



جامعة بيروت العربية  
BEIRUT ARAB UNIVERSITY

# Research Center for Environment and Development

Annual Report  
2018-2019

## I. REFLECTION

During the year 2018-2019, the BAU Research Center for Environment and Development (RCED) has continued its efforts to serve the educational and development mission of BAU in Bekaa. This annual report briefly presents of the main initiatives achieved facilitate all BAU activities in Bekaa with focus on Academic services, environmental research and community outreach activities. Among other achievements, RCED supported by the Continuing Education and Professional Training Center has successfully obtained the CESCO the official recognition to conduct IC3 Digital Literacy Certification exams to serve BAU students in Bekaa. In addition, RCED was successful in strengthening to cooperation with the Faculty of Sciences through attracting two more Ph.D candidates to develop proposals on pressing national issues facing important water resources in Bekaa region. This year has also witnessed the launching of joint project with the Faculty of Agriculture and Veterinary Medicine, The Lebanese University on compost use in potato production and its effects on soil quality and potato growth.

## II. HIGHLIGHTS

### . Scientific Research

#### - Compost Use in Potato Production: Effects on Soil quality and Plant growth.

Cooperation agricultural project between faculty of Agriculture and Environmental Sciences at Lebanese University and Research center for Environment & Development, BAU-Bekaa.

This project was launched in June 2019 under the farm conditions of experimental station of RCED.

Improvement of soil quality is a key approach in the management of soil and water quality degradation while maintaining improved agricultural production and crop quality. One important mean in which soil quality can be restored is through the addition of organic matter (OM).

This project aims to evaluate the benefits of using composts in potato production in the Bekaa valley. Specifically, the effects of using cow manure and municipal compost amendments on soil and crop quality will be examined including:

- Nutrient (N, P, K) availability and crop use during the season.
- Soil physical quality indicators such as Bulk density, soil water holding capacity, infiltration and aggregate stability
- Soil chemical quality indicators like CEC, total organic C, and electrical conductivity
- Crop quality indicators like tuber size, shape, percent culled, tuber numbers and shoot numbers per plants, nitrate concentration in tubers, dry matter and specific density, and Incidence of major potato diseases suppression.



Potato Project @ RCED

- Contribution to the joint research published article on “*Antihypertensive Indigenous Lebanese Plants: Ethno pharmacology and a Clinical Trial*”
- **Saffron Farming**, joint research with Lebanese Agricultural Research institute (LARI) on “Effects of corm density and fertilization treatment on the productivity of Saffron (*Crocus sativus L.*) under open field farm conditions in Central Bekaa”. This project was launched at the experimental station of the BAU Research Center for Environment and Development. Plantation was performed at the beginning of November (2 and 3), 2018 and production was assessed in terms of numbers of flowers, fresh and air-dry weight of stigma.



Saffron @ RCED

## • Outreach and Community Development

### - Training for ICRC (International Committee of the Red Cross) on “Club Feet Management”, August 22<sup>nd</sup>, 2019

In a collaborative initiative between Faculty of Health Sciences and Lebanese Red Cross, A training workshop on “Club Feet Management” was held at RCED, Bekaa on August 22, 2019.

Twenty physiotherapists from Lebanese Red Cross from different centers across Lebanon participated in the interactive workshop mentored by Dr. Khalid Tukey, faculty member from faculty of Health Sciences. Program covered a spectrum of contemporary topics covered the Anatomical structures and biomechanics (foot & ankle), Pirani Test (medical significance & interpretation), and Physical Therapy Role (techniques, orthosis & consideration).



Dr. Khalid Tukey mentoring the workshop

### - Meeting for “تلاقي الجمعيات”, August 21<sup>st</sup>, 2019

In an initiative to protect children on all the Lebanese territories from the pest and the harmful effects of smoking and through the anxiety of interested associations they met among "تلاقي الجمعيات" to unite their efforts to protect our children and secure a prosperous future for them in a country we are all proud of.

The meeting was in attendance of the president of the Union for the Protection of Juveniles in Lebanon Mrs. Amira Sukar, director of the National Office for Combating Addiction at the Ministry of Social Affairs in Lebanon Mrs. Amira Nasser Deen and the director of Research Center for Environment and Development Dr. Safaa Baydoun



Association's meeting

- Seminar on “قوي قلبك”, August 8<sup>th</sup>, 2019

Research Center for Environment and Development organized an awareness seminar titled “قوي قلبك” in cooperation with Faculty of Health Sciences and the BAU

Continuing Medical Training Center as a part of the National Heart Failure Awareness campaign by the Ministry of Public Health in Lebanon.

