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## Energy Transition in the Middle East and North Africa Region: Regional Solutions for Climate Change Challenges Amid Economic Sanctions

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# ENERGY TRANSITION IN THE MIDDLE EAST AND NORTH AFRICA REGION: REGIONAL SOLUTIONS FOR CLIMATE CHANGE CHALLENGES AMID ECONOMIC SANCTIONS

Mehrnoosh Aryanpour\*



## ABSTRACT

As the world grapples with the urgent priority of transitioning to a net-zero future, there exists a shared need to make all efforts to reduce anthropogenic greenhouse gas emissions, mostly caused by burning fossil fuels. The Middle East and North Africa (MENA) region plays an important role because of its oil and natural gas output. Additionally, this region has experienced significant conflict and numerous wars. This article will focus on one of the many challenges that some key states in the MENA region, with a main focus on Iran, are facing in their energy transition. Several countries in the MENA region are or have recently been subject to some form of economic sanctions. Sanctions appear to have had a material impact on these countries' abilities to fulfill their contributions to transitioning to a net-zero economy. Research suggests that the chief obstacles they face regarding that transition is the lack of access to the latest technologies, a dearth of financing, limited or often no direct investments in low carbon industry, diplomatic isolation, and the concomitant economic volatility caused by sanctions, which in sum, take away from the financial capacity of a target country to save and invest for the transition to net zero. Therefore, it is crucial to revisit sanctions laws and policies, ensuring that they do not hinder the global community from achieving its climate goals. This article proposes establishing a regional 'climate savings account' to serve as a strategic mechanism to balance geopolitical interests and environmental goals.

**Keywords:** economic sanctions, climate change, energy transition, MENA, Paris Accord, energy security

## 1. INTRODUCTION

Major petrostates in the Middle East and North Africa (MENA) region with vast natural resources and outsized carbon footprints are reasonably expected to be among the leading contributors to reducing emissions, but current

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research suggests that present regulations, incentives, and international policy decisions may work against such an aspiration. Some countries, chiefly Qatar, Saudi Arabia, and the United Arab Emirates, have made commitments to that effect, but the region encompasses more than just the leading performers, like the constituents of the Gulf Cooperation Council (GCC). Major oil states such as Iran, Iraq, Libya, and Yemen should also be included to make this transition possible.

However, both existing sanctions and the legacy of past sanctions on the governments, energy, and banking sectors of these countries have effectively curtailed those states' abilities to achieve their own climate goals and to fulfill the expectations of their regional and international peers.<sup>1</sup> Economic sanctions are imposed to coerce a target state into changing its behavior or acting in a certain way. The end goals vary depending on who is imposing the sanctions, who the target country is, and the extent to which the target country is meant to suffer. The effectiveness of sanctions in changing a country's behavior is debatable and is not the subject of this article. Sanctions are at times construed as a substitute for war, as a regulatory regime to control trade, or to reduce the economic benefits of a country, though sanctions have historically both preceded and followed arms conflicts between nations. Sanctions imposed by the United Nations (UN) differ from those enforced by the United States, the United Kingdom, and the European Union (EU).

For example, in the case of Iran, the United States, through the Office of Foreign Assets Control (OFAC), has imposed primary and secondary economic sanctions since 1979, seeking to force the Iranian government to

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<sup>1</sup> Mohsen Abdollahi, 'Economic Sanctions and the Effectiveness of the Global Climate Change Regime' in Damilola S Olawuyi (ed), *Climate Change Law and Policy in the Middle East and North Africa Region* (Routledge 2021); Islamic Republic of Iran Department of Environment, *Intended Nationally Determined Contribution* (2015) <[www.ctc-n.org/sites/www.ctc-n.org/files/UNFCCC\\_docs/indc\\_iran\\_final\\_text.pdf](http://www.ctc-n.org/sites/www.ctc-n.org/files/UNFCCC_docs/indc_iran_final_text.pdf)> accessed 26 June 2024.

change its foreign policies and behaviour by isolating the regime and hurting its economy.<sup>2</sup>

The impact, types, and social and political circumstances of these target countries vary, but the focus of this article is on the common concerns shared by these states, either in their Nationally Determined Contributions (NDCs) or found through other legal, economic, and geopolitical similarities among them, which principally originate from being subject (or having been subject) to restrictions on accessing international trade and financial markets. It is worth noting that a naïve, blanket attribution of sanctions as the sole reason for climate underperformance is overly simplistic, though many causal links can be drawn between the lack of progress made on climate and the effects of sanctions.

Much research has been devoted to evaluating the efficacy of American economic sanctions as a foreign-policy instrument.<sup>3</sup> However, while the literature is saturated with scholarship surveying the deleterious effects of sanctions on economic output and the protection of human rights,<sup>4</sup> relatively limited work has been done on the effects that sanctions may have on climate

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<sup>2</sup> Phillip Brown, *Oil Market Effects from U.S. Economic Sanctions: Iran, Russia, Venezuela* (R46213, Congressional Research Service 2020) 3; International Emergency Economic Powers Act, Pub L No 95–223, 91 Stat 1626 (US 1977).

<sup>3</sup> Susan Hannah Allen and David J Lektzian, ‘Economic Sanctions: A Blunt Instrument?’ (2013) 50 *Journal of Peace Research* 121; Zachary Selden, ‘Are Economic Sanctions Still a Valid Option?’ (201) 11 *Georgetown Journal of International Affairs* 91; David Restrepo Amariles and Matteo M Winkler, ‘U.S. Economic Sanctions and the Corporate Compliance of Foreign Banks’ (2018) 51 *The International Lawyer* 497; Hossein G Askari and others, ‘U.S. Economic Sanctions: Lessons from the Iranian Experience’ (2001) 36 *Business Economics* 7; Nicholas Mulder, *The Economic Weapons: The Rise of Sanctions as a Tool of Modern War* (Yale UP 2022); Özgür Özdamar and Evgeniia Shahin ‘Consequences of Economic Sanctions: The State of the Art and Paths Forward’ (2021)23 *International Studies Review* 1646.

<sup>4</sup> Cristiane Carneiro and Dominique Elden, ‘Economic Sanctions, Leadership Survival, and Human Rights’ (2009) 30 *University of Pennsylvania Journal of International Law* 969; Laura Reiner, *Targeted Sanctions and Human Rights: Challenging the UN Security Council’s 1267 Regime* (GRIN Verlag 2016).

change.<sup>5</sup> On the whole, the relative paucity of academic treatment of this topic suggests that substantially more scholarship is necessary, particularly for the benefit of national leadership and international policymakers for whom the sustainability-centric externalities of their decisions appear to have grave implications for global climate aims. The primary aims of this article are (1) to draw the reader's attention to the issue by using Iran and its cohorts as a collective example and (2) to make suggestions for novel policy frameworks specific to the MENA region that can address the glaring rift in making any headway on climate related issues for the subject countries.

While the economic sanctions are imposed by different countries or organizations, such as the UN, United States, and EU, a fundamental comparison of such sanctions is not performed in this article. It is also a clarifying heuristic to group all these target countries together, as the reasons Yemen, Iraq, and Libya came to be sanctioned in the first place (and have not proven effective at developing their energy and climate transition) can be somewhat different from the reasons why Iran and Syria have not likewise progressed.

