

Greenwashing in Palestine/Israel: Settler colonialism and environmental injustice in the age of climate catastrophe

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Abstract

Israeli innovations in “green” technology are ostensibly aimed at sustainable resource management and climate change mitigation. But sustainable development and environmental (in)justice in Palestine/Israel need to be examined through interdisciplinary perspectives that account for the broader settler colonial and neoliberal contexts in which they occur. Taking into account the historical and geographic context of Israel’s scientific development, we argue that Israel’s green technologies are fundamentally structured by the Zionist project of appropriating Palestinian lands. Within settler colonial analysis, environmental injustice comprises part of a broader pattern of settler domination of Indigenous ecological relations, requiring attending not to ‘equity’ in relations with the state and environment but a reckoning with settler privilege and the return of land to Indigenous communities. We analyze the use of environmental infrastructures—specifically in the areas of waste management, renewable energy, and agricultural technologies (“agritech”)—as mechanisms for land appropriation and dispossession in Palestine/Israel. Our analysis of ‘greenwashing’ as a rhetorical strategy asserts that regardless of the ecological impact of individual technologies, in Israel’s settler colonial context they further indigenous dispossession and elimination and are therefore incommensurable with long-term socio-ecological resilience. Through this analysis of Israeli greenwashing, we discuss Israeli sustainability initiatives and technological innovations not as ahistorical discourses, commodities, or technologies, but as elements of a historically situated settler colonial project.

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Introduction

Israeli innovations in “green” technology are ostensibly aimed at sustainable resource management and climate change mitigation. International media traditionally represents Israel as a relatively small, water-scarce, densely populated, and highly urbanized country facing several pressing environmental challenges. Israeli government officials and green tech CEOs emphasize the country’s shortage of water, energy, and land resources, interpreting this as an impetus for the development of cutting-edge technologies in a wide variety of fields. As such, Israel is presented as a global leader in climate change mitigation and adaptation, exporting its tech and expertise abroad, particularly to developing nations. But these narratives avoid reference to environmental justice in Israel/Palestine, to the occupation, or to the country’s wider geopolitical context. Through this analysis of Israeli “greenwashing,” we discuss Israeli sustainability initiatives and technological innovations not as ahistorical discourses, commodities, or technologies, but as elements of a historically situated settler colonial project.¹

As noted in a recent special issue on the theme, environmental injustices in Palestine need to be examined through interdisciplinary perspectives that account for the broader settler colonial and neoliberal contexts in which they occur (Braverman, 2021a). Considering the historical and geographic context of Israel’s scientific development, we argue that Israel’s green technologies are fundamentally structured by the Zionist project of appropriating Palestinian lands. In fact, we argue that Israel is managing the ecology of historic Palestine to strategic effect. By promoting a “green” image and positioning the country as a global leader in sustainable technology, afforestation, and arid land management, Israeli leaders frame Israel as a responsible—and, by proxy, legitimate—steward of Palestinian lands. As such, Israel’s advancement of sustainability and climate change mitigation works to reproduce and advance the settler colonization of Palestine.

We analyze the use of environmental infrastructures—specifically in the areas of waste management, renewable energy, and agricultural technologies (“agritech”)—as mechanisms for land appropriation and dispossession in Palestine/Israel. This phenomenon, termed “greenwashing” by activists (Benjamin et al., 2011), reflects a constellation of state, environmental, and settler colonial interests, and informs our scholarly engagement with the political ecologies of state-making.² Situated at the intersection of political geography/geopolitics, political ecology, and comparative settler colonial studies, our analysis asks how modern discourses around climate change mitigation and sustainable ecological management offer new opportunities for settler colonial state-making and consolidation of state power in contested territories, achieved through inherently violent acts against the Palestinian people. This research is couched within a broader interest in what has been termed “geopolitical ecology” or “environmental statecraft,” examining how states, and in this case settler colonial states, manage their environments toward strategic ends (Loftus, 2020; see also Benjaminsen et al., 2017).

We begin by outlining our theoretical and historical framework for discussing Israel as a settler colonial state. We then articulate our conceptualization of greenwashing, which asserts that regardless of the ecological impacts of individual technologies, in Israel’s settler colonial context they further indigenous dispossession and elimination and are therefore incommensurable with long-term socio-ecological resilience.³ Articulating our use of these terms allows us to examine why settler state actors may choose to pursue greenwashing as a strategy. Finally, we analyze the use of three “green” technologies: waste processing, solar energy, and drip irrigation. In the case of each green technology, we examine how journalists, Israeli officials, and CEOs interpret them as

elements of sustainable development, how these technologies and the related discourses advance settler interests and impact Palestinian communities, and how some organizations challenge these interpretations. In analyzing each case study, we ask: Who benefits and who bears the costs of the production, consumption, and disposal of Israel's green technologies and innovations? Who gets to be 'green,' and on whose terms? And what about this is distinctly settler colonial, as opposed to fitting broader definitions of environmental racism?

Settler colonialism and land in Palestine/Israel

We examine Israel's sustainable technology sector and greenwashing practices through the lens of environmental justice and environmental racism, encompassed within the broader frameworks of settler colonial land governance and dispossession. Environmental racism and environmental injustice are overlapping terms referring to the disproportionate impact of environmental hazards on people of color, poor people, and other marginalized groups. Challenging understandings of environmental justice as a redistributive struggle for the equitable sharing of environmental burdens and benefits, scholars have emphasized the structural racism of capitalist nation-states as drivers of environmental injustice (Pellow, 2007; see also Bullard, 2008; Camargo and Ojeda, 2017; Harris, 2017). Within settler colonial analysis, environmental injustice comprises part of a broader pattern of settler domination of Indigenous ecological relations (Whyte, 2018). In the case of Palestine, *targeted* instances of environmental injustice (such as Israeli destruction of Palestinian solar panels) highlight the intentional settler project of Indigenous elimination, which cannot be redressed through appeals to the state. It follows that decolonization can inform movements for environmental justice. Like environmental justice, decolonization mobilizes a redistribution of access to land; however, it also demands a reckoning with settler privilege and the return of land to Indigenous communities. Challenging our settler privilege means "calling into question the legitimacy of the settler state and the sense of belonging on the land" and questioning deeply "all the assumptions we have been raised within a society built on imperialism, private property... and capitalism" (Gilio-Whitaker, 2018). Taken together, environmental justice and decolonization movements call forth qualitative changes in peoples' relationships with land and with other beings.

