



جامعة بيروت العربية  
BEIRUT ARAB UNIVERSITY

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Research Center for **مركز أبحاث البيئة**  
Environment and Development **والتنمية**

*Annual Report*

*2011-2012*

## Introduction:

Founded in the beginning of the current academic year (2011-2012), The Research Center for Environment and Development (RCED) at Beirut Arab University – Bekaa Campus is envisaged as a platform to address aspects of sustainable development. Concerned with the complex interactions between environmental protection, social development and economic development, RCED seeks ways and means to effectively contribute to sustainability in all human activities in Bekaa region, in particular, and Lebanon, in general. The ecological approach utilized by RCED treats the social, biological and physical components of environmental protection as a key goal of development.

RCED goals are as follows:

- Conduct Applied Research to Promote Natural Resource Protection and Management.
- Provide Applied Research Internships for Undergraduate and Graduate Students.
- Stimulate Participation in National and International Cooperation Programs and Interdisciplinary Collaborative Research Networking.
- Establish Community Outreach and Engagement Activities and Programs.
- Capacity Building.
- Develop Data Bases and Access to Information Resources.
- Enhance Environmental and Health Awareness.

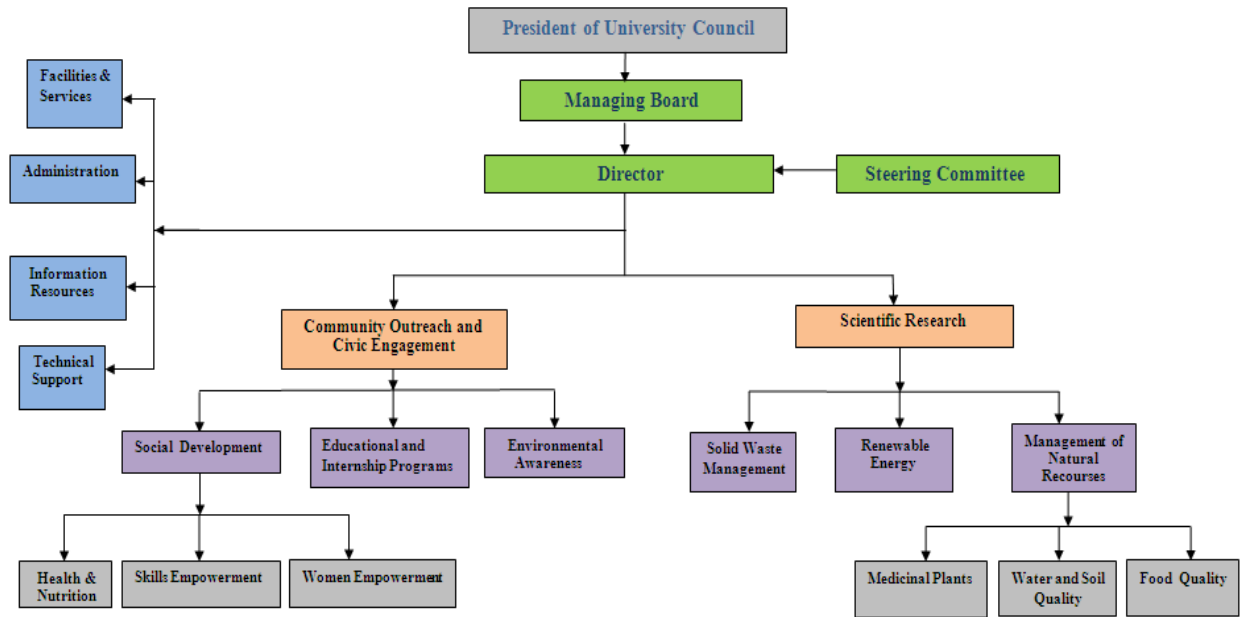
The chart below represents the Organizational Structure of RCED showing two major divisions each of which includes three units:

### ***I. Scientific Research :***

- Management of Natural Resources
- Renewable Energy
- Solid Waste Management

### ***II. Community Out Research and Civic Engagement:***

- Environmental Awareness
- Social Development
- Educational and Internship



On Feb 23<sup>th</sup> 2012, the 1<sup>st</sup> meeting of the Managing Board consisting of experts in various areas from Beirut Arab University and community members of Bekaa to review RCED Strategic Directions and Bylaws was held.

