For Immediate Release

AUB-led regional study makes recommendations to overcome threat of dwindling water resources

COMPLETE SUMMARY REPORT ON STUDY IS AVAILABLE UPON REQUEST

Beirut, Lebanon- 09/04/2014 –Dams should be built to better manage and conserve Lebanon's water resources, and farmers should be trained on water usage in order to help Lebanon preserve its dwindling water resources, according to an AUB-led study whose findings were revealed on April 9.

"We only have two dams in Lebanon and there is a huge gap of 43 years between the construction of the recent Shabrouh dam and that of the older Karaaoun dam," said Nadim Farajalla, associate professor of environmental hydrology at AUB.

Farajalla is one of three researchers involved in a joint study entitled, "Impacts of Population Growth and Climate Change on Water Scarcity, Agricultural Output and Food Security," which was conducted by AUB's Issam Fares Institute Climate Change and Environment Program in the Arab World and the Faculty of Agricultural and Food Sciences, in collaboration with American University of Cairo's Desert Development Center and the Columbia University Middle East Research Center (CUMERC), through the Institute for Sustainable Development Practice (ISDP) in Amman.

"We need to better manage our water resources that are poised to dwindle due to decreasing rainfall/snowfall and rising temperatures in the coming years," added Farajalla.

"Public attention is especially high in Lebanon now due to a 'dry' winter and the influx of about one million registered Syrian refugees," said FAFS Dean Nahla Hwalla. "Not only do we seek sound water resources management but food security as well, and pooling our resources with regional partners will enhance our understanding of the situation in the Middle East and North Africa (MENA) region."

The background study showed that Egypt and Lebanon are both facing challenges in supplying enough food and water for their citizens, especially under the changes in climate and population size; and in spite of their differences in population growth and climatic properties, each country has tangible food and water insecurities, tied with impacts of climate change in terms of dryness, higher temperatures, and sea level rise.

"The water distribution schedule was the highest reported reason for water shortage in Egypt," said Richard Tutwiler, Research Institute for a Sustainable Environment (RISE) Director. "So most farmers dug private shallow wells to satisfy their water needs, and sometimes over-irrigated their lands…causing a great loss of water; most farmers were not

even familiar with the concept of climate change despite the fact that most of them have been shifting their plantation and cropping seasons."

Meanwhile, the huge influx of refugees into Lebanon has imposed great stress on water availability and on water quality. Moreover, the extreme weather conditions – floods in winter and droughts in summer – have also been playing a negative role on water and agriculture.

While some Lebanese farmers were familiar with climate change, others were only aware of weather changes and tried to adapt their crop seasons and plantation times to the fluctuating patterns. Water scarcity was a major issue in all regions and to all farmers, and just as in Egypt, the Lebanese farmers also tried solving the problem by drilling their own private wells. General factors affecting farmer outputs in Lebanon included the volatile market prices, and the high cost of production.

Proper packaging and labeling as well as better use of abandoned lands in Lebanon are essential to better manage agricultural resources, noted Farajalla.

"The case of Syrian refugees is not only straining our water resources but also greatly affecting wastewater, solid waste management and employment as well," he added.

The concluding recommendations were directed towards the farmers, and towards governmental and nongovernmental organizations.

Some of the recommendations include changing irrigation patterns and methods, selecting crop based on water availability, encouraging farmers to cooperate on land use and water management, as well as exploring options on water reuse.

As for recommendations addressed to governments and non-governmental organizations, the priorities should be to invest in research and data collection, develop stronger connections with farmers, improve water and agricultural management, and encourage successful and innovative practices and technologies.

"Dialogue among respective regions in the MENA remains a key factor in establishing needs and appropriate solutions," said Diala Dabbas, Columbia Global Centers Institute for Sustainable Development Practice manager. "We aim to establish both a multidirectional and horizontal network and this project is a case in point."

According to the speakers, in viewing these issues in isolation, one risks missing significant drivers of change in the other areas. Thus, such inter-regional projects are critical for fully understanding how communities and countries are affected by growing environmental and human-caused threats, how they are responding, and ideas for how they can improve their adaptation strategies.

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Note to Editors

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Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 700 full-time faculty members and a student body of about 8,500 students. AUB currently offers more than 100 programs leading to the bachelor's, master's, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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