

# ISSUE BRIEF **07.16.18**

## **Integrating Climate Change Policies with Economic Diversification Strategies: Challenges and Opportunities in Oman and the UAE**

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### **INTRODUCTION**

Since the 1930s, the Arab Gulf states have been defined by their hydrocarbon wealth, which flows from the nearly one-third of proven world crude oil reserves and about one-fifth of world natural gas reserves in their region. Oil and gas export revenues have played a crucial role in shaping the Arab Gulf states' political economies, which have strongly revolved around centralized government control. The central government generates the hydrocarbon wealth and the remainder of society is engaged in the distribution and utilization of the wealth created. Consensual legitimacy is the basis for government survival, with low taxation and high energy subsidies as part of political compromise. As such, any change or pressure to the energy regime can create economic and political instability. This factor is critical when it comes to addressing the impacts of climate change in the Arab Gulf states—especially when the changes involve constraints on fossil fuels.

Historically, oil price shocks have been a source of pressure on the Arab Gulf states' energy regime. However, apart from the states' focus to bring back a supply-demand balance to the international oil markets, oil prices historically have not put enough pressure on the political regime to cause a re-examination of its central source of income. Only since mid-2014 have oil

prices seemed to pressure political regimes to consider domestic economic reforms along with efforts to restore balance in the international energy market. The post-2014 drop in oil prices—from as high as US\$100 per barrel to as low as US\$40 per barrel—has increased the urgency of economic diversification, which has been discussed for decades across the Gulf states. Among other measures, energy subsidy reforms, privatization, and even a value-added tax have been discussed and introduced. Such economic reforms offer the opportunity for the Gulf states to address the potential impacts of climate change. This is because climate change creates another source of uncertainty for the states' main source of income—and hence, the states' economic and political stability. But to what extent have they paid attention to the potential impacts of climate change and to what extent have the Gulf states considered tapping the opportunities offered by economic diversification to address such impacts?

This brief sets out the key challenges and opportunities of integrating climate policies with Gulf Cooperation Council (GCC) economic diversification strategies, particularly in Oman and the United Arab Emirates (UAE). It draws on 19 semi-structured interviews conducted by the author between January and February 2017 in Oman and the UAE. The interviews targeted stakeholders representing governments, the private sector, academia,



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and NGOs who have relevant experience in climate change and/or economic development. The interview questions assessed the level of awareness of climate policy integration and explored where stakeholders perceive its specific challenges and opportunities.

### WHY SHOULD THE ARAB GULF STATES INTEGRATE CLIMATE POLICIES WITH ECONOMIC DIVERSIFICATION MEASURES?

There is ample evidence that fossil fuels account for over 85% of global energy consumption, and burning them is thought to cause 65% of man-made greenhouse gas (GHG) emissions.<sup>1</sup> Therefore, future access to fossil fuel-based energy must be constrained to limit climate changes to (relatively) safe levels and keep the increase in global mean surface temperatures well below 2°C. These are the objectives of the Paris climate accord, which entered into force in 2016.

A recent study released by Oil Change International suggests that holding 68% of fossil fuel reserves underground is likely to limit global warming to below 2°C, and holding 85% of it underground is likely to limit global warming to below 1.5°C.<sup>2</sup> In this context, it is suggested that the Middle East would need to leave about 40% of its oil and 60% of its gas underground.<sup>3</sup>

Efforts to reduce carbon emissions and improve energy efficiency are no longer the preserve of the West, as significant changes in regulation are underway in China, Brazil, South Africa, and India, among others, in response to the worldwide drive to curb GHG emissions. The global implementation of climate mitigation measures, such as carbon emissions reduction targets, could change the trading landscape of hydrocarbon markets by reducing the demand for fossil fuel exports, leading to lower prices and diminished GDP growth. This would have major implications for the Arab Gulf states, whose top trade partners in 2015 were the European Union, with 14.7% of the trade balance; China, with 13%; Japan, with 11.5%; and India, with 10.4%,<sup>4</sup> according to data from the European Commission.