Iran serves as a suitable principal subject of analysis for this study for several reasons. Iran ranks second in the world for natural gas reserves and fourth for proven crude oil reserves.<sup>6</sup> Iran is also the seventh highest emitter of greenhouse gasses,<sup>7</sup> and according to World Bank data, Iran has consistently

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<sup>5</sup> Alexander Rustler, 'Are Sanctions Stopping Us from Achieving Global Climate Goals' (Journal of International Affairs, 11 July 2019) <<https://jia.sipa.columbia.edu/news/are-sanctions-stopping-us-achieving-global-climate-goals>> accessed 26 May 2024; Nicholas Mulder, 'Building Big Green States In A Tumultuous World' (Noema 1 September 2022) <[www.noemamag.com/building-big-green-states-in-a-tumultuous-world/](http://www.noemamag.com/building-big-green-states-in-a-tumultuous-world/)> accessed 26 June 2024; Abdollahi (n 1); Manuel Bessler, Richard Garfield and Gerard Mc Hugh, *Sanctions Assessment Handbook: Assessing the Humanitarian Implications of Sanctions* (United Nations Inter-Agency Standing Committee 2004) 82–85; Narges Bajoghli and others, *How Sanctions Work: Iran and the Impact of Economic Warfare* (Stanford UP 2024); Emre Hatipoglu, Mehmet Ali Soytaş and Fateh Belaïd, 'Environmental Consequences of Geopolitical Crises: The Case of Economic Sanctions and Emissions' (2023) 85 Resources Policy 104011.

<sup>6</sup> 'Islamic Republic of Iran' (World Bank, 20 October 2022) <[www.worldbank.org/en/country/iran/overview](http://www.worldbank.org/en/country/iran/overview)> accessed 24 May 2024.

<sup>7</sup> Mohammad Reza Mansouri Daneshvar, Majid Ebrahimi and Hamid Nejadsoleymani, 'An Overview of Climate Change in Iran: Facts and Statistics' (2019) 8 Environmental Systems Research 7.

ranked among the top seven nations in gas flaring over the last ten years,<sup>8</sup> which accounts for 35% of the presumed global carbon dioxide (CO<sub>2</sub>) equivalent greenhouse gas budget under the Paris Accords.<sup>9</sup> Thus, Iran's economy will likely be significantly affected by, and has a powerful capacity to contribute to, the anticipated global pivot toward green energy. Most critically, Iran, being subject to the most comprehensive U.S. and international sanctions since 1979, provides a plethora of data on how sanctions alone (and not sanctions combined with the travails of war) affect a major oil producer; it also serves as a case study of how a regime has responded to such sanctions over time and how the Iranian economy has, in turn, been affected by them.

Ultimately for all of the region, the deleterious effects of climate change have already begun to bite hard, with environmental crises ranging from water shortages to desertification and sandstorms recently afflicting many countries from Iran<sup>10</sup> to Iraq, where temperatures in the city of Basra routinely breach 50°C, rendering human life untenable,<sup>11</sup> and Libya, which faces its own plague of mass desertification.<sup>12</sup> Conditions in neighbouring countries are not materially better, with Saudi Arabia making a grim milestone of surging deaths from record heat at this year's Hajj, where temperature in the shade of Kaaba neared 52°C.<sup>13</sup> Approximately 50% of Iran's national budget revenues

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<sup>8</sup> 'A Decade of Stalled Progress on Reducing Global Gas Flaring' (World Bank Group, 5 May 2022) <[www.worldbank.org/en/news/press-release/2022/05/04/a-decade-of-stalled-progress-on-reducing-global-gas-flaring](http://www.worldbank.org/en/news/press-release/2022/05/04/a-decade-of-stalled-progress-on-reducing-global-gas-flaring)> accessed 25 May 2024.

<sup>9</sup> 'Gas Flaring Explained' (World Bank Group) <[www.worldbank.org/en/programs/gasflaringreduction/gas-flaring-explained](http://www.worldbank.org/en/programs/gasflaringreduction/gas-flaring-explained)> accessed 26 June 2024.

<sup>10</sup> Cornelius Adebahr and Olivia Lazard, 'How the EU Can Help Iran Tackle Water Scarcity' (Carnegie Europe, 7 July 2022), <<https://carnegieeurope.eu/2022/07/07/how-eu-can-help-iran-tackle-water-scarcity-pub-87281>> accessed 25 May 2024.

<sup>11</sup> 'Iraq: Water Crisis in Basra' (Human Rights Watch) <[www.hrw.org/news/2019/07/22/iraq-water-crisis-basra](http://www.hrw.org/news/2019/07/22/iraq-water-crisis-basra)> accessed 26 June 2024.

<sup>12</sup> Abdallah Hussien, 'Our Land. Our Future: Combating Desertification in Libya' (United Nations Development Programme, 5 June 2024) <[www.undp.org/libya/news/undp-libya-combats-desertification-and-restores-ecosystems-sustainable-future](http://www.undp.org/libya/news/undp-libya-combats-desertification-and-restores-ecosystems-sustainable-future)> accessed 26 June 2024.

<sup>13</sup> Zahra Fatima and BBC World Service, 'What's Behind Deaths at This Year's Hajj Pilgrimage in Saudi Arabia?' (BBC, 22 June 2024) <[www.bbc.com/news/articles/c3ggj0809dqq](http://www.bbc.com/news/articles/c3ggj0809dqq)> accessed 26 June 2024.

and 80% of the country's exports are sourced from oil resources,<sup>14</sup> which is typical for a Persian Gulf or North African petrostate. Iraq's reliance on oil resources is approximately 90% for budgetary purposes,<sup>15</sup> and war-torn Libya's fragmented government was facing a reported 98% dependency at the start of the civil crisis.<sup>16</sup> For economies with such massive reliance on fossil fuel to undertake an effective and equitable transition out of fossil fuel production would likely require significant international assistance, which is materially hampered by the stifling effects of sanctions (past or present) on financial flows.

The present research will treat, as a matter of comparison, historical economic sanction circumstances of Syria, Yemen, Iraq, and Libya—which have faced civil wars, ongoing conflicts, and militia challenges—in order to isolate the rapport of financial isolation and climate issues in the MENA region. But it is ultimately far easier and functionally transparent to begin to identify and link the impact of sanctions in the case of Iran as a robust intellectual primitive. Further research may also substantiate lines of inquiry suggesting that the lack of development of renewables or being far from a net-zero future is due in part to the simultaneous causality of sanctions and political instability / insurgency in a subject country, which, while a tertiary consideration, is not without merit.

After this introduction, section two of this article discusses the impacts of sanctions on energy security and sustainable development in Iran. Section

<sup>14</sup> 'Iran's Government Plans To Increase Taxes Amid Economic Crisis' (Iran International, 23 November 2023) <[www.iranintl.com/en/202311237742](http://www.iranintl.com/en/202311237742)> accessed 26 June 2024; 'A Look at Governments' Oil Revenues / This Government Had the Highest Oil Revenue in Iran's History' (Khabar Online, 23 June 2024) <<https://www.khabaronline.ir/live/1923543/%D9%86%DA%AF%D8%A7%D9%87%D8%8C-%D8%A8%D9%87-%D8%AF%D8%B1%D8%A2%D9%85%D8%AF%D9%87%D8%A7%DB%8C-%D9%86%D9%81%D8%AA%DB%8C%D8%88%D9%84%D8%AA-%D9%87%D8%A7%D8%A7%DB%8C%D9%86-%D8%AF%D9%88%D9%84%D8%AA-%D8%A8%D8%A7%D9%84%D8%A7%D8%AA%D8%B1%DB%8C%D9%86-%D8%AF%D8%B1%D8%A2%D9%85%D8%AF%D9%86%D9%81%D8%AA%DB%8C>> accessed 5 July 2024 (original in Persian).

