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ENVIRONMENT AND SOCIETY IN THE MIDDLE EAST AND NORTH AFRICA: INTRODUCTION

From arid cities to irrigated fields, hot deserts to Mediterranean mountains, costal enclaves to verdant oases, the Middle East and North Africa (MENA) encompasses a range of environments for thinking through the relationships between nature and society, people, plants, and animals, human and nonhuman worlds. Early depictions of the region in terms of patriarchal, tradition-bound, and largely homogenous Muslim populations living in undifferentiated desert spaces has long given way to scholarship that identifies the diversity and dynamism of associational life, political subjectivities, state formations, religious practices, and gender performances. Only relatively recently, however, has a significant subset of scholarship on the Middle East and North Africa picked up newer approaches to environmental issues and taken a renewed look at older topics, such as the relationship between water and the state and local subsistence practices in arid lands. This shift in the scholarship is not necessarily a reflection of rising popular “environmental consciousness” in the Middle East and North Africa, although people of the region have always been living in and thinking about the material worlds around them. For while there have been recent efforts to connect local traditions to global environmental discourses, such as rereading religious texts for their “green” character and celebrating heat-shedding architectural design, “the environment” as a term has a more uneven resonance regionally than it does in some other parts of the world.¹ Rather, this increasing scholarly interest stems from a growing recognition within the euromerican academy of the environment as comprising intertwined social, material, political, biological, and representational worlds, and thus constituting an important focus of study.

Historians have been at the forefront of this recent environmental turn in the scholarship on MENA, drawing attention to the diverse ecologies to be found in the region and to the centrality of control over natural resources in shaping trajectories of political rule through time.² This scholarship has revealed clear lines of connection between colonial practices of imagining the region as degraded, postcolonial projects of national sovereignty, and 20th-century discourses of development as environmental redemption.³ It has also highlighted how environmental imaginaries of the region constructed through imperial projects, which posited a distinction between productive climates in the metropole and pathological landscapes “elsewhere,” undergirded a moral climatology that painted inhabitants and their material worlds alike.⁴

Focusing on the contemporary period, a body of scholarship on environmental issues in the Middle East and North Africa in the social sciences more broadly has probed the politics of environmental change and resource conflict. Timothy Mitchell's foundational text on technopolitics and modernity in Egypt, *The Rule of Experts*, has been highly influential here.⁵ Other works spanning the disciplines of geography, political science, science and technology studies, and law have brought further critical depth to a range of environmental topics in the region, revealing the relations of power, identity, gender, knowledge, and authority that both shape and are shaped by environment–society interactions.⁶

Building on these important foundations, this special issue highlights a burgeoning of anthropological writing about the material world in the Middle East and North Africa. Over the past few decades, an interest in environmental issues has become widespread in the anthropology of many world areas, but in the anthropology of the Middle East and North Africa topics such as gender, religion, conflict, state formation, and political economy have predominated.⁷ This imbalance has begun to change in recent years, however, as more anthropologists working in the region have started to address environmental concerns. In many cases, this topical selection emanates from ethnographic engagement rather than preceding or dictating it. A number of the contributors to this special issue, for instance, did not start out as environmental anthropologists, but were led to environmental questions through their fieldwork interactions as they found issues such as access to resources, landscape degradation, and infrastructural interventions to be among their interlocutors' predominant concerns.

Ethnography has an important role to play in current scholarly discussions about the environment in the Middle East and North Africa. Through long-term fieldwork and established relations of trust within communities, ethnographers draw attention to everyday lived experience as densely meaningful. This allows us to ask not only how "others" make sense of things "we" know already, but how multiple ways of making sense of things change what we think we already know or what is possible to know. It also opens up new avenues for thinking about the mutual constitution of social and material worlds, and about how this process of world-making intersects with different environmental imaginaries and attendant political economies.

