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Responding to Climate Change in Jordan: understanding institutional developments, political restrictions and economic opportunities

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ABSTRACT

Jordan is one of the world's most resource-poor, arid and freshwater-stressed countries with climate change aggravating these challenges further. We argue that due to Jordan's climate change vulnerability and low levels of resilience, as well as its vital role in Middle Eastern politics, it is necessary to examine how climate change policies are approached in the kingdom. Based on a thematic analysis of official climate change policy documentation and elite interviews, we find that climate change problems are portrayed as important in Jordan, but the policymaking and implementation processes face significant challenges. The main predicaments are: the prioritization of short-term political and economic interests, over-reliance on external actors, limited financial, technical and knowledge capacities, and a lack of coordination between the key public sector stakeholders. Furthermore, as with other authoritarian states, Jordan's ability to respond to climate change is influenced by restrictions stemming from the governing regime's prioritization of its own survival.

ARTICLE HISTORY

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Introduction

Jordan is a small developing state that suffers from long-term environmental problems (freshwater scarcity, arable land degradation, desertification, drought, extreme heat, and loss of biodiversity) causing social, economic, and political security challenges.¹ Climate

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¹Hussam Hussein, Alberto Natta, Abed Al Kareem Yahya and Baha Hamadna, 'Syrian Refugees, Water Scarcity, and Dynamic Policies: How Do the New Refugee Discourses Impact Water Governance Debates in Lebanon and Jordan?', *Water* 12, no. 2 (2020): 1–15; Ola Al-Jaafreh, O. and Imre Nagy, 'The Environmental Challenges, Problems and Management: a case study of Jordan', *Researches Review* 47, no. 1 (2018): 53–70; Adel Yacoub Shamaileh, 'An Evaluation of the Effectiveness of Environmental Policy in Jordan', *International Journal of Business and Management* 11, no. 2 (2016): 92–118; Ram Aviram, David Katz and Deborah Shmueli, 'Desalination as a Game-changer in Transboundary Hydro-politics', *Water Policy* 16, no. 4 (2014): 609–224; Scott Greenwood, 'Water Insecurity, Climate Change and Governance in the Arab World', *Middle East Policy* 21, no. 2 (2014): 140–156; and Dorte Verner (ed.), *Adaptation to a Changing Climate in the Arab Countries: A Case for Adaptation Governance and Leadership in Building Climate Resilience* (Washington, DC: World Bank, 2012).

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change exacerbates these problems and contributes to existing social conflicts (e.g. between communities that compete over freshwater supplies and/or arable land) and economic stress (caused by, for example, increased costs for utilities, food and freshwater²), resulting in low levels of climate resilience.³ These environmental vulnerabilities occur within the context of a restrictive political regime.⁴

There has been an increase in the number of studies of climate change politics in developing and (semi-)authoritarian states,⁵ but Jordan has largely been ignored. Studies that explore environmental issues in Jordan tend to focus on freshwater scarcity as a long-term condition that has natural and political causes.⁶ While some scholars do look at climate change as another environmental issue,⁷ there are still few comprehensive analyses of Jordanian climate change mitigation or adaptation policies with most of the existing studies coming from practitioners⁸ rather than

²Nezar Hammouri, Mohammed Al-Qinna, Mohammed Salahat, Jan Adamowski and Shiv. O. Prasher, 'Community Based Adaptation Options for Climate Change Impacts on Water Resources: The Case of Jordan', *Journal of Water and Land Development* 26 (2015): 3–17; Lahn, G. and G. Shapland, 'Cascading Climate Risks and Options for Resilience and Adaptation in the Middle East and North Africa', Chatham House (2022). Available at <https://www.cascades.eu/publication/cascading-climate-risks-and-options-for-resilience-and-adaptation-in-the-middle-east-and-north-africa/> (accessed September 1 2022); Mohamed Albohgdady and Salah E. El-Hendawy, 'Economic Impacts of Climate Change Variability on Agricultural Production in the Middle East and North Africa Region', *International Journal of Climate Change Strategies and Management* 8, no. 3 (2016): 463–472; and Jawad Al-Bakri, Ayman Suleiman, Fayez Abdulla and Jamal Ayad, 'Potential Impact of Climate Change on Rainfed Agriculture of a Semi-Arid Basin in Jordan', *Physics and Chemistry on Earth* 35, no. 3 (2010): 125–134.

³We adhere to the IPCC's official definition of resilience as 'the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change' (IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva, Switzerland. Available at <https://www.ipcc.ch/report/ar4/syr/> (accessed May 10 2023).

⁴José Ciro Martínez, 'Jordan's Self-fulfilling Prophecy: The Production of Feeble Political Parties and the Perceived Perils of Democracy', *British Journal of Middle Eastern Studies* 44, no. 3 (2017): 356–372, DOI: 10.1080/13530194.2016.1193805.

⁵Mohammed Rafi Arefin, 'The State, Sewers, and Security: How Does the Egyptian State Reframe Environmental Disasters as Terrorist Threats?', *Annals of the American Association of Geographers* 109, no. 2 (2019): 412–421, DOI: 10.1080/24694452.2018.1497474; Bruce Gilley, 'Authoritarian Environmentalism and China's Response to Climate Change', *Environmental Politics* 21, no. 2 (2012): 287–307, DOI: 10.1080/09644016.2012.651904; Andrew Heffernan, 'El Discurso Oficial de las Autoridades Marroquíes y Sus Aliados en la Ecologización de sus Políticas Públicas: Modernización del Autoritarismo, Inserción Internacional y Lucha Contra el Cambio Climático', *Relaciones Internacionales* 42 (2019): 157–173; Sandra Bhatasara and Admire Nyamwanza, 'Sustainability: A Missing Dimension in Climate Change Adaptation Discourse in Africa?', *Journal of Integrative Environmental Sciences*, 15, no. 1 (2018): 83–97; and Harry Verhoeven, 'Introduction: The Middle East in Global Environmental Politics', in *Environmental Politics in the Middle East: Local Struggles, Global Connections*, ed. H. Verhoeven (Oxford: Oxford University Press, 2018): 1–25.

⁶Khadija Darmame and Robert Potter, 'Political Discourses and Public Narratives on Water Supply in Amman, Jordan', in *Water, Life and Civilisation: Climate, Environment and Society in the Jordan Valley*, eds. S. Mithen and E. Black (Cambridge: Cambridge University Press, 2011); Al-Bakri et al., 'Potential Impact of Climate Change; and Maher F. Abu-Taleb, 'Impacts of Global Climate Change Scenarios on Water Supply and Demand in Jordan', *Water International* 25, no. 3 (2000): 457–463.

⁷Erin Feitelson and Amit Tubi, 'A Main Driver or an Intermediate Variable? Climate Change, Water and Security in the Middle East', *Global Environmental Change* 44 (2017): 39–48; Erika Weinthal, Neda Zawahirri and Jeannie Sowers, 'Securitizing Water, Climate and Migration in Israel, Jordan and Syria', *International Environmental Agreements: Politics, Law and Economics* 15 (2015): 293–307; Hammouri et al., 'Community Based Adaptation': 3–17; Albohgdady and El-Hendawy, 'Economic Impacts of Climate': 463–472; Jamal Alrusheidat, Wafa'a Abu Hammour and Safa Al-Jaafreh, 'Climate Change Adaptation and Technology Transfer: The Path to Disaster Risk Reduction in the Arid and Semi-arid Zone: The Case of Jordan', *New Mediterranean* 1 (2016): 2–6; and Lorraine Sugar, Chris Kennedy and Dan Hoornweg, 'Synergies Between Climate Change Adaptation and Mitigation in Development', *International Journal of Climate Change Strategies and Management* 5, no. 1 (2013): 95–111.

