

Issam Fares Institute for Public Policy and International Affairs American University of Beirut

Identified Regional Climate Change Priorities: Sounding identifies water and agriculture as top climate change-related regional priorities

I- IFI's Research and Policy Dimensions

The Issam Fares Institute's Research and Policy Forum on Climate Change and Environment in the Arab World at the American University of Beirut brings together scholars, researchers, policymakers, and other stakeholders involved in Climate Change research and policy in the Middle East and North Africa region. The purpose of this initiative is to identify gaps in the knowledgebase and help launch new research efforts. As part of this continuous effort, and in preparation for the Copenhagen COP-15 conference, the institute sounded a number of researchers in the Middle East during November 2009; asking researchers to identify and list what they perceive as the region's Climate Change research and policy priorities.

II- Methodology

In order to identify the main Climate Change and research priorities in the Middle East, IFI identified 60 regional experts based on their published work in the region and on recommendations from AUB researchers. These 60 experts were contacted and asked to list 3 Climate Change issues they assessed were priorities for their country. 30 researchers responded to this sounding. The research and policy projects suggested totaled 90. These suggestions were then collected and grouped into categories, allowing IFI to determine the four main priority areas of research and policy in the region. The following note summarizes the results of this sounding.

The three main priorities for climate change research and policy in the Levant are:

- 1- The impact of climate change on water resources and their management (32 out of 90)
- 2- The impact of climate change on agriculture (14 out of 90)
- 3- Energy conservation measures and renewable energy (14 out of 90)

Equally important for many researchers is to create a Climate Change model for the region.

III- Priority Findings

The main research and policy objectives fall into three categories:

1. Identify the impacts of climate change (47 projects out of 90)
2. Identify adaptation measures (24 projects out of 90)
3. Select and Adopt mitigation measures (18 projects out of 90)

Priority 1: Water Resources and Water Resources Management

32 suggested research projects address this concern. Rising temperatures and decreasing rainfall are expected to have high impact on the availability, quality and management of fresh water resources. The research priorities mentioned include but are not restricted to: identifying the impact of climate change on the availability and quality of surface and ground water, the availability of water for irrigation – and hence impact on food security – issues of water security, changes in water demand and water resources management, the drying up of rivers and aquifers, and the need to test currently accepted adaptation

measures to find out whether they are relevant or not.

To adapt to the climate change challenges on water availability and quality in the region, some policy changes are suggested. These included the need to find new sources of water (desalination, water harvesting...), adopt efficient water management strategies, transboundary cooperation over water issues (particularly for Palestine with Lebanon, Syria and Jordan), and align water valuation and agricultural policies with changes in resources availability and management.

Priority 2: Impact of Climate Change on Agriculture and Food Security

14 suggested research objectives out of 90 are focused on the impact of Climate Change on agriculture and food security. In addition to the concerns over the availability of water for irrigation, other research areas identified comprised the need to assess the impact of severe droughts on agricultural lands, rural populations and their socioeconomic consequences; monitor changes in soil characteristics; predict the variability in food production and related land use changes; assess the impact of climate change on fisheries, biodiversity, and local ecosystems; and the need to identify new crop varieties. In terms of policy changes, the researchers stress the need to devise pro-active policy responses for farmers and rural communities (microinsurance, infrastructural investments, community planning for resilience, and so on), limit the expansion of irrigated agriculture, reduce the overextraction of coastal aquifers, and encourage the adoption of adaptive farming practices.

Priority 3: New Energy Conservation Measures and Renewable Energy

14 out of 90 suggested research projects in the Levant dealt with identifying energy conservation measures and renewable energy. The objective of such research and policy suggestions comprised mostly mitigation and adaptation measures that can be used to limit climate change impact and adapt to the changes imposed by global warming.

IV- Policy Instruments and Recommendations

Research recommendations aim to:

- Identify alternative sources of energy in order to reduce fuel consumption.
- Encourage the use of renewable energy in order to cut down on fuel consumption,
- Adopt measures to ensure energy efficiency, and new construction standards (green buildings).
- Orient research toward building a regional climate model.
- Downscale international models to the regional or sub-regional level, while others thought it better to develop a new model for the region based on local data and patterns in order to identify the likely scenarios and impacts of climate change. There are various uses and applications for such models. For instance, they could help generate an appraisal of climate change impact on water resources, validate some of the current scenarios, identify local climate change patterns (on a country level), assess the impact of drought, and reduce the current uncertainties in projecting the impacts of climate change. In some instances, it was even suggested that models be derived for localized ecosystems and aquifers such as the Euphrates and Tigris rivers.

The findings of this sounding were disseminated at the UNFCCC COP-15 Climate Change World Summit in Copenhagen, December 2009.