Recent ethnographies have explored a range of environmental themes, including oil and social life in Oman, water politics in Egypt, land conflicts in the Negev, landscape architecture in the Gulf, and fisheries in Turkey.⁸ These works have cultivated a disposition towards environmental questions that looks for contextually and historically specific accounts of the dialectic between social relationships and material things. This disposition attempts to establish the right balance against a background of cautionary tales about determinism, presentism, decontextualization, economism, and technomanagerial rationalities. Furthermore, it troubles paired binary logics of constructed/natural, male/female, rationality/spirituality, West/East, North/South, and technological/biological.

The contributions to this special issue add to these conversations by offering grounded ethnographic insights into specific cases in which the environment, in some form or other, becomes a locus of consideration, interaction, and planning. All of the articles deal with issues of temporality, from practices that orient us towards the future to feelings of nostalgia, and the possibility of timescapes as a form of governance. They also

highlight the many modes through which international discourses about the environment, sustainability, or climate change intersect with local contexts, often in unpredictable ways. While there are multiple possibilities for thematically organizing these papers, we cluster them into the following three themes: expertise, framing, and domestic design.

The first set of papers looks at questions of environmental expertise, offering a window onto processes of creating and managing expert knowledge in contexts of uncertainty. Sophia Stamatopoulou-Robbins examines climate change planning by the Palestinian Authority and the ways in which planners seek to translate scientific knowledge into policy plans that might entice funds from the large international institutions on which the PA is especially reliant. Palestinian Authority climate planners face the challenge of having to enact a kind of commensuration of rainfall (a distillation of climate change in this location) and the project of Israeli occupation—two key vulnerabilities to which the PA stands open. It is unclear what the climate will look like in the future, or what the reality of political independence will be for Palestine. The United Nations is pushing for adaptation planning now for a future of uncertain rainfall patterns, constructing conditions in which planners make the continuation of occupation and the situation of a future climate commensurate. Commensuration then operates in tandem with black boxing, or making something stable and unquestionable in order to make the analysis of other things possible. What becomes unquestioned is the extension of the Palestinian Authority (long since past its legal mandate), in part because of the long timescales of climate change and occupation. According to Stamatopoulou-Robbins, the double move of black boxing and commensuration does not erase politics but moves it to a different domain. The process of trying to get climate adaptation money from the United Nations requires PA planners to live in the tension that their work serves to normalize the occupation under the rubric of moving the PA towards statehood.

Caterina Scaramelli's article traces the consolidation of the "wetlands" classification in Turkey, demonstrating how such environmental categories do not exist prior to their social and political construction. Her work brings ethnographic attention to the processes through which such socionatural spaces become relevant to various groups in the everyday and through forms of expertise. Key to this analysis are embodied experiences of learning to care, of becoming invested in place, and of connecting with particular political, scientific, cultural, and material ties that are necessary to create and sustain ecologies. Scaramelli details the varied ways in which scientific experts, their students, and local community members who relocated to Turkey's Kizilirmak Delta during the 19th and 20th centuries, have come to care about the wetland. Rather than positing a neat set of distinctions in local conflicts over land use and management of the wetlands, the article instead explores how various actors function as the stewards for each other's projects, learning to attach to this place in embodied ways. In the case of the Kizilirmak Delta, expertise to manage uncertainty is a bodily accomplishment and daily habit.

Simone Popperl's contribution offers "geologies of erasure" as a way to think about the productive capacities of persistent colonial environmental imaginaries, particularly the ways that those imaginaries function as sociotechnical projects, erasing some populations from the map and framing certain kinds of expertise and calculation as apolitical universals. The story that Popperl tells about sinkholes around the Dead Sea is deeply materially-social, as projects to make the desert bloom have cascading,

multiscalar, and multidirectional impacts that play out through the interactions of water, salt, and land. When sinkholes first began to emerge in the mid-1980s, residents in Jordan referred to them as star holes because of their rapid appearance. Although geological explanations of their origins are now widespread, less widely distributed is scientific knowledge generated by the Geological Survey of Israel about the phenomenon, which includes the capacity to predict where new sinkholes will appear through the analysis of high resolution satellite images. Without access to this data, Palestinian scientists rely on aerial photographs that include many “distortions”—such as the erasure of settlements and military installments—as well as field surveys, which are challenging in a context where their mobility is limited by checkpoints and residence papers. Thus, the ability to know the environment, to understand the sinkhole problem, is intimately tied to political positionality. In one particularly telling ethnographic moment, Popperl shares a conversation in which her interlocutor from the Geological Survey of Israel says that if an academic journal questioned the erasure of Palestine or Syria from maps in articles that they submitted, the authors would simply submit the unchanged article to a different journal, signaling the way in which such geologies of erasure operate at multiple scales of removal.