<sup>15</sup> Justin Salhani, 'Iraq's Overreliance on Oil Threatens Economic, Political Strife' (Al Jazeera, 28 March 2024) <[www.aljazeera.com/news/2024/3/28/iraqs-overreliance-on-oil-threatens-economic-political-strife](http://www.aljazeera.com/news/2024/3/28/iraqs-overreliance-on-oil-threatens-economic-political-strife)> accessed 26 June 2024.

<sup>16</sup> 'How Is Libya Reacting to Low Oil Prices?' (World Bank Group) <[www.worldbank.org/en/country/libya/publication/economic-brief-july-2016](http://www.worldbank.org/en/country/libya/publication/economic-brief-july-2016)> accessed 26 June 2024.

three draws a causal link between sanctions and environmental harm. Section four proposes that sanctions be revisited, with a focus on energy transition and climate goals in MENA; it also proposes a novel collective financial mechanism to reboot sustainability initiatives throughout the region based on well-formed principles of common but differentiated responsibilities. The fifth section provides a brief conclusion.

## **2. THE EFFECT OF SANCTIONS ON ENERGY SECURITY AND SUSTAINABLE DEVELOPMENT**

Before diving into the impact of economic sanctions on energy security, it is important to acknowledge the need for more thorough research on energy security itself in the Middle East. Some leading literature has been produced by Dr. Olawuyi, who has made significant contributions to this field. In one of his studies examining energy poverty in the MENA region, he reaffirms that MENA countries have adequate energy resources that could efficiently address the energy needs of their populations. However, issues such as sabotage, destruction of energy infrastructure, and lack of sustained investment in energy infrastructure have negatively impacted the production and distribution of energy. Additionally, armed conflicts and political instability further hinder the efficient generation and distribution of energy in the region.<sup>17</sup> Applying this principle to the current topic, it is understood that sanctions can be considered a form of sabotage. Sanctions disrupt the normal production and distribution of energy. This form of economic and political interference can be as detrimental as physical sabotage or destruction of infrastructure, as it similarly undermines availability, accessibility, affordability, and acceptability of energy resources.<sup>18</sup> Moreover, as inherently defined, sanctions act as an indirect form of warfare, with consequences as significant as those of direct conflict.

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<sup>17</sup> Damilola S Olawuyi, 'Energy Poverty in the Middle East and North African (MENA) Region: Divergent Tales and Future Prospects' in Íñigo del Guayo and others (eds), *Energy Law and Energy Justice* (OUP 2020) 257.

<sup>18</sup> 'The concept of "four As of energy security" availability, accessibility, affordability and acceptability were introduced by [the] Asia Pacific Energy Research Centre' in 2007. Pooja Sharma, 'Analyzing the Role of Renewables in Energy Security by Deploying Renewable Energy Security Index' (2023) 11 *Journal of Sustainable Development of Energy, Water and Environment Systems* 1110463; Alicia Altagracia Aponte (ed), *A Quest for Energy Security in the 21st Century* (Asia Pacific Energy Research Centre 2007).



For example, in the case of Iran, sanctions not only physically make it impossible to trade conventional fuel and any other goods adjacent to the hydrocarbons supply chain but also make it impossible to add a new source of renewable energy into the energy mix. If not for sanctions, Iran would have the potential to emerge as a leader in renewable-energy production,<sup>19</sup> as would other neighbours and peers, ranging from Libya to Iraq and Syria, who also benefit from high levels of consistent sun exposure. According to the U.S. Energy Information Administration, Iran could produce 4.5–5.5 kilowatt-hours per square meter per day of solar energy given its weather,<sup>20</sup> and even Total, with its approved landmark, multifaceted \$28 billion investment in Iraq’s energy industry, has made solar power production a key component of upstream development initiatives.<sup>21</sup> Notwithstanding novel legal reforms in Iran, such as those of 2022, when in recognition of the increasingly urgent need to diversify Iran’s energy mix and begin to reduce its carbon footprint, the government passed a comprehensive new policy framework aimed at making more serious inroads to promote alternative energy solutions, there have been no takers in terms of international participants in the country’s renewables sector.<sup>22</sup> Not even the most aggressive minimum guaranteed tariffs, the most permissive foreign and domestic investment allowances, or the most significant exemptions to existing limitations on the ownership of renewables infrastructure<sup>23</sup> could catalyze a return of investment capital, suggesting that a guided mandate for resource allocation to sustainable energy infrastructure may be needed.

Moreover, the ability to develop transitional fuels like natural gas is also limited. This is significant because natural gas is abundant in Gulf states, especially Iran and Yemen, the latter of which has one of the region’s larger liquefied natural gas (LNG) terminals that has been inactive for almost a decade. Much of Iran’s gas production comes from the giant South Pars field, which it shares with Qatar and which Iran discovered in 1990, just a year

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<sup>19</sup> Eric Wheeler and Michael Desai, ‘Iran’s Renewable Energy Potential’ (Middle East Institute, 26 January 2016) <[www.mei.edu/publications/irans-renewable-energy-potential](http://www.mei.edu/publications/irans-renewable-energy-potential)> accessed 25 May 2024.

<sup>20</sup> ‘Iran’ (US Energy Information Administration, 17 November 2022), <[www.eia.gov/international/analysis/country/IRN](http://www.eia.gov/international/analysis/country/IRN)> accessed 25 May 2024.

<sup>21</sup> John Lee, ‘TotalEnergies Signs Contracts for Solar Power in Iraq’ (Iraq Business News, 11 April 2024) <[www.iraq-businessnews.com/2024/04/11/totalenergies-signs-contracts-for-solar-power-in-iraq/](http://www.iraq-businessnews.com/2024/04/11/totalenergies-signs-contracts-for-solar-power-in-iraq/)> accessed 26 June 2024.

<sup>22</sup> Interview with Sepideh Ahmadi, Chief Executive Officer of Energy Management and Sustainable Development of FARAB’s Renewable Projects (26 July 2023).

<sup>23</sup> *ibid.*

before the first gas was produced from the same geology by Qatar in 1991. The shared resource has been developed according to two divergent economic models: Qatar began exporting LNG from the North Field in 1997, while, heretofore, Iran has not built a single LNG facility.<sup>24</sup> Instead, development of the South Pars resource has occurred in multiple phases, often with great delays, owing both to destruction of energy facilities from insufficient technology<sup>25</sup> as well as the withdrawal of international energy companies resulting from the imposition of sanctions.<sup>26</sup> Reduced gas supply, particularly of LNG, has led to higher spot prices and shortages of freely deliverable fuel, making energy less affordable for everyone from Europe to the Far East, leaving only the United States—which just this year imposed a moratorium on LNG exports—and Qatar to fill the gap. Lastly, this situation undermines the principle of acceptability, which focuses on ensuring that energy sources and technologies are environmentally sustainable and socially responsible, addressing concerns such as greenhouse gas emissions and the overall impact on public health and climate. For a country that is the target of sanctions, these challenges are compounded, making it harder to adapt to and mitigate the impacts of energy production or consumption.