⁸For example, H. Bany Yasin, 'The Case of The Hashemite Kingdom of Jordan', in ACT Alliance, *Enhanced Climate Action in Response to 1.5°C of Global Warming. Scaling Up Nationally Determined Contributions*: 53–63. https://www.preventionweb.net/files/62199_actalliancereport1.5c.pdf; EcoPeace Middle East, *Climate Change, Water Security, and National Security for Jordan, Palestine, and Israel* (2019). <https://reliefweb.int/report/occupied-palestinian-territory/climate-change-water-security-and-national-security-jordan>; USAID, *Climate Change Risk Profile. Jordan [Fact Sheet]*, (2017). https://www.climateintelinks.org/sites/default/files/asset/document/2017_USAID_Climate%20Change%20Risk%20Profile_Jordan.pdf; GIZ, *Climate Change Governance in Jordan: Towards Policy and Institutional Coordination [Intersectoral Coordination for the Implementation of the Climate Change Policy of the Jordanian Environment Ministry]* (2015)]. <http://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/JORDAN%29%20Climate%20Change%20Governance%20in%20Jordan%20-%20Towards%20Policy%20and%20Institutional%20Coordination.pdf>.

academics. This article seeks to contribute to filling this gap in several ways. Firstly, it analyses the official position on Jordan's climate change policies and the factors and actors that impact them. Secondly, it highlights how Jordan's vulnerability and low levels of resilience interplay with climate change politics. Thirdly, it contributes to discussions of how climate change is addressed in authoritarian/semi-authoritarian regimes.

Jordan has made substantial progress in its official climate change rhetoric, but it is struggling to take the next step in implementing and sustaining a coherent climate change policy. We argue that engaging with climate change-related topics helps the government maintain Jordan's international image as a modernizing and progressive state, while demonstrating to domestic audiences that it seeks to promote their well-being. In the case of the former, climate change vulnerability serves to attract financial, technical and political support from international organizations (IOs) and foreign partners. The latter uses climate change as the scapegoat for economic and social hardships, shifting blame away from, and thus protecting, the governing regime. We conclude that Jordan needs a more holistic climate change policy which organically fits with the country's long-term goals.

To test our argument, we first explore how climate change is addressed in authoritarian regimes, then look at Jordan's vulnerability to climate change, and the methodological considerations. We then provide an analysis of the factors and actors affecting the creation and implementation of climate change policies in Jordan, and how they correlate with official narratives.

Dealing with climate change in authoritarian countries

Jordan is a constitutional monarchy in which King Abdullah holds extensive executive powers that allow him to play the dominant role in the kingdom's politics and governance, leading observers to regard it as an authoritarian, or at best semi-authoritarian system.⁹ For example, he appoints and dismisses the most important governing posts, including the Prime Minister, the Cabinet, the heads of the armed forces, the intelligence service and the gendarmerie, and all 65 members of the Senate (the upper house of Parliament). The constitution also permits King Abdullah to dissolve both the Senate and the House of Representatives (the lower house of parliament).¹⁰ Elections are managed by the Independent Election Commission which is appointed by royal decree. Restrictions on political parties and the manipulation of district lines to over-represent less populated but more pro-monarchy areas, have resulted in a lower house of parliament dominated by independents (many of whom come from East Bank tribes that support the regime,¹¹ or

⁹See: Curtis Ryan, *Jordan and the Arab Uprisings—Regime Survival and Politics Beyond the State* (New York: Columbia University Press, 2018); Sean Yom, 'The New Landscape of Jordanian Politics: Social opposition, fiscal crisis, and the Arab Spring', *British Journal of Middle Eastern Studies*, 42, no. 3 (2015): 284–300; Morten Valbjørn, 'The 2013 Parliamentary Elections in Jordan: Three stories and some general lessons', *Mediterranean Politics*, 18, no. 2 (2013): 311–317; Jillian Schwedler, 'The Political Geography of Protest in Neoliberal Jordan', *Middle East Critique*, 21, no. 3 (2012): 259–270; Sean Yom, 'Jordan: Ten more years of autocracy', *Journal of Democracy*, 20, no. 4 (2009): 151–166; Ellen Lust-Okar, 'Elections Under Authoritarianism: Preliminary lessons from Jordan', *Democratization: Democratization in the Muslim World: Changing Patterns of Power and Authority*, 13, no. 3 (2006): 456–471.

¹⁰For example, King Abdullah dissolved parliament on September 27 2020 and appointed one of his royal advisers, Bisher al-Khasawneh, as Prime Minister on October 7 2020.

¹¹See: Philip Robins, *A History of Jordan*. 2nd ed. (Cambridge: Cambridge University Press, 2019).

business people with vested economic interests¹²). In the 19th parliament (current at the time of writing) 118 of the 130 seats are occupied by such members. The House of Representatives holds little real authority/power in Jordan—while groups of 10+ lawmakers can propose legislation which can then be approved, rejected or amended, the Senate and King Abdullah must approve every bill before it can become law. King Abdullah also appoints the Constitutional Court and the Chair of the Judicial Council while civil and Sharia court judges are appointed by royal decree. This centralization of power informs policymaking in practically all sectors of public life in Jordan, from policing to bread subsidization,¹³ and the environment.¹⁴ However, it should be noted that there is a distinction between policymaking structures and social and economic practices and experiences. Whilst policymaking is hierarchical and centralized, public debate and social deliberations are often not censored, for example, when the regime is not targeted.

In this article we contribute to the discussion on interactions between political regimes and national climate policies¹⁵ by looking at some common themes that impact climate change responses in restrictive political settings and how this is applicable to the Jordanian case. A common feature of authoritarian states is the importance of regime survival. Hence it is necessary to understand how climate change affects this. For example, for the Gulf countries, climate change can be seen as 'a "lose-lose" proposition, threatening both the fragile geography [...] and the industry that nurtures its monarchical regimes'¹⁶ forcing leaders to evaluate whether they should move towards 'a more "normal" productive economy' or sanction 'higher levels of state repression'¹⁷ to suppress any public disparagements. As discussed below, due to Jordan's lack of resources, climate change does not create the same economic predicament, however, its geographical vulnerability should promote the climate agenda at the highest level of governance.

Some authoritarian leaders use environmental threats to justify 'an increase in state presence, control, and security'¹⁸ exacerbating the existing problem of the limited engagement of civil society—which already often faces fines, imprisonment, threats, injury and (in more extreme cases) death.¹⁹ Where civil society is not completely silenced, instead of contesting or shaping policy decisions, it enhances policy implementation fitting around regimes' political goals. This is the case in Jordan as is demonstrated by the data collected and analysed below.

¹²See: Janine Clark, 'Municipalities Go to Market: Economic reform and political contestation in Jordan', *Mediterranean Politics*, 17, no. 3 (2012): 358–375.

¹³See: Jose Ciro Martinez, *States of Subsistence: The politics of bread in contemporary Jordan* (Stanford: Stanford University Press, 2022) and Jessica Watkins, *Creating Consent in an Illiberal Order: Policing disputes in Jordan* (Cambridge: Cambridge University Press, 2022).

¹⁴This is demonstrated by the marginalization of Prince Hassan bin Talal who many rightly regard as a globally recognized 'champion of environmental causes'.

¹⁵e.g., James McCarthy, 'Authoritarianism, Populism, and the Environment: Comparative Experiences, Insights, and Perspectives', *Annals of the American Association of Geographers* 109, no. 2 (2019): 301–313, DOI: 10.1080/24694452.2018.1554393.

¹⁶Jim Krane, 'Climate Action Versus Inaction: Balancing the Costs for Gulf Energy Exporters', *British Journal of Middle Eastern Studies* 47, no. 1 (2020): 135, DOI: 10.1080/13530194.2020.1714269.

¹⁷*Ibid.*, 134.

¹⁸Arefin, 'The State, Sewers', 414; see also Mark Beeson, 'The Coming of Environmental Authoritarianism', *Environmental Politics* 19, no. 2 (2010): 276–294, DOI: 10.1080/09644010903576918.

¹⁹Nick Middeldorp and Philippe Le Billon, 'Deadly Environmental Governance: Authoritarianism, Eco-populism, and the Repression of Environmental and Land Defenders', *Annals of the American Association of Geographer*, 109, no. 2 (2019): 324–337.

Another potential issue is that the exposure to an authoritarian political system tends to result in higher levels of climate indifference or scepticism.²⁰ This distancing from the problem re-enforces the belief that climate policies are ‘irrelevant, ignorant of people’s lived experience and incapable of addressing the full range of challenges they face’²¹ leaving decisions in the hands of a limited circle of ‘ecolites’.²² Under these circumstances the key concepts can be redefined to further limit deliberative processes. For example, “nature” [recorded] as “national” [...] obscure[s] global and transboundary connections and processes²³ whilst climate change can be perceived as a purely scientific- or energy-related issue.²⁴ In Jordan this has been manifested through the lack of climate change-related topics within the wider political discourse and popular debates.

