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ORIGINAL PAPER

Securitizing Water, Climate, and Migration in Israel, Jordan, and Syria

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Abstract Protracted droughts and scarce water resources, combined with internal and cross-border migration, have contributed to the securitization of discourses around migration and water in much of the Middle East. However, there is no clear understanding of the conditions under which water, climate change, and migration are conceived of as security concerns or of their policy implications. This article explores the different means through which Israel, Jordan, and Syria have framed issues of water, climate change, and migration as national security concerns. Based upon an analysis of governmental and publicly available documents, coupled with field interviews with Israeli and Jordanian policymakers, experts, and nongovernmental organizations, we identify two different framings of the water–climate–migration nexus, depending on whether migration is largely external or internal. In Israel and Jordan, concern with influxes of external migrants elevated migration as a security issue in part through impacts on already-scarce water resources. In Syria, where severe drought in the early 2000s prompted large-scale internal migration, officials downplayed connections between scarce water resources, drought, and internal migration, part of a broader pattern of rural neglect. Unlike much of the conventional literature that has posited a linear relationship between climate change, decreasing water availability, and migration, we provide a more robust picture of the water–climate–migration nexus that shows how securitized framings take different forms and produce several unintended consequences.

Keywords Securitization · Refugees · Water · Climate change · Migration

The authors share equal responsibility for the content and analysis herein. This article is part of an ongoing collaboration, and we have chosen to rotate authorship on the articles we generate.

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Abbreviations

GMST	Global mean surface temperature
ICCIC	Israel Climate Change Information Centre
NGO	Nongovernmental organization
NOAA	National Oceanic and Atmospheric Administration
UNEP	United Nations Environment Programme
UNHCR	United Nations HIgh Commissioner on Refugees
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
USA	United States of America

1 Introduction

In the Middle East, natural resources are often considered issues of national security; that is, resource management policies are 'securitized' (Fischhendler 2015; Buzan et al. 1998). However, the processes by which natural resources broadly, and water more specifically, are conceived as security concerns is not well understood (Fischhendler and Katz 2013). This article contributes to the debates on the securitization of water discourses by expanding the water securitization lens to examine the connections between water, climate change, and migration. It asks how states 'securitize' the water–climate–migration nexus differently and considers the consequences of different framings for migrants, borders, and water management. Specifically, the article explores variations in how Israel, Jordan, and Syria securitized the linkages between water, climate change, and migration.

As part of the eastern Mediterranean, Israel, Jordan, and Syria have all experienced protracted drought during the 2000s. Regional climate change models predict a further increase in the frequency and duration of severe droughts in the eastern Mediterranean as an ongoing result of climate change (Hoerling et al. 2012; Evans 2009). These countries have also experienced significant flows of migrants within and across their borders, many fleeing impoverishment and war. As observed by White (2011) for North Africa, the majority of migrants in the eastern Mediterranean move locally and regionally, rather than seeking access to developed countries.

Much of the literature on climate change and migration has focused on the narrower topic of environmental and/or climate refugees. El-Hinnawi first coined the term 'environmental refugees' in a 1985 United Nations Environment Programme (UNEP) report as a way to grapple with increasing numbers of people forced to leave their homes because of environmental disruptions and disasters (Keane 2004). While the literature on environmental refugees can include climate refugees, Biermann and Boas (2010) find that after nearly three decades of wrestling with the notion of environmental refugees, there still is no consensus on what constitutes a climate refugee. The lack of a well-defined body of international law on climate refugees has hindered a collective international response to addressing the causes and consequences of migration due to climatic change and natural disasters (see, e.g., Keane 2004). The 1951 Convention Relating to the Status of Refugees (amended by the 1967 Protocol) defines

who can formally be considered a refugee and makes no provision for environmentally driven migration (UNHCR 2012).[1]

In contrast to the literature on environmental/climate refugees and the securitization of environmental issues (e.g. Buzan et al. 1998; Trombetta 2008), we seek to explain variation in processes of securitization among similarly situated states. By focusing on Israel, Jordan, and Syria, all of which have faced significant periods of drought over the past few decades, we seek to provide a more nuanced understanding of how and when states securitize issues of water, climate change, and migration. Drawing on governmental and publicly available documents, and 15 field interviews with Israeli and Jordanian policymakers, experts, and nongovernmental organizations (NGOs), we identify two different framings of the water–climate–migration nexus, depending on whether migration is largely external or internal. Overall, we provide a more robust picture of the water–climate–migration nexus than the conventional literature, which assumes a linear relationship between climate impacts and migration (e.g. Reuveny 2007).