### **Progress and Achievements:**

During the current year of the RCED Initiation Stage of establishment, the following achievements have been made:

#### ***I- Scientific Research:***

RCED has performed the following initiatives towards establishing and launching research facilities and activities:

- Launching of Stage I of the research project ***“Impact of Agricultural Resources on Agricultural Resources in Bekaa”***. The project is a collaborative initiative with the Institute of Agricultural Research - Ministry of Agriculture; Center Remote Sensing – the National Council for Scientific Research and Lebanese University. Stage I of the project consists of survey study of practices among farmers of Bekaa. The survey covers components on the quantity and quality of water, fertilizers, pesticides, socioeconomic status of farmers.... etc.

- Completion and submission of the grant application for the research project proposal **“Assessment of Macrophytic Community of Qaraoun Lake”** for 2012 call of the grant program of the National Council for Scientific Research. The project proposal is collaborative research activity with the Lebanese University, Litani River Authority - Ministry of Energy and Water, and Athens University .
- Completion of the concept note of the research project **“Hermon Mountain; Biodiversity Assessment Towards a Valorization and Conservation Action Plan”**. The proposal is a collaborative initiative with the Faculty of Pharmacy; Lebanese University and Ministry of Social Affairs . An application for the Global Environmental Funds is currently under development.
- Development of a *pilot project* of the establishment of the **“Medicinal and Aromatic Plants (MAP ) Garden”** at RCED. The project aims to grow 3 plants: **Majoram المرندكوش (*Origanum officinals*)**, **Garden thyme الزعتر (*Thymus Syriacum*)** and **Lavender (*Lavandula officinas*)** over an area of 1500 m<sup>2</sup>. This project is a collaborative initiative between RCED and the NGO “Green Hands” that has a long standing experience in MAP. Land tillage and irrigation system implementation is currently underway.
- Completion of the procedures for establishment of Water and Soil Quality laboratories. The process is pending budget allocation and the final president approval.
- **Capacity Building** of the research assistant Mr. Mahmoud Kamar at the **Water Unit - Faculty of Sciences (1 week)** and the Institute of **Agricultural Research Ministry of Agriculture (1 month)**. The training covered measurements of microbiological, physical and chemical parameters of water quality.
- Submission of the abstract **“Climate Change and Energy Policy Portfolios of Lebanon”** for the 5<sup>th</sup> International Scientific Conference on “Climate Change and Energy” in October 2012. The conference is organized by PROMEATHEAS Network for Energy and Climate Change Policy. The paper is being jointly developed with the Lebanese Center for Energy Conservation.
- Development of **Data base of Ground Water Wells** in Central and West Bekaa. The data base so far includes 400 wells.

## ***II- Community Outreach & Civic Engagement***

### ***❖ Social Development:***

- Skills Empowerment Program that stands as an extension program of some of the activities at the “Center of Consultation”, “Center for Entrepreneurship and “Language Center” at Beirut Campus, has been developed. The program has been launched by offering AutoCAD (currently running), 3D-Max, and Intensive Courses for BAU Entrance exams.
- In collaboration with the Faculty of Health Sciences, a health awareness program “***Steps to Healthier You***” consisting of: 1) Health and Nutrition Seminars and 2) Physical Education Classes has been established. The seminars performed are listed below:
  - “***Dietary Guidelines and Healthy Life Style***” by Mrs. Leila Itani - Faculty of Health Sciences – BAU (Feb 4<sup>th</sup>);
  - “***Risk Factors for Cardiovascular Diseases***” by Dr. Ali Samaha - Faculty of Medicine – BAU (Feb 4<sup>th</sup>);
  - “***Overweight and Obesity among Adolescents***” by Mrs. Zeina Mourtada / RD - Canada and Juvenile Diabetes by Dr. Ali Mrad/ Endocrinology - Bekaa Hospital (March 10<sup>th</sup>);
  - “***Self Assessment Training for My Measurements***” by Mrs. Dima Kraidieh/ Faculty of Health Sciences (April 28<sup>th</sup>).
- A workshop “***كيف أنشئ مشروعاً صغيراً؟***” between April 25<sup>th</sup> and 27<sup>th</sup> 2012. The workshop was organized in collaboration with the “Center For Entrepreneurship” at BAU and UNESCO within the woman empowerment context. The participants of the course included 35 ladies from different towns across all Bekaa region. The Program included presentations by Dr. Leila Abboud - Center For Entrepreneurship - BAU; Eng. Najah El Jarouch - Lebanese League for Women in Business; Mr. Mohammad Rifai - The Lebanese Organization for Studies and Training - Mr. Richard Younes - First National Bank; Mrs. Miray Kerbej - Center for Developmental Services - Ministry of Social Affairs; Dr. Mohammad Hammad - Faculty of Commerce & Business Administration – BAU, and Association D’entraide Professionnelle. The Workshop was sponsored by First National Bank (FNB).