Israeli authorities' greenwashing discourse is a relatively recent manifestation; however, when analyzed through the lens of settler colonialism, it becomes apparent as part of a longer trajectory of Zionist ideologies of environmental management (see also Alatout, 2011; Rumman, 2010; Sharif, 2014). The primary object of settler colonization is not the extraction of native labor and resources, but the land itself. Settlers come to stay (Wolfe, 1999), and as such, are interested in territory, emptied of its native population. Moreover, settler formations tend to use similar narrative justifications for their settlement. As a structure, settler colonialism's "endgame is always the elimination of the Natives in order to acquire their land, which it does in countless seen and unseen ways," through techniques that are embedded in national narratives, international discourse, and geopolitics (Gilio-Whitaker, 2018). Often land appropriation in settler colonial contexts is justified through appeals to "proper use," the assertion that native peoples are not using the land efficiently (to its maximum productive capacity), rendering it "wasteland" or "terra nullius" (Tully, 1994; Voyles, 2015). For example, Zionist thinkers adopted the articulation of Palestine as "a land without a people for a people without a land,"⁴ a desert for Jewish settlers to reclaim and make bloom so that the land could come alive again (George, 1979; Tal, 2007). Modern Israeli discourses of green innovation and development feed into age-old settler colonial discourses of "proper use" of indigenous lands (Troen, 2013), legitimizing land appropriation through reference to climate change mitigation and natural resource management.

Land is central to all settler colonial formations, including the ownership, control, and management of it and its resources. Pushing the land to its maximum productive capacity is central to settler

colonialism: “[t]he settler is making a new ‘home’ and that home is rooted in a homesteading worldview where the wild land and wild people were made for his benefit. He can only make his identity as a settler by making the land produce, and produce excessively, because ‘civilization’ is defined as production in excess of the ‘natural’ world (i.e. in excess of the sustainable production already present in the Indigenous world)” (Tuck and Yang, 2012: 6). In essence, settler colonialism’s unsustainability is part and parcel of its imperative to optimize the productive capacities of land. At the same time, settlers are preoccupied with the construction of their own regenerative societies predicated on the elimination of Indigenous ones (Wolfe, 1999). As Kyle Whyte (Citizen Potawatomi Nation) argues, settler colonial situations are marked by multiple environmental injustices, but one overlaying all the others is that “settler colonialism is a social process by which at least one society seeks to establish its own collective continuance at the expense of the collective continuance of one or more other societies” (2008: 136). Defining collective continuance as “a society’s capacity to self-determine how to adapt to change in ways that avoid reasonably preventable harms” (131), Whyte argues that settler imperatives of productivity and Indigenous elimination are fundamentally at odds with settlers’ desire to ensure their own collective continuance.

As Leanne Betasamosake Simpson (Michi Saagiig Nishnaabeg) notes, settler colonialism is a structure constituted by a set of ever-shifting processes aimed at dispossession. Though the exact processes may change, they work together to ensure that the outcome remains consistent with its goal of maintaining dispossession (Simpson, 2017: 45). When one can see the whole “map of loss,” the interlocking structures become clear: “[c]olonizers wanted the land. Everything else, whether it is legal or policy or economic or social... was part of the machinery” of land appropriation (15). Historically, Israeli settler colonialism claimed land through purchase, negotiation, and expulsion, displacing hundreds of thousands of Palestinians. Today, this regime assumes many forms. Israeli authorities deny Palestinians the right to return to their homelands or claim sovereignty. Instead, they bulldoze Palestinian homes and buildings, incentivize the construction of Israeli settlements in the West Bank, and support the continuing confinement and killing of Palestinians in the Gaza Strip. Settler colonialism dominates the lives of those who are struggling to remain in their homes or visit loved ones across militarized borders; at the same time, representatives of settler states work to obscure these instances of foundational and ongoing violence in ways old and new. As Simpson ultimately argues, “[t]he structure shifts and adapts... because it has one job: to maintain dispossession by continually attacking Indigenous bodies and destroying Indigenous families. Neoliberal states manipulate the processes that maintain settler colonialism to give the appearance that the structure is changing... Colonialism as a structure is not changing. It is shifting to further consolidate its power, to neutralize our resistance, to ultimately fuel extractivism” (46). Israeli green technology is just one more example of this dynamic, where settler state authorities have reworked and re-articulated Israeli state relationships to land to maintain the control and dislocation of Palestinian communities.

Greenwashing as settler apparatus

We understand greenwashing to be a rhetorical strategy used by Israeli state and corporate actors to emphasize “progressive” innovations regarding climate change mitigation, sustainability, and green agriculture in ways that draw attention away from Israel’s egregious human rights abuses. In the case of Israel, the settler state’s claims to green development and climate change mitigation obscure and advance settler colonialism, dispossession, and de-development as part of a broader strategy of settler knowledge production. Hawari, Plonski, and Weisman point out that Israeli authorities use knowledge production to “reshape critique of its political, social, and economic relations and redefine the moral parameters that inform its legitimacy and entrench its irrefutability” (2019: 155). For example, one former minister and diplomatic advisor argues that Israel’s

technological leadership on environmental issues offers a “first-class platform for branding and positioning of the State of Israel in the international arena” (Oren, n.d.). Offering a more critical perspective, the organization Who Profits defines greenwashing as “a critical term that describes a form of deception employed by an entity or organization, when it deceptively uses green PR or marketing to promote its policies and products as environmentally friendly and ethically benevolent” (2017: 10). For Israel, this narrative improves global perceptions by promoting a particular geopolitical image: within greenwashing discourse, Israel emerges as a progressive force for climate change mitigation and responsible environmental stewardship in an arid, underdeveloped, and undemocratic region. Greenwashing articulations also highlight Israel’s skillful management of land and ecology while downplaying, ignoring, and avoiding reference to territorial dispossession and colonization.