Despite the restrictions experienced under authoritarianism, interested stakeholders (e.g. environmental activists and scientists) are still able to achieve some of their goals by utilizing their inside knowledge of how the regime operates.²⁵ As Wilson²⁶ notes, even in the most extreme authoritarian settings (e.g. Nazi Germany or Stalin’s USSR) ‘conservationists sometimes found room to pressure these regimes’ to occasionally achieve ‘progressive and far-reaching environmental reforms’,²⁷ especially if conservation plans fit with the personal ambitions of authoritarian leaders. This personification of environmental policy can be useful in countries like Jordan where the monarch has a significant political presence, as this can give policies a much-needed push,²⁸ but it can also reinforce a top-down approach and limit policy/project sustainability when leaders change their minds or are replaced.

Methodological considerations

The research design is based on rich qualitative data which includes the key Jordanian climate change documentation, including: the National Climate Change Policy of the Hashemite Kingdom of Jordan 2013–2020: Sector Strategic Guidance Framework²⁹; the National Green Growth Plan for Jordan³⁰; Climate Change By-law N 79³¹; the National Climate Change Adaptation Plan³²; and the Second National Climate Change Policy (2022–2050).³³ Furthermore, we conducted 23 interviews with key Jordanian climate

²⁰Yiannis Kountouris, ‘Do Political Systems Have a Lasting Effect on Climate Change Concern? Evidence From Germany After Reunification’, *Environmental Research Letters* 16, no. 7 (2021).

²¹Liz Koslov, ‘Avoiding Climate Change: “Agnostic Adaptation” and the Politics of Public Silence’, *Annals of the American Association of Geographers* 109, no. 2 (2019): 571.

²²Gilley, ‘Authoritarian Environmentalism’.

²³McCarthy, ‘Authoritarianism, Populism’, 306.

²⁴Gilley, ‘Authoritarian Environmentalism’.

²⁵Jeannie Sowers, ‘Nature Reserves and Authoritarian Rule in Egypt: Embedded Autonomy Revisited’, *The Journal of Environment and Development* 16, no. 4 (2007): 375–397.

²⁶Robert Wilson, ‘Authoritarian Environmental Governance: Insights from the Past Century’, *Annals of the American Association of Geographers* 109, no. 2 (2019): 314–323.

²⁷*Ibid.*, 319–320.

²⁸Marianna Poberezhskaya and Alina Bychkova, ‘Kazakhstan’s Climate Change Policy: Reflecting National Strength, Green Economy Aspirations and International Agenda’, *Post-Communist Economies* 34, no. 7 (2021): 894–915.

²⁹Ministry of Environment, *National Climate Change Policy* (2013).

³⁰Ministry of Environment, *National Green Growth Plan* (Amman: Ministry of Environment, 2017).

³¹Ministry of Environment, *Climate Change By-law N 79* (Amman: Ministry of Environment, 2019).

³²Ministry of Environment and UNDP, *Gender Equality and Climate Change in Jordan: Exploratory Gender Analysis*. (Amman: Ministry of Environment, 2021).

³³Ministry of Environment, *The National Climate Change Policy of the Hashemite Kingdom of Jordan (2022–2050) Sector Strategic Guidance Framework* (Amman: Ministry of Environment, 2022).

change stakeholders and experts. The sampling was purposive. As the research project aims to analyse Jordan's official position on climate change, we targeted organizations and individuals that are directly involved in devising Jordanian climate policies. To avoid any unintentional bias, we first researched relevant documentation and conducted a media search of both traditional and social sources to create a list of individuals and organizations involved in climate change-related topics in Jordan which was then complemented by a snowballing technique. Mindful, that in restricted political regimes top-level policymakers are often either closed to academic inquiries or reproduce the officially sanctioned narratives, we deliberately approached mid-tier officials as well as IOs, NGOs and scientific bodies that are actively involved in designing and implementing relevant policies.³⁴ As not to exclude marginalized voices we approached local activists and media professionals for their interpretations of the existing policy framework. Gender balance was taken into consideration with an almost equal divide between male and female interviewees (13 and 10 respectively). Also, all interviewees apart from one were Jordanian nationals (including those working for IOs) as it was important for us to understand the evaluation of climate-related policies from inside. Hence, the selection included: representatives of the Ministry of Environment (MoE); the Ministry of Energy and Mineral Resources; the Jordan Renewable Energy and Energy Efficiency Fund; the Prime Ministry; major IOs and foreign development organizations (including: the UNDP, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the Friedrich Ebert Foundation); scientific institutes (including the Royal Scientific Society); media; civil society groups and local activists.

The open-ended semi-structured interviews were conducted online between December 2021 and March 2022 and in person during field work in Jordan in April 2022. The interviews were done either in English or Arabic³⁵ and each lasted between 30 and 90 minutes. The questions asked were inspired by previous studies of climate change policies in developing (semi-)authoritarian states³⁶ and by the literature review on Jordan's environmental, political and socio-economic vulnerabilities (see above). Due to ethical considerations all interviewees are anonymized.

Lastly, this study was informed by discussions during a two-day workshop (organized by the authors) held in Amman, Jordan (4th-5th of July 2022) which gathered 34 key stakeholders (in addition to the above-mentioned organizations,³⁷ the event was attended by representatives from the WANA Institute, NAMA Consultancy, the UNFAO, Generation for Peace, UN Habitat, the Global Green Growth Institute, and USAID). The workshop allowed the authors to observe how stakeholders interact with one another, which voices dominate the discussion, how the Ministry of Environment navigates the discussion, and to ascertain whether the participants are in agreement on the problems/themes identified during the first stage of the research project.

Overall, due to climate change not being a politically sensitive topic (as discussed below) most interviewees/workshop participants were quite open and eager to share

³⁴On this occasion, the selected interviewees were all based in the central bodies of their respective organizations in Amman, however, for the next stage of the project local branches and municipalities will be considered to assess how the official discourse 'travels' throughout the country.

³⁵The research team was able to conduct interviews in both languages.

³⁶e.g., Poberezhskaya and Bychkova, 'Kazakhstan's Climate Change'; and Marianna Poberezhskaya, *Communicating Climate Change in Russia: State and Propaganda* (Abingdon: Routledge, 2016).

³⁷These included earlier interviewed individuals but also their colleagues who they recommended or sent in their place.

their opinions with a few exceptions (where interviewees were reserved in their opinions). It should be noted that the circle of experts and people directly involved in climate policy in Jordan is relatively modest, hence we were able to gather a range of key arguments and interpretations. On a few occasions, interviews did not take place due to scheduling issues or because prospective participants declined to be interviewed or simply did not respond to our requests (with no reasons provided). There were no patterns observed in interviewees' accessibility.

Data was analysed using qualitative content analysis which ensures academic rigour and an in-depth examination of collected data, and has enough flexibility to be adjusted to the specific research needs and accommodate the diversity of the dataset.³⁸ The analytical codes were created inductively, evolving along with the data analysis and then feeding into the 'overarching categories'.³⁹ The categories included 'the national manifestation of climate policies', 'the role and voice of civil society', 'the influence of resource scarcity', 'proliferation of the green economy narrative' and 'Jordan's regional role and international ambitions'.

Jennie Sowers⁴⁰ stresses the importance of considering 'social, political and economic factors' in our understanding of climate risks and related policies. She also highlights that Middle Eastern states do reflect on 'exogenous conditions' affecting their climate vulnerability but omit the impact of 'policy choices, cultural norms and historical processes'.⁴¹ Thus, we explore Jordanian climate change policy within the complex discursive setting of semi-authoritarianism, economic dependencies and geographical vulnerabilities. We argue that understanding the existing climate change narratives in Jordan vis-à-vis their practical materialization is an important first step in realizing how policies come about, the way they are rationalized, and implemented or held back.

Analysis

As Maha Al-Zu'bi⁴² rightfully highlights, climate change discourse in Jordan has 'been a marginal feature of national politics and regarded by the government as a technical and scientific concern rather than a political issue' and it is only over the past decade that there has been an increased (albeit still modest) political interest. For example, in 2013 the government published its first National Climate Change Policy (NCCP) for 2013–2020.⁴³ Being the first comprehensive official document on climate change, the policy played a vital role in stating Jordan's climate vulnerability, clearly implying climate change's anthropogenic nature, and identifying the missing legal framework and institutional gaps. From this time onwards we can see the emergence of an official climate change narrative in Jordan, the appearance of public awareness campaigns, more engaged international participation, and an increasing number of climate change-related

³⁸ Hisu-Fang Hsieh and Sarah E. Shannon, 'Three Approaches to Qualitative Content Analysis', *Qualitative Health Research* 15, no. 9 (2005): 1277–1288.

