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PROSPECTS FOR CLIMATE CHANGE INTEGRATION INTO THE GCC ECONOMIC DIVERSIFICATION STRATEGIES

Aisha Al-Sarihi

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Prospects for Climate Change Integration into the GCC Economic Diversification Strategies

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About the Author

Aisha Al-Sarihi was a Research Officer at the Kuwait Programme, LSE Middle East Centre working on climate change in the GCC states. Her doctoral thesis at the Centre for Environmental Policy, Imperial College London, investigates the challenges, opportunities and policies to adopting renewable energy in hydrocarbon-rich economies, focusing on Oman as a case study.

Abstract

Characterised by a fragile desert environment and high reliance on oil export revenues as their primary source of income, the economies of the Gulf Cooperation Council (GCC) states are highly vulnerable to the adverse impacts of climate change. This both urges the strengthening of non-oil economic sectors and renders oil export revenues vulnerable to the impacts of the climate change mitigation measures adopted by other countries. Moreover, reliance on oil makes economic vulnerability to oil price shocks an inevitable challenge to the region's economic stability. This paper studies the interplay between climate change mitigation efforts and attempts to diversify GCC economies in order to identify the potential co-benefits of mainstreaming climate change measures into long-term economic planning, and to analyse the gap in addressing climate change in GCC economic diversification processes.

Introduction

According to the 2013 Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5), 'warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia'.[1] The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, the sea level has risen, and the concentrations of greenhouse gases (GHGs) has increased.[2] The report also notes that carbon dioxide concentrations have increased by 40 percent since pre-industrial times, primarily due to fossil fuel emissions, and then to net land use change emissions. Accordingly, each of the last three decades has been successively warmer at the Earth's surface than any preceding decade since 1850. IPCC scenarios suggest that an increase in global surface temperature will exceed 1.5 degrees Celsius (^{0}C) by the end of the twenty-first century. In addition, the report confirms that, with 95 percent certainty, human activity is the dominant cause of observed warming since the mid-twentieth century.

In recognition of the importance of an effective and progressive response to the urgent threat of climate change, at the 21st Conference of Parties (COP 21) in Paris in December 2015, parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement to limit the increase on the global average temperature to well below 2^{0}C more than pre-industrial levels, and to pursue efforts to limit the temperature increase to only 1.5^{0}C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change.[3] The Paris Agreement entered into force in November 2016, requiring all parties to put forward their best efforts through nationally determined contributions (NDCs) to strengthen global response to climate change.

Now that the Agreement has entered into force, the next challenge for governments is to translate these mitigation and adaptation ambitions into action on the ground. The contribution of national parties towards addressing the impacts of climate change will vary in light of different national circumstances. As such, tackling climate change in the Gulf Cooperation Council (GCC) states – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE) – will be critical, as well as highly challenging because those countries are affected not only by the adverse physical impacts of climate change, but also

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1 Thomas F. Stocker, Dahe Quin, Gian-Kasper Plattner, Melinda M. B. Tignor, Simon K. Allen, Judith Boschung, Alexander Nauels, Yu Xia, Vincent Bex and Pauline M. Midgley (eds), *Climate Change 2013: The Physical Science Basis: Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, 2014), p. 4.

2 Ibid.

3 United Nations, 'Article 2', *Paris Agreement* (2015). Available at http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (accessed 23 August 2017).

by the impacts of the mitigation measures, especially constraints on fossil fuels, taken in response to it. This can be explained as follows.

Home to nearly 30 percent of proven world crude oil reserves and around one-fifth of global natural gas reserves, the GCC states remain highly reliant on oil and gas export revenues. In recognition of their vulnerability to oil price shocks and their awareness of the finite nature of oil and gas resources, the GCC states have historically prioritised economic diversification, or reduction of their reliance on fossil fuel export revenues and enhancement of the economic contribution of non-oil sectors, in their long-term economic policies.[4]

In addition to the fact that oil resources are finite and that income from exporting these resources fluctuates in response to oil prices, climate change makes economic diversification even more urgent in the region for two primary reasons. First, the effects of climate change, particularly as evidenced through global warming, have adverse impacts on non-oil economic sectors in fragile desert environments, such as fisheries, agriculture, infrastructure and tourism, which, with proper governmental intervention, might play a crucial role in boosting economic diversification in the GCC states. Second, the expected decrease in future demands for fossil fuel exports as a result of the global efforts to cut GHGs will harm Gulf economies and should push them towards diversification.[5] Accordingly, addressing the impacts of climate change in the GCC states could serve as a tool to boost economic diversification by improving the sustainability of affected sectors such as agriculture, tourism and fishing, as well as by promoting investments in alternative energy resources including low carbon technologies, such as renewable energy, energy efficiency, and carbon capture, utilisation and storage. Early recognition of climate change impacts means that policymakers need to consider the appropriateness of different economic growth strategies that could eliminate the potential impacts and at the same time maximise economic benefits. These strategies need to increase the ability of societies to mitigate and adapt to climate change through different development choices.

To this end, the co-benefits of addressing climate change issues and advancing GCC economic diversification are likely to outweigh the costs of addressing climate change issues in isolation from the GCC's long-term economic policies. Nevertheless, economic development policies and climate change issues tend to be viewed separately. This paper argues that the GCC states can progress on the Paris Agreement by aligning climate change action with their ongoing economic diversification processes. Thus, the extent to which climate change issues are addressed in the unfolding economic diversification processes in the six GCC states is examined. The analysis is informed by assessing the following: the GCC states' intended nationally determined contributions (INDCs), which were submitted towards achieving the goal set in the Paris Agreement; long-term national economic

[4] Martin Hvidt, 'Economic Diversification in GCC Countries: Past Record and Future Trends', *LSE Kuwait Programme Paper Series* 27 (London, 2013).

[5] Susan Solomon, Dahe Qin, Martin Manning, Melinda Marquis, Kristen Averyt, Melinda M. B. Tignor, Henry Leroy Miller, Jr. and Zhenlin Chen (eds), *Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, 2007), p. 18.

development policies (or visions) – Vision 2020 for Oman's Economy, Bahrain's Economic Vision 2030, Qatar's National Vision 2030, Kuwait's Vision 2035, the UAE's Vision 2021 and Saudi Arabia's Vision 2030; and the recently established national economic diversification programmes, such as Oman's National Programme for Enhancing Economic Diversification (Tanfeedh) and other national climate change efforts and initiatives.

Linking Climate Change with Development Strategies

In order to address the adverse impacts of climate change, responses can be undertaken in two main ways: mitigation and adaptation. The IPCC defines mitigation as 'an anthropogenic intervention to reduce the anthropogenic forcing of the climate system, which includes strategies to reduce GHG sources and emissions and enhancing greenhouse gas sinks.'[6] Adaptation, on the other hand, is the 'adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.'[7] Mitigation actions, such as a reduction of carbon dioxide emissions, tackle the causes of anthropogenic climate change. They may be undertaken at any level, from the local to the global, but their benefits are always global. In contrast, adaptation actions, such as the replanting of mangroves, tackle the consequences of climate change, usually at the local or regional level. The resulting benefits accrue locally or regionally.

Climate change mitigation and adaptation responses can be taken a step further by linking them with long-term national development strategies to reduce the risk of conflicting strategies, additional regulatory burdens and inefficient budget allocations.[8] Linking climate change responses to development strategies is not new; the past decade has seen the emergence of a sizeable body of scholarly literature on climate and development that spans global, regional, national and local levels. Environmental policy integration, climate policy integration,[9] green economy initiatives[10] and climate compatible development[11] are relevant policy examples that have not yet been recognised by the Gulf countries.