In Israel and Jordan, concern with the demands imposed on already-scarce water resources by external migrants has contributed to the securitization of linkages between migration and water resources. Securitization of this nexus has helped decision-makers portray controversial and costly investments in large-scale infrastructure projects for water supply and border controls as political necessities. Although Israel already had long-term investments underway to augment water supplies through desalination, water conservation, and shifts in economic activity, fears of 'climate refugees' from Africa propelled securitized framings of water and the construction of new border fences. This securitized framing obscured the more fundamental drivers of these migration flows to Israel, namely poverty and conflict. In Jordan, climate impacts and external migration led the Kingdom to employ a securitized discourse to attract international assistance for large-scale hydrological infrastructure, including the Red Sea–Dead Sea Water Conveyance project and desalination plants.

In Syria, however, where severe drought in the early 2000s prompted large-scale internal migration to cities, decision-makers downplayed connections between scarce water resources, drought, and internal migration. As part of Bashar al-Assad's neglect of rural constituencies and focus on neoliberal reform and regime security, decision-makers were unable to acknowledge or address a long-term crisis in water management. Water decision-making was already highly securitized, opaque, and fragmented across multiple state authorities. The government downplayed connections between migration, drought, and existing water and agricultural policies, while state agencies proved unable to effectively respond to the large-scale internal displacement of the late 2000s and its sociopolitical effects.

This paper reviews the literatures on securitization of natural resources followed by a discussion of climate change predictions for the Middle East broadly. It then considers the different framings of water, climate change, and migration within the context of Israel, Jordan, and Syria.

[1] According to the 1951 Convention, a refugee is someone 'owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to, or owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it' (UNHCR 2010). It is important to note that the Convention also does not to apply to refugees from Palestine who fall under the auspices of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA).

2 Securitizing water, climate change, and migration linkages in the Middle East

The literature on securitization examines how discourses construct water resources in terms of existential threats, exploring the contextual and underlying factors that trigger securitization, and their policy implications. Framing policy issues in terms of security often moves discussions 'out of the sphere of normal politics into the realm of emergency politics' (Floyd 2008, 6) as between Israel and Palestine (Nathan and Fischhendler 2012) and between Syria and Turkey (Daoudy 2013).[2]

Drawing upon Buzan and Wæver (2003) and Buzan et al. (1998), Fischhendler (2015) suggests structural, institutional, and linguistic mechanisms through which water is securitized. For example, the underlying logic for securitizing water is its unequal distribution geographically and temporally in the Middle East. The region's transboundary rivers provide about 60 % of its freshwater supplies, the highest rate of dependence on international basins in the world (World Bank 2007). These transboundary rivers have asymmetrical upstream and downstream power relations, which affects access and control over water (Lowi 1993). Thus, state initiatives to access water through infrastructure construction on a transboundary river can threaten another state's water supply. Turkey's construction of dams along the Euphrates and Tigris rivers has heightened tensions with downstream Syria and Iraq, reinforcing the perception that water is a national security issue (Zawahri 2006).

Several scholars have attempted to defuse the focus on security that permeates the study and practice of water resource management in the Middle East by highlighting the cooperative elements of water, including mutual hydrological interdependence that creates incentives for countries to jointly manage their water resources (Wolf 1998). Yet, the securitization of water discourse and management continues (e.g. Zeitoun et al. 2010; Cook and Bakker 2012; Schäfer 2013).

Vulnerability to the impacts of climate change on water resources (IPCC 2013) has contributed to securitizing water discourses. Despite uncertainties in projections, most climate change scenarios forecast adverse water availability trends in the Middle East, including weather extremes (Sowers et al. 2011). The Middle East is already experiencing anthropogenic climate change: between 1950 and 2003, there has been an increase in aggregate temperatures, a decrease in the number of cold days, and an increase in the amount of warm days (Zhang et al. 2005). The increasing frequency of wintertime droughts in the Mediterranean (i.e. 10 of its 12 driest winters since 1902 within the past 20 years) cannot be explained by natural climatic variability alone (Hoerling et al. 2012). Precipitation has declined in Jordan, Syria, Lebanon, Palestine, and Israel (Göbel and De Pauw 2010; OECD 2013).