³⁹ Sotirios Sarantakos, *Social Research*, 4th edition (London: Macmillan International, 2013): 13.

⁴⁰ Jeannie Sowers, 'Understanding Climate Vulnerability in the Middle East and North Africa', *International Journal of Middle East Studies* 51, no. 4 (2019): 622.

⁴¹ Ibid.

⁴² Maha Al-Zu'bi, 'Jordan's Climate Change Governance Framework: From silos to an intersectoral approach', *Environment Systems and Decisions* 36 no. 3 (2016): 290.

⁴³ Ministry of Environment, *National Climate Change Policy* (2013).

investments and internationally funded projects. Of course, these advances need to be seen within the restrictions of the political, economic and social contexts.

National policy: capacity-building and ownership of the problem

The first NCCP was later supported by the National Green Growth Plan (2017), the Green Growth National Action Plans (2021–2025) and the National Climate Change Adaptation Plan (2021). In 2019, the Jordanian government adopted the Climate Change By-Law N 79 – the first step towards a national legal framework for climate change policy. The By-Law confirmed the MoE as the central authority in climate change policies (see Article 3) and the structure and function of the National Climate Change Committee (NCCC) (which was established in 2001 but remained relatively inactive). The By-Law formalized the necessity of cross-institutional involvement. While not having the same status as a law, it served as an important discursive moment elevating and formalizing the climate change discussion.

In 2022, Jordan published its second NCCP (2022–2050) which aims to mainstream climate change in all policies, strategies and action plans. Hence, on paper the government presents Jordan as actively moving towards ‘a low-carbon and climate resilient society’,⁴⁴ however, gaps in the existing institutional structure do not support the rhetorical shift. For example, the MoE is a relatively new institution (established in 2003), has a limited number of staff (c.170)⁴⁵ and is weakened by a high turnover at its highest level with a new minister starting every 2–3 years. This leads to the policymaking and implementation process being informed by immediate political ambitions rather than long-term national strategies. The Ministry also often finds itself under pressure from other governmental bodies. For example, in 2012 it narrowly avoided being merged with the Ministry of Municipal Affairs.⁴⁶ The attempt to subvert the MoE is demonstrative of the tendency to centralize and dictate Jordanian policymaking with a view to promoting political control and stability in the short-term without regard for longer-term concerns such as climate change: ‘they [the government] are not looking to this ministry as a priority ministry in Jordan [...] there’s still no full consideration that the [Ministry] is needed’.⁴⁷ The marginalization of the government institutions dealing with climate change is a rather typical feature of the political landscape in developing and (semi-) authoritarian countries.⁴⁸

Even positive processes are stalled by the lack of political will, budgetary constraints and the persistent prioritization of other political and economic problems. For example, in 2014 the Climate Change Directorate was created within the MoE to oversee Jordan’s climate change strategies as well as to represent the country at the international level. However, the Directorate is significantly understaffed and underfinanced, and was only recently allocated its own budget. This results in constant staff rotation which prevents the accumulation of expertise⁴⁹; hindering the transition from the discursive

⁴⁴Ministry of Environment, *National Climate Change Policy* (2022).

⁴⁵Al-Jaafreh and Nagy, ‘Environmental Challenges, Problems’.

⁴⁶Moshe Terdiman, ‘Environmental Challenges’, in *The Palgrave Handbook of the Hashemite Kingdom of Jordan*, ed. P. R. Kumaraswamy (Singapore: Palgrave Macmillan, 2019).

⁴⁷Interview with a chairman of an Environmental NGO (ENGO), Amman, Jordan, April 13 2022.

⁴⁸e.g., Bimal Regmi and Dinanth Bhandari, ‘Climate Change Governance and Funding Dilemma in Nepal’, *TMC Academic Journal* 7, no. 1 (2012): 40–55.

⁴⁹Interview with a senior representative at the Royal Scientific Society, online, February 2 2022.

acknowledgement of climate change's importance to the coherent implementation of policies: 'there is a lack of an institutionalising work [. . .] If the minister has changed, the people who are in charge are changed then those plans shall continue. But we don't see this'.⁵⁰ Thus, the Directorate is seen as a partial success with compelling arguments in support of elevating its status (e.g. allocating a larger budget, allowing it to hire more staff, and increasing salaries to help with retention) but also in terms of the way it is seen by other relevant institutions.⁵¹

Jordan's climate change policy also suffers from limited coordination between major stakeholders.⁵² There are 13 main government bodies involved in creating and/or implementing environmental policies (including: the MoE; the Ministry of Water and Irrigation; the Ministry of Health; the Ministry of Municipal Affairs; the Ministry of Agriculture; the Ministry of Industry and Trade; the Ministry of Energy and Mineral Resources; the Ministry of Transportation).⁵³ Each of these bodies have their own mechanisms for understanding Jordan's environmental challenges and for determining priorities. Communication between these actors is often limited or ineffective—even when they deal with overlapping environmental issues, they have their own immediate interests and approaches.⁵⁴ The NCCC includes representatives from these ministries and is chaired by the MoE,⁵⁵ yet it is unable to overcome the members' differing interests and approaches. Furthermore, these actors need to advance their specialized climate change knowledge and foster a sense of common responsibility:

In Jordan, the UNFCCC focal point is the MoE. But the issue is that the other ministries don't know their specific roles. [. . .] they think that they are doing a favour for the MoE if they help them or provide information.⁵⁶

Hence, there is a discrepancy between the discursive elevation of the climate change agenda and the lack of institutional and knowledge-based support which are prerequisites for a more holistic climate change strategy that is responsive to societal needs.

***Civil society and public awareness: 'did you solve all other problems in Jordan?'*⁵⁷**

In 2022, a face-to-face survey conducted by the Jordanian consultancy group NAMA showed that 46.2% of respondents stated that they have never heard of climate change. Among those who have heard about it, only 54.4% consider climate change 'very important' or 'somewhat important'.⁵⁸ Similar results have been shown by an international survey conducted among Facebook users, in which Jordanian responders showed

⁵⁰Interview with a leading Jordanian climate expert, online, February 24 2022.

⁵¹Interview with a government official at the Prime Ministry, online, December 16 2022.

⁵²It should be noted that problems with coordination and cooperation between government bodies is not unique to climate change mitigation and adaptation. Rather institutional rivalries and disjointedness are evident in other policy sectors too—in particular with regards to energy, trade, foreign policy and labour.

⁵³Al-Jaafreh and Nagy, 'Environmental Challenges, Problems'; Shamaileh, 'Evaluation of the Effectiveness'.

⁵⁴Darmame and Potter, *Political Discourses*: 458.

⁵⁵MOFA, *Climate Change Profile: Jordan* (Amsterdam: Ministry of Foreign Affairs, Holland, 2018).

⁵⁶Interview with a senior representative at the Royal Scientific Society, online, February 2 2022.

⁵⁷Interview with an IO representative based in Amman, Jordan, online, December 17 2021.

⁵⁸NAMA, *Perception of Climate Change in Jordan* (Amman: NAMA Strategic Intelligence Solutions, 2022). Available at <https://www.namasis.com/Default.aspx?Lng=&P=ard&Q=&ID=310&L=1> (accessed July 5 2022).

one of the lowest results.⁵⁹ Like many developing countries,⁶⁰ Jordan's public attitude towards climate change is negatively impacted by focus on everyday survival. For example, high levels of poverty, unemployment, underemployment, displacement, and regional instability⁶¹ lead climate change to be seen as an 'elitist' and 'privileged' problem⁶² that only the rich should trouble themselves with: 'there are many things that they [the community] are facing and because of that pressure they are not taking any responsibility for climate change, saying it's worthless right now, let me stay alive'.⁶³ Furthermore, despite the gradual introduction of climate change to educational curriculums, there is a lack of carbon literacy among educators and decision-makers at all levels, suggesting the need for ongoing educational campaigns.⁶⁴

However, anecdotal evidence suggests that despite these negative features, climate awareness is slowly increasing, including amongst those working in government.⁶⁵ This increase is often explained by: recent flash floods in Jordan (especially, a tragic incident that resulted in the death of several school children in 2018⁶⁶; the COVID-19 pandemic (which made people pay more attention to nature-⁶⁷); the noticeable decline in freshwater availability; and a shift in global politics (e.g. 'the return of the US' to climate discussions⁶⁸). Also, due to the high number of IOs operating in Jordan, there has been a surge in climate change-related projects that regularly include awareness training.⁶⁹ The change is especially evident among youth,⁷⁰ who use a wide range of news sources and are more engaged in international discussions, and farmers, who work 'day-by-day with [climate change's] impacts'.⁷¹ Both groups are more often targeted by IOs and in some regards there is an oversaturation with repetitive training provided by different actors, which rarely translate into behavioural changes. For instance, for youth it becomes a 'box ticking exercise' to attend as many IO-organized events as possible to enhance their CVs.⁷² While farmers are not receptive to information if there is no accompanying practical support for changes to their practices.

