted to follow up on any concerns and address their questions, particularly students facing disruptions to thesis research.

The FSP routinely advises students pursuing the MS in food security degree on the importance of following a standard academic calendar and of identifying and preparing a thesis or project on an appropriate timeline (e.g., identification of topic by end of second semester of enrollment). Despite this, some graduate students have faced personal issues linked to financial concerns and mental health issues that extended their time-to-degree. Appropriate action was taken to address extenuating circumstances, which reflect the diversity and challenges that are found among our student population across AUB. However, these types of issues are expected to increase in light of Lebanon’s challenging economic and public health situations.

The FSP continuously seeks to recruit a talented student body with the potential to thrive in an academic setting, including to contribute to region-leading research. The FSP Executive Committee has at times discussed whether and how to increase selectivity of admissions into the degree program. Current admission requirements and review processes do not provide for higher selectivity: If an applicant has sufficient GPA and English language scores, admission is typically granted. Previous decisions by the FSP Executive Committee to reject applicants on the basis of a weak statement of purpose or admit on academic probation given weak academic performance have been questioned and at times overruled at subsequent stages of the admissions review process. This issue has been raised to the attention of the Dean of FAFS, who expressed support for efforts to raise standards and support appropriate levels of selectivity in admissions decisions.

The FSP is currently in the process of re-designing and launching a professional diploma program as an online course offering, with the objective to expand our reach and attract a wider pool of potential candidates, including professionals who are unable or unwilling to

travel to Lebanon to pursue a full, two-year MS degree program. The diploma will be offered as an online course that permits academically successful students to transfer credits towards the MS degree program (subject to a second application process). The proposal for the professional diploma program is currently pending before the Board of Graduate Studies, and requires several additional internal and external approvals prior to its launch (tentatively spring 2021). The re-design and launch process is expected to be time- and resource-intensive, as per the development of other online courses at AUB.

The FSP has offered the MS in food security degree since fall 2016. A current strategic challenge is therefore to evaluate the program to confirm that its design and course content are optimal to meet both the program learning objectives of the degree as well as tailored to the needs of both students and the labor market. Sufficient evidence is available to undertake a comprehensive review of the core curriculum, identify areas for improvement, and adopt and implement an improvement plan as appropriate. Areas for focus may include revisions or improvements to courses with relatively lower student assessment scores.

## **V. Departmental Reports**

### **A. Department of Agriculture (AGRI)**

*Prepared by: Dr. Isam Bashour, Interim Chairperson of AGRI Department, and Mr. Rami El Hussein, Administrative Officer*

#### **1. Highlights**

The department of Agriculture, took the unprecedented step of going fully online due to the COVID-19 measures adopted by most of the faculties at AUB. The unusual circumstances allowed for the online initiative, once on hold, to relaunch in full swing. Several collaborations with US universities allowed for the efficient training of the majority of faculty and staff. AGRI in step with the FAFS vision to foster the wellbeing of the people and the ecosystem they inhabit, had successfully hired 3 new faculty members, and initiated its new curriculum. Gradual implementation of the new program will lead to a seamless transfer into the improved setup of graduation requirements. The learning outcomes will be evaluated and continuously reassessed to ensure the acquired skills are streamlined with the FAFS research agenda and vision as well as AUB's mission as a leading educational institution and research pioneer in Lebanon and the region. As last year, the department produced several publications, organized workshops, and partook in events along those lines. As a part of the department's involvement in the developing rural production and farming sustainability, faculty members are keen on establishing direct relations with producers and processors like farmer's markets. Through the Environment and Sustainable Development Unit (ESDU), producers of all scales are invited to sell their produce in the FAFS area. Many students who get their first encounter with the direct farmer supply process take up the skill and excel in the circuit. The department being aware of critical agrarian approaches is adamant on providing service and advice regardless of farm size or available resources. The department's commitment to advancing sustainable agricultural practices and promoting systemic food

secure policy forms the core of the research agenda. Alternative pest management is an important venue in reducing herbicide use and contamination of aquifers and water resources. The fields of natural predators and integrated pest management saw important research contributions by faculty and students. The department's research agenda aims to minimize the impact of intensive production, sine qua non for a food secure environment. The department continued its investigative research into the effect of antibiotics presence in irrigation water and extent of its absorption into arable crops. Long term effect of contaminants in irrigation water poses a prime concern if on the long term, for both health specialists and agricultural engineers alike. It is part of the research agenda and an intrinsic dimension of the WEFRAH focus. The department successfully recruited 3 new faculty members from a pool of distinguished and experienced researchers in the field. Dr. Sandra brings an expertise in Conservation Agriculture, a field that distinguishes AUB in the region since it was introduced to Lebanon out of the research collaboration with the Agriculture department. Dr. Yanni's outlook will include the infrastructure, which augurs well in the context of interdisciplinary collaboration between faculties at AUB. The expertise Dr. Yanni brings on crop water requirement, reduced tillage and cover crops also contribute to the department's capital in the WEFRAH initiative. Her carbon research is a well suited skill in a climate change oriented research agenda. The department also offered the position of Horticulture to Dr. Walid El Kayal, his first rank publications in the field of biotech set the bar high. Dr. El Kayal developed a distinguished approach to sustainable research, where far reaching results and innovative trial designs can be completed without requiring all the big budget equipment. His know-how and connections in the field will be a great resource. Dr. El Kayal's expertise in grape production will also be a boon to the plan of introducing viticulture to AREC. He pointed out the transferability of these techniques to the varied requirements of the varied fruit production orchard at AREC. Dr. Kassahun Asmari became the department's animal pathologist. He brings a prestigious teaching experience and a distinguished research career in the field of small ruminants and zoonotic disease, proving to be a critical aspect of human health and food security. The renovation of AREC and recentralization of hands-on research in the Bekaa campus is an important aspect of the department's research agenda. The strategic value and the size allow flexibility in experiment design and facilitate interdisciplinary projects, becoming a hallmark of current research philosophy.

## 2. Personnel

### Full-time Faculty:

Isam Bashour	Professor/Interim Chair
Youssef Abou-Jawdah	Professor
Shady Hamadeh	Professor/ ESDU Director
Jad Chaaban	Associate Professor
Mustapha Haidar	Professor/ AREC Director
Hadi Jaafar	Associate Professor
Lina Jaber	Lecturer
Mohamad Farran	Professor
Gumataw Abebe	Assistant Professor
Giuliano Martiniello	Assistant Professor

Ali Chalak	Associate Professor
Rachel Bahn	Instructor
Hana Sobh	Instructor
Sandra Yanni	Assistant Professor
Walid El Kayal	Assistant Professor
Wondim Kassahun Asmare	Professor

**Part-time Faculty:**

Sami Saad	Instructor	Fall
Youssef Doughan	Lecturer	Fall, Spring
Hachem El Hussein	Lecturer	Fall, Spring
Rami Ollaik	Instructor	Fall, Spring, Summer
Mazen Tamer	Lecturer	Fall
Amer Najm	Lecturer	Summer
Nabil Nemer	Lecturer	Fall
George Battikha	Lecturer	Spring
Sarah Osmane	Lecturer	Fall
Makram Bou Nassar	Instructor	Spring, Summer
Faouzi Issa	Lecturer	Spring

**Full-time Staff:**

Razan Dbaibo	Departmental Research Assistant
Rami Elhusseini	Administrative Officer

**Graduate Assistants:**

Aya Fardoun	Fall 2019
Mohammad Kaddoura	Fall 2019
Mahmoud Fawwaz	Fall 2019, Spring 2020
Hanna Mikhael	Fall 2019, Spring 2020
Bouchra Masry (El)	Fall 2019, Spring 2020
Imad Keniar	Fall 2019, Spring 2020
Moudhafar Abu-Altemen	Fall 2019, Spring 2020
Lora Saleh El Moussawi	Fall 2019
Walid El Hakeem	Fall 2019, Spring 2020
Roya Mourad	Fall 2019
Hiba Naim	Fall 2019
Jad El Chouwani	Fall 2019, Spring 2020
Lara Sujud	Fall 2019, Spring 2020
Rima Hijazi	Spring 2020

**3. Teaching Activities: AGRI Dept****Fall 2019–20 Undergraduate:**

<b>Course</b>	<b>Credits</b>	<b>Enrollment</b>	<b>Instructor(s)</b>
AGSC 201	2.0	37	L. Jaber



AGSC 204	3.0	18	M. El Tamer
AGSC 205	3.0		Hamadeh/Jaber
AGSC 207	3.0		Yanni
AGSC 212 (sect. 1)	2.0	30	J. Chaaban
AGSC 212 (sect. 2)	2.0	35	Y. Khalil
AGSC 212 Recitation (sect. 1)	1.0	30	S. Saad
AGSC 212 Recitation (sect. 2)	1.0	35	S. Saad
AGSC 215	3.0	14	I. Bashour
AGSC 219 (sect. 1)	3.0	15	R. Ollaik
AGSC 219 (sect. 2)	3.0	12	R. Ollaik
AGSC 220	3.0	16	M. El Tamer
AGSC 221	3.0	18	N. Nemer
AGSC 232	2.0	15	Y. Abou Jawdeh
AGSC 232 (Lab)	1.0	15	H. Sobh
AGSC 235	2.0	22	S. Osmane
AGSC 241	3.0	11	Y. Doughan
AGSC 287	1.0		F. Issa
AGSC 295	3.0	10	Y. Abou Jawdeh
AGSC 296	1.0	16	L. Jaber
AGBU 211	3.0	20	G. Abebe
AGBU 213	3.0	14	H. El Housseini
AGBU 236	3.0	16	R. Bahn
AGBU 239	0	19	R. Bahn
AGBU 248	3.0	12	G. Abebe
AVSC 220	1.5	20	M. Farran
AVSC 220	1.5	20	L. Jaber
AVSC 243	3.0	19	S. Hamadeh
AVSC 271	3.0	18	M. Farran
AVSC 275	3.0	15	L. Jaber
AVSC 281	3.0	19	M. Farran

**Fall 2019-20 Graduate Courses:**

<b>Course</b>	<b>Credits</b>	<b>Enrollment</b>	<b>Instructor(s)</b>
AGSC 301	1.5	5	S. Hamadeh
AGSC 301	1.5	5	A. Chalak
AGSC 310	3.0	3	H. Jaafar
AGSC 312	3.0	7	I. Bashour
AGSC 323	2.0	5	Y. Abou Jawdeh
AGSC 323 (lab)	1.0	5	H. Sobh
AGSC 334	3.0	5	H. Jaafar
AGSC 395	1.0	7	L. Jaber
AVSC 304	3.0	3	H. Shaib
AVSC 305	3.0	3	K. Asmare
AVSC 307	3.0	3	M. Farran
AVSC 395	1.0	1	L. Jaber

Spring 2019-20 Undergraduate:

Course	Credits	Enrollment	Instructor
AGSC 201	2.0	48	L. Jaber
AGSC 202	1.5	12	S. Yanni
AGSC 203 Lect.	1.5	20	W. El Kayal
AGSC 203 Lect.	1.0	20	M. Haidar
AGSC 203 Lab	1.0	20	H. Sobh
AGSC 206	3.0	12	S. Yanni
AGSC 212 (sect. 1)	2.0	26	A. Chaaban
AGSC 212 (sect. 2)	2.0	30	A. Chalakh
AGSC 212 Recitation (sect. 1)	1.0	26	S. Saad
AGSC 212 Recitation (sect. 2)	1.0	30	S. Saad
AGBU 213	3.0	14	H. El Housseini
AGSC 219 (sect. 1)	3.0	14	R. Ollaik
AGSC 219 (sect. 2)	3.0	12	R. Ollaik
AGSC 222	1.0	16	M. Haidar
AGSC 224	3.0	16	W. El Kayal
AGSC 225	3.0	12	M. Keulertz
AGSC 228	3.0	16	R. Bashour
AGSC 231	3.0	16	M. El Tamer
AGSC 253	3.0	26	W. El Kayal
AGSC 265	3.0	15	I. Bashour
AGSC 278	3.0	14	G. Battikha
AGSC 284	3.0	16	M. Haidar
AGSC 299	2.0	1	I. Bashour
AVSC 220	1.5	23	M. Farran
AVSC 220	1.5	22	L. Jaber
AVSC 222	3.0	16	L. Jaber
AVSC 224	3.0	15	H. Shaib
AGBU 210	3.0	17	G. Abebe
AGBU 213	3.0	13	H. El Housseini
AGBU 240	0	21	M. Bou Nassar
AGBU 255	3.0	20	Y. Doughan
AGBU 292	3.0	19	G. Abebe
AGBU 292	2.0	19	R. Bahn

Spring 2019-20 Graduate Courses:

Course	Credits	Enrollment	Instructor
AGSC 301	3.0	11	S. Kharroubi
AGSC 303	3.0	4	J. Chaaban
AGSC 336	3.0	3	K. Asmare
AGSC 328	3.0	3	H. Jaafar
AGSC 389	3.0	8	G. Abebe
AGSC 384	3.0	5	J. Chaaban
AGSC 395	1.0	6	L. Jaber

Summer 2019–20:

Course	Credits	Enrollment	Instructor
AGSC 219	3.0	14	R. Ollaik
AGSC 223	2.0	10	M. Haidar
AGSC 226	3.0	10	A. Najm
AGBU 229	3.0	14	M. Bou Nassar
AGBU 236	3.0	1	J. Chaaban
AGBU 256	1.0	15	M. Bou Nassar
AVSC 226	3.0	10	M. Farran

**4. Completed Theses**

- Mr. **Albert Ayinpoya Akafari** – Land acquisition for gold mining and its effects on smallholder farmers' livelihoods in the Talensi District of, Ghana. Advisor: Gumataw Abebe September 2019
- Mr. **Gadson Asimwe** - Smart irrigation for sweet corn: Evapotranspiration-based or soil moisture sensor-based scheduling technique. Advisor: Dr. Hadi Jaafar Sept. 2019
- Mr. **Naji EL Beirouthy**- Trends in snow cover and snow water equivalent using remotely sensed data in Lebanon, Advisor: Dr. Hadi Jaafar Sep. 2019
- Ms. **Roya Mourad**- Modeling and validation of Sentinel-2 and Landsat-derived LAI and crop yield, Advisor: Dr. Hadi Jaafar Sep. 2019
- Ms. **Rachel Sfeir**- Horticultural performance of five open-pollinated tomato varieties under organic management. Advisor: Dr. Youssef Abou Jawdah Sep. 2019
- Ms. **Aya Haidar**- Changes in the Lebanese agrarian labor regimes in Lebanon after the Syrian crisis. Advisor: Dr. Ali Chalak Sep. 2019
- Mr. **Walid Al Hakeem**- Performance of Eimeria-challenged male broilers fed 2 ionophore–nicarbazin combinations. Advisor: Dr. Mohamad Farran, Aug. 2020
- Ms. **Nour Ezzeddine**- Integrated Pest Management of Greenhouse Pests by Locally Collected Entomopathogenic Fungi and Predatory Mites, Advisor: Dr. Youssef Abou Jawdah, May 2020
- Ms. **Fatima Abdallah**- Sustainable Biocontrol Of Greenhouse Vegetable Pests In Lebanon: Mass Production Of *Amblyseius Swirskii* And Its Efficacy Against Whiteflies And Thrips, Advisor: Dr. Youssef Abou Jawdah, May 2020

**5. Research Funding**Internal Grants: University Research Board (URB):

• Walid El Kayal	01-Jul-2020	30-Jun-2021	15,000.00\$
• Mirella Aoun	01-Jul-2020	30-Jun-2021	15,000.00\$
• Sandra Yanni	01-Jul-2020	30-Jun-2021	15,000.00\$
• Gumataw Abebe	01-Jul-2020	30-Jun-2021	13,000.00\$
• Shady Hamadeh	01-Jul-2020	30-Jun-2021	15,000.00\$
• Youssef Abu Jawdeh	01-Jul-2020	30-Jun-2021	12,000.00\$

Local, Regional and International Grants:

- **Dr. Chaaban**
  - CAMEALEON research on the impact of multi-purpose cash in combination with services on WASH and shelter outcome for Syrian refugees in Lebanon The Norwegian Refugee Council (NRC) 01-Sep-2020-31-Dec-2021 (\$100,152.00).
  - Conceptualizing, Measuring and Understanding Multidimensional Inequality in the Middle East and North Africa INSTITUTE OF INTERNATIONAL EDUCATION 23-Sep-2019-22-Nov-2019 (\$ 4,177.50).
- **Dr. Farran**
  - Lebanese National Council for Scientific Research for 2 years with a budget of 44,000,000 LL “Could the high cannabidiol low THC industrial hemp enhance the livelihood of farmers in the Beqaa region?”
- **Dr. Jaafar:**
  - Smart Irrigation using remote sensing and ML, Google.org –Tides, Foundation Lead PI (2019-2022) \$1,045,000
  - Integrating time-series ET, mapping into an operational, irrigation management, framework (ITSET) IHE-Delft DUPC2, Netherlands
  - Single PI \$115,000 2019-2021
  - Characterizing Field-Scale Water Use, Phenology and Productivity in Agricultural Landscapes using Multi-Sensor Data Fusion; NASA Grant 17-LCLUC17-0002- Sub-awarded by USDA (2018-2021), \$654,000 (Total; AUB PI share: \$64,000)
  - Assessing the water – energy nexus in the Beqaa Valley in Lebanon by estimating groundwater depletion using remote sensing; Munib and Angela Masri Institute of Energy and Natural Resources; (2018-2020) \$13,000
  - Energy Efficient Sensor Design for Precision Agriculture Applications using RF Wake-up and Harvesting; Lebanese National Center for Scientific Research. L-CNRS- Co-I (2018-2020) \$34,000

## 6. Publications

### \* Corresponding author

- DeBrouwer, E. J., Sriskantharajah, K., **El Kayal, W.**, Sullivan, J. A., Paliyath, G., & Subramanian, J.\* (2020). Pre-harvest hexanal spray reduces bitter pit and enhances post-harvest quality in ‘Honeycrisp’ apples (*Malus domestica* Borkh.). *Scientia Horticulturae*, 273, 109610. doi:10.1016/j.scienta.2020.109610
- **Farran, M. T.\***, **Shaib, H.**, Hakeem, W. G., Kaouk, Z. M., & Harkous, A. A. (2020). Performance of Eimeria-challenged male broilers fed 2 ionophore–nicarbazin combinations. *Journal of Applied Poultry Research*, 29(3), 684-691. doi:10.1016/j.japrr.2020.05.002

- **Martiniello, G.** (2020). Bitter sugarification: Sugar frontier and contract farming in Uganda. *Globalizations*, 1-17.
- Mourad, R., **Jaafar, H.\***, Anderson, M., & Gao, F. (2020). Assessment of leaf area index models using harmonized Landsat and Sentinel-2 surface reflectance data over a semi-arid irrigated landscape. *Remote Sensing*, 12(19). doi:10.3390/RS12193121
- **Abebe, G.\*** (2020). Effects of institutional pressures on the governance of food safety in emerging food supply chains: A case of the Lebanese food processors. *Agriculture and Human Values*. <https://doi.org/10.1007/s10460-020-10071-3>
- **Chalak, A.**, Ghandour, L.\*, Anouti, S., Nakkash, R., Yassin, N., & Afifi, R. (2020). The impact of broad-based vs targeted taxation on youth alcohol consumption in Lebanon. *Health Policy and Planning*, czaa018. <https://doi.org/10.1093/heapol/czaa018>
- El Gemayel, L. J., & **Bashour, I. I.\*** (2020). Mechanism of antibiotic uptake in plants. In M. Z. Hashmi (Ed.), *Antibiotics and antimicrobial resistance genes: Environmental occurrence and treatment technologies*, (pp. 177-193). Springer Nature.
- El Gemayel, L. J., **Bashour, I. I.\***, **Abou Jawdeh, Y.**, **Farran, M. T.**, & Farajalla, N. (2020). Effect of antibiotics on plant growth in a water culture. In M. Z. Hashmi (Ed.), *Antibiotics and antimicrobial resistance genes: Environmental occurrence and treatment technologies*, (pp. 239-253). Springer Nature.
- Hailu M., **Asmare K.\***, Gebremedhin E. Z., Sheferaw D., Gizaw D., Di Marco V., & Vitale M. (2020). Cryptosporidium and Giardia infections in dairy calves in southern Ethiopia. *Parasite Epidemiology and Control*, e00155. <https://doi.org/10.1016/j.parepi.2020.e00155>
- Sourenian, T., Mann, D., Li, S., Deng, X., **Jaafar, H.**, Kassem, I.I.\* (2020). The Dissemination of Multidrug Resistant E. coli Harboring the Mobile Colistin Resistance Gene, *mcr-1.1*, on Transmissible Plasmids to the Mediterranean Sea, *Journal of Global Antimicrobial Resistance*, 22, doi:<https://doi.org/10.1016/j.jgar.2020.05.007>
- **Youssef, S.A.**, **Bashour, I. I.\***, **Abou Jawdeh, Y.**, **Farran, M. T.**, & Farajalla, N. (2020). Uptake of gentamicin, oxytetracycline, and tylosin by lettuce and radish plants. In M. Z. Hashmi (Ed.), *Antibiotics and antimicrobial resistance genes: Environmental occurrence and treatment technologies*, (pp. 195-210). Springer Nature.
- **Abebe, G. K.\***, **Bahn, R. A.**, **Chalak, A.**, & Yehya, A. A. K. (2020). Drivers for the implementation of market-based food safety management systems: Evidence from Lebanon. *Food Science & Nutrition*, 8(2), 1082-1092. <https://doi.org/10.1002/fsn3.1394>
- Abed Al Ahad, M.\*, **Chalak, A.**, Fares, S., Mardigian, P., & Habib, R. R. (2020). Decentralization of solid waste management services in rural Lebanon: Barriers and opportunities. *Waste Management & Research*, 1-10. <https://doi.org/10.1177/0734242X20905115>
- **Aoun, M.\*** (2020). Assessment of a netting system for apple production in a Mediterranean semi-arid climate. In J. A. Fernandez, F. M. Del Amor, & A. Sadka (Eds.), *XI International Symposium on Protected Cultivation in Mild Winter Climates and I International Symposium on Nettings and Screens in Horticulture* (pp. 293-296). International Society for Horticultural Science. doi.org/10.17660/ActaHortic.2020.1268.39
- **Aoun, M.\*** (2020). Pesticides' impact on pollinators. In W. L. Filho, A. M. Azul, L. Brandli, P. G. Özuyar, & T. Wall (Eds.), *Zero hunger, Encyclopedia of the UN*

*Sustainable Development Goals*, (pp. 1-11). Springer. [https://doi.org/10.1007/978-3-319-69626-3\\_38-1](https://doi.org/10.1007/978-3-319-69626-3_38-1)

- **Aoun, M.\***, & Manja, K. (2020). Effects of a photoselective netting system on Fuji and Jonagold apples in a Mediterranean orchard. *Scientia Horticulturae*, 263, 109104. <https://doi.org/10.1016/j.scienta.2019.109104>
- **Elhusseini, R.**, Fares, E. J.\*, & Obeid, O. (2020). Phosphorus supplementation raised the heart rate of male water polo players during a randomised graded dryland exercise test. *BMJ Open Sport & Exercise Medicine*, 6(1), e000714. <https://doi.org/10.1136/bmjsem-2019-000714>
- Hassan, J., El-Gemayel, L., **Bashour, I.**, & Kassem, I. I. (2020). On the edge of a precipice: The global emergence and dissemination of plasmid-borne mcr genes that confer resistance to colistin, a last-resort antibiotic. In M. Z. Hashmi (Ed.), *Antibiotics and antimicrobial resistance genes in the environment* (pp. 155-182). Elsevier. <https://doi.org/10.1016/B978-0-12-818882-8.00010-3>
- **Jaafar, H. H.\***, & Ahmad, F. A. (2020). Time series trends of Landsat-based ET using automated calibration in METRIC and SEBAL: The Bekaa Valley, Lebanon. *Remote Sensing of Environment*, 238, 111034. <https://doi.org/10.1016/j.rse.2018.12.033>
- Saleh, G., El Darra, N.\*, Kharroubi, S., & **Farran, M. T.** (2020). Influence of storage conditions on quality and safety of eggs collected from Lebanese farms. *Food Control*, 111, 107058. <https://doi.org/10.1016/j.foodcont.2019.107058>
- **Yanni, S. F.\***, Helgason, B. L., Janzen, H. H., Ellert, B. H., & Gregorich, E. G. (2020). Warming effects on carbon dynamics and microbial communities in soils of diverse texture. *Soil Biology and Biochemistry*, 140, 107631. <https://doi.org/10.1016/j.soilbio.2019.107631>

