

CLIMATE CHANGE IN THE MIDDLE EAST: A SOURCE OF COOPERATION OR CONFLICT?

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Climate change is a major governance challenge in the Middle East, but water and food availability in the region is currently affected more by unsustainable groundwater extraction, demographic change, and unregulated transboundary water flows. These physical stresses are accentuated by economic development constraints and resource governance failings. Middle Eastern states have made modest commitments to climate change mitigation and adaptation, with most progress in the scaling up of clean energy investments. There is scope for more effective regional cooperation on climate change through the League of Arab States and the Gulf Cooperation Council. While some commentators have directly attributed conflict effects to climate change in the Middle East (e.g. the drought-migration-Syrian war thesis), recent scholarship on the impacts of climate change in the region rejects the claim that climate change is a catalyst or intensifier of governance breakdown and conflict.

Climate change is arguably the greatest governance challenge facing humanity. While long-term changes in climatic properties, over and above natural variability, may be due to natural causes, there is now strong scientific consensus that the principal causes of climate change are attributable directly or indirectly to human activities – notably the generation of greenhouse gas emissions from the use of fossil fuels and land-use change. According to the Intergovernmental Panel on Climate Change (IPCC) 2018 special report *Global Warming of 1.5°C*, global warming is likely to reach 1.5°C between 2030 and 2052 if anthropogenic greenhouse gas emissions continue at the current rate. Without deep cuts in these emissions, climate scientists state that, by the end of the century, the global mean temperature rise will be between 2.7 and 3.0°C under a medium emissions scenario. For the IPCC a mean temperature rise above 2°C is “dangerous” climate change, the avoidance of which is the key goal for Parties to the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The 2015 Paris Agreement, under the UNFCCC, commits signatory states to “holding the increase in the global average temperature to well

below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change” (Article 2). These are the key goals for global climate governance and guide the voluntary commitment of 190 countries to limit greenhouse gas emissions: at the moment these emissions reduction pledges fall well short of the levels needed to limit warming to 1.5°C or even 2°C.

The Middle East is projected this century to face major impacts from climate change. According to climate scientists, over the course of this century the region faces higher average temperatures, a significant reduction in annual rainfall, and sea level rise. By 2100, mean temperatures are projected to increase by 1-3°C in a medium emissions scenario (RCP 4.5) and by 2-5°C in a high emissions scenario (RCP 8.5). These broad projections, which point to increasing aridity and declining water availability, mask major spatial and seasonal variations. For example, there are significant increases in precipitation projected for the Arabian Peninsula (Bucchignani et al., 2018). At the same time, climate change is less a source of pressure on water and food availability than unsustainable groundwater extraction, demographic change and unregulated transboundary water flows. These physical stresses are accentuated by economic development constraints and resource governance failings. Institutional failings accentuating water scarcity are apparent at multiple scales – from the domestic (e.g., social conflicts intensified by the skewed development of water resources in Yemen) to the transboundary (e.g., tensions between Iraq and Turkey caused by the latter’s growing upstream control of the Tigris and Euphrates rivers).

There are numerous mitigation and adaptation projects underway in the Middle East to address climate change. Djoundourian (2021) surveys the nationally determined contributions (NDCs) reported by Arab countries under the Paris Agreement. These generally lack quantitative emissions targets but make commitments to renewable energy generation. For example, Bahrain, Qatar, Saudi Arabia and the United Arab Emirates (UAE) all declare an intention to adopt major renewable energy capacity, including to power energy-intensive desalination plants. The Arab Gulf states face a double challenge of high emissions per capita and emissions growth, which explains the absence in their NDCs of greenhouse gas emissions targets. Across the Arab country, NDCs, mitigation and adaptation commitments have a high level of conditionality, requiring international financial support and/or technological transfers. Lebanon’s stated intention to increase renewable energy use by 20% is, for example, completely conditional on external financing. In contrast, Israel commits to achieve an economy-wide unconditional target of reducing, by 2030, its per capita greenhouse gas emissions by 26% compared to 2005 levels.

There is recognition by many states in the Middle East that there needs to be a shift to a low-carbon model of economic development, although regional policies for climate change and economic integration are weak. Under the League of Arab States, a Council of Ministers

Responsible for the Environment issue developed an Arab Environment Facility to finance environmental projects in Arab countries and provide technical and institutional support for environmental initiatives, but this regional governance instrument remains marginal to national development strategies and plans. There is far more investment activity from sovereign wealth funds in Gulf states (notably the UAE and Bahrain), which are developing innovative financial technology (FinTech) instruments to support low-carbon economic diversification. Interestingly, there is support from citizens across the region – especially younger people – for action on climate change and the creation of employment opportunities in green economic sectors (e.g. renewable energy, sustainable tourism).

While it is widely acknowledged that there are major uncertainties over local effects in the Middle East, this has not prevented commentators directly attributing conflict tendencies to climate change. Researchers have usually avoided such *climate determinism*, though some academics have claimed that climate variability and change have intensified conflict effects in the region. In my own research on climate change vulnerability in Palestine, I have shown with colleagues that the bio-physical effects associated with current climate change have insignificant effects on lives and livelihoods compared to the extreme socioeconomic stresses of a protracted military occupation in the West Bank and the blockade of Gaza (Mason, Zeitoun and Zimi, 2012). Furthermore, internal migration induced by a 2007-10 drought (attributed at least in part to climate change) has been claimed to be a significant contributor to the onset of violent conflict in Syria. Recent scholarship on the impacts of climate change in the Middle East tends to reject claims giving significant causal weight to these impacts as catalysts or intensifiers of conflict. The drought-migration-Syrian war thesis is largely discredited: the principal cause of food and water insecurity in Syria was government mismanagement and corruption (Daoudy, 2020). Although climate change and variability are not drivers of conflict, environmental governance failings leave poorer Middle East countries vulnerable to climate-related impacts on water and land resources.

Climate change in the Middle East is part of a wider transformation of socio-ecological systems that is negatively affecting the capacity of countries to adapt to environmental shocks and stresses (Pouran and Hakimian, 2019). In its 2019 *Global Assessment Report*, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services records for Western Asia high biodiversity losses and a major deterioration in ecosystem services since 1970. This ecological decline is attributed principally to land use change (notably urbanization), direct exploitation of natural resources, and pollution. There is a marked regional divide in the fiscal scope for Arab countries to adapt to climate change and other biophysical stresses. The Gulf monarchies have the financial resources to prevent water and food scarcity by adopting seawater desalination, the importing of food products, and foreign direct investment in agricultural land. In contrast, resource-poor Arab states, sometimes dependent on foreign

aid and other forms of external support, are more exposed to climate-related stresses from disruptions to rural livelihoods and urban food systems. However, all the Arab states in the Middle East face the political challenge posed by governance for sustainability; that is, the need to develop effective environmental decision-making that is integrated across key economic sectors and open to the participation of civil society actors, including local communities negatively affected by climate change.

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