FLOOD
Forced Emplacement
Flood Exposure and Contested Confinements,
from the Colony to Climate Migration

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ABSTRACT: As intensifying floods and other climate extremes proliferate, narratives of unidirectional climate migration have become ubiquitous in media coverage and policy debates. This article reviews new scholarship that attends to an underreported dimension of climate change impact exposure. Emerging conversations in Indigenous climate justice research, mobility studies, and critical urban adaptation scholarship seek to understand why so many marginalized communities find themselves immobilized in the face of climate extremes. I argue that these scholars are building a concept of forced emplacement to politicize and historicize the uneven distribution of climate harms. Drawing on this scholarship and brief ethnographic sketches from my work in Peru and the Maldives, I follow forced emplacement across diverse case studies that root devastating immobilizations from flooding in local histories of colonial confinement, unevenly policed mobility, and varied efforts to control marginalized populations. I also illuminate how climate-exposed communities contest adaptation projects that reproduce their immobilization.

KEYWORDS: climate adaptation, climate mobility, colonialism, environmental justice, flooding, immobilization, infrastructure

Breathless headlines about climate-linked human movement have proliferated in recent years. “Welcome to the Age of Climate Migration,” Rolling Stone warned after 2017’s Hurricane Harvey (Goodell 2018), its cover a dystopian image of bumper-to-bumper traffic on a Houston highway, the city behind it improbably engulfed by both flood and fire. In a 2020 New York Times Magazine cover story, Abrahm Lustgarten predicts “the greatest wave of global migration the world has seen” (2020). Across media, policy reports, and certain areas of scholarship, climate migration narratives conjure flows of water beyond its proper boundaries to convey a sense of doom at the idea of people forced from their homes (Bettini 2013). Metaphors of “rising tides” (Wennersten and Robbins 2017), “streams” (Vince 2022: xi), “surges” (Baker 2015), and “floods” (Spencer 2014) of desperate migrants pervade climate coverage. This aquatic language repro-
duces an earlier xenophobia from security scholars’ alarm at “bulging populations” and “waves of environmental refugees that spill across borders” (Homer-Dixon 1991: 77).

Popular images of climate migration as a figurative flood reflect a commonsense vision of what is normal and stable in much of the world: a notion of order in which humans tend to, and should, remain anchored to one place, with a single address, a single home region, and a single nationality. Underlying this vision is the assumption of a tamed unchanging environment rooted in the Enlightenment premise of “moderate and orderly” nature (Ghosh 2016: 22). Both water and people “out of place” violate a dominant global order (see Douglas 2002). Indeed, literal flooding disasters now routinely destabilize this homeostatic premise, dramatizing tensions between that which is meant to be contained and that which is meant to be mobile.

Recent scholarship in the emerging ethnography of climate change critically contextualizes the relentless media focus on boundary-defying climate migrants by focusing instead on the conventions of sedentariness that underlie this policy anxiety. This review article tracks three new scholarly conversations demonstrating that simplified narratives of climate-driven cross-border migration are incomplete: historically informed climate justice research led by Indigenous scholars, climate mobility studies, and the scholarship on how urban built environments face climate extremes. This work illuminates how climate change also intensifies existing forms of immobilization. It reveals paranoic obsessions with people out of place as frequently rooted in long-standing projects of confinement. In this review, I follow how critical scholarship on efforts to contain certain marginalized populations contributes a new conceptual architecture for understanding uneven exposure to climate change in sites of extreme flooding.

I argue that these scholars are building a concept of forced emplacement as a necessary ethnographic complement to existing narratives of unidirectional forced migration. Of course, not all emplacement is unwanted. Indeed, attachments to home, dwelling, and place are essential to climate justice struggles. This review, however, focuses specifically on the unbeckoned emplacements featured in a blooming collection of case studies that contextualize efforts to limit the mobility of populations exposed to acute climate impacts within deeper local histories of colonization, sedentarization, and diverse forms of state control of marginalized communities. Reproducing a normative order of sedentary living, many contemporary policy narratives also frame secure containment as the ideal endpoint of any climate adaptation trajectory. I therefore read forced emplacement not as an objective condition, but as a project. Confinement, as the scholars I review below suggest, is a policy aim through which diverse legacies of immobilization reverberate to shape uneven exposure to climate extremes. Confinement projects are also contested, resisted, and refused in multiple ways, as these scholars illustrate.

In what follows, I trace three conversations in contemporary critical climate scholarship that trouble the taken-for-granted permanence of built environments and the sedentary ideologies at their foundation. First, I outline the Indigenous-led historical climate justice analysis of colonial and state confinements in the Americas as enduring legacies observable in case studies of present-day exposure to flood-induced immobilization. Second, I turn to new scholarship in climate mobility studies and the ethnography of community relocation that develops structural critiques of uneven immobilization for an era of intensified flooding. Third, I address the interdisciplinary environmental justice conversation on resilience projects and uneven disaster recovery in flood-prone urban built environments structured, in part, by projects to contain historically marginalized and racialized communities while defending the city as a permanent political entity. The review moves from forced emplacement’s beginnings in diverse histories of confinement to a discussion of how those histories shape enduring imaginative commitments to sedentary living in the present that constrain dominant visions of future adaptation and resilience.
Each section opens with a recent flood story that highlights the section theme. The first two sections also feature brief sketches from my comparative ethnography of climate mobility in Peru and the Maldives. This research has been ongoing since 2011 and was most developed over twenty-six months of fieldwork in Peru between 2013 and 2019. My methods have entailed living with and following highlanders and islanders from historically mobile communities as they engage with and struggle against state climate adaptation projects (see Hirsch 2015, 2022).