## 7. Services

### • Dr. Abebe

AUB

- Member of the Library Committee, (Chair)
- Member of FAFS Strategic Plan Committee

Public Service

- Reviewer for the following journals: 1. World Development 2. Agricultural Systems 3. Food Policy 4. Food Security 5. British Food Journal 6. Journal of Agricultural Science and Technology 7. African Journal of Agricultural Research

### • Dr. Abou Jawdah

AUB

- Member of FAFS Advisory Committee
- Member of FAFS Space Committee
- Member of FAFS Social Committee

Public Service

- 2010-present, Scientific consultant on pesticide registration Committee, Lebanese Ministry of Agriculture
- Scientific consultant for the Lebanese Standards Institution (LIBNOR), Ministry of Industry, on establishing Maximum Residue Limits (MRLs) for pesticide residues in Lebanon
- **Dr. Martiniello**  
AUB
  - Member of FAFS Research Committee
  - Member of University Publications Committee
  - Public Service
  - Editorial Assistant for the Agrarian South: a Journal of Political Economy (2016-present)
  - Contributing Editor for the Review of African Political Economy (2011-present)
  - Chairperson of Master of Science in Rural Community Development, American University of Beirut (2016-present)
  - Faculty of Agricultural and Food Sciences Research Committee (2016-present)
  - Member of the IIPPE - Africa Group - (International Initiative in Promoting the Study of Political Economy)
  - Journal Refereeing: Journal of Peasant Studies, Journal of Agrarian Change, Journal of Rural Studies, Third World Quarterly, Geoforum, Community Development Journal, Sustainability, Land Use Policy, Review of African Political Economy, Canadian Journal of Development Studies, Journal of Contemporary African Studies, Africa Security Review
- **Dr. Chalak**  
AUB
  - Member of the Interfaculty Committee on Capacity Building in Food Security, Faculty of Agricultural and Food Sciences. (September 2018 – Present)
  - Acting Coordinator of the Rural Community Development (RCODE) M.Sc. Program, Faculty of Agricultural and Food Sciences. (February 2018 – August 2018 & June 2019 – August 2019)
  - Member of the Advisory Committee for the “Integrated Shelter and WASH response to meet basic needs of vulnerable families: Assessing refugee shelter modalities applied in three localities in Lebanon”, Issam Fares Institute for Public Policy and International Affairs, Save the Children (March 2018 – September 2019)
  - Member of the Curriculum Committee for the AUB-EARTH Global Master’s Program (GMP) in Health and Sustainable Development (October 2016 – Present)
  - Member of the FAFS Graduate Studies Committee (until 2021)
  - Member of the FAFS Social Committee
  - Member of the University Senate committee (Fall 2014 & 2015 – Present).
  - Member of the University Library Committee (2013 – 2015 & 2017 – Present)

- Public service
- Associate Editor, New Medit: Mediterranean Journal of Economics, Agriculture and Environment, May 2019 – Present.
- Member of steering committee to launch a competition on “Participatory Land Use Planning in Chekka and its Koura surroundings” organized by Public Works, June 2019 – Present.
- Vice-president of the Executive Committee of AUB Faculty United, October 2017 – January 2020.
- **Dr. Bashour**  
AUB
  - Chair of the AUB admissions committee
  - Member of FAFS Strategic Plan Committee
  - Member of FAFS Undergraduate Admissions Committee
  - Member of FAFS Space Committee
  - Member of FAFS Administrative Committee
  - Member of FAFS Undergraduate Curriculum and Undergraduate Student Academic Affairs Committee
- Public Service
  - Supervise the soil and water laboratories, interpret results, and give recommendations to farmers on fertilization programs and problem solving.
- **Dr. Farran**  
AUB
  - Member of FAFS Advisory Committee
  - Coordinator of FAFS Undergraduate Programs
- Public Service
  - Advisor to the Minister of Agriculture, Republic of Lebanon, February 1, 2017 to date
- **Dr. Chaaban**  
Public Service
  - Research Fellow (2015-present), Economic Research Forum, Cairo, Egypt
  - Research Associate (2014-present), Lebanese Center for Policy Studies
  - Member of the Advisory Board (2015-present), Co-Opinion Network, Istanbul, Turkey
  - Network member, Migration Policy Centre, Robert Schuman Centre for Advanced Studies, European University Institute (EUI), Italy (2012-present)
  - Associate Researcher, Toulouse School of Economics, GREMAQ-INRA, France (2005-present)
- **Dr. Hamadeh**  
AUB
  - Member of RCODE Committee
  - Member of Food Security Committee



- Member of FAFS Administrative Committee
- Member of FAFS Strategic Plan Committee

Public Services

- Member in the International Goat Association.
- Reviewer to many scientific journals including; Small Ruminant Research, Australian Journal of Experimental Agriculture, Jordan Journal of Agricultural Sciences, Turkish Journal of Veterinary and Animal Sciences, and others.

- **Dr. Jaafar**

AUB

- Member of FAFS Research Committee
- Member of Water Specialization at the Pro-green Online Diploma- Advisor (2014-2020)
- Member of the University Senate
- Member of the University Research Board
- Member of Task Force for Scholarly Concentration Clerkship at the Faculty of Medicine, Faculty representative 2018-2019

Public Service

- Member, Scientific Committee - Abdel Al Foundation (2016 - Present)
- Member, “ National committee to Combat desertification and Climate change mitigation”, Ministry of Agriculture Member, ( 2015- Present)

- **Dr. Haidar**

AUB

- AREC Director
- Member of AUB AREC Task Force
- Member of FAFS Student Affairs Committee
- Member of FAFS Administrative Committee

Public Service

- Chairman of the National Committee of Conservation Agriculture, 2013-Present
- Member in the National Committee of Organic Agriculture, 2012-Present
- Provides daily services to the local community

- **Dr. Yanni**

AUB

- Member of FAFS Library Committee

- **Dr. El Kayal**

AUB

- Member of FAFS undergraduate Admissions Committee
- Member of FAFS Research Committee

- **Dr. Wondim**

AUB

- Member of FAFS Undergraduate Curriculum and Undergraduate Student Academic Affairs Committee

## 8. Participation in Workshops, Proposals, Meetings and Conferences

- **Dr. Jaafar**

- Google Geo For Good Summit Google, Sunnyvale, CA, USA, September 16-19, 2019
- Google AI Impact Challenge Summit, San Francisco, Ca, USA, February 9-15, 2020
- FAO-CEDIL Workshop, July 1, 2020, Berlin, Germany
- NASA LCLUC Virtual Science Team Meeting, USA, October 2020
- Google Geo For Good Summit 2020, California, USA – October 2020
- WINII Project Closing Workshop-IHE-Delft, Netherlands: Promoting integrated and sustainable development in the Litani River Basin Lebanon using new approaches, December 8, 2020

- **Dr. Bashour**

- USAID Agriculture and Rural Empowerment (ARE) Activity: FAFS-AUB

- **Dr. Chalak**

- Nakkash, R., Khader, Y., Ablal, R., Abu Rmeileh, N., Mostafa, A., Jawad, M., Chalak, A. & Salloum, R. 'National prevalence of cigarette and waterpipe tobacco smoking in three Eastern Mediterranean region countries. Poster presentation at the '20th Annual SRNT-E Conference', Online Conference, 17-18 September 2020
- Chalak, A., Nakkash, R., Ablal, R., Khader, Y., Abu Rmeileh, N., Mostafa, A., Jawad, M., Salloum, R. Demand elasticities of Waterpipe Tobacco and Cigarette Consumption in Three Eastern Mediterranean Region Countries. Poster presentation at the '20th Annual SRNT-E Conference', Online Conference, 17-18 September 2020
- Salloum, R. & Chalak, A. 'Choice experiments in food and health research.' Webinar organized by the International Development Research Center (IDRC), Canada, 22 January 2020
- Salloum, R. & Chalak, A. 'Discrete choice experiments and their applications in health and food research.' Oral presentation organized by the Faculty of Health Sciences and the Faculty of Agricultural and Food Sciences, American University of Beirut, Beirut, Lebanon, 11 December 2019

- **Dr. Yanni**

- Bassel Daher, Roula Bachour, Sandra Yanni, Reem Khattar, Rabi Mohtar\*. A Water-Energy-Food Nexus Approach for Evaluating the Sustainability of an EAT-LANCET inspired Mediterranean Diet: The Case of Lebanon. Presentation at the 2020 ASABE Annual International Meeting, Bridging Social and Physical

Sciences to Achieve Water, Energy, and Food SDGs-HYBRID session, July 13, 2020. (\* R. Mohtar Presenter)

## 9. Strategic Challenges

- Streamline the new curriculum program learning outcomes with the ABET categories
- Promote the specific employability features that FAFS accords its graduates, in both Agribusiness and Agriculture
- Explore effective methods in online training and other adaptive approaches in light of the emergent COVID-19 situation

## B. Department of Landscape Design and Ecosystem Management (LDEM)

*Prepared by: Dr. Yaser Abunnasr, Associate Professor and Chairperson of LDEM and Ms. Nadine Modad, LDEM Administrative Officer*

### 1. Highlights

LDEM strives to lead in the education of environmental design & management in the region graduating ethically, socially & environmentally responsible designers and scientists. Two programs are currently offered by LDEM. One Bachelor of Landscape Architecture (BLA) with a Diploma of Ingenieur Agricole and one Masters of Science in Environmental Sciences, major Ecosystem Management (ECOM) degree which is part of the Interfaculty Graduate Environmental Sciences Program (IGESP). During Academic Year 2019/2020, the Department consisted of seven full-time faculty members. In 2019-2020, 55 BLA undergraduate students and 18 MSc ECOM students were registered and LDEM graduated 15 BLA students. Faculty research themes included agrarian transformations and land use change; natural and human disaster assessment and planning; green infrastructure and climate change; conservation of native flora; socio-spatial concerns in healthy community design; landscape design and planning; cultural and spiritual landscapes.

#### a. Major Initiatives or Accomplishments

- **LAAB accreditation review visit postponed due to COVID-19**  
The scheduled visit during Spring 2019/2020 by the LAAB Accreditation team for review of the Landscape Architecture Program at LDEM was postponed until Fall 2020/2021, in the hope that the current situation of the COVID-19 pandemic will have subsided. Based on forthcoming communications with LAAB, LDEM will send updates regarding the rescheduled visit dates.
- **LDEM's membership at ECLAS continues in the aim to expand its reach of high academic standards**  
LDEM became officially a member of the European Council for Landscape Architecture Schools (ECLAS) in March 2019. ECLAS is a community working on fostering and developing scholarship in landscape architecture at the European and

international level. LDM continues to enhance its presence and visibility in the international academic community of landscape architecture through information exchange, experiential participation, common research agendas, and collaborative research projects.

## **b. Department Academic Activities**

The following was achieved during the academic year 2019-20:

- **Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs) assessment**

Direct and indirect assessment of program and course learning outcomes were carried at the end of Fall 2019/2020 only. No report was submitted in Spring 2019/2020 as per the University's decision due to the COVID-19 pandemic crisis.

- **BLA Program Accreditation Status**

The BLA program at LDEM was approved and invited to apply for initial accreditation by the Landscape Architecture Accreditation Board (LAAB), the academic arm of the American Society of Landscape Architects (ASLA). The LDEM accreditation team consisted of Nadine Modad, Rim Hazimeh and Sara Hamzeh, led by Dr. Yaser Abunnasr. The BLA self-study used for program re-registration was updated during Fall 2019/2020 based on the 2018/2019 academic year and based on ASLA requirements. It was successfully submitted for ASLA/LAAB accreditation in December 2019/2020. The department prepared for the accreditation visit which was anticipated April 2020, however due to the COVID-19 pandemic crisis, the visit had to be postponed to a date to be determined later, hopefully during the Fall term 2020/2021. If all goes well, our program will be the first to apply for accreditation outside the USA.

- **General Education Courses Re-certification**

In May 2020, LDEM 203/ENSC 202 'The Environment and Sustainable Development' elective course was reviewed and accepted as GE Social Sciences I course for a one-year duration.

- **Synergies with ArD**

Upon the request of FAFS Dean Mohtar, synergies with the Architecture and Design Department (ArD) at MSFEA were explored through several meetings between the Chairs of LDEM and ArD. A report is in progress highlighting areas of collaboration and development to ensure efficiencies academically and financially. The report will be submitted to the respective Deans in Summer 2019/2020 to be finalized and approved by the respective departments in Fall 2020/2021.

- **Undergraduate Excellence**

- ***Nehme Moujaess Student Award in Landscape Architecture:*** The Nehme Moujaess Student Award in Landscape Architecture is a yearly award established in 2017, which honors a final year LDEM student for his/her final year design project and research conducted during the last two semesters of

the undergraduate degree in Landscape Architecture. The award's mission is to recognize and promote innovative and exceptional landscape projects that are responsive to place, culture, and to the natural and ecological needs of the region. In May 2020, BLA final year student, Nour El Zein, was selected to receive this year's Nehme Moujaess Student Award in Landscape Architecture' after a rigorous virtual selection process set by LDEM committee members. In addition to the winner, two final year students were also shortlisted and presented with certificates of recognition. The students were Lama Amin, who ranked 2nd and Julia Abi Saab who ranked 3rd. The committee which included renowned architect Vladimir Djurovic has selected Ms. El Zein's project "Saying River: Discovering the Hidden Waterscape" as the most developed and responsive culturally, socially and environmentally at both the macro and micro scale. The selection committee comprised of three voting members including Dr. Rami Zurayk, chair of the committee and representative of Mr. Nehme Moujaess, Mr. Vladimir Djurovic, representative of the landscape profession/field, Dr. Beata Dreksler, representative of the LDEM department, and one non-voting member Dr. Maria Gabriella Trovato, Final Year Project main instructor. Ms. Zein was recruited by Mr. Djurovic's office soon after.

- ***LDEM student Thea Maria Maroun wins Global Undergraduate Award:*** LDEM alumna Thea Maria Maroun presented her final year project during the Global Undergraduate Awards in Dublin. Thea's paper on 'Re-morphing the Quarryscape of the Metn Express Highway: Hybridizing Theories: Between Ecological Reclamation and Land-Art' attracted the attention of many of the participants. Her paper was ranked among the top 10% of papers in the Architecture & Design category among the 3,437 submissions. The project tackles the quarries of the Metn express highway that have been abandoned, and that are currently leaving extremely large open spaces decay, in a time where open spaces in the city are scarce. The entire ecological system suffers from the many disturbances affecting it. The project thus aims to treat the major loss and degradation of habitats, habitat qualities, and land cover.

- **New Academic Programs:**

- ***Proposal of a Master of Landscape Architecture (MLA) program:*** The MLA proposal lead by M. G. Trovato with significant contribution from LDEM administrative staff and Faculty was finalized and submitted to FAFS Dean during early December 2018. The program was benchmarked with similar ASLA accredited programs across the US. It was processed through the proper university channels in Fall 2019-20.
- ***Proposal for a New Undergraduate Program:*** S. Talhouk is preparing a proposal for a new undergraduate program to be offered by LDEM upon approval. The suggested program is a B.Sc. in Eco-tourism. Being a unique

program in Lebanon, it is expected to attract a good number of students. Submission of the proposal through the proper channels is expected in AY 2020-21.

### **c. Department Outreach and Societal Impact**

- **A Playful Structure by LDEM Students Revives AREC's Pine Area**

Each summer, second year LDEM students develop a useful structure at AREC, Bekaa, as part of the Site Engineering III - Design Implementation course (LDEM 249). Dr. Beata Dreksler supervised LDEM's second year students who participated in a week-long workshop at AREC from July 15 to July 22, 2020. The students worked to implement a project that will serve the AREC community and its visitors and students. Second-year students designed and constructed a traditional tannour with hexagonal pergola, a comfortable wooden table, chairs, and swings. The students received help from agriculture students residing at AREC and volunteers from among LDEM first and third year students. The project was possible due to the participation of AREC staff and involvement of the Syrian refugee family Al-Hussain, who taught the students, step-by-step, how to construct a traditional tannour using old techniques and natural materials available in rural areas: clay, hay, and goat hair. At the end of the workshop, the tannour was tested by preparing tannour bread. The students received very positive feedback from AREC Director, Dr. Mustapha Haidar, who indicated that the tannour will be officially inaugurated during the upcoming AREC Field Day. The collaborative effort of the community, students from multiple disciplines, and the AREC administration demonstrated the importance of collaboration in envisioning and realizing any project.

- **Public Spaces & Urban Development: International Design Charrette in Beirut**

LDEM, represented by five students and led by Assistant Professor Nayla Al-Akl, participated in a 2-day international design charrette on the conceptualization of Beirut Digital District during September 11 and 12, 2019, looking at spaces of heritage, contrasts and connections. The workshop generated concepts for Beirut's Digital District- a site rich in history in heritage, which aims to become a cluster that caters to the young digital creative community. The aim of the workshop was for local students from programs in landscape architecture and urban planning and design to work on concepts for a site that is integral to the city's future and holds enormous potential as a public space, heritage site, and a possible business hub with connections to its surrounding neighborhoods. The design charrette was part of a series of initiatives to build networks and collaborations on issues relating to urban landscapes and public spaces, reflecting on how we engage with one and with the physical environment we inhabit. The charrette was a successful platform for academics, non-governmental organizations, local authorities, and local experts to spend time working with students, provide feedback on work sessions, presentations, and techniques for capacity building purposes.

- **AUB and the Norwegian Theatre Academy Collaborate on 100-year Anniversary of Bauhaus**

Celebrating the 100-year anniversary of Bauhaus, LDEM worked with the Norwegian Theatre Academy (NTA) to highlight Beirut and Tripoli as cultural architectural relics. These landscapes are considered modernist and utopian sites that create housing for residents, while also reflecting the local culture and representation within the land. Regional workshops took place in Beirut and in Tripoli, “The Building as a Stage” during October 4 to 17, 2019. The collaboration between part-time faculty Cornelia Krafft at LDEM/AUB and Karen Kipphoff of the Norwegian Theatre Academy (NTA) included bachelor's degree (BA) students from the AUB courses Scenography (Architecture) and Spatial Structures Movement (Landscape Architecture) at and the master's degree (MA) Scenography students from NTA. Students participated in-group work and guided tours that concluded with on-site interventions in Tripoli and Beirut.

- **LDEM students and Dr. Beata Dreksler in Germany to Support UN SDG Initiative “Sustainable cities and communities”**

B. Dreksler and three LDEM students, Luna Mansour, Ranim El Hariri, and Abdul Halim Hariri, represented AUB in an intensive workshop for The Middle East Social Innovation Lab (MESIL). The workshop which was held during November 15 to 23, 2019, offered a unique experience that combined design (landscape architecture and architecture) with business, organized by a DAAD funded program, Higher Education Dialogue with the Muslim World, in cooperation with Hochschule für Wirtschaft und Umwelt, Nürtingen-Geisling (Germany), German Jordanian University (Jordan), Birzeit University (Palestine), and American University of Beirut (AUB).

- **LDEM Plant Sales Help Promote Good Mental Health During the COVID-19 Lockdown**

Each year, students of the Landscape Horticulture course produce flowering plants and culinary herbs to organize the annual on-campus spring plant sale. This year, due to the COVID-19 lockdown, the LDEM plant sale was truly exceptional. Over 75 AUB faculty purchased more than 800 plants, which they selected from LDEM's online catalogue. The sale took place online from April 8 to 10, 2020 and distribution was well-planned to minimize direct human contact. Research shows that plants and connecting to nature improve mental health and wellbeing, especially during times of lockdown. Faculty members commended the online plant sale and sent several affirmations of their delight with the event.

- **LDEM Plants Spread Positive Energy Around Campus**

As students embark on their exam period, and as staff work relentlessly to ensure the health and wellbeing of their community, ‘good luck’ and ‘thank you’ are best said with plants. LDEM and the Office of Student Affairs, surprised AUB residence hall students and staff with plants on May 13, 2020. Plants are known to support mental wellbeing by reducing stress. In residence halls and workplaces, plants help students and staff concentrate and perform tasks with greater accuracy due to their calming influence. By spending more time surrounded with plants, students and staff will have a more positive outlook which could be of great benefit during the lockdown due to COVID-19. LDEM hopes to spread this initiative and motivate the AUB community to grow more plants.

- **Facing the Coronavirus: the Power of Plants in Times of a Pandemic**  
LDEM students, as part of Healing Gardens (LDEM 262) course and under the supervision of Dr. Salma Talhouk, assessed the positive impact of reconnecting with nature and plants during COVID-19. Being socially responsible designers and scientists at FAFS, students were responsive to place, culture, and to the natural and ecological needs of the region by identifying meaningful opportunities during this pandemic.
- **Dr. Beata Dreksler Leads LDEM Students in Community Garden Building Initiative**  
Dr. Dreksler led second-year LDEM students in the design and development of a community garden in Ain Mreisseh, Beirut in May 2020. The work was done in collaboration with the AUB Neighborhood Initiative led by Mona Hallak. Student presentations were shared with the AUB Neighborhood Initiative to look into implementation possibilities.
- **Dr. Yaser Abunnasr Featured in the First Newsletter of the NAWAMED Project**  
Dr. Abunnasr, coordinator of the NAWAMED project “Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries”, was featured in the first issue of NAWAMED’s yearly newsletter discussing importance and relevance of the anticipated project outcomes. The NAWAMED project aims to improve urban water management and promote the use of non-conventional water resources. A full version of the newsletter is available at the following link: [NAWAMED - First Newsletter \(campaign-archive.com\)](https://campaign-archive.com).
- **LDEM Worked Hard to Improve Faculty and Students Virtual Learning Experience**  
The COVID-19 pandemic caused the shift in the mode of teaching to virtual learning effective March 2020. This has caused challenges for students to maintain their studies, manage their time, probably deal with personal situations as well as psychological pressure. Trying to maintain some level of normalcy was a challenge for all. LDEM faculty tried very hard to make the online learning experience as smooth as possible. To try to improve the BLA and ECOM students virtual learning experience, LDEM initiated in late March 2020, a student survey to try and understand what were the student needs and limitations in regards to virtual learning. At the same time, the Chair periodically met with LDEM’s full-time Faculty members, part-time faculty and students representatives.
- **LDEM Shared Useful Tips for Learning and Working from Home**  
FAFS’ LDEM, led by Dr. Yaser Abunnasr, prepared a report with an executive summary on virtual learning strategies and compiled resources and recommendations to continue teaching in times of crisis. Documents included: Assessment of virtual learning at LDEM and plan of action, Continue Teaching in Times of Crisis manual and the Executive Summary of the assessment of virtual learning at LDEM and plan of action.
- **LDEM’s Dr. Salma Talhouk Promoting Household AC Water Collection for Plant Use**



In the summer time, it is always a good idea to collect water from the household or even office ACs to water house or office plants. It is free of chlorine and salts. All what is needed is to add a small spoon of fertilizer in each pot to make sure the plant gets the nutrients it needs once a month.

- **FSP Launches Lebanon Food Security Portal to Help Understand Food Security in Lebanon**

The Food Security Program (FSP) launched its "Lebanon Food Security Portal" featuring all that one needs to know about food security in Lebanon. The portal compiles essential food security briefs, international and regional reports, current media highlights, input from and interviews with FAFS faculty members, policy updates, and much more. The first Lebanon Food Security Brief, authored by Rachel Bahn (AGRI/FSP), Abed Al Kareem Yehya (FSP), and **Rami Zurayk** (LDEM/FSP) was published August 22, 2020 and carried messages focused on the impact on the country's food security by the extreme economic contraction and currency depreciation, the COVID-19 pandemic, and the Beirut Port explosion.

#### **d. Space and Facilities**

- **Model and Manufacturing Lab**

The wood engraving and laser cutter machine which was part of a previously approved capital budget was placed in the newly renovated LDEM outdoor model room and installed during Spring 2019-20. It will be made functional for students use effective Fall 2020-21.

- **LDEM Students' Facilities Improvement**

The LDEM department completed the upgrade of its indoor and outdoor facilities at Reynolds in late May 2020, in response to student needs and accreditation requirements.

- **Launch of the LDEM Outdoor Classroom**

First year landscape architecture students launched in June 2020, the newly refurbished LDEM outdoor classroom in Reynolds Hall, attending their Plant Material I course (LDEM 219) under the supervision of instructor Monika Fabian. The new outdoor classroom allows students to take all safety precautions during the pandemic and gives them the opportunity for hands on experience.