Building on expanding uses of the term “greenwashing” in the Israeli context, we further assert that regardless of any particular technology’s environmental impacts, Israeli development on Palestinian land undermines Palestinian development and furthers Israel’s settler colonial project and territorial goals—and, as such, challenges Palestinian collective continuance.⁴ In conversation with recent scholarship, we examine how the dispossession of Palestinian land is obscured through appeals to expertise in climate change mitigation, environmental protection, preservation, sustainable development, and “green” agriculture (Alatout, 2006; Braverman, 2019, 2020, 2021a, 2021b; Davis and Burke, 2011; Fairhead et al., 2012; Gutkowski, 2021; McKee, 2021; Salem, 2019; Shaveh, 2014). Drawing on Whyte’s work, we argue for an expansion of “greenwashing” in settler colonial contexts, like Israel, to include any efforts to undermine indigenous “collective continuance” on the land through purportedly sustainable technologies. Whether or not they reduce rates of environmental extraction and the emissions of greenhouse gasses and pollutants, Israeli “green” technologies still invariably work to reassert Israeli control over Palestinian people and territory and to undermine their ability to exist into the future.

For Israeli authorities, greenwashing accomplishes several projects which maintain and expand Israel’s presence on Palestinian land. First, Israeli greenwashing works to occlude the violence of settler land seizure and dispossession by framing these out of popular conversations, normalizing the settler state. Settler colonialism “obscures the conditions of its own production” (Veracini, 2010: 14), obfuscating the reality that all settler colonies are premised on dispossession, erasure, and elimination of indigenous peoples from the land. As part of their self-denial and national narratives, settler colonial regimes rely on tactics of distraction. These “practices of presenting and marketing Israel to an international audience” work to “launder Israel’s past and present; hiding the violence of colonial disruptions and expulsions beneath articulations of moral legitimacy, national longing and belonging, and the right to claim sovereignty over territory, law and life in Palestine” (Hawari et al., 2019). When Israeli authorities, journalists, and private actors narrate green development to domestic and international audiences, they frame their narratives in ways that largely exclude Palestinians’ experiences of displacement from land, Israeli groundwater contamination, destruction of solar panels, and restriction of access to water—even though these are fundamentally ecological matters. Ignoring questions of territorial sovereignty, Israeli environmental NGOs instead emphasize biopolitical quality-of-life concerns (Alatout, 2006). This kind of discursive framing operates as a mechanism of power, sidestepping Palestinian land claims while allowing Israeli environmental actors to proceed with settler development projects. Moreover, by emphasizing the supposed environmental benefits of Israeli-made technologies without acknowledging that these innovations have been developed in occupied Palestine, they naturalize the Israeli state as the ecologically responsible, rightful steward of Palestinian land. Israel’s green image and green technologies become normalized and taken for granted without any critical consciousness about the status of the territory in which these technologies are developed, produced, used, and disposed of, or about their costs to Palestinian communities and landscapes. In effect,

that Israel is an innovator in climate-change mitigation strategies becomes normalized as part of the “water we swim in” (Gilio-Whitaker, 2018).

Second, in a context where Israeli state actors emphasize the *qualitative* aspects of Israeli environmental governance while obfuscating its *territorial* aspects (Alatout, 2006), greenwashing helps sustain the Israeli occupation of Palestine by operating as a “settler move to innocence.” Settler moves to innocence “attempt to relieve the settler of feelings of guilt or responsibility without giving up land or power or privilege, without having to change much at all” (Tuck and Yang, 2012: 10). In terms of environmental concerns, since Israel’s settler imperative precludes Israeli environmentalists from focusing on territorial concerns, their moves to innocence are instead channeled into biopolitical questions. The separation of “ecology” from “territory” within Israeli environmental discourse operates as a mechanism of power that brackets out Palestinian land claims while allowing Israeli environmental actors to proceed with development projects (Alatout, 2006). Even in cases like that of Israeli-governed desalination plants, whose benefits do (ostensibly) extend to Palestinian communities, the Israeli government ultimately maintains territorial and technological control; it retains the power to provide or deny access to environmental resources (al-Charrett, 2021; Shalalfeh et al., 2018) and may gain a strategic advantage in negotiations (Katz, 2021). When read as settler moves to innocence, then, green technologies “represent settler fantasies of easier paths to reconciliation” (Tuck and Yang, 2012: 4) that bypass demands for the return of land, advancing Israeli territorial management over the ecologies of Palestine without ever challenging the terms of these relations. In a related move to innocence, Israeli authorities bolster the image of Israel as a global environmental benefactor through the sale of green technologies to countries in need (Abunimah, 2012; Who Profits, 2020b).

Finally, in the words of former minister and diplomatic advisor Itzhak Oren, Israel’s export of green technologies and expertise can drive “sustainability diplomacy,” fortifying Israel’s economic relations across the globe while offering the country “significant diplomatic capital” (Oren, n.d.). Oren defines sustainability diplomacy as “a diplomatic platform which markets and capitalizes on the achievements of Israeli technology in sustainability related research and development and translates them to economic, public image, and political advantages.” He envisions that in the future, Israel might “harness its technological progress to lead the international effort to fight climate change” as a “leading global player” (ibid.). This vision advances a particular kind of Israeli settler futurity. In this context, “futurity” describes how “the future is rendered knowable through specific practices (i.e. calculation, imagination, and performance) and, in turn, intervenes upon the present through three anticipatory logics (i.e. pre-caution, preemption, and preparedness)” (Baldwin, 2012: 173, quoted in Tuck and Gaztambide-Fernández, 2013: 80). Anticipating climate catastrophes and preempting these through the development of green technology, Israeli authorities frame the nation as an indispensable actor within the global community—in effect, producing a particular understanding of the future and staking a claim to it. However, it should be noted that Israeli climate planning reflects an ahistorical, apolitical, universalizing, geophysical approach to climate change which avoids engaging with the role of structural violence in shaping the problem and solutions to ecological crisis in Palestine and beyond (Weinger, 2021). This makes sense, since *settler* futurity is a logic that requires the eradication, assimilation, and ultimately replacement of Indigenous people by the settler in order to ensure the persistence of the settler state (Tuck and Gaztambide-Fernández, 2013; Tuck and Yang, 2012). As the climate crisis unfolds, those countries increasingly dependent on Israeli green technology become reluctant to critique Israeli domination of Palestine; as such, Israel’s role as a source of vital environmental technology in the context of impending ecological disruption helps shield the state from international censure. Working within representational and economic registers alike, Israeli environmental expertise helps to secure the state’s enduring position within the international community, rescuing Israel’s settler futurity in the face of its critics.