It is worth noting that sanctions not only impact energy security within the MENA region but also have extraterritorial effects, as evidenced by the situation in Asia, given their high dependence on energy import. For example, the Arab oil embargo in the 1970s, along with the Iran–Iraq War and the Gulf War, demonstrated the significant vulnerability of Asian oil-importing countries’ energy security to political events in the Middle East.<sup>27</sup>

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<sup>24</sup> ‘Energy Information Administration, Qatar: Natural Gas’, (US Department of Energy, 3 April 2008) <[www.eia.gov/cabs/Qatar/NaturalGas.html](http://www.eia.gov/cabs/Qatar/NaturalGas.html)> accessed 2023; Jafar Aali, Hossain Rahimpour-Bonab and Mohammad Reza Kamali, ‘Geochemistry and Origin of the World’s Largest Gas Field from Persian Gulf, Iran’ (2006) 50 *Journal of Petroleum Science and Engineering* 161.

<sup>25</sup> Chris Murphy, ‘Gone in 30 Seconds: Dozens of Workers Scramble to Safety When 1,300-ton, \$25million Gas Rig Collapses in the Gulf’ *Daily Mail* (London, 11 February 2013) <[www.dailymail.co.uk/news/article-2277012/Gone-30-seconds-Iranian-gas-rig-caught-camera-sinks-Persian-Gulf-taking-terrified-crew-it.html](http://www.dailymail.co.uk/news/article-2277012/Gone-30-seconds-Iranian-gas-rig-caught-camera-sinks-Persian-Gulf-taking-terrified-crew-it.html)> accessed 25 May 2024.

<sup>26</sup> OJ Editors, ‘CNPC Exits South Pars 11 Project’ (*Oil & Gas Journal*, 7 October 2019) <[www.ogj.com/exploration-development/article/14068063/cnpc-exits-south-pars-11-project-off-iran](http://www.ogj.com/exploration-development/article/14068063/cnpc-exits-south-pars-11-project-off-iran)> accessed 26 June 2024.

<sup>27</sup> Qi Cui Wei Wei and Heng Cui, ‘How Political Conflicts Threaten Energy Security and Economic Growth in Asia: A Study on the Sanctions Imposed on Iran’ (2023) 34 *Energy & Environment* 58.

Sanctions have also provoked anger among the Iranian Revolutionary Guard, leading to military actions, such as Iran's attempts to close the Strait of Hormuz. This strategic move threatens to block the primary transport corridor for oil exports from the Persian Gulf petrostates, thereby significantly impacting global energy security.<sup>28</sup>

Similar to Iran's case, Syria has also been subject to U.S. and EU sanctions since 1979 and more recently under the Caesar Syria Civilian Protection Act of 2019. The Caesar Act places sanctions on foreign individuals who assist the Assad regime in acquiring goods, services, or technologies that support its military operations, aviation sector, or oil and gas industries.<sup>29</sup>

In Syria, the oil and gas industries are subject to sanctions. Both states, in their Nationally Determined Contributions (NDCs), have blamed these sanctions for the lack of development in their energy sectors and the slow progress in renewable energy development.<sup>30</sup> Syria claims in its NDC that 'unilateral coercive economic measures imposed by some states and regional entities on the Syrian Arab Republic since 2011' have caused significant damage to its 'economic structures' and have negatively impacted 'the efforts of the Syrian State institutions and civil society for protecting the environment and supporting national plans of adaptation and mitigation.'<sup>31</sup> The persistence of these measures poses the greatest challenge to Syria's efforts to meet its international commitments related to climate change and environmental protection and to strengthen societal resilience. These sanctions, coupled with 'a deliberated reduction of international aid and financing, [have] targeted . . . key sectors of the Syrian economy, particularly technological components, energy, and financing channels.'<sup>32</sup> Additionally, the continued occupation of the Syrian Golan by Israel, has had catastrophic impacts, depleted resources, and polluted the natural environment.

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<sup>28</sup> *ibid* 60.

<sup>29</sup> 'Caesar Syria Civilian Protection Act' (US Department of State, 17 June 2020) <<https://2017-2021.state.gov/caesar-syria-civilian-protection-act/>> accessed 26 June 2024.

<sup>30</sup> Syrian Arab Republic, Nationally Determined Contributions Under Paris Agreement on Climate (2018) <<https://unfccc.int/sites/default/files/NDC/2022-06/FirstNDC-Eng-Syrian%20Arab%20Republic.pdf>> accessed 26 June 2024; Islamic Republic of Iran Department of Environment (n 1).

<sup>31</sup> Syrian Arab Republic (n 30) 2.

<sup>32</sup> *ibid*.

Iran also has very similar language in its NDC. Although the political situations in Iran and Syria are not identical, as Syria's oil sector is not as large as Iran's and has been heavily damaged due to civil war,<sup>33</sup> both states share a common claim: the lack of financial resources and technology is the reason for their slow progress.

Demonstrating the potential validity of that point from the perspective of other, more fractured regional states is a worthwhile exercise. The Central Intelligence Agency itself, in a revealing 1986 circular from the Directorate of Intelligence, observed that '[t]he heavy dependence of the Libyan oil industry on foreign companies makes it vulnerable, at least in principle, to economic sanctions', acknowledging in particular that 'unilateral controls . . . on trade of US-origin goods and technology have had some impact in limiting access', particularly to 'state-of-the-art computer equipment'.<sup>34</sup> Fast-forward nearly forty years, on the precipice of a global climate crisis, and the same well-made contentions about the limitations of sanctions on urgently required technological solutions hold true. As a broad trend, even the most autonomously managed energy-centric economies like Iran's, and certainly those of cripplingly dependent Iraq and Libya, have no ability to bootstrap domestically built emissions-mitigating tools, which remain the province of economically advantaged nations, such as Canada, the United States, and those in Western Europe.<sup>35</sup>

Sanctions have isolated Iran, and—at various points—Iraq, Syria, Yemen, and Libya not only from the investment necessary to transition to clean energy but also from the technology itself. Be they speculative technologies, such as CO<sub>2</sub> capture and storage, or more established technologies, such as floating LNG, the methods necessary for clean-energy production have not been widely introduced in these countries due to sanctions, or they simply cannot afford them due to the economic constraints caused by sanctions. Additionally, their captive bellwether infrastructure players themselves—

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<sup>33</sup> World Bank Group, *The Toll of War: The Economic and Social Consequences of the Conflict in Syria* (2017) 56.

<sup>34</sup> Directorate of Intelligence, *The Libyan Oil Industry: Dependence on Foreign Oil Companies* (Central Intelligence Agency 1986) iv <[www.cia.gov/readingroom/docs/CIA-RDP06T00412R000504980001-4.pdf](http://www.cia.gov/readingroom/docs/CIA-RDP06T00412R000504980001-4.pdf)> accessed 26 June 2024.

<sup>35</sup> Vicente Paolo Yu, 'Addressing the Climate Technology Gap in Developing Countries Through Effective Technology Transfer' (Forum on Trade, Environment, & the SDGs, 13 December 2023) <<https://tessforum.org/latest/addressing-the-climate-technology-gap-in-developing-countries-through-effective-technology-transfer>> accessed 26 June 2024.

such as Iran's MAPNA<sup>36</sup> and a host of companies affiliated with Libya's national oil company, which remained sanctioned for a period of over 10 years—do not have access to the global financing to acquire these expensive technologies.<sup>37</sup> Sanctions have already affected these countries' collective abilities to transition to clean energy by 'restricting access to technology, service, and know-how, blocking international aid for the environment, and increasing the natural resource-intensity of the economy',<sup>38</sup> particularly given the dependence upon foreign technology for such items, as has been previously elucidated.