⁵⁹Anthony Leiserowitz, J. Carman, N. Buttermore, L. Neyens, S. Rosenthal, J. M., J.W. Schneider and K. Mulcahy, *International Public Opinion on Climate Change* (New Haven, CT: Yale Program on Climate Change Communication and Data for Good at Meta, 2022).

⁶⁰See: Ralf Barkemeyer, Frank Figge and Diane Holt, 'Sustainability-Related Media Coverage and Socioeconomic Development: A Regional and North—South perspective', *Environment and Planning C: Politics and Space* 31, no. 4 (2013): 716–740.

⁶¹Interview with a Jordanian climate activist, online, 10 December 2021; Interview with an IO representative (a), Amman, Jordan April 10 2022.

⁶²Interview with a Jordanian climate activist, online, January 20 2022.

⁶³Interview with a Jordanian climate expert, online, February 14 2022.

⁶⁴Interview with a Jordanian climate activist, online, December 10 2021.

⁶⁵Interview with a Jordanian climate activist, online, February 8 2022; Interview with an official at the Ministry of Environment (a), Amman, Jordan April 10 2022.

⁶⁶Suleiman Al-Khalidi, 'Jordan Flash Floods Kill 21 People, Many of Them School Children on Bus', Reuters, October 25 2018. Available at <https://www.reuters.com/article/us-jordan-floods-idUSKCN1MZZGI> (accessed September 1 2022); Interview with an official at the MoE (b), Amman, Jordan, 10 April 2022.

⁶⁷Interview with a government official at the Prime Ministry, online, December 16 2022.

⁶⁸Interview with a senior official at the MoE, online, January 13 2022.

⁶⁹Interview with a leading Jordanian climate expert, online, February 14 2022.

⁷⁰Interview with a Jordanian climate activist, online, January 20 2022.

⁷¹Interview with an official at the MoE (a), Amman, Jordan April 10 2022; see also Lahn and Shapland, 'Cascading Climate Risks'.

⁷²Interview with a Jordanian climate policy consultant, online, January 27 2022.

The last couple of decades has seen a gradual increase in environmental activism across the Middle East,⁷³ including in Jordan (with various NGOs and IOs supporting numerous community-based projects and engaging with the wider society). However, when it comes to climate change ‘social mobilisation is at its nascent stages’ in the region⁷⁴ with Jordan showing one of the lowest levels of climate activism⁷⁵ (e.g. no NGO specifically and consistently focuses on climate change). The above-mentioned NAMA survey showed that just 5% of respondents have taken any ‘action out of concern for climate change’. Even the first NCCP mentions the importance of involving a wider range of actors, including local communities, community-based organizations, media, and educational institutions.⁷⁶ However, the primary role envisioned for this array of actors is mostly limited to climate change awareness campaigns, leaving civil society activists unhappy that their policy inputs are undervalued.⁷⁷ Furthermore, whilst a variety of events and consultations with civil society representatives take place, it is unclear to what extent and with what results they get involved in the actual policymaking process and which groups are excluded/included at the higher levels of discussions.⁷⁸

The public perception of climate change and social mobilization require a more thorough exploration, but the initial analysis shows that climate change is not a problematic topic to discuss in Jordan because the interested stakeholders focus more on changes to discourse and the encouragement of only initial (and limited) behavioural changes rather than on fundamental restructuring of Jordan’s political economy. Yet, for various reasons climate change remains largely ignored which contributes to the phenomenon of ‘a climate “spiral of silence” that leads people who do not hear about the topic in daily life to avoid discussing it themselves’.⁷⁹ Such ‘climate silence’ is more likely to take place in developing and/or (semi-)authoritarian societies⁸⁰ where climate change-related topics are overshadowed by other concerns whilst the interested actors do not have enough power to impact the state agenda.

Resource poverty: a burden or a benefit?

Jordan’s economy is quite small with a GDP of \$44.98 billion and a GDP per capita of just over \$4100 – this limits the ability of the state to extract revenue from the market to fund its budget⁸¹; it is integrated into the global economy which offers opportunities for trade and investment but also makes Jordan highly vulnerable to regional and global processes;⁸² and Jordan is scarce in practically all natural resources and has long relied on external supplies of fuel, food, metals and building materials.⁸³ Hence, the Jordanian

⁷³ Jeannie Sowers, ‘Environmental Activism in the Middle East and North Africa’, in *Environmental Politics in the Middle East: Local Struggles, Global Connections* ed. H. Verhoeven (Oxford: Oxford University Press, 2018): 27–52.

⁷⁴ *Ibid.*, p.51.

⁷⁵ Interview with a chairman of a Jordanian ENGO, online, January 31 2022.

⁷⁶ Ministry of Environment, *National Climate Change Policy* (2013), 39.

⁷⁷ Interview with a chairman of an ENGO, Amman, Jordan, April 13 2022.

⁷⁸ We suggest that these questions need to be addressed in a stand-alone study.

⁷⁹ Koslov, ‘Avoiding Climate Change’, 570.

⁸⁰ see Poberezhskaya *Communicating Climate Change*.

⁸¹ IMF, *Country Data—Jordan* (2021). <https://www.imf.org/en/Countries/JOR#ataglance> (accessed September 13 2021).

⁸² Imad El-Anis, ‘Political Economy’ in *The Palgrave Handbook of the Hashemite Kingdom of Jordan*, ed. P. R. Kumaraswamy (Singapore: Palgrave Macmillan, 2019).

⁸³ see: Imad El-Anis, ‘Explaining the Behaviour of Small States: An Analysis of Jordan’s Nuclear Energy Policy’, *Cambridge Review of International Affairs* 29, no. 2 (2016): 528–547; Warwick Knowles, *Jordan: A Study in Political Economy* (London: I.B. Tauris, 2005); and Hamed El-Said and Kip Becker, *Management and International Business Issues in Jordan* (Binghamton: International Business Press, 2001).

economy has long been dependent on external loans, grants, aid, and foreign remittances which together often account for over 11% of GDP.⁸⁴ Successive governments, and the regime, have historically been preoccupied with survival by shoring up the national budget⁸⁵ which has been in constant deficit for several decades and according to the 2021 state budget the deficit was estimated at \$2.89 billion even after foreign aid (totalling \$798 million).⁸⁶ Given existing pressures, Jordan will not be able to foot the bill of climate change mitigation and adaptation on its own. Indeed, the first NCCP states that ‘both mitigation and adaptation measures in Jordan will require substantial financial resources’.⁸⁷ Hence, while Jordan is boastful of its GHG emissions reduction achievements (it has met the 14% reduction target included in its first NDC) and has significantly raised its new target (to 31%),⁸⁸ most of these commitments depend on external support.