- **Eco-Unit Renovation**

Phase 2 of the Eco-unit renovations, which consists of an outdoor classroom was completed in Fall 2019/2020. Part of the funding was covered by FAFS Dean's office.

- **Damage to Reynolds Caused by August 4, 2020 Beirut Port Explosion**

The explosion that took place at Beirut port on August 4, 2020 has caused some damage in the LDEM floors at Reynolds, like in other campus areas. Damage was assessed and consisted mainly of fallen false ceilings, windows damage and some shattered glass. Priority has been given to cleaning up all debris so they do not

constitute a hazard to people. Fortunately, there was minor equipment damage. Repairs were completed by the end of August to early November 2020.

#### e. Student Activities

The below activities were organized by LDEM students through classes or by the Landscape Architecture Student Society (advisor N. Al-Akl):

- **Landscape Architecture Student Society: Valentine's Day event**  
Valentine's Day event, organized by the Landscape Architecture Student Society (LASS), took place on February 12 and 13, 2020. The event included purchasing sweets and roses from local nurseries and bakeries, an essential initiative needed in the country given the circumstances. This initiative offered a chance for students, faculty, and staff to surprise loved ones while also contributing to the community. The total amount raised was 190,000LL, which will be used for future events of the society.

## 2. Personnel

During academic year 2019-2020, the LDEM department included seven full-time faculty members, sixteen part-time faculty members (2.3 FTE in Fall and 3.4 FTE in Spring) and sixteen research assistants out of which fourteen were appointed on grants. Twelve graduate assistants were appointed (from ECOM, FSP and Urban Design). The department has two non-academic staff (One Administrative Officer and one Greenhouse Technician).

- **New, Promoted Faculty and Faculty Updates**
  - ***Dr. Yaser Abunnasr appointed as New Chairperson of LDEM:*** Y. Abunnasr was appointed as Chairperson of the LDEM Department effective January 27, 2020 for a three-year term, in addition to serving as BLA program coordinator since Fall 2018/2019. He led the Landscape Architecture Accreditation Board (LAAB) process for accreditation of the Bachelor of Landscape Architecture program. He also serves as member of the AREC Task Force, and led the development of FAFS' departmental and faculty level space needs assessments; he chairs the FAFS facilities committee. LDEM expressed its sincere gratitude to Dr. Rami Zurayk for his distinguished service and commitment to the department throughout his term as Chair. Under Dr. Zurayk's leadership and tenure, LDEM successfully completed an external review of its undergraduate program in Landscape Architecture, NYSED registration as a professional program, and submitted the application for accreditation by ASLA/LAAB. During Dr. Zurayk's term, LDEM became a member of the European Council for Landscape Architecture Schools (ECLAS) (March 2019); created the annual student LDEM Chair's Award of Excellence (2015), and moved into its new premises in Reynolds Hall. Dr.

Zurayk's term also witnessed the finalization of a proposal for a Masters of Landscape Architecture (MLA) (December 2018); and the Department's promotion and reappointment criteria for faculty were developed and incorporated into the FAFS' 'Reappointment, Promotion, and Tenure Criteria and Procedures'.

- ***Dr. Rami Zurayk appointed as new Director of the Food Security Program:*** R. Zurayk assumed the position of Director of the Food Security Program and Chairperson of the Food Security Program Executive Committee replacing Dr. Martin Keulertz effective July 1, 2020. Dr. Zurayk, a world leader in food security, will continue steering the program into a very promising future. He has a long and distinguished administrative career at FAFS, and has served as Associate Dean, and Chair of the LDEM Department (2014-2020).
- ***Ms. N. Al-Akl, Associate Dean of Student Affairs:*** N. Al-Akl continues to serve as Associate Dean of Student Affairs. Her appointment started on January 15, 2019.
- ***Dr. Yaser Abunnasr was appointed as member of the newly formed advisory board of FAFS's Environment and Sustainable Development Unit (ESDU) effective July 1, 2020.***
- ***Dr. Yaser Abunnasr dual appointment:*** Y. Abunnasr was appointed as Associate Professor (Dual appointment) in the Urban Design and Planning program at MSFEA effective Spring 2019-20.
- ***Renewal of Contracts:*** Y. Abunnasr's contract as associate professor was renewed for six years effective September 1, 2019.
- ***Landscape Architecture Faculty Line (Focus: Landscape Design and Site Construction):*** In June 2019, the Provost approved LDEM and FAFS recommendation to appoint B. Dreksler as a tenure track Assistant Professor for a period of five years effective September 1, 2019 for the position of Landscape Architecture (Focus: Landscape Design and Site Construction).
- ***Advertisement of Landscape Architecture Faculty Line (Focus: Landscape Design and History):*** The recommendation of the department to advertise for a re-instated faculty position in landscape architecture (with a focus of landscape design and history) was approved in March 2019. The position was advertised for during the period of June-September 2019. Eleven applications were received. The department initiated the search committee and short-listing process in December 2019. Three candidates were shortlisted. In January 2020, LDEM was informed of the university decision to freeze faculty recruitment and hiring and no offers were issued to the candidates.
- ***Advertisement of Landscape Architecture Faculty Line (Replacement of M. Madani who resigned in August 2019):*** The recommendation of the department to advertise for a replacement faculty position in landscape architecture (replacement of M. Madani) at the level of Lecturer or above was

approved in September 2019. The position was advertised for during the period of October 2019 to January 2020. Seventeen applications were received. In January 2020, LDEM was informed of the university decision to freeze faculty recruitment and the process was halted.

The below tables detail the personnel in the Landscape Design and Ecosystem Management department during academic year 2019-20:

Full Time Faculty:

Faculty name	Title
Yaser Abunnasr	Associate Professor, BLA Coordinator and Chairperson (January 2020 – present)
Nayla Al-Akl	Assistant Professor and Associate Dean of Student Affairs
Beata Dreksler	Assistant Professor (effective August 2019)
Monika Fabian	Instructor/ Greenhouse supervisor
Salma N. Talhouk	Professor and Chair of AUBotanic
Maria Gabriella Trovato	Assistant Professor
Rami Zurayk	Professor, ECOM Coordinator and Chairperson (January 2014- December 2019)

Part Time Faculty:

Faculty name	Title
Rania Abboud	Lecturer (Fall and Summer 2019/2020)
Balsam Al-Ariss	Lecturer (Fall and Spring 2019/2020)
Noura Badran	Lecturer (Spring 2019/2020)
Joelle Baroud	Lecturer (Fall 2019/2020)
George Battikha	Senior Lecturer (Fall 2019/2020)
Alicia Denris	Lecturer (Spring 2019/2020)
Cornelia Krafft	Lecture (Fall 2019/2020)
Nadim Farajalla	Research Associate & Director of Climate Change & Environmental Prog. At Issam Fares Institute (Fall & Spring 2019/2020)
Sara Hage	Lecturer (Spring 2019/2020)
Mona Khechen	Senior Lecturer (Fall and Spring 2018/2019)
Wissam Melhem	Lecturer (Spring & Summer 2019/2020)
Ramzi Mezher	Lecturer (Fall and Spring 2019/2020)
Halim Nader	Lecturer (Spring 2019/2020)
Dima Rachid	Lecturer (Fall Spring 2019/2020)
Salwa Sabbagh	Lecturer (Fall Spring 2019/2020)
Sarah Yassine	Lecturer (Fall 2019/2020)

Associate Faculty:

Jala Makhzoumi	Associate to the Department (until November 2019)
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Graduate Assistants:

GA name	Major
Sarine Agopian	Urban Design, MSFEA (Fall 2019/2020)
Rhea Ekmekji	Ecosystem Management (Fall & Spring 2019/2020)
Leen El Taki	Ecosystem Management (Fall & Spring 2019/2020)
Lama Katerji	Ecosystem Management (Fall and Spring 2019/2020)
Kimberly Green	Food Security (Fall 2019/2020)
Bridget Ireland	Ecosystem Management (Fall 2019/2020)
Christina Hachem Majdalani	Ecosystem Management (Fall 2019/2020)
Samar Morkos	Ecosystem Management (Fall & Spring 2019/2020)
Christelle Moussa	Ecosystem Management (Fall 2019/2020)
Elsy Sakr	Ecosystem Management (Spring 2019/2020)
Sabrina Ulmasova	Ecosystem Management (Fall & Spring 2019/2020)
Maya Zeid	Ecosystem Management (Fall 2019/2020)

Support Staff:

Staff name	Position
Elias Abi Samra	Greenhouse Technician
Nadine Modad	Administrative Officer (August 25, 2016 – present)

**3. Teaching**

- Courses Offered**

During the academic year 2019-20, the Department offered sixteen undergraduate courses and one graduate course during the Fall term 2019-20; fifteen undergraduate courses and two graduate courses during the Spring term 2019-20 and four undergraduate courses and one internship course during the summer term 2019-20.

- Student Enrollment in Courses**

Student Enrollment - Fall 2019/2020

Course	Course Title	Credits	Enrollment	Instructor(s)
LDEM 200	Landscape Technical Drawing	4	10	Joelle Baroud <sup>P</sup> / Rania Abboud <sup>P</sup>
LDEM 202	Studio I: Landscape Design Fundamentals I	4	10	Ramzi Mezher <sup>P</sup> / Sarah Yassine <sup>P</sup>
LDEM 207	Landscape Architecture History I	3	11	Maria. G. Trovato
LDEM 210	Botany and Plant Ecology for Landscape Architects	3	8	Salma Talhouk
LDEM 214	Landscape and Geomorphology	3	10	Rami Zurayk
LDEM 218	Landscape Ecology	3	20	Yaser Abunnasr
LDEM 221	Plant Material II	1	8	Monika Fabian

LDEM 222	Studio III: Landscape Planting Design	4	8	Nayla Al-Akl (P) / Monika Fabian (2cr.)
LDEM 228	Studio V: Urban Landscape Design	6	19	Beata Dreksler (P)/ Salwa Sabbagh <sup>P</sup>
LDEM 230	Water and The Environment (GE Natural Sciences Elective)	3	63	Nadim Farajalla <sup>P</sup>
LDEM 241	Studio VII: Landscape Capstone Project I	4	14	M. G. Trovato (P); M. Khechen <sup>P</sup> ; B. El-Ariss <sup>P</sup>
LDEM 247	Site Engineering I	3	8	Beata Dreksler
LDEM 251	Geographic Information System	3	16	Rania Abboud <sup>P</sup>
LDEM 260	Contemporary Issues in Landscape Architecture (Core course and GE Humanities)	3	13	Dima Rachid <sup>P</sup>
LDEM 261	Spatial Structure and Movement (FAFS Elective)	3	15	Cornelia Krafft <sup>P</sup>
LDEM 270	Ornamental Plants for Dry Landscapes	3	13	George Battikha <sup>P</sup>
LDEM 301	Urban Greening (graduate and senior undergraduate level)	3	4	Salma Talhouk

#### Student Enrollment - Spring 2019/2020

Course No.	Course Title	Credits	Enrollment	Instructor(s)
LDEM 201	Landscape Descriptive Drawing	4	8	Noura Badran <sup>P</sup>
LDEM 204	Studio IV: Cultural Landscape Design	6	8	Beata Dreksler
LDEM 208	Landscape Architecture History II (Core course and GE Humanities)	3	15	Nayla Al-Akl
LDEM 211	Landscape Horticulture	3	8	Monika Fabian
LDEM 216	Studio II: Landscape Garden Design	4	9	Alicia Denris <sup>P</sup>
LDEM 217	Soils in the landscape (Core course and GE Natural Sciences)	3	10	Rami Zurayk(P)/ Monika Fabian (Lab; 1cr.)
LDEM 230	Water & the Environment	3	87	Nadim Farajalla (P)
LDEM 242	Studio VIII: Landscape Capstone Project II	6	14	Maria G. Trovato (P); Mona Khechen <sup>P</sup> ; Balsam El-Ariss <sup>P</sup>
LDEM 246	Studio VI: Natural Landscape Design	6	19	Sara Hage <sup>P</sup> (P); Dima Rachid <sup>P</sup>
LDEM 248	Site Engineering II: Construction Material	3	8	Beata Dreksler

LDEM 262	Healing Gardens: Theoretical Perspectives & Applications (FAFS elective and GE Social Sciences)	3	12	Salma Talhouk
LDEM 263	Landscape Appreciation and Site Analysis	3	8	Maria G. Trovato
LDEM 265	Landscape Management	3	19	Salma Talhouk
LDEM 290	Professional Practice	3	19	Ramzi Mezher <sup>P</sup>
LDEM 291	Surveying and Base Plan Development	3	9	Halim Nader; 2cr. (P) <sup>P</sup> / Wissam Melhem <sup>P</sup> (1cr.)
LDEM 302	Green Infrastructure for resilient Landscapes and Cities (Graduate elective)	3	4	Yaser Abunnasr
LDEM 630/ENSC 630	Natural Resources Management (Graduate core course)	3	10	Rami Zurayk

#### Student Enrollment - Summer 2019/2020

Course No.	Course title	Credits	Enrollment	Instructor(s)
LDEM 219	Plant Material I	2	9	Monika Fabian
LDEM 231	Sustainable Water Mngt. Techniques	3	8	Sandra Yanni (AGRI; 2cr.; P)/ Beata Dreksler (1cr.)
LDEM 249	Site Engineering III: Design Implementation	4	8	Beata Dreksler
LDEM 252	Computer Aided Design	3	8	Rania Abboud <sup>P</sup>
LDEM 292	Internship	2	19	Beata Dreksler

P Part-time faculty

(P) Principal instructor

#### **4. Completed Theses and Thesis Advising**

Eighteen students were enrolled in the ECOM program for the academic year 2018/2019. In addition to serving as advisors and/or committee members to ECOM students, LDEM Faculty members also served as advisors or committee members to other AUB or non-AUB Masters and PhD students as follows: **R. Zurayk** serves as committee member to two Masters students from the AGRI department and to two PhD students in Environmental engineering at AUB and co-advisor to one PhD student at the KTH Royal Institute of Technology, Stockholm, Sweden. **Y. Abunnasr** serves as thesis advisor to five Urban Design students and one RCOD student. He is also serving as committee member to three AUB students (from Urban Design), committee member for a PhD student from the University of Massachusetts Amherst, USA and committee member for a PhD student from University College London (UCL). **N. Al-Akl** serves as committee member to two Urban Design student at AUB. **M. G. Trovato** is serving as committee member to three Urban Design Masters students at AUB and as co-advisor to one PhD student from the University of Girona, Spain.

#### Completed theses:

Student Name	Student Major	Advisor	Thesis Title	Defense date
Shalimar Sinno	Rural Community Development (RCOD)	Yaser Abunnasr	Campus-Community Engagement: The Case of an Urban Agriculture Initiative at AUB	May 2020
Maya Melhem	Ecosystem Management (ECOM)	Salma Talhouk	Design guidelines for Ancillary Botanic Gardens (ABG)	2019
Bridget Ireland	Ecosystem Management (ECOM)	Imad Saoud (Biology Dept.)	Using Indigenous <i>Amblyseius Swirskii</i> and <i>Phytoseiulus Persimilis</i> to Manage Pests on Pepper Plants Irrigated with Aquaculture Water	July 2020
Thuraya Abu Merhi	Ecosystem Management (ECOM)	Nayla Al-Akl	Experiencing Wellbeing in Streets: The Case of Badaro and its Restorative Landscape Features	September 4, 2020

## 5. Research Funding

### Local, Regional and International Grants:

LDEM Faculty members continued work on current research projects and launched new research and development projects under the FAFS umbrella supported by external and internal funding as follows:

- Total number of continuing grants: 6 grants (local and international): 265,790 USD plus 75,443.38 Euros
- Total number of new grants: 8 grants (local and international) in the amount of 104,658 USD plus 1,129,758.34 Euros
- Total grants amount (14 grants continuing and new): 370,448USD plus 1,205,201.72 Euros.

Title	Funded by	Year	PI	USD	Academic Umbrella
<b>Continuing recent grants:</b>					
Using Unmanned Aerial Vehicles (UAV)/Drones to measure the contribution of trees to Urban Heat Island Reduction in Urban Landscapes	The Collaborative Research Stimulus Award (AUB's President's Office and AUBMC)	April 2018-April 2020	Y. Abunnasr (PI), M. Awad (FEA) and A. Yertezian (FEA)	\$34,600	OGC
SWaM Akkar. Supporting Sustainable Solid Waste Management in Jurd al-Kaytee, Akkar	Cooperazione Internazionale (COOPI) / EU	Oct. 2018 – June 2020	M. G. Trovato (PI) and R. Zurayk (co-PI)	\$68,111	FAFS



Cultural Corridors of Peace	INHERIT	October 2018 – January 2020	R. Zurayk (PI)	\$41,413	FAFS
Sustaining the landscape of cemeteries: Enhancing religious institutions' contribution to sustainable cities and communities in Beirut	SDG (Global Compact Network Lebanon, GCNL)	October 2018 – October 2019	N. Al-Akl (PI)	\$10,000	FAFS
Advancing Alternative Migration Governance (ADMIGOV)	European Commission/ HORIZON 2020	February 1, 2019 – January 31, 2023	M. G. Trovato (PI) and N. Al-Akl (co-PI)	75,443.38 Euros	FAFS
Capacity Building for Education and Applied Research on Mediterranean UNESCO's Biosphere Reserves (Edu-BioMed)	ERASMUS+	Nov. 2018 to Nov. 2021	S. Talhouk (PI); R. Zurayk (co-PI) and W. El-Hajj (Co-PI; FAS)	AUB funds: \$111,666	NCC
<b>New grants:</b>					
Virtual heritage – exploring applications of VR, AR and MR for digital reconstruction of archeological landscapes	Startup fund	Sept. 2019 to Sept. 2020	B. Dreksler (PI)	\$10,000	FAFS
The Role of Landscape in Promoting Inclusion on University Campuses	AUB funds (URB)	July 2019 to Sept. 2021	N. Al-Akl (PI); R. Zurayk (Co-PI)	\$27,250	FAFS
MESIL – Middle East Social Innovation Lab; Consortium of institutions	DAAD – (Interregional exchange and mobility grant)	2019 - 2020	N. Al-Akl (PI for AUB)	€ 85,000	
The Sheep from The Future? Steps to a new Coupling of Pastoralism, Ecosystems and Consumers in an Age of Environmental Degradation	WEFRAH, AUB funds	May 2019 to May 2020	S. Talhouk (co-PI); S. Perdigon (PI)	\$32,500	FAS
Leveraging an Integrated NetworkK: Bettering Conservation and Management of Rare Plants in and around Culturally Protected Sites (LINK)	Birdlife International	2019-2020	S. Talhouk (PI)	\$19,908	

Sustainable Networks for Agro-Food Innovation Leading in the Mediterranean, MedSNAIL*	EU-ENI CBC MED	Sept. 2019 to Aug. 2022	Y. Abunnasr (PI)	€324,758.34 Euros	FAFS
Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries, NAWAMED*	EU-ENI CBC MED	Sept. 2019 to Aug. 2022	Y. Abunnasr (PI)	€720,000	FAFS
Balancing water consumption and micro climate amelioration of different tree leaf types in semi-arid climate	AUB funds (URB)	July 2020 to June 2021	Y. Abunnasr (PI)	\$15,000	FAFS

\* Yaser Abunnasr receives the MedSNAIL and NAWAMED grants: Dr. Yaser Abunnasr received the prestigious MedSNAIL and NAWAMED grants as an AUB representative and lead beneficiary for the new EU grant: Sustainable Networks for Agro-food Innovation Leading in the Mediterranean (MedSnail). The meeting took place during October 21-24, 2019 in Seville, Spain. The project, in partnership with co-PI Dr. Shady Hamadeh (ESDU) and team, began on September 1, 2019 and runs through August 31, 2022. Project meetings are planned for Turin, Italy, Sfax, Tunisia, Gozo, Malta, and Beirut and a final project conference will be held in Seville, Spain in 2022. Dr. Abunnasr is also PI and AUB representative in a second EU grant, Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries (NAWAMED) also funded under the framework of the European Neighbourhood Instrument's Cross border cooperation Mediterranean Sea Basin (ENI CBC MED) program for cooperative projects. The kick-off meeting took place November 25-29, 2019 in Latina, Italy. The project also with a three-year duration, began October 2019, and will develop three prototypes for domestic grey water recycling: a green wall on the AUB campus, a constructed wetland in AREC (Bekaa), and a prototype in a refugee camp in the Bekaa.

## 6. Publications

In line with the department mission, the research agenda and the department's broad research themes, a number of articles in international refereed journals were published by the LDEM faculty members. Below are some samples:

### International Refereed Journals (\*Corresponding/Senior author):

- **Zurayk, R.\*** (2020). Pandemic and food security: A view from the Global South. *Journal of Agriculture, Food Systems, and Community Development*, 9(3), 1-5. <https://doi.org/10.5304/jafscd.2020.093.014>.
- Dialesandro, J. M.\*, Wheeler, S. M., & **Abunnasr, Y.** (2019). Urban heat island behaviors in dryland regions. *Environmental Research Communications*, 1(8), 081005. [doi: 10.1088/2515-7620/ab37d0](https://doi.org/10.1088/2515-7620/ab37d0)
- Wheeler, S. M.\*, **Abunnasr, Y.**, Dialesandro, J., Assaf, E., Agopian, S., & Gamberini, V. C. (2019). Mitigating urban heating in dryland cities: A literature review. *Journal of Planning Literature*, 34(4), 434-446. [doi: 10.1177/0885412219855779](https://doi.org/10.1177/0885412219855779)

- Allam, M., Mhawej, M., Meng, Q., Faour, G.\*, **Abunnasr, Y.**, Fadel, A., & Xinli, H. (2021). Monthly 10-m evapotranspiration rates retrieved by SEBALI with Sentinel-2 and MODIS LST data. *Agricultural Water Management*, 243. doi:10.1016/j.agwat.2020.106432
- **Abunnasr, Y.** (2020). The landscape as a basic unit for integrated energy planning in the Mediterranean. In A. L. Palazzo & F. Benelli (Eds.), *Energy planning in Mediterranean landscapes: Innovation paths in practices and careers* (pp. 49-55). Quodlibet
- Jaszczak, A., Żukowska, J., **Dreksler, B.**, **Al-Akl, N.**, & Kristianova, K. (2019). Planning of the green road system as an element of spatial management in suburbs and small towns. *Zarządzanie Publiczne*, 2(46), 131-147. doi: [10.4467/20843968ZP.19.009.10685](https://doi.org/10.4467/20843968ZP.19.009.10685)
- Baalbaki, R. Ahmad, S. H., Kays, W., **Talhok, S.N.**, Saliba, N. A., Al-Hindi, M. 2019. Citizen science in Lebanon – a case study for ground water quality monitoring. *R. Soc. open sci.* 6: 181871. <http://dx.doi.org/10.1098/rsos.181871>
- **Yaser Abunnasr** (2020). The landscape as a basic unit for integrated energy planning in the Mediterranean, *iQuaderni di U3*, 49-55, Quodlibet, ISBN 9788822905413, E-ISBN 9788822911094
- **Maria G. Trovato** (2019). Spatial inequalities and marginalization: the borderscape condition of Syrian displaced in Lebanon, in *Kerb Journal of Landscape Architecture*, 26 - Homelands; eds. Rex, A., Ellul, J., Zacaharias, M., Floch, R., Mülleisen, W., RMIT press, 2019. ISBN: 9780648435549

#### Edited Books

- Ioannis N. Vogiatzakis, Theano S. Terkenli, **Maria Gabriella Trovato**, Nizar Abu-Jaber (Eds). *Landscapes in the Eastern Mediterranean between the future and the past*. MDPI. ISBN 978-3-03921-774-8 (Pbk); ISBN 978-3-03921-775-5 (PDF) <https://doi.org/10.3390/books978-3-03921-775-5> (registering DOI)

#### Book Chapters

- Mueller, Lothar\* & Eulenstein, Frank & Mirschel, Wilfried & Antrop, Marc & Jones, Michael & McKenzie, Blair & Dronin, Nikolai & Kazakov, Lev & Kravchenko, Valery & Khoroshev, Alexander & Gerasimova, Maria & Dannowski, Ralf & Schindler, Uwe & Ruhovich, Olga & Sychev, Viktor & **Trovato, Maria Gabriella** & Sheudzhen, Askhad & Denis, Couvet & Robinson, Guy & Blum, Winfried & Kienast, Felix. (2019). *Landscapes, Their Exploration and Utilisation: Status and Trends of Landscape Research*. In: Mueller L., Eulenstein F. (eds) *Current Trends in Landscape Research*. *Innovations in Landscape Research*. Springer, Cham. pp.105-164. 10.1007/978-3-030-30069-2\_5.
- **Trovato, M.\***, & Ali, D. (2019). Planning tools for the protection of the natural and cultural heritage in the Eastern Mediterranean area. In L. Mueller & F. Eulenstein (Eds.), *Current trends in landscape research* (pp. 467-486). Cham: Springer.
- **Maria Gabriella Trovato** (2020). Spatial inequalities and marginalization: the border-scape condition of Syrian displaced in Lebanon, in Ed Wall, Timothy Waterman, and Jane Wolf Editors, *Landscape Citzenships*, Routledge. (Status: approved and forthcoming in 2021).

