

**Arab Climate Resilience Initiative**  
Third Regional Consultation Meeting  
**“Climate Change Impacts in the Arab Region:**  
**Towards Sustainable Energy – Resources, Challenges and Opportunities**

**Report of the Meeting**

**Background**

Climate change has been called the “defining development challenge of our time” – and the Arab countries are among the most vulnerable to its impacts. It is expected that climate change will increase the frequency and intensity of extreme climatic conditions and related disasters, among them rising sea-levels, an increase in sea-surface temperatures, and more severe events such as droughts, floods, and storm surges. Sea levels rose globally at an average of 1.7mm per year during the twentieth century and it is projected that they will continue to rise by another 1 to 3 meters this century.<sup>1</sup> It has been further estimated for the Arab region that for 1m of sea level rise: 3.2% of its population would be impacted (vs. 1.28% worldwide); 1.49% of its GDP (vs. 1.30% worldwide); 1.94% of its urban population (vs. 1.02% worldwide); and 3.32% of its wetlands (vs. 1.86% worldwide)<sup>2</sup>.

With well over half of the Arab region’s 359 million people residing within 100 km of a coastline, and with the overwhelming majority of major cities and economic activity occurring in coastal areas, the impact of sea-level rise will have serious consequences on its coastlines and low-lying deltas, and be particularly crucial for the small-island states, as well as the natural and man-made islands, of the Gulf. More frequent incidences of flooding and storm surges, as well as saltwater intrusion into fresh water supplies, are likely to lead to severe land degradation and biodiversity loss. This in turn would undermine overall food security and rural livelihoods, as well as accelerate migration into urban areas where the provision of adequate infrastructure and public services will be a key challenge. Increasing sea-surface temperatures, growing acidification of surface waters, and coastline erosion are likely to negatively impact Securing human development in the Arab countries thus requires that such climate challenges be addressed as an utmost priority. Piece-meal and reactive policy and engineering approaches alone will not suffice. While the exact extent of the impacts of climate change cannot be fully known, it is certain that the most effective responses will be those that are coordinated across a range of sectors and institutions, drawing on the energies and responding to the needs of all sectors of society.

The Arab Climate Resilience Initiative will bring a wide range of actors together to build the momentum needed to achieve climate resilience in a rapidly changing environment. This includes developing the capacity of local and national stakeholders to take a broader, integrated approach to coastal zone management, one that not only seeks to protect coastal zones, but also to promote the sustainable use of economic and ecological services of coastal areas.

Within this context, the aim of the regional consultation meeting on “Climate Change Impacts in the Arab Region: Towards Sustainable Energy – Resources, Challenges and Opportunities” organized by UNDP-RBAS in partnership with the Arabian Gulf University, Bahrain is to bring together policy leaders and experts to examine the major challenges facing the energy sector in the Arab region, identifying and prioritizing policy interventions needed towards sustainable energy, and identifying opportunities for promoting inter-Arab cooperation in the same field. The overall objectives of the meeting are as follows :

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<sup>1</sup> Bindoff, N.L., J. Willebrand, V. Artale, A. Cazenave, J. Gregory, S. Gulev, K. Hanawa, C. Le Quéré, S. Levitus, Y. Nojiri, C.K. Shum, L.D. Talley and A. Unnikrishnan, (2007): Observations: Oceanic Climate Change and Sea Level (2007), in: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p.387.

<sup>2</sup> Dasgupta, S., Laplante, B., Meisner, C., and Yan, J. (2007), ‘The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis’, *World Bank Policy Research Working Paper* 4136.