❖ ***Educational and Internship Programs:***

- Organizing a workshop for the practicum of post graduate course “***Environmental Law***” – Faculty of Law on October.10<sup>th</sup> .2011. Students had field visit to Nab’a Jdita to observe a number of environmental crimes and abuse. Presentations by RCED were performed.
- Organizing 9 community seminars for the practicum of the course “***Community Nutrition***” - Department of Nutrition & Dietetics - Faculty of Health Sciences- BAU. The seminars were performed in various schools, health and social centers in the region.
- Organizing a seminar on “***Design and Testing of a Two Ways Passive Cooling-and-Heating System for Use in Bekaa Valley***”, a senior student project supervised by *Drs. Mohammad Khamis Mansour and Ahmad Abed El Nabi* - Faculty of Engineering - BAU. The project was held on April 21<sup>th</sup> 2012 at Bar-Elias Municipality. Participants included members of municipality councils, economic and social sectors, students and community members from the region. The seminar was sponsored by Dubai Group.
- Hosting a number of Master degree defence presentations by students from the Faculty of Sciences.

❖ ***Environmental Awareness:***

- A workshop on “***Litani River; Current Status& Management Strategy***“ was held on March 24<sup>th</sup> 2012 with the aim to raise the awareness of community and to create advocacy groups to pressurise decision makers to take quick measures to combat the degradation of Litani River and Qaraoun Lake, the most important water resources of the country. The workshop was sponsored by BankMED. Participants included mayors from all Bekaa, schools, NGO representatives and various community members. The program included presentations by *Dr. Nabil Amacha* - Litani River Authority; *Eng. Bassam Sabbagh*- Ministry of Environment; and *Prof. Hamdi Seif* - Faculty of Engineering - BAU.
- A seminar on “***The Challenge of Sustainable Energy Development in the Post Rio+20 Era***” by Prof. Dimitrios MAVRAKIS, the Director of the Energy Policy and Development Center (KEPA) and Coordinator of PROMETHEAS Network. In addition to BAU President, Deans, faculties, administration and students, participants included representatives from National Council for Scientific Research, Lebanese Center for Energy Conservation, Ministry of Environment, and Municipalities.

### *III. Networking:*

- A *Memorandum of Understanding* with the *Institute of Agricultural Research - Ministry of Agriculture* was signed by *Prof. Amr Adawi* and *Dr. Michel Frem - Director General of Institute of Agricultural Research - Ministry of Agriculture* on Sept.19<sup>th</sup>. 2011. The terms cover the exchange of information of data, use of laboratories and collaboration in scientific research.
- Hosting *Judge Antoine Sleiman* - Bekaa Governor on Dec.8<sup>th</sup>.2011. The visit was organized by the Bekaa Alumni. The Governor was received by Prof. *Khaled Baghdadi*, on the behalf, of BAU president and *Dr. Hamdi Seif* in addition to Alumni members. Presentations on RCED strategic directions were performed.
- Obtaining the **membership of “PROMETHEAS Network on Climate Change and Energy”** that consists of 27 European and Asian countries. In this regard Prof. Dimitrios MAVRAKIS, the Director of the Energy Policy and Development Center (KEPA) and Coordinator of PROMETHEAS Network visited BAU between 1<sup>st</sup> - 5<sup>th</sup> April 2012. The visit was in response to BAU invitation to explore the cooperation initiatives with the network and establish collaboration revenues with the “National and Kapodistrian University of Athens – Greece. *Prof. Mavrakis* was accompanied by *Mrs. A. Vasila*, Head of Administrative and Promotion Unit at KEPA and *Mr. E. Margaritis*, Infrastructure Projects and Procurement Consultant. During the visit meetings with BAU president, Deans of some faculties, Lebanese Center for Energy Conservation and with the general director of Ministry of Energy and Water were held.

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It is noteworthy to state that all the aforementioned activities are archived by individual reports including photos. Some photos of various events and activities are shown below:



*Bekaa Governor's Visit*



*Managing Board First Meeting*





*Steps to A Healthier you- Seminar 1*



*Steps to A Healthier you- Seminar 2*



*Steps to A Healthier you- Seminar 3*



*Litani Workshop*



*Coordinator Visit of PROMETHEAS Network*



*ورشة عمل "كيف أنشئ مشروع صغير"*



*Student Project Seminar- Faculty of Engineering*



*Memorandum of Understanding with LARI*