This article illustrates one way critical climate researchers are taking up the charge recently posed by Sarah Vaughn, Bridget Guarasci, and Amelia Moore to develop “scholarship that can focus on the immediacy of structural violence and creative agency in the now of everyday life without resulting in dehumanizing, reductive essentialisms or facile critiques” (2021: 285). Literature linking environmental injustice to histories of domination and enduring legacies of colonialism is far too vast to cover comprehensively. Here, I complement existing reviews that historicize uneven climate vulnerability (Gutierrez et al. 2021; Thomas et al. 2019; Vaughn et al. 2021: 285). My narrower method in curating this review has been to select case studies from the last decade that illuminate climate-intensified immobilization as an emerging site of political struggle.

**Historicizing Forced Emplacement**

In March 2019, the United States’ upper Midwest faced a bomb cyclone. A massive blizzard followed by sudden temperature increases resulted in flooding that decimated homes, towns, and farmland (Hansen 2019). The flooding forced a sustained humanitarian crisis upon the Oglala Lakota residents of the Pine Ridge Reservation in South Dakota. Many residents were stranded in their homes as supplies of food, potable water, and medicines dwindled. They reported feeling as if they were under “house arrest” (Smith 2019). This immobilization crisis was compounded by severely limited government disaster support for Native American tribes, and by the US reservation system itself, which was colonially designed for isolation and containment.

Two years earlier, in a region whose dwelling patterns reflect a distinct colonial history of ordering space, Peru’s desert coast saw devastating floods resulting from El Niño-linked downpours. Thousands of inhabitants of marginalized neighborhoods within Lima, Peru’s capital city, and in other coastal cities, were left stranded or trapped in their homes. The damage to lives and land was compounded by an extreme drought immediately preceding the rains that primed the terrain for mudslides. Flooding and mudslides led to over 100 deaths, the destruction of some 100,000 homes and businesses, and dengue and zika epidemics (Ramírez and Briones 2017).

In both sites, the trapping and stranding of systemically marginalized people by floods compounds deeper legacies of colonial projects to relocate, consolidate, and contain Indigenous populations. Climate justice scholars of the contemporary Americas are tracing how legacies of colonialism and imperial plunder often configure local exposure to climate extremes such as flooding (Whyte 2016). As part of this project, ethnographers, geographers, historians, and philosophers are excavating the underlying historical and biopolitical arrangements through which environmentally responsive mobility and migration have been pathologized (Hardy et al. 2017; Shearer 2012; Thomas et al. 2019; Weiss et al. 2018) and subjected to what Patrick Wolfe called the “settler logics of elimination” (2006: 387). Historians have made clear that colonial containment projects across the Americas depended on forced displacement, genocide, the Atlantic slave trade, and other violent means of reordering life (Low 2015; Smallwood 2008) and terraforming colonial landscapes (Crosby 1986; Grove 2019). As calls for climate adaptiveness and resilience intensify, climate justice research is shining a new critical light on contem-
porary mobility constraints that reflect colonial world-making. Certainly, not all colonialism is the same. Colonial and state domination over Indigenous peoples varied considerably across contexts. Rather than parsing those specific histories, this section follows case studies across a small sample of local settings in the Americas where contemporary forced emplacements reveal traces of colonial resettlement, state sedentarization, and other population management strategies that involved the spatial confinement of marginalized communities. Those historical legacies reverberate into the present as compounded barriers to generating sovereign responses to emergencies like flooding.

Climate coloniality researchers demonstrate that the premise of single-sited sedentary living was long exceptional in much of the world. They mark sedentarization as an active project that in many places required significant violence to maintain. Scholarly work on North American settler colonialism extends historical critiques of enclosure and private property regimes that privileged Lockean sovereignty over fixed stretches of land as the ultimate indicator of white European racial superiority (Bhandar 2018; Campbell 2015; Harris 1993) by pinpointing how essential the policing of Indigenous movement was to colonial settlement. Potawatomi philosopher Kyle Whyte (2018) documents how the project to pathologize Indigenous mobility as unruly, excessive, or other to settler mobility is an effort to eliminate historically elaborated human relations with the nonhuman environment that allow for deft responses to disruption. Whyte expands research on the effects of Indigenous sedentarization in settler-colonial contexts to understand how they now structure climate vulnerability. For example, he notes how pre-colonial adjustments in dwelling habits and social organization such as the Potawatomi seasonal round were part of a continuous responsiveness to ecological change. Anishinaabe mobility principles more broadly entail living in and building simultaneous relations with many places to ensure abundance and ecosystem redundancy, which Whyte defines as a buffer of available sites for provisioning wild rice and other sources of sustenance (2018: 129–131). Anishinaabe migration myths emphasize that dwellings were not fixed or permanent but “a stopping point” (Scott Lyons, cited in Whyte et al. 2019: 322).

In contrast to these mobilities, Whyte writes, “fixed rights of treaty areas and fixed jurisdictions of reservations, established during the nineteenth century, place limits on Indigenous peoples, effectively rendering them immobile” (2016: 91). These immobilization projects, while never fully successful, persist. Kahnwá:ke Mohawk anthropologist Audra Simpson’s study of Mohawk nationhood and refusal reads mobility as a freedom that settler nation-states continually strive to eliminate. As one of her interlocutors indicates, “In the ideal world, we would move through our traditional territory with no impediments” (2014: 162). “Settlement,” meanwhile, connotes permanent post-invasion emplacement while disguising the privileged mobility settlers grant themselves over the lands they occupy (Carpio et al. 2022).