- Develop recommendations for activities and policies that respond to the priority issues
- Expand the knowledge base and set the pace for policy dialogue on climate change in the region
- Mobilize key actors to address the related policies and strategic actions

### **The Third Consultation Meeting**

The third Consultation Meeting on “Climate Change Impacts in the Arab Region: Towards Sustainable Energy – Resources, Challenges and Opportunities” took place at “AIJAWHARA Center”, Arabian Gulf University, the Kingdom of Bahrain, on 6-7 October 2010. The meeting was attended by almost 100 participants from 16 Arab countries. The meeting was held under the patronage of H.H. Dr. inaugurated H.E. Dr. Abdul Hussain Bin Ali Mirza, Minister of Oil and Gas Affairs, Chairman of National Oil and Gas Authority, Bahrain. In his inauguration speech, Dr. Mirza emphasized the need to and importance of steering the energy sector into sustainable path. He outlined the main focus of the energy policy in Bahrain, which include supporting environmental projects, particularly those related to limiting the emission of carbon dioxide, such as clean development mechanism projects (CDM), improving energy efficiency, promoting renewable and alternative energy sources, and maximize productivity and resource efficiency in the oil sector. He presented some initiatives currently underway to support the policy framework such as the feasibility study undertaken by Bahrain National Oil company (BAPCO) on a project for expending the use of solar energy in the Kingdom through photovoltaic technology in association with one of the major US technology providers. He concluded by highlighting Bahrain’s commitment to foster international cooperation to achieve sustainable energy future.

Mr. Mr. Sayed Aqa, the UN Resident Coordinator, UNDP Resident Representative, Bahrain welcomed participants and Dr. Adel Abdellatif, Chief, Regional Programme Division, Regional Bureau for Arab States, United Nations Development Programme gave a presentation highlighting the fact that though climate change is a concern for the Arab region, it also offers many opportunities to increase energy accessibility, promote alternative and renewable energy; diversify economic growth; and create Job opportunities to address unemployment. He then presented the Arab Climate Resilience Initiative, its objectives and main guiding principles. The presentation also included an overall review of the global energy scene, and the major issues and challenges of the Arab region. This was followed by a presentation of the agenda of the meeting and the major questions that the meeting’s participants should try to answer during their deliberation.

The opening session was ended by a speech from Dr. Khaled Tabbara, Vice President, Arabian Gulf University, who welcomed the meeting’s participants and emphasized the timely event that addresses a crucial challenge for the Arab region. He underlined the vulnerability of the region to the potential adverse impacts of climate change especially in terms of water scarcity, desertification, food security, and sea level rise. He reminded participants that in addition to these adverse impacts on ecosystems, the GCC oil producing countries would be highly impacted economically as a result of implementation of mitigation measures in developed countries, the current major oil consumers. Dr. Tabbara underlined that AGU, as a regional GCC academic institution, and within its strategic framework, is putting climate change on top of its research agenda. He finally concluded by wishing the participants a productive meeting and a pleasant stay in Bahrain.

Following the opening session, the meeting started deliberations as outlined in the meeting’s agenda

### **The Themes that emerged in the presentations and discussion**

#### **Panel 1: Energy Resources: Enabling Environment and Challenges**

- Energy sector profile in the region
- Major energy challenges in the Arab region

- Market Drivers for RE in the Arab Region
- The need for energy sector reform
- Success stories on EE and RE from the Region
- RE Institutions in the Region
- RE national targets in some Arab countries
- Regional Energy Integration initiatives.
- Arab participation in the CDM
- Major Barriers for Market Development of EE and RE

## **Panel 2: Sustainable Energy**

- Main issues of the energy sector in Morocco
- High oil import dependency in Morocco, high energy bill for the economy, and high risk of global market volatility as drivers for promoting EE and RE.
- Morocco' energy strategy with clear objectives supported by sound institutional and legislative framework.
- The \$ 9 billion solar project in Morocco
- The need for support of R&D as part of the RE strategy
- Integrated morocco solar and wind plan
- Renewable energy potential in Algeria
- The major principals of the Algerian policy for the development of renewable energy
- The Algerian experience in developing a sound institutional and legislative framework
- Some major EE and RE projects in Algeria
- Fostering international cooperation in RE such as the DESERTEC project
- Some energy facts in Kuwait
- Energy Code for buildings in Kuwait.
- KISR activities on Energy Efficiency
- Energy Conservation Code of Practice in Building in Kuwait
- Potential of Solar Power Generation in Kuwait
- Major barriers for promoting RE in Kuwait.
- Highlights of the AFED report on impact of climate change on the Arab countries
- Opportunities for policy interventions
- Opportunities for inter-Arab cooperation