Cardiologist Dr. Ali Smeha faculty member in Health Sciences and Faculty of Medicine at BAU has given all information about Symptoms of heart failure that include: weight gain, chronic fatigue, shortness of breath, difficulty sleeping, chronic cough, fatigue and frustration, swelling of your ankles, feet or abdomen, loss of appetite and nausea, tachycardia. In addition to the most important preventive measures since the failure of heart muscle does not mean the inability to enjoy daily life and normal functions, but means that some adjustments to the lifestyle to suit the needs of the heart.



Dr. Ali Smeha giving the lecture



Collaboration of BAU Continuing Medical Training Center

- Fascination of Plants Day May 2019 @BAU

Celebrating the “Fascination of plants Day” organized by the European plant Science organization (ESPO), RCED and in collaboration of Biology Department, faculty of Sciences, BAU, celebrated this event by organizing students awareness activities in its three campuses; Beirut and Tripoli on the 3<sup>rd</sup> of May and Debbieh on the 13<sup>th</sup> of May. Through a display of native Lebanese plants, students, faculty and staff members shares knowledge on the enormous benefits and importance of plants to our lives. Ecological and ethical principles of plant biodiversity conservation against threats including deforestation, urbanization, and other climate change risks were discussed. Participants were encouraged to take actions and play a role in conservation initiatives at all scales. The activities were organized by Dr. Saffa Baydoun and Dr. Bilal Osta under the below themes:

**Beirut: Plant Conservation: A rescue Against Climate Change**  
حماية التنوع الحيوي للنباتات، معا في مواجهة تغير المناخ

**Tripoli: Plant Day 2019**

**Debbieh: A Glance at Wild Flora of Beirut Arab University**  
لمحة عن التنوع الحيوي للنباتات البرية في جامعة بيروت العربية



Wild Flora @ Debbieh Campus



Student's Participation

**- Workshop on “Water in Lebanon: Turning Current Challenges into Future Opportunities, March 13<sup>th</sup>, 2019**

Ahead of World Water Day, Beirut Arab University (BAU) in Bekaa participated in the youth conference organized by the EU-MADAD funded Water Access and Development (WAAD) consortium, in partnership with the American University of Beirut’s (AUB) Issam Fares Institute for Public Policy and International Affairs (IFI), organized a youth conference titled “Water in Lebanon: Turning Current Challenges into Future Opportunities”. The conference, which took place within IFI’s facilities, was also live-streamed within the campuses of Beirut Arab University (BAU) in Bekaa and Phoenicia University (PU) in the South, turned the conference into a national event, as access to water is a collective problem that needs a collective solution.



Participation in World Water Day

In addition to ongoing project, a group of students from the Faculty of Health Sciences are also involved in some field work on the food programs that the organization is working in the Bekaa region under the supervision of Dr. Leila Itani.



Health sciences' field participation

- **Workshop on “Fostering Resilience by Strengthening Abilities FORSA”,  
February 21<sup>st</sup>, 2019**

With the objective of playing a role in economic development and creation of job opportunities, Research center for Environment & Development, Beirut Arab University, Bekaa, organized a community outreach session in collaboration with Mercy Corps Lebanon to share and provide explanations about “Fostering Resilience by strengthening Abilities” FORSA, for business support program that aims to provide business coaching and financing to small and medium enterprises (MSMEs) and startups who are looking to grow their business. The program provides a support in planning, management and opportunities and build a concrete growth plan.



Participants

**- Monthly Workshops of Litani Association of Medical Doctors & Faculty of Medicine at BAU**

Aiming at sharing knowledge of new findings and advancement in medical and health care field and services, the Research center for Environment and Development jointly with the Litani Association for Medical Doctors and the Faculty of Medicine, BAU organized several monthly workshops during the academic year 2018-2019. Topics covered for this year was Cancer, which is the second leading cause of death after heart disease & stroke. It also exerts the highest social & economic burden of all causes of morbidity through cost of diagnosis & treatment, & years of life lost due to disability.



Litani Association Doctors



Participants

**- Central Bekaa Forum, October 25<sup>th</sup>, 2018**

The Research Center for Environment & Development, BAU, Bekaa campus in coordination with the dean of student affairs and the director of admission department organized the Academic Guidance Exhibition for the Association of Universities in Lebanon in the presence of the following universities: Beirut Arab University, American University of Beirut, Lebanese American University, Islamic University of Lebanon, Middle East University, Sagesse University, Haigazian University, Antonine University, University of Balmand, Holly Spirit University of Kaslik and Saint Joseph University. The forum was held at RCED with the participation of 1200 secondary students of public and private schools in central and western Bekaa region. Students were provided with detailed information on the specialties available in the universities, admission requirements and extracurricular activities, in addition to financial aids & scholarships. Participants from school principals, teachers and students stressed the importance of this exhibition for consuming their benefits, and a number of school administrators requested for a round table meeting with the president and dean of students in BAU to discuss the possibility of starting some majors in Bekaa branch specially medical school and engineering, hoping that the year 2019 will be the occasion.





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