Further, these countries' isolation from the global community has bred 'distrust' among its citizens of the Global North who hold the technology and knowledge necessary to tackle these environmental problems.<sup>39</sup> Even as '[t]he costs of clean energy technologies have dropped dramatically in recent years and are now below those for fossil fuels in many countries',<sup>40</sup> subject countries, particularly those MENA ex-GCC states, have not significantly adopted them, although other emerging markets have benefited from these improvements in cost and availability.<sup>41</sup>

A glance at neighbouring countries, such as major oil producer Saudi Arabia, reveals investment of billions of dollars in renewables and mostly solar,<sup>42</sup>

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<sup>36</sup> 'MAPNA Group' (Iran Watch, 2 May 2011) <[www.iranwatch.org/iranian-entities/mapna-group](http://www.iranwatch.org/iranian-entities/mapna-group)> accessed 25 May 2024.

<sup>37</sup> 'Treasury Identifies 14 Companies Owned by Libya's National Oil Corporation as Subject to Sanctions' (US Department of the Treasury, 22 March 2011) <<https://home.treasury.gov/news/press-releases/tg1114>> accessed 26 June 2024; Libyan Sanctions Regulations 87 Fed Reg 59675 (3 October 2022) (to be codified at 31 CFR pt 570).

<sup>38</sup> Kavch Madani, *Iran Under Sanctions: The Unintended Environmental Implications of Iran Sanctions* (Johns Hopkins School of Advanced International Studies 2020) 4.

<sup>39</sup> *ibid.*

<sup>40</sup> Ivetta Gerasimchuk and others, *Beyond Fossil Fuels: Fiscal Transition in BRICS* (International Institute for Sustainable Development 2019) <[www.iisd.org/system/files/publications/beyond-fossil-fuels-brics.pdf](http://www.iisd.org/system/files/publications/beyond-fossil-fuels-brics.pdf)> accessed 25 May 2024.

<sup>41</sup> Ekta Meena Bibra and others, *Global EV Outlook 2021: Accelerating Ambitions Despite the Pandemic* (International Energy Agency 2021) 15–26.

<sup>42</sup> 'The Groundbreaking Solar Project Helping to Power a Brighter Tomorrow' (Public Investment Fund, 2 July 2023) <[www.pif.gov.sa/en/news-and-insights/global-insights/2023/the-groundbreaking-solar-project-helping-to-power-a-brighter-tomorrow/](http://www.pif.gov.sa/en/news-and-insights/global-insights/2023/the-groundbreaking-solar-project-helping-to-power-a-brighter-tomorrow/)> accessed 26 May 2024.

notwithstanding underlying enabling prospects that are not materially better than those of Iran, Libya, or Iraq, which only recently—after the reimposition of sanctions on Iran in 2018—finally garnered significant sums of investment capital from a major international oil company. The disproportionate success of other countries in the region being able to attract investments, despite Iran being a better investment opportunity from a resource standpoint, is likely due to a lack of sanctions imposed on those countries.

### **3. DRAWING A LINK BETWEEN SANCTIONS AND ENVIRONMENTAL HARMS**

‘Iran is [a] party to the UN Framework Convention on Climate Change but never signed the 2015 Paris Agreement to limit global warming’, instead conditioning its participation on the lifting of sanctions.<sup>43</sup> This grand gesture reiterates that Iran does not believe it will receive the benefits and perks following the Paris Accord, whether in the form of grants or loans from the Global North, if it remains subject to U.S. sanctions. This is not entirely off base, especially considering the banking limitations and the absence of OFAC licenses granted to businesses investing in climate initiatives in Iran. However, the reality is that there is currently no foreign investment in renewables in Iran, and the National Iranian Oil Company (NIOC) lacks the capability to acquire technologies and knowledge to aid in decarbonizing their production or reducing emissions.

It appears that the effects that U.S. sanctions have had on Iran’s ability to transition away from fossil fuels to clean-energy production will, in turn, undermine Iran’s ability to respond to climate change in several ways. First, through the volatility caused by sanctions, adverse fluctuations of the price of fossil fuel and higher hydrocarbons prices act as a tax on global growth that, all else equal, take away from the financial capacity to save and invest for the transition to net zero. Second, the lack of investment in both conventional and renewable energy in Iran due to sanctions creates a putative vicious cycle of lower future productive capacity offset by higher prices. Third, isolation of Iran from the global community through sanctions not only prohibits the country from accessing the knowledge and technology necessary to make the

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<sup>43</sup> AFP, ‘Iran Won’t Sign Climate Deal While Under Sanction’ *The News International* (Karachi, 11 November 2021) <[www.thenews.com.pk/print/907679-iran-won-t-sign-climate-deal-while-under-sanctions](http://www.thenews.com.pk/print/907679-iran-won-t-sign-climate-deal-while-under-sanctions)> accessed 26 May 2024.

transition to clean energy but also decreases its likelihood of participating in global climate agreements through which new alliances would be created.

Beyond those contended demerits, when it comes to the climate-specific implications of sanctions on Iran, one must not forget the very real and present hazards facing those who must inhabit the Iranian biosphere. Madani explains that ‘Iran is currently experiencing major environmental problems.’<sup>44</sup> Specifically, ‘[s]ome of the evident signs of environmental degradation over the last four decades are increasing water shortage; drying rivers, wetlands and aquifers; air and waste pollution; soil erosion, deforestation, desertification, sand and dust storms; land subsidence and sinkholes; wildfires and biodiversity losses.’<sup>45</sup> Madani further notes that ‘[t]op Iranian officials have frequently blamed sanctions for [the country’s] environmental consequences, some [even] claiming that they have caused “severe” and “irreparable” damage.’<sup>46</sup>

In that sense, the above point of view contends that sanctions present what amounts to a quadruple threat to broad sustainability, environmental protection, and climate-focused governance. First, sanctions lead to lower immediate supplies of hydrocarbons, driving up prices and leading to greater exposure to global energy shocks. Second, sanctions lead to lower investment in conventional and renewable energy as well as green/clean technology, to say nothing of any firm commitments to global climate initiatives. Third, sanctions incentivize collaboration with other ‘bad actors’ on the climate front, chiefly other major energy producers (and consumers) who care far less about protecting the environment, reducing emissions, or achieving net zero. Fourth, sanctions cause a climate death spiral of humanitarian crises on the domestic front.<sup>47</sup>

In counting the contributing drivers of climate catastrophe in Iran, other contributing local factors should not be disregarded. Although the Iranian government has unilaterally controlled the country’s oil industry for over half a century, Iran has not had significant influence on the international market.<sup>48</sup> Therefore, it is hard to isolate the precise impact that sanctions have

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<sup>44</sup> Madani (n 38) 6.

