

# Climate Change and Environment in the Arab World

May 2011

Director General of the Lebanese Ministry of Environment Dr Berj Hatjian gives a course at AUB titled, "Environmental Policy Practice in Lebanon". Seven of his students attended the Arab Forum of Environment and Development (AFED) conference and wrote this policy memo as part of IFI's commitment to Climate Change and Environmental issues.

## 2010 Report of the Arab Forum for Environment and Development on Water

### Arab region will face 'severe water scarcity'

The Arab Forum of Environment and Development (AFED) revealed poor water management across the Arab world, including, but not limited to; a lack of fresh water resources within the Arab world; 13 of the Arab countries are currently some of the world's most water-scarce countries in the world; the average availability of fresh water by the year 2015 will have decreased to below 500 m<sup>3</sup> per year—defined as severe water stress; Iraq and Sudan will be the only two countries above water scarcity level by 2025. The AFED report further states that the total water consumption exceeds the available renewable water resources, and population growth is currently exerting further pressure on the available resources, with more than 45 million people lacking access to drinking water and sanitation.

The third in a series of reports presented at the AFED forum, 'Water: Sustainable Management of a Scarce Resource', edited by AFED Board of Trustees member and former CEO of Global Environment Facility Mohamed El-Ashry, AFED Secretary General Najib Saab, and Bashar Zeitoun (Editor of the AFED 2010 water report), also stated that nine countries will fall below 200 cubic meters, six of which will actually fall below 100 cubic meters. Furthermore, over 80 percent of fresh water is used for agriculture, with over half of that water wasted as a result of unsustainable practices.

**“ The AFED report highlighted water pollution as one of the most important constraints facing the water sector in the Arab world. ”**

### With minimal rainfall, 70 percent of Arab lands are dry

According to climate change models, predictions for the end of the 21st century show a 25 percent decrease in precipitation as well as a 25 percent decrease in evaporation rates, resulting in a 20 percent decline in average yields.

Due to the increase in demand and subsequent insufficient supply of renewable water resources, governments resort to taking advantage of ground-water resources. This has the potential to decrease the water table and result in the contamination of aquifers with saline seawater. Moreover, it is encouraged to use non-conventional water resources such as desalination and waste-water treatment and reuse.

The AFED report highlighted water pollution as one of the most important constraints facing the water sector in the Arab world. This pollution is primarily attributed to improper agricultural practices (such as runoff, use of fertilizers and pesticides, to name a few), as well as the improper discharge of domestic and waste-water.

Another factor that needs to be taken into consideration is the issue of climate change, which, unlike water, deserves further research and on-the-ground studies in order to generate concrete data, especially with regards to its impact on the future of water resources in the region.

**The Issam Fares Institute for Public Policy and International Affairs (IFI) at the American University of Beirut (AUB)** was inaugurated in 2006 to harness the policy-related research of AUB's internationally respected faculty and other scholars, in order to contribute positively to Arab policy-making and international relations. IFI is a neutral, dynamic, civil, and open space that brings together people representing all viewpoints in society. It aims to: raise the quality of public policy-related debate and decision-making in the Arab World and abroad; enhance the Arab World's input into international affairs; and, enrich the quality of interaction among scholars, officials and civil society actors in the Middle East and abroad.

Research and Policy Memo #6

**The Research and Policy Forum on Climate Change and Environment in the Arab World** provides a mechanism that brings together AUB professors, other academics and researchers, civil society, the private sector and policymakers. By promoting close interaction between researchers and policymakers, it aims to help formulate more effective environmental policies in the Arab World, and to mitigate the impact of expected climate change scenarios and other environmental challenges. The AUB-IFI Climate Change Forum comprises lectures, research, publications, comprehensive regional databases of scholars and research, and regular workshops, seminars and conferences.

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## Policy Recommendations:

- Establish policy reforms that specifically address water scarcity to efficiently manage water resources.
- The Arab region is one of the driest in the world. Current capacities should be fully realized to allow for proper management, effective infrastructure, reduced water consumption and increased water reuse.
- Agriculture sector consumes most of the water supplies. High yield crops should be used, which consume less water, and irrigation methods should be modernized to reduce evaporative loss.
- The Arab world imports two-thirds of its water. Trans-boundary water agreements should be enhanced to ensure that headwater states continue to provide a fair share to the Arab nations. ■

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As part of the “Environmental Policy Practices in Lebanon” course taught at AUB by Dr. Berj Hatjian, the students attended a two-day workshop on the AFED 2010 Water Report. The students were able to learn and experience real-time policy frameworks and processes, and interact with policy-makers by asking questions about their countries’ policies towards the protection of the environment. The 2-day AFED conference also allowed students to engage in a critical environmental debate among leading practitioners, policy-makers and regional experts. It assured the students that environmental policy is essential to the Arab region and needs young committed specialized environmental policy individuals.

  
**Further Reading:**  
**2010 Report of the Arab Forum for Environment and Development Arab Environment Water for Sustainable Management of a Scarce Resource**  
<http://www.afedonline.org/Report2010/main.asp>

**IFI Commissioned Papers:**  
**Country-specific Studies on Climate Change and the Policy-making Process in the Levant**  
[http://www.aub.edu.lb/ifi/public\\_policy/climate\\_change/ifi\\_cc\\_texts/Pages/cc\\_policy\\_levant\\_workshop.aspx](http://www.aub.edu.lb/ifi/public_policy/climate_change/ifi_cc_texts/Pages/cc_policy_levant_workshop.aspx)

**IFI Research and Policy Memos:**  
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