Israel's green technologies highlight the contradictions inherent within settler capitalist approaches to environmental management. Emphasizing environmental quality over the politics of environmental governance is a mode of settler colonial control—and, as Alatout (2006) argues, so is the very bifurcation of life and land within ecological discourse in Palestine/Israel. Nevertheless, stewardship of land and quality of life are fundamentally interconnected, and they must be theorized as such, even if these frameworks appear contradictory at first glance. As Tuck and Yang remind us, “[a]ttending to...what is incommensurable between decolonizing projects and other social justice projects will help to reduce the frustration of attempts at solidarity” (2012: 4). Even if we think of climate change mitigation and green development as social and environmental justice projects—though often, they are not—they are frequently at odds with decolonization, since they do not involve the return of land to Indigenous stewardship or the redress of settler violence. Indeed, “green development” furthers ongoing dispossession in settler colonies, as we explore in the following section.

Three case studies of greenwashing

In this section, we discuss three examples of Israeli green technologies and their popular representations within Israeli and international media, analyzing them as environmental projects guided by settler logics and articulated through greenwashing rhetoric. Our examples of waste treatment, solar energy, and drip irrigation include both obvious cases of environmental injustice and cases which initially appear to yield social and ecological benefits both within and beyond Israel. We describe the ways in which all three of these technologies work to ensure ongoing settler occupation while severing the continuity of Palestinian relationships to and on land. As such, these green technologies are not ahistorical commodities, but situated and implicated in settler colonialism.

We read all three examples through the framework of “collective continuance,” developed by Whyte (2018), to demonstrate the settler logics of land appropriation that shape environmental governance. Whyte outlines three environmental injustices perpetrated by settler colonial situations. One is environmental racism as we traditionally understand it: Indigenous, Black, poor people, and people of color living in environments with more pollution and less capacity to have meaningful connections with the nonhuman world. A second environmental injustice, inherent to settler colonialism, is the establishment of a regenerative settler society premised on the elimination of indigenous society, whereby settler ecology replaces indigenous ecology. And the third environmental injustice is the inherent unsustainability of settler societies, rooted as they are in capitalism, colonialism, and extractivism, despite settler attempts to suppress their unsustainability (137). To the extent that it supports the adaptation of the settler state to ecological, social, and political conditions alike, environmental management in settler states operates to ensure settlers' persistence on the land. We read Israeli environmental innovations not only as technologies of environmental governance, but also as attempts at ensuring Israeli futurity on occupied land in ways that actively undermine Palestinians' opportunities for collective continuance.

Waste processing as environmental injustice

As the world increasingly generates more waste (and, consequently, experiences more of its negative impacts), people have developed alternatives to landfills consisting of recycling or energy recovery technologies, and Israel is representing itself as a global innovator in this arena. However, though waste treatment is preferable to waste disposal, it is still a polluting industry with the potential to harm human and non-human health through the contamination of water, air, and soil, as well as through the introduction of noise, dust, and pests (B'Tselem, 2017: 5). As scholars and activists in the field of environmental justice are aware, these hazards are often unequally

distributed, with low-income communities of color bearing the brunt of the costs of production, consumption, and disposal. Below, we detail Israeli innovations in the treatment of waste, and how West Bank Palestinians have come to bear the costs of the resulting environmental and public health impacts. Within our discussion, we address the importance of analyzing the settler colonial conditions of environmental (in)justice in Palestine.

In 2017 the “largest and most advanced facility in Israel for treating waste” went online outside of Tel Aviv, taking in around half of all the municipal waste in the Dan region (Rinat, 2017). According to reports, a large portion of the treated waste is then transferred to the Nesher cement plant in Ramle, where it provides around a fifth of the fuel needed to run the plant’s ovens. This facility utilizes a process that produces refuse-derived fuel (RDF) and is one of the largest of its kind in the world. Ha’aretz, Israel’s popular daily newspaper, describes the process by which organic wastes are sent to a facility in the Jordan Valley for processing (Ibid.). There is no reference, however, to the fact that the Jordan Valley is occupied territory, or to the health effects of processing waste there. Similarly, the popular “Green Israel” Facebook group, which posts “Green facts of the week,” stated on February 4th, 2018: “[m]ore than 85% of solid waste in Israel is treated in an environmentally sound manner, which makes Israel one of the most environmentally clean countries in the world.” However, it makes no mention of the ecological contamination generated by these facilities, or the communities who are disproportionately exposed to this contamination. By selectively highlighting the positive aspects of Israeli environmental technologies while omitting their costs to Palestinians, statements like these constitute settler moves to innocence through greenwashing.

To some extent, Israel’s displacement of waste onto Palestinian land can be understood through environmental justice frameworks, which address the ways capitalism drives environmental racism: NIMBY (“not in my back yard”) objections by Israelis, as well as the high costs of stringent environmental regulation and international restrictions on waste transport, have encouraged Israel to seek “sacrifice zones” where waste treatment plants can be located in peripheral regions inhabited by communities with less political power (B’Tselem, 2017: 5, 12). As detailed in a report from December 2017 by B’Tselem (The Israeli Information Center for Human Rights in the Occupied Territories), Israel found these sacrifice zones in the occupied West Bank. In a stunning example of environmental racism, Israel exploits Palestinian land for the treatment of Israeli waste:

Abusing its status as an occupying power and the fact that Palestinians have no say in the decision-making process—which also means they cannot object to decisions made—Israel applies less rigorous regulations in industrial zones in settlements and even offers financial incentives such as tax breaks and government subsidies. This policy has made it more profitable to build and operate waste treatment facilities in the West Bank than inside Israel. (2017: 5–6)

More than just an example of environmental racism and NIMBY, though, this is made possible by the settler colonial relationship and occupation of Palestinian territory.

