The long goodbye on a disappearing, ancestral island: a just retreat from Isle de Jean Charles

Jessica R. Z. Simms¹ · Helen L. Waller¹ · Chris Brunet² · Pamela Jenkins³

Accepted: 22 April 2021 / Published online: 13 May 2021
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Abstract

Climate change will necessitate evermore frequent and complex managed retreats in the future, and drafting policies that are equitable and just for those residents who are relocating will be essential. The USA's first federally funded, community-scale, climate-driven resettlement is currently underway in coastal Louisiana. In January 2016, the U.S. Department of Housing and Urban Development (HUD) awarded the state of Louisiana \$48.3 million to plan, design, and implement a structured, just, and scalable resettlement with former and current Isle de Jean Charles residents. Most Island households are multi-generational and directly descended from Jean Marie Naquin, after whose father the Island is named. Using interviews, ethnographic data, and policy documents, this paper will delineate and analyze the dimensions of sense of place, which, in this case, prompted policy changes dramatically different from standard relocation policies: assurance that the properties and land from which residents are departing will remain in their possession as long as the land remains. For most Island residents, this was non-negotiable. The intangible connection to place—feelings of belonging, lifestyle, family connections, and culture—plays a central role in many families' decision to stay or go. The choice to relocate is rooted in this complex entanglement of identity, familial ties, land loss, historical and current marginalization, and a way of life passed on by multiple generations. In forthcoming community resettlements, continued access and ownership of the properties being left behind should be considered as a critical component for planning just retreats.

Keywords Resettlement · Just retreat · Louisiana · Climate change · Sense of place

Introduction

Life-threatening disasters exacerbated by climate change are now part of our daily narratives. The accompanying losses are intangible and immeasurable. In August 2020, the world

watched the rare event of two simultaneous storms churn through the Gulf of Mexico, prompting 1.5 million people to evacuate (Trepanier 2020; CoreLogic 2020), not knowing if there would be anything left upon their return. This was a record-breaking hurricane season overall: thirty named storms, with twelve making landfall in the USA.

Extreme scenarios of climate change effects often engender conversations about managed retreat. The bayou region of south Louisiana is home to diverse peoples and cultures, in addition to being an area where many people have already departed for higher ground (Colten et al. 2018). Due to accelerated sea-level rise, subsidence, and other anthropogenic stresses, Louisiana's coastline is washing away. In fewer than 100 years, Louisiana lost almost 5,000 km² of its coastal land area due to relative sea-level rise, and this is not expected to stop or decelerate (Törnqvist et al. 2020). Coastal land loss, difficulty maintaining a livelihood based upon seafood catches with low market prices, high flood insurance premiums, repeated storm inundations, poverty, and climate change are some of the key challenges facing coastal

✉ Jessica R. Z. Simms
jess.simms@gmail.com

Helen L. Waller
helen.l.waller@gmail.com

Chris Brunet
christopheb158@icloud.com

Pamela Jenkins
pjenkins@uno.edu

¹ State of Louisiana, Office of Community Development, New Orleans, LA, USA

² Isle de Jean Charles, LA New Orleans, USA

³ University of New Orleans, New Orleans, LA, USA

Louisiana residents (CPRA 2017). Under these circumstances, the safety and sustainability of coastal communities such as Isle de Jean Charles are threatened (Fig. 1).

The residents of Isle de Jean Charles, a community of predominantly American Indian ancestry, live on an Island that is rapidly disappearing into the Gulf of Mexico. Once encompassing more than 22,000 acres, only 320 acres of Isle de Jean Charles (the “Island”) remain. The sole connecting road to the mainland, Island Road, built in the early 1950s, is often impassable due to high winds, tides, or storm surge pushing water over the road. Due to this urgent situation, the Resettlement’s primary beneficiaries are current permanent residents of the Island and past permanent Island residents displaced on or since August 28, 2012¹².