- **Maria Gabriella Trovato (2020).** Geographies of migration and new landscapes on the Mediterranean basin, in Gloria Pungetti Editor, The Routledge Handbook of Seascapes, Routledge. (Forthcoming in 2021).
- Bahn, R., Tell, T., and **Zurayk, R.** 2019. Social Life, from Rural to Urban. In Yom, S. (ed.). The Societies of the Middle East and North Africa: Structures, Vulnerabilities, and Forces. 1st Edition (Paperback) - Routledge. pp.356
- **Zurayk, Rami.** (2020). Pandemic and Food Security: A View from the Global South. Journal of Agriculture, Food Systems, and Community Development. 9 (3), 1-5. <https://doi.org/10.5304/jafscd.2020.093.014>.
- **Talhok, S. N.,** R. Baalbaki, S. Haydar, W. Kays, S. Kayed, M. Al-Hindi, and N. A. Saliba. Contextualizing Openness: A Case Study in Water Quality Testing in Lebanon. In: Contextualizing openness: Situating open science. Edited by Leslie Chan; co-edited by Angela Okune, Becky Hillyer, Denisse Albornoz and Alejandro Posada. University of Ottawa Press. ISBN 978-1-55250-611-0
- Chammas, G., Kayed, S., Al Shami, A., Kays, W., Citton, M., Kalot, M., Al Marj, E., Fakhr, M., Yehya, N. A., **Talhok, S. N.,** Al-Hindi, M., Zein-el-Dine, S., Tamim, H., Lakkis, I., Abou Najm, M., & Saliba, N. A. (2020). Transdisciplinary interventions for environmental sustainability. *Waste Management*, 107, 159-171. <https://doi.org/10.1016/j.wasman.2020.03.043>
- Tan, Ayfer & Adanacioğlu, Neşe & Ay, Saadet & Batal, Malek & Ghattas, Hala & **Talhok, Salma.** (2020). Where the wild things are. 10.4324/9780429053788-23.

### Reports

- Nejdawi, R, Biyiringiro, F and **Zurayk, R.** 2019. Tracking food security in the Arab Region, United Nations Economic and Social Commission for Western Asia. 98 pp [https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/tracking-food-security-arab-region-english\\_1.pdf](https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/tracking-food-security-arab-region-english_1.pdf)
- **Zurayk, R.** 2019. Manual for Tracking Food Security in the Arab Region. United Nations Economic and Social Commission for Western Asia. 63pp. [https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/manual-monitoring-food-security-arab-region-english\\_1.pdf](https://www.unescwa.org/sites/www.unescwa.org/files/publications/files/manual-monitoring-food-security-arab-region-english_1.pdf)
- **Maria Gabriella Trovato** (corresponding author), **Nayla El-Akl**, Dana Ali, Sara Abou Faker. Syrian Refugees in Lebanon: Protection amidst Crises. 2020. AUB Interim report. ADMIGOV – Advancing Alternative Migration Governance.
- **Maria Gabriella Trovato** (corresponding author), Dana Ali, Jessika Nicolas, Nada Jouni, Lorena Gebran. 2019. Landscape Character Assessment, in support of the SWaM Akkar. Supporting Sustainable Solid Waste Management in Jurd al-Kaytee, Akkar, Lebanon. Final Technical report.
- **Al-Akl, N.** (2019). Full Report - *Cemeteries as Urban Green Spaces: Sustainable Design and Planning Approaches to Cemeteries in Beirut*. A Global Compact Network Lebanon Funded Project
- **Al-Akl, N.** (2019). Chapter - The Landscape of the Middle East. In Fetzer et al. (Eds.), *Middle East Social Innovation Lab - Empowering Communities For Designing Sustainable Futures: the case of Ajloun in Jordan*.
- **Maria Gabriella Trovato**, Dwelling in emergency. The effect of the COVID-19 pandemic on Syrian displaced in Lebanon. Available at URL <http://admigov.eu>

- **Maria Gabriella Trovato, Nayla Al-Akl, Dana Ali and Sara Abou Fakher (2020).** *Syrian Refugees in Lebanon: Protection amidst Crises*, ADMIGOV interim report on Lebanon

## 7. Consultancies

- **R. Zurayk.** Senior Technical Consultant on Food Security in Qatar, Oliver Wyman (February 2020 to April 2020).
- **R. Zurayk.** Member of the *jury* at the Food Planet Prize – The Curt Bergfors Foundation: <https://foodplanetprize.org/the-jury/>
- **R. Zurayk.** Member of the jury at the FoodTech Challenge of the United Arab Emirates: <https://foodtechchallenge.com/>
- **N. Al-Akl.** Green Park Residence Master Plan and Design, Cyprus – Mouflon Real Estate Fund *Ltd.* (2020).

## 8. Distinctions

- **Salma Talhouk and Jala Makhzoumi receive Life Time Achievement Award at the Landscape Middle East Awards Ceremony:** S. Talhouk, LDEM Professor and Chair of AUBotanic, was invited together with LDEM associate J. Makhzoumi to participate in the first ‘Landscape Middle East Awards Ceremony’ at which they received the ‘Life Time Achievement Award’ in a ceremony organized by Landscape Middle East Magazine in Dubai. The event was held on November 25, 2019. Dedicated to the memory of Dr. Musa Nimah (1942-2016), Eminent Professor of Irrigation at the American University of Beirut, the awards ceremony honored those whose dedication, creativity, and relentless effort have had a positive impact on the landscape profession in the region. The unique event highlighted the importance of landscape architecture in the development of cities and communities and its impact on human health, happiness, and quality of life. Landscape Middle East Magazine published a special edition featuring the biographies of award recipients which was disseminated in December 2019.
- **Nayla Al-Akl serving on the jury committee for the prestigious Sir Geoffrey Jellicoe Award, International Federation of Landscape Architects (IFLA):** N. Al-Akl served on the jury committee for the Sir Geoffrey Jellicoe Award. The Award will be presented during the 57<sup>th</sup> IFLA World Congress hosted in George Town, Penang, Malaysia, which was originally planned for 13-15 August, 2020. The IFLA Sir Geoffrey Jellicoe Award is the highest honor that the International Federation of Landscape Architects can bestow upon a landscape architect. The Award recognizes a living landscape architect whose lifetime achievements and contributions have had a unique and lasting impact on the welfare of society and the environment and on the promotion of the profession of landscape architecture. The award is bestowed annually on an academic, public or private practitioner whose work and achievements are respected internationally.

- **J. Makhzoumi receives ECLAS Lifetime Achievement Award 2019:** Dr. Jala Makhzoumi, one of the main founders of the Landscape Design and Ecosystem Management program at FAFS and current Associate to LDEM department, received the 'European Council of Landscape Architecture Schools (ECLAS) Lifetime Achievement Award' during the ECLAS conference 2019 for her outstanding contribution to landscape architecture education. The conference was held during September 16-17, 2019, in Oslo, Norway.
- **Elias Abi Samra 30 years' Service Award:** Mr. Elias Abi Samra, greenhouse technician at LDEM/FAFS, received during the President's Service and Service Excellence Awards Ceremony for 2019, as a service award token for his 30 years of service at FAFS. The ceremony was held on September 24, 2019 at AUB's Assembly Hall.

## 9. Events

- **R. Zurayk hosts London Exhibition – ARAB BEDOUIN: No Future without Past:** R. Zurayk, a partner in the Cultural Corridors of Peace project, joined with the Institute for Heritage and Sustainable Human Development (INHERIT) hosted a London exhibition during January 15-25, 2020 in celebration of the cultural heritage of the Bedouin people of Lebanon, Jordan and the Occupied Palestinian Territories. The exhibit, No future without past, provided an opportunity for marginalized Bedouin communities to share their culture and way of life. The project's exhibition was intended to support Bedouin communities in the Levant through documentation to safeguard Bedouin cultural heritage and help secure a better future. The purpose of this project was to help these communities tackle prejudices and discrimination against them, and to raise awareness of their socio-cultural identity and the ecological and economic value of their traditional practices and their cultural heritage which are threatened by current socio-economic circumstances and restrictions of movement across the Syro-Lebanese border. The project was also expected to ensure that the Bedouin community of the Beqaa have the means to stay connected with other Bedouin communities living in various parts of the Middle East, such as Jordan and Palestine.

## 10. Services

- **Yaser Abunnasr**  
AUB
  - Chairperson, Department of Landscape Design and Ecosystem Management (January 2020 – present).
  - BLA undergraduate program Coordinator (2018 - present)
  - Member, Advisory Committee to the Center for Teaching and Learning, faculty (college) representative (2015- present)
  - Member, AUBotanic Planning Committee (2015- present)
  - Elected Chair FAFS Library Committee (2015- 2019)

- Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee
- Member of AREC strategic task force (2018-present)
- Member of FAFS Facilities Committee
- Member of FAFS Space Committee
- Founding member – Invented Landscapes- A research group dedicated to conceptualizing alternatives to urban landscape on slopes adjacent to major urban conglomeration – joint collaboration between the department of Landscape Design and Ecosystem Management and Department of Architecture and Design – Web link: <http://inventedlandscapes.wordpress.com/>
- Lead Faculty Member, (research, writing, and reviewers' visit), BLA Program
- Self-Study, for New York State Education Department registration and LAAB/ASLA Accreditation process (2017-present)

#### Others

- Journal editor: Heritage and Society, invited in July 2016 to start as co-editor (2016-present)
- Journal reviewer: Landscape and Urban Planning (2014-present); Landscape Journal (2016-present) and Lebanese Scientific Journal (2017-present)
- Expert, with 'Beirut Madinati' on Coastal project proposal for Beirut Coastal Zone (2017-present)

#### • **Nayla Al-Akl**

##### AUB

- Associate Dean of Student Affairs, Office of Student Affairs, AUB (2019 – present)
- Co-Chair, Diversity and Inclusion Working Group (2020- present)
- Member, University Task Force on Lives and Careers of Women Faculty at AUB (2018 – present)
- Member, Task Force on Inclusive Campus Environment (2019 – present)
- Member, Core Curriculum Committee (2018-Present)
- Member, AUBotanic University Committee–AUB (2014 – present)
- Member, FAFS Student Affairs Committee (2019 – Present)
- Member, Graduate Studies Committee (Student Affairs representative) (2019 – Present)
- Participation in student recruitment efforts by the faculty, including visit to high school and interview for promotional video (2019)
- Academic Advisor to the Landscape Architecture Student Society (LAAS), LDEM (2013-present)

#### Others

- Co-founding and administrative member of the Lebanese Landscape Association (LELA) (2015-present).
- Representative member of LDEM at ECLAS (European Council of Landscape Architecture Schools).



- Design consultant on landscape architecture, landscape planning and architecture projects locally and internationally.
- Member; Invented Landscapes; web link:  
<http://inventedlandscapes.wordpress.com/>
- Member, Garden Show Spring Festival Planning Committee (2016-Present)
- Chair of IFLA Working Group: Natural Resources & Protected Landscapes – International Federation of Landscape Architects - IFLA Middle East (2018 – Present).
- Jury Member at the Interior Design Final Year Student Projects, Notre Dame University North Lebanon Campus
- Bikfaya Municipal Garden, Municipality of Bikfaya-Mhaidtha, Lebanon

- **Beata Dreksler**

AUB

- Member of FAFS Undergraduate Admissions Committee
- Member of FAFS Research Committee
- Member of FAFS Social Committee
- Committee member and LDEM representative, The Nehme Moujaess Student Award in Landscape Architecture (2019-2020)
- AUB Botanic Committee Participation in the committee Lectures for docent program (2017-2019).

Others

- Member to the Commission on Ecosystem Management of IUCN (International Union for Conservation of Nature) for the Quadrennial Period 2017-2020.

- **Monika Fabian**

AUB

- Coordinate school students visits to the greenhouse area and offer miscellaneous horticultural activities
- Member of the Initiative for AUB as Botanic Garden
- Member of the Greenroof research group
- Advising landscape architecture and architecture students on plants and trees used in their projects
- Manage the continuous updating of the landscape plant database

- **Jala Makhzoumi**

AUB

- Associate to the LDEM department (until November 2019)
- Advisory Board Member at the Nature Conservation Center (NCC)

Others

- Main founder and president of the Lebanese Landscape Association (LELA), NGO as the Lebanese Chapter of the International Federation of Landscape Architects (IFLA) (2015-present)



- Editorial Board Member, Landscape Research, Taylor and Francis, London (2014-present)
- Lead landscape planning consultant, Booz Allen Hamilton, client: Al Riyadh Development Authority, Project: Riyadh Greening, KSA (2018- present)

- **Salma Talhouk**

AUB

- Member of the Executive Committee of NCC (AUB's Nature Conservation Center), 2010-present.
- Member of the FAFS E-Learning Committee (effective March 2020).
- Member of FAFS Advisory committee
- Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee
- Member of FAFS Social Committee
- Member of FAFS Strategic Plan Committee
- Founding Chairperson of AUBotanic committee (2014- present)
- Academic review of curriculum committee

Others

- Member of the International Union for the Conservation of Nature (IUCN)
- Chair of the ecotourism group – Ecosystem Services Partnership (ESP)  
<https://www.es-partnership.org/community/workings-groups/sectoral-working-groups/swg-7-tourism/>

- **Maria Gabriella Trovato**

AUB

- Member of the Undergraduate Curriculum and the Undergraduate Student Academic Affairs Committee
- Faculty representative on the Academic Development Committee
- Chair of the ad hoc committee for the MLA program development
- Member of the AUB Botanic Garden committee
- Member of the AUB4refugee working group on Syrian Refugee Crisis (2016-present)
- Founding member of the landscape research group 'Landscape in Emergency'
- Co-Principal Investigator in the academic research Developing a Global Design Team Approach for Interdisciplinary Learning at the Faculty of Agricultural and Food Sciences, Scholarship on Teaching and Learning (SOTL) University Research Board, AUB (2018-2019)

Others

- Invited Reviewer for the Scientific Journal 'ISPRS International Journal of Geo-Information', MDPI (2020).
- Invited Reviewer for the Scientific Journal Infrastructures (ISSN 2412-3811), MDPI (2020).
- Invited Examiner of a PhD candidate, Università degli Studi 'Mediterranea' di Reggio Calabria, Italy (2019).
- Member of the European Council of Landscape Architecture Schools (ECLAS)

- Initiator and Director for the East Med Landscape Observatory (2015-present)
- Member of Order of Architects, Planners, Landscape Architects and Conservators, Province of Messina, Italy
- Member of the editorial department of the 'RIVISTA' journal of the Order of Architects, Planners, Landscape Architects and Conservators, Province of Messina, Italy (2012-present).
- Co-founding member and secretary of the Lebanese Landscape Association (LELA), NGO
- Chair of the IFLA Landscape Architecture Without Borders working group, under the Professional Practice IFLA Committee
- Responsible of the CIVILSCAPE's Task Force for Landscape in Emergency
- Initiator and member of the board committee of the a research group on 'Mediterranean Landscape in Emergency'
- Member of the Committee of the PhD program in Landscape Architecture, Faculty of Architecture, Università di Firenze, Italy, since 2018. ([www.dida.unifi.it/vp-534-landscape-architecture.html](http://www.dida.unifi.it/vp-534-landscape-architecture.html))
- Invited Reviewer for the Scientific Journal 'Al-Masaq: Journal of the Medieval Mediterranean, Routledge group, 2018
- Invited Expert to the 'Second Thematic Meeting related to the preparation of the Sixth National Report to the Convention on Biological Diversity'. Lebanese Ministry of Environment. 2018
- Invited Examiner of a PhD candidate, Universitat Internacional de Catalunya (UIC), Barcelona, Spain. 2019
- Invited Examiner of PhD candidates, on the ADAPT-r PRS doctorate Program, RMIT University, Australia. 2019
- Co -Advisor, PhD program in Arts and Education, Universitat de Girona, Spain. research path in Art Education, Social context and identity. Multicultural, ecological, inclusive and social perspectives Student Margherita Serboli, Title: Un plan abierto. Continuidad especial y social en la arquitectura escolar: experiencias y propuestas para espacios educativos innovadores en areas criticas (2017-2020)

- **Rami Zurayk**

AUB

- Chairperson, Department of Landscape Design and Ecosystem Management (LDEM), January 2014 – present
- Director of the Food Security Program and Chairperson of the Food Security Program Executive Committee (July 2020 – present)
- Member of FAFS Administrative Committee (until January 2020)
- Member of FAFS Advisory committee
- Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee (until January 2020)
- Member of FAFS Strategic Plan Committee
- Member of FAFS Students' Recruitment Committee

Others

- Member of the Steering Committee of the High Level Panel of Experts on Food Security and Nutrition (HLPE) of the Committee on World Food Security (CFS) (Two terms: 2015-2017 and 2017-2019). The steering committee is composed of 15 internationally recognized experts in a variety of food security and nutrition related fields. <http://www.fao.org/cfs/cfs-hlpe/hlpe-steering-committee/en/>
- Member of the Research Review Board, Arab Council for the Social Sciences (ACSS-Cycle 2017-2018 and 2018-2019)

## 11. Faculty Participation in Local and International Conferences, Workshops and Seminars

### Conferences:

- **LDEM Faculty participation at ECLAS conference 2019:** The LDEM faculty members presented a symposium session entitled 'Challenges and Opportunities of Landscape Architecture Education in the Arab World: The Experience of the American University of Beirut' at the European Council of Landscape Architecture Schools (ECLAS) conference which was held from September 16 to 17, 2019 in Oslo, Norway. The LDEM group included six faculty members and one associate member. Y. Abunnasr was leading and included S. Talhouk, B. Dreksler, M.G. Trovato, N. Al-Akl and M. Fabian, with associate member J. Makhzoumi coordinating the department's participation and the Dean's office generously funded most of the trip. The LDEM faculty gave presentations under the above-mentioned panel where the experience of LDEM of eighteen years of challenges and opportunities in the development of a curriculum, teaching pedagogy, outreach, and research agenda was shared. The event helped increase and enhance the visibility of LDEM and FAFS.
- **Y. Abunnasr attended the kick-off meeting for the new EU grant titled MedSNAIL (Sustainable Networks for Agro-food Innovation Leading in the Mediterranean):** Y. Abunnasr serves as Principal Investigator of this grant approved under the framework of ENI CBC MED programme. The meeting was held in Seville, Spain during October 21-24, 2019.
- **Y. Abunnasr attended the kick-off meeting for the new EU grant titled NAWAMED (Nature Based Solutions for Domestic Water Reuse in Mediterranean Countries):** Y. Abunnasr serves as Principal Investigator of this grant which was approved under the framework of ENI CBC MED programme. The meeting was held in Latina, Italy during November 25 - 29, 2019.
- **Dr. Yaser Abunnasr participated in the Next Generation of Sustainable Communities conference:** Y. Abunnasr participated in the Next Generation of Sustainable Communities conference which was held on January 24, 2020 in the International Center at UC Davis, California. This was a small invitation-only conference for specialists in the field to develop an agenda for the future of sustainable cities worldwide. This was the final event of the Sustainability, Research and Training program (SRTP) which is funding Y. Abunnasr's current research project "Greener Cities are Cooler Cities: Using Vegetated Green Infrastructure to Mitigate Urban Micro-climates in Desert Urban Landscapes".

- **Y. Abunnasr participated in ‘the Landscape Approach Capacity Building Workshop’:** The event intended to develop landscape mapping skills for biosphere managers in the Mediterranean Basin and was held on the island of Lemnos, Greece from February 13 to 15, 2020. Y. Abunnasr gave a session on historical landscape features mapping.
- **M. G. Trovato on Migrants and Common Ground – IFLA, Oslo 2019:** M. G. Trovato who serves as Chair of the Landscape Architects without Borders group under the International Federation of Landscape Architects (IFLA), organized and moderated a breakout session at the IFLA 2019 Congress held in Oslo, Norway during September 18-19, 2019. The Congress, which was attended by over 1300 participants and hosted over 250 talks, delved into the theme of the Common Ground: the global challenge for a sustainable life is affecting countries and communities worldwide. Landscape architecture is increasingly leading the way in addressing the complex ecological, social, and economic problems confronting rapid urbanization and resource re-allocation in both established and developing countries. The LAWB session titled Migrants and Common Ground: how design can accommodate newcomers inquired invited Architects, Urban Planners and Landscape architects on the common role design disciplines play in addressing the migratory conditions of displaced people worldwide.
- **N. Al-Akl on Sustaining the Landscape of Cemeteries – IFLA, Oslo 2019:** N. Al-Akl presented a paper entitled “Sustaining the landscape of cemeteries: Enhancing religious institutions’ contribution to sustainable cities and communities in Beirut” during the COMMON GROUND, IFLA WORLD CONGRESS 2019, 18-20 September, Oslo Congress Center, Oslo, Norway.
- **N. Al-Akl and M. Fabian on Holistic and Immersive Pedagogy of Teaching – IFLA, Oslo 2019:** M. Fabian and N. Al-Akl gave a lecture entitled “ Holistic and Immersive Pedagogy of teaching: Addressing Global issues through local Initiatives”, LESSONS FROM THE PAST, VISIONS FOR THE FUTURE, during the ECLAS-UNISCAPE CONFERENCE at the Norwegian University of Life Sciences, Norway. September 16-17, 2019.
- **M. G. Trovato attended the second edition of 2020 DIDA (Dipartimento di Architettura, Firenze) Research Week:** M. G. Trovato was invited to be part of a special PhD event to investigate the scientific content of a new PhD in ‘Sustainability and innovation for the design of the built environment and the product system’. The event was organized by the Graduate School of DiDA and was held in the department of Architecture at the University of Florence during February 5-6, 2020. M. G. Trovato was asked to attend an international working table named ‘Contributions’. The roundtable hosted four specialists in different disciplinary fields in order to build a shared research vision.
- **S. Talhouk attended Governing Council Meeting for the Edu-BioMed project:** S. Talhouk was invited as project PI at AUB to attend the meeting which was conferred by the European Commission in the frame of the Erasmus+ programme. The meeting was held at the Institut de Ciència i Tecnologia Ambientals (ICTA) at the Autonomous University of Barcelona (UAB), in Barcelona, Spain from September 30 to October 2, 2019.
- **Dr. Rami Zurayk delivers the Al Berry lecture in Critical Development Studies at the University of Toronto Scarborough, Canada:** R. Zurayk was invited as keynote

speaker at a symposium on 'Food Sovereignty and Food Security' which was also hosted by the Center for Critical Development Studies at the University of Toronto Scarborough. The event took place from September 24 to September 27, 2019.