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6 Martin Parry, Osvaldo Canziani, Jean Palutikof, Paul van der Linden, and Clair Hanson (eds), *Climate Change 2007: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, 2007), p. 750.

7 Ibid.

8 OECD, *Integrating Climate Change Adaptation into Development Co-Operation: Policy Guidance* (Paris, 2009).

9 Per Mickwitz, Francisco Aix, Silke Beck, David Carss, Nils Ferrand, Christoph Görg, Anne Jensen, Paula Kivimaa, Christian Kuhlicke, Wiebren Kuindersma, María Máñez, Matti Melanen, Suvi Monni, Anders Branth Pedersen, Hugo Reinert and Séverine van Bommel (eds), *Climate Policy Integration, Coherence and Governance: Peer Report* 2 (Helsinki, 2009).

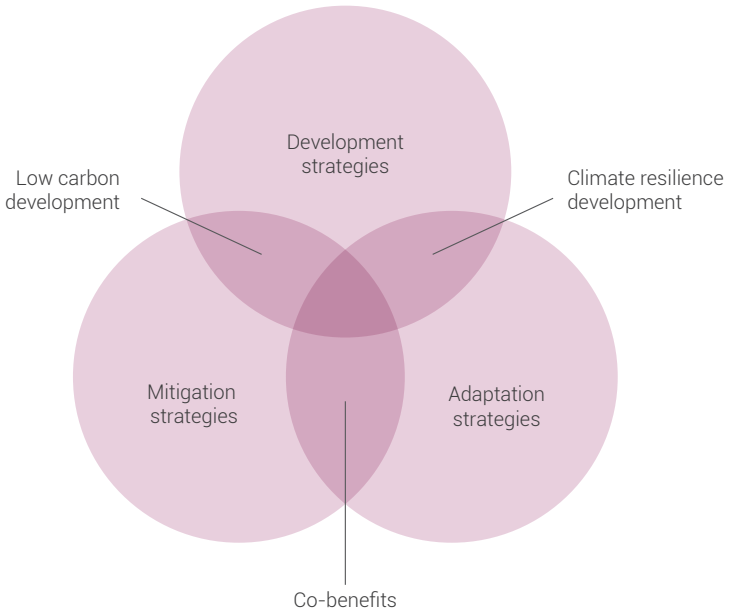
10 UN Environment, 'What is an "Inclusive Green Economy"?'. Available at http://web.unep.org/greeneconomy/what-inclusive-green-economy (accessed 23 August 2017).

11 Tom Mitchell and Simon Maxwell, 'Defining Climate Compatible Development', *Climate & Development Knowledge Network Policy Brief*, November 2010.

Climate compatible development involves fusing together strategies that have, to date, tended to work in isolation and assessing how to advance and potentially combine them. As explained by Mitchell and Maxwell, such development 'minimises the harm caused by climate impacts, while maximising the many human development opportunities presented by a low emissions, more resilient, future.'[12] In this way, adaptation overlaps with development. This overlap is known as 'climate resilient development', defined as development that has the capacity to absorb and quickly bounce back from climate shocks and stresses. In the same way, mitigation strategies overlap with development through 'low carbon development'. Low carbon development aims to reduce emissions or keep them low without compromising development goals. Thus both climate resilient development and low carbon development result in a win–win outcome (i.e. co-benefits), ensuring low emissions while simultaneously building resilience and promoting development (Figure 1).[13]

Figure 1: Climate Compatible Development

Source: Adapted from Mitchell and Maxwell, 'Defining Climate Compatible Development'.



But how do we evaluate the degree of alignment between climate change mitigation and adaptation strategies and broader economic development strategies? 'Climate policy integration' provides a relevant concept that enables us to evaluate this.

12 Ibid.

13 Ibid.

Climate policy integration can be defined as:

> The incorporation of the aims of climate change mitigation and adaptation into all stages of policy-making in other policy sectors (non-environmental as well as environmental); complemented by an attempt to aggregate expected consequences for climate change mitigation and adaptation into an overall evaluation of policy and a commitment to minimise contradiction between climate policies and other policies.[14]

On the basis of this definition, scholars have developed criteria to assess the degree of climate policy integration: inclusion, consistency, weighting, reporting and resources.[15] Accordingly, guiding questions have been developed to enable the analysis of each criterion (Table 1).

Table 1: Criteria and Guiding Questions Used to Assess Policy Integration

Source: Mickwitz et al., Climate Policy Integration.

Criterion	Key Questions
Inclusion	• To what extent are direct and indirect climate change mitigation and adaptation impacts covered?
Consistency	• Have the contradictions between the aims related to climate change mitigation and adaptation and other policy goals been assessed? • Have there been efforts to minimise revealed contradictions?
Weighting	• Have the relative priorities of climate change mitigation and adaptation impacts compared to other policy aims been decided? • Are there procedures for determining the relative priorities?
Reporting	• Are there clearly stated evaluation and reporting requirements for climate change mitigation and adaptation impacts (including deadlines) *ex ante* and have such evaluations and reporting happened *ex post*? • Have indicators been defined, followed up and used?
Resources	• Is internal as well as external know-how about climate change mitigation and adaptation impacts available and used and are resources provided?

[14] Mickwitz et al., *Climate Policy Integration*.

[15] Paul Kivimaa and Per Mickwitz, 'The Challenge of Greening Technologies: Environmental Policy Integration in Finnish Technology Policies', *Research Policy* 35/5 (2006), pp. 729–44.

Impacts of Climate Change in the GCC States

Climate Change Impacts on Non-Oil Sectors

Characterised by a fragile desert environment, the Arab region, as described by the findings of the 2009 report of the Arab Forum for Environment and Development,[16] is in many ways among the most vulnerable to the potential impacts of climate change. The most significant of these effects are increased average temperatures, less – or more erratic – precipitation, and sea level rise in a region which already suffers from aridity, recurrent drought and water scarcity.[17]

According to the 2013 IPCC AR5 report, climate models of large-scale climate phenomena influencing regional climates over West Asia indicate that it is very likely that temperatures will continue to increase in the area and that precipitation will diminish overall.[18] Indeed, recent climate change observations over the Arabian Peninsula confirmed this, showing significant mean annual warming trends of 1.03°C per decade in Oman, 0.81°C per decade in the UAE, 0.65°C per decade in Qatar, and 0.57°C in Kuwait per decade for the period 1980–2008.[19] In some regions, such as Dubai, Riyadh, Doha and Kuwait, the surface temperature over land regions is 1.5 to 3.5 times higher than the global land mean surface temperature.[20] A recent study by Pal and Eltahir argued that the Arab Gulf countries will suffer heatwaves beyond the limit of human survival. The heatwaves, which are expected to begin after 2070, will critically affect the economies and populations of Abu Dhabi, Dubai, Doha and coastal cities in Iran, as well pose a deadly threat to millions of pilgrims in Saudi Arabia when Hajj falls in the summer.[21]

Similarly, trends show an overall decrease of annual total precipitation of around 19.1mm (-16.9 percent of the base mean) throughout the Arabian Peninsula.[22] The IPCC study also shows that coastal areas will be extensively inundated due to sea level rise, with projections ranging from 2 to 9 meters by 2100 under various study scenarios. At the same time, the sea is projected to get saltier by up to 20 percent due to the effect of net evaporation and increased rainfall extremes of landfall cyclones on the coasts of the Arabian Sea.[23]

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16 Mostafa K. Tolba and Najib W. Saab, *Arab Environment: Impact of Climate Change on Arab Countries* (Beirut, 2009).