Predictably, resource scarcity appears to be a prominent theme in Jordan’s official climate change discourse which accomplishes two strategic tasks. Firstly, when it comes to the necessity of importing fossil fuels, there is a process of distancing from the associated carbon emissions—blame shifting (*who caused it?*). Secondly, when the discussion involves a lack of other resources such as freshwater or food, we witness responsibility shifting (*who should fix it?*). With one of the main arguments being that as the U.S.A., the UK and the EU (as well as others) are directly interested in Jordan’s stability and its capacity to absorb refugees⁸⁹ from nearby conflicts,⁹⁰ they must pay for these ‘services’. The theme fits within the climate justice narrative⁹¹ and supports the notion of the state’s rent-seeking behaviour⁹² meaning that Jordan ‘rents out’ its political neutrality, stability and cooperation on global initiatives like climate change mitigation and adaptation to the international community. Within this context, Jordan is often presented as a ‘second victim’ to the conflicts and challenges surrounding it, taking the ‘burden’ of hosting refugees or combatting climate change:

when Palestine was occupied, we became the second victim. When Iraq was occupied, we were the second victim [. . .] we are a small country and all of a sudden you’ve got something which could be counted as 15–20% of your total population [. . .] they need water, they need education, they need healthcare, they need everything.⁹³

⁸⁴Kirk H. Sowell, ‘Slowing Jordan’s Slide into Debt’, Carnegie Endowment for International Peace (2018). Available at <https://carnegieendowment.org/sada/75865> (accessed September 15 2021).

⁸⁵Laurie Brand, *Jordan’s Inter-Arab Relations: The Political Economy of Alliance Making* (New York: Columbia University Press, 1994).

⁸⁶Al-Monitor, *Jordan’s 2021 budget is a harbinger of worse things to come* (2020). Available at: <https://www.al-monitor.com/originals/2020/12/jordan-2021-state-budget-deficit-coronavirus-economic-crisis.html> (accessed September 15 2021).

⁸⁷Ministry of Environment, *National Climate Change Policy* (2013), 34.

⁸⁸Ministry of Environment, *Updated Submission of Jordan’s 1st Nationally Determined Contribution (NDC)*, (2021). Available at <https://unfccc.int/sites/default/files/NDC/2022-06/UPDATED%20SUBMISSION%20OF%20JORDANS.pdf> (accessed July 4, 2022)

⁸⁹Over the last two decades Jordan has experienced added environmental pressure from its rapid population growth from 5.122 million in 2000 to 10.2 million in 2020 which was caused by an increased fertility rate (at 2.69) (World Bank, Population Total—Jordan (2021). Available at <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=JO> (accessed September 13 2021) and the influx of refugees (William R. Thompson and L. Zakhirova, *Climate Change in the Middle East and North Africa: 15000 Years of Crises, Setbacks, and Adaptation* (Milton: Taylor & Francis Group, 2021).

⁹⁰see Gerasimos Tsourapas, ‘The Syrian Refugee Crisis and Foreign Policy Decision-Making in Jordan, Lebanon, and Turkey’, *Journal of Global Security Studies* 4, no. 4 (2019): 476.

⁹¹e.g., Lukas H. Meyer and Pranay Sanklecha, *Climate Justice and Historical Emissions* (Cambridge: Cambridge University Press, 2017).

⁹²Rolf Schwarz, ‘Jordan: Rentierism and State Survival’, in *War and State Building in the Middle East*, ed. Rolf Schwarz (Gainesville: University Press of Florida, 2012).

⁹³Interview with a senior official at the MoE, online, January 13 2022.

Apart from the persistent reminder that help should come from outside, existing vulnerabilities are also used to justify various policies. For example, Jordan is one of the four most freshwater scarce countries in the world⁹⁴ with per capita consumption approximately 80 litres per day (with some heavily populated areas in the north closer to 65 litres).⁹⁵ Climate change is worsening this already dire situation.⁹⁶ Over the years, Jordanian policymakers have securitized freshwater scarcity to attract international financial and technical assistance for the planning and development of large-scale hydrological projects such as the Disi Aquifer Conveyance project⁹⁷ and the planned Red Sea-Dead Sea project.⁹⁸ Accordingly, our interviews showed freshwater scarcity has become the most prominent trigger for advancing climate change discussions at the national level (all interviewees placed it as the top negative consequence of climate change for Jordan). The danger here is that the freshwater-related narratives, whilst rightfully regarded as important, can divert attention from other climate-related sectors that are crucial to climate change mitigation and adaptation efforts, including: health, urban planning, transport, waste and others. As an alternative, the climate itself becomes securitized, even at the highest level with King Abdullah stating that climate change is among Jordan's major security problems.⁹⁹ However, as highlighted above, within restricted political regimes this can further limit meaningful involvement of civil society and marginalized groups.

Green economy: profiting from climate change mitigation

At present, climate change does not suggest any substantial 'conflicts of interest' since Jordan is a minor emitter, most of its climate-related projects have received external support (although as discussed below, future donor support is not guaranteed), and fundamental restructuring of domestic productive, consumptive and societal practices are not (yet) being pursued. However, experts and activists admit that they need to be creative in bringing climate change into the spotlight. For example, they situate the topic within the discourse of 'benefits', 'economic profitability' and 'economic solutions'¹⁰⁰ or by mentioning the 'key messages about international donations and international relationships'.¹⁰¹

⁹⁴UNFAO, *Aquastat Database Country Report—Jordan* (2021). Available at <http://www.fao.org/aquastat/statistics/query/results.html> (accessed September 13 2021).

This is far below the UN-designated absolute freshwater scarcity line of 500 cubic metres per capita per year.

⁹⁵UNHCR, *End Visit Statement by the United Nations Special Rapporteur on the Human Right to Water and Sanitation, Jordan* (2014). <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=14386&LangID=E>. (accessed September 13 2021).

⁹⁶Hammouri et al., 'Community Based Adaptation'; Hussam Hussein, 'Yarmouk, Jordan and Disi Basins: Examining the Impact of the Discourse of Water Scarcity in Jordan on Transboundary Water Governance', *Mediterranean Politics* 24, no. 3 (2019): 269–289.

⁹⁷Erika Weinthal, Neda Zawahiri and Jeannie Sowers, 'Securitizing Water, Climate and Migration in Israel, Jordan and Syria', *International Environmental Agreements: Politics, Law and Economics*, 15 (2015): 293–307.

⁹⁸A. Al-Omari, A. Salman and E. Karablieh, 'The Red Dead Canal Project: An Adaptation Option to Climate Change in Jordan', *Desalination and Water Treatment* 52, nos. 13–15 (2013): 2833–2840.

⁹⁹James Reint, 'UNGA 2021: Jordan's King Calls for "Rethink" of Climate Change and Pandemic Efforts', *The National*, September 22, 2021. Available at <https://www.thenationalnews.com/world/us-news/2021/09/22/unga-2021-jordans-king-calls-for-rethink-of-climate-change-and-pandemic-efforts/> (accessed March 2 2022).

¹⁰⁰Interview with an IO representative based in Amman, Jordan, online, January 17 2022.

¹⁰¹Interview with a chairman of an ENGO, Amman, Jordan, April 13 2022.

Feindt and Oels¹⁰² argue that ‘the articulation of an environmental problem shapes if and how the problem is dealt with’. Indeed, the narrative of ‘green growth’ or ‘sustainable development’ go hand-in-hand with Jordan’s official rhetoric where climate change policy is seen ‘as an integral part of the much broader strategy for green growth’¹⁰³ where ‘Jordan’s national circumstance [e.g. resource scarcity] make it unusually well positioned to seize opportunities’.¹⁰⁴ The ‘green economy’ is also seen as a chance to become independent of the influence of fossil fuel exporting countries, hence there is a strong sense of ‘need’¹⁰⁵ in that climate change can bring benefits to, rather than restrictions on, development.

Likewise, Jordan stands out with its high level of public and state support for renewable energy sources (RES).¹⁰⁶ In 2012, the Jordanian government accepted the Renewable Energy and Energy Efficiency Law which provided a legal framework for the private sector’s investment in RES. This was followed by the establishment of the Jordan Renewable Energy and Energy Efficiency Fund (JREEEF). Subsequently, RES have become more popular in Jordan: solar panels now cover most government and municipal buildings, religious buildings, and schools, and many residential properties.¹⁰⁷ The current ambition is for RES to reach 50% of Jordan’s energy basket by 2050 (however, there are some concerns whether this will be achieved due to economic and technical barriers).¹⁰⁸ Furthermore, the renewable energy sector aims to change Jordan from a highly vulnerable energy importing country to an energy exporter.¹⁰⁹ In addition to the development of RES, there are discussions on the advancement of energy efficiency projects (e.g. retrofitting residential buildings and imposing new regulations on new construction, improvements in public and personal electric transport, and an energy efficiency awareness campaign).