Furthermore, constraints on the use of fossil fuel energy (e.g., fossil fuel taxes and carbon pricing) could increase production costs and hence prices of exportable goods and services. This would also have a major effect, since the Gulf countries remain highly dependent on imported goods, especially food. Since the 1960s, imports of goods and services as a percentage of GDP have continued to increase in all Gulf countries except Bahrain. In 2015, imported goods and services accounted for more than 35% of GDP in Bahrain, 83% in the UAE, 45% in Kuwait, 52% in Oman, 36% in Qatar, and 37% in Saudi Arabia.<sup>5</sup>

Efforts by the Arab Gulf states to overcome their dependence on imports face the challenge of a fragile desert environment. Non-oil economic sectors, such as agriculture, fisheries, infrastructure, and tourism, are vulnerable to climate change impacts—namely, an increase in average temperatures, higher sea levels, a decrease in annual precipitation, and recurrent droughts leading to water scarcity.<sup>6</sup>

The Gulf states commodity found in abundance—oil—is in high demand domestically, thereby pressuring the GCC's energy system. Easy access to energy supplies via fossil fuel subsidies or low taxation has encouraged resource-intensive activities in areas like industrialization, urbanization, and transportation, which have led to signs of unsustainable energy use in the Gulf states. Between 1971 and 2014, for example, the total primary energy supply in the Gulf states grew by an average of 7% per year, faster than any region in the world.<sup>7</sup> Total domestic oil consumption surged by 114% between 1980 and 2013, and domestic natural gas consumption increased by 160% in the same period.<sup>8</sup> According to OECD statistics, aggregate energy demand in GCC countries is expected to continue to rise well above the world average, at around 3% per year between 2010 and 2030, with electricity and water demand growing at rates of 6% per year over the same period.<sup>9</sup> Further, the per capita domestic consumption of primary energy in the GCC is among the highest in the world, and six of the top 12 energy-consuming countries in the world are in the GCC.<sup>10</sup>

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The increasing domestic consumption of fossil fuel resources in the Gulf States has been associated with dramatic increases in the Gulf states' per capita carbon emissions. The World Resources Institute reported that the Arab Gulf states' per capita emissions of CO<sub>2</sub> were the highest in the world in 2014.<sup>11</sup> This is partly due to the states' small populations and undeniable energy intensity.<sup>12</sup> In Qatar, for example, per capita emissions were almost 11 times the global average and 2.5 times the U.S. average in 2007.<sup>13</sup> In 2010, Kuwait ranked 1st, Qatar ranked 6th, the UAE ranked 9th, Oman ranked 11th, Bahrain ranked 14th, and Saudi Arabia ranked 22nd in per capita CO<sub>2</sub> emissions.<sup>14</sup>

With the factors discussed in this section in mind, it is argued that addressing the impacts of climate change in line with economic diversification strategies will not only help minimize the impacts of climate change in the Gulf states but also maximize broad potential economic and social benefits such as energy security, food security, employment, and public health.<sup>15</sup>

## ECONOMIC DIVERSIFICATION AND CLIMATE CHANGE: CHALLENGES AND OPPORTUNITIES

Stakeholders representing governments, the private sector, academia, and NGOs raised a number of issues during interviews for this brief. This section sets out some of the most important among them.

### Oman

In Oman, climate change and the economy continue to be treated as separate issues. Although the intent to shift away from an oil-based economy dates to 1976, the real push for economic diversification in Oman has been driven by the drop in oil prices since 2014. In 2016, a National Program for Supporting Economic Diversity (known as TANFEEDH) was established to facilitate the implementation of the 9th Five-Year Plan (2016–2020),<sup>16</sup> which targets three main sectors: manufacturing, tourism, and logistics.

Oman ratified the Paris Climate Change Agreement in 2016—the same year that the TANFEEDH program was approved—and submitted its Intended Nationally Determined Contribution (INDC) in 2015. However, Oman is the only Gulf country that has not expressed an intention to align its INDC with its economic diversification strategies. The 9th Five-Year Plan has an environmental dimension, but it is not perceived as a priority in the short term and is treated as an issue separate from other prioritized sectors, such as energy, manufacturing, tourism, and logistics.