The second cluster of papers looks at how environmental projects are framed and at attempts to manage unruly frames, both local and global. Emily McKee pairs two cases—the construction of what was dubbed by some an “ecomosque” in an unrecognized Bedouin village in the Negev in Israel and a campaign for the restoration of the Jordan River, which forms the border of Israel, Jordan, and the Palestinian West Bank. She traces the labor that participants in both projects invested to situate and articulate their projects for various audiences, and the limitations to the possibility for frame shifting in a context where Israeli audiences largely insisted on strict separation between political and environmental logics and Palestinian audiences generally refused the possibility of such a disaggregation. As McKee outlines, while the chief proponent of the “ecomosque” imagined hybrid and flexible framings for the project, local village members were alienated by the labor, finance, and design of a mosque undertaken in collaboration with an Israeli-led environmental organization. In addition, the space for multiplicity and flexibility in framing narrowed as the mosque was threatened with demolition and as Operation Cast Lead in the Gaza Strip intensified already fraught local relations. In the case of Jordan River restoration, the NGO EcoPeace worked to frame the project for multiple local and international audiences with competing political orientations, without being so careful as to rob statements of any content altogether.

Natalia Gutkowski’s article probes a different kind of framing device—the timescape. Gutkowski argues that the timescape functions as a tool to govern people, land, and the environment and helps us understand processes of inequality and dispossession affecting Palestinian citizens of Israel. This notion of the timescape sheds light on the seemingly counterintuitive move by the Israeli Ministry of Agriculture to actively work to preserve nonintensive, rain-fed agriculture in a seasonal wetland area inhabited by a Palestinian community, despite its long-term commitment to the modernist transformation of agricultural lands. In this case, Israeli officials drew on global discourses of indigenous environmental knowledge to laud the Palestinian residents for their local sustainable knowledge, a shift from earlier practices of deriding them for their environmentally damaging cultural practices. What this meant for the Palestinians, though, was

that any requests they made for new technologies, such as drainage, were challenged as betrayals of their status as good sustainable subjects. Hence the displacement through timescape functions to maintain Israeli state power, particularly through practices that enforce a series of forms of waiting, including waiting for technological improvements.

Hande Özkan's contribution explores the underappreciated role of environmental projects in Turkey's nation-building process. Through an examination of the history and context of the Zingal forest industry in northern coastal Turkey, Özkan traces nationalist environmental discourses from the time of the early Turkish Republic to the present. Noting the importance of productive and green nature, "verdure" was taken up in the early days of the Turkish state as characteristic of civilization and key to producing appropriate citizen-subjects of the new nation. As the new nation state introduced policies that moved away from Ottoman practices of contract forestry, Zingal was nationalized and the Belgian company that formerly operated it replaced by a state forest enterprise. Much of Özkan's piece deals with the conundrum set up by two narrative frameworks in local memory: Zingal's Belgian-run operation as the model of modern industry, infrastructure, and cosmopolitan interactions, and a more nativist narrative of that period as a brief and extractive interlude between the rightful claim of the state to ownership of forests. For Özkan, this duality demonstrates the multiplicity and incompleteness of environmentally focused nationalist modernity.