## **Panel 3: Knowledge and Technology Transfer**

- Overview of current research on Energy Efficiency (EE) and Renewable Energy (RE) in the Arab region
- Research funds in the region: the Qatar National Research Fund (QNRF), KACST, and The Arab Science and Technology Foundation (ASTF, UAE)
- Recent research shift towards fundamental research work (mostly in GCC)
- Research focus on sustainable water production
- Research agenda on Energy Efficient Building Systems & Processes
- Research agenda of EE in buildings at AUB
- Human resource development in the Arab Region
- Energy research objectives and activities at the Energy Research Institute of KAUST, KSA
- Highlights of the national Energy Efficiency program in the KSA
- The Qatar Sustainable Water & Energy Utilization Initiative (QWE), vision, resources, and current research activities.
- Qatar national food security programme with focus on energy and water security
- The global context of technology transfer within the UNFCCC process.
- Poznan Strategic Program on Technology Transfer with its windows of funding.

- Technology needs assessments in the Arab region.
- GEF-funded EE and RE projects in the Arab countries.
- Barrier to TT in the Arab Region
- Role of civil society in raising public awareness on climate change.
- Recommendations to enhance appropriate research and address the existing challenges of R&D
- Regional opportunities for interventions and collaboration within the region that would support advancing the climate change agenda

#### **Panel 4: Economic and Financial Opportunities for Development**

- Constraints of oil supply by peak oil challenge
- Highlights of the global market of RE in 2009
- The green building concepts inherited from the traditional Arab Architecture.
- Solar energy as a preferred option for the Arab Countries.
- Main features of Dubai carbon centre of excellence as PPP, its vision, mission, and business model.
- RE potential and ongoing plans and activities in the GCC
- Pilot project of Zero carbon house in Bahrain implemented by BAPCO
- Green buildings initiatives in the GCC to reduce carbon footprint.
- The notion of green jobs and the role of EE and RE in creating them.
- Lack of data on green Jobs market in the Arab countries
- Some examples of ILO's work on Green Jobs in the Arab Region

#### **Panel 5: Moving Forward**

Dr. Ibrahim Abdel Gelil summarized the main messages came out of the two days discussions as:

- To mainstream EE and RE into development policies, strategies, and plans
- To develop a strategic approach to promote EE and RE at the national level

Based on the feedback from the participants regarding the major challenges of the energy sector in the region, he summarized them as follows:

- Energy Diversification
- High rates of energy demand growth
- Securing energy supply for the oil importing countries
- Attract massive investments in the energy sector
- Sector reform and mobilize private sector
- Human capacity development in managing the energy sector

Further, the opportunities of interventions identified from the two day discussions were:

- Integrate energy efficiency and RE into energy, economic, and environmental planning
- Strengthen legislative and institutional framework
- Remove key barriers (policy, market, economic)
  - Sector reform
  - Economic incentives
  - Low investment in R & D
  - Energy subsidies
  - Standards, testing and certification
  - Knowledge management
- Establish national targets for EE and RE
- Education, training, and public awareness

- Innovative financing schemes, e.g. Harness the potential for carbon finance in the region
- Promote regional energy integration

While opportunities for Arab-Arab Cooperation were identified as:

- Establish synergy with other regional initiatives (e.g. RCREEE)
- Regulatory and Institutional reform (Algeria, Tunisia, Syria)
- Collaboration between Universities and Research institutions (KACST)
- Energy prices reform (Jordan, Morocco)
- Mandatory Energy Audits (Algeria, Tunisia)
- Economic incentives (Algeria, Tunisia, Morocco)
- Energy efficiency codes and standards (Egypt, Tunisia, KSA)
- Public awareness (Morocco, Lebanon)
- Regional energy integration projects
- Green building (Dubai, Egypt)

Dr. Abdellatif concluded the meeting by thanking speakers, moderators, and participants for their valuable contribution and very constructive discussions; he explained the next steps towards developing the Arab Climate Resilience Initiative. The outcome of the three regional consultations held in Syria, Egypt, and Bahrain will be presented to the high-level meeting hosted by the Government of Morocco from 3-5 November 2010.