17 Ibid.; Stocker et al., *Climate Change 2013*.

18 Ibid., pp. 1271–2.

19 Said AlSarmi and Richard Washington, 'Recent Observed Climate Change over the Arabian Peninsula', *Journal of Geophysical Research: Atmospheres* 116/D11 (2011).

20 Ibid.

21 Jeremy S. Pal and Elfatih A. B. Eltahir, 'Future Temperature in Southwest Asia Projected to Exceed a Threshold for Human Adaptability', *Nature Climate Change* 6/2 (2015), pp. 197–200.

22 Ibid.

23 Stocker et al., *Climate Change 2013*, p. 271.

Non-oil economic sectors such as agriculture, fisheries, infrastructure and tourism, are vulnerable to climate change impacts, namely increase in the average temperature, sea level rise and decrease in annual precipitation. Increasing average temperature combined with a reduction in net precipitation worsens existing water scarcity issues in the region and is associated with consequent potential impacts on sensitive sectors such as biodiversity, tourism and agriculture. Similarly, coastal areas – home to approximately 85 percent of the population and over 90 percent of infrastructure – in addition to fisheries and agricultural areas are highly vulnerable to the combined effects of the sea level rise and hyper-saline coastal waters. According to 2014 data, non-oil economic sectors contributed less than 60 percent of GDP in all GCC countries, except for the UAE and Bahrain.[24] Addressing the impacts of climate change in these sectors is therefore essential in order to improve the sustainability of the Gulf states' non-oil economies.

Potential Climate Change Impacts on the GCC Oil-Based Economy

In addition to the exposure of the region's non-oil economic sectors to the adverse physical effects of climate change, the oil economic sector is potentially affected by the measures taken in response to it, which mainly put constraints on fossil fuels (Table 2). According to data from the European Commission, the GCC countries' top trade partners in 2015 were the European Union, with 14.7 percent of the trade balance; Japan, with 11.5 percent; India, with 10.4 percent; and China, with 13 percent.[25] Efforts to reduce carbon emissions and improve energy efficiency are no longer the preserve of the West, as significant changes in regulation are under way in China, Brazil, South Africa and India, among others, in response to the worldwide drive to curb GHG emissions.

Table 2: GCC Countries' Top Trade Partners and their Emission Reduction Targets
Source: European Commission

Trade Partner	INDC Emission Reduction Target
EU	40 percent below 1990 levels by 2030
Japan	26 percent by fiscal year 2030 from 2013 levels
India	Reduce carbon intensity by 33–5 percent from 2005 by 2030 Increase the contribution of non-fossil-fuel-based power generation capacity to 40 percent by 2030
China	Reduce carbon intensity by 60–5 percent from 2005 by 2030

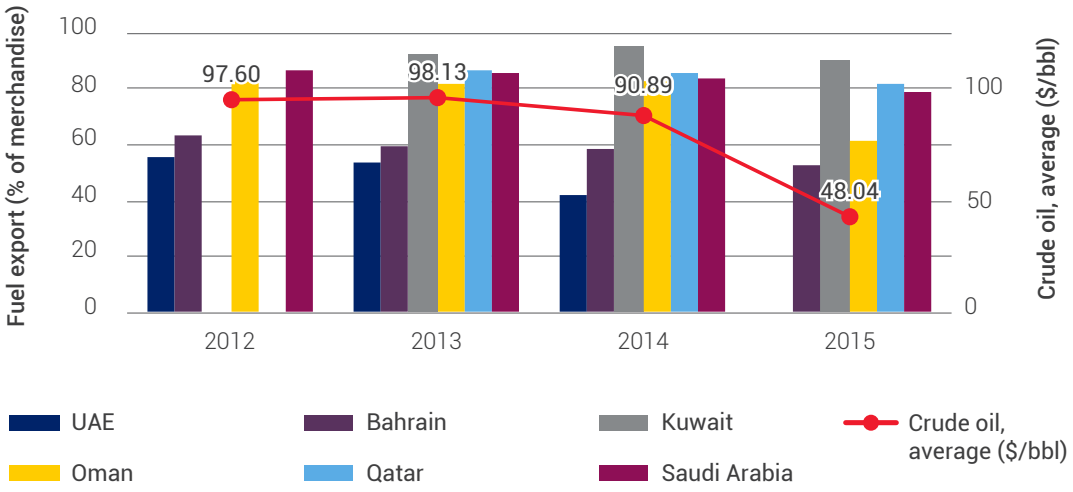
[24] International Monetary Fund, *Economic Diversification in Oil-Exporting Arab Countries* (Manama, April 2016), p. 13.
[25] European Commission, *Trade: Countries and Regions: Gulf Region*, June 2017. Available at http://ec.europa.eu/trade/policy/countries-and-regions/regions/gulf-region/index_en.htm (accessed 23 August 2017).

Holding the increase in the global average temperature to well below 2°C above pre-industrial levels requires implementing mitigation actions to reduce GHG emissions, which are mainly sourced from fossil fuel combustion. Concern about the impacts of the implementation of response measures on the GCC states exists largely due to the region's narrow export profile (Figure 2).

In this context, the implementation of response measures creates two major challenges for the GCC countries. First, the implementation of mitigation measures could change the trading landscape of hydrocarbon markets by reducing the demand for fossil fuel exports, leading to lower prices and diminished GDP growth.[26] In fact, this impact of the implementation of mitigation measures goes hand in hand with another problem inherent in dependence on a small number of product exports, namely vulnerability to global price shocks. This is true for the GCC economies as oil and gas exports have continued to account for more than 40 percent of total exports (Figure 3).

Figure 2: Contribution of Oil Exports in the GCC States' Total Government Exports, 2012–2015

Source: World Bank[27]

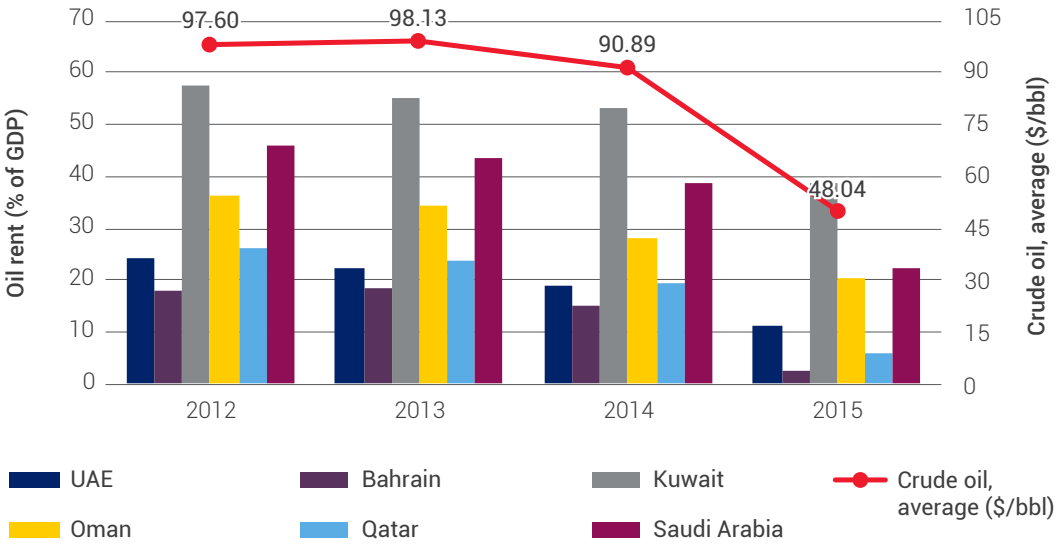


[26] Core Writing Team, Rajendra Pachauri and Andy Reisinger (eds), 'Climate Change 2007: Synthesis Report', *IPCC* (Geneva, 2007), p. 18; Mustafa Hussein Babiker and Mohammed Fehaid, 'Climate Change Policy in the MENA Region: Prospects, Challenges and the Implication of Market Instruments', *Economic Research Forum Working Paper* 588, May 2011. Available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_full_report.pdf (accessed 22 September 2017).