Sedentarization of Indigenous peoples has been a relatively recent process in much of settler-colonial North America (Marino 2012). Some Canadian sedentarization policies began as recently as the mid-twentieth century, as Inuk politician and climate activist Sheila Watt-Cloutier details in her memoir recounting social change alongside diminishing arctic ice (2018). As Métis scholar Zoe Todd notes, sedentarization operations are perpetuated, in part, by built structures (2017). Elizabeth Marino identifies settler infrastructure as a material enforcer of sedentarization in her climate change ethnography of the Inupiat community of Shishmaref, Alaska (2012). She argues that colonial infrastructure installation was a project to “trap” Shishmaref residents in place (2015: 58). The condensed siting of infrastructures on a barrier island long known for its exposure to flooding was decided without local representation or expertise. Shishmaref has a long history of inter-ecosystem and seasonal mobility, with travel for marine hunting and other practices facilitated by movement over highways of arctic ice. Marino notes how the gov-
ernment school, its authority supported by state laws mandating universal education, exerted a centripetal force that confined that mobility. At this unmoving institutional center, state-employed teachers further worked to reduce mobility by assimilating Shishmaref children into US settler culture. This infrastructurally enforced confinement on the barrier island compounds Shishmaref residents’ exposure to habitual flooding.

Tlingit anthropologist Anne Spice further illuminates the confining force of settler “critical infrastructure” (2018: 40) in the context of the Coastal GasLink pipeline project in British Columbia. Infrastructures like pipelines can serve beyond their primary purpose of “facilitating the flow of goods, people, or ideas” (Brian Larkin, cited in Spice 2018: 41), enacting settler projects of permanent domination over humans and nonhuman landscapes by forcibly limiting Indigenous mobility through their territory. In her ethnography of resistance to pipeline construction on Unist’o’ten land, Spice describes a Wet’suwet’en protest encampment that serves as a distinctly permanent infrastructure, refusing mobility-limiting pipelines with a collective emplacement meant to strengthen Indigenous relations with the land.

Research on South American climate extremes follows how distinct regional legacies of forced confinement during colonial, early republican, and more recent eras of state population management help to shape uneven immobilization in present-day flooding events. Imperial Spain’s empire-wide convention of condensed villages of fixed legible settlements was an effort to control Indigenous movement, extract forced labor, and eliminate locally elaborated mobilities (Rafael 1988; Wernke 2013). In Peru, colonial efforts to remake relations with the land would have dire consequences for the future ability to withstand climate extremes in some communities, as one case study of colonial ecological erasure demonstrates. Archeologist Ari Caramanica and co-authors (2020) studied precolonial El Niño flooding events in the Pampa de Mocan, on Peru’s northern desert coast. In contrast to contemporary technocratic approaches in Peru that take El Niño flooding to be a disastrous anomaly threatening the foundations of how people live, precolsonial inhabitants of the region saw El Niño events as weather changes they could expect and accommodate. For 2000 years, Pampa de Mocan residents maintained a network of flexible irrigation canals that allowed them to channel excess water from rare El Niño inundations onto otherwise unfavorable terrains. They harnessed floodwaters to produce “spectacular vegetative transformations” and an augmented agricultural bounty (2020: 24130). The precolsonial irrigation flexibility these researchers found was dramatically distinct from the region’s colonially founded irrigation infrastructures. This centralized irrigation infrastructure persists into the present in parts of Peru as intricate but brittle systems of immovable canals supporting fixed property lines, condensed European-style towns, and industrial monocropping.

Peruvian sociologist Aníbal Quijano coined the phrase “coloniality of power” (2000) to signal that the country’s colonially established racial and spatial hierarchies organize uneven development in the present. When viewed in light of Peru’s most recent El Niño disaster, the erasure of precolsonial adaptability suggests that the coloniality of power also configures inequitable exposure to Peru’s intensifying climate dangers. Colonial sedentarizing and landscape-dominering ideologies help to shape present-day exposures to flooding that harm marginalized and Indigenous communities, many of whom reside in shantytowns outside of Peru’s coastal cities, sites associated with class mobility (Altamirano 1984; Babb 2020) that were acutely susceptible to El Niño floods and mudslides.

My own research in rural Peru involved working with people who refuse containment. Don Gerardo Huaracha, my longtime host in the rural Colca Valley, in Peru’s southern Andes, has long maintained a network of fields, homes, kin, and dwellings at multiple elevations throughout highland and coastal Peru, moving against the grain of the region’s colonially established and state reinforced sedentarization. His multisited engagements with the variegated land-
scape reflect a redundancy tactic found widely among Andean agriculturalists and herders that Gerardo traces to the era before Spanish and Inca colonialism (see also Manrique 1985). Today, Gerardo’s multisited practices entail rotating between middle-elevation quinoa, barley, wheat, and potato fields, tending his highland alpaca herd, engaging in communal irrigation labor, visiting with kin, and entertaining guests and tourists in his Yanque home and archaeological museum. Gerardo narrated his life history to me as one of movement between the Andes and the coast, exemplifying a narrative genre I call “mobility stories” (Hirsch 2018). Gerardo described the joy of allowing planting and harvesting work to dictate his movements through the region. He detailed the pleasure of sleeping in warm fields after a day of work and awakening to prickly frost. This is a rural region where, despite its colonially configured governance institutions, many agriculturalists feel a state abandonment that translates into a sense of political autonomy: as another Colca resident put it, “Peru is in Lima.” While the widespread mobile and multisited living Gerardo described was not explicitly political, it quietly defies the force of population containment rooted in the centralized Spanish colony.

Multisited mobility is especially useful to Colca Valley residents in moments of environmental disruption. In June 2020, a landslide occurred between the villages of Yanque and Achoma. A hill’s worth of dry sediment crashed into the Colca River, damming the river and flooding the surrounding agricultural land. As on the coast three years before, this landslide likely resulted from terrains made unstable by the region’s multiyear drought and newly erratic rains. Several of my Yanque-based interlocutors broadcast the flood on social media. Their feeds showed a dramatic water level increase, as the flooded river weakened bridges and inundated homes and fields belonging to 68 families. The dam took weeks to break, given the difficulty of securing government disaster aid. The effect was damaged crops, inaccessible fields and businesses, and inhibited regional mobility with intervillage pathways inoperable. Residents were safe but lost significant investment, with seeds and crops left to rot. Families with the ability to move between multiple agricultural terrains fared best in the flood’s aftermath.

