



**Gulf Research Centre Cambridge**  
Knowledge for All

Workshop 2  
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## **Energy Transition and Climate Change, Challenges and Opportunities for the Gulf Region**

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### **Abstract**

While countries of the Gulf Cooperation Council (GCC) are experiencing rapid economic development, they face many current and potential problems related to sustainability. In the absence of numerous urgent measures, including policy reforms, the populations of these nations are likely to experience in future years a wide array of water, energy, and food-security challenges, which in turn will have extremely negative environmental, economic, and social impacts. With growth of the middle class across large parts of the region, energy consumption are rapidly evolving and these developments have significant implications in terms of resource

utilization, carbon emissions, social equity and economic development. This workshop aims to address the current status, progress, and prospective outlook of long-term structural change in energy systems, renewable energy plans and climate change policies in GCC countries.

## **Description and Rationale**

### **Objectives and Scope**

Current economic trends in the Gulf region are not sustainable and to a large extent this is a reflection of our society's patterns of consumption and production. The major area of concern is energy, especially in the context of climate change.

In fact, each country or region, according to its stage of development, has a unique and diverse energy system as starting point, with different energy resources, demand dynamics, technologies, stock of capital, geographies and cultures

Energy transition plans in GCC play a key role for their continuous economic prosperity, reducing CO<sub>2</sub> emissions and realizing SDGs. It is therefore extremely notable that the United Nations 2030 Agenda for Sustainable Development reaffirms the importance of Goal # 7 "affordable and clean energy" and emphasizes efforts to "Take urgent action to combat **climate change** and its impacts" as an explicit Sustainable Development Goal (SDG 13). Thus research on role of energy transition to realize economic and climate goals is of great importance especially in oil rich countries such as GCC countries.

A timely implementation of the energy transition requires multiple approaches in parallel. Energy conservation and improvements in energy efficiency thus play a major role. Smart electric meters can schedule energy consumption for times when electricity is abundant, reducing consumption at times when the more variable renewable energy sources are scarce.

The goal of this workshop is to explore the social, economic, political, cultural, and infrastructural challenges of energy transition in the Gulf countries and commencing a transition towards more sustainable lifestyles with focus on innovation and technology in realizing clean energy viable option for an oil rich region like the Gulf.

The aim is to provide a venue for scholars and policy makers to discuss this undertaking in the context of the region, as well as to propose and debate possible interventions that are cognizant of locally specific constraining and enabling factors. We anticipate that the workshop will bridge the gap in research, explore common ground among different stakeholders, and formulate visions of a more sustainable future.

We specifically invite contributions that address key elements of energy transition, renewable energies and climate change as it relates to the 2030 Agenda and the role that GCC countries can play in realizing its objectives. The workshop will explore in detail the obstacles and opportunities for meaningful transition across the region.

Possible topics for the workshop include but are not limited to:

1. How can the aims and objectives of energy transition be achieved in the Gulf region and what are the opportunities for cross-national learning?
2. Are there instructive case studies of country-specific analysis of current metrics, including political and socioeconomic drivers for energy transition and climate change?
3. What opportunities exist for fostering social innovation and enhancing well-being in the Gulf region and for encouraging grassroots experiments to facilitate more environmentally sustainable and socially equitable lifestyles?
4. What policies have thus far been implemented to enable energy transition in the Gulf region (including with reference to climate change)?
5. What is the scope for considering strategies that encourage shifts towards a circular economy (regenerative system)? What are the consequences of these developments for lifestyles and human security?
6. Renewable energy as a solution beyond combating climate change, but has wider implications on agriculture, industry, water, food security and employment.
7. The Role of governments, business, academia and civil society in the transition.
8. Is it possible to identify interventions to pursue energy transition through sectoral interventions that are oriented towards tourism, agriculture and industry production?
9. What are the specific gender-related challenges for energy transition and climate change policymaking in the Gulf region?
10. What roles can education, media, and culture play in promoting energy transition, renewables and climate change in GCC countries?

The main output of the workshop will be an edited book based on an invited selection of papers presented at the workshop. We hope that this volume will fill a knowledge gap pertaining to energy transition and climate change in the Gulf region.