The past two decades have seen exceptionally severe droughts in Israel, Syria, Jordan, Lebanon, and Iraq. This experience has intensified the water securitization discourse by states and international organizations (Brown and Crawford 2009; Schwartz and Randall 2003). The literature on climate change and migration suggests increased water-related disputes and pressures for migration (Trondalen 2009). This has garnered the attention of the national security communities in the USA and Europe (White 2011; Kolmannskog 2008; Smith and Vivekananda 2009) and scholarly interest (see, e.g., Werrell and Femia 2013).

[2] Also see Warner (2012) for an analysis of securitization within the context of contestation over the Ilisu dam.

However, some scholars have argued that the securitization of climate-induced migration has overstated climatic contributions and downplayed other drivers of migration (Dabelko 2009; White 2011; Tertrais 2011). These drivers include access to financial resources and social support, which also may be negatively affected by adverse effects on local communities from climate change over time (Tacoli 2009). Generalizing about climate change obfuscates differential impacts on water resources (Mason 2013; Sowers and Weinthal 2010). Indeed, we argue that a global convergence around securitizing linkages between water, climate change, and migration masks variation in domestic discourses and policies.

We also find the often-posited linear relationship between water, climate, and migration overlooks other ways in which water resources, climate change, and migration are framed in the Middle East. As turmoil, warfare, and conflict have gripped states including Iraq and Syria, refugees have fled across borders in search of safety and livelihoods. In some host countries, the combination of conflict-induced migrants and hydrological effects of climate change are used by states to appeal for international assistance to finance controversial hydrological infrastructures. The presence of external refugees may also lead states to securitize the climate–migration–water nexus as a mechanism to justify xenophobic policies.

The elevation of water and climate change into securitized discursive frames is not simply a result of physical scarcity. Since the 1960s Middle Eastern states have addressed food shortage by importing cereals (Allan 1997) and using trade to substitute for other water-intensive activities, including those related to industry and energy production (Siddiqi and Anadon 2011). Similarly, drought has driven Israel, Turkey, and Jordan to adopt water efficiency measures in agriculture and prioritize municipal water use. Given a track record in managing water, physical scarcity is not a clear driver to 'securitize' water resources as we show through our analysis of Israel, Jordan, and Syria.

2.1 Israel: securitizing borders from 'climate refugees'

Israel offers a useful illustration of securitizing aspects of migration and water scarcity. While its water management within and vis-à-vis its neighbouring countries has been framed for decades as a national security issue (e.g. Lowi 1993; Zeitoun 2011), the securitization of water, climate change, and migration in Israel is relatively recent.

Israel faced 7 years of consecutive drought from 2003/2004 to 2010/2011 (OEDC 2011). Up until the 2010s, water management, especially coping with water availability, was left to the Water Authority (prior to 2007 known as the Water Commission). The Water Commission's Master Plan for 2002–2010 sought to stabilize the water system through augmenting supply, in particular through promoting desalination and water reuse and reclamation systems to avert further crises (Israel Water Authority 2012).

These policies to improve water conservation and expand use of desalination may make Israel less vulnerable and more resilient to climate change than its neighbours (OECD 2013; Feitelson et al. 2012). Israel's Climate Change Information Centre (ICCIC) has also drafted recommendations to encourage water savings through 'no regret strategies'.[3]

[3] The Ministry of Environmental Protection established the ICCIC in 2011 to coordinate efforts on assembling knowledge on climate change that will feed into the development of a national adaptation plan. See: http://www.sviva.gov.il/English/env_topics/climatechange/Adaptation/Pages/ClimateChangeInformationCenter.aspx.