This first series of case studies details diverse historical projects of population confinement and landscape micromanagement in the Americas that help shape how marginalized communities come to find themselves immobilized in the face of extreme flooding in the present. These scholars demonstrate that colonial legacies can endure through their ability to structure uneven privileges to, restrictions on, and defiant forms of mobility. The next section turns to the scholarship on present-day climate mobility and immobility.

Climate Mobilities Otherwise

Flooding is familiar to residents of the Maldives, a nation of 1,192 low-lying islands. Images of knee-high water, motorcycles repurposed as jet skis, and floating trucks populate the “flood” tag in Avas, a Maldivian online newspaper. Torrential rains and flash flooding have recently affected thousands of Maldivians, with floods in November 2021 in Meemu atoll, in May 2021 in Addu Atoll (Davies 2021), and many others. Floods reached Malé, the fortified Maldivian capital, in 2019 (Asif 2019). Malé’s shoreline is protected by a seawall funded by the Japan International Cooperation Agency. The islands’ low elevation and the recent destruction of mangroves and coastal wetland ecosystems in the name of harbor development accentuate the ease with which rising floodwaters invade streets and homes. Flooding is intensifying due to climate change. Thanks to a vocal former president, Mohamed Nasheed, the Maldives became a poster-child for the globalized narrative that inundations from rising seas would soon render island nations uninhabitable, leading to a mass exodus of homeless citizens (Hirsch 2015).
The emerging literature on “climate mobilities” (Boas et al. 2022) within mobility studies, and related work on immobilization and forced migration, takes human movement as foundational to social life, rather than an exceptional state (Sheller 2018). Relatedly, forced migration scholars critique policy frameworks that view populations fleeing atrocity as pathological, and that limit their mobility through the violent spatial technologies of the refugee camp (Besteman 2016: 57–76; El-Shaarawi 2021; Feldman 2018) and the “enforcement archipelagoes” of offshore detention (Mountz 2020). These securitized sites are ostensibly temporary dwellings that, for many asylum seekers, enforce a decades-long immobility akin to incarceration. As Neel Ahuja suggests, the figure of the climate refugee is easily slotted into this category of pathologized mobility as a paradigmatic sign of deviance from the conventional global order of permanent dwellings and belonging to stable nation-states (2021).

New research on climate mobility suggests that the widely circulating narrative of unidirectional, large-scale, or cross-border migration out of climate-exposed countries that ends, in its best-case scenario, with resettlement to sedentary safety (Clark and Bettini 2017; for examples of this narrative, see Environmental Justice Foundation 2009; Vince 2022) provides an incomplete picture of how people are moving in response to climate extremes. Mobility researchers show how climate change provokes a deeper rethinking of existing “mobility regimes,” or the political frameworks through which certain forms of mobility and stasis are normalized while others are pathologized (Glick Schiller and Salazar 2013). They build on the nuancing that the Foresight report (2011), from the UK Government Office for Science, has contributed to policy debates by demonstrating that climate-related mobilities are multicausal and multidirectional (see also Black et al. 2013).

Climate mobility scholarship shows how flood-exposed Indigenous groups, Island dwellers, and marginalized communities are creatively reimagining their mobility practices, remaking concepts of place, and articulating a more combative resistance to international policy frameworks that accept that their homes will inevitably become uninhabitable. In illuminating the new forms of agentive mobility and immobility that climate extremes are occasioning, I argue, this literature also reveals systematic efforts to constrain that agency, contributing to the concept of forced emplacement. In the rest of this section, I inventory a selection of recent insights on contemporary movement and confinement from the climate mobility literature by highlighting recent special issues of *Mobilities* and the *Journal of Ethnic and Migration Studies*. Then, I review the case of constrained mobility in US climate disaster planning, in which colonial foundations and capitalist logics hinder relocation planning in Indigenous communities exposed to intensifying flooding. Lastly, I discuss my ethnographic findings from a project to delimit mobility in the flood-exposed Maldives capital region.

The *Mobilities* special issue “Anthropocene Mobilities” (Baldwin et al. 2019) investigates new forms of agentive mobility and immobility, as well as new constraints, which are emerging in the face of climate change. Since its inception, the main project of mobility studies scholarship has been “challenging views of territories and places as fixed, and questioning understandings of mobilities as exceptional, and sedentary lifestyles as the norm” (Boas et al. 2022: 3368; see also Adey 2006; Sheller 2018; Urry 2007). Climate extremes such as flooding test what Mimi Sheller has called the “sedentary ontologies” (2018: 28) that inform existing hegemonic understandings of dwelling arrangements, movements, borders, and abstract political space (see also Gupta and Ferguson 1992). The special issue authors urge an ethnographically informed approach to climate-responsive movement that takes seriously its potential diversity and that accounts for uneven histories of capitalism, fossil fuel development, and colonialism. Contributions include an intervention by Kyle Whyte, Jared Talley, and Julia Gibson on Indigenous mobility traditions (2019; see previous section). Philosopher Thomas Nail’s contribution suggests replacing
the problematic “Anthropocene” label with “Kinocene,” to characterize the present as “an age of movement” (2019: 375) of humans, nonhumans, materials, and ideas.