The ‘green economy’ narrative is not without its problems making climate change discussions vulnerable to fluctuations in economic considerations.¹¹⁰ A key achievement, for example, was the popularization and increased up-take of electric vehicles which resulted from the lowering of customs duties on these cars and associated infrastructure. Yet this policy was reversed due to budgetary considerations. A rapid decline in the purchase of electric vehicles followed:

Sometimes I feel that there is no political will, they just [want] to receive grants and [attract] international donors [...] but after Corona and Ukraine and Russia, they didn’t pay more attention [to] climate change because [the] people [and] all the politicians [are] talking about food security and energy security.¹¹¹

Sowers¹¹² reflecting on the advancement of environmentalism in the Middle East, states that ‘as in other regions, state and corporate actors increasingly deploy their own

¹⁰²Peter H. Feindt and Angela Oels, ‘Does Discourse Matter? Discourse Analysis in Environmental Policy Making’, *Journal of Environmental Policy and Planning* 7, no. 3 (2005): 162.

¹⁰³Ministry of Environment, *National Climate Change Policy* (2013), 35.

¹⁰⁴Ministry of Environment, *National Green Growth Plan*, 2.

¹⁰⁵Interview with a Jordanian climate activist, online, December 14 2021.

¹⁰⁶Leiserowitz et al., *International Public Opinion*; and Ministry of Environment, *National Climate Change Policy* (2013).

¹⁰⁷Interview with a senior official at the Ministry of Energy and Mineral Resources, Amman, Jordan, April 13 2022.

¹⁰⁸Interview with a senior official at the JREEEF, online, January 27 2022.

¹⁰⁹Ibid.

¹¹⁰Interview with a senior representative at the Royal Scientific Society, online, February 2 2022.

¹¹¹Interview with a chairman of an ENGO, Amman, Jordan, April 13 2022.

¹¹²Jeannie Sowers, ‘Environmental Activism’, 31.

environmental discourses and interventions, often under the rubric of sustainability'. As Jordan has to contend with complex political, economic and social issues, a lack of a genuine concern for climate change, can translate into 'empty' sustainability discourse which can easily be removed from the agenda or interpreted in a more instrumental way.

International climate policy: image, ambitions and dependency

At the international level, Jordan has a solid record of engaging with the global climate change regime. It signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 (followed by ratification in 1993). In 2003, it ratified the Kyoto Protocol as a non-Annex-I country. At COP-21 (2015) King Abdullah noted 'we [Jordan] were the first in our region to produce a comprehensive, forward-looking National Climate Change Policy', he then concluded his speech with a pledge of 'continuing cooperation, for our own people's future and the future of our shared world'.¹¹³ Jordan prides itself on being one of the first countries in the region to sign the Paris Agreement and submitting its Nationally Determined Contribution (NDC) to the UNFCCC in 2016 (updated in 2021).

Hence, combatting climate change is becoming a key feature of Jordan's international image, yet at the same time, in practice not enough attention is paid to support Jordan's international involvement in climate change discussions. For example, the national delegation at COPs is often put together too close to the event leaving no time to work on a strategy and agenda.¹¹⁴ The delegation is also often too small and excludes key experts or civil society voices.¹¹⁵ During international negotiations, Jordan traditionally sits within the Arab group which is dominated by Saudi Arabia and other Gulf countries, becoming a hostage to its good relations with the Gulf and missing out on articulating its own needs and ambitions.¹¹⁶

That said, Middle Eastern partners have many common interests, especially when it comes to adaptation (with freshwater scarcity being the most pressing issue¹¹⁷). Thus, sharing experiences or knowledge is important, though admittedly, a complicated task. For example, cooperation between Jordan and Israel is problematic¹¹⁸

we cannot just go and say let's have some kind of dialogue because then everyone will fight us. It's not about the dialogue anymore, it's about that we just suggested some kind of normalisation with the enemy. And then you jeopardise your whole operation.¹¹⁹

Furthermore, as previously discussed Jordan's economic dependency on external support complicates the advancement of an authentic national climate change policy. For example, it is evident that climate change is increasingly prominent in the MoE as one of the major 'investment driver[s]'.¹²⁰ And while there is a clear understanding that even achieving Jordan's ambitious mitigation commitments will not make much of a difference

¹¹³Jordan Times, 'Climate change cannot be addressed in isolation—King' (2015). Available at <https://www.jordantimes.com/news/local/climate-change-cannot-be-addressed-isolation-%E2%80%94king> (accessed September 7 2022).

¹¹⁴Interview with an official at the MoE (a), Amman, Jordan, April 10 2022.

¹¹⁵Interview with a chairman of an ENGO, Amman, Jordan, April 13 2022.

¹¹⁶Interview with an IO representative, Amman, Jordan April 10 2022.

¹¹⁷Interview with an official at the MoE (a), Amman, Jordan, April 10 2022.

¹¹⁸Though recently Jordan has signed a 'Memorandum of Understanding' with Israel which involved agreement on the sharing of freshwater and RES (Interview with a senior official at the JREEEF, online January 27 2022):.

¹¹⁹Interview with an IO representative based in Amman, Jordan, online, January 17 2022.

¹²⁰Interview with an official at the Prime Ministry, online, December 16 2021.

on the global scale, it is an important rhetorical move that portrays Jordan as a suitable country for climate change-related investments and a 'launchpad' for projects in the wider region.¹²¹ Yet, the experts cast doubt on how genuine Jordan's commitments are with some suggesting that it is a good PR move:

[Politicians'] priority is to appear that they are fighting for the people [...] If they think there's more public interest in something they would completely disregard everything else and just focus on one thing, even if they don't understand it [...] they just go and try to discuss it in front of the media.¹²²

'Donor-driven' climate change-related projects are also concerning¹²³ as they depend on continuous external support, which brings into question their longevity and sensitivity to the local context.¹²⁴ As a joint study conducted by the MoE and UNDP¹²⁵ showed 'despite the efforts of international organizations to invest in a sustainability plan, it is too frequent that we witness the closure of activities'. Furthermore, the national communications to the UNFCCC and numerous national reports are heavily influenced, or in some cases completely written, by external experts or by IOs based in Jordan. On the one hand, this helps to fill a gap in knowledge and experiences, but on the other, the persistent reliance on external support hinders local capacity building: 'this is something that they [official institutions] have been used to, some kind of external organisation coming in and then giving them solutions'.¹²⁶

The problem of dependency on external expertise and initiatives is not unique to Jordan as it can be seen in other Middle Eastern countries where 'international donors have indirectly undermined the autonomy and capacity of the very environmental institutions and procedure that they helped to establish'.¹²⁷ Hence, there is an urgent need to develop its own national capacity to pursue and maintain climate-related initiatives.

Discussion

As with Hammouri et al.'s¹²⁸ evaluation of the barriers to climate change adaptation and mitigation in Jordan, we also highlight the insufficient legal framework and its enforcement; a clash between long-term climate change processes and politicians' short-term interests, and a lack of coordination on cross-sectoral issues. Furthermore, our analysis demonstrates that there are strong pro-climate sentiments at various levels of Jordanian governance but due to the various 'power formations' involved, the practical outcomes often do not match the created narratives. For example, pro-climate rhetoric is evident at the highest level, with King Abdullah acknowledging that climate change is 'a painful reality' that 'unrecognisably [has] transformed parts of our landscape and aspects of our ecosystem'.¹²⁹ Whilst this corresponds with the recent positive changes in climate

¹²¹Ibid.

¹²²Interview with an IO representative based in Amman, Jordan, online, January 17 2022.

¹²³Interview with a Jordanian climate change expert, online, January 23 2022.

¹²⁴Patrick Nunn, 'Responding to the Challenges of Climate Change in the Pacific Islands: Management and Technological Imperatives', *Climate Research* 40, (2009): 211–231.

¹²⁵Ministry of Environment and UNDP, 'Gender Equality', 57.

¹²⁶Interview with a Jordanian climate change expert, online, January 23 2022.

¹²⁷Sowers, 'Nature Reserves', 394; also see Sowers, 'Understanding Climate Vulnerability'.

¹²⁸Hammouri et al., 'Community Based Adaptation', 12.

¹²⁹Jordan Times, 'King delivers remarks at P4G climate change summit' (2021). Available at <https://www.jordantimes.com/news/local/king-delivers-remarks-p4g-climate-change-summit> (accessed August 5 2022).

policymaking and implementation, it does not yet translate into a coherent strong response to climate change.