Prior to 2010, the linkages between water, climate, and migration rarely entered Israeli security discourses. The exception was the work by some NGOs to call attention to climate change by highlighting threats to Israel's security from climate refugees in sub-Sahran Africa (Freimuth et al. 2007). Specifically, alluding to the Darfur crisis, Friends of the Earth Middle East warned of potential migrants moving from Sudan via Egypt to Israel (Freimuth et al. 2007). Only since 2010 has a discussion of climate change impacts on external migration to Israel entered the Israeli security discourse; the ICCIC 2012 report explicitly linked climate change to the threat of illegal climate-induced migration (i.e. climate refugees) from sub-Saharan Africa and its impacts on Israel's geopolitical and economic security (ICCIC 2012). The report recommended that Israel secure its borders (Udasin 2012; ICCIC 2012) and called for building 'sea fences' along the Mediterranean and Red Seas and law enforcement along the border areas. This recommendation resonated with many Israelis, as 60,000 African migrants and asylum seekers have crossed into Israel from Egypt since 2005 (Human Rights Watch 2014). In response, Israel has built a fence across its entire border with Egypt that has in effect closed the routes used by African refugees to enter Israel (Fiske 2013).

The ICCIC report's recommendations mirror the European debate about the supposed flood of climate refugees entering Europe from North Africa (White 2011). Although the report received widespread press coverage, other studies revealed more complex and dynamic factors contributing to this migration wave such as conflict, violence, and abject poverty. Local NGOs providing desperately needed assistance to these refugees, as a result, strongly disputed the report, especially the framing of environmental refugees.[4]

The securitization of external migration from Africa has pervaded the thinking of mainstream NGOs as a means to continue to raise the profile of climate change as a national priority. For instance, the Coalition Coordinator of The Paths to Sustainability Coalition in Israel suggested that calling African migrants 'work immigrants' obscured the fact that they were 'climate refugees' (Milrad-Givon 2012). Unlike government policymakers that call for building more fences, Milrad-Givon (2012) instead suggests that the government must pay attention to the root cause of the migration and invest in regional collaboration to share technical know-how concerning water and agricultural efficiency.

This emphasis on placing barriers to climate refugees/migrants sharply deviates from Israel's fervent approach to immigration from the Jewish diaspora. It affirms the widespread domestic conviction that Israel's population needs to grow, but only as a result of demographic increase from the Jewish population inside Israel or Jewish immigration from outside Israel. Indeed, Israel (and its Ministry of the Environment) has never made overpopulation a problem (Tal 2002) encouraging instead high population growth rates among the Jewish population (Orenstein 2004).

Securitizing migration in terms of supposed threats from climate refugees contributes to discriminatory discourses and practices against African refugees and Bedouin communities inside Israel. For instance, the Negev and Sinai Bedouin are seen as the likely conduits facilitating the movement of populations across the borders of Sudan, Egypt, and Jordan. Securitization of migration also contributes to xenophobia and domestic tensions between African refugees and the local population. The Israeli government has frequently denied asylum seekers 'the right to a fair asylum process', and in some cases resorts to 'voluntarily' deporting Sudanese and Eritrean nationals (Human Rights Watch 2014, 560). Many of these African refugees end up living in south Tel Aviv; tensions between locals and

[4] Zawahri's interview with researcher with African Refugee Development Center, Tel Aviv, 20 December 2012.

refugees resulted in several rounds of protests as the former groups feel overwhelmed and threatened by the influx of refugees. In January 2014, thousands of refugees went on strike in Israel, protesting the use of detention facilities and deportations and holding signs that read, 'we are refugees, not criminals' (Margalit 2014).

While Israel has pursued some adaptive water management policies, particularly by augmenting supply through desalination, the emphasis on securitizing the water–climate–migration nexus is also likely to affect Israel's relations with its Arab neighbours. The old tactic of closing borders, now in response to the threat of 'climate refugees', has already hindered resolution of the conflict with Palestinians, as policymakers continue to build border fences as solutions and could potentially cause Israel and Palestine to be less cooperative in wastewater recycling and desalination, and harden their negotiating positions over their shared water resources (Feitelson et al. 2012). The securitization of water and climate is likely to further prevent Israel from addressing issues of occupation and territorial control over shared aquifers.

2.2 Jordan: securitizing migration and climate change as a threat to water resources

Jordanian policymakers have framed the security implications of water, climate change, and migration in terms of the need to build large-scale infrastructure projects to increase water supplies. As Jordan has low per capita water availability (Humpal et al. 2012), access to sufficient water is seen as integral to national security. When several foreign investors chose not to invest in Jordan because of the country's water scarcity in 2008, King Abdullah established a Royal Commission to address the country's water crisis.[5] Access to water is further tied to political stability, as communities in Jordan tend to take to the streets in protest over inadequate supplies of household water (Warrick 2013; Zawahri 2012).