[27] World Bank, 'Fuel Exports (percentage of merchandise exports)'. Available at https://data.worldbank.org/indicator/TX.VAL.FUEL.ZS.UN?view=chart (accessed 8 September 2017). Please note that, as per the World Bank, data is missing for Kuwait and Qatar in 2012, and for the UAE in 2015.

Figure 3: Influence of Fluctuations in Oil Prices on the Contribution of Oil Revenues into GDP in the GCC States, 2012–2015

Source: World Bank[28]



Second, climate change mitigation measures, especially constraints on the use of fossil fuel energy (e.g. fossil fuel taxes), could increase production costs and hence prices of exportable goods and services. This would have a major effect, since the GCC countries remain highly dependent on goods imports, especially food.[29] Since the 1960s, the percentage of imports of goods and services in the total GDP has continued to increase in all GCC countries, except Bahrain (Figure 4).

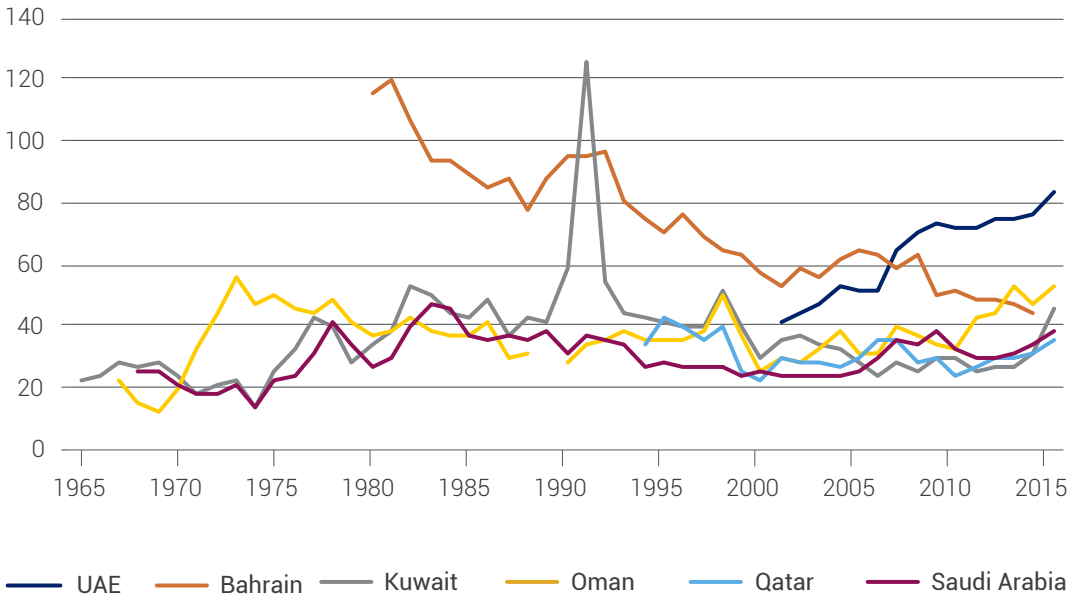
Nonetheless, these global shifts towards low carbon economies present opportunities for the GCC countries, should they seek to maintain their economic position through investing in emerging technologies in the international clean energy market.

[28] 'Oil rents (percentage of GDP)', *World Bank*. Available at https://data.worldbank.org/indicator/NY.GDP.PETR.RT.ZS (accessed 8 September 2017).

[29] Babiker and Fehaid, *Climate Change Policy in the MENA Region*.

Figure 4: Percentage of Import of Goods and Services in the GDP of GCC states, 1965–2015

Source: World Bank[30]



Climate Change Alignment with the GCC Economic Diversification Strategies

Potential Co-Benefits of Integrating Climate Change into the GCC Economic Diversification Strategies

Integrating adaptation and mitigation measures into national long-term development strategies is important in order to reduce the risk of conflicting strategies, additional regulatory burdens and inefficient budget allocations. This means instead of adding the GCC states' responses to climate change impacts as a new policy, these should be mainstreamed into existing decision-making and policy processes. The integration of climate change action into national economic policies would contribute to maintaining the political will at all levels, given that the implementation of climate action requires inclusive stakeholder engagement across diverse actors – national, subnational, municipal, public, private and civil society.

[30] World Bank, 'Imports of goods and services (percentage of GDP)'. Available at https://data.worldbank.org/indicator/NE.IMP.GNFS.ZS (accessed 8 September 2017). Please note that there are figures missing in some years for every country except Kuwait as the data was used as it appears in the source.

In response to the adverse impacts of climate change, mitigation actions in the GCC states could deliver not only emissions reductions, but also wider co-benefits in relation to climate change adaptation, development, employment, energy security and public health. Adaptation could contribute to wide-ranging economic co-benefits, especially enhancing the adaptation of non-oil sectors, which are already affected by the effects of climate change. Taking into account differences between the Gulf countries, the main areas targeted by climate change adaptation action in that region remain water security, food security, biodiversity protection, coastal zone management, infrastructure and urban planning, fisheries and marine environments, and agriculture (Table 4). These are major sectors that might, to varying extents depending on national circumstances, contribute to low carbon economic growth away from dependence on fossil fuel export revenues.

Although long-term national economic development plans were established years before the Paris Agreement, the potential consistency between climate change mitigation and adaptation and other policy aims is not addressed in the submitted INDC reports. Although no two plans are the same, they have all included a number of common features.[31] One was the clear intent to create knowledge-based economies in which growth is driven by research, development and innovation, wherein internationally competitive high value-added economic sectors are created. Heavy emphasis is placed on strengthening and expanding the private sector and creating new jobs to absorb the fast-growing and increasingly well-qualified entrants into local labour markets (Table 4). These goals could coincide with climate change mitigation and adaptation actions listed in the INDC reports. However, there is a lack of clarity on the potential co-benefits that could be achieved by the INDCs to accelerate the economic diversification processes in the region (Table 3).

The co-benefits could also contribute towards achieving a number of United Nations Development Programme (UNDP) Sustainable Development Goals (SDGs),[32] in particular those on the provision of affordable and clean energy (SDG7), the availability of decent work and economic growth (SDG8), the creation of sustainable cities and communities (SDG 11), the reduction of economic inequality (SDG10), the encouragement of responsible consumption and production (SDG12) and the protection of ecosystems and biodiversity (SDG15).

Further, early recognition of climate development co-benefits could also help GCC countries take advantage of available international means provided under the UNFCCC to support developing countries pursue climate action in conjunction with long-term economic development plans.

[31] Hvidt, *Economic Diversification in GCC Countries*.

[32] UNDP, 'Sustainable Development Goals'. Available at http://www.undp.org/content/undp/en/home/sustainable-development-goals/background.html (accessed 23 August 2017).