Much of the special issue focuses ethnographically on how tensions between mobility and immobility play out through climate change. A contribution by Samid Suliman and co-authors (2019) details how Indigenous Pacific Islanders refuse forced emplacement, whether by coastal flooding or at the endpoint of an out-migration policy. The authors note that some Pacific Islander activists and artists do not view permanent resettlement as a viable climate adaptation plan. Pacific Islander communities are historically mobile, conceptualizing their ocean region not as small islands isolated from one another but as the vast expanse that Fijian writer Epeli Hau‘ofa famously called a “sea of islands” (cited in Suliman et al. 2019: 298). They contest dominant imaginaries of adaptive out-migration from regions exposed to flooding and sea-level rise that are “inherently state-centric, sedentarist, anthropocentric, developmentalist, ahistorical and universalist” (2019: 306). They use poetry, protest, and performance art happenings to mobilize the pan-Pacific concept of *banua, which designates meaningful relations with land, ocean, and place. *banua disrupts the generic sense of dwelling as a motionless empty container of security that is placeless and interchangeable. These artists and activists see, at the end of hegemonic out-migration teleologies, forced emplacement in the form of future life secured through sedentary living in places where islanders may have no relation to the land. Instead, they emphasize the possibilities of prioritizing a willing, regional, multisited emplacement in a home that encompasses islands and ocean and is built on mobile relations.

One performance art piece the authors analyze is Repatriate 1 by Tongan artist Latai Taumoepeau. The piece dramatizes forced emplacement as a drowning for which conventional concepts of being “saved” are untenable. The artist stands in a tank that slowly fills with water. She performs a traditional Tongan dance as the audience looks on, unable to save her. Her piece dramatizes a refusal to accept adaptive migration, taking the form of an emplacement that is forced by climate impacts she did not cause. At the same time, the artist enacts a willing, sovereign decision not to be rescued on outsiders’ terms, because abandoning her home is an unacceptable alternative. “Climate change activisms such as these hint at the limits of the climate adaptation orthodoxy,” the authors write (Suliman et al. 2019: 306), noting how previously ignored voices are working to “confound” conventional adaptation visions (2019: 308).

The collection “Climate Mobilities” in the Journal of Ethnic and Migration Studies (Boas et al. 2022) also resists representations of climate refugees in need of saving. The authors highlight scholarship on mobility and displacement that details the multiplicity of “relatively local mobilities” that characterizes how people respond with movement in contexts of acute climate extremes (2022: 3366). Among the collection’s contributions, Carol Farbotko tracks a Tuvaluan re-emplacement activist movement and its “anti-displacement mobilities,” or mobilities that are distinct from the out-migration trajectory imagined as inevitable for Tuvalu (2022). Other authors find Senegalese fishers incorporating long-distance labor migration as a climate change response (Zickgraf 2022) and critique documentary films that sensationalize climate refugees (Durand-Delacre 2022). These authors demonstrate diverse forms of contesting mobility regimes that posit safety as long-term sedentariness. “Climate mobilities,” the editors argue, “are neither unidirectional nor singularly determined” (Boas et al. 2022: 3375). They call for analyses that “push back against perspectives of settlement as a norm, or against pushes for relocation under ‘climate refugee’ storylines” (2022: 3375).

Scholarship on planned community relocation in the United States, however, demonstrates that some Indigenous communities must compromise with the mainstream adaptation narratives that the above climate mobility scholars contest in order to secure relocation funding. Even as they do so, they face the legacies of settler-colonial confinement, with the path to relo-
cation filled with the bureaucratic obstacles of a federal policy culture that cannot compute the preventative organized relocation of an entire community. The Alaska Native communities of Shishmaref (Marino 2012, 2015), Kivalina (Shearer 2011, 2012), and Newtok (Ristroph 2021) all voted to relocate at the turn of the twenty-first century, but their plans remain in suspension. Shishmaref has been deliberating about relocation for nearly fifty years. Compounding the spatial legacies of colonial mobility-limiting infrastructure, stalled relocation introduces a forced emplacement double-bind, where communities cannot move, yet settler governments neglect infrastructural upkeep and community needs with the logic that investing in a village about to relocate is a waste of resources. The Indigenous residents of Isle de Jean Charles, Louisiana, face similar obstacles to their planned relocation from a flood-prone peninsula whose marshy lands were degraded by the oil industry, as Julie Maldonado describes (2019). They were awarded $48.3 million from the Louisiana government in 2016 to relocate as a community to higher ground 40 miles away from the islet. The relocation effort has since been hobbled by bureaucratic obstacles, legal challenges, and interagency confusion that has eroded tribal sovereignty over the move (Jean Charles Choctaw Nation 2022). These cases of stalled relocation reveal forced emplacement in the systematic blockage of flood-exposed Indigenous communities from a collective move. The publicity these cases have generated also highlights the ironic coexistences of mobility and immobility. Although these communities remain barred from collective relocation, individual members circulate widely as advocates. They appear at international climate talks and on global stages to draw attention to the injustice of being forced to move due to the climate extremes they face and the simultaneous, compounding injustice of their community’s inability to do so, despite the dangers of staying.

A last example of compelled sedentarization from my ethnographic research shows the Maldives working to ensure its survival as a nation. There, efforts are underway to incentivize 240,000 inhabitants, about 70 percent of the population, to resettle from small flood-exposed islands onto a new artificially dredged island called Hulhumalé, which has been under construction since 1997. My 2011 visit involved a daylong walk around the geoengineered island. I saw empty housing developments and new construction zones blooming alongside vacant lots and wild brush. I also saw work to expand the island itself and the construction of flood protections along its artificially high coastline. Population consolidation was a policy charted out in the Maldives’ 2009–2013 Strategic Development Plan and the 2016 national budget (Maldives Independent 2015). This policy vision emphasizes voluntary relocation to relieve overcrowding and a housing shortage. It expresses the government’s interest in reducing public infrastructure costs on low-population, flood-exposed islands distant from the capital. The likely long-term effect will be to allow smaller islands to fall into neglect, confining once-rural Maldivians to a condensed capital region as their island homes are sacrificed.