The third cluster of papers, on domestic design, takes the built space as a key site for analyzing socio-material worlds.⁹ Architectures of the environment articulate varied imaginings of inhabited natures and verdant domestic spaces, which change with political and economic pressures over time. In her paper on the Dana Biosphere Reserve in Jordan, Bridget Guarasci interrogates the relationship between aesthetics and environment. The USAID-funded project to renovate Ottoman-era housing in Dana offers a stylized primitivist authenticity with indoor plumbing, calling on an international set of conventions about the look and feel of nature standardized by the UN and its global partners. Guarasci usefully contrasts this with self-funded housing built by area residents in the adjacent village of Qadisiyah, where design is oriented towards maximal comfort. In Qadisiyah architectural elements and sumptuous furnishings index local systems of social status and moral standing, and invoke ties to a national political imaginary of the monarchy. These two architectures of the environment signal competing visions of the future of Jordan. The comparative view indicates that the slow and uncertain progress of transnational capital invested in Qadisiyah has a durability that the "big money" project backed by the UN did not.

Nisreen Mazzawi and Amalia Sa'ar likewise look to the domestic sphere as a key location of environmental concern, turning their attention to the *hawākīr* of Nazareth—household gardens that served important social and subsistence functions in the past but have been disappearing since the late 1970s. In the past, *hawākīr* functioned as extensions of domestic space, with women congregating there during the day to complete many household functions and mixed gender groups taking advantage of the atmosphere afforded by such spaces in the evenings. Over the last several decades, these gardens have been in decline due to the pressures of increasing population density, land use and residence pattern changes, transformations in aesthetic tastes for domestic landscaping, rising water prices, and the influx of cheap produce from Israel that makes subsistence production economically unviable. The *hawākīr* have not completely

disappeared, however, as Mazzawi and Sa'ar demonstrate in their discussion of contemporary garden practices. While spatially and temporally more limited in design, a few gardens remain, largely in connection to tourist microenterprises and businesses that employ the *ḥawākīr* as emblems of authentic locality, or as expensive hobbies that function as sites of attachment and identity work. These authors argue that the changing formation of gardens provides a key and often-overlooked point of entry into transformations in urban social and material patterns.

The essays that comprise the roundtable section of this special issue build on this thematic interest in the built environment, training our gaze on the Gulf. Through introducing and curating this section, Gareth Doherty brings contrasting perspectives from architects, urban planners, landscape designers, and ethnographers. In these essays a particular environment is at play: arid, hot, and highly urbanized. This heat and aridity, and the emergence of air conditioning as a technology for managing those conditions, has produced new ways of living, transforming urban space (Günel). One thread that runs through the roundtable is the problems that have arisen from past urban planning approaches and the possibilities for alternative futures. Contributors lay out their visions for cities that are oriented more towards human needs (Alawadi) and scales (Al Mogren). They also suggest novel approaches to planning, such as a downscaling of urban development projects, which would allow more local as well as global firms to participate and produce more diverse outcomes (Reisz), as well as landscape planning that focuses on the coastal edges, border zone interfaces, and food-water-energy nexus (Grichting).

The review article by Mandana Limbert similarly takes the Gulf as a starting point but reorients our perspective to the sea. Limbert examines five recent texts that trace trade and mobility through centering the maritime worlds of the Indian Ocean, Red Sea, and Persian Gulf. In particular, she highlights their shared conceptual focus on oceanic connectivity and differentiated passage, and demonstrates how this framing enables a new appreciation for the “economic, administrative, governing, and material worlds of the 19th century” in the region. Methodologically, while each of the monographs utilizes the archive of the British empire, they read it differently against alternative sources and internal silences as they construct their narratives.

Together, the contributors to this issue bring to the fore the rich diversity of ecologies in the region, looking at wetlands and deserts, irrigated agriculture and urban spaces, seas and domestic gardens. Yet there remain some fruitful arenas for further research. Topically, there is space for more ethnographic work on urban ecologies that builds on understandings of nature not as something set aside from human interaction but as deeply interwoven with human experience, and that complements scholarship on urban ecologies from related disciplines, such as those featured in the issue's roundtable. Additional work on bodies, human and nonhuman, as sites of ecological connection would be of particular value in the study of the Middle East and North Africa. Relatedly, scholarly examination of pollution generated by agriculture, industry, and service sectors, and carried by air, water, and soil, as a key issue of health and social justice in the region would be welcome.