- **Rami Zurayk speaks at the CFS in Rome:** R. Zurayk was invited to participate at the 46<sup>th</sup> annual meeting of the Committee on World Food Security (CFS), held at FAO headquarters in Rome, Italy during October 14 to 18, 2019. The CFS session brought together food security and nutrition stakeholders from across the world to network, review global progress, share experiences and agree on policy guidance. R. Zurayk also joined the ESCWA partner side event, 'Informed decision making on Arab food security within the context of climate change', which was organized with the aim of providing support towards the elimination of hunger and ensuring food security and nutrition for the Arab Region. The side event discussed outcomes from a recent initiative on tracking food security in the Arab Region, the impact of climate change on the agricultural sector within the framework of 2030 Agenda for Sustainable Development, and related Arab strategies and initiatives. ESCWA, in cooperation with FAO, ACSAD, AOAD, and support from Sida, implemented the initiative in the framework of its project to promote food and water security in the Arab region. The initiative aims to highlight the benefits of enhanced technical capacity and resilience to climate change, which, in turn, contribute to anchoring the science-policy-interface approach to national and regional policy development for enhanced food security.
- **R. Zurayk participated in the "Regional Meeting on Promoting Food and Water Security in the Arab Region":** The regional meeting discussed the outcomes of the ESCWA Initiative on Promoting Food and Water Security in the Arab Region. This initiative was supported by Sida and implemented in cooperation with FAO-RNE, AOAD and ACSAD. The event was organized by the United Nations Economic and Social Commission for Western Asia (ESCWA) and was held during November 27-28, 2019 in Amman, Jordan. The meeting provided a multi-stakeholder platform for sharing views and experiences and discussing further interventions to advance food security in Arab countries.
- **Dr. Rami Zurayk participated in the "Regional Consultative Technical Meeting":** R. Zurayk was invited as a discussant in the thematic session addressing "Building resilient farming communities to boost local economies and create decent rural employment". This meeting gathered senior officials from governments in the Near East and North Africa region and from FAO to discuss thematic under the agenda of the regional conference. The event was organized by FAO Regional Office for the Near East and North Africa (NENA) and was held from January 20 to January 21, 2020 in Cairo, Egypt. This meeting reviewed topics falling under the overall theme of the Regional Conference namely that of food system transformation in order to achieve the Sustainable Development Goals (SDGs).
- **Macro fungi Diversity in the Middle East: Survey and Identification of Wild Mushrooms in Lebanon:** Nadine Modad, LDEM administrative officer, field mycologist and FAFS alumna, participated in the 18<sup>th</sup> Congress of European Mycologists, held at the University of Warsaw and Białowieża National Park in Poland from September 16 to 21, 2019. Her participation was made possible through a staff development grant supported by FAFS Dean Mohtar. Her abstract 'Macro fungi Diversity in the Middle East: Survey and Identification of Wild Mushrooms in

Lebanon', was accepted for a poster session, providing her with the opportunity to present her Master's thesis work internationally and interact with experts in her field. More than 300 mycologists, from 45 countries and varying specialties attended the congress organized by the Polish Mycological Society and the European Mycological Association (EMA). N. Modad became a member of the EMA during the Congress.

- **NAWAMED participates in AQUACYCLE's 1st Stakeholder Workshop:** Dr. Yaser Abunnasr (NAWAMED project coordinator at AUB), was invited by AQUACYCLE to participate in its first series of Stakeholder Workshops which was held on July 25, 2020 at the Doctoral School of Sciences and Technologies, Lebanese University, Tripoli, Lebanon. AQUACYCLE is a project from the ENI CBC MED program Towards Sustainable Treatment and Reuse of Wastewater in the Mediterranean Region. The project offers opportunities for cooperation between eight partners in the Mediterranean region and works toward sustainable, cost-effective treatment and reuse of wastewater with minimal running costs and maximum environmental benefits. CERTE, from Tunisia, is a partner in both projects. The workshop was organized in the framework of the ENI CBC Med funded AQUACYCLE project, on the theme of "Changing the paradigm for wastewater reuse". It included interactive sessions in which participants were invited to identify relevant issues and possible solutions to overcome wastewater problems in the city of Tripoli. As an invited speaker of NAWAMED, Dr. Abunnasr gave the presentation Nature based solutions for grey water recycling: Potential for cities in Lebanon in which he explained how green walls and constructed wetlands provide ecosystem benefits that help clean water, reduce temperatures, increase biodiversity, clean the air, and provide many other benefits. Abunnasr explained that "recycling grey water is becoming a mainstream of sustainability, although highly engineered solutions are costly and energy intensive, nature-based solutions can provide economically viable solutions to recycle grey water at the individual scale." His presentation introduced nature-based solutions and NAWAMED as a novel approach to grey water recycling and its potential applications and opportunities for cities in Lebanon through upscaling. Dr. Abunnasr also participated in discussions to collect participant feedback and expectations about AQUACYCLE's envisaged outcomes, such as the planned demonstration on a pilot basis of an eco-innovative wastewater treatment technology and an initial prototype of a WebGIS based decision support tool towards the drawing up of treated wastewater reuse action plans. He shared a brief, filmed interview about reactions to the AQUACYCLE project. This workshop is a likely first step toward future collaboration between both projects, through sharing ideas, exchanging knowledge and information related to technical activities/tasks, pilot experiences and overall lessons learned.

#### Public lectures:

- **Public Lecture on 'Landscape Architecture in a Changing Climate by Andy Clayden:** Andy Clayden, senior lecturer and landscape architect in the Department of Landscape Architecture at the University of Sheffield, UK, delivered a lecture entitled 'Landscape Architecture in a Changing Climate' at FAFS on September 11, 2019. Clayden's research focuses on the design and management of cemetery and memorial landscapes. Clayden offered his personal reflections on his journey into

Landscape Architecture, beginning with his home city of Coventry, a medieval city that was entirely reconstructed after serious bombing in World War II. During his talk, Clayden also discussed how the public realm is a way for re-energizing the city and providing it with an identity, questioning the character of today's parks, and how these parks differ from those developed 10, 20, and 30 years ago. The lecture also touched on Clayden's research interests in cemetery design and management and what drew him to this area of study. The lecture concluded with an exploration of a number of projects recently implemented in Sheffield to address the challenges of a changing climate.

- **Dr. Rami Zurayk on Food Security in the 13<sup>th</sup> episode hosted by Dr. Simon Khachar:** Among the many episodes that are being organized by the AUB-Annahar COVID-19 Studio, Dr. Rami Zurayk (LDEM) and Dr. Omar Obeid (NFSC) were featured in the 13<sup>th</sup> episode held on May 19, 2020 and, hosted by Dr. Simon Kachar , to discuss "Food Security and Nutritional Immunity" during the pandemic. R. Zurayk highlighted the importance of focusing on agriculture today as part of a solution, which requires a long-term set of changes, the first of which is to provide abundant water and agricultural lands and change food diets through the consumption of vegetables. R. Zurayk made clear that the citizens' role is to improve their diet by focusing more on plant resources, and also on local production as the alternative to what we import with high bills in hard currency.

#### Seminars:

- **Rami Zurayk served as on the team of moderator of the Online Seminar Series 'The Impact of COVID-19 on Global Food Security'** on April 30, 2020. The team of moderators also included members from the International Forum on Globalization (IFG), the Federal University of ABC in Brazil and 2 other members for AUB.

## **12. Strategic Challenges**

- Completion of LAAB (Landscape Architectural Accreditation Board) accreditation of the BLA undergraduate program by ASLA (The American Society of Landscape Architects).
- Increase enrollment in the Landscape Architecture undergraduate program.
- Approval of the new graduate Masters of Landscape Architecture program.
- Finalizing the new undergraduate BSc program in Ecotourism.
- Implementing synergies with the Architecture and Design (ArD) department at MSFEA.
- Successful teaching in times of crisis especially that design courses remain a challenge.
- Lack of a fixed budget for holding departmental lecture/workshop series is an obstacle for establishing an interdisciplinary discourse among the local and international scholars.

## **A. Department of Nutrition and Food Sciences (NFSC)**

*Prepared by: Dr. Omar Obeid, Chairperson*

## **1. Highlights**

During the period of September 1, 2019 to August 31, 2020, the Nutrition and Food Sciences Department (NFSC) conducted several activities as summarized below:

## **2. Personnel**

The NFSC Department has 16 full-time faculty members, 11 part-time faculty members, two Departmental Research Assistants, 3 support staff, and 20 Research Assistants. Twenty-seven graduate assistants were appointed in the Fall AY 2019-20, 28 graduate assistants in the Spring AY 2018-19, and 2 in the Summer 2020. The tables below provide further details.

### Full-time Faculty

<b>Names</b>	<b>Title</b>
Omar Obeid	Professor and Chairperson
Nahla Hwalla	Professor
Imad Toufeili	Professor
Ammar Olabi	Professor
Lara Nasreddine	Associate Professor
Samer Kharroubi	Associate Professor
Farah Naja	Associate Professor
Mohammad Abiad	Associate Professor
Issmat Kassem	Assistant Professor
Lamis Jomaa	Assistant Professor
Elie-Jacques Fares	Assistant Professor
Marie-Claire Chamieh	Lecturer
Basma Hamadeh	Instructor
Hamza Daroub	Instructor
Laura Hjeij	Instructor
Jennifer Ayoub	Instructor

### Part-time Faculty

<b>Names</b>	<b>Title</b>
Carla Habib Mourad	Lecturer
Adib Charafeddine	Part-time Lecturer
Hamza Daroub	Part-time Instructor
Krystel Ouaijan	Part-time Instructor
Reem Hamzeh	Part-time Instructor
Marie-Rose Samaha	Part-time Instructor
Antonio Khabbaz	Part-time Instructor
Jana Majzoub	Part-time Instructor
Pascale Karam	Part-time Lecturer
Abir Barhoumi	Part-time Instructor
Chafic Koleilat	Chef in Residence



Departmental Research Assistants

<b>Names</b>	<b>Title</b>
Batoul Zaiter	Administrative- Departmental RA
Hala Al Fallah	Laboratory- Departmental RA
Fatima Sadek	CP RA (Fall)
Zeinab Jaafar	CP RA (Spring)

Support Staff

<b>Names</b>	<b>Title</b>
Samson Atamian	Pilot Plant Supervisor (until June 2020)
Tsolaire Sourenian	Laboratory Technician
Tania Ghannam	Secretary

Research Assistants

<b>Names</b>	<b>Names</b>
Jennifer Ayoub	Zeinab Hmede
Nehmat El Helou	Caroline Rajeh
Marie-Elizabeth Ragi	Cecile Borgi
Mandy Taktouk	Myra Zeineddine
Marwa Diab El-Harake	Rachelle El Haber
Maria El Hajj	Sarah Ibrahim
Hiba Shatila	Line Koleilat
Fatima Al Zahraa Chokor	Shaden Baasiri
Marwa Itani	Afifa Shatila
	Marwa Diab El-Harake

Graduate Assistants

<b>Fall 2019-2020</b>	
<b>Graduate Assistant</b>	<b>Major</b>
Hanin Chafei	FSAF
Mona Zeidan	FSAF
Nasri Daher Hussein	FSAF
Noura Abou Assaly	FSAF
Jackie Sfeir	FSAF
May Khanafer	FTCH
Nairie Marie Messerlian	FTCH
Tayib Hadi Moussbah	FTCH
Sara Younes El Fakhani	FTCH
Ali Assi	FTCH
Lea Dagher	FTCH
Rayanne Beayno	FTCH
Nour Hallab	FTCH
Dana Hassoun	FTCH
Maria Abou Mourad	NUTR
Lara Chehade	NUTR

Nisrine Chidiac	NUTR
Hiba Al Rifai	PHNU
Aya Chatila	PHNU
Miriam Dagher	PHNU
Arev Mazlounian	PHNU
Sarah Zahr	PHNU
Melodie Al Daccache	PHNU
Nadine Nasser	PHNU
Sahar Nassour	PHNU
Omar Bahlawan	PHNU
Razan Alameh	PHNU

<b>Spring 2019-2020</b>	
<b>Graduate Assistant</b>	<b>Major</b>
Noura Abou Assaly	FSAF
Rouba Ballout	FSAF
Mayssaa Bou Dargham	FSAF
Hanin Chafei	FSAF
Nasri Daher Hussein	FSAF
Mona Zeidan	FSAF
Ali Assi	FTCH
Rayanne Beayno	FTCH
Dana Hassoun	FTCH
Fatima Hojeij	FTCH
May Khanafer	FTCH
Nathalie Abdul Baki	NUTR
Maria Abou Mourad	NUTR
Nairie Marie Messerlian	NUTR
Tayib Hadi Moussbah	NUTR
Janelle Zakour	NUTR
Jackie Sfeir	NUTR
Sara Younes El Fakhani	NUTR
Hiba Al Rifai	PHNU
Aya Chatila	PHNU
Miriam Dagher	PHNU
Arev Mazlounian	PHNU
Sarah Zahr	PHNU
Melodie Al Daccache	PHNU
Nadine Nasser	PHNU
Sahar Nassour	PHNU
Omar Bahlawan	PHNU
Razan Alameh	PHNU

<b>Summer 2019-2020</b>	
<b>Graduate Assistant</b>	<b>Major</b>
Omar Bahlawan	PHNU

Razan Alameh	PHNU
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### 3. Teaching

#### FALL Semester AY 2019-2020:

Course No.	R	L	C	Title	Faculty Member
NFSC 210	2	3	3	Statistics in Nutrition and Food Sciences	S. Kharroubi
NFSC 220	3	0	3	Food and Nutrition Awareness	C. Habib Mourad
NFSC 221	3	0	3	Basic Nutrition	N. Hwalla
NFSC 222	3	0	3	Community Nutrition	L. Jomaa
NFSC 223	3	0	3	Nutrition and Physical Activity	E.J. Fares
NFSC 240	1	3	2	Nutritional Status Assessment	L. Nasreddine/L. Hjeij (2 Lab sec.)
NFSC 252	3	0	3	Introduction to Food Processing	B. Hamadeh
NFSC 261	3	0	3	Introductory Biochemistry	A. Charafeddine
NFSC 265	3	0	3	Food Chemistry	I. Toufeili
NFSC 267	1	3	2	Food Analysis	B. Hamadeh (2 lab sec.)
NFSC 274	3	0	3	Human Nutrition and Metabolism	O. Obeid
NFSC 277	3	0	3	Food Microbiology I	R. Hamzeh
NFSC 279	0	3	1	Medical Nutrition lab I for NDCP	M.C. Chamieh
NFSC 282	3	0	3	Food Quality Management	R. Hamzeh
NFSC 283	3	0	3	Nutrition, Education and Communication	L. Jomaa
NFSC 284a	-	-	1	Seminar in Clinical Dietetics	M.C. Chamieh
NFSC 287	2	0	2	Food Processing	M. Abiad
NFSC 288	2	3	3	Technology of Food Products	H. Daroub (3 lab sec.)
NFSC 289	0	3	1	Food Processing Laboratory	H. Daroub
NFSC 290	2	3	3	Food Service Management	Jana Majzoub
NFSC 292	3	0	3	Medical Nutrition Therapy I	P. Karam/A. Barhoumi
NFSC 294	0	3	1	Medical Nutrition Therapy Lab I	M.C. Chamieh
NFSC 296	1	0	1	Seminar Presentation in Food Sciences and Nutrition	L. Nasreddine (2 sections)
NFSC 298F	-	-	13	Dietetic Practicum	M.C. Chamieh
NFSC 298I	-	-	2	Internship	F. Sadek
NFSC 299	-	-	2	Special Topics in Nutrition and Food Sciences	E.J. Fares (coordinator)
NFSC 300A	-	-	1	Graduate Tutorial	Staff
NFSC 300B	-	-	2	Graduate Tutorial	Staff
NFSC 300C	-	-	3	Graduate Tutorial	Staff
NFSC 301	2	3	3	Statistical Methods for Nutrition and Food Science	S. Kharroubi
NFSC 307	3	0	3	Nutritional Epidemiology	F. Naja
NFSC 310	3	0	3	Advanced Food Biochemistry	I. Toufeili
NFSC 311	3	0	3	Advanced Nutrition: Macronutrients	N. Hwalla
NFSC 352	3	0	3	Food Safety Systems	A. Khabaz
NFSC 370	3	0	3	Food Product Development	A. Olabi

NFSC 395	1	0	1	Graduate Seminar	M. Abiad
NFSC 396	0	0	0	Comprehensive Exam	Staff
NFSC 399	-	-	T	M.S. Thesis	Staff
PHNU 300	3	0	3	Fundamentals of Public Health Nutrition	L. Nasreddine
PHNU 301	3	0	3	Nutrition in the Life Cycle	F. Naja

**WINTER Term AY 2019-2020:**

Course No.	R	L	C	Title	Inst / Coord
NFSC 225 A	0	0	0	Job Shadowing	M.C. Chamieh
NFSC 298 W	1	0	0	Practicum	M.C. Chamieh

**SPRING Semester AY 2019-2020:**

Course No.	R	L	C	Title	Inst / Coord
NFSC 210	2	3	3	Statistics in Nutrition and Food Sciences	S. Kharroubi
NFSC 220	3	0	3	Food and Nutrition Awareness	C. Habib Mourad/ PhD students
NFSC 221	3	0	3	Basic Nutrition	2 Sections- N. Hwalla (A)/ F. Naja (B)
NFSC 223	3	0	3	Nutrition and Physical Activity	E. J. Fares
NFSC 224	0	3	1	Advanced Nutrition Principles and Practices	Krystel Ouaijan
NFSC 229	0	3	1	Menu Planning	S. Sawaya
NFSC 252	3	0	3	Introduction to Food Processing	B. Hamadeh
NFSC 261	3	0	3	Introductory Biochemistry	I. Toufeili
NFSC 265	3	0	3	Food Chemistry	I. Toufeili
NFSC 267	1	3	2	Food Analysis	H. Daroub
NFSC 272	1	3	2	Introduction to Food Service and Industries	H. Daroub
NFSC 275	1	3	2	Quantity Food Production	J. Ayoub /Chef Koleilat
NFSC 277	3	0	3	Food Microbiology I	R. Hamzeh
NFSC 278	2	3	3	Food Microbiology II	R. Hamzeh
NFSC 284A	-	-	1	Seminar in Clinical Dietetics	M.C. Chamieh
NFSC 284B	-	-	1	Seminar in Clinical Dietetics	M.C. Chamieh
NFSC 281	0	3	1	Nutrition in The Life Cycle Lab for NTDT	L. Hjeij
NFSC 285	2	0	2	Nutrition in the Life Cycle	F. Naja
NFSC 286	0	3	1	Nutrition in The Life Cycle Lab for NDCP	L. Hjeij
NFSC 287	2	0	2	Food Processing	M. Abiad
NFSC 289	0	3	1	Food Processing Laboratory (3 sections)	B. Hamadeh
NFSC 290	2	3	3	Food Service Management	J. Ayoub
NFSC 291	3	0	3	Elements of Food Engineering	M. Abiad
NFSC 293	3	0	3	Medical Nutrition Therapy II	L. Nasreddine
NFSC 295	0	3	1	Medical Nutrition Therapy Lab II for	M.C. Chamieh

				NTDT	
NFSC 296	-	-	1	Seminar Presentations in Nutrition and Food Science	N. Hwalla (2 sections)
NFSC 297	0	3	1	Medical Nutrition Therapy Lab II for NDCP	M.C. Chamieh
NFSC 298I	-	-	2	Dietetic Internship	J. Ayoub
NFSC 298S	-	-	13	Dietetic Practicum	M.C. Chamieh/L. Jomaa (2 cr.)
NFSC 299	-	-	2	Special Topics in Nutrition and Food Science	L. Nasreddine
NFSC 300A	-	-	1	Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300B	-	-	2	Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300C	-	-	3	Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300FS	-	-	3	Graduate Tutorial in Food Safety	Staff
NFSC 301	3	0	3	Statistical Methods for Nutrition and Food Sciences	S. Kharroubi
NFSC 305	3	0	3	Sensory Evaluation	A. Olabi
NFSC 306/A	3/2	0	3/2	Community Nutrition (PHNU course)	L. Jomaa
NFSC 312	3	0	3	Sports Nutrition	E.J. Fares
NFSC 315	3	0	3	Advanced Nutrition: Vitamins	O. Obeid
NFSC 351	3	0	3	Food Safety: Contaminants and Toxins	Dr. Kassem (Online)
NFSC 395	1	0	1	Graduate Seminar in Nutrition and Food Science	M. Abiad
NFSC 399	-	-	T=9	M.S. Thesis	Staff
FSEC 310	3	0	3	Nutrition Security: Assessment and Intervention Strategies	L. Jomaa
PHNU 390	2	0	2	Practicum	Staff
PHNU 391 (A & B)	3	0	3	Integrative Learning Experience	3 sections- L. Nasreddine, F. Naja, L. Jomaa

**SUMMER TERM AY 2019-2020:**

<b>Course No.</b>	<b>R L C</b>			<b>Title</b>	<b>Instructor/ Coordinator</b>	<b>Restriction</b>
NFSC 225B*	0	0	0	Job Shadowing	Marie-Claire Chamieh	For NDCP II
NFSC 280*	-	-	1	Summer Training in Food Establishments	Ammar Olabi	
NFSC 284B*	-	-	1	Seminar in Clinical Dietetics	Marie-Claire Chamieh	NDCP-IDE students
NFSC 298I*	-	-	2	Dietetic Internship	J. Ayoub	2 sections
NFSC 298SU*	-	-	28	Dietetic Practicum	Marie-Claire Chamieh	For NDCP
NFSC 394*	-	-	0	Internship	Dr. Kassem	For FSAF

PHNU 304*	2	0	2	Nutrition in Emergencies	Dr. Obeid	
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#### 4. Completed Theses

A total of 23 theses were completed in AY 2019-2020 as below:

Student's Name	Year	Advisor	Major	Thesis Title
Waed Sleem	2019	Dr. Farah Naja	Nutrition	Weight gain and dietary adequacy among pregnant women: A prospective study.
Talar Garabedian	2019	Dr. Omar Obeid	Nutrition	Acute effect of phosphorus ingestion on postprandial protein synthesis in rats.
Mariam Baroudi	2019	Dr. Farah Naja	Nutrition	Validity and reproducibility of a food frequency questionnaire among Lebanese adults for the assessment of food groups.
Nivin Nasser	2019	Dr. Mohamad Abiad	Food Technology	Converting post-consumer food waste into fish feed.
Raeda El Sayed Ahmad	2019	Dr. Farah Naja	Nutrition	Validity and reliability of a food frequency questionnaire for assessing energy, macro and micro nutrients intakes among Lebanese adults.
Nour Al Bissani	2019	Dr. Omar Obeid	Nutrition	The relation between the type of adiposity, inflammation, and iron absorption in pre-menopausal women.
Nour Wehbe	2019	Dr. Omar Obeid	Nutrition	The relation between glycemic and insulinemic status and iron absorption in premenopausal women.
Marwa Itani	2019	Dr. Imad Toufeili	Food Technology	Quantification of antioxidants and antioxidant capacities of Lebanese composite dishes.
Marya Harb	2019	Dr. Issmat Kassem	Food Technology	Microbiological acceptability of skinless chicken breasts and analysis of antimicrobial resistance in <i>Escherichia coli</i> associated with Lebanese poultry.
Joanna Salibi	2019	Dr. Issmat Kassem	Food Technology	Prevalence and loads of fecal pollution indicators and antibiotic resistance of <i>Escherichia coli</i> in raw minced beef in Lebanon.
Zeinab Harb	2019	Dr. Imad Toufeili	Food Technology	Antioxidant intake from fruits, vegetable and beverages consumed

				in Lebanon.
Cecile Borgi	2019	Dr. Lara Nasreddine	Nutrition	Dietary Glycemic Index and Load: Associations with cardiometabolic abnormalities amongst healthy Lebanese adults.
Rita Aoun	2019	Dr. Lara Nasreddine	Nutrition	Fructose intake and risk of metabolic syndrome in Lebanese adults: A cross sectional study.
Rim Baalbaki	2019	Dr. Omar Obeid	Nutrition	The role of phosphorus in postprandial energy expenditure of healthy male subjects.
Pamela Aoun	2020	Dr. Mohamad Abiad	Food Technology	Food waste generation drivers among consumers at restaurants: the case of Lebanon
Abdallah Alhaj Sulaiman	2020	Dr. Ismat Kassem	Food Technology	Detection of plasmid-mediated Colistin resistance gene, mcr-1, in multidrug resistant e. Coli and Proteus mirabilis in water matrices in Syrian refugee camps in Lebanon
Sara Nasserredine	2020	Dr. Samer Kharroubi	Food Technology	Food allergy knowledge, attitudes and practices (kaps) of foodservice workers at restaurants in Lebanon: a cross-sectional study
Lea Dagher	2020	Dr. Ismat Kassem	Food Technology	Evaluation of the microbiological water quality in rivers across Lebanon by assessing densities of fecal indicators and antibiotic resistance profiles of Escherichia coli
Fidele El Masri	2020	Dr. Omar Obeid	Nutrition	The Effect of Aspartame and Sucralose Consumption on Food Intake and Body Composition of Rats
Dima Charara	2020	Dr. Lara Nasreddine	Nutrition	Anemia and its Association with Dietary Intake and Infant and Young Child Feeding practices: A Cross-Sectional Study Amongst 0-2-years-old Syrian Refugee Children in Lebanon
Hiba Al Rifai	2020	Dr. Farah Naja	Public Health Nutrition	Knowledge, Attitudes and Practices of Lebanese Pediatricians in Relation to Supporting Breastfeeding
Jana Daher	2020	Dr. Ammar Olabi	Food Technology	Influence of Different Sports on the Taste Perception and Acceptability of a Commercial Sports Drink Among University Athlete Students
Jouman Hassan	2020	Dr. Issmat Kassem	Food Safety	A Nationwide assessment of the occurrence of Mobile Plasmid-borne Colistin-Resistance Gene, mcr-1, in