Like the Pacific Islanders described above, Maldivians have historically been accustomed to traveling long distances across and beyond the Indian Ocean. Fishing, trading, shipping, and laboring are all occasions for present-day mobility between islands. Adil Hussein is an environmentalist and NGO staff member I spoke with at length during my visit. As we walked through Hulhumalé’s undeveloped lots, Hussein acknowledged that his professional position involved compromising with the state, public-private partnerships, and other funders in carrying out climate adaptation projects. However, he described his personal vision of resilience as rooted in a longer Maldivian history of treating islands as “temporary places.” As he explained,

The original Maldivians, they knew, they knew that these islands are not meant to last forever. So [they would] just move over to the next island . . . Every fifty years or hundred years we move with our architecture. Our architecture should be dismantlable. Yeah. Our way of life
should be much more sustainable... We have our roots in the soil... we don't want to cut our roots, but it was never like that... We have many uninhabited islands, which show signs of human habitation. What's the story there? The story is the people have left. They have moved to bigger and better islands. So that process should be here.

A population consolidated on an artificially dredged island geoengineered for protection against coastal flooding reflects a climate mobility regime in which enforced sedentarization is the dominant vision for securing human life. Hussein pushed back against this adaptation plan, even as he was tasked with helping to carry it out, by offering a competing vision of mobility between existing islands. Hussein reflects the tensions between distinct forms of mobility and immobility that the climate mobility scholarship engages in its diverse critiques of technocratic, centralized, and unidirectional adaptive migration narratives that have sedentary living as their endpoint. The technoscientific mastery over costal ecosystems that the Hulhumalé vision reflects is a theme that scholars of urban flood-prone terrains address directly.

The Permanent City, Inundated

On 1 September 2021, not long after Hurricane Ida made landfall on Louisiana’s Gulf Coast, the National Weather Service announced New York City’s first ever flash flood emergency. Much of the US northeast suddenly faced unprecedented floods, winds, and damage from a storm whose intensity was publicly attributed to climate change (Flowers 2021). It was through the city’s affordable housing crisis that Ida’s floods exacted their most tragic violence. Deaths across the city were the result of people being trapped in place. Eleven people drowned in their basement apartments (Zaveri et al. 2021), where they were immobilized by both flash floods and an extreme marginalization that constrained their ability to choose where and how to make a home.

Environmental justice scholars are building a critical focus on efforts to protect coastal and riverine cities like New York, where flooding is causing increasing disruption. In this section, I review how climate scholarship on urban built environments both identifies and widens the scale of the forced emplacements that floods render visible. I begin with scholarship that reads urban built environments as expressions of technical mastery over nonhuman environments. Then, I turn to recent critiques of top-down urban resilience planning and grounded analyses of flood disaster recovery. I highlight work that emphasizes how efforts to stabilize and control ecosystems reproduce ideological commitments to emplaced ecosystem domination while exacerbating uneven exposure to extreme flooding events.

Scholars have critically assessed the “human supremacy” (Crist 2019: 3) or “human exceptionalism” (Kimmerer 2015: 385) informing today’s cornucopian faith in urban structures, settlements, and infrastructures as permanent in the face of extreme flooding (Anand 2017; Ley 2021). Julietta Singh (2018) suggests that human mastery over nonhumans and subordinate humans is a core Enlightenment ideology underlying colonial projects of settlement and confinement. The modern urban form itself came of age in the forge of imperial and colonial expansion (Ghosh 2016). Urban geographers have attended to how colonial ideologies of mastery inaugurated many of today’s most powerful global cities as nodes of political and technical control over stolen land (Simpson and Hugill 2022). They describe how colonial infrastructures from railways to pipelines plot out visions for urban belonging, mark a city’s aspirational ecological domination, and enact differentiated mobilities and containments (Cowen 2020; Curley 2021).
Recent ethnographies have explored flood protections and their unintended consequences, reading how coastal engineering and infrastructure projects frame the city as a permanent unmoving form tasked with containing humans and nonhumans within fixed jurisdictional boundaries. Nikhil Anand follows Mumbai’s water infrastructure system, noting the multiple human and nonhuman relations through which engineers’ visions of water control often fail (2017). Lukas Ley’s study of repeat flooding and the failed promises of Dutch coastal engineering in Semarang, Indonesia, locates a persistent “technofix mentality” at the root of repeat infrastructural breakdowns when flooding strikes (2021: 4). Coastal adaptation infrastructure projects in Guyana also evidence a “technological optimism” and, as Sarah Vaughn demonstrates, open multiple opportunities for political contestation (2022: 2). Infrastructures that dominate ecosystems are polyvalent in how they are politically received by the communities that stand to be affected by their installation. Technologies of stabilization like levees and seawalls are often desirable forms of government-funded care and protection. Yet as Kian Goh demonstrates (2021; see below), resilience infrastructures can also cause major disruptions, exacerbate inequities, and become sites of political struggle.