Geographically, we also note an imbalance, with five of the eight papers in this issue focusing on Israel and Palestine, two on Turkey, and one on Jordan. The Arabian Peninsula is the focus of the roundtable and review essays, and Egypt, the focus of our

own work, has similarly received a fair amount of attention (although not represented here). This may reflect overall trends in privileged research sites in the region, diminished access to other locations in recent years, and relatively robust environmental movements and discourses in operation in some of these countries (namely, Israel and Turkey). The emerging scholarship on countries such as Iraq, where for many years conflict has proven an impediment to in-depth fieldwork, is thus a particularly exciting development.¹⁰ As research on environmental topics expands in the Middle East and North Africa, extension past these dominant areas would be beneficial.

Bringing together this collection of scholarly contributions, however, this issue signals an opening to a promising arena of scholarship on environment–society interactions in the Middle East and North Africa. These works are neither environmentally determinist in supposing that the material world predetermines how social structures are formulated in particular ecologies, nor socially determinist in forgetting to account for the ways in which the physical world itself conditions possibilities for knowing, seeing, managing, and engaging with it. Rather, they reveal how layered ethnographic engagement can help us understand multiple idioms of power, intertwined aesthetic and temporal regimes, changing economic systems, varied moral-cum-environmental imaginaries, and the sociomaterial worlds that they enable.

NOTES

¹For example, the term for environment in Arabic, *al-biʿa*, is not widely used beyond government, education, policy, and NGO circles. Countries such as Turkey and Israel have established active environmental movements, which are closely tied to global environmental activism and have constructed terms that cover similar semantic domains to the English term “environment,” while in other countries in the region such movements are still nascent.

²Two important edited collections on this topic are Alan Mikhail, ed., *Water on Sand: Environmental Histories of the Middle East and North Africa* (New York: Oxford University Press, 2012); and Diana K. Davis and Edmund Burke III, eds., *Environmental Imaginaries of the Middle East and North Africa* (Athens, Ohio: Ohio University Press, 2011). Other notable works in this field include Alan Mikhail, *Nature and Empire in Ottoman Egypt: An Environmental History* (Cambridge: Cambridge University Press, 2011); and Sam White, *The Climate of Rebellion in the Early Modern Ottoman Empire* (Cambridge: Cambridge University Press, 2011).

³See especially Davis and Burke, *Environmental Imaginaries*; Toby Craig Jones, *Desert Kingdom: How Oil and Water Forged Modern Saudi Arabia* (Cambridge, Mass.: Harvard University Press, 2010); Diana K. Davis, *Resurrecting the Granary of Rome: Environmental History and French Colonial Expansion in North Africa* (Park Place, Ohio: Ohio University Press, 2007); and David Sims, *Egypt's Desert Dreams: Development or Disaster* (Cairo: American University in Cairo Press, 2015).

⁴Derek Gregory, “(Post)Colonialism and the Production of Nature,” in *Social Nature: Theory, Practice, and Politics*, ed. Noel Castree and Bruce Braun (Malden, UK: Blackwell Publishers, 2001).

⁵Timothy Mitchell, *Rule of Experts: Egypt, Technopolitics, Modernity* (Berkeley, Calif.: University of California Press, 2002).

⁶Samer Alout, “‘States’ of Scarcity: Water, Space, and Identity Politics in Israel, 1948–59,” *Environment and Planning D: Society and Space* 26 (2008): 959–82; Leila Harris, “Irrigation, Gender, and the Social Geographies of the Changing Waterscape in Southeastern Anatolia,” *Environment and Planning D: Society and Space* 24 (2006): 187–213; Jan Selby, “The Geopolitics of Water in the Middle East: Fantasies and Realities,” *Third World Quarterly* 26 (2005): 329–49; Irus Braveman, *Planted Flags: Trees, Land, and Law in Israel/Palestine* (Cambridge: Cambridge University Press, 2009); Omar Tesdell, “Wild Wheat to Productive Drylands: Global Scientific Practice and the Agroecological Remaking of Palestine,” *Geoforum* 78 (2017): 43–51; Nurcan Atalan-Helicke and Becky Mansfield, “Seed Governance at the Intersection of Multiple Global and Nation-State Priorities: Modernizing Seeds in Turkey,” *Global Environmental Politics* 12 (2012):

125–46; Eckart Woertz, *Oil for Food: The Global Food Crisis and the Middle East* (Oxford: Oxford University Press, 2013); Jeannie Sowers, *Environmental Politics in Egypt: Activists, Experts, and the State* (New York: Routledge, 2013).