			Escherichia coli isolated from Lebanese River Waters
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## 5. Research Funding

### University Research Board (URB):

Project title	Budget (\$)	Investigators
The emergence and transmission of plasmid-borne mobile elements (mcr) that confer resistance to colistin, a last resort antibiotic, in irrigation water and associated soils and crops	15,000.00	Dr. Kassem, Issmat
Perceptions of Complementary and Alternative Medicine (CAM) among users, providers and health care workers in Lebanon: A qualitative study	13,250.00	Dr. Naja, Farah
Contribution of NOVA food groups to energy intake and determinants of ultra-processed food consumption in Lebanese children and adolescents: Evidence from National Surveys	12,300.00	Dr. Nasreddine, Lara
Impact of phosphorus ingestion with fructose and glucose on substrate utilization in active individuals during moderate exercise	12,500.00	Dr. Fares, Elie-Jacques
The Impact of Dietary Phosphorus Manipulation on in vivo Protein Synthesis in Sedentary and Active Rats	10,000.00	Dr. Obeid, Omar
Assessing the taste perception and acceptability of a commercial sports drink pre-and post-exercising: A comparative study among different sports	10,632.00	Dr. Olabi, Ammar
Developing a Cash Plus Nutrition Social and Behavioral Change Communication Strategy to improve Dietary Choices among Syrian Refugees: The Case Study of Tyre, Lebanon	12,000.00	Dr. Jomaa, Lamis
Unravelling the Relationship between Household Food Waste, Food Security and Financial Management: The Case of Lebanon	12,000.00	Dr. Abiad, Mohamad
Prevalence of Malnutrition in Lebanese Hospitals, Recognition and Impact on the Right to Health	8,500.00	Dr. Hwalla, Nahla
Estimating the SF-6D Value Set for a Population-Based Sample of Lebanese	12,500.00	Dr. Kharroubi, Samer

### External Grants:

PI Name	Funding Agency	Project Title	Amt Approved
Dr. Nahla Hwalla (PI) Dr. Carla Habib Mourad	Nestle	Nestlé For Healthier Kids - Ajyal Salima	\$857,000
Dr. Omar Obeid	Iodine	Assessment of Dried Spot Thyroglobulin in Pregnant Women to Redefine the Range of Median	\$21,700



		Urinary Iodine Concentration that Indicates Adequate Iodine Intake: STRIPE	
Dr. Nahla Hwalla (PI) Dr. Lara Nasreddine Dr. Farah Naja	Nestec	Nestec - Dietary Intake in the United Arab Emirates for the 'Feeding Infants & Toddlers Study' (FITS) and the 'Kids Nutrition & Health Study' (KNHS)	\$1,025,065
Dr. Lara Nasreddine (PI) Dr. Nahla Hwalla Dr. Farah Naja	Towards Healthier Kids and Sustainable Future	Towards Healthier Kids and Sustainable Future	\$252,360
Dr. Omar Obeid	EQUIP	Establishment of a Regional Reference Iodine Laboratory (EQUIP)	\$100,000
Dr. Farah Naja (PI) Dr. Nahla Hwalla Dr. Lara Nasreddine Dr. Samer Kharroubi Dr. Lamis Jomaa Dr. Mohamad Alameddine (FHS)	Food and Agriculture Organization (FAO)	Balancing the trade-offs for a Sustainable Healthy diet: the case of Lebanon	\$99,248.00
Nasreddine, Lara	International Atomic Energy Agency (IAEA)	Quantitative Estimation of Dietary Energy and Added Sugar Intakes: A Validation Study amongst Lebanese Adults	\$42,120.00
Naja, Farah	Qatar University	An Interdisciplinary Model Towards Integrative Complementary and Alternative Medicine Use in Qatar and Lebanon: The Case of Breast Cancer and Diabetes Patients	\$245,000.00

## 6. Publications

The following articles were published in international refereed journals by NFSC members as indicated below:

Name of the Professor	Year	Journal	Title	Authors	Impact Factor	Author Position	Quartile
Mohamad Abiad	2020	Journal of Solid-State Chemistry	Lanthanides based metal organic frameworks for luminescence sensing of toxic metal ions	Mahmoud M.E., Moussa Z., Prakasam T., Li L., Abiad M.G., Patra D., Hmadeh M.	2.291	4	Q2
Mohamad	2019	Journal of	Qualitative and	Chalak A, Diab	1.665	1	Q3

Abiad		Food Safety	quantitative cues in consumers' valuation of food safety: Evidence from Lebanon	M, Kassem II, Abiad MG			
Mohamad Abiad	2019	International Journal of Food Microbiology	Combined effects of thymol, carvacrol and packaging on the shelf-life of marinated chicken.	Karam L, Roustom R, Abiad MG, El-Obeid T, Savvaidis IN	4.006	3	Q1
Mohamad Abiad	2019	PLoS ONE	The determinants of household food waste generation and its associated caloric and nutrient losses: The case of Lebanon	Chalak A., Abiad M.G., Diab M., Nasreddine L.	2.740	corresponding author	Q2
Nahla Hwalla	2020	Nutrients	Impact of a Three-Year Obesity Prevention Study on Healthy Behaviors and BMI among Lebanese Schoolchildren: Findings from Ajyal Salima Program	Habib-Mourad C., Ghandour L.A., Maliha C., Dagher M., Kharroubi S., Hwalla N.	4.546	corresponding author	Q1
Nahla Hwalla	2020	British Journal of Nutrition	Erosion of the Mediterranean Diet among Adolescents: Evidence from an Eastern Mediterranean Country	Naja F., Hwalla N., Hachem F., Abbas N., Chokor F.A.Z., Kharroubi S., Chamieh M.-C., Jomaa L., Nasreddine L.	3.334	2	Q2
Nahla Hwalla	2020	Sustainability (Switzerland)	Changes in Environmental Footprints Associated with Dietary Intake of Lebanese Adolescents Between the Years 1997 and 2009	Naja F., Hwalla N., El Zouhbi A., Abbas N., Chamieh M.C., Nasreddine L., Jomaa L.	2.576	corresponding author	Q2
Nahla Hwalla	2020	European Journal of Nutrition	Food insecurity is associated with lower adherence to the Mediterranean	Naja F., Itani L., Kharroubi S., Diab El Harake M.,	4.664	4+	Q1

			dietary pattern among Lebanese adolescents: a cross-sectional national study	Hwalla N., Jomaa L.			
Nahla Hwalla	2020	Nature	Repositioning of the global epicentre of non-optimal cholesterol	Taddei C., Zhou B., Bixby H., Carrillo-Larco R.M., Danaei G., .. , Hwalla N., ..., Cisneros J.Z., Gregg E.W., Ezzati M.	43.070	4+	Q1
Nahla Hwalla	2020	Nutrition Journal	Sex disparities in dietary intake across the lifespan: The case of Lebanon	Nasreddine L., Chamieh M.C., Ayoub J., Hwalla N., Sibai A.-M., Naja F.	3.359	corresponding author	Q2
Nahla Hwalla	2020	BMC Public Health	Impact of a one-year school-based teacher-implemented nutrition and physical activity intervention: Main findings and future recommendations	Habib-Mourad C., Ghandour L.A., Maliha C., Awada N., Dagher M., Hwalla N.	2.521	corresponding author	Q2
Nahla Hwalla	2019	Sustainability (Switzerland)	Mediterranean diet and its environmental footprints amid nutrition transition: The case of Lebanon	Naja F., Itani L., Hamade R., Chamieh M.C., Hwalla N.	2.576	corresponding author	Q2
Nahla Hwalla	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F	4.664	4	Q1
Nahla Hwalla	2019	Sustainability Science	Impacts of shifting to healthier food	Bahn R., EL Labban S.,	4.669	corresponding author	Q1

			consumption patterns on environmental sustainability in MENA countries	Hwalla N.			
Nahla Hwalla	2019	Nature	Rising rural body-mass index is the main driver of the global obesity epidemic in adults	Bixby H., Bentham J., Zhou B., Di Cesare M., ... Hwalla N., ...Zheng W., Zheng Y., Zholdin B., Zhou M., Zhu D., Zhussupov B., Zimmermann E., ZunigaCisneros J., Ezzati M.	43.070	4+	Q1
Nahla Hwalla	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F	1.734	corresponding author	Q4
Nahla Hwalla	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square methods	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.	2.740	3	Q2
Nahla Hwalla	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18	Jomaa L, Naja F., Kharroubi S., Hwalla N.	3.182	corresponding author	Q2

			years: Findings from a national cross-sectional study				
Nahla Hwalla	2019	Nutrients	Differences in dietary intakes among Lebanese adults over a decade: results from two national surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N., Naja F.	4.546	corresponding author	Q1
Nahla Hwalla	2019	International Journal of Nutritional Sciences	Fighting Malnutrition in Hospitals: A Middle East and Global Perspective.	Ouaijan K., Hwalla N.		corresponding author	
Nahla Hwalla	2019	BMJ open	Prevalence and associations of behavioural risk factors with blood lipids profile in Lebanese adults: findings from WHO STEPwise NCD cross-sectional survey.	Mansour M, Tamim H, Nasreddine L, El Khoury C, Hwalla N, Chaaya M, Farhat A, Sibai AM	2.496	4+	Q2
Nahla Hwalla	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N	2.483	corresponding author	Q2
Nahla Hwalla	2019	International Journal of Nutritional Sciences	Reducing the Sugar Burden using Non-Nutritive Sweeteners: Review of Evidence and Recommendations. International Journal of Nutritional Sciences	Aldaheri A., Almadani K., Ayesha W.H., Eldien M.M., Ismail L.C., Sadikot S.M., Hwalla N.		corresponding author	
Nahla Hwalla	2019	Lancet	The state of hypertension care in 44 low-income and middle-income countries: a cross-sectional study of	Geldsetzer P., Manne-Goehler J., Marcus M.E., Ebert C., Zhumadilov Z.,	59.702	4+	Q1

			nationally representative individual-level data from 1·1 million adults.	Wesseh C.S., Tsabedze L., Supiyev A., Sturua L., Bahendeka S.K., Sibai A.M., Quesnel-Crooks S., Norov B., Mwangi K.J., Mwalim O., Wong-McClure R., Mayige M.T., Martins J.S., Lunet N., Labadarios D., Karki K.B., Kagaruki G.B., Jorgensen J.M.A., Hwalla N.C., Houinato D., Houehanou C., Msaidié M., Guwatudde D., Gurung M.S., Gathecha G., Dorobantu M., Damasceno A., Bovet P., Bicaba B.W., Aryal K.K., Andall-Brereton G., Agoudavi K., Stokes A., Davies J.I., Bärnighausen T., Atun R., Vollmer S., Jaacks L.M.			
Lamis Jomaa	2020	PLoS ONE	Voices of the vulnerable: Exploring the livelihood strategies, coping mechanisms and their impact on	Nabulsi, D., Ismail, H., Abou Hassan, F., Sacca, L., Honein-AbouHaidar, G., Jomaa, L.	2.740	corresponding author	Q2

			food insecurity, health and access to health care among Syrian refugees in the Beqaa region of Lebanon.				
Lamis Jomaa	2020	Public Health Nutrition	Food insecurity is associated with compromised dietary intake and quality among Lebanese mothers: Findings from a national cross-sectional study	Jomaa, L.H., Naja, F.A., Kharroubi, S.A., Diab-El-Harake, M.H., Hwalla, N.C.	3.182	corresponding author	Q2
Lamis Jomaa	2020	European Journal of Nutrition	Food insecurity is associated with lower adherence to the Mediterranean dietary pattern among Lebanese adolescents: a cross-sectional national study	Naja F., Itani L., Kharroubi S., Diab El Harake M., Hwalla N., Jomaa L.,	4.664	corresponding author	Q1
Lamis Jomaa	2020	Nutrients	Caregiver's self-confidence in food resource management is associated with lower risk of household food insecurity among SNAP-Ed-eligible head start families	Jomaa, L., Na, M., Eagleton, S.G., Diab-El-harake, M., Savage, J.S.	4.546	corresponding author	Q1
Lamis Jomaa	2020	Sustainability (Switzerland)	Changes in Environmental Footprints Associated with Dietary Intake of Lebanese Adolescents Between the Years 1997 and 2009	Naja F., Hwalla N., El Zouhbi A., Abbas N., Chamieh M.C., Nasreddine L., Jomaa L.	2.576	corresponding author	Q2
Lamis Jomaa	2020	PLoS ONE	Energy drinks consumption and perceptions among	Ghozayel M., Ghaddar A., Farhat G.,	2.740	corresponding author	Q2

			University Students in Beirut, Lebanon: A mixed methods approach	Nasreddine L., Kara J., Jomaa L.			
Lamis Jomaa	2020	British Journal of Nutrition	Erosion of the Mediterranean Diet among Adolescents: Evidence from an Eastern Mediterranean Country	Naja, F., Hwalla, N., Hachem, F., Abbas, N., Chokor, F.A.Z., Kharroubi, S., Chamieh, M.-C., Jomaa, L., Nasreddine, L.	3.334	corresponding author	Q2
Lamis Jomaa	2019	Public Health Nutrition	Food insecurity is associated with suboptimal sleep quality, but not sleep duration, among low-income Head Start children of pre-school age	Na, M., Eagleton, S.G., Jomaa, L., Lawton, K., Savage, J.S.	3.182	3	Q2
Lamis Jomaa	2019	Conflict and Health	Informal healthcare provision in Lebanon: An adaptive mechanism among displaced Syrian health professionals in a protracted crisis	Honein-Abouhaidar G., Noubani A., El Arnaout N., Ismail S., Nimer H., Menassa M., Coutts A.P., Rayes D., Jomaa L., Saleh S., Fouad F.M.	2.000	4+	Q3
Lamis Jomaa	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: Findings from a national cross-sectional study	Jomaa L, Naja F., Kharroubi S., Hwalla N.	3.182	corresponding author	Q2
Lamis Jomaa	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja	4.664	corresponding author	Q1



			overweight and obesity among preschool children in Lebanon: a cross-sectional study.	F			
Lamis Jomaa	2019	PLoS ONE	Perceived impact of community kitchens on the food security of Syrian refugees and kitchen workers in Lebanon: Qualitative evidence in a displacement context	Ibrahim N., Honein-AbouHaidar G., Jomaa L.	2.740	corresponding author	Q2
Lara Nasreddine	2020	British Journal of Nutrition	Erosion of the Mediterranean Diet among Adolescents: Evidence from an Eastern Mediterranean Country	Naja F., Hwalla N., Hachem F., Abbas N., Chokor F.A.Z., Kharroubi S., Chamieh M.-C., Jomaa L., Nasreddine L.	3.334	4+	Q2
Lara Nasreddine	2020	International Breastfeeding Journal	Exclusive breastfeeding during the 40-day rest period and at six months in Lebanon: A cross-sectional study	Chehab R.F., Nasreddine L., Zgheib R., Forman M.R.	2.55	2	Q1
Lara Nasreddine	2020	Nutrients	Dietary Glycemic Index and Glycemic Load Are Not Associated with the Metabolic Syndrome in Lebanese Healthy Adults: A Cross-Sectional Study	Borgi C., Taktouk M., Nasrallah M., Isma'eel H., Tamim H., Nasreddine L.	4.546	corresponding author	Q1
Lara Nasreddine	2020	Nutrition Journal	Sex disparities in dietary intake across the lifespan: The case of Lebanon	Nasreddine L., Chamieh M.C., Ayoub J., Hwalla N., Sibai A.-M., Naja F.	3.359	corresponding author	Q2
Lara	2020	Sustainability	Changes in	Naja F., Hwalla	2.576	4+	Q2

Nasreddine		(Switzerland)	Environmental Footprints Associated with Dietary Intake of Lebanese Adolescents Between the Years 1997 and 2009	N., El Zouhbi A., Abbas N., Chamieh M.C., Nasreddine L., Jomaa L.			
Lara Nasreddine	2020	PLoS ONE	Energy drinks consumption and perceptions among University Students in Beirut, Lebanon: A mixed methods approach	Ghozayel M., Ghaddar A., Farhat G., Nasreddine L., Kara J., Jomaa L.	2.740	4	Q2
Lara Nasreddine	2020	Sleep & breathing = Schlaf & Atmung	Sleepless in Beirut: sleep duration and associated subjective sleep insufficiency, daytime fatigue, and sleep debt in an urban environment.	Chami H.A., Ghandour B., Isma'eel H., Nasreddine L., Nasrallah M., Tamim H.	2.326	4	Q3
Lara Nasreddine	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F	4.664	1	Q1
Lara Nasreddine	2019	European Journal of Nutrition	A healthy lifestyle pattern is associated with a metabolically healthy phenotype in overweight and obese adults: a cross-sectional study.	Naja F, Itani L, Nasrallah MP, Chami H, Tamim H, Nasreddine L	4.664	corresponding author	Q1
Lara Nasreddine	2019	BMJ open	Prevalence and associations of behavioural risk factors with blood lipids profile in	Mansour M, Tamim H, Nasreddine L, El Khoury C, Hwalla N,	2.496	3	Q2

			Lebanese adults: findings from WHO STEPwise NCD cross-sectional survey.	Chaaya M, Farhat A, Sibai AM			
Lara Nasreddine	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F	1.734	1	Q4
Lara Nasreddine	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N	2.483	corresponding author	Q2
Lara Nasreddine	2019	PLoS ONE	The Determinants of Household Food Waste Generation and its Associated Caloric and Nutrient Losses: The Case of Lebanon.	Chalak A, Abiad MG, Diab M, Nasreddine L	2.740	4	Q2
Lara Nasreddine	2019	Clinical Nutrition	MON-PO635: Contribution of Lebanese Composite Dishes To antioxidant Intakes in Lebanon	Itani M, Toufeili I, Nasreddine L	6.360	corresponding author	Q1
Lara Nasreddine	2019	PLoS ONE	Pre-pregnancy BMI, gestational weight gain and birth outcomes in Lebanon and Qatar: Results of the MINA cohort.	Abdulmalik M.A., Ayoub J.J., Mahmoud A., Nasreddine L., Naja F.	2.740	corresponding author	Q2
Lara Nasreddine	2019	Nutrients	Differences in Dietary Intakes among Lebanese Adults over a Decade: Results from Two National Surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N., Naja F.	4.546	1	Q1
Lara	2019	Journal of	Sleepless in Beirut:	Chami H.,	3.456	4+	Q2

Nasreddine		Clinical Sleep Medicine	Sleep Difficulties in an Urban Environment With Chronic Psychosocial Stress	Bechnak A., Isma H., Talih F., Nasreddine L., Nasrallah M., Tamim H.			
Lara Nasreddine	2019	Food & Nutrition Research	The extent, nature, and nutritional quality of foods advertised to children in Lebanon: the first study to use the WHO nutrient profile model for the Eastern Mediterranean Region.	Nasreddine L., Taktouk M., Dabbous M., Melki J.	2.553	1	Q3
Lara Nasreddine	2019	Journal of Personalized Medicine	The Interaction between Genetic Polymorphisms in FTO and TCF7L2 Genes and Dietary Intake with Regard to Body Mass and Composition: An Exploratory Study.	Nasreddine L., Akika R., Mailhac A., Tamim H., Zgheib N.K.		1	
Farah Naja	2020	British Journal of Nutrition	Erosion of the Mediterranean Diet among Adolescents: Evidence from an Eastern Mediterranean Country	Naja F., Hwalla N., Hachem F., Abbas N., Chokor F.A.Z., Kharroubi S., Chamieh M.-C., Jomaa L., Nasreddine L.	3.334	1	Q2
Farah Naja	2020	Sustainability (Switzerland)	Changes in Environmental Footprints Associated with Dietary Intake of Lebanese Adolescents Between the Years 1997 and 2009	Naja F., Hwalla N., El Zouhbi A., Abbas N., Chamieh M.C., Nasreddine L., Jomaa L.	2.576	1	Q2
Farah Naja	2020	BMC Health Services Research	Role of community pharmacists in weight management:	Hijazi M.A., Shatila H., El-Lakany A., Al Rifai H., Aboul-	2.548	corresponding author	Q3

			Results of a national study in Lebanon	Ela M., Naja F.			
Farah Naja	2020	Nutrition Journal	Sex disparities in dietary intake across the lifespan: The case of Lebanon	Nasreddine L., Chamieh M.C., Ayoub J., Hwalla N., Sibai A.-M., Naja F.	3.359	corresponding author	Q2
Farah Naja	2020	Nutrition Journal	Dietary patterns and their associations with gestational weight gain in the United Arab Emirates: Results from the MISC cohort	Itani L., Radwan H., Hashim M., Hasan H., Obaid R.S., Al Ghazal H., Al Hilali M., Rayess R., Mohamed H.J.J., Hamadeh R., Al Rifai H., Naja F.	3.359	corresponding author	Q2
Farah Naja	2020	European Journal of Clinical Nutrition	Nutrition amid the COVID-19 pandemic: a multi-level framework for action	Naja F., Hamadeh R.	3.293	1	Q2
Farah Naja	2020	European Journal of Nutrition	Food insecurity is associated with lower adherence to the Mediterranean dietary pattern among Lebanese adolescents: a cross-sectional national study	Naja F., Itani L., Kharroubi S., Diab El Harake M., Hwalla N., Jomaa L.	4.664	1	Q1
Farah Naja	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F	4.664	corresponding author	Q1
Farah Naja	2019	BMC Pregnancy and	Gestational weight gain and gestational	Hashim M, Radwan H,	2.927	4+	Q2

		Childbirth	diabetes among Emirati and Arab women in the United Arab Emirates: results from the MISC cohort.	Hasan H, Obaid RS, Al Ghazal H, Al Hilali M, Rayess R, Chehayber N, Mohamed HJJ, Naja F			
Farah Naja	2019	BMC Public Health	Burden of non-communicable diseases among Syrian refugees: a scoping review.	Naja F, Shatila H, El Koussa M, Meho L, Ghandour L, Saleh S	2.521	1	Q2
Farah Naja	2019	Nutrients	Human Milk Oligosaccharide, Phospholipid, and Ganglioside Concentrations in Breast Milk from United Arab Emirates Mothers: Results from the MISC Cohort.	McJarow P, Radwan H, Ma L, MacGibbon AKH, Hashim M, Hasan H, Obaid RS, Naja F, Mohamed HJJ, Al Ghazal H, Fong BY	4.546	4+	Q1
Farah Naja	2019	Nutrition and Cancer	Healthy Eating Index-2010 and Mediterranean-Style Dietary Pattern Score and the risk of colorectal cancer and adenoma: a case-control study.	Jafari Nasab S, Bahrami A, Rafiee P, Hekmatdoust A, Ghanavati M, Rashidkhani B, Sadeghi A, Asadzadeh Aghdaei H, Naja F, Hejazi E	2.363	4+	Q3
Farah Naja	2019	Sustainability (Switzerland)	Mediterranean diet and its environmental footprints amid nutrition transition: The case of Lebanon	Naja F., Itani L., Hamade R., Chamieh M.C., Hwalla N.	2.576	1	Q2
Farah Naja	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A,	1.734	corresponding author	Q4