Domestic water management is in crisis, involving desperate attempts to meet ever-growing needs.[6] While officials have introduced some policies to improve efficiency in water use, the Jordanian Ministry of Water and Irrigation has primarily encouraged building large hydrological infrastructure to meet escalating demands.[7] Actual or proposed infrastructures, such as the Disi Water Conveyance Project or the Red Sea–Dead Sea Water Conveyance, provide the regime with some breathing room while allowing it to avoid embracing politically sensitive policies, such as introducing water pricing schemes or reducing water theft from the municipal water networks.

While government officials are cognizant of climate change's impact on water availability,[8] they have lagged in building adaptive capacity. In interviews, policymakers frame these impacts as distant events that will take place in 15–20 years and not relevant for collecting sufficient water to survive an upcoming summer. Yet in response to increasing pressure from the donor community to build adaptive capacity, officials have emphasized building technical knowledge by increasing their ability to collect independent data on the influence of climate change.[9]

[5] Zawahri's interview with anonymous highly placed government official, Amman, 22 April 2012.

[6] Zawahri's interview with Secretary General Ministry of Water and Irrigation, Amman, 28 April 2012.

[7] Zawahri's interview with representative from GIZ, Amman, 24 April 2012.

[8] Ibid.

[9] Zawahri's interview with government official, Amman, 28 April 2012.

Because the Ministry has limited financial resources, it relies on the donor community to fund large and small hydrological infrastructures.[10] And given donors' interest in climate change, this has led ministry officials to begin to frame the need to build large infrastructures, such as the Disi and more recently the Red Sea–Dead Sea Water Conveyance, in terms of building adaptive capacity to meet the climate challenges confronting the country.[11]

While Israel's growing attention to climate change is linked to migration through concern with climate refugees, Jordanian policymakers' understanding of water scarcity is tied to the impact of repeated influxes of migration from Palestine, Iraq, and Syria on its limited water resources over the last 65 years. Palestinian refugees from the Arab–Israeli wars constitute approximately 2.6 million of Jordan's population (Zureik 1994),[12] while Palestinians expelled from Kuwait during the first Gulf War are estimated at 360,000 (van Hear 1995). Iraqis began arriving during the first Gulf War and increased in numbers after the 2003 US invasion. It is generally assumed that Iraqi refugees in Jordan range from 500,000 to 700,000 (Fagen 2009; Al-Qdah and Lacroix 2010). The most recent round of refugees has come from the Syrian civil war. As of December 2014, the United Nations High Commissioner on Refugees (UNHCR) listed 620,441 registered Syrian refugees in Jordan (UNHCR http://data.unhcr.org/syrianrefugees/regional.php. Accessed 16 Dec 2014). Large numbers of undocumented refugees from Yemen and Libya also reside in Jordan.

Jordan faces a significant challenge in counting its refugee population because of policies that encouraged refugees to remain undocumented. Refugees have typically received a tourist or visitor visa and are therefore not classified as refugees but rather as guests. Once the visa expires, many refugees do not renew it for fear of being deported. Given their concentration in major cities such as Amman, urban refugees have generally attempted to integrate within the larger population, surviving through work in the informal sector.

The large influx of Syrian refugees led Jordan to shift its policies by placing refugees into camps and registering them with UNHCR. Many of the initial waves of Syrian refugees entering through official border crossings stayed with host families or rented flats in urban areas as previous refugees had done. The construction of the Za'atari camp, 80 km north-east of Amman, was Jordan's first foray into tented camps; planned for 80,000 persons, the camp and temporary transit centres grew to hold 130,000 registered refugees (Luck 2013).

Migration into Jordan adds significant stress on local resources and leads to domestic social conflict (Fagen 2009) as prices for housing and public services increase. Low-income groups perceive refugees as threatening their employment opportunities because refugees are willing to work for lower wages (Sweis 2012; Fagen 2009). A 2009 poll by the Centre for Strategic Studies at the University of Jordan revealed that 65 % of Jordanians therefore opposed allowing any additional Syrian refugees into the country (Fagen 2009). Jordan has suspended 'sponsoring' refugees out of transit centres and Syrians entering informally are sent to Za'atri camp (Ibid 17). Jordan has also opened a second refugee camp housing an additional 45,000 Syrians and is in the process of building a third camp (Luck 2012, 2013).