Certain infrastructures and building materials index a command over space that encodes “specifically urban geographies of segregation and containment” (Cowen 2020: 480). Concrete, for instance, is utilized to confine humans and dominate and stabilize ecosystems. Anand Pandian observes that concrete is vital to a contemporary (sub)urban politics of protective confinement, enforced exclusion, and incarceration in the United States (2022). It is essential to the ideology of sedentary permanence underlying the US landscape of gated communities, border walls, fortified cities, and sophisticated private property boundary surveillance. From these architectures of seclusion, exclusion, protection, and immobility, Pandian reads a fantasy of stabilizing against uncertainty through militarized command and control, with concrete an instrument of maintaining privilege by keeping unwanted humans in what is deemed their proper place. Upholding this fantasy are the prison and reservation systems, which Robert Nichols identifies as an “archipelago of spatial containment” (2014: 454). Concrete’s materiality can also, by contrast, aid in refusing displacement and resisting the prospect of criminalized containment. Kali Rubaii’s analysis of informal Palestinian built environments centers concrete as an insurgent infrastructure of permanence. As Rubaii writes, “Concrete is a life inhibitor, inhabiting space so that other things cannot” (2016). Rubaii identifies concrete as a technology of aspirational sovereignty in the West Bank, where inhabitants in the path of settlement expansion who face potential criminalization use it to build permanent homes. Rubaii’s case shows concrete instantiating sovereignty as a token and instrument of agentive emplacement.

At the broader scale of the city, ideologies of infrastructural command over stabilized watery environments that depend on materials like concrete organize a top-down political commitment to urban permanence. Ashley Dawson traces these logics of mastery across today’s most populated coastal and riverine cities, identifying technoscientific protections as often counterproductive to the long-term effort to minimize harm from extreme flooding. Dawson mobilizes the term “environmental blowback” (2017: 75) to describe how ambitious engineering projects to make urban built environments resilient can intensify climate impacts. Seawalls may provide parts of a city with several decades of protection from storm surges if they do not exceed their estimated intensity, but they come with risks of erosion, habitat disruption, and water deflection onto what become sacrifice zones. Exacerbating this blowback, Dawson suggests, is what New Orleans-based geographer Richard Campanella (2010) calls the “levee effect”: a paradox in which flood protections like levees are viewed as so protective that their presence encourages development in the floodplain, which ultimately exacerbates the harms of flooding. Dawson traces urban resilience projects to the “racialized rhetoric of technological mastery” (2017: 80).
that characterized American settler-colonial expansion, in which the nonhuman environment and Indigenous inhabitants were cast as objects to be tamed (see Cowen 2020).

As Kian Goh elaborates in her recent book *Form and Flow* (2021), top-down approaches to flooding protections and other climate change impacts have proliferated under the banner of resilience planning. Resilience, for Goh, is engaged as a policy tool for perpetuating the power and permanence of the “command and control” global city (2021: 16; see also Roy 2011). Goh finds that the term’s connotation of “bouncing back” (2021: 9) is reflected in how resilience plans retrench the systemic inequalities of earlier modes of uneven urban development. Goh’s book follows climate resilience planning and climate justice activist “counterplanning” (2021: 115–148) in and across three flood-exposed cities: New York, Jakarta, and Rotterdam. One site of her analysis is Jakarta’s Great Garuda or Great Sea Wall project, which if built would become the world’s largest seawall. This technology of fortified emplacement for the urban unit is a Dutch design project that resulted from globally networked “policy mobilities” across major cities (Jamie Peck, cited in Goh 2021: 17). The seawall project rests on a tense combination of globalized mobile expertise and a future of selective local displacements and containments of marginalized residents to make way for the construction. Many of Jakarta’s poorest inhabitants are confined to *kampung* settlements in low-lying areas where they face repeat flooding events and are deprioritized for infrastructural protection. Goh describes how *kampung* activist coalitions are proactively organizing against both displacement and unwanted confinement due to the seawall project by collectively redesigning housing, developing community counterplans, building political alliances, and securing commitments from city leaders. Through their activist work, *kampung* communities claim a role in defining the climate mobility regimes that the seawall project is enacting.

Rachel Tolbert Kimbro’s book *In Too Deep* (2022) details the distinct complexities of flood exposure and immobilization that elite communities render visible in the US context. Kimbro follows thirty-six mothers living in an affluent Houston neighborhood who faced an astonishing three extreme flooding events in the three years between 2015 and 2017. Even after these back-to-back floods, strikingly, twenty-eight out of the thirty-six mothers Kimbro interviewed chose not to move. She attributes staying to multiple factors. Residents had sunk plenty of investment into their properties and felt committed to them. Kimbro’s findings corroborate prior research showing how disasters can augment socioeconomic inequality (Raker 2020) and occasion a rise in housing segregation that Virginia Eubanks calls “climate redlining” (2016). Kimbro learned that many residents had the socioeconomic privilege required to survive floods, manage state aid bureaucracies, and afford rebuilding in place. Kimbro’s interviewees also enjoyed the upper middle-class well-being that the neighborhood provided and signified. But perhaps the most important factor was a familiar institution: the highly regarded public elementary school.

School buildings, as Marino also demonstrates (2015; see above), exert a centripetal force. They enact, epitomize, and consolidate North American settler legacies. For Kimbro, the school’s disproportionate hold on public resources marks the lopsided wealth of the neighborhood’s tax base relative to the rest of Houston. “Although a few mothers fretted about the potential impact on their children of experiencing yet another flood,” Kimbro observes, “on balance they believed the risk was worth it for the chance to continue living in the perfect neighborhood” (2022: 206). This is a case where micro-level agentive emplacement reproduces a macro-level forced emplacement. Like other communities that struggle to remain in the homes and places to which they are attached, the affluent mothers Kimbro interviews are active agents, mobilizing available state support to recover in place. Yet as these mothers enact their sincere hold on meaningful homes and lives, they also augment the inequalities that characterize their city’s unevenly apportioned financial resources and flood protections. In doing so, they reproduce Houston’s
spatial commitment to a flood-exposed ecosystem that intensifies its underserved communities’ inequitable susceptibility to both immobilization and displacement.