<sup>45</sup> *ibid.*

<sup>46</sup> *ibid.*

<sup>47</sup> *ibid.*

<sup>48</sup> Reza Bandarian, ‘Technological Renewal of Iran’s Oil Refining Industry, Providing Technological Strategies for Competitiveness’ (2020) 10 *Science and Technology Policy Letters* 5.

on Iran's current approach to climate change, but as discussed, there is sufficient evidence that sanctions are a major contributing factor, as also shown by Iran's NDC.<sup>49</sup> Some believe that 'while it is true that sanctions "pressure the economy and weak economies exhaust more natural resources to survive" causing "more emissions and degradation of the environment," blaming all environmental woes on sanctions is not right.'<sup>50</sup>

In response to sanctions, Iran, sitting on the world's fourth-largest oil reserves, has largely turned to the policy of 'economy of resistance', adopting 'a range of survivalist... policies that have helped reduce the economic pressure of sanctions but have greatly accelerated environmental degradation.'<sup>51</sup> Some contend that 'Iran is experiencing not only intense social and economic distress but also an ever-worsening environmental crisis – both, at least in part, as a result of US sanctions.'<sup>52</sup> Iran's effort to resist the sanctions' pressure on the oil and gas industries has brought major environmental catastrophes.<sup>53</sup> For example,

Rustler notes:

Tehran has accelerated water-resource infrastructure developments to boost agricultural output and ensure food security, leading to rapidly receding ground-water levels. To secure its energy supply, Iran has turned petrochemical factories into oil refineries. Reports suggest that Iran's home-grown petrol contains ten times the level of contaminants found in imported

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<sup>49</sup> Islamic Republic of Iran Department of Environment (n 1) 4.

<sup>50</sup> Syed Zafar Mehdi, 'Iran: How Sanctions Bar Iran from Joining Paris Climate Accord' *The Muslim News* (Middlesex, 13 December 2021) <<https://muslimnews.co.uk/news/middle-east/iran-sanctions-bar-iran-joining-paris-climate-accord/>> accessed 26 May 2024.

<sup>51</sup> Madani (n 38) 4. For more information on Iran's economy of resistance, see Amir Toumaj, *Iran's Economy of Resistance: Implications for Future Sanctions* (American Enterprise Institute 2014) <[www.criticalthreats.org/wp-content/uploads/2016/07/imce-imagesToumajA\\_Irans-Resistance-Economy-Implications\\_november2014-1.pdf](http://www.criticalthreats.org/wp-content/uploads/2016/07/imce-imagesToumajA_Irans-Resistance-Economy-Implications_november2014-1.pdf)> accessed 26 May 2024.

<sup>52</sup> Barney Bartlett and Shirin Hakim, 'Economic Sanctions Are Triggering Environmental Damage' (Al Jazeera, 15 February 2021) <[www.aljazeera.com/opinions/2021/2/15/economic-sanctions-are-triggering-environmental-damage](http://www.aljazeera.com/opinions/2021/2/15/economic-sanctions-are-triggering-environmental-damage)> accessed 26 May 2024.

<sup>53</sup> Madani (n 38).



fuel, and the Sulphur content of its domestically produced diesel is 800 times higher than that of the international standard.<sup>54</sup>

In light of sanctions, ‘Iran has loosened . . . environmental considerations [and] regulations’, sacrificing long-term climate health for short-term survival.<sup>55</sup>

In comparison with the neighbouring country Qatar, unlike Qatar Petroleum, which is up to speed with global environmental and energy standards and has received tremendous global attention and collaboration, the NIOC, having been designated an entity ‘that commit[s], or pose[s] a significant risk of committing, acts of terrorism’ by OFAC and the State Department multiple times,<sup>56</sup> has remained in the shadows and has operated mostly in a survival mode. These agencies are both state owned and have the same mandate, but in keeping up with the global environmental trend, Qatar Petroleum has changed its name to Qatar Energy, while the NIOC remains the same by carrying the same name and agenda. The NIOC finds itself in a more desperate place than before, as it had been anxiously waiting on the outcome of the Joint Comprehensive Plan of Action as Total and many major international oil companies withdrew from investing in Iran when the United States left the Iran deal.<sup>57</sup>

#### 4. TOWARD CLIMATE-CONSCIOUS COLLECTIVE ACTION TO OFFSET NEGATIVE EXTERNALITIES OF SANCTIONS

The concept of climate-conscious sanctions recognizes that, due to the serious environmental situation in the MENA region, it is necessary to revise sanctions regulations to ensure they align with the global community’s climate goals. This could be done through solutions such as finding financial mechanisms or by expanding exemptions within the existing sanctions

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<sup>54</sup> Rustler (n 5).

<sup>55</sup> Madani (n 38) 20.

<sup>56</sup> ‘Treasury Sanctions Key Actors in Iran’s Oil Sector for Supporting Islamic Revolutionary Guard Corps-Qods Force’ (US Department of the Treasury, 26 October 2020) <<https://home.treasury.gov/news/press-releases/sm1165>> accessed 26 June 2024.

<sup>57</sup> David Ramin Jalilvand, Back to Square One? Iranian Energy After the Re-Imposition of US Sanctions (Oxford Institute for Energy Studies 2019) <[www.oxfordenergy.org/wp-content/uploads/2019/03/Iranian-Energy-after-the-Re-Imposition-of-US-Sanctions.pdf](http://www.oxfordenergy.org/wp-content/uploads/2019/03/Iranian-Energy-after-the-Re-Imposition-of-US-Sanctions.pdf)> accessed 28 June 2024.

regulations. Climate-conscious sanctions would promote forming a group initiative from within the MENA region, led by more economically advantaged countries with an eye toward fulfilling aggregate regional commitments under the Paris Accord at a bloc level. To the extent that sanctions have been used as a political tool to influence policies, they must not be implemented without offering incentives or, as Haass and O'Sullivan would call it, 'engagement'.<sup>58</sup> In their 'usage, engagement refers to a foreign policy strategy that depends to a significant degree on positive incentives to achieve its objectives.'<sup>59</sup> In the context of MENA, achieving the goal of net zero cannot rely on enforcing sanctions in isolation. Instead, incentives could involve establishing a coalition of wealthier nations within the existing platform of Leaders for a Sustainable MENA.<sup>60</sup> This coalition would focus on addressing sanctions in the region and collaborate with other nations and organizations, such as the United States and UN, to bridge the understanding gap and finalize practical solutions for the climate problem in target countries with the goal to bring down emissions. Leaders for a Sustainable MENA can play the role of a regional policymaker to promote financing at both government and private sector levels in target countries such as Iran. Due to existing regulations, even after the rapprochement between Saudi Arabia and Iran, there has been minimal investment by Saudis in Iran because of sanctions.<sup>61</sup> With the help of China, Iran and Saudi Arabia formed an agreement in March 2023 'to normalize diplomatic relations.'<sup>62</sup> Since then, Saudi Arabia and Iran have lightly begun investing at the government level and have opened a mutual chamber of commerce.<sup>63</sup> This indicates investment in various sectors, including renewable energy. However, despite collaboration at the government level, the private sector in Saudi Arabia hesitates to engage in a meaningful way. This is because private entities do

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<sup>58</sup> Richard N Haass and Meghan L O'Sullivan, 'Introduction' in Richard N Haas and Meghan L O'Sullivan (eds), *Honey and Vinegar: Incentives, Sanctions, and Foreign Policy* (Brookings Institution Press 2000) 2.

<sup>59</sup> *ibid.*

<sup>60</sup> 'Leaders for a Sustainable MENA: Mobilizing Climate-Resilient Economies and Societies' (World Economic Forum) <<https://initiatives.weforum.org/leaders-for-sustainable-mena/home>> accessed 27 June 2024.