[10] Zawahri's interview with former Minister of Water and Irrigation, Amman, 15 May 2012.

[11] Zawahri's interview with Friends of the Earth Middle East representative, Amman, 25 April 2012 and with anonymous government official, Amman, 14 May 2012.

[12] This figure does not include the descendants of refugees that are born in Jordan and have become Jordanian citizens of Palestinian origin.

The influx of Syrian refugees has further securitized discourses around water and migration (Fagen 2009). Newspaper reports highlight how the country's water resources are over-consumed and over-exploited to meet refugees' ever-increasing needs (Namrouqa 2012; Warrick, June 15, 2013). About 80 % of Jordanians believed that Syrian refugees were straining domestic water and energy supplies (Sweis 2012). Tensions have increased as local officials and communities complain about refugees wasting scarce water because of their failure to appreciate the country's severe water deficit; to alleviate these concerns, donors launched programs to 'educate' refugees on water conservation measures (Bruere 2012).

The Ministry of Water and Irrigation has seen the influx of Syrian refugees as a significant security challenge. In the summer of 2012, Jordan experienced severe water shortages. Unable to meet its increasing freshwater needs, Jordan bought additional water from Israel.[13] After intense debate about the pressures that refugees were placing on scarce domestic water supplies, Germany provided funding to purchase and deliver drinking water to the Za'atari camp (Namrouqa 2012). Government officials used the added pressures on scarce water resources from refugees along with the negative impact of climate change on freshwater resources to further justify the building of large hydrological infrastructures.[14]

2.3 Syria: under-securitizing linkages between drought and internal migration?

In contrast to the Israel and Jordan cases, the Assad regime did not securitize the water–climate–migration nexus in the years before the 2011 uprising. Protracted drought from 2006 to 2011 across much of Syria exacerbated internal migration from agricultural areas and led to food insecurity, documented malnutrition, and the growth of shantytowns on the edges of cities. Yet drought in parts of Iraq, Turkey, Israel, Lebanon, and Jordan at the same time did not produce such a widespread humanitarian crisis. Since the Syrian regime prioritized food security and building rural support through agrarian policies in the early years of the Ba'athist government, it is striking that the regime did not acknowledge or address the unfolding drought crisis. Instead the Assad government downplayed the extent of the drought and ensuing internal migration and hardship. As de Châtel (2014) argues:

> In general, the regime was keen to uphold the image of Syria as a self-sufficient producer of wheat and other key staples and avoid any closer examination of the deeper causes of the humanitarian and environmental crisis…It severely limited media coverage and sought wherever possible to frame the worsening situation in the broader context of the global food crisis, financial crisis, and climate change, portraying Syria as a victim of external factors and natural disasters beyond its control (p. 16).

The onset of drought exacerbated a long-term degradation in the adaptive capacity of rural communities and local ecologies. In 2009, before the uprising, half of Syria's 20 million people earned their living from agriculture, and the sector accounted for 20 % of Syria's $45 billion GDP (Reuters 2009). Syria's agricultural sector was heavily dependent upon rainfall; 67 % of all agricultural land was rainfed rather than irrigated (FAO-MAAR,

[13] Zawahri's interview with representative from the Israeli Ministry of Foreign Affairs, Jerusalem, 5 June 2012.

[14] Zawahri's interview with GIZ representative, Amman, 24 April 2012.

2001).[15] A long-term drying trend intensified in 2006 and was severely exacerbated in 2007–2008, when rainfall decreased by 66 % in al-Hassakah, 60 % in Deir Ezzor, and 45 % in al-Raqqa (Erian 2011). The 2008/2009 rainfall season was similarly poor, producing areas of acute hardship for farmers, herders, and families who had lost their sources of livelihood. These included not only harvests and income from the sale of crops, but also seeds and livestock due to the lack of fodder and pasture.