Kimbro’s study highlights the conceptual and emotional difficulties of leaving home, even in regions now vulnerable to repeat “500-year” floods. Liz Koslov’s study of managed retreat, by contrast, features residents of Staten Island who insisted on leaving (2016). She follows their mobilization for a state home buyout program after 2012’s Hurricane Sandy. Koslov highlights how foreign the idea of retreat to prevent harms like those of the Hurricane Ida flash flooding is to a resilience-minded policy culture invested in technofixes that enable cities to endure largely without changing shape. In the US context, floodplain home buyouts are more cost-effective protections against extreme flooding than structural defenses such as seawalls. However, the US Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program incentivize rebuilding in place in high-risk areas after flood disasters (Koslov 2016; Tier 2021). Koslov also compares the successful community relocation of the majority-white middle-class town of Valmeyer, Illinois, after the 1993 Great Midwest Flood to the more scattershot buyout and relocation efforts in Staten Island and Isle de Jean Charles. Her comparison reveals that inequitable patterns of government support for managed retreat reproduce housing marginalization by confining underrepresented communities to flood-prone areas while affording privileged groups the option of moving.

Environmental justice researchers have recently trained their focus on housing injustice in urban encounters with climate change, which has been a point of rising activism in cities like New York (Checker 2011; Climate Action Lab 2019; Cohen 2018; Rice et al. 2020). Housing often falls outside of what Malini Ranganathan and Eve Bratman label “mainstream resilience thinking” in urban climate policy conversations (2021: 117). New York’s housing crisis combines scarce affordable housing with stark class inequality accentuated by gentrification and the criminalization of undocumented immigrants and unauthorized dwellings. This crisis created the conditions for people to become trapped during the Ida flash flooding (Zaveri et al. 2021). The months since have already seen efforts to rebuild in place supported by unevenly accessible FEMA funding (Hogan 2021), with local activists raising concern that the city’s housing inequity is intensifying (Chayya 2022). This escalation typifies what Kevin Fox Gotham and Miriam Greenberg call “uneven redevelopment” in their book Crisis Cities (2014: 135), a comparative analysis of disaster recovery in New York and New Orleans.

The contemporary scholarly effort to track uneven urban redevelopment, and research documenting points of resistance to inequitable resilience and recovery plans, reveals forced emplacement projects at work on multiple scales. In the example of the Ida floods, members of immigrant and marginalized communities found themselves trapped as the result of an affordable housing crisis, an effect of which is to confine people without privilege in homes that expose them to disproportionate harm. At the wider scale of the urban political unit, the enduring commitment to sedentary domination over watery landscapes upon whose subordinated stability cities depend is also a project of forced emplacement. Flooding is on the rise in the United States (Kimbro 2022: 209) and in over 85 percent of the world’s delta regions, where many of the world’s most populated cities are situated (Dawson 2017). Yet neither preventative retreat nor collective relocation are politically feasible for many of the communities that would most benefit from these moves (Koslov 2016). Certainly, there exists a growing profusion of creative activist approaches to contesting and redesigning urban life in light of increasing climate extremes (Goh 2021). However, in much of the world, urban leaders and policymakers are working to keep their cities on a trajectory toward consolidating ideologies of fixed settlement and fortified human mastery over their watery landscapes. New York’s low-lying island ecosystem, home to both deadly basement apartments and some of the world’s most highly valued waterfront
property, is projected to see a tenfold increase in moderate flooding by 2050 (NOAA 2022). Upholding the fantasies of fixity and mastery in such settings means an indefinite commitment to escalating protections that promise to enforce and entrench an inequitable sedentarism.

Conclusion

The concept of forced emplacement marks sedentary living as political. The paranoid anticipation of mass migration captured in the news stories with which I opened this article perpetuates a politics of containment that naturalizes human immobility as neutral and normal, instead of as historically exceptional, one among many options for connecting with place and home, or as a dangerous manifestation of structural violence. Even as scholars have added nuance to debates about adaptation and movement since the early 2000s, the “climate migration” news beat, with its sensationalized border crossers, homeless wanderers, and aquatic metaphors, remains active into the 2020s (Vince 2022). This reveals a racialized anxiety in dominant sedentary communities about humans and water out of place that has the potential to organize climate mobility regimes and adaptation plans for decades to come.

The scholars featured in this review are working to resist such an outcome. They position forced emplacement as a partial political explanation for why underrepresented and underserved communities so frequently bear climate change’s heaviest burdens. Micro-level forced emplacements are made visible in flooding disasters, where dwelling arrangements in flood-exposed communities are both products and engines of marginalization. Sedentary dwelling conventions organize uneven exposure to the structural violences of isolation and immobilization. The critical conversations I have outlined here assert the urgency of attending to the deeper questions raised by the insight that climate change can mean both displacement and immobilization (Black et al. 2013). Their case studies foreground instances of climatic immobilization that can be traced back to histories of violently imposed sedentary living. They critique the present-day projects through which those legacies configure pathologized mobilities. Informed in many cases by local histories of confinement, Indigenous, Islander, and other climate-exposed activists work against the constraining visions of forced emplacement projects. They map futures that confound frameworks dictating where and how they move and dwell and that exceed the boundaries of the adaptation and resilience plans now taking hold.

As Kyle Whyte maintains, well-meaning climate policymakers all too often describe uneven impact exposure as simple “bad luck” (2016). Centering deliberate historical projects of forced emplacement means unlearning this ahistorical and placeless “bad luck” assumption. Scholars are incorporating critical analyses of immobilization into the project of repoliticizing climate extremes, climate adaptation, and climate governance. It is urgent that the ongoing structural analysis of climate exposure inspect unspoken and unexamined commitments to immobilized mastery in order to build just alternatives to today’s hegemonic adaptation narratives. The work of rethinking immobilization is vital to the broader reimagining of our normative fossil-capitalist frameworks that genuine climate justice requires.

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