Nonetheless, Oman is the only Gulf country that has indicated (in its INDC) the intent to cut its GHG emissions by 2% between 2020 to 2030, as compared to business-as-usual levels.<sup>17</sup> Yet strategies to achieve this target or ways to ensure that future developments do not hinder Oman from reaching it have not been discussed.

In Oman, aligning climate change considerations with economic diversification strategies does not seem possible, especially with the persistence of top-down decision-making, bureaucracy, and the negligible ability of the Ministry of Environment to influence decision-making. Furthermore, the lack of available data with regard to, for example, GHG emissions and climate risk assessments—let alone information on the potential benefits of aligning climate issues with economic development or an awareness of this by the country's leaders—are not positive signs for such efforts in the short-to-medium term. Further, the integration of climate policies requires Oman's leaders to champion solutions to climate-related issues. While this vital support is visible in, for instance, the government's commitment to managing the risks of cyclones, it is absent when it comes to climate mitigation issues such as per capita carbon emissions. Also lacking is a mature culture of collaboration between relevant entities that enables vertical and horizontal policy integrity.

However, Oman does invest in some low-carbon technologies and renewable energy projects. Examples are the national oil company-led 7 MW solar project, established in 2012 to replace the natural

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gas used for enhanced oil recovery;<sup>18</sup> government-led initiatives such as the 303 kW solar project established in 2013 to replace the use of diesel to electrify Oman's rural areas;<sup>19</sup> and the 2017 launch of a policy to install rooftop solar PV systems.<sup>20</sup>

A closer look at these developments indicates that some were developed years before the recent drop in oil prices. This is because an increase in domestic energy demand—and Oman's efforts to free more natural gas for exports—are in large part behind the country's search for alternative energy sources such as renewables. In 2014, for example, about 70% of Oman's total natural gas production was consumed domestically. Due to domestic pressure on natural gas supplies and because of Oman's long-term natural gas export commitments, the country has also imported about 10% of its natural gas from Qatar since 2008.<sup>21</sup> In addition, Oman signed a memorandum of understanding to import gas from Iran in a 25-year deal starting in 2015.<sup>22</sup> While the gas imports from Iran are allocated partially to LNG processing, the majority is used to meet domestic demand.

**The United Arab Emirates**

Unlike Oman, climate policy integration is likely to take place in the UAE.

In the UAE, policies that address climate change have top-down political support. Such policies are considered opportunities for the UAE to align climate-related matters with economic development strategies in a post-oil future. Leadership in this matter has been illustrated by statements on Twitter. In 2016, Dubai's Ruler and the UAE's vice president and prime minister, Sheikh Mohammed bin Rashid Al Maktoum, posted that "Celebrating the last barrel of oil, as my brother Mohammed bin Zayed has said, we will build a sustainable economy for future generations." The same year, he posted that "Managing climate change makes the Ministry of Environment and Water into the Ministry of Climate Change and Environment."

To date, the UAE is the only Gulf state that prepared its INDC in line with its Vision 2021, which states that the UAE aims to make clean energy 24% of its total energy mix by

2021.<sup>23</sup> The UAE is also the only Gulf country to establish a Green Economy for Sustainable Development initiative in 2012<sup>24</sup>—which was approved by the cabinet in 2015—and was the first Gulf country to release, in 2017, a climate action plan.<sup>25</sup>

The UAE's federal governing structure seems to allow federal and local actions related to the environment and climate. At the federal level, the Ministry of Climate Change and the Environment is taking the lead in climate change matters. It has issued the UAE's climate action plan (2017–2050), which was prepared in consultation with actors representing other emirates and various sectors, including the private sector. Although efforts remain fragmented, each emirate has, for example, its own clean energy targets such as Dubai's Clean Energy Strategy 2050<sup>26</sup> and Abu Dhabi's goal to source 7% of power generation capacity from renewables by 2020.<sup>27</sup> The emirates' confederation system has allowed a degree of organizational diversity, which enables more room for creativity and competitiveness between emirates as they develop low-carbon solutions. The UAE alone has about 10 environmental authorities.<sup>28</sup>

Sixty-six percent of those interviewed for this brief expressed satisfaction with collaborations between entities involved with economic and environmental governance at the federal and the local levels. For instance in Abu Dhabi, the Environment Agency collaborates directly with the Department of Economic Development.