Interestingly, the Assad regime had access to scientific studies that mapped the impacts of the drought (Erian 2011), but the regime did not use these studies to address connections between drought and internal migration, let alone elevate these linkages to issues of national security. Such studies showed that regions most affected were the rainfed agricultural and steppe regions in the north-eastern part of the country (*al-badia)*, namely the provinces of al-Hassakah, Deir Ezzor, and al-Raqqa, with Aleppo also gravely affected. These areas further accounted for 75 % of total wheat production, which the regime had encouraged under the goal of increasing food self-sufficiency in cereals (Erian 2011, 15). The result of crop and livestock failures was extensive migration for entire families and communities to cities, in contrast to what had long been seasonal labour migration for men from rural to urban areas. '[t]he movement of migrants from the eastern rural region towards southern urban areas played an important role' in explaining rapidly increasing poverty rates in urban areas between 2004 and 2009 (Nasser et al. 2013, 26).

The regime not only downplayed the drought and its welfare impacts, it also used the state-owned media to highlight achievements in crop production despite poor rainfall (de Châtel 2013, 16). Francesca de Châtel notes that the few references to the drought in state-owned media outlets framed drought in terms of global climate change, in which Syria was portrayed as the victim of global factors beyond the regime's purview (Ibid).

In stark contrast, online and international news reports provided some accounts of the plight of internal migrants. Near Aleppo, the failure of crops, including the famous *halaby* peppers, saw the abandonment of agricultural villages and migration to the city (Nabhan 2010). Families living in tents near garbage dumps in Damascus told reporters that they had come from Hasakah, where they had cultivated wheat and cattle (Oweis 2009). Makeshift camps, lacking sanitary facilities and water, sprang up around Dara'a and other provincial centres (Akkad 2009).

When the decline in the wheat harvest forced the government to finally import wheat in 2008, it belatedly asked for international assistance and began planning for a cash assistance programme (Oweis 2009). UN agencies began to coordinate disaster relief response, but efforts to provide direct food aid, let alone longer-term interventions, were hampered by lack of international funding, weak domestic NGO capacity, and insufficient government commitment. The 2009–2010 request for US$ 43,687 million was only 19 % funded by February 2010. UN officials noted that part of the difficulty in raising funds for Syria was that donors were unaccustomed to Syria facing such a large-scale crisis in human health (Akkad 2009).

UN field assessment teams provided more documentation about the scale of the unfolding humanitarian crisis by 2009. In the severely drought-affected regions, over 80 % of the families visited in these areas had reduced their food intake substantially, limiting their meals to one per day for adults and two for children, with many subsisting on bread and sugared tea. Monitoring programmes in primary health centres of the provinces showed widespread incidences of malnutrition, anaemia, and nutrition-related diseases, particularly

[15] While much attention has centred on decreasing surface water availability in the Tigris and Euphrates river basins, precipitation accounts for 68.5 % of available freshwater in Syria (Erian 2011, 16).

among children (UN Syria Drought Response Plan 2009–2010, 4). The UN estimated that 300,000 persons were in dire need, 800,000 were extremely vulnerable, and 1.3 million people had been affected by the drought (UN 2009, 7).

The result of failing to link internal climate-induced migration to very real questions of human security affected the Syrian regime's ability to respond and build resilience. Indeed, the government's agricultural policies to intensify and extend cultivation arguably limited adaptive capacities in rural areas over time. The Assad regime prioritized agricultural development and expanding arable lands to build support among rural populations (Hinnebusch 2011; Saleeby 2012). The government subsidized cotton and wheat cultivation in the arid and steppe regions of the north-east regardless of the agro-economic consequences. These outcomes included overextraction of groundwater from an estimated 420,000 wells (only half of which were licensed), and potential for desertification (Oweis 2009). State projects to 'reclaim' land—convert arid to arable land through irrigation networks—were supported by international donors, who promoted mechanization, intensification, and expansion of agriculture on 'marginal' lands in developing countries. Land pressures were exacerbated by high population growth rates and desertification, and the limits of water resources became increasingly evident (Sowers 2011).