			Lebanese Adults: A Cross-Sectional Study.	Hwalla N, Naja F			
Farah Naja	2019	Nutrients	Differences in dietary intakes among Lebanese adults over a decade: results from two national surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N., Naja F.	4.546	corresponding author	Q1
Farah Naja	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square methods	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.	2.740	1	Q2
Farah Naja	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N	2.483	1	Q2
Farah Naja	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: findings from a national cross-sectional study.	Jomaa L, Naja F, Kharroubi S, Hwalla N	3.182	corresponding author	Q2
Farah Naja	2019	BMJ open	Beliefs, practices and knowledge of community pharmacists regarding complementary and alternative medicine: national cross-sectional	Hijazi MA, Shatila H, El-Lakany A, Aboul Ela M, Kharroubi S, Alameddine M, Naja F	2.496		Q2

			study in Lebanon.				
Farah Naja	2019	International Journal of Adolescent Medicine and Health	Adherence to a Mediterranean dietary pattern and overweight and obesity among female adolescents in Iran	Sedaghat F., Naja F., Darand M., Beyzai B., Rashidkhani B.		2	
Farah Naja	2019	PLoS ONE	Pre-pregnancy BMI, gestational weight gain and birth outcomes in Lebanon and Qatar: Results of the MINA cohort.	Abdulmalik M.A., Ayoub J.J., Mahmoud A., Nasreddine L., Naja F.	2.740	corresponding author	Q2
Farah Naja	2019	European Journal of Nutrition	A healthy lifestyle pattern is associated with a metabolically healthy phenotype in overweight and obese adults: a cross-sectional study.	Naja F, Itani L, Nasrallah MP, Chami H, Tamim H, Nasreddine L	4.664	1	Q1
Omar Obeid	2020	International Journal of Obesity	The effect of central obesity on inflammation, hepcidin, and iron metabolism in young women	Stoffel N.U., El-Mallah C., Herter-Aeberli I., Bissani N., Wehbe N., Obeid O., Zimmermann M.B.	5.540	4+	Q1
Omar Obeid	2020	BMJ Open Sport and Exercise Medicine	Phosphorus supplementation raised the heart rate of male water polo players during a randomised graded dryland exercise test	Elhusseini R., Fares E.-J., Obeid O.		3	
Omar Obeid	2020	BMC Public Health	Breakfast consumption among Saudi primary-school children relative to sex and socio-demographic	Al-Hazaa H.M., Alhowikan A.M., Alhussain M.H., Obeid O.A.	2.521	corresponding author	Q2



			factors				
Omar Obeid	2020	Clinical Science	Obesity and adiposity: The culprit of dietary protein efficacy	El-Mallah C., Obeid O.	5.178	corresponding author	Q1
Omar Obeid	2019	Foods	Effect of processed chickpea flour incorporation on sensory properties of mankoushe zaatar	Dandachy S., Mawlawi H., Obeid O.	3.011	corresponding author	Q2
Omar Obeid	2019	Nutrition Research	Fructose threshold for inducing organ damage in a rat model of non-alcoholic fatty liver disease	Fakhoury-Sayegh N, Trak-Smayra V, Sayegh R, Haidar F, Obeid O, Asmar S, Khazzaka A	2.627	corresponding author	Q3
Omar Obeid	2019	Nature and Science of Sleep	Insufficient sleep duration and its association with breakfast intake, overweight/obesity, socio-demographics and selected lifestyle behaviors among Saudi school children	Al-Hazzaa H.M., Alhussain M.H., Alhowikan A.M., Obeid O.A.	4.375	corresponding author	Q1
Omar Obeid	2019	JSM Nutritional Disorders	Regional policies on sugar intake reduction at population levels to address obesity in the Eastern Mediterranean	Jawadleh A.J., El Mallah C.M., Obeid O.		corresponding author	
Omar Obeid	2019	Nutrition	Phosphorus ingestion with a high-carbohydrate meal increased the postprandial energy expenditure of obese and lean individuals.	Assaad M., El Mallah C., Obeid O.	3.591	1	Q2
Omar Obeid	2019	Obesity	Effect of Meal Acceptability on Postprandial	El Helou N., Obeid O., Olabi A.	3.969	2	Q1

			Appetite Scores and Hormones of Male Subjects with Varied Adiposity				
Omar Obeid	2019	Nutrition	Concomitant lysine and phosphorus addition to wheat gluten protein diet highly amplified growth measures of rats	Ragi M.E., El Mallah C., Toufeili I., Obeid O.	3.591	corresponding author	Q2
Omar Obeid	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.	0.694	corresponding author	Q4
Ammar Olabi	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.	0.694	3	Q4
Ammar Olabi	2019	Obesity	Effect of Meal Acceptability on Postprandial Appetite Scores and Hormones of Male Subjects with Varied Adiposity	El Helou N., Obeid O., Olabi A.	3.969	corresponding author	Q1
Imad Toufeili	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.	0.694	4	Q4
Imad Toufeili	2019	Environmental Geochemistry	Uptake of Cd, Pb, and Ni by Origanum	Dbaiho R., Bashour I.,	3.252	4	Q2

		and Health	syriacum produced in Lebanon	Hamadeh S., Toufeili I.			
Imad Toufeili	2019	American Journal of Analytical Chemistry	Impact of Plastic Packaging Materials and Storage Time on the Quality Parameters of Lebanese Extra Virgin Olive Oil under Real-Time Storage Conditions	Zarazir, Rajab, Obeid H, Toufaily, Toufeili I, Hamieh		4+	
Imad Toufeili	2019	Clinical Nutrition	MON-PO635: Contribution of Lebanese Composite Dishes To antioxidant Intakes in Lebanon	Itani M, Toufeili I, Nasreddine L	6.360	2	Q1
Imad Toufeili	2019	Nutrition	Concomitant lysine and phosphorus addition to wheat gluten protein diet highly amplified growth measures of rats	Ragi M.E., El Mallah C., Toufeili I., Obeid O.	3.591	3	Q2
Samer Kharroubi	2020	Healthcare	Analysis of SF-6D health state utility scores: Is Beta Regression Appropriate?	Kharroubi S.A.	1.916	corresponding author	Q3
Samer Kharroubi	2020	Frontiers in Public Health	Are Lockdown Measures Effective Against COVID-19?	Kharroubi S.A., Saleh F.	2.483	corresponding author	Q2
Samer Kharroubi	2020	Journal of Foods	First Nation-wide analysis of food safety and acceptability in Lebanon	Kharroubi S.A., Nasser N., El-Harake M., Alhaj Sulaiman A., Dagher L., Kassem I.		corresponding author	
Samer Kharroubi	2020	Journal of Applied Poultry Research	Poultry Production and its Effects on Food security in the MENA Region	Daghir N., El Harake M., Kharroubi, S.A.	1.015	corresponding author	Q3
Samer Kharroubi	2020	Land Use Policy	Using IUCN protected areas management categories as a tool	Salman M.M., Kharroubi S., Itani M., Talhouk S.N.	3.682	2	Q1

			to assess youth preferences for local management of an Important Plant Area (IPA) in Lebanon				
Samer Kharroubi	2020	European Journal of Nutrition	Food insecurity is associated with lower adherence to the Mediterranean dietary pattern among Lebanese adolescents: a cross-sectional national study	Naja F., Itani L., Kharroubi S., Diab El Harake M., Hwalla N., Jomaa L.	4.664	3	Q1
Samer Kharroubi	2020	Public Health Nutrition	Food insecurity is associated with compromised dietary intake and quality among Lebanese mothers: Findings from a national cross-sectional study.	Jomaa, L, Naja, F, Kharroubi, SA, El-Harake, M., Hwalla, N.	3.182	3	Q2
Samer Kharroubi	2020	Nutrients	Impact of a Three-Year Obesity Prevention Study on Healthy Behaviors and BMI among Lebanese Schoolchildren: Findings from Ajyal Salima Program	Habib-Mourad C., Ghandour L.A., Maliha C., Dagher M., Kharroubi S., Hwalla N.	4.546	4+	Q1
Samer Kharroubi	2020	Frontiers in Applied Mathematics and Statistics	Modeling the Spread of COVID-19 in Lebanon: A Bayesian Perspective	Kharroubi S.A.		1	
Samer Kharroubi	2020	International Journal of Environmental Research and Public Health	The importance of accounting for parameter uncertainty in SF-6D value sets and its impact on studies that use the SF-6D to measure	Kharroubi S.A., Beyh Y., Abdul Fattah E.A., Young T.	2.468	corresponding author	Q2

			health utility				
Samer Kharroubi	2020	Quality of Life Research	Modelling a preference-based index for EQ-5D-3L and EQ-5D-3L + Sleep using a Bayesian framework	Kharroubi S.A., Beyh Y.S., Brazier J., Yang Y.	2.773	corresponding author	Q2
Samer Kharroubi	2020	Food Control	Influence of storage conditions on quality and safety of eggs collected from Lebanese farms	Saleh G., El Darra N., Kharroubi S., Farran M.T.	4.258	corresponding author	Q1
Samer Kharroubi	2020	International Journal of Nursing Studies	What made Lebanese emigrant nurses leave and what would bring them back? A cross-sectional survey	Alameddine M., Kharroubi S.A., Dumit N.Y., Kassas S., Diab-El-Harake M., Richa N.	3.783	2	Q1
Samer Kharroubi	2020	International Journal of Environmental Research and Public Health	Examining the feasibility and acceptability of valuing the arabic version of SF-6D in a lebanese population	Kharroubi S.A., Beyh Y., El Harake M.D., Dawoud D., Rowen D., Brazier J.	2.468	corresponding author	Q2
Samer Kharroubi	2020	Journal of Material Cycles and Waste Management	Food loss and food waste recovery as animal feed: a systematic review	Rajeh C., Saoud I.P., Kharroubi S., Naalbandian S., Abiad M.G.	1.974	3	Q3
Samer Kharroubi	2020	British Journal of Nutrition	Erosion of the Mediterranean Diet among Adolescents: Evidence from an Eastern Mediterranean Country	Naja F., Hwalla N., Hachem F., Abbas N., Chokor F.A.Z., Kharroubi S., Chamieh M.-C., Jomaa L., Nasreddine L.	3.334	4+	Q2
Samer Kharroubi	2020	Research in Social and Administrative Pharmacy	Translation, cultural adaptation and psychometric validation of the SF-6D measure of health-related quality of life for	Dawoud D.M., El-Dahiyat F., Abojedi A., Dawoud N., Soliman A.M., Hussein M., Mohamed O.,	2.844	corresponding author	Q1

			use in Arabic-Speaking countries	Hasan S.S., Babar Z.-U.-D., Kharroubi S.A.			
Samer Kharroubi	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F	1.734	3	Q4
Samer Kharroubi	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square methods	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.	2.740	corresponding author	Q2
Samer Kharroubi	2019	Journal of Medical Economics	The importance of accounting for the uncertainty around the preference-based health-related quality-of-life measures value sets: a systematic review	Kharroubi S.A., Beyh Y.	1.958	1	Q3
Samer Kharroubi	2019	European Journal of Health Economics	Valuation of preference-based measures: can existing preference data be used to select a smaller sample of health states?	Kharroubi S.A., Rowen D.	2.367	corresponding author	Q2
Samer Kharroubi	2019	BMJ open	Beliefs, practices and knowledge of community pharmacists regarding complementary and	Hijazi MA, Shatila H, El-Lakany A, Aboul Ela M, Kharroubi S, Alameddine	2.496	4+	Q2

			alternative medicine: national cross-sectional study in Lebanon.	M, Naja F			
Samer Kharroubi	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: Findings from a national cross-sectional study	Jomaa L, Naja F., Kharroubi S., Hwalla N.	3.182	3	Q2
Samer Kharroubi	2019	Mediterranean Journal of Hematology and Infectious Diseases	Anthropometric Viral etiology of acute respiratory infections in pediatric patients in Lebanon	Masoud K., Hanna-Wakim R., Zaraket H., Kharroubi S., Araj G.F., Matar G.M., Dbaiho G.	1.600	4	Q4
Elie Jacques Fares	2020	BMJ Open Sport and Exercise Medicine	Phosphorus supplementation raised the heart rate of male water polo players during a randomised graded dryland exercise test	Elhusseini R., Fares E.-J., Obeid O.		corresponding author	
Elie Jacques Fares	2020	JMIR mHealth and uHealth	The Arabic version of the mobile app rating scale: Development and validation study	Bardus M., Awada N., Ghandour L.A., Fares E.-J., Gherbal T., Al-Zanati T., Stoyanov S.R.	4.313	4	Q1
Elie Jacques Fares	2019	Journal of Physical Activity and Health	First physical activity report card for children and youth in Lebanon	Nader P.A., Majed L., Sayegh S., Mattar L., Hadla R., Chamieh M.C., Mourad C.H., Fares E.-J., Hawa Z., Belanger M.	1.993	4+	Q2
Issmat	2020	Water	The potential	Kassem I.I.,	1.885	2	Q3

Kassem		International	impact of water quality on the spread and control of COVID-19 in Syrian refugee camps in Lebanon	Jaafar H.			
Issmat Kassem	2020	Journal of Global Antimicrobial Resistance	Dissemination of multidrug-resistant Escherichia coli harboring the mobile colistin resistance gene mcr-1.1 on transmissible plasmids in the Mediterranean Sea	Sourenian T., Mann D., Li S., Deng X., Jaafar H., Kassem I.I.	2.469	corresponding author	Q3
Issmat Kassem	2020	Antibiotics	Audacious hitchhikers: The role of travel and the international food trade in the global dissemination of mobile colistin-resistance (mcr) genes	Hassan J., Kassem I.I.	3.893	corresponding author	Q1
Issmat Kassem	2020	Travel Medicine and Infectious Disease	Refugees besieged: The lurking threat of COVID-19 in Syrian war refugee camps	Kassem I.I.	4.868	corresponding author	Q1
Issmat Kassem	2020	Travel Medicine and Infectious Disease	First report of the plasmid-borne colistin resistance gene (mcr-1) in Proteus mirabilis isolated from domestic and sewer waters in Syrian refugee camps	Alhaj Sulaiman A.A., Kassem I.I.	4.868	corresponding author	Q1
Issmat Kassem	2019	Travel Medicine and Infectious Disease	First report on the detection of the plasmid-borne colistin resistance gene mcr-1 in multi-drug resistant E. coli isolated from	Sulaiman A.A.A., Kassem I.I.	4.868	corresponding author	Q1



			domestic and sewer waters in Syrian refugee camps in Lebanon				
Issmat Kassem	2019	International Journal of Antimicrobial Agents	Emergence of plasmid-borne colistin resistance gene mcr-1 in multidrug-resistant Escherichia coli isolated from irrigation water in Lebanon	Hmede Z., Sulaiman A.A.A., Jaafar H., Kassem I.I.	4.615	corresponding author	Q1
Issmat Kassem	2019	Journal of Food Safety	Qualitative and quantitative cues in consumers' valuation of food safety: Evidence from Lebanon	Chalak A, Diab M, Kassem II, Abiad MG	1.665	3	Q3
Issmat Kassem	2019	Journal of Global Antimicrobial Resistance	On a collision course: The availability and use of colistin-containing drugs in human therapeutics and food-animal farming in Lebanon	Kassem I.I., Hijazi M.A., Saab R.	2.469	1	Q3
Issmat Kassem	2019	IDCases	First report of the plasmid-borne colistin resistance gene (mcr-1) in Proteus mirabilis isolated from a toddler in non-clinical settings	Hmede Z., Kassem I.I.		corresponding author	

## 7. Services & Professional Affiliations

### Services

<b>N. Hwalla</b>	<b>Faculty- Level Committees</b> <ul style="list-style-type: none"> <li>• Member of the Advisory Committee</li> <li>• Member of the Academic Affairs Committee</li> <li>• Member of the Thesis Manual Committee</li> <li>• Member of the Administrative Committee</li> <li>• Member of the Academic and Curriculum Committee</li> <li>• Member of the Research and Publications Committee</li> </ul>
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	<p><b>University-Level Task Forces and Committees</b></p> <ul style="list-style-type: none"> <li>• Chair of the University Policies and Procedures Review Committee appointed by the President</li> <li>• Chair of the University Disciplinary Committee</li> <li>• Chair of Ad Hoc Grievance Committee appointed by the President</li> <li>• Member of the Task Force for granting Honorary Degrees appointed by the President</li> <li>• Member of Task Force for revising faculty promotion criteria appointed by the President</li> <li>• Member of the Population Health and Nutrition Study (PHANS) Research group</li> <li>• Chairperson of the Academic Development Committee</li> <li>• Chairperson and member of the Senate Committee for Faculty Affairs</li> <li>• University Committee on Student Affairs</li> <li>• Interfaculty Graduate Nutrition Program Committee</li> <li>• Member of University Senate Steering Committee</li> <li>• Member of University Strategic Planning Committee</li> <li>• Member of University IRB Committee</li> <li>• Member of University Senate</li> <li>• Member of Academic and Curriculum Committee</li> <li>• Member Administrative Committee</li> <li>• FAFS Member of Executive Committee of IBSAR</li> <li>• Member of the Board of Graduate Studies</li> <li>• Member of the University Research Board</li> <li>• Member of the University Housing Committee</li> </ul> <p><b>Service to the Profession</b></p> <ul style="list-style-type: none"> <li>• 2014-present Editorial Board member: Centrum Scientific Strategy Advisory Board</li> <li>• 2008-present Editorial Board member: Mediterranean Journal of Nutrition and Metabolism</li> <li>• 2006-present Editorial Board Member- International Journal of Food Sciences and Nutrition</li> <li>• 2006-2008 Editorial Board member: Health Education Research</li> <li>• 2004-present Editorial Board member: World Health Organization Bulletin</li> <li>• 2004-present Editorial Board member: Annals of Nutrition and Metabolism</li> <li>• 2004-present Reviewer of Research Articles: <ul style="list-style-type: none"> <li>- World Health Organization Bulletin</li> <li>- Nutrition Research</li> <li>- Annals of Nutrition and Metabolism</li> <li>- European Journal of Clinical Nutrition</li> <li>- Bulletin of the National Nutrition Institute</li> </ul> </li> </ul>
<b>I. Toufeili</b>	<p><b>Faculty</b></p> <ul style="list-style-type: none"> <li>• Faculty Admissions Committee.</li> <li>• Faculty Academic and Curriculum Committee.</li> <li>• Faculty Advisory Committee.</li> <li>• Faculty Graduate Studies Committee.</li> <li>• Faculty Agricultural Research and Extension Center Committee.</li> <li>• Faculty Student Affairs Committee.</li> </ul> <p><b>University</b></p> <ul style="list-style-type: none"> <li>• University Academic Development Committee.</li> </ul>

	<ul style="list-style-type: none"> <li>• University Admissions Committee.</li> <li>• University Committee on Compulsory Freshman Year.</li> <li>• University Committee on General Education</li> <li>• University Task Force on Accreditation (Task Team 14).</li> <li>• University Ad Hoc Committee for Identifying National Research Priorities.</li> <li>• University Ad Hoc Committee on Consumer Protection.</li> <li>• Teaching Excellence Award Committee.</li> <li>• University Publications Committee.</li> <li>• Advisory Committee to the Center of Teaching &amp; Learning</li> <li>• Organizing Committee for the First Annual Open House for Graduate Studies at AUB</li> <li>• University Ad Hoc Committee on Graduate Assistantships</li> </ul> <p><b>Public Service and Services to Profession</b></p> <ul style="list-style-type: none"> <li>• National Committee on Fortification of Wheat Flour with Iron and Folic Acid.</li> <li>• Technical Advisor to UNICEF on Fortification of Wheat Flour.</li> <li>• Lebanese Institute of Standards Committee on Wheat Flour and Bakery Products.</li> <li>• Newspaper and Television Interviews on Food Safety.</li> <li>• National Committee on Olive Oil Quality.</li> <li>• Respond to Inquiries on Food Additives and Food Processing.</li> </ul> <p><b>Professional Affiliations</b></p> <ul style="list-style-type: none"> <li>• Institute of Food Science &amp; Technology, UK (Fellow).</li> <li>• American Association of Cereal Chemists (Professional Member; Milling and Baking Division, Rheology Division).</li> <li>• Institute of Food Technologists (Professional Member).</li> <li>• Lebanese Association of Food Science and Technology (Founding Member).</li> <li>• New York Academy of Sciences.</li> <li>• Syndicate of Chemists in Lebanon.</li> </ul>
<b>O. Obeid</b>	<ul style="list-style-type: none"> <li>• UPTC</li> <li>• Biomedical sciences: member of PhD committee</li> <li>• FAFS administrative committee</li> </ul>
<b>A. Olabi</b>	<p><b>Faculty</b></p> <ul style="list-style-type: none"> <li>• FAFS Strategic Plan Committee (AY 17-18 to present).</li> <li>• Executive Advisory Board (AY 17-18 to present).</li> <li>• FAFS AREC Taskforce (AY 17-18 to present).</li> <li>• Graduate Studies Committee (AY 07-10; AY 17-18 to present).</li> <li>• Academic and Curriculum Affairs Committee (AY 09-12; AY14-16; AY 17-18 present).</li> <li>• Admissions Committee (AY 07-10; AY 17-18-present).</li> <li>• FAFS Representative, MasterCard Foundation Scholars Program (AY 16-17 present).</li> <li>• Sinno High School Scholarship in Agriculture and Awards Committee (AY 17-18 to present).</li> <li>• Undergraduate Admissions Committee (AY 16-17-present).</li> <li>• Marshall, Commencement Committee (AY 05-12) and Chief Marshall (AY 14 to present).</li> </ul>

	<ul style="list-style-type: none"> <li>• University</li> <li>• Committee of Department Chairs (AY 18-19-present).</li> <li>• Council of Associate Deans (AY 18-19-present).</li> <li>• University Student Complaints Committee (AY 18-19-present).</li> <li>• IT Application Development Committee (AY 18-19-present).</li> <li>• Co-Chair of Working Group VI (for MSCHE Self-Study with Dr. Najat Saliba): Planning, Resources, and Institutional Improvement (AY 16-17-present).</li> <li>• AUB AREC Taskforce (AY 17-18 to present).</li> <li>• Graduate Education Taskforce (AY 17-18 to present).</li> <li>• Regional External Programs Committee, FAFS Representative (AY 17-18 to present).</li> <li>• FAFS representative (CEC Coordinator) on the Regional External Programs' (REP) Continuing Education Center (AY 16-17-present).</li> <li>• Policies and Procedures Review Committee (AY 17-18 to present).</li> <li>• FAFS Representative, Office of International Programs Advisory Committee (AY 16-17-present).</li> <li>• General Education (GE) Subcommittee for Service Learning and Civic Engagement (AY 16-17-present).</li> <li>• General Education (GE) Subcommittee for First Year Seminar (AY 16-17-present).</li> <li>• MasterCard Foundation Scholars Program at AUB, Interviewing Committee (Summer 2016-present).</li> <li>• Second Tenure Task Force FAFS Representative (AY 10-11-present).</li> <li>• Food Security and Policy in the Middle East Program (AY 10-11-present).</li> <li>• Lebanon Action for Salt and Health Group (LASH) (AY 12-13-present).</li> <li>• World Action on Salt &amp; Health (WASH) (AY 12-13-present).</li> <li>• NCC (Nature Conservation Center, AY 07-08-present).</li> </ul> <p><b><u>Service to the Profession</u></b></p> <ul style="list-style-type: none"> <li>• Reviewer for the Journal of Food Science.</li> <li>• Reviewer for the Journal of Dairy Science.</li> <li>• Reviewer for the Journal of the Science of Food and Agriculture.</li> <li>• Reviewer for Food Quality and Preference.</li> <li>• Reviewer for Appetite.</li> <li>• Reviewed for the CNRS, Lebanon.</li> <li>• Reviewer for University Research Board, American University of Beirut.</li> </ul> <p><b><u>Professional Affiliations</u></b></p> <ul style="list-style-type: none"> <li>• Member of Scientific Committee, Arab Beverage Association (October 2014-Present)</li> <li>• Member of the Institute of Food Technologists (Sensory and Quality Assurance divisions).</li> <li>• Member of the American Dairy Science Association.</li> <li>• Member of the Association for Chemoreception Sciences.</li> <li>• Member of the Lebanese Association for Food Science and Nutrition.</li> </ul> <p><b><u>Public Service</u></b></p> <ul style="list-style-type: none"> <li>• Founding Board Member, Land O Lakes Association-Lebanon (March 2014-present).</li> </ul>
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	<ul style="list-style-type: none"> <li>• Member of the Lebanese “Food Constitution/Codex Alimentarius” Committee (AY 07-present).</li> <li>• Member of the Lebanese Ministry of Agriculture Committee for Milk and Milk Products (December 2009-present).</li> <li>• Member of the Lebanese Ministry of Agriculture Committee for Food Industries (AY 09-present).</li> <li>• Member of the Food Security and Policy in the Middle East Program (April 2010-present).</li> <li>• Member of the Lebanese Action for Salt and Health (LASH, Under the Vascular Medicine Program at AUBMC).</li> <li>• Member of the World Action for Salt and Health.</li> <li>• Media interviews on research-related issues.</li> <li>• Member of the Salt Reduction Working Group (Ministry of Industry in cooperation with LASH).</li> </ul>
<b>L. Nasreddine</b>	<p><b>Department</b></p> <ul style="list-style-type: none"> <li>• Member of the Departmental Review and Self Study Group (2020-present)</li> <li>• Member of the Public Health Nutrition program committee (2017-present)</li> <li>• Member of the CP committee to oversee the Coordinated program in Nutrition and Dietetics (2009-2019)</li> <li>• Departmental Ad hoc committees:</li> <li>• Nutrition and Food Science Strategic Planning Committee.</li> <li>• Coordinated Program Accreditation Committee.</li> <li>• Learning Outcomes Coordinating Committee</li> </ul> <p><b>Faculty</b></p> <ul style="list-style-type: none"> <li>• Member of the Undergraduate Research Volunteer Program (2020-present)</li> <li>• Coordinator of the PHNU Program (2020-present)</li> <li>• Member of the FAFS Library Committee (2020-present)</li> <li>• FAFS Strategic Plan committee (May 2018-present)</li> <li>• FAFS committee for the development of Tenure guidelines (September 2017-present)</li> </ul> <p><b>University</b></p> <ul style="list-style-type: none"> <li>• Deputy Title IX Coordinator, Equity &amp; Title IX Network (2017-present)</li> <li>• Member of the Faculty Workload Taskforce (September 2017-present)</li> <li>• Title IX investigation panels</li> <li>• Member of the Teaching Excellence Award Committee (Dates not shown for confidentiality purposes)</li> <li>• Member of the Committee on Scholarly Concentration Clerkship at the Faculty of Medicine (2018-present)</li> <li>• Member of the organizing committee for the Annual AUB Biomedical research day (October 2014-Present)</li> <li>• Jury member, Annual AUB Biomedical Research Day (February 2015 - present)</li> <li>• Member of the Vascular Medicine Program (VMP) Executive Council (January 2013-present)</li> </ul> <p><b><u>Service to the Profession</u></b></p> <ul style="list-style-type: none"> <li>• Reviewer of papers in the following refereed journals:</li> </ul>