As with other restrictive political regimes, in Jordan the demand ‘for ecologically sound policies’ can potentially lead to higher levels of ‘democratisation’,¹³⁰ but so far there is no evidence that climate change itself, as well as the corresponding policies, pose a political threat. Still, a lack of confrontation between the government and civil society does not prevent the systematic exclusion of a wider range of voices. Even within liberal societies, there is a danger of the ‘discursive enclaves’ where ‘discourses articulated only in protected settings are not exposed to critique and challenge’.¹³¹ In (semi-)authoritarian societies the circle of meaningfully involved participants becomes particularly narrow, pre-empting the need for controlling/censoring existing narratives.¹³² This also feeds into the limited meaningful involvement of civil society groups. As Stehr¹³³ notes: ‘suppression of social complexity undermines the capacity of societies to solve problems’, moreover, it distances climate change from wider society by preventing it from understanding and relating to problems caused by climate change.

Thus, at the individual level, even ‘accepting climate change as a concept continues to be challenging and rather hypothetical to many’.¹³⁴ It is seen as an ‘elitist’ issue detached from the day-to-day life of ordinary people, especially in rural areas. This goes together with the lack of a sense of personal responsibility—if one does not see the relevance of the issue, one will not reflect on one’s own contribution to it.¹³⁵ The responsibility problem can also be explained by the complex situation in the Middle East and the lack of civil liberties in Jordan—people do not feel that anything depends on them, including climate change: ‘[it] is bigger than us’.¹³⁶

Furthermore, the ‘construction’ of climate change in Jordan is significantly impacted by external actors which can be both positive and negative. Welcoming ‘outsiders’ to contribute to the discussion furthers the democratic approach to this environmental problem, however, persistently allowing external interpretations of climate change to dominate local discussions and to influence policy formation and implementation hinders public understanding and acceptance of the problem. Instead, Jordanian climate policy should ‘integrat[e] local knowledge’¹³⁷ which could be as simple as ensuring that more information and materials are available in Arabic.¹³⁸ Alternatively, state authorities can move ‘beyond the “rule of experts” by including more people in

¹³⁰Mert, A., ‘The Trees in Gezi Park: Environmental Policy as the Focus of Democratic Protests’, *Journal of Environmental Policy and Planning* 21, no. 5 (2019): 593–607.

¹³¹Hayley Stevenson and John S. Dryzek, ‘The Discursive Democratisation of Global Climate Governance’, *Environmental Politics* 21, no. 2 (2012): 202.

¹³²Teresa Ashe and Marianna Poberezhskaya, ‘Russian Climate Scepticism: An Understudied Case’, *Climatic Change* 172, no. 41 (2022) <https://doi.org/10.1007/s10584-022-03390-3>.

¹³³Nico Stehr, ‘Exceptional Circumstances: Does Climate Change Trump Democracy?’, *Issues in Science and Technology* 32, no. 2 (2016): 44.

¹³⁴Ministry of Environment and UNDP, ‘Gender Equality’, 43.

¹³⁵Thijs Bouman, Mark Verschoor, Casper J. Albers, Gisela Böhm, Stephen D. Fisher, Wouter Poortinga, Lorraine Whitmarsh, Linda Steg, ‘When Worry About Climate Change Leads to Climate Action: How Values, Worry and Personal Responsibility Relate to Various Climate Actions’, *Global Environmental Change* 62, (2020) 102061. <https://doi.org/10.1016/j.gloenvcha.2020.102061>.

¹³⁶Interview with a climate activist, January 20 2022.

¹³⁷Fanny Frick-Trzebitzky and Antje Bruns, ‘Disparities in the Implementation Gap: Adaptation to Flood Risk in the Densu Delta, Accra, Ghana’, *Journal of Environmental Policy and Planning* 21, no. 5 (2019): 589.

¹³⁸Lahn and Shapland, ‘Cascading Climate Risks’.

discussions¹³⁹ where communities are not just seen as perpetual victims of climate change but also stakeholders with knowledge and experience of ‘working with ecological, economic, and political uncertainty’.¹⁴⁰ As the UN Women’s report (2018) claims: ‘in rural areas of Jordan, women should not just be seen as beneficiaries in need of awareness raising. They are leaders, professional and civil society practitioners, agricultural producers, small entrepreneurs and elected representatives capable of promoting positive change and stronger resilience in their communities’.¹⁴¹ Hence, more inclusive climate policies would allow us to address the problems of how climate change mitigation and adaptation interact with existing inequalities, including gender, socioeconomic class, migration status, ability/disability, rural vs urban divides and so on (though more research is needed in this area).

Another issue concerns situating climate change within ‘green economy’ aspirations which allows for key stakeholders to be identified and the discussion to move forward. However, ‘there are diverse visions for a sustainable economy, and these encompass different social and political values’¹⁴² which within the setting of a non-democratic regime makes climate change discourse subservient to the political will. So, while it is laudable that the Jordanian government ‘wants to develop in a right way’,¹⁴³ the pragmatic approach to climate change and the multitude of interpretations of the ‘right way’, makes it vulnerable to internal politics and the high turn-over of key decision-makers.

Verhoeven¹⁴⁴ notes that ‘environmental dynamics in the [Middle East] are both reflective and co-constructive of broader global political-economic and environmental forces’. Jordan illustrates this argument well. Promoting climate change mitigation and adaptation initiatives at home and abroad serves the purpose of rhetorically responding to existing environmental, economic, and political challenges. However, existing power relations and the restriction of the existential interest in regime survival distracts attention from the root causes of these challenges, while the lack of accountability and inconsistent engagement with a wider range of stakeholders hinders the implementation of climate change policies.

Conclusion

Those who prefer to see the glass as half full highlight the recent spike in government attention to climate change and the progress in Jordan’s national climate change policy process. At the same time, there is a general acceptance that more *urgent* issues (e.g. unemployment and poverty) take priority. There is also the more pessimistic realization that the pragmatic approach to climate change means that it is only elevated within official discourse when the state sees a direct economic or political benefit. Climate change is not perceived as a

¹³⁹Karen Rignall, ‘Living Climate Change in the Middle East and North Africa’, *International Journal of Middle East Studies* 51, no. 4 (2019): 631.

¹⁴⁰*Ibid.*

¹⁴¹UN Women, *Rural Women and Climate Change in Jordan*, (2018). <https://jordan.unwomen.org/en/digital-library/publications/2018/rural-women-and-climate-change-in-jordan>, p. 11.

¹⁴²Hayley Stevenson, ‘Contemporary Discourses of Green Political Economy: A Q Method Analysis’, *Journal of Environmental Policy and Planning* 21, no. 5 (2019): 543.

¹⁴³Interview with a senior official at the MoE, online, January 13 2022.

¹⁴⁴Harry Verhoeven, ‘Introduction: The Middle East in Global Environmental Politics’, in *Environmental Politics in the Middle East: Local Struggles, Global Connections*, ed. H. Verhoeven (Oxford: Oxford University Press, 2018), 3.

threat to the government or the Hashemite regime's survival. Instead, it acts as another 'resource'¹⁴⁵ to contribute to the government's stability which at the discursive level positions itself as a proponent of climate change mitigation and adaptation efforts. Yet, Jordan's climate change policy framework is fragile.

Lahn and Shapland¹⁴⁶ state that 'climate change is already interacting with more immediate threats from armed conflicts, environmental degradation, corruption and gender inequalities' in the Middle East, and governments' responses affect not only their states but elsewhere too. The fundamental challenges discussed above need to be dealt with for Jordan's climate change adaptation and mitigation efforts to be effective, which in the longer run would lead to more domestic and regional security and stability. While this study offers an important exploration of climate change policy in Jordan, it is only the first step towards a comprehensive understanding of climate-related narratives, policies, and political processes in the country and as such it is not without its limitations. Future studies could examine the impact of social justice and gender, the role of local communities and public discourses, the involvement of private sector actors, the role of informal processes and power in the policy and decision-making process, the role of the king and royal family beyond shaping the climate discourse, and the impact of regional integration to offer deeper insights.

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¹⁴⁵see Marianna Poberezhskaya and Natasha Danilova, 'Reconciling Climate Change Leadership with Resource Nationalism and Regional Vulnerabilities: A Case-study of Kazakhstan', *Environmental Politics* 31, no. 3 (2021): 429–452.

¹⁴⁶Lahn and Shapland, 'Cascading Climate Risks', 3.