Table 3: Examples of Climate Mainstreaming by Sector and Potential Co-Benefits

Source: OECD, Handbook on the OECD-DAC Climate Markers (September 2011).[33]

Sector	Mainstreaming Options	Potential Co-Benefits
Agriculture	• Incorporating climate change adaptation into farming practices, irrigation system designs, community development plans and projects	• Contribution to food security and economic growth
Infrastructure	• Introducing disaster risk and climate change assessments into the construction of new infrastructure projects for informed decision-making • Using hazard maps, climate forecasts and other climate-related data to avoid building new infrastructure in areas at high risk of flooding or storm surges • Considering climate change projections in designing sewage systems, drains and storm water systems, etc.	• Lower costs
Land Use and Planning	• Planning development according to the medium- to long-term risks posed by climate change in varying geographical zones • Revising regulations and standards to reflect climate variability • Expanding the planning horizons of land use plans to incorporate longer climate predictions	• Lower costs
Fisheries	• Mapping changes in the range of fish species • Strengthening the monitoring of fish stocks to determine the impacts of climate change	• Contribution to food security • Generation of employment • Facilitation of economic growth
Coastal Zone Protection	• Conservation of mangroves and coral reefs to protect coastal zones from weather-related catastrophes (storms and typhoons)	• Lower costs
Water	• Including climate forecasts, water resource assessments and current natural hazard profiles in the designs of new projects • Monitoring and managing hydrological and meteorological data for decision-making on impacts of climate change • Strengthening capacity for integrated planning and management of water resources in response to climate change, including supply, demand and water quality issues • Promoting water conservation and rainwater harvesting in areas anticipating enhanced water stress due to climate change	• Improvement of water security and health • Triggering of private investment • Generation of employment

[33] Available at https://www.oecd.org/dac/stats/48785310.pdf (accessed 23 August 2017); Sining C. Cuevas, *Examining the Challenges in Mainstreaming Climate Change Adaptation into Local Land-Use Planning: The Case of Albay, Philippines*, PhD thesis, University of Queensland.

Energy Sector	• GHG emission reductions or stabilisation in the energy, transport, industry and agricultural sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management	• Improvement of energy security • Reduction of vulnerability to oil price shocks • Triggering private investments, stimulation of technological change • Job creation, economic growth away from fossil fuel • Reduction of air pollution, improvement to health • Contribution to fiscal sustainability

Current Status of Climate Change Integration into GCC Economic Diversification Strategies

In their long-term economic development visions of the twenty-first century (Table 4), the GCC countries set out ambitious targets and objectives for diversifying economies and expanding their productive base to ease the eventual transition towards a post-oil era.[34] Diversification comprises moving downstream in the domestic hydrocarbon industry and supporting the growth of non-fossil fuel industries, including manufacturing and services. An environmental dimension is included in the GCC long-term development plans, however despite the fact that the GCC states are among the world's highest per capita carbon emitters (Qatar ranked first and Oman thirteenth in 2014),[35] national development plans do not include overarching national targets related to climate change, such as carbon intensity reduction targets, energy consumption reduction targets or an emission reduction target, with some exceptions referring to climate aspects in a rather abstract manner. For instance, Bahrain Economic Vision 2030 states that 'economic growth must never come at the expense of the environment and the long-term well-being of our people'; Kuwait Vision 2035 promises to 'ensur[e] environment regulations and efficient sustainability within the state'; Qatar National Vision 2030 states that 'economic development and protection of the environment are two demands neither of which should be sacrificed for the sake of the other'; and Oman's Vision 2020 promises the 'creation of a stable holistic economic climate with a view of developing a private sector able to optimize the use of human and natural resources of the Sultanate through efficient methods and maintain environment integrity.'

[34] Kristian Coates Ulrichsen, *Economic Diversification Plans: Challenges and Prospects for Gulf Policymakers* (Washington D.C., 2016).

[35] 'CO_2 emissions (metric tons per capita)', *World Bank* (2013). Available at https://data.worldbank.org/indicator/EN.ATM.CO2E.PC (accessed 8 September 2017); Mari Luomi, *Mainstreaming Climate Policy in the Gulf Cooperation Council States* (Oxford, 2014); Mari Luomi, *The Gulf Monarchies and Climate Change: Abu Dhabi and Qatar in an Era of Natural Unsustainability* (London, 2013).

Although economic diversification strategies are not new among the GCC states, the lack of attention to climate change action, and hence to the mainstreaming of climate action into the diversification strategies, can be explained by the fact that the Paris Agreement came into force years after the launch of GCC long-term economic development plans and two years after the significant drop in oil prices of mid-2014. Accordingly, climate change action plans are yet to be established across the GCC states.

This does not necessarily mean that climate change is perceived as unimportant. There are different climate-related efforts and initiatives that have already been undertaken by different Gulf countries. The UAE's INDC was prepared in line with its Vision 2021, which aims to increase the use of clean energy to 24 percent by 2021;[36] and Saudi Arabia set a target of avoiding use of up to 130 million tons of carbon dioxide by 2030 annually.[37] Oman, in its INDC, set a target of cutting its GHG emissions by 2 percent between 2020 and 2030 compared to 1994.

The UAE was the only Gulf country that established a Green Economy for Sustainable Development initiative in 2012.[38] This initiative, for which the UAE Green Agenda 2015–2030 was established as an overarching framework, could serve as a tool for the implementation of the country's INDCs, taking advantage of the existing Green Development Council. In addition, the Masdar mega-project serves to experiment with, and demonstrate the applications of, sustainable projects such as on-grid/off-grid renewable energy projects and sustainable buildings. The Masdar project, which predates the Paris Agreement, could – with proper management – generate country-specific information and valuable insights into the factors that could promote or delay the implementation of sustainable projects.

Additionally, the Gulf states show a progressive interest in developing emission reduction initiatives. A range of targets for energy efficiency and renewable energy has been set for 2020 and 2030, as well as aspirational long-term objectives for 2040 and 2050 (Table 5). However, only some of these targets are mandatory, like the UAE's mandatory efficiency labelling and star rating for domestic appliances[39] and its mandatory building codes (e.g. the Estidama programme),[40] Bahrain's implementation of energy-efficiency regulations (e.g. for buildings and electrical appliances), Qatar's Energy Efficiency Programme and the Saudi National Energy Efficiency Programme.

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[36] 'Sustainable Environment and Infrastructure', *UAE Vision 2021*. Available at https://www.vision2021.ae/en/national-priority-areas/sustainable-environment-and-infrastructure (accessed 23 August 2017).

[37] *Saudi Vision 2030*. Available at http://vision2030.gov.sa/en (accessed 23 August 2017).

[38] UAE Ministry of Climate Change and Environment, *United Arab Emirates State of Green Economy Report* (Dubai, 2016).

[39] LSE Grantham Research Institute, *UAE Energy Efficiency Standardization and Labelling Scheme* (2013). Available at http://www.lse.ac.uk/GranthamInstitute/law/uae-energy-efficiency-standardization-and-labelling-scheme (accessed 23 August 2017).

[40] The Estidama programme is an initiative developed and promoted by the Abu Dhabi Urban Planning Council. It aims to implement a framework to rate the sustainability of design, construction and operation of communities and buildings including villas.

Energy efficiency initiatives are still in their infancy in Oman. On the other hand, the UAE,[41] Oman[42] and Saudi Arabia[43] are in the process of launching regulatory frameworks for small-scale grid-connected solar photovoltaic systems. Developing an overarching national climate action plan could help synthesise these goals and efforts in a holistic, long-term, climate development direction. Such overarching plans would also help to avoid burdens on state budgets while providing clarity on the mitigation and adaptation fiscal requirements.

[41] D. Madhura, 'Abu Dhabi to Regulate Small-Scale Solar PV Systems', *Zawya Project News*, 24 November 2016. Available at http://www.zawya.com/uae/en/story/Abu_Dhabi_to_regulate_smallscale_solar_PV_systems-ZAWYA20161124072227 (accessed 23 August 2017).