In response to increasing climate crises and their financial costs to the federal government, in 2014, HUD announced nearly \$1 billion in Community Development Block Grants (CDBG) available for disaster recovery and long-term community resilience via the National Disaster Resilience Competition (NDRC). In January 2016, HUD announced a \$92 million award to the State of Louisiana, Office of Community Development, with \$48.3 million allocated for the Resettlement of Isle de Jean Charles. This Resettlement is the USA’s first federally funded, comprehensive grant for a voluntary community resettlement. Climate-driven managed retreat is in early iterations. Ferris (2015) states that managed retreat is under-researched in part due to the lack of available empirical data. This paper begins to address that deficiency.

Resettlement of a community requires decision making at all levels: who gets to move?; where to move?; how will it be funded?; what will happen to the land left behind? Oliver-Smith (2010) notes that resettlements are always exigent and complex, as these decisions are life-changing. Each decision may significantly shift residents’ economic footing, political and tribal ties, and social situations that may de-stabilize their attachment, sense of place, and identity-based experiences.

The Isle de Jean Charles Resettlement is mid-way in its progress: agreements with residents opting to move are signed, the land for the new settlement is purchased, the infrastructure construction is well underway, and the first round of homes are anticipated to be completed by the end of 2021. This paper provides an understanding of how the decision-making of the residents demands a flexible community-based resettlement framework. We explore the research question: how did Island residents’ histories and sense of place affect policy outcomes pertaining to the Island properties?

To answer this question, we first present the literature grounding the paper’s argument, including a sense of and attachment to place and climate and environmental justice. We then delineate the various methods used to gather and analyze data, followed by some of the history influencing the Resettlement and decisions to participate in it. Following this, we outline the main factors affecting most residents’ decisions about moving—agency in participating and keeping their land and homes—and the role these played in developing this Resettlement’s policies. In the discussion, we delineate how those involved in future managed retreats must pay particular attention to the unquantifiable sense of and attachment to place residents have with their land and the identities situated within it. We conclude with co-author and Island resident, Chris Brunet’s summation of the Island’s immeasurable sense of place.

A sense of place on the Island

The conceptual framework for this research is grounded in both sense of and attachment to place literature. Places can function as sources for individual identities (Massey 1994), such as means of security, stable employment, living conditions, familiarity, and comfort. Sense of place is a multidimensional concept that describes humans’ relationships with place, embodied in beliefs, emotions, stories, and experiences particular to a geographic setting (Convery et al. 2014).

Place is a historically distinct nexus wherein social networks are rooted and both material and cultural flows coalesce. Casey (1997) characterizes place as “an embodied experience—the site of a powerful fusion of self, space and time.” He urges a conception of place as a structure that subsumes both human experiences and the material world in which those experiences happen. Identities are grounded in a sense of and attachment to place and are geographically bound up in the places at risk (Adger et al. 2011). Relph (2009) states, “sense of place is a synaesthetic faculty that combines sight, hearing, smell, movement, touch, imagination, purpose, and anticipation.” Pointing to the interrelatedness of place and physical and mental functions, Hess et al. (2008), describe these relationships as “nested collections of human experience” that facilitate intimate and personal knowledge of living in a certain place.

Place is interconnected to multiple aspects of social lives, including environmental conceptualizations, rootedness to place, quality of life, and feelings of inclusion and non-inclusion (Seamon 2015). In turn, when processes of change occur in a place, such as coastal land loss, peoples’ identities can be affected (Burley 2010; Simms 2017). Oliver-Smith (2009) states “removal from a most basic physical dimension can mean removal from life.” The effects of uprooting individuals deeply tied to place are devastating.

¹ This date marks Hurricane Isaac’s landfall in Louisiana, which qualified the Resettlement for funding through HUD’s National Disaster Resilience Competition.

² The Resettlement Program also offers former permanent Island residents displaced prior to August 28, 2012, an option to rejoin their community in the form of an improved lot (See Fig. 2 for Resettlement options for former and current Island residents.)