<sup>61</sup> 'Saudi-Iran Deal Shows How US Sanctions Strategy Backfired, Experts Say' (Middle East Eye, 30 March 2023) <[www.middleeasteye.net/news/saudi-iran-deal-shows-how-us-sanctions-strategy-backfired-experts-say](http://www.middleeasteye.net/news/saudi-iran-deal-shows-how-us-sanctions-strategy-backfired-experts-say)> accessed 26 June 2024.

<sup>62</sup> William Figueroa, 'Iran-Saudi Normalization: A Regional Process with Chinese Characteristics' (Foreign Policy Research Institute, 24 March 2023) <[www.fpri.org/article/2023/03/iran-saudi-normalization-a-regional-process-with-chinese-characteristics/](http://www.fpri.org/article/2023/03/iran-saudi-normalization-a-regional-process-with-chinese-characteristics/)> accessed 26 June 2024.

<sup>63</sup> SaudiFund <<https://iran-saudiarabia.com/>> accessed 26 June 2024.

not want to risk losing access to a larger market, such as the United States, or face potential sanctions that could cut them off from the banking system.

These potential solutions include adapted versions of various past American exemptions and European policy initiatives, including the 2018–19 abortive Instrument for Trade and Exchange<sup>64</sup> to facilitate energy swaps for humanitarian goods between the French, Swiss, and German governments and Iran. Relying on the patchwork approach to the U.S. government’s tolerance of targeted expenditures of credit balances accumulated by Iran with its trading partners such as Iraq and Korea—ranging from the Significant Reduction Exemptions program of 2018 (which expired and was not renewed)<sup>65</sup> to the extension of the Trump era waivers on financial transfers by the Iraqi government for gas and power<sup>66</sup>—there are sufficient grounds for what amounts to a ‘Climate Savings Account’. A Climate Savings Account is proposed as an immediate mechanism to accumulate funds aimed at achieving critical climate goals. These goals include reducing dependence on oil, investing in renewable energy sources, and mitigating venting and flaring. Such initiatives have the potential to decrease global carbon emissions by hundreds of millions of tons of CO<sub>2</sub> equivalents. This account would focus on funding initiatives that reduce greenhouse gas emissions, promote renewable energy, and improve environmental sustainability in a target state, such as Iran. Specific sanctions exemptions would be granted for transactions and activities directly related to these environmental projects, ensuring that the funds are used exclusively for climate action under the monitoring of Leaders for a Sustainable MENA. By creating a structured and transparent framework, the international community can support Iran, as an example, in achieving its environmental goals while providing a form of economic relief that aligns with global climate priorities. This would allow wealthier, resource-rich nations in the MENA region to provide loans to other countries within the region. These loans would be contingent upon terms and conditions acceptable to both the West and the UN. To ensure efficient

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<sup>64</sup> Foreign & Commonwealth Office and Jeremy Hunt, ‘New Mechanism to Facilitate Trade with Iran: Joint Statement’ (GOV.UK, 31 January 2019) <[www.gov.uk/government/news/joint-statement-on-the-new-mechanism-to-facilitate-trade-with-iran](http://www.gov.uk/government/news/joint-statement-on-the-new-mechanism-to-facilitate-trade-with-iran)> accessed 26 June 2024.

<sup>65</sup> Kenneth Katzman, *Iran Sanctions* (RS20871, Congressional Research Service 2019) 21.

<sup>66</sup> Dastan Muwaffaq, ‘Trump-Era Waivers Allow Iraq to Purchase Iranian Gas: US State Dept. Spox’ (Kurdistan24, 15 November 2023) <[www.kurdistan24.net/en/story/33161-Trump-era-waivers-allow-Iraq-to-purchase-Iranian-gas-US-State-Dept.-Spox](http://www.kurdistan24.net/en/story/33161-Trump-era-waivers-allow-Iraq-to-purchase-Iranian-gas-US-State-Dept.-Spox)> accessed 26 June 2024.

execution, robust mechanisms for oversight and accountability should be established.

By using the many billions of dollars owed to states like Iran by its neighbors (such as Iraq)<sup>67</sup> for dated energy exports, or by prefunding future purchases of economically critical energy output, such as Yemeni LNG, targeted lending programs with heavy covenants on the deployment of proceeds in the green space are recommended. Wealthier nations, such as Qatar and Saudi Arabia, could play a pivotal role by assisting in regional transition efforts under such a program, which in its own way mimics the freeze, seize, and release methodology currently being applied by the G7 in the context of the \$300 billion of blocked Russian funds within Europe for the weaponization and future reconstruction of Ukraine.<sup>68</sup>

Given how much wealth is already located in the MENA region, it is credible to posit that the solution for the energy transition in MENA is to be found in intra-MENA collaboration. While an ideal approach could involve future lifting of secondary sanctions<sup>69</sup> in the MENA region, an intra-regional trade block utilizing already sequestered proceeds, such as the billions of dollars held by Iraq awaiting to be repaid to Iran, is an immediately feasible solution. This would allow wealthier nations the flexibility to share their resources, expertise, and climate knowledge with countries like Iran and Syria while demanding high levels of accountability for the reinvestment of those principal sums to the benefit of all in terms of flaring mitigation; water management; renewables investments; and procurement of long-duration, low-pollution energy sources in the form of solar, wind, and transitional hydrocarbon fuels. Such actions would uphold principles of solidarity and cooperation in international law, emphasizing regional support in a highly vulnerable area. It is important to note that politics in the region are complex

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<sup>67</sup> Kareem Chehayeb and Abdulrahman Zeyad, 'Iraqi Officials Are Defending a Barter Deal with Iran, Say It Doesn't Violate US Sanctions on Tehran' (The Associated Press, 13 July 2023) <<https://apnews.com/article/iraq-iran-electricity-sanctions-oil-gas-e0bd5674c5b70020eb564fe7c9ff1446>> accessed 26 June 2024.

<sup>68</sup> Steven Erlanger, 'What to Know About the \$50 Billion Ukraine Loan Backed by Russian Assets' The New York Times (New York, 14 June 2024) <[www.nytimes.com/2024/06/14/world/europe/ukraine-g7-ukraine-aid-russia.html](https://www.nytimes.com/2024/06/14/world/europe/ukraine-g7-ukraine-aid-russia.html)> accessed 26 June 2024.

<sup>69</sup> Through secondary sanctions, OFAC can influence the actions of non-U.S. parties to prevent them from doing business with targets states. Tom Ruys and Cedric Ryngaert, 'Secondary Sanctions: A Weapon out of Control? The International Legality of, and European Responses to, US Secondary Sanctions' (2020) British Yearbook of International Law braa007.

and often subject to change. This option needs to be reviewed alongside other national security priorities and developed in alignment with broader security goals.

It is increasingly likely that Iran and other regional pariahs will not be able to respond to climate change without U.S. sanctions being lifted. The principle of ‘common but differentiated responsibilities’ (CBDR), which is enshrined in the United Nations Framework Convention on Climate Change (UNFCCC),<sup>70</sup> is highly relevant in the MENA region. This region includes countries with high and increasing gross domestic products (GDPs), such as the United Arab Emirates,<sup>71</sup> and economies facing severe challenges with decreasing GDPs, such as Yemen.<sup>72</sup> In the context of regional collaboration, wealthier countries can assist in mitigation and adaptation efforts across the region. Achieving a successful energy transition in MENA requires the participation of all countries, ensuring that no nation is left behind.