[42] Oman Authority for Electricity Regulation, 'Development of Standards for Small Scale Grid-Connected Solar PV Systems', 4 January 2017. Available at http://aer-oman.org/pdfs/press_releasesolar2017_ARB.pdf (accessed 23 August 2017).

[43] Electricity and Cogeneration Regulation Authority', *Saudi Vision 2030*. Available at http://www.ecra.gov.sa/ar-sa/News/Pages/News2317.aspx (accessed 23 August 2017).

Table 4: Summary of Objectives and Sectors Targeted by Economic Development Plans and INDCs for GCC Countries

Economic Visions				INDC Reports			
Vision	**Year**	**Aims**	**Leading Sectors**	**GHG Emission Reduction Target**	**Timeline**	**Targeted Mitigation Areas**	**Adaptation Areas**
Vision 2020 for **Oman**'s Economy	1995	• Economic diversification • Investments in industrialisation, human resources, privatisation and employment	• Tourism • Logistics • Manufacturing • Fisheries • Mining	2 percent reduction in GHG emission compared to 1994 levels		• Flare minimisation from oil industries • Renewable energies • Energy efficiency • Reduction in HCFCs	• Extreme events (e.g. tropical storms) • Coastal zones • Water security • Fisheries and marine environment • Food security and agriculture • Biodiversity
Bahrain Economic Vision 2030	2008	• Double household income • Secure employment • Give Bahraini workforce preference	• Financial sector • Tourism • Business services • Manufacturing • Logistics			• Energy efficiency (Kingdom of Bahrain) Energy Efficiency Programme (KEEP) • Renewable energy • Carbon capture and utilisation/storage	• Coastal zones • Water resources • Human health • Biodiversity
Qatar National Vision 2030	2008	• Knowledge-based society • Economic diversification • Sound economic management • Responsible exploitation of oil and gas	• Oil and gas • Education	Delivery of voluntary contribution of INDCs	2021–2030	• Energy efficiency • Clean energy such as renewable energy • Education and tourism	• Waste management • Infrastructure and transport • Water management • Awareness

Kuwait Vision 2035	2010	• Economic diversification • GDP growth spurred by state investments in infrastructure, • Services, education and institutional reforms	• Gas sector • Infrastructure • Trade and finance			• Energy efficiency (e.g. district cooling) • Renewable energy • Public transport • Waste management	• Natural disaster management • Coastal zones • Water desalination and water efficiency • Agriculture and biodiversity
UAE Vision 2021	2010	• Become one of the best places in the world to do business • Diversify away from oil	• Financial services • Aviation • Trade and commerce	Increase of clean energy to 24 percent of total energy mix by 2021	2021	• Clean energy target • Energy efficiency (tariff reform, building standards, district cooling, appliance efficiency) • Water efficiency • Flare minimisation from oil industries	• Water and waste water management • Wetlands • Coastal and marine environment conservation (UAE National Blue Carbon Project, agriculture, UAE Sustainable Fisheries Programme) • Education and research • Awareness campaigns
Saudi Vision 2030	2016	• Education-based economy • Privatisation • Boosting small and medium-sized enterprises • Improving the business environment	• Private sector • Education • Business services	Up to 130 million tons of carbon dioxide equivalent avoided by 2030 annually	2030	• With economic diversification co-benefits • Energy efficiency (Saudi Energy Efficiency Program) • Renewable energies • Carbon capture and utilisation/storage • Utilisation of gas • Methane recovery and flare minimisation	• Water and waste water management • Urban planning (public transport) • Marine protection • Reduced desertification

Table 5: Renewable Energy and Energy Efficiency Targets in the Gulf States
Source: IRENA (2016)

Country	Renewable Energy Targets	Energy Efficiency Targets
Kuwait	• 2020: 5 percent of total electricity generation • 2030: 15 percent of total electricity generation	• 5 percent increase in generation efficiency • 10 percent reduction in energy consumption in buildings
Bahrain	• 2020: 5 percent of electricity installed capacity	
Qatar	• 2030: 20 percent of capacity (1,800 MW)	• 2017: 20 percent reduction in per capita electricity consumption • 35 percent reduction in per capita water consumption compared to 2011
UAE	• 2050: 50 percent clean energy (44 percent renewables and 6 percent nuclear)[43]	• 2050: increase energy efficiency to 40 percent
Saudi Arabia	• 2022: 9.5 GW of electricity • 2040: 54 GW	• 2021: 14 percent reduction in peak demand
Oman	• 2025: 10 percent of electricity generation	• 2015: 5 percent reduction in average gas consumption per kWh of generation

The key question for the second aspect of mainstreaming – consistency – is whether the contradictions between the aims related to climate change mitigation and adaptation and other policy goals have been assessed, and whether efforts have been made to minimise them. Contradiction between policies may arise, for example, from the implementation of climate change adaptation measures. In the case of the Arab Gulf region, one of the adaptation measures taken to cope with water stress is desalination. This is a highly energy-intensive industry that typically, if no clean fuel is used, increases GHG emissions, and hence conflicts with mitigation goals. Here too, a comprehensive assessment of the contradictions between climate change mitigation and adaptation themselves and other policy goals is not provided in current INDC reports.

The third indicator for mainstreaming is weighting, responding to the following questions: 'Have the relative priorities of climate change mitigation and adaptation impacts, compared to other policy aims, been decided?' and 'are there procedures for determining relative priorities?'

In their INDCs, Gulf countries list climate change mitigation and adaptation priorities (Table 3). In terms of adaptation, although work is still in progress to launch national climate action plans, GCC states have already been progressing with regard to coastal

[44] 'Renewable Energy Market Analysis: The GCC Region', *IRENA* (2016); 'UAE Energy Plan aims to cut CO2 emissions 70 percent by 2020', *The National*, 10 January 2017. Available at https://www.thenational.ae/uae/uae-energy-plan-aims-to-cut-co2-emissions-70-by-2020-1.51582 (accessed 8 September 2017).

zone management, water resources management, biodiversity protection and the promotion of agriculture and fisheries. Nevertheless, further work needs to be done in terms of prioritisation of climate change mitigation and adaptation either between themselves or compared with the national policy.

The fourth indicator for mainstreaming is reporting, which asks the questions: 'Are there clearly stated evaluation and reporting requirements for climate change mitigation and adaptation impacts (including deadlines) *ex ante* and have such evaluations and reporting happened *ex post*?' and 'Have indicators been defined, followed up and used?'

The GCC countries aim to implement climate change actions on a voluntary basis, since they are not major contributors to the global total of GHG emissions. It would be useful for the GCC countries to develop climate change mitigation and adaptation performance indicators with economy-wide implications to facilitate the process of monitoring and reporting verification and to allow room for evaluation and progress. In this regard, the 2012 UAE Green Economy for Sustainable Development initiative could serve as an example for the UAE itself in its future implementation of the climate action plan, and for other GCC members in terms of developing performance indicators and the associated processes of monitoring and reviewing.

Oman and the UAE also aim to develop a national GHG emissions inventory programme in their upcoming national climate mitigation plans, to enable a database for emissions from all sectors and to identify the main sectors that contribute to GHG emissions. The eventual aim is to inform a national target for GHG emission reduction and mitigation measures, and to develop a national monitoring, reporting and verification system to track the progress in national GHG emission reduction.

Conclusion and Policy Recommendations

Two years into the Paris Agreement, the next challenge is for Gulf governments to translate their mitigation and adaptation ambitions into action on the ground.