Israel uses Palestinian land to illegally dump toxic waste in violation of international law. Various types of waste are transferred to the West Bank, including but not limited to sewage sludge, infectious medical waste, used oils, solvents, metals, electronic waste, and batteries. There are at least 15 waste plants operating in the West Bank, including six that treat hazardous waste “which requires special processes and regulatory supervision due to the dangers it poses, including toxicity, mutagenicity [carcinogenicity], infectiousness, flammability and combustibility” (B’Tselem, 2017: 7). At least four of these plants process hazardous waste produced in Israel and one processes sewage sludge. The latter, named Compost Or Factory, Ltd is located in the northern Jordan Valley and is the largest of the Israeli waste facilities that process sewage. The plant receives sludge from 25 municipal sewage treatment facilities throughout Israel. Two other facilities that

operated inside Israel were closed in 2013 and 2014 respectively after protests from local residents who suffered from the stench produced by the plants. The Eco Medical plant, located about ten kilometers west of the Compost Or facility, processes some 3300 metric tons of infectious, biological, and medical waste every year (8). The mismanagement of this waste could cause vast health ramifications as sewage facilities contain microorganisms that can develop drug-resistant capabilities that are then passed into the local environment (9). The Green Oil energy plant is one of three main facilities recycling about 12,500 metric tons of used oil waste annually in Israel. As a whole, the potential for adverse ecosystem reactions that would then affect environmental and public health stem from the contamination of water, air, and soil. Finally, the EMS Refiners of Precious Metals, Inc. has treated basic metals, byproducts generated in the electronics industry, as well as solid waste and solvents that contain precious metals since its establishment in 1989 (11). Taken together, these and other facilities expose Palestinian communities and land to high levels of environmental toxins.

Israel dumps this waste despite being a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, an international treaty setting standards for handling and transporting hazardous waste to poorer areas and countries (Nassar, 2017). The treaty stipulates that hazardous waste is only transported to countries that are given detailed information about what they're receiving and can manage the waste to specific environmental standards. Most importantly, receiving countries must provide written consent (B'Tselem, 2017: 13). But because Israel considers the West Bank a yet-to-be-formally-annexed part of its own country (Hughes, 2020), the settler state asserts none of these requirements apply. A B'Tselem report points out, "Israel takes advantage of the fact that the West Bank is not its sovereign territory, which has left significant gaps in the environmental legislation on waste recycling between Israel and the West Bank," which make recycling waste in the West Bank more profitable than in Israel (2017: 13). Two recent laws in particular, the Clean Air Law and the Environmental Protection Law (Pollutant Release and Transfer Reporting the Registration Obligations) apply in 'Israel proper,' but not in the West Bank (14). In short, Israeli authorities exploit the ambiguity of the West Bank as neither a separate nation nor a fully integrated part of the Israeli state in order to dump Israeli environmental hazards there.

Moreover, Israeli authorities encourage environmental injustice in the West Bank, motivating corporations to operate waste plants in the West Bank through financial incentives, including government subsidies and tax breaks (B'Tselem, 2017; Nassar, 2017). For example, MTA Recycling Technologies, Ltd is one of five plants that recycle about 40% of the 50,000 metric tons of solvent waste Israel generates annually. Beginning in 2017, the Ministry of the Environmental Protection exempted all five plants from legal limits on the volume of waste to be transported and from the requirement to obtain individual permits for each shipment of waste (B'Tselem, 2017: 9). The MTA plant manufactures new products from the solvent waste through a distillation process that involves releasing pollutants into the air, and which results in various organic contaminants (10).

Trucking Israeli waste products, including hazardous waste and sewage, to treatment plants in the West Bank is also a violation of international humanitarian law, specifically the law of war, which "prohibits the occupying power from using the occupied area for its own benefit, for developing its own economy" (Leifer, 2017). Additionally, the occupying power must ensure people's health, hygiene, and adequate living standards in order to guarantee them the "highest attainable standard of physical and mental health" (B'Tselem, 2017: 17). Palestinians in the West Bank, unlike Israeli settlers living in neighboring settlements, have no influence on Israel's decisions to operate waste treatment facilities on their land. And because Palestinians lack the state capacity to develop their own waste processing infrastructures, dominant Israeli discourse weaponizes this "failure to build" to justify Israeli control over Palestinian environmental management (Stamatopoulou-Robbins, 2020). In violation of both international laws of war and international

laws of hazardous waste transportation, Israeli authorities burden Palestinian communities with the hazardous byproducts of Israeli life in occupied Palestine while foreclosing on Palestinian environmental sovereignty. Rather than being a traditional case of environmental injustice, the story of Israeli contamination of Palestinian territory is predicated on settler domination: “Israel’s environmental policy in the West Bank, including situating polluting waste treatment facilities there, is part and parcel of the policy of dispossession and annexation it has practiced in the West Bank for the past 50 years” (B’Tselem, 2017; Nassar, 2017).

This is an example of settler colonialism as ecological domination, “committing environmental injustice against Indigenous peoples” and strategically undermining “Indigenous peoples’ social resilience as self-determining collectives” (Whyte, 2018: 125). Dumping toxic waste on Palestinian land is clearly a case of environmental racism, but the violence goes deeper than that. As Whyte argues, “[a]t the surface level, environmental violence manifests as the imposition of environmental destruction and pollution. At another level, it is possible to look at environmental violence as undermining the qualities of relationships that are constitutive of any society’s social resilience or collective continuance” (140). In other words, Israeli waste infrastructure governance forecloses on Palestinian waste management, preventing Palestinian social and ecological adaptation. Viewed in this context, the environmental injustice of Israeli waste processing in Palestinian communities highlights the logic of elimination (Wolfe, 2006) masquerading as sustainable innovation.

Solar energy development and de-development

In a May 2015 statement to the global initiative Sustainable Energy for All (SEforAll), Israel’s Ambassador to the UN called Israel “a hub for renewable energy research and development” (Who Profits, 2017). Indeed, green electricity (particularly the kind produced through solar power) is internationally recognized as a viable alternative to oil- and gas-derived energy, and therefore a potential solution to global climate change. In the occupied West Bank, however, solar power has become another area of segregation, dispossession, and colonization. In this section, we discuss how Israeli discourse regarding solar energy development masks the state’s targeted destruction of Palestinian solar panels, demonstrating the ways in which settlers advance their own collective continuance while undermining the collective continuance of Indigenous communities.

In one speech, Israel’s UN ambassador quoted “one of Israel’s sustainable energy pioneers” who called “to realize that the same sun that shines equally on all of us, is owned by none of us, and can supply energy in abundance, inherently promotes peace” (Who Profits, 2017: 10). In addition to the clear settler colonial overtones of the “pioneer” terminology, this statement also works as a settler form of greenwashing. The ambassador’s depiction of the sun as an abundant, universal supply of energy suggests that Israelis and Palestinians have the same access to solar energy. Through the discourse of “equal access,” the ambassador glosses over the deep infrastructural inequalities separating Palestinians in the West Bank and Gaza from Israeli citizens. One could even infer from the statement that if Palestinians lack solar energy, it is because of a failure on their part to utilize this abundant resource, rather than because of the barriers posed by military occupation, blockades, and restrictive permitting bureaucracies. Moreover, the articulation that solar energy “inherently promotes peace” points to an Israeli vision of the future—one in which Israel manages Palestinian ecologies to produce abundant energy with no resistance from Palestinian people.