However, it is unclear whether the United States will consider facilitating such a regional solution to be in its own geostrategic interest. With respect to Iran, the United States must weigh whether energy stability, regional climate degradation, and decarbonisation should take precedence over combatting the continuance of Iran’s behaviour and hegemonic aspirations.

But despite the threat Iran’s government may pose to U.S. national security interests, the future of the climate could pose a more immediate and more devastating threat to the United States. According to the Department of Homeland Security (DHS), ‘[a]ddressing the climate emergency is a priority for DHS as sea-level rise, extreme weather events, workforce health, and other direct and indirect impacts of climate change will affect the Nation’s preparedness and national security over the long term.’<sup>73</sup>

Further, the global implications of climate change make it so that the failure of one country to meet its climate commitments directly harms the rest of the world. To facilitate such global effort, the Paris Accord ‘sets a goal of keeping

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<sup>70</sup> United Nations Framework Convention on Climate Change (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 art 3 para 1.

<sup>71</sup> ‘UAE GDP 1960-2024’ (MacroTrends) [www.macrotrends.net/global-metrics/countries/ARE/uae--united-arab-emirates/gdp-gross-domestic-product](http://www.macrotrends.net/global-metrics/countries/ARE/uae--united-arab-emirates/gdp-gross-domestic-product) accessed 26 June 2024.

<sup>72</sup> ‘Yemen GDP’ (Trading Economics) <<https://tradingeconomics.com/yemen/gdp>> accessed 27 June 2024.

<sup>73</sup> ‘Climate Literacy at DHS’ (US Department of Homeland Security, 20 April 2023) <[www.dhs.gov/climate-literacy-dhs](http://www.dhs.gov/climate-literacy-dhs)> accessed 24 June 2024.

global warming “well below 2°C” while striving to limit it to 1.5°C’.<sup>74</sup> To achieve this goal, ‘the world requires a rapid and significant transformation of all parts of the global economy, including deep emissions reductions in the energy sector’.<sup>75</sup>

Though Iran and its peers have not, generally speaking, ratified the Paris Agreement, it has published a nonbinding Intended Nationally Determined Contribution plan in which it promises to reduce greenhouse gas emissions by 4% by 2030 and to begin a transition to clean-energy production.<sup>76</sup> However, to expect Iran, Syria, Libya, or Iraq, among others, to contribute to the low-carbon energy transition without global support, which is already hard due to their dependence on fossil fuel, is unreasonable and unrealistic, barring material financial and logistical assistance in carrying out an action plan consistent with NDCs. Iran’s Meteorological Organization has observed that ‘the country’s greenhouse gas emissions have increased by 3% in the past decade and the average temperature has risen by 1.8°C since 1750, considerably higher than the global average of 1.1°C.’<sup>77</sup> The Intergovernmental Panel on Climate Change is explicit about the need to rapidly phase out fossil fuel supply and demand: ‘coal by 95%, oil by 60% and gas by 45% by 2050.’<sup>78</sup> At present, Iran is 99.33% reliant on fossil fuel.<sup>79</sup> For an economy with such massive reliance on fossil fuel to undertake an effective and equitable transition out of fossil fuel production would require significant electrification, diversification, liquidity for investment, access to technology, and dialogue with the international world.

Iran’s, and its peers’, failure or success in achieving its climate goals deeply affects the security interests of the United States. Given the urgency and magnitude of the climate change problem, the incorporation of climate

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<sup>74</sup> Gerasimchuk and others (n 40) 4.

<sup>75</sup> *ibid.*

<sup>76</sup> Islamic Republic of Iran Department of Environment (n 1) 4.

<sup>77</sup> ‘3-Year Window for Iran’s Paris Accord Accession’ Financial Tribune (Tehran, 6 December 2017) <<https://financialtribune.com/articles/environment/77373/3-year-window-for-irans-paris-accord-accession>> accessed 26 May 2024.

<sup>78</sup> Nathan Cooper and Amy White, ‘IPCC Report: Urgent Climate Action Needed to Halve Emissions by 2030’ (World Economic Forum, 6 April 2022) <[www.weforum.org/agenda/2022/04/ipcc-report-mitigation-climate-change/](http://www.weforum.org/agenda/2022/04/ipcc-report-mitigation-climate-change/)> accessed 30 May 2024.

<sup>79</sup> ‘Fossil Fuel Dependency by Country’ (World Atlas, 25 April 2017) <[www.worldatlas.com/articles/countries-the-most-dependent-on-fossil-fuels.html](http://www.worldatlas.com/articles/countries-the-most-dependent-on-fossil-fuels.html)>.

objectives into national security priorities, and the relevance of Iran within that construct, climate should be incorporated in every political instrument designed by the U.S. government going forward, including its stance toward sanctions.

As currently structured, sanctions are not aligned with climate goals, but regional actors within MENA can put together a construct that mimics established U.S. policies to reboot investment into achieving net zero. Much as sanctions currently permit fossil fuel development, such as American or European energy players' operations in Libya under Muammar Gadhafi, Iraq under Saddam Hussein, or Iran in the 2015 to 2018 period, they should be equally designed to stimulate the development of solar energy in the same countries, which currently suffer due to a lack of proper OFAC licenses and permits and clarity on financial flows necessary to foment such developments. If there is no solution for the current conditions, the existing construct undermines both (1) the ability of the country subject to sanctions to transition to clean energy and (2) the United States' capacity to lead global efforts against climate change. By adopting a climate-conscious approach to sanctions, the United States could begin to reintegrate Iran back into the international community for the purpose of combatting the immediate, global threat of climate change, while still pursuing its diplomatic agenda against bad actors in the country.

## 5. CONCLUSION

Climate change is an undeniable humanitarian issue of global significance. Although it is hard to allocate an exact percentage for sanctions' contribution to climate disaster in MENA or specifically in Iran, it is evident that sanctions have played a meaningful role. The current structure of economic sanctions poses a dual challenge: (1) it hinders the ability of wealthier nations in MENA to engage meaningfully in helping the region with energy transition, and (2) it impedes MENA's capacity to lead global efforts against climate change by reducing emissions in the region.

The MENA region, in collaboration with the United States, can mitigate this impact by implementing a climate-conscious sanctions framework. Such an approach would entail aligning sanctions regulations with climate goals, resorting to solidarity and regional collaboration, and relying on CBDR in the context of MENA. One potential solution is to utilize existing platforms, such as Leaders for a Sustainable MENA, which can host a committee or task group to focus on finding solutions for sanctions that can lobby U.S. and other agencies to carve out exemptions for secondary sanctions. This could be

in the shape of setting up a climate savings account, which is a financial mechanism in which funds or credits are allocated specifically for climate-related mitigation or adaptation projects. Ensuring that funds are dedicated solely to climate action under the supervision of Leaders for a Sustainable MENA, a transparent and structured framework can enable international support for the region's environmental goals while offering economic relief aligned with global climate priorities. This approach would enable wealthier MENA nations to support their neighbours in achieving energy transition goals, fostering regional collaboration and sustainability. Furthermore, it would exemplify the UNFCCC's principle of Common But Differentiated Responsibilities in a region where it is most needed.