⁷A number of anthropologists have noted this orientation of anthropological engagement with the Middle East and North Africa towards certain topics and away from others. See Lara Deeb and Jessica Winegar, “Anthropology of Arab-Majority Societies,” *Annual Review of Anthropology* 41 (2012): 537–58; Marcia Inhorn, “Roads Less Traveled in Middle East Anthropology—and New Paths in Gender Ethnography,” *Journal of Middle East Women’s Studies* 10 (2013): 62–86; and Lila Abu-Lughod, “Zones of Theory in the Anthropology of the Arab World,” *Annual Review of Anthropology* 18 (1989): 267–306. One notable exception to this is the early work of Dawn Chatty on nomadic pastoralists. See, for instance, *From Camel to Truck: The Bedouin in the Modern World* (New York: Vantage Press, 1986); and *Mobile Pastoralists: Development Planning and Social Change in Oman* (Cambridge: Cambridge University Press, 1996).

⁸Mandana Limbert, *In the Time of Oil: Piety, Memory, and Social Life in an Omani Town* (Stanford, Calif.: Stanford University Press, 2010); Jessica Barnes, *Cultivating the Nile: The Everyday Politics of Water in Egypt* (Durham, N.C.: Duke University Press, 2014); Emily McKee, *Dwelling in Conflict: Negev Landscapes and the Boundaries of Belonging* (Stanford, Calif.: Stanford University Press, 2016); Gareth Doherty, *Paradoxes of Green: Landscapes of a City-State* (Berkeley, Calif.: University of California Press, 2017); Ståle Knudsen, *Fishers and Scientists in Modern Turkey: The Management of Natural Resources, Knowledge and Identity on the Eastern Black Sea Coast* (New York: Berghahn Books, 2008). See also Gökçe Günel, “The Infinity of Water: Climate Change Adaptation in the Arabian Peninsula,” *Public Culture* 28 (2016): 291–315; Tessa Farmer, “Willing to Pay: Competing Paradigms about Resistance to Paying for Water Services in Cairo, Egypt,” *Middle East Law and Governance* 9 (2017): 3–19; Karen Rignall, “Land and the Politics of Custom in a Moroccan Oasis Town,” *Anthropological Quarterly* 88 (2015): 941–68; Liron Shani, “Of Trees and People: The Changing Entanglement in the Israeli Desert,” *Ethnos* (2017), <https://doi.org/10.1080/00141844.2017.1304972>; and Elizabeth Angell, “Assembling Disaster: Earthquakes and Urban Politics in Istanbul,” *City* 18 (2014): 667–78.

⁹The idea that cities and building processes can be approached as environmental concerns is the focus of a special issue on Istanbul: Elizabeth Angell, Timur Hammond, and Danielle van Dobben Schoon, eds., “Assembling Istanbul: Buildings and Bodies in a World City,” *City* 18 (2014).

¹⁰Kali Rubaii’s research on wartime ecologies in Iraq, which examines the material legacies of the Ba’thist regime, US military occupation, and counter-insurgency projects in the context of local projects of date farming, reproduction of human life, and scientific conservation practices, is a notable example; Rubaii, “Counterinsurgency and the Ethical Life of Material Things in Iraq’s Anbar Province” (PhD diss. University of California, Santa Cruz, 2018). See also Bridget Guarasci’s work on the intersection of ornithology, biodiversity conservation, and late liberal capitalism in Iraq’s southern wetlands; Guarasci, “The National Park: Reviving Eden in Iraq’s Marshes,” *Arab Studies Journal* 23 (2015): 128–53.