Unfortunately, Palestinians do not enjoy unfettered access to energy. Instead, “[t]he Palestinian electricity sector is a captive market, and it suffers from various hindrances, the most significant of which are the electricity debts allegedly owed by the Palestinian Authority to the IEC [International Electrotechnical Commission]” (Who Profits, 2017: 11). Palestinians living under occupation are forced to live with unstable hopes for electrical reliability and economic growth (9). Though

total energy consumption in the occupied Palestinian territory is the lowest in the region, electricity prices remain the highest. Consequently, Palestinian communities struggle to access energy for basic needs while Israeli settlements can rely on constant electricity (10). As stated by Who Profits,

For solar energy production, the Jordan Valley is a slice of heaven. According to NASA, the area receives 3000 h of annual sunshine, and high radiation levels. Its open areas and low population density make it particularly conducive for harnessing solar energy. (2017: 19)

This should mean that Palestinians are able to reduce their dependence on Israeli energy imports. However, according to a report by Al-Haq, for Palestinians in Area C of the West Bank “solar energy does not function as a supplemental source of power but rather constitutes a last resort measure to meet basic human needs” (2018: 4).

Rather, Israeli military policy prevents Palestinians from tapping into the potential for solar energy production in the occupied territory at the same time as the settlement enterprise expands through Israeli development of solar and residential fields. During 2016 alone Israel generated approximately \$460 million in revenue from solar energy projects, including projects located in the West Bank (Nassar, 2018). This is despite the fact that, as human rights lawyer Michael Sfard points out, “[t]he occupying power must manage [natural resources] for the benefit of the occupied people, and...if the proceeds are not invested back in the occupied community, that is a violation of international law” (Blau, 2015). And Israeli violations of international law are motivated not only by economics, but also territorial concerns. In addition to resulting in enormous profits, solar projects boost the broader settlement enterprise and economy of occupation (Who Profits, 2017: 10–11). The same report demonstrates Israel’s intent to expand their future solar projects in addition to their roughly 300,000 meters of solar fields in the Jordan Valley. (17). Over the last few years, four Israeli commercial solar fields have been constructed in illegal industrial settlements in the West Bank creating additional energy for Israel (10). An *Electronic Intifada* article concludes: “Israel is having it both ways. It is illegally confiscating Palestinian land ‘to exploit the territory’s solar energy without investing the benefits back’ into these communities” (Nassar, 2018).

Moreover, while Israel develops its own solar energy sector in the occupied West Bank, Palestinian infrastructure faces active de-development. In early 2018, reports by Who Profits and Al-Haq showed that Israel had drastically escalated destruction of EU-funded energy projects, including solar, in the occupied Palestinian territories. Palestinians are required to obtain permits to install solar panels in Area C of the West Bank, but less than 2% of building permits are approved (al-Haq, 2018; Who Profits, 2017). If solar panels are installed without permits, the Israeli Civil Administration issues confiscation or demolition orders. From 2001 to 2016, Israel caused an estimated \$74 million in destruction to EU-funded projects. That includes \$26 million of destruction to EU projects during Israel’s 2014 assault on Gaza. And in the past two years, Israel has drastically escalated its crackdown on EU-funded projects in the West Bank (Nassar, 2018). Instead of serving the energy needs of Palestinians, Israel instead builds commercial solar fields to serve Israeli households.

And Israel is not just profiting domestically from its solar energy technology. In 2017 an Israeli company, Energiya Global, was set to oversee \$1 billion worth of solar field projects in Africa, starting with a \$20 million solar field next to Liberia’s main airport. The company’s CEO, Yossi Abramowitz, stated, “[i]n Africa, they deeply feel the effects of climate change because of increasing desertification.... They are looking to Israel as a world leader to hold back desertification, and a lot of conflicts in the region are due to scarce water and food conflicts” (Lidman, 2017). The patronizing framing of Africa (as a singular entity) putting its faith in Israel to rescue it from impending desertification reflects a vision of Israel as the savior of a racialized, dependent continent. Through

the emphasis on “water and food conflicts,” Abramowitz offers a depoliticized representation of the African continent, marked by struggles which have nothing to do with histories of colonial exploitation and everything to do with the whims of nature. Moreover, this greenwashing articulation draws attention away from the conflict Israel itself is embroiled in, and the costs and benefits of their energy policies for Palestinian communities under Israeli control.

As described in a Who Profits report, energy infrastructures “are often reduced to mere technical systems... regarded as having little to no political influence. Yet, despite its subterranean nature, electrical infrastructure plays a pivotal role in shaping the politics and political economy of any society, all the more so in a state of prolonged occupation” (2017: 9). By developing green energy solutions that rely on the exploitation of Palestinian land (such as solar technologies that restrict Palestinians’ sustainable practices through the continued “green” expansions), Israel reinforces its own settler-colonial power structure. Israel’s solar energy production exemplifies the environmental injustice at the heart of settler colonization: the establishment/creation of a regenerative settler society premised on the elimination of Indigenous society, where settler ecology replaces Indigenous ecology. In settler colonies, as Whyte and other scholars have noted: “[t]he settlers’ aspirations are to transform Indigenous homelands into settler homelands. Settlers create moralizing narratives about why it is (or was) necessary to destroy other peoples... or take great pains to forget or cover up the inevitable militancy and brutality of settlement” (2018: 135). For Israeli authorities, solar power is one way of advancing Israeli collective continuance: solar panels supply Israelis with energy, claim territory within the West Bank, and secure international support as objects of philanthropy. At the same time, Israeli authorities prevent Palestinians from accessing solar energy of their own, thereby undermining Palestinian collective continuance through bureaucratic and militarized violence.