Furthermore, as in Tunisia, Egypt, Jordan, and Morocco during the 1970s and 1980s, the Assad regime introduced economic 'reforms' during the 1990s to address stagnant macroeconomic performance and an overburdened public sector. The attempt to create market economies without public participation, political reforms, and mechanisms of accountability, however, led to crony capitalism, where the benefits of privatizing markets and investment opportunities accrued to those with connections to the regime and the military/security sectors (Haddad 2012; Donati 2013). In Syria, respectable aggregate growth rates during the 1990s and 2000s masked growing inequality, increasing poverty rates, stagnant employment creation, and deepening or persistent regional inequalities (Nasser et al. 2013).

For agricultural communities, specific neoliberal reform measures, such as lifting subsidies on fuel and fertilizers in 2008, severely affected human security, particularly in the context of rising global commodities prices from 2007 on. Subsidy reform undertaken in the absence of compensating social services, risk insurance, or employment alternatives led to rapidly rising prices for essential agricultural inputs and eroding rural purchasing power. Household expenditure surveys showed a decline in real expenditures for the vast majority of Syrian households between 2004 and 2009 (Nasser et al. 2013). The severest declines were registered in the governorates that also suffered drought or high levels of internal migration: Deir Ezzor (−10 %), Dara'a (−5.9 %), Idlib (−5.1), Al-Raqqa (−4 %), and Damascus (−3 %) (Ibid). There is little evidence that the regime used the data on household expenditures collected by local research centres to devise policy interventions.

The humanitarian crisis that preceded the ongoing Syrian uprising has naturally been obscured by the ongoing catastrophe in Syria that has flooded the region with approximately 3.3 million Syrian refugees as of 14 December 2014 (http://data.unhcr.org/syrianrefugees/regional.php, Accessed 14 December 2014). Yet, the patterns of government practice and discourse that characterized the Assad's regime approach to the internal displacement of the late 2000s mirror the regime's approach to the flow of external migrants generated by the conflict between the regime's supporters and opponents. In both cases, the causes of migration and the linkages to water and climate change—particularly the regime's role in both causing migration and inadequately responding—are obscured in securitized discourses that blame outside forces and actors for Syrian hardships.

As the uprising has morphed into a protracted civil and proxy war in which outside countries play large roles in sustaining the parties' ability to fight, the regime has

systematically depopulated and destroyed many neighbourhoods and towns that accommodated the previous influx of internal migrants. The costs of reconstruction and immediate aid to refugees and Syrian cities when the conflict ends will likely take precedence over much needed restructuring of agricultural and economic development policies. The security challenges of widespread migration, first internal and now far beyond Syria's borders, have not even begun to be addressed by a regime in a fight for its continued existence.

3 Theoretical and empirical implications of securitizing water, climate change, and migration

Our analysis of the different ways that water, climate change, and migration have been framed as security issues underscore that securitization needs to be contextualized. Whether decision-makers frame climate change and migration in terms of national security threats, as in Israel and Jordan, or overlook the impacts of migration on political stability as in Syria, governments often downplay the critical role of state policies and regime priorities in structuring the linkages between water resources, climate, and migration.

Our analysis contributes to the theoretical debate by helping to identify the different conditions under which securitized framings of the water–climate–migration nexus take different forms and produce several unintended consequences. Although wintertime droughts are intensifying in duration and frequency across the eastern Mediterranean, only in Syria did drought produce major internal displacement, exacerbating an already-existing humanitarian crisis in rural areas. An urgent need to diversify employment and livelihood options in rural areas preceded both the drought and the uprising, a priority overlooked by the Assad regime.

In the case of Jordan, policymakers securitized the linkages between climate and external migration by focusing on the impact of refugees on water resources. Policymakers securitized issues of water scarcity to justify building large-scale, supply-side hydrological infrastructures, instead of adopting measures to improve state and community capacity to adapt to climate change and scarce water supplies.

Securitizing migration into Israel also supported a focus on infrastructure projects, in this case expanding border fences. The securitization of external migration—namely that people migrating to Israel from Africa are climate refugees—has reified projects for building fences and walls. As White (2011) argued for North Africa and Morocco in particular, national security agencies and regional security organizations in the European Union have increasingly reduced the water–climate–migration nexus to one of border enforcement and interdiction. Unfortunately, the result perpetuates the mentality of countries under siege—from both land and sea—and builds political support for exclusionary social policies. While discourses about security, water, climate change, and migration often focus on physical climate impacts and water scarcity, socioeconomic and political choices shape whether and how physical impacts matter for human and national security.

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