The analysis of climate change impacts on the GCC confirms the importance of understanding the unique interplay between the GCC economies and climate change in order to inform a formulation of national climate action plans. The GCC countries are affected not only by the adverse physical impacts of climate change, but also by the measures taken in response to its effects. In an era of falling oil prices and accelerating processes of economic diversification, a successful translation of the GCC climate change mitigation and adaptation ambitions into action on the ground could be achieved by addressing climate change issues in the unfolding economic diversification strategies, in this way minimising the harm of climate impacts while maximising the development opportunities of a low emissions, more resilient future.

While the preparation of INDCs was inspired by the desire to enhance economic diversification, analysis of these demonstrates a lack of clarity on the potential co-benefits that could be achieved by complementing climate action with economic diversification. This paper reveals a number of such potential co-benefits, including but not limited to:

- reducing the risk of conflicting strategies, additional regulatory burdens and inefficient budget allocations;
- contributing to maintaining political will at all levels, given that the implementation of climate action requires inclusive stakeholder engagement across diverse actors;
- reducing emissions, in addition to wider co-benefits in relation to climate change adaptation, development, employment, energy security and public health;
- targeting non-oil sectors that have the potential, to an extent, to enhance a low carbon economic growth away from dependence on fossil fuel export revenues;
- progressing towards achieving a number of SDGs;
- taking advantage of available international means provided under the UNFCCC to support developing countries to pursue climate action in conjunction with long-term economic development plans.

Most importantly, the degree to which climate change adaptation and mitigation considerations are mainstreamed in the unfolding GCC economic diversification processes indicates a failure to sufficiently address climate change considerations, with the UAE as an exception. From a climate change mitigation perspective, for example, there is no inclusion of overarching national economy-wide targets related to climate change, such as carbon intensity reduction targets, energy consumption reduction targets or emission reduction targets, with some exceptions that refer to climate aspects in a rather abstract manner. Also, despite the acknowledgement of the importance of integrating climate change actions into economic diversification, a comprehensive assessment for the contradictions between climate change mitigation and adaptation policies themselves and other policy goals is missing in the current of the GCC states.

Policy Recommendations

Get the policy framework right: A comprehensive understanding of the reasons behind climate change action is important to ensure its sustainability and support over time. A far-reaching climate change policy framework should include mitigation and adaptation actions in a way that supports the national economy and is supported by it.

Take advantage of existing arrangements: The planning and implementation of economy-wide climate action require considerable institutional capacity-building, fiscal arrangements and a diverse range of actor networks. To avoid extra burdens, expand on the policy leverages that work well and review how the communication reports and NDCs were developed, in order to understand to what extent any existing structures support both adaptation and mitigation in conjunction with economic diversification.

Enhance buy-in for NDC implementation: Because the economy-wide implications of climate change policy require coordination and input across different actors, consider an engagement on the co-benefits of climate action that might be useful for different actors involved in the implementation of NDCs, including different ministries, departments, agencies or private sector actors. Also, developing performance indicators helps stakeholders to respond and engage with reporting on climate change action.

Ensure information-sharing and awareness-raising: To increase understanding and further involvement across government and other stakeholders in the planning and implementation of climate action plans.

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Ribale Sleiman Haidar

Editorial Assistant
Jack McGinn

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Police officers patrol in front of the entrance at the venue for the World Climate Change Conference 2015 (COP21) at Le Bourget, near Paris, France, November 29, 2015.

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برنامج الكويت

مركز الشرق الأوسط LSE

إمكانيات ادراج تغير المناخ في استراتيجيات التنويع الاقتصادي لدول مجلس التعاون الخليجي

عائشة السريحي

شباط / فبراير ٢٠١٨

نبذة مختصرة

إن اقتصادات دول مجلس التعاون الخليجي، التي تتسم ببيئة صحراوية هشة واعتماد كبير على عائدات تصدير النفط كمصدر أساسي للدخل، معرضة بشدة للتأثيرات السلبية لتغير المناخ. وهذا ما يحث على تعزيز القطاعات الاقتصادية غير النفطية ويجعل عائدات صادرات النفط عرضة لتداعيات تدابير التخفيف من آثار تغير المناخ التي اعتمدتها البلدان الأخرى. علاوة على ذلك، فإن الاعتماد على النفط يجعل الضعف الاقتصادي أمام صدمات أسعار النفط تحديا محتوما للاستقرار الاقتصادي في المنطقة. تدرس هذه الورقة التفاعل بين جهود التخفيف من تغير المناخ ومحاولات تنويع اقتصادات دول مجلس التعاون الخليجي من أجل تحديد المنافع المشتركة المحتملة لتعميم تدابير تغير المناخ في التخطيط الاقتصادي الطويل الأجل وتحليل الفجوة في معالجة تغير المناخ في إجراءات التنوع الاقتصادي لدول مجلس التعاون الخليجي.

ملخص تنفيذي

اعترافا بأهمية الاستجابة الفعالة والتدريجية للتهديد الملح لتغير المناخ، توصل الأطراف في اتفاقية الأمم المتحدة الإطارية بشأن تغير المناخ، في المؤتمر الحادي والعشرين للأطراف الذي عقد في باريس في كانون الأول / ديسمبر ٢٠١٥، إلى اتفاق تاريخي للحد من زيادة متوسط درجة الحرارة العالمية إلى أقل بكثير من درجتين مئويتين فوق مستويات ما قبل الحقبة الصناعية، ومواصلة الجهود للحد من زيادة ارتفاع درجة الحرارة إلى ١,٥ درجة مئوية فقط فوق مستويات ما قبل الحقبة الصناعية، مع التسليم بأن هذا من شأنه أن يقلص بشكل كبير من مخاطر وآثار تغير المناخ. وقد دخل اتفاق باريس حيز النفاذ في تشرين الثاني / نوفمبر ٢٠١٦، مطالبا جميع الأطراف ببذل قصارى جهودهم من خلال "مساهمات محددة وطنيا" لتعزيز الاستجابة العالمية لتهديد تغير المناخ.

الآن، وبعد أن دخل اتفاق باريس بشأن تغير المناخ حيز النفاذ، فإن التحدي التالي الذي تواجهه الحكومات هو ترجمة طموحات التخفيف والتكيف هذه إلى فعل على أرض الواقع. ستختلف مساهمة الأطراف الوطنية في التصدي لآثار تغير المناخ في ضوء الظروف الوطنية المختلفة. على هذا النحو، فإن معالجة تغير المناخ في دول مجلس التعاون الخليجي (البحرين والكويت وسلطنة عمان وقطر والمملكة العربية السعودية والإمارات العربية المتحدة) ستكون حاسمة، فضلا عن أنها تشكل تحديا كبيرا لدول مجلس التعاون الخليجي ليس فقط لأنها تتأثر من جراء الآثار المادية السلبية لتغير المناخ، بل أيضا من جراء آثار تدابير التخفيف، ولا سيما القيود المفروضة على الوقود الأحفوري التي تم اتخاذها استجابة لتلك التدابير.

وفي عصر هبوط أسعار النفط وتسريع عمليات التنويع الاقتصادي، يمكن تحقيق ترجمة ناجحة لطموحات دول مجلس التعاون الخليجي في التخفيف من آثار تغير المناخ والتكيف إلى فعل على أرض الواقع من خلال معالجة قضايا تغير المناخ في استراتيجيات التنويع الاقتصادي التي تتكشف، مما يقلص ضرر الآثار المناخية، وفي نفس الوقت يحقق فرص التنمية القصوى لانبعاثات منخفضة، ومستقبل أكثر مرونة.