Drip irrigation and land appropriation

Another far-reaching repercussion of climate change is water shortage and drought. A 2017 article titled “The Secret of Israel’s Water Miracle and How it Can Help a Thirsty World” asserts that Israel is equipped to solve these problems at a planetary level, noting that Israel has “separated its water consumption from Mother Nature” (Schuster, 2017). The article goes on to say that “Israel should have been a water basket case,” listing its problems: 60% of the land is desert and the rest is arid; rainfall has dropped to half its 1948 average, apparently thanks to climate change; as global warming progresses, Israel and the whole Levant are expected to become even drier; and, from 1948, Israel’s population has grown 10-fold (ibid.). The innovations Israel has used to overcome these challenges include drilling deep wells, desalination, reusing treated sewage (or gray water) for farming, engineering crops that thrive in onerous conditions, and the “holy grail” of Israeli agricultural tech—drip irrigation (ibid.). The latter involves dripping small amounts of water and fertilizer directly onto plants’ roots as a less-wasteful alternative to the standard practice of flooding fields with prodigious amounts of both (ibid.). In this section, we discuss Israeli discourses around agricultural innovation, and particularly drip irrigation, contextualizing these within a legacy of settler land appropriation and narrative justification.

Israeli authorities have invested significantly into the development of drip irrigation. The Israeli Ministry of Economy created financial incentives, subsidizing up to 50% of the costs of research and development of agricultural technology. Around 80% of Israeli agricultural technologies are sold overseas to countries in the European Union, Asia, Central and South America, and the United States, generating increasing profits in recent years. In fact, Israel has been so successful in its efforts to promote its agricultural technologies that 30% of the global drip irrigation market comes from Israel alone (Who Profits, 2020a: 11). Addressing the importance of transferring water-saving technology for international diplomacy, a former member of the Ministry of Foreign

Affairs recently argued that “[t]he potential dividends are numerous — to the country’s political status, image and economy” (Oren, n.d.). In other words, the sale of green technology fosters international goodwill and complicity with Israel’s domestic indiscretions.

Drip irrigation has been championed by the Israeli government as one of many ways that Israel is “feeding the world” and exporting its green technology (Leichman, 2012). According to Rafi Mehudar, Israel’s self-identified drip irrigation “pioneer,” drip is

the only technology that has been proven to significantly increase the supply of food. We are already saving large parts of humanity from starving, and this is just the beginning. (Shamah, 2015)

Mehudar’s claim demonstrates several strands of greenwashing discourse: the exceptionalism of Israeli agricultural technology, the settlers’ move to innocence through “saving large parts of humanity,” and the invocation of an even more grandiose future in the assertion that this is “just the beginning.” What remains unarticulated is the entanglement of drip irrigation technology with violent land dispossession and the insistence on a futurity characterized by settler (ecological) domination. Even a source as ostensibly neutral as Wikipedia reflects greenwashing discourse. According to the page on agriculture in Israel,

[a]griculture in Israel is a highly developed industry: Israel is a major exporter of fresh produce and a world-leader in agricultural technologies despite the fact that the geography of Israel is not naturally conducive to agriculture. More than half of the land area is desert, and the climate and lack of water resources do not favor farming. Only 20% of the land area is naturally arable. (Wikipedia, 2018)

Once more, Israel’s status as “world-leader” and “major exporter” overcoming nature’s limitations to feed the world works to valorize overproduction. Together, these discourses constitute a form of greenwashing, masking the Israeli state’s foundational and ongoing destruction of communities and land.

The use of advanced agricultural technology in organic farming, grey water use, and drip irrigation in Israeli settlement agriculture echoes “proper use” narratives that have historically justified dispossession at the hands of settlers to advance Israeli interests in Palestine (Troen, 2013). The significance of these arguments should come as no surprise given the importance of agriculture to settler continuity on the land; as a sedentary, permanent practice that undermines Indigenous resilience by transforming native land, flora, and fauna into resources, agriculture is essential to settler colonialism (Wolfe, 2006: 395).⁵ Nevertheless, settler agricultural activity tends to go overlooked within debates about West Bank settlements, in spite of its far-reaching territorial implications, humanitarian repercussions, and threats to Palestinian civil society and state-building.

Israeli settler agriculture occupies more than one and a half times more land than the built-up area of settlements and is one of the factors driving the drastic decline of Palestinian land cultivation in the West Bank over the last decade, making it the most effective means of land takeover in the West Bank (Kerem Navot, 2013: 6). 28.5% of the most arable agricultural land within the territory of Israel/Palestine is in the occupied Jordan Valley (Who Profits, 2020a: 23). By emphasizing the abundance created by Israeli innovation, discourses of agricultural improvement have historically drawn attention away from the role of Israeli agriculture within the conquest of Palestinian land. In recent years, Israeli agricultural discourses have begun incorporating assertions of fighting global warming, scientific expertise, and accepted meanings of environmental protection and sustainability in the modern era. Within the context of global climate crisis, these greenwashing narratives of eco-modernization operate not only as rationalizations of Zionist settler colonialism, but also as settler moves to innocence through environmental innovation. These developments in drip irrigation and other agricultural technologies framed as “benefitting the rest of the world” happen on

appropriated Palestinian land. In a 2020 report, Who Profits highlights that “by taking part in agricultural experiments carried out on occupied land and in partnership with settlement R&D centers, companies actively contribute to the expansion of illegal agricultural production by settlers and to the normalization of land grabs and dispossession” (2020a: 22).

In addition to its entanglement with land dispossession, drip irrigation also harms the health and longevity of Palestinians. Drip irrigation requires special fertilizers and is used by Palestinian farmers and agricultural workers alike; however, most pesticide labels are written only in Hebrew or English. As a result, 86.3% of surveyed Palestinian farmers were unable to read the instructions; many explained that they had not received any education about how to deal with fertilizers and pesticides, and that they did not understand the environmental impacts on air and water quality (Al-Sa’ed et al., 2011: 524). As a result, since at least 2011, there has been a strong correlation between the carcinogenic pesticides used by Palestinian farmers and hospitalized cancer cases (Ibid.: 522). Whether the omission of Arabic-language instructions is due to negligence or intentional misinformation on the part of drip irrigation pesticide developers, it has deadly effects on Palestinian communities and ecologies.⁶ Development is only “sustainable” when it meets the needs of the present without compromising the ability of future generations to meet their own needs. In addition to challenging the “sustainability” of several green initiatives, there is also a question of *who they are sustainable for*. Israeli green technologies are clearly unsustainable because they undermine both the current and future ability of Palestinians to meet their own daily needs.

