



The Climate Change Challenge And The Arab World

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Climate change and the arab world

The need for strong global action is becoming increasingly urgent as the scientific basis behind climate change is becoming more solid. This urgency is also shared by the Arab region given the high vulnerabilities of Arab countries to the projected impacts of climate change.

Based on the findings of the 2009 Report of the Arab Forum for Environment and Development (AFED), it was stated that Arab countries are among the most vulnerable regions in the world to climate change impacts; namely increased average temperatures, less and more erratic precipitation, and sea level rise (SLR), in a region which already suffers from aridity, recurrent drought and water scarcity.

1. Water Scarcity

The already critical situation of water scarcity in the Arab world will reach severe levels by 2025 regardless of climate change. A report recently published in Japan has warned that what is known as the Fertile Crescent, spanning from Iraq and Syria to Lebanon, Jordan and Palestine, would lose all traits of fertility and might disappear before the end of the century because of deteriorating water supply from major rivers.

2. Sea Level Rise

A simulation carried out for AFED by Boston University's Center for Remote Sensing revealed that a sea level rise of only 1 metre would directly impact 41,500 km² of the Arab coastal lands. The most serious impacts of sea level rise would be in Egypt, Tunisia, Morocco, Algeria, Kuwait, Qatar, Bahrain, and the UAE.

3. Agricultural Sector

The impact of climate change on the Arab's agricultural sector would mostly be clear in Egypt, where a 1 metre rise would put 12% of the country's agricultural land at risk. It would also directly affect 3.2% of the population in the Arab countries, compared to a global percentage of about 1.28%.

4. Food Production

It was reported that food production would face an increased threat that is affecting basic human needs. Harsher and expanding aridity and changes in the spans of seasons may cut agricultural yields in half if no alternative measures are applied. Adaptive measures need to be introduced including changes in crop varieties, fertilizer and irrigation practices.

Also, higher temperatures, lower rainfall and alteration in the span of seasons will introduce a need to develop new crop varieties that can adapt to the emerging conditions. Crops which need less water and can withstand higher levels of salinity should be developed and introduced on a large scale.

5. Land use and urban planning

Land use and urban planning regulations in the Arab region largely ignore basic adaptation requirements to climate change. An estimated 75% of buildings and infrastructure in the region are at direct risk of climate change impacts, mainly from sea level rise, higher intensity and frequency of hot days and storm surges. Reliability of transportation systems, water supply and wastewater networks, and energy generation stations will be at risk.

6. Human Health

The human health would be adversely affected by climate change impacts related to rising in temperatures, mainly due to changes in geographical ranges of disease vectors like mosquitoes, waterborne pathogens, water quality, air quality and food availability and quality. It was reported that incidence of infectious diseases like malaria and schistosomiasis will increase, mainly in Egypt, Morocco and Sudan.

Also, higher CO₂ concentrations and fiercer and more frequent sand storms in desert areas will increase allergic reactions and pulmonary diseases all over the region.

7. Biodiversity

Biodiversity in the Arab countries, already deteriorating and there are a risk that it will be further damaged by climate change. It was reported that a 2°C rise in temperature will make extinct up to 40% of all the species. The Arab countries that are especially vulnerable to climate change risk are the cedar forests in Lebanon and Syria, the mangroves in Qatar, the reed marshes of Iraq, the high mountain ranges of Yemen and Oman, and the coastal mountain ranges of the Red Sea.

8. Tourism

Tourism is an important sector of the economy for a number of Arab countries, is highly vulnerable to climate change. An increase of between 1-4°C in average temperature will cause a drastic decline in the index of tourism comfort all over the region. It was projected that areas classified between "good" and "excellent" are likely to become "marginal to "unfavorable" by the year 2080, mainly because of hotter summers, extreme weather events, water scarcity and ecosystems degradation.

Bleaching of coral reefs will affect tourism in countries in the Red Sea basin, mainly Egypt and Jordan.

Also, beach erosion and sea level rise will affect coastal tourist destinations, mainly in Egypt, Tunisia, Morocco, Syria, Jordan and Lebanon, especially in locations where sandy beach stretches are narrow and buildings are close to the shoreline.

9. The Economic Impact

The Economic Impact seems to be totally ignored. Policymaking in the region has displayed, in many respects, deficiencies that need to be urgently remedied if Arab countries are to prepare for the potential negative impacts of climate change. Those range from sustainable management of natural resources to risk planning.

Reference:

Arab Environment: Impact of Climate Change on the Arab Countries' (AFED) Report 2009: <http://www.afedonline.org/afedreport09/default.asp>