
ME101 Lecture 8: The Challenge Beyond Economics | Climate Change in a Desert

Speaker: Dr Aisha Al-Sarihi; Moderator: Ms Tettyana Jasli

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Despite hailing from the Middle East, Dr Aisha Al-Sarihi admitted that she has never been to the desert. Driving home the point that the region has varied and highly diverse landscapes, from the snow-capped mountains of northern Iran to the sand dunes of Saudi Arabia, Dr Al-Sarihi — a non-resident fellow at the Arab Gulf States Institute in Washington — warned, however, that the region as a whole is at risk of a 3 to 5°C increase in temperature by the end of this century, rendering it mostly uninhabitable to humans.

Climate change is already an ongoing reality in the Middle East, where adverse weather conditions and disasters such as cyclones and megastorms are being felt every few years or so, damaging property, infrastructure and costing human lives. All is not too late, however, and she argued that if these trends are to be curtailed, there must be decisive climate action and cooperation between the different nation-states of the region.

Focusing on the member states of the Gulf Cooperation Council (GCC), Dr Al-Sarihi stressed that these countries must move beyond simply stating climate mitigation and adaptation aspirations, ambitions and goals, and must instead actively commit to and pursue aggressive policies that will result in a tangible decrease in the rate of warming in the Middle East.

Economy, Energy Demand and the Greenhouse Gas Emissions of Oil-Producing Gulf Arab States

It is no surprise that oil immediately comes to mind when we think about the Gulf Arab states, for their rapid transformation and development in the last few decades have been owed almost entirely on the extraction of this resource. Oil and natural gas reserves in the region alone account for 30 and 20 per cent of the global reserves respectively, and at current production rates, the Gulf region could supply the current demand for oil and gas for another hundred years.

The economies of these nation-states are intricately linked to the oil and gas industry. While the price of oil is volatile and fluctuates with the international market, the oil and gas industry overwhelmingly dominates the export sector of the Gulf Arab states, accounting for as much as 90 per cent of all exports for Kuwait, for example. In terms of GDP, too, oil revenues take up significant proportions of the overall output, accounting for 25 per cent of the United Arab Emirates' GDP and 60 per cent of Kuwait's. Therefore, Dr Al-Sarihi argued that any tangible climate action that these countries take must consider a significant reduction in their dependence on fossil fuels for revenue.

At the same time, energy demand in the region has been surging, increasing by 5 per cent per year on average. In fact, energy use per capita across the Gulf states has far exceeded other major countries like the US, UK and China. Numerous factors can be cited for this, said Dr Al-Sarihi, including the use of air conditioning to combat hot weather, accounting for 60 to 80 per cent of energy consumption alone, population growth, higher standards of living, the low prices of fuel and electricity, and the general expansion of the energy industry in the region.

Almost 99 percent of this energy is supplied by oil and natural gas, with only a small fraction being supplied by renewable energy. Because of this high reliance on oil and gas, what we observe in the region is that greenhouse gas emissions are increasing across the Arab Gulf states, with the region as a whole contributing 2.6 per cent of global emissions. Again, statistics from the World Bank rank Qatar, Kuwait, Bahrain, the UAE and Saudi Arabia as having the highest carbon emissions per capita globally.

All of these issues are tied together in a negative feedback loop. The oil and gas exports play an important role in the GCC economy. The greater the revenue from these exports, the greater the economic stability of these GCC countries, and the greater the increase in governmental expenditure thereafter. This will result in the lowering of energy prices at the household level, despite the fact that such prices do not reflect the real cost of producing and consuming such energy. With this increase in the domestic energy consumption, there will be greater greenhouse gas emissions, contributing to global climate change. Domestic demand for energy has been so great that countries like Kuwait and the UAE have even resorted to importing natural gas from their neighbours. Therefore, if oil and gas exports are reduced, economic stability will be threatened. This reduces the incentive for governments to stop the reliance on oil and natural gas, especially since the transition to cleaner energy resources produces a great deal of uncertainty.

While the Arab Gulf states have been aware of this negative feedback loop, such a scenario has been the reality for them for a long time. Increasing greenhouse gas emissions must spur the Gulf Arab states into climate action, because ultimately, such a move will contribute to economic diversification, economic stability, and thereafter long-lasting social and environmental benefits.

Addressing Climate Change at the Governmental and Grassroots Level

The Paris Agreement drafted in 2015 stipulates that countries must list their mitigation and adaptation ambitions with regards to tackling climate change. For the top trade partners of the GCC, including the European Union, Japan, India and China, this would entail moving away from fossil fuels, with an aim to meet lower greenhouse gas emission targets by 2030. Even with the present Covid-19 crisis, the EU and China have not stopped prioritising their green initiatives, with a European Green New Deal in the works and China's plans to achieve carbon neutrality by 2060. While all GCC states have signed and ratified the Paris Agreement, these are mostly listed ambitions, and not all have a national climate strategy on the ground. Oman, Qatar and the UAE are the most recent countries to develop a roadmap to achieving climate mitigation and adaptation measures.