Fig. 1 These USGS maps depict land loss surrounding Isle de Jean Charles over a recent 45-year period

The sense of place tied to the land is complex, shaped through an intricate relationship between people and place (Nejad and Walker 2018; McGaw et al. 2011). Burley (2010) and Jenkins (2016) note the distinctive attachment to place for coastal Louisiana residents. Some residents have such a strong sense of place that “relocation represents a loss of their way of life, not just a place to live” (Jenkins 2016). The Island is a place where processes of nature and culture interact and both shape and are shaped by each other (Wylie 2007), encompassing the residents, their ancestors buried in the Island cemetery, the surrounding built and physical surroundings, and other animate and inanimate beings. These relationships are most often inadequately captured in relocations and resettlements across the globe (Wrathall et al. 2015; Morrissey and Oliver-Smith 2013).

Climate and environmental justice

Researchers have found that compensating for intangible aspects of life such as culture, community problem solving, social networks, and livelihoods is not sufficiently considered in managed retreat (Wrathall et al. 2015; Morrissey and Oliver-Smith 2013; Kirsch and Worlds 2001). The irretrievable immaterial losses have become a pressing question for many facing development-induced displacement, climigration, and managed retreat. When left unaccounted for, these losses contribute further to the nexus of environmental injustice perpetrated in Louisiana, USA, and across the globe (Wrathall et al. 2015; Morrissey and Oliver-Smith 2013; Kirsch and Worlds 2001).

Resettlement is a disruptive process to communities and their livelihoods, often making it a last resort in climate change, hazard, and development planning (Cernea and McDowell 2000). Relocations have historically been involuntary and with maladaptive outcomes (McDowell 2013). In

government-led resettlements, policymakers must pay attention to the past injustices via legacies of colonialism that relegated many marginalized, low-income population and/or communities of color into these hazard-prone locations in the first place. Marginalized populations are most often at higher risk to disasters and climate-driven hazards, such as sea-level rise, oppressive heat, and coastal erosion (Freudenberg et al. 2016; Whyte 2017; Arnall 2019; Barra 2020). As it pertains to Indigenous populations, Whyte (2016), explains climate injustice as the “vulnerability caused by ongoing, cyclical colonialism both because institutions facilitate carbon-intensive economic activities that produce adverse impacts while at the same time interfering with Indigenous people’s capacity to adapt to the adverse impacts.”

Environmental justice theory distills not only the powerful forces involved in the deterioration of the areas occupied by historically disenfranchised communities but also the ways in which the value of communities’ ways of relating to the land is undermined (Bullard 1993; Scott 1998; Schlosberg 2013). Reconciling the multitude of concepts of human, non-human, and ecosystem networks held by Indigenous and non-Indigenous communities requires a deep level of understanding and commitment to justice that is often not afforded by demands of expedience (Oliver-Smith 2010). This can result in epistemological injustice that is detrimental to Indigenous communities (McConkey 2004; Fricker 2007). The dismissal of these non-western relationships to socio-ecological systems is another form of environmental injustice perpetrated in both adaptation and resettlement processes (Pellow 2000). The Peninsula Principles (Displacement Solutions 2013), a framework written to protect and enhance the resilience of groups and individuals displaced as a result of climate change and climate-related disasters, outlines the rights for those undergoing displacement or resettlement to have “assurances that rights to access traditional lands and waters (for example, for

hunting, grazing, fishing and religious purposes) are maintained or similarly replicated.”

In this paper, we document how Island residents’ attachment to place and the history of their relationship to the land are integral to their negotiating the formation of the Resettlement policies. The stories Island residents told of experiences, whether re-told from family members or personally, demonstrated time and time again the importance of the role of place and historical injustices in their decisions of relocation. The struggle to keep the Island for as long as it remains and to have control over decisions of where they live, who they live by, and their new home became elements of their just retreat.

Methods

This paper uses a qualitative inquiry to answer the research question about the role of people, place attachment, and history in the decision of Isle de Jean Charles residents to move from the Island to a physically safer location. Because the permanent residents of Isle de Jean Charles are relatively small in number (about 100 people lived on the Island at the time of the grant announcement)³, using qualitative measures is appropriate to capture the themes of this small population—both the overarching themes and the more nuanced understanding of their decision to move.