This degradation of Palestinian ecologies begs the question: if settlers are hoping to eventually “inherit” Palestinian land, why are they poisoning it in the meantime? The answer lies in the structural unsustainability of settler colonialism, based in extractivism and capitalism. Though settlers destroy Indigenous relations of resilience and strive to replace Indigenous adaptive communities with their own, settler models of interaction are premised on the idea that “proper use” of Indigenous land entails meeting its “maximum productive capacity,” which is inherently unsustainable. Whyte explains, “[f]or Indigenous peoples under settler colonialism, wrongful domination is locatable... [in the] settler intent to undermine Indigenous collective continuance (and hence Indigenous ecologies) through disrupting the qualities of relationships that are constitutive of collective continuance and that facilitate social resilience or adaptive capacity” (2018: 136). This is the third environmental injustice described by Whyte: due to the driving force of capitalism, which goes hand-in-hand with settler colonization, settler societies are not marked by high levels of collective continuance. Moreover, settler perspectives on ecological harm mask settlers’ own responsibility; as argued by Paul Guernsey, “[i]nfrastructures of settler perception obfuscate the ways in which Native communities experience environmental emergencies as cycles of settler colonial violence and ecocide. Emergencies such as global warming are described as ‘human-caused’ rather than directly linked to settler colonialism, capitalism, and White supremacy” (Guernsey, 2021: 1). In undermining Indigenous collective continuance, settler societies also undermine their own, suppressing their unsustainability by denying the basis of their societies in the racialized domination of beings and land.

Conclusion

Throughout this article, we argue that Israel’s strategies for sustainable resource management and ecological stewardship are fundamentally structured by its project of settler colonial dispossession. Capitalism alone cannot not account for Israel’s destruction of Palestinian solar panels and militarized seizure of agricultural land. It follows that ecological violence in Palestine must be understood through analyzes of settler environmental injustice. Settler colonialism is not an unintended threat to Indigenous collective continuance; dispossession is not incidental to Israeli “sustainable

development.” Instead, appeals to expertise in climate change mitigation, environmental protection, sustainability, and “green” agriculture work to obscure and sustain the appropriation of Palestinian land. We assert that in settler colonial contexts our understanding of socioecological sustainability must include any efforts by settler society to undermine indigenous collective continuance, or social resilience, through purportedly sustainable technologies or activities. Ecological management and green development don’t *become enrolled in* settler colonialism; coming out of settler colonies they are inherently linked to and driven by logics of dispossession, elimination, and replacement. Further, in defining environmental issues as the degradation of nature (separate from human—and in this case, Palestinian—life) Israel promotes itself as a responsible manager of Palestinian lands. We therefore argue that whether the outcomes of these projects are largely “sustainable” (i.e. water conservation and renewable energy), “unsustainable” (i.e. dumping waste near Palestinian villages and destroying solar panels), or some combination of both, their development and implementation within Israel/Palestine still inevitably works to reassert Israeli control over Palestinian people and territory. In short, Israeli sustainability sustains settler colonialism.

Fanon writes, “[l]et us admit it, the settler knows perfectly well that no phraseology can be a substitute for reality” (1962, quoted in Tuck and Yang, 2012: 2). Indeed, attending to the incommensurability of settler capitalist environmentalism and Indigenous frameworks “won’t get anyone off the hook from the hard, unsettling work of decolonization” (Tuck and Yang, 2012: 4). In addition to challenging settler phraseologies, we must also challenge the settler notion that our responsibility ends at properly articulating the problem. Instead, we must support interruptions that unsettle innocence and recognize incommensurability, such as Indigenous challenges to settler environmental governance. These offer us vantages onto more sustainable and just futures.

Highlights

- Israel’s purportedly “green” environmental infrastructures—like waste management, renewable energy, and “agritech”—are mechanisms for land appropriation and dispossession.
- Israeli state and corporate actors use “greenwashing” discourse, emphasizing environmental innovations to distract from land dispossession and settler violence.
- Israel’s green technologies and discourses work to ensure ongoing settler occupation while severing Palestinian relationships to and on land.
- Examinations of sustainability and environmental (in)justice in Palestine/Israel must account for neoliberal and settler colonial contexts.
- In addition to constituting cases of environmental injustice, Israeli environmental management practices must be understood through frameworks of settler colonialism.
- Israeli environmental technologies and the associated greenwashing discourses work to advance settler futurity and collective continuance in Palestine.

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Notes

1. The terminology of “green” is, itself, predicated on the colonial bifurcation of “social” and “ecological” life (Alatout, 2006), which violates relations of reciprocity through the transformation of (non)-human life into “resources” (Curley, 2021). Dominant understandings of what is and isn't “green” are forged through approaches to environmental management that seek to secure the long-term resilience of global extractive capitalism. As such, we use the term “green” to highlight institutional demarcations of environmental impact rather than material ecological conditions. Conversely, we use the term “socioecological sustainability” in alignment with Kyle Whyte's framework of collective continuance. This approach reflects our understanding that a technology's reduction of greenhouse gas emissions does not guarantee that it will support the long-term survival of human and non-human life and relationships.
2. While greenwashing is traditionally a term that scholars and activists use to describe private actors falsely representing themselves as environmentally sustainable, our usage of the term suggests that state actors can also participate in greenwashing, and that states can also be the objects of greenwashing.
3. Contrary to popular belief, this phrase originated among Christian Zionists (Goldman, 2009: 22–3), highlighting the significance of Christian hegemony and Western coloniality in shaping Zionist thinking. Because settler colonialism in both Palestine and North America is rooted in a shared lineage of European, Western, and Christian domination, our analysis is relevant to other settler colonies as well.
4. Our argument about the fundamental unsustainability of Israeli green technology should not be extrapolated to essentialize Palestinian relationships to land as inherently sustainable. Indeed, Palestinian approaches to ecological management have been and continue to be heterogeneous and outside of the scope of this study.
5. In contradiction to the settler emphasis on agriculture, Israeli authorities have reclassified much of the arable land of the Jordan Valley as a “closed military zone” that can later be settled (Who Profits, 2020a, 2020b: 23). Despite their rhetoric of “feeding the world,” Israeli authorities ultimately prioritize military occupation, land, and water dispossession over agricultural production.
6. Drip irrigation is not the only site of pesticide toxicity that affects Palestinians; in May of 2021, B'tselem featured a story about several farmers in the West Bank who noticed that their trees were poisoned by nearby settlers (B'Tselem, 2021).

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