### **Contribution to the Gulf Studies**

This workshop will contribute to exploration of Energy transition and climate change in the Gulf region with a specific emphasis on sustainability and 2030 agendas. To advance this field of research, a collaborative and interdisciplinary effort will be required. We hope to facilitate an open, enlivened discussion and a critical exchange of knowledge and ideas. The workshop will be a catalyst for identifying innovative solutions to the complex and multilayered challenges of energy transition and climate change as it relates to the 2030 Agenda in GCC countries.

### **Anticipated Participants**

We encourage papers from various disciplines including, but not limited to, political and social science, energy, environment, economics, and public policy. Applications

and case studies from the Gulf region and other regions are highly encouraged. Researchers with Gulf region experience (both native and non-native) are invited to apply. In addition to academic presentations, the workshop also welcomes representatives of NGOs, government officials, and think tank experts who are willing to conform to the paper guidelines.

## **Workshop Director Profiles**

**Dr. Mohammed Abdelraouf** leads GRC's research program on Sustainability and Environmental Issues. He was the lead author for the West Asia chapters on environmental governance in the United Nations Environment Programme (UNEP) GEO 5 and GEO 6 reports. He has published various policy papers on environmental issues in the MENA region and authored five books. Dr. Abdelraouf is a part-time lecturer on environmental economics at universities in the MENA region. Since 2010, he has represented the Science and Technology Major Group at UNEP and is currently co-chair of the Major Groups Facilitating Committee (MGFC) at UN Environment.

**Dr. Mohammad Alshawaf** is an assistant professor of environmental sciences in the department of Environmental Technology Management at Kuwait University since 2014 and a fellow in The Oxford Institute for Energy Studies (UK). Mohammad completed his Ph.D at the University of Massachusetts at Boston, his research focuses on using statistical modeling and GIS applications in environmental and natural resource management. Particularly he is interested in gaining insights into the interconnections between the environment, policy, and economics. Recently his work focuses on the challenges of integrating solar energy in arid climates. Additionally, he is currently working with a team of researchers from Poland on the implementation of circular economy, mainly waste and waste to energy, in Kuwait.

**Dr. Gawdat Bahgat** is Professor of National Security Affairs at the National Defense University's Near East South Asia Center for Strategic Study. He is an Egyptian-born specialist in Middle Eastern policy, particularly Egypt, Iran, and the Gulf region. His areas of expertise include energy security, proliferation of weapons of mass destruction, counter-terrorism, ArabIsraeli conflict, North Africa, and American foreign policy in the Middle East. Bahgat's career blends scholarship with national security practicing. Before joining NESA in December 2009, he taught at different universities. Bahgat published ten books including, *Alternative Energy in the Middle East* (2013), *Energy Security* (2011), *International Political Economy* (2010), *Proliferation of Nuclear Weapons in the Middle East* (2007), *Israel and the Persian Gulf* (2006), and *American Oil Diplomacy* (2003). Bahgat's articles have appeared in *International Affairs*, *Middle East Journal*, *Middle East Policy*, *Oil and Gas Journal*, and *OPEC Review*, among others. His work has been translated to several foreign languages. Bahgat served as an advisor to several governments and oil companies. He has more than 25 years of academic, policy and government experience working on Middle Eastern issues.

## **Selected Readings**

Adnan Badran et al, *Water, Energy and Food Sustainability in the Middle East*, (Berlin: Springer, 2017)

Chris Martenson, *The Crash Course: The Unsustainable Future of our Economy, Energy and Environment*, (Hoboken, NJ: Wiley, 2011)

Elie Azar and Mohamed Abdel Raouf, *Sustainability in the Gulf: Challenges and Opportunities*, (Abingdon: Routledge, 2017)

Emirates Centre for Strategic Studies, *Water and Food Security in the Arabian Gulf*, (London: I. B. Tauris, 2013); Zahra Babar and Suzi Mirgani eds, *Food Security in the Middle East*, (Oxford: Oxford University Press, 2014);

Mohamed Abdel Raouf and Mari Luomi, *The Green Economy in the Gulf*, (Abingdon: Routledge, 2015)