This is not to say that the Arab Gulf states had not been doing anything prior to 2015, however, said Dr Al-Sarihi. For example, Saudi Arabia had the Saudi Green Building Forum in 2010 to enhance energy efficiency in buildings, as well as the creation of the Saudi Energy Efficiency Center in 2012 to make more efficient use of energy in the country. Dubai had its Integrated Energy Strategy 2030 as well. Yet, she stressed that it is simply not enough to have initiatives without real action on the ground. Admittedly, there has been a

313 percent increase in the total renewable electricity installed capacity between 2014 and 2018 in the Arab Gulf states. Solar panels have been installed on buildings, as part of renewable energy development. However, if one looks at the share of renewable electricity as part of total electricity capacity, in all countries, it is less than 1 per cent, with the exception of the UAE, where it is still at a mere 2 per cent.

Speaking further about Saudi Arabia, Dr Al-Sarihi mentioned that it is chairing ‘T20 Saudi Arabia’, coordinating a task force for climate change and the environment. One of the most important things Saudi Arabia has proposed in 2020 is the ‘Circular Carbon Economy’. The proposal stipulates that Arab Gulf countries depending on oil revenue as the main source of income should not avoid the use of oil for now, but instead address the root problem, which is carbon emissions. The proposal, therefore, allows for the use of fossil fuels, but deals with the emissions at the same time. There are four ways carbon emissions can be redirected, through the four Rs: by reducing, reusing, recycling, or removing the carbon. Reusing, for example, involves developing industries that manufacture useful products from the carbon emitted.

These are some examples stated by Dr Al-Sarihi on the ways the Arab Gulf states are attempting to address climate change, but until these initiatives result in real policy changes on the ground, they will stay as ambitions waiting to be acted upon, which must happen soon if the region is to avoid a devastating increase in temperature by the end of the century. While 92 per cent of millennials in the region believe in climate change, only 6 per cent consider it a top priority. There is reason to be hopeful, however, as a recent survey in Saudi Arabia shows that 47 per cent of correspondents believe it is highly important that sustainability is an integral part of the Covid-19 recovery process.

Highlights from the Question and Answer Session

Q: The Covid-19 pandemic has caused uncertainty worldwide. What do you think are the implications of the global coronavirus outbreak on the climate change policies of the Gulf states?

Dr Al-Sarihi: Covid-19 has been challenging for the Gulf countries, which are facing double challenges. They had to prioritise the health sector. At the same time, because of the lockdown measures, there has been a reduction in the demand for oil, resulting in the decrease in oil prices worldwide. So far, the Arab Gulf states, like any other part of the world, have introduced some stimulus measures to shore up the economy to aid domestic businesses in the region. Whether that money is going into climate-related investments, it is too early to say. But based on the data, most of the money thus far has been allocated to help domestic businesses and the health sector. We have not seen investment directed to the climate-related sector.

Q: How do you think economic stimulus policies and climate action can be combined? How can they make this politically palatable?

Dr Al-Sarihi: If the Gulf states do not invest money in the climate at this time, it is a good time to play around with policies and regulations. Since the energy prices are low, it is a really good opportunity to revisit the electricity prices, and the subsidies allocated to the energy sector.

It is a good time to revise the subsidies at the moment as that would help reduce the social shock of increasing the fuel prices for the masses. It is a good time to look at the energy efficiency measures because altering these measures are low hanging fruit when it comes to climate mitigation, compared to developing

other measures like renewable energy. This is a good start, and it will help mitigate climate change not only in the short term, and also in the long term.

Q: There are a lot of specific national policies, but could climate action be addressed regionally? I'm not just thinking of the GCC states, but also Iraq and Iran.

Dr Al-Sarhi: This is a good question. Climate action should not be restricted to the domestic level. Climate change does not respect borders. Its impact can be felt across borders. There will need to be cooperation across countries for climate action. There are opportunities for countries to cooperate.

The Gulf countries have already started an electricity grid network. If we integrate the renewable energy sector, we could enhance climate action. But if your question is whether they are doing enough in terms of cooperation, my team and I have already assessed the cooperation between countries in a recent paper.

The GCC has a department looking into climate cooperation. Our concern was that, while there are regulations out there, these regulations are outdated, and in terms of implication, not much is going on. More needs to be done to enhance the cooperation between Gulf countries, not just in terms of mitigation, but also adaptation. For example, water scarcity is an issue. There are more opportunities for the countries to come together. For example, they can think about capacity building, cooperate on finances, think of opportunities like job creation in the region, and get together to figure out how to integrate climate-related investments, this would be a great start.

Q: Can I get your take on climate refugees? Even if the wealthier Gulf countries can manage the problems associated with climate change, they cannot be isolated from the rest of the region.

Dr Al-Sarhi: I might not be in the best position to answer how climate change affects migration. Dr Marwa Daoudy has written a book on how climate change has affected the conflict in Syria. There are studies that show that the most recent incidents in Syria are linked to climate change, and are connected with food security and water scarcity. These concerns exacerbate the issue, forcing people to move from rural to urban areas.

Q: I have another question on the effects of climate change. Do you think the climate change challenge will end up drawing states closer, or will it heighten tensions in the region?

Dr Al-Sarhi: A difficult question to answer. I think, even if we think about this question from a global perspective, I think the impact of climate change should bring the countries together. Especially for the Arab Gulf states, they share the same culture, and more or less have similar structures in their economy. They are also in the same zone in terms of how much the temperature will increase.

But again, we need to highlight how these countries are different in terms of socio-economic context, and financial resources. Qatar and the UAE have high capacities to deal with climate change. Oman has the human capacity. The financial issue is something that Arab Gulf states can work on together. I know I am not answering the question, but my take is that climate change *should* bring them together.