	<ul style="list-style-type: none"> <li>• Annals of Human Biology</li> <li>• Archives of Environmental Contamination and Toxicology</li> <li>• BMC Nutrition</li> <li>• British Journal of Nutrition</li> <li>• Eastern Mediterranean Health Journal</li> <li>• Environment Research</li> <li>• European Journal of Nutrition</li> <li>• Food Additives and Contaminants</li> <li>• International Breastfeeding Journal</li> <li>• International Journal of Environmental Health Research</li> <li>• Italian Journal of Food Science</li> <li>• Journal of Human Lactation</li> <li>• Journal of Nutrition Education and Behavior</li> <li>• Lebanese Science Journal</li> <li>• Nutrition Journal</li> <li>• Nutrition and Health Journal</li> <li>• Pediatric Obesity</li> <li>• PLOS one</li> <li>• Population Health Metrics</li> <li>• Public Health Nutrition</li> <li>• Reviewer of proposals for the Institutional Review Board (IRB)</li> <li>• Reviewer of proposals for the LNCSR</li> <li>• Reviewed for QASR (Al Quds Academy for Scientific Research)</li> <li>• Reviewed the Food-Based Dietary Guidelines for Jordan (WHO, EMRO) (Summer 2020)</li> <li>• Development of Food-Based Dietary Guidelines for the Adult Lebanese Population (<a href="http://website.aub.edu.lb/fafs/nfsc/Documents/FBDG%20English%20Version.pdf">http://website.aub.edu.lb/fafs/nfsc/Documents/FBDG%20English%20Version.pdf</a>)</li> <li>• Development of Food-Based Dietary Guidelines for the Pediatric Lebanese population</li> <li>• Board Member of ILSI Middle-East</li> <li>• Member of Lebanese Action for Salt and Health (LASH)</li> <li>• Member of the International Breast Cancer and Nutrition team</li> <li>• Reviewer for the French-Lebanese “Programme CEDRE”</li> <li>• Member of the Public Health in the Arab World (PHAW)</li> <li>• Member of the WHO Regional Research in Nutrition-related NCDs</li> <li>• Member of the World Action on Salt &amp; Health (WASH)</li> <li>• Member of the Global Observatory for Physical Activity (GoPA!) committee (2017-Present)</li> <li>• Reviewer of a promotion file (Zayed University, Dubai, UAE)</li> </ul>
<b>S. Kharroubi</b>	<b>University</b> <ul style="list-style-type: none"> <li>• FAFS representative on Commencement Committee (2017 – present)</li> <li>• FAFS representative for the Open House for Graduate Studies at AUB, (2017 – present)</li> <li>• FAFS representative on General Education Quantitative Thought Task Force</li> </ul>

	<p>(2018 – present)</p> <ul style="list-style-type: none"> <li>FAFS representative on the University Student Faculty Committee (2020 – present)</li> </ul> <p><b>Faculty</b></p> <ul style="list-style-type: none"> <li>Chair of FAFS Research Committee</li> <li>FAFS Statistical Advisor</li> <li>FAFS Ambassador during the school visits as part of the student recruitment initiative (Jan 2020).</li> <li>Member of Student Affairs Committee (2016 – present)</li> <li>Member of Undergraduate Curriculum Committee (2017 – present)</li> <li>Member of Undergraduate Admissions Committee (2017 – present)</li> </ul> <p><b>Department</b></p> <ul style="list-style-type: none"> <li>Co-advisor on the Food Safety program</li> </ul> <p><b>Professional Service</b></p> <ul style="list-style-type: none"> <li>Chartered Statistician (CStat), Royal Statistical Society, UK.</li> <li>Honorary Reader in Medical Statistics, School of Health and Related Research, University of Sheffield, UK.</li> <li>Associate Editor for Frontiers in Public Health, reviewing several articles per year as well as seeking potential reviewers for submitted manuscripts</li> <li>Guest Editor: International Journal of Environmental Research and Public Health; Special issue: Applications of Data Science to the Environment and Health Fields. My role involves disseminating calls, encouraging researchers to submit their work for this Special issue, reviewing submitted articles and/or seeking potential reviewers.</li> <li>Fellow of the Royal Statistical Society, UK</li> <li>Member of the International Statistical Institute</li> <li>Member of the International Society for Clinical Biostatistics</li> <li>Member of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR)</li> <li>Member of the ISPOR Value of Information Task Force Review Group, reviewing and providing feedback on the final draft of ISPOR Value of Information reports.</li> <li>Member of the ISPOR Statistical Methods Task Force Review Group, reviewing and providing feedback on the final draft of ISPOR Statistical methods reports.</li> <li>Member of the ISPOR Stated Preference Methods Special Interest Group, reviewing and providing feedback on the final draft of ISPOR Stated Preference Methods reports.</li> <li>Member of ISPOR-Lebanon Chapter (LSPOR)</li> <li>Abstract reviewer for key international conferences, namely Medical Decision Making and ISPOR conferences</li> <li>Journal Reviewer to key academic journals in Statistics and Health Economics such as Communications in Statistics – Theory and Methods; Statistics in Medicine; Statistics and Probability Letters; Journal of Biostatistics and Biometric Applications; Journal of Applied Mathematics; Applied Mathematical Modelling; Health and Quality of Life Outcomes;</li> </ul>
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	<p>Journal of Health Economics; Medical Decision Making; Journal of Medical Economics; PLOS ONE; Population Health Metrics; Health Economics; Value in Health; Quality of life Research; PharmaEconomics; British Medical Journal; Journal of Patient-Reported Outcomes; Kuwait Journal of Science.</p> <ul style="list-style-type: none"> <li>• Grant proposals' reviewer for national (Farouk Jabre Biomedical Research, AUB) and international (Medical Research Council, UK) funding bodies.</li> <li>• Delivered talks and presented my research findings in many national and international meetings and conferences in Statistics and Health Economics</li> <li>• Made a series of research visits to pursue collaborative research with colleagues in the region (Kuwait and UAE) and beyond (UK, Canada)</li> <li>• Organizer and leader of a two-day workshop on "Statistics with R"</li> </ul>
<b>M. Abiad</b>	<p><b>University, Faculty and Department Services</b></p> <ul style="list-style-type: none"> <li>• University Senate – Elected FAFS Representative 2015 – present</li> <li>• Senate Committee for Faculty Affairs 2018 – present</li> <li>• University Disciplinary Committee – Elected FAFS Representative 2015 – present</li> <li>• Social and Behavioral Sciences Institutional Review Board (SBS-IRB) – Alternate Member 2018 – present</li> <li>• University Sports Committee – Member 2014 – present</li> <li>• University Student Faculty Committee (USFC) – Elected FAFS Representative 2017 – present</li> <li>• University Committee on Student Affairs – Elected FAFS Representative 2017 – present</li> <li>• Writing Center Advisory Board – Member 2013 – present</li> <li>• K.A.S. Central Research Science Laboratory Steering Committee – Member – FAFS Representative 2011 – present</li> <li>• Faculty Student Affairs Committee- Chair (2017-present) &amp; Elected Member (2016-present)</li> </ul> <p><b>Public Service</b></p> <ul style="list-style-type: none"> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Essential Oils (NL TC54); Since 2016</li> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Pulses and Grains (NL TC34 SC4zein); Since 2016</li> <li>• The National Committee for Monitoring and Controlling Wheat, Lebanese Ministry of Agriculture; Since 2016</li> <li>• The National Committee for Agricultural Manufacturing and Food Products, Lebanese Ministry of Agriculture; Since 2010</li> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Packaging (NL TC122); Since 2010</li> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Safety of Food Processing Machinery (NL TC 653); Since 2009</li> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Food additives (NL TC 1008); Since 2009</li> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of</li> </ul>



	<p>Industry, Technical Committee on Food Labeling (NL TC 1011); Since 2009</p> <ul style="list-style-type: none"> <li>• The Lebanese National Standards Institution (LIBNOR), Lebanese Ministry of Industry, Technical Committee on Paper, Board and Pulp, Glass and Metal Containers (NL TC 3010); Since 2009</li> </ul> <p><b>Services to the Profession</b></p> <ul style="list-style-type: none"> <li>• Reviewer for the Institutional Review Board (IRB) at AUB</li> <li>• Reviewer for the following international journals: <ul style="list-style-type: none"> <li>– Sustainability</li> <li>– PLOS one</li> <li>– Food and Bioproducts Processing</li> <li>– Food Quality and Preference</li> <li>– Waste and Biomass Valorization</li> <li>– Journal of Environmental Planning and Management</li> <li>– Journal of Cleaner Production</li> <li>– Food Quality and Preference</li> <li>– RSC Advances</li> <li>– European Review of Agriculture Economics</li> <li>– Journal of Solid Waste Technology</li> <li>– Journal of Materials in Civil Engineering</li> <li>– Advances in Civil engineering</li> <li>– Materials Letters</li> <li>– International Journal of Food Properties</li> <li>– Food and Bioprocess Technology</li> <li>– Foodborne Pathogens and Disease</li> <li>– Food Biophysics</li> </ul> </li> </ul>
<b>L. Jomaa</b>	<p><b>University, Faculty and Department Service</b></p> <ul style="list-style-type: none"> <li>• Co-Director of the Refugee Health Program (RHP), Global Health Institute (GHI), AUB (Fall 2016- present).</li> <li>• Chair, Student Affairs Committee (September 2019 – present).</li> <li>• Member of advisory committee on Lebanon Crisis Observatory initiative at the American University of Beirut (July 2020-present)</li> <li>• Member of the Public Health Nutrition Committee for joint Public Health Nutrition MSc. degree between FAFS and FHS at AUB (August 2020-present).</li> <li>• Member of the Executive Interfaculty Committee on Capacity Building in Food Security (Spring 2017- present)</li> <li>• Member of the Food Security Master's Program and Diploma, FAFS, AUB (Summer 2015- present)</li> <li>• Member of the interdepartmental Rural Community Development Committee and Master's Program (spring 2014 - present)</li> <li>• Member of the Nutrition and Dietetics Coordinated Program Committee (2013-present)</li> <li>• Member of the FAFS Graduate Studies Committee (Sept 2015-2017), (2019 – present)</li> <li>• Advisor of the Nutri-club (2013-2014 and 2018-present)</li> </ul> <p><b>Public and Community Service</b></p> <ul style="list-style-type: none"> <li>• Organized and moderated the panel discussion entitled "Reflection on</li> </ul>

	Coping Strategies among Syrian Refugees and their Impact on Health” as part of a one-day symposium held on September 17, 2019 at College Hall, AUB.
<b>E. Fares</b>	<ul style="list-style-type: none"> <li>• International Society of Sports Nutrition</li> <li>• Sports and nutrition consultant at Solidarité Liban Suisse (SLS) association</li> </ul>

### Professional Affiliations

<b>N. Hwalla</b>	<ul style="list-style-type: none"> <li>• President of the Lebanese Association for Nutrition and Food Science</li> <li>• Member of the “WHO Nutrition Guidance Expert Advisory Group (NUGAG), Sub-group on Diet and Health”</li> <li>• American Dietetic Overseas Association Country Representative for Lebanon Member of the LNCSR Committee for Science and Technology Innovation Policy (STIP) related to setting priorities for research in Food and Nutrition in the country</li> <li>• Member of the Executive Board of the National Intersectoral Committee on Food &amp; Nutrition</li> <li>• Member of Ministry of Health committee on legislation for dietary and herbal supplements</li> <li>• Member of World Public Health Nutrition Association</li> <li>• Member of the American Society of Clinical Nutrition, American Institute of Nutrition, USA</li> <li>• Member of the Columbus Concept Scientific Advisory Board</li> <li>• Member of the Middle East and North African Nutrition Association</li> <li>• Member of the Federation of Asian Nutrition Societies</li> </ul>
<b>I. Toufeili</b>	<ul style="list-style-type: none"> <li>• Institute of Food Science &amp; Technology, UK (Fellow).</li> <li>• American Association of Cereal Chemists (Professional Member; Milling and Baking Division, Rheology Division).</li> <li>• Institute of Food Technologists (Professional Member).</li> <li>• Lebanese Association of Food Science and Technology (Founding Member).</li> <li>• New York Academy of Sciences.</li> <li>• Syndicate of Chemists in Lebanon.</li> </ul>
<b>O. Obeid</b>	<ul style="list-style-type: none"> <li>• The Nutrition Society, UK (Full member)</li> <li>• The Lebanese Association for Nutrition and Food Science (Executive Committee)</li> <li>• Advisory Committee for the Syrian Diabetic Journal (Diabetic World)</li> <li>• Member of the Editorial Board: Arab Journal of Food and Nutrition</li> <li>• Advisory Committee for the Arab Centre of Nutrition</li> <li>• Member of the Governmental Colloquium Committee (Dietetic)</li> <li>• Member of MENANA (Middle East and North Africa Nutrition Association)</li> <li>• Member of the Nutrition in Emergencies Training Network (NIETN)</li> </ul>
<b>A. Olabi</b>	<ul style="list-style-type: none"> <li>• Member of the Institute of Food Technologists (Sensory and Quality Assurance divisions).</li> <li>• Member of the American Dairy Science Association.</li> <li>• Member of the Association for Chemoreception Sciences.</li> </ul>
<b>L. Nasreddine</b>	<ul style="list-style-type: none"> <li>• American Society for Nutrition</li> </ul>

	<ul style="list-style-type: none"> <li>• Nutrition Society</li> <li>• Lebanese Academy for Nutrition and Dietetics (LAND)</li> <li>• Nutrition and Obesity Related Diseases (NORD, AUB Global Health Initiative)</li> <li>• Vascular Medicine Program at AUB</li> <li>• Population Health and Nutrition Study (PHANS) group at AUB</li> <li>• International Breast Cancer and Nutrition (IBCN; Lebanon's network)</li> </ul>
<b>S. Kharroubi</b>	<ul style="list-style-type: none"> <li>• Royal Statistical Society (RSS),</li> <li>• International Statistical Institute (ISI)</li> <li>• International Society for Pharmacoeconomics and Outcomes Research (ISPOR)</li> <li>• ISPOR Value of Information Task Force Review Group and ISPOR Statistical Methods Task Force Review Group.</li> <li>• Also involved in White Rose Initiative in Health Technology Assessment (WRIHTA)</li> <li>• CHEBS (Centre for Bayesian Statistics in Health Economics)</li> <li>• ScHARR (School of Health and Related Research at the University of Sheffield)</li> <li>• CHE (Centre for Health Economics) and School of Public Health at the University of Alberta by conducting collaborative research</li> </ul>
<b>F. Naja</b>	<ul style="list-style-type: none"> <li>• Member of the Association of Public Health Epidemiologists in Ontario</li> <li>• Member of the Lebanese Dietetic Association</li> <li>• Member of the World Public Health Nutrition Association</li> </ul>
<b>M. Abiad</b>	<ul style="list-style-type: none"> <li>• American Society of Agricultural and Biological Engineers (ASABE) – (Professional Member since 2018)</li> <li>• Society of Food Engineering (SoFE) – (Professional Member since 2018)</li> <li>• American Association of University Professors (AAUP) – (Member since 2017)</li> <li>• AUB Faculty United – Chartered Chapter of the American Association of</li> <li>• Food Safety Alliance for Packaging – Technical Committee of the Institute of Packaging Professionals – (Professional member since 2010)</li> <li>• Institute of Packaging Professionals (IoPP) – (Elite Professional Member since 2010)</li> <li>• International Society of Food Engineering (ISFE) – (Professional Member since 2009)</li> <li>• American Association of Pharmaceutical Scientists (Professional Member since 2009)</li> <li>• Institute of Food Technologists (IFT) – (Professional member since 2001)</li> <li>• Order of Engineers and Architects, Beirut, Lebanon – (Professional Member since 1998)</li> </ul>
<b>I. Kassem</b>	<ul style="list-style-type: none"> <li>• International Association for Food Protection.</li> <li>• Conference of Research Workers in Animal Diseases (CRWAD) (2013-present).</li> <li>• <b>The Food Innovation Center (OSU) (2013-present).</b></li> <li>• <b>American Society for Microbiology (ASM) (2004-present).</b></li> <li>• Sigma Xi (2005-present).</li> </ul>

<b>L. Jomaa</b>	<ul style="list-style-type: none"> <li>• Member of the Young Scientists community, World Economic Forum (2018- present).</li> <li>• Member of the Refugee and Asylum Seeker Health Initiative (RAHI), University of California, San Francisco, US (2018- present)</li> <li>• Member of the American Society of Nutrition (2010-present)</li> <li>• Executive committee member of the Nutrition Education and Behavioral Science Research Interest Group at ASN (June 2018- present)</li> <li>• Member of the Public Health and Community Nutrition Research Interest Group</li> <li>• Member of the Lebanese Fulbright Alumni Association (2011-present)</li> <li>• Member of the Lebanese Association for Nutrition and Dietetics (2004-present).</li> </ul>
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#### Participation in Workshops and Conferences

<b>N. Hwalla</b>	<ul style="list-style-type: none"> <li>• Participated as a keynote speaker in the Regional Consultative Technical Meeting, which was held in Cairo, Egypt, from January 20-21, 2020.</li> <li>• Attended the Rafik Hariri University (RHU) Board of Trustees (BOT) Meeting, which was held in Monte Carlo at the residence of BOT Chairperson Mrs. Nazek Rafik Hariri from September 5- 8, 2019.</li> <li>• Travelled to UAE to follow-up on the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS)”. The event was held in UAE, from December 5-6, 2019.</li> </ul>
<b>O. Obeid</b>	<ul style="list-style-type: none"> <li>• Attended EASO’s Centers of Obesity Management (COMs) Summit Meeting, which took place in Gdansk, Poland from October 10-11, 2019.</li> <li>• Attended the Arab Beverages Conference and Exhibition as a speaker. The conference took place in Dubai, UAE from October 27-29, 2019.</li> <li>• Attended the EASO COMs and Exchange Mentoring Program at the Department of Human Nutrition, Faculty of Life Sciences at the University of Copenhagen, which took place in Copenhagen, Denmark, from November 11-15, 2019.</li> <li>• Attended the AAH R4NUT conference as a new member of the Scientific Committee, which took place in Paris, France from November 20-21, 2019.</li> <li>• Participated in the Emerging Valley International Summit which was held in Aix-en-Provence, France from December 4-5, 2019.</li> <li>• Participated in the Wellness JO Conference (WJC) and shared his experience and knowledge about wellness and healthy lifestyle practices. The conference was held under the patronage of his excellency the Minister of Culture and the Minister of Youth, which took place in Amman, Jordan, from February 22-23, 2020.</li> <li>• Presented a poster entitled “Effect of Aspartame mode of ingestion on body weight and composition in Sprague-Dawley rats” at the European and International Congress on Obesity, which took place in Dublin, Ireland from May 17-20, 2020.</li> </ul>
<b>L. Nasreddine</b>	<ul style="list-style-type: none"> <li>• Traveled to Doha, Qatar to follow-up on the QNRF grant, October 15-20, 2019.</li> <li>• Participated in the 5th Dubai International Nutrition Congress as a speaker</li> </ul>

	<p>and presented two abstracts on “Metabolically healthy obesity and its association with dietary and lifestyle factors” and “Assessment of the nutritional quality of food advertised to children in Lebanon”. The conference took place in Dubai, UAE from Oct 24-26, 2019.</p> <ul style="list-style-type: none"> <li>• Participated in the 13th Dubai International Food Safety Conference, which was held from Nov 11-13, 2019, at the Dubai International Convention and exhibition Center, where she gave a talk entitled "Food Consumption and Nutrition Surveys: key findings from the Levant".</li> <li>• Travelled to UAE to follow-up on the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS)”. The event was held in UAE, from December 5-6, 2019.</li> </ul>
<b>S. Kharroubi</b>	<ul style="list-style-type: none"> <li>• Participated in Google AI Impact Challenge Accelerator 5-days Boot camp. This is the 3rd high touchpoint for the Google AI Impact Challenge Accelerator. The Boot camp was held from February 10-February 14, 2020 in San Francisco, California, USA.</li> <li>• Travelled to UAE to follow-up on the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS)”. The event was held in UAE, from December 5-6, 2019.</li> </ul>
<b>F. Naja</b>	<ul style="list-style-type: none"> <li>• Participated in the FAO-WHO workshop “Leveraging Food Systems to Combat Obesity”, which was held from Sept 23-24, 2019 in Cairo, Egypt.</li> <li>• Traveled to Doha, Qatar to follow-up on the QNRF grant, September 9, 2019.</li> <li>• Traveled to Doha, Qatar to follow-up on the QNRF grant, October 15-18, 2019.</li> <li>• Attended and participated in the event “Being and Well-being: traditional diets from Mediterranean and beyond?”, organized by FAO, which was held in Rome, Italy on November 27, 2019.</li> <li>• Travelled to UAE to follow-up on the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS)”. The event was held in UAE, from December 5-6, 2019.</li> <li>• Participated in the 4th PHCC International Conference, which was held in Doha-Qatar from February 19-22, 2020. She delivered a talk on ‘Pre-pregnancy BMI, gestational weight gain and birth outcomes in Lebanon and Qatar: Results of the MINA cohort’.</li> </ul>
<b>M. Abiad</b>	<ul style="list-style-type: none"> <li>• Attended the Arab Beverages Conference and Exhibition as a speaker, which took place in Dubai, UAE on October 27-29, 2019.</li> </ul>
<b>L. Jomaa</b>	<ul style="list-style-type: none"> <li>• Attended the STEP Conference 2020, which took place in Dubai Internet City, Dubai, United Arab Emirates, from February 11-12, 2020.</li> <li>• Attended a workshop as a guest speaker and facilitated different sessions during the Food Security Center Regional workshop organized by the University of Nairobi in conjunction with the Food Security Center in the University of Hohenheim. The workshop was held in Nairobi, Kenya from September 23rd and September 26th, 2019.</li> </ul>
<b>M.C. Chamieh</b>	<ul style="list-style-type: none"> <li>• Attended the Food &amp; Nutrition Expo &amp; Conference in PA, USA from October 26-29, 2019.</li> <li>• Visited Sage University to track, examine and document the integration of the NDCP-IDE students in assigned practicum sites at the SAGE colleges,</li> </ul>

	Albany-NY, USA, from October 30-31, 2019.
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## **8. Strategic Challenges**

The following challenges were encountered during the past year:

- Difficulty in conducting national or regional nutrition surveys given the unstable financial and political situation.
- Difficulty in implementing community projects and securing internship placements for dietetic interns as part of their community nutrition rotations due to the unstable financial and security situation in Lebanon.
- Scarcity of laboratory equipment.
- Budget cuts.

## **9. Future Plans**

- Enhance collaborations with the food industry
- Introduce programs concentrations