وعلى الرغم من أن إعداد المساهمات المقررة وطنيا مستوحى من الرغبة في تعزيز التنوع الاقتصادي، فإن تحليل المساهمات المقررة المحددة وطنيا يدل على عدم وضوح المنافع المشتركة المحتملة التي يمكن تحقيقها من خلال تكامل الإجراءات المناخية مع التنويع الاقتصادي. وتكشف هذه الورقة عن عدد من هذه المنافع المشتركة المحتملة، بما في ذلك على سبيل المثال لا الحصر:

- الحد من مخاطر تضارب الاستراتيجيات، ومن الأعباء الرقابية الإضافية، ومن عدم كفاية مخصصات الميزانية؛
- المساهمة في الحفاظ على الإرادة السياسية على جميع المستويات، بالنظر إلى أن تنفيذ الإجراءات المناخية يتطلب إشراك أصحاب المصلحة على نطاق واسع عبر مختلف الجهات الفاعلة - الوطنية ودون الوطنية والبلدية والعامة والخاصة وربما المجتمع المدني؛

- تخفيض الانبعاثات، بالإضافة إلى المنافع المشتركة الأوسع نطاقا فيما يتعلق بالتكيف مع تغير المناخ، والتنمية، والعمالة، وأمن الطاقة، والصحة العام.
- استهداف القطاعات غير النفطية التي لديها القدرة، إلى حد ما، على تعزيز نمو اقتصادي منخفض الكربون بعيدا عن الاعتماد على عائدات تصدير الوقود الأحفوري؛
- التقدم نحو تحقيق عدد من أهداف التنمية المستدامة؛
- الاستفادة من الوسائل الدولية المتاحة التي توفرها اتفاقية الأمم المتحدة الإطارية بشأن تغير المناخ لدعم البلدان النامية في اتباع الإجراءات المناخية بالاقتران مع خطط التنمية الاقتصادية الطويلة الأجل. وتشمل هذه الآليات إجراءات التخفيف المناسبة على الصعيد الوطني، وخطط التكيف الوطنية، واستراتيجيات التنمية منخفضة الانبعاثات، وآلية التنمية النظيفة.

والأهم من ذلك، يشير تحليل مدى تعميم اعتبارات التكيف مع تغير المناخ والتخفيف من آثاره في عمليات التنويع الاقتصادي الخليجية إلى جهل نسبي في معالجة اعتبارات تغير المناخ في خطط التنمية الوطنية لدول مجلس التعاون الخليجي، باستثناء دولة الإمارات العربية المتحدة. فمن منظور التخفيف من آثار تغير المناخ، على سبيل المثال، لا يوجد إدراج شامل للأهداف الاقتصادية الوطنية العريضة المتصلة بتغير المناخ، مثل أهداف الحد من شدة انبعاث الكربون أو أهداف خفض استهلاك الطاقة أو أهداف خفض الانبعاثات، مع بعض الاستثناءات التي تشير إلى الجوانب المناخية بطريقة مجردة نوعا ما. وعلى الرغم من الإقرار بأهمية دمج إجراءات تغير المناخ في التنويع الاقتصادي، فإن التقييم الشامل للتناقضات بين سياسات التخفيف من آثار تغير المناخ وسياسات التكيف نفسها وأهداف السياسات الأخرى غير موجود في المساهمات المقررة المحددة وطنيا الحالية لدول مجلس التعاون الخليجي.

توصيات سياساتية

تصحيح إطار السياسات: إن الفهم الشامل للأسباب الكامنة وراء تأثير تغير المناخ مهم لضمان استدامته ودعمه بمرور الوقت. وينبغي أن يشمل إطار سياسة تغير المناخ بعيدة المدى إجراءات التخفيف والتكيف، بطريقة تدعم الاقتصاد الوطني وتكون مدعومة منه.

الاستفادة من الترتيبات القائمة: يتطلب تخطيط وتطبيق الإجراءات المناخية على نطاق الاقتصاد الشامل إصلاحا أساسيا للمؤسسات ولبناء القدرات وللترتيبات المالية ولمجموعة متنوعة من الشبكات الفاعلة. ولتجنب الأعباء الإضافية، القيام بالتوسع في الروافع السياساتية التي تعمل بشكل جيد، ومراجعة كيف تطورت تقارير الاتصالات والمساهمات المحددة وطنيا، من أجل فهم مدى دعم أي من الهياكل القائمة كلا من التكيف والتخفيف بالترابط مع التنويع الاقتصادي.

تعزيز الانخراط في تطبيق المساهمات المحددة وطنيا: نظرا لأن الآثار المترتبة على سياسة تغير المناخ على نطاق الاقتصاد الشامل تتطلب التنسيق والمشاركة من مختلف الجهات الفاعلة، فكروا بالانخراط في المنافع المشتركة للإجراءات المناخية التي قد تكون مفيدة لمختلف الجهات الفاعلة التي يحتمل أن تشارك في تطبيق المساهمات المحددة وطنيا، بما في ذلك مختلف الوزارات، والإدارات، والوكالات أو الجهات الفاعلة في القطاع الخاص. كما أن وضع مقاييس للأداء يساعد أصحاب المصلحة على الاستجابة والانخراط في الإبلاغ عن إجراءات تغير المناخ.

ضمان تبادل المعلومات ورفع التوعية: لزيادة الفهم وزيادة المشاركة عبر الحكومة وأصحاب المصلحة الآخرين في تخطيط وتطبيق خطط العمل المتعلقة بالمناخ.

عن مركز الشرق الأوسط

يبني مركز الشرق الأوسط على علاقة كلية لندن للاقتصاد و العلوم الاجتماعية الطويلة مع المنطقة، ويوفر محورا مركزيا لمجموعة واسعة من البحوث حول الشرق الأوسط.

يهدف مركز الشرق الأوسط لتعزيز التفاهم وتطوير البحث الدقيق على المجتمعات والاقتصادات و الأنظمة السياسية والعلاقات الدولية في المنطقة. ويشجع المركز كلا من المعرفة المتخصصة والفهم العام لهذا المجال الحيوي. للمركز قوة بارزة في البحوث المتعددة التخصصات والخبرات الإقليمية. باعتبارها من رواد العلوم الاجتماعية في العالم، تضم كلية لندن للاقتصاد أقسام تغطي جميع فروع العلوم الاجتماعية. يستخدم مركز الشرق الأوسط هذه الخبرة لتعزيز البحوث المبتكرة والتدريب على المنطقة.

عن برنامج الكويت

منذ تاسيسه عام ٢٠٠٧، أصبح برنامج الكويت مركزا رائدا عالميا للبحوث والخبرات عن الكويت ومنطقة مجلس التعاون لدول الخليج العربية. يشكل البرنامج القناة الرئيسية التي يتم من خلالها تسهيل وتوسيع وتعزيز البحوث عن الكويت في كلية لندن للاقتصاد . يقع البرنامج في مركز الشرق الأوسط في كلية لندن للاقتصاد تحت ادارة البروفيسور طوبي دودج.

يتم تمويل برنامج الكويت من قبل مؤسسة الكويت للتقدم العلمي.

السيرة الذاتية

عائشة السريحي باحثة سابقة في برنامج الكويت، مركز الشرق الأوسط في كلية لندن للاقتصاد والعلوم السياسية. باحثة في مجال تغير المناخ في دول مجلس التعاون الخليجي. تتركز أطروحة الدكتوراه التي تقدمها عائشة في مركز السياسات البيئية بجامعة إمبريال كوليدج لندن على دراسة التحديات والفرص والسياسات لاعتماد الطاقة المتجددة في الاقتصادات الغنية بالموارد الهيدروكربونية مع التركيز على عمان.

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