The UAE has the advantage of political leaders who are not only aware of climate change but also knowledgeable about its effects. The UAE also benefits from regular meetings between committees involved in delivering the goals and objectives of the UAE's Vision 2021. Yet the availability, credibility, and access to data related to climate change are still issues to be fully addressed in the UAE. This is one of the reasons the Ministry of Climate Change and Environment is aiming to establish, in collaboration with Columbia University, a new institute dedicated to researching climate change-related matters (i.e., the Emirates Climate Change and Environment Institute).

Furthermore, the UAE appears to be

conscious about investing in low-carbon development projects. A planned investment of US\$163 billion has been announced to achieve a 44% clean energy target by 2050. An additional US\$350 million from the Abu Dhabi Fund for Development will be invested in renewable energy projects. The country has also expressed interest in studying the possibility of enhancing “green” finance, or the financing of investments that produce environmental benefits.<sup>29</sup>

As a net importer of natural gas since 2007, the UAE realizes the importance of developing alternative energy supplies like renewable and nuclear energy in order to enhance energy security and self-sufficiency, and to free more hydrocarbons for export. About half of the demand of power plants for domestic electricity and water generation is met by natural gas imports; the demand for natural gas increases by almost 6% annually.<sup>30</sup> Due to increasing demands, and indeed with the uncertain state of relations with Qatar, the UAE is also looking for alternative LNG supply sources, such as the U.S. The international attention focused on high per capita carbon emissions in the UAE was another driver for the country to diversify its economy and to pursue low-carbon developments such as the establishment of environmentally friendly megaprojects like Masdar City, headquarters of the International Renewable Energy Agency (IRENA), and the Mohammed bin Rashid Solar Park in Dubai to convey a global message about the country’s interest in renewable energy.

## POLICY TAKEAWAYS

The Arab Gulf states should:

1. Strengthen efforts to address the economic uncertainties associated with climate change impacts on non-oil and oil-based economic sectors.
2. Take advantage of ongoing economic reforms associated with addressing the impacts of the oil price shock to align the effects of climate change with different economic sectors.

3. Support the generation of climate change research and data and their impact on different economic sectors.
4. Strengthen the legal position of the Ministries of Environment and Climate to champion and coordinate efforts toward maximizing the advantages of aligning climate change policies with different economic sectors.
5. Take advantage of existing arrangements between economic diversification and climate change actions. However, and most importantly, the two efforts should be aligned to avoid contradictions between climate policies and other policies.
6. Ensure that information is shared and awareness is raised at different levels of society, including the political level, private sector, and among citizens and other residents.

## CONCLUSION

Climate change, especially as it relates to global constraints on fossil fuel use, is a source of uncertainty for the economic and political stability of the Arab Gulf states. Economic diversification strategies driven by the desire to enhance energy security, eliminate vulnerability to oil price shocks, and prepare the Arab Gulf states for a post-oil economy offer opportunities to address the potential impacts of climate change.

In consultation with stakeholders from environmental and economic fields in government, the private sector, academia, and NGOs in Oman and the UAE, a mix of institutional and data- and resource-related challenges and opportunities to align climate change policies with economic diversification strategies have been identified. It appears that the integration of climate policies and economic diversification is likely to occur in the UAE, which has the advantages of its leaders’ political will as well as the institutional and resource capacity to implement the needed changes. In contrast, deficits in both existing data and institutional and resource capacities make climate change integration unlikely in the short-to-medium term in Oman.

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