

Climate Change and Environment in the Arab World

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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 #10

Climate Change and Health Research in the Eastern Mediterranean Region (EMR)

Climate change is likely to aggravate the burden of disease in the Arab region currently suffering from political instability, natural disasters and humanitarian crises. The prevailing arid environment and the reliance on rain-fed food production exacerbate the situation. Therefore, governments and key stakeholders are encouraged to make further outlays to counteract new and increasing challenges to population health.

Research on Climate Change and Health in the EMR has been sporadic, unfocused, and uncoordinated

Research, conducted by Dr. Rima Habib, associate professor at the department of Environmental Health at the American University of Beirut, in conjunction with the Issam Fares Institute for Public Policy and International Affairs, showed that existing literature on climate change and health research in the EMR is very limited both in the breadth and depth of topics discussed and the methodologies and approaches used for research. The informational gaps stand in the way of regional preparedness and adaptation, as most of the reviewed articles discussed how weather variations, such as temperature, humidity, and rainfall impacted health; yet they did not formulate these findings within a conceptual framework that linked their findings to climate change. Studies have not explored the health impacts of climate change on food production, water availability, and the geographical distribution of disease-vectors and hosts. And although a few studies have analyzed the interaction between climate change and weather variability on air quality, and their effects on health, they have been geographically limited to Lebanon, Sudan, Egypt and the Gulf region.

“ The existing burden of disease in the EMR is expected to increase as a consequence of climate change. ”

Climate Change impacts the epidemiology of many illnesses and socially-situated health outcomes

Scientific literature has inadequately addressed two types of climate change knowledge: (1) analytical epidemiological research that studies specific infectious diseases and chronic illnesses particularly impacted by climate change and (2) cost-effectiveness studies that estimate the health burden and costs of climate change.

The existing burden of disease in the EMR is expected to increase as a consequence of climate change, and therefore governments should take adaptive measures to protect the health of their populations by adopting strategies that address public policy, infrastructure and technology development, surveillance and monitoring, research strengthening, health interventions, and public awareness campaigns.

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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■ **Effective and coordinated surveillance systems in the EMR are the basic pillars for advancements in climate change research.** There is a need to develop systematic assessments of localized environmental, economic, and health impacts of climate change. Governing institutions and civil society can use these assessments to raise awareness among policymakers, health professionals, and the public on relevant local consequences of climate change with an emphasis on actionable steps to promote health within communities.

■ **Further research is needed to assess climatic changes and related health impacts in the EMR.** Research should play a leading role in informing the decision-making process of powerful regional stakeholders. Climate change research, however, requires multidisciplinary knowledge of complex and multilayered environmental, social, and health processes. Such knowledge will allow countries to identify vulnerabilities, evaluate capacity to adapt to climate change, and develop adaptation strategies to allay the health impacts of climate change. Accomplishing this broad research agenda requires the establishment of a strong regional research coordinating body with ties to international funding organizations, stakeholders in the region, and international and local scientific communities. The

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EMR climate research group should be the foundation of a focused program that guides funding and research on climate change toward priority topics that are inadequately explored in the region.

■ **Studies must establish models for Climate Change-sensitive infectious diseases and chronic illnesses.** These models may be adapted from work conducted outside the region. In particular, analytical and epidemiological studies conducted at both national and regional levels must distinguish the connections between climatic variables, geographic differences between areas within the EMR, and population health.

■ **Climate change adaptation strategies should be aligned and integrated with national goals for health systems development.** Efforts can be made to:

- Improve healthcare access for isolated and vulnerable populations.
- Equip treatment facilities with the necessary provisions and personnel for emergency services.

However, the implementation of adaptation measures may prove difficult for countries in the region, because they are already coping with numerous environmental, social, economic, and health crises that dominate national agendas. In addition, many of the regional countries also lack the material infrastructure, resources, and professional capacity to implement adaptation strategies. Given these barriers:

■ **Regional, international and UN agencies, such as the WHO, UNDP, UNEP and others, should allocate resources to assist local and regional stakeholders** with capacity building and the development of cost-effective adaptive measures that are sustainable within local contexts. ■



Further Reading:

Habib R. R., El-Zein K., Ghanawi J. Climate Change and Health Research in the Eastern Mediterranean Region. *EcoHealth*, 7 (2010), 156-175

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

IFI Research and Policy Memos:

For more Climate Change and Environment related research and policy publications, please visit the IFI website

http://www.aub.edu.lb/ifi/public_policy/climate_change/ifi_cc_texts/Pages/home.aspx