Thirty-three formal interviews were conducted with current and former Island residents, and seven of the nine Steering Committee members⁴. Interviews ranged from 30 minutes to two and a half hours. Most interviews were conducted with a single person, though for some, several family members were involved. There were 55 participants: women (32) and men (23) ranging in age from 18 to 86. The participants in the study were permanent residents from the Island on or after August 28, 2012, and Steering Committee members, two of whom were not Island residents. At least two of the authors were present for most of the interviews and meetings. Interview questions ranged from community cohesion to uncertainties of living on the Island to aspects of it that residents hold important and could be replicated in their new homescape. Of 100 people on the Island, at least one member of each Island household was interviewed except five households who chose not to be interviewed, four of whom are not taking part in the Resettlement.⁵

³ A qualitative face-to-face survey was completed as part of phase 1 of the Resettlement. Survey results can be viewed at <http://isledejeancharles.la.gov/sites/default/files/public/IDJC-Final-Report-Update.pdf>.

⁴ For more information on the Steering Committee, see the “Decision-making inside the planning process” section.

⁵ From the beginning, there were four families who were not interested in moving and this has not changed. All residents, despite their level of interest, were invited to all meetings, design workshops, and other events about the proposed move.

Conversations with participants in formal and informal settings occurred from August 2016 through the present. Informal conversations took place at residents’ homes, during architectural design charrettes, Steering Committee meetings, and other community events. Notes from the Steering Committee meetings (6), design charrettes (3), and other community meetings (6) are included in the analysis. Policy and regulatory statements were also reviewed (OCD 2021).

This paper, focusing on decision making and policy, is part of a larger study that documents how residents came to understand their move. For this paper, we coded for data focusing on how participants framed the struggles surrounding the Island’s fate and their own agency in the resettlement process. The codes from the interviews were compared to the codes from the meetings analysis and notes from informal conversations, building to a consistent view (Creswell 2009). The codes that emerged (Saldaña 2018) were as follows: views of the past, sense of place, narratives/rumors, issues of representation, community/family, trust/outside, co-plan/voice, design/site plan, jobs/economic, poverty, uncertainty/mobility/displaced, and health.

This documentation allowed us to reflect on how the residents came to understand their decision-making and how this community engagement defined both the course of the Resettlement policies and the design of the new site. Further to this, as we began to reflect on the analysis, we would repeatedly reach out to an Island resident for further insight. One of the authors, Chris Brunet, is a lifelong resident of this Island who identifies as Choctaw. His voice is important throughout as those of us from the outside documented the process.

Findings

Critical historical moments

A key concern for residents was the future scenario of the Island and the residential homes there. In the beginning of a meeting, an Island resident asked, “who has the answer of what’s going to happen to our homes?” (Steering Committee meeting, Feb. 26, 2018). The enduring stories of illegal takings of land rightfully belonging to them were passed down from generations of American Indians and continue in the lived memories of current Island residents. These stories endured and hold sway in the present day. Before the final iteration of the Island policy, one interviewee queried, “since we Indians, why everytime they gotta bulldoze everything and move us?” (resident interview, 2018, June 1). Variations of this question were heard throughout the planning process. From the inception of the Resettlement grant, there was pervasive mistrust surrounding the state’s prospects for the Island. At an early community meeting, a resident stated, “there’s a

lot of people who think that a big real estate company or oil company is gonna come take the land” (OCD 2016). Many residents reiterated that their great grandparents were duped into signing an “X” and losing rights to their land. When it came to the Resettlement, they were not going to let this happen to them again (resident interviews). As one resident said to a journalist, “we learned a long time ago not to trust when they came with paper and a pen” (Stein 2018). The “X” as a signature leading to losing rights to land serves as a cautionary tale to American Indian descendants (Fischer 1965; resident interviews).

The combined history of American Indians and both private and public lands are defined by misconduct and mistrust (Garrison 2002). In particular, the resettlement of Indigenous people in the USA is conflicted and exploitative (Cave 2003; Haake 2007; Norton-Smith et al. 2016). Any resettlement effort in the USA can serve as a reminder of the Indian Removal Act of 1830 and the associated policies that compelled the ancestors of most Isle de Jean Charles residents into the bayous in the early to mid-nineteenth century (Yawn 2020).

Throughout the later half of the nineteenth and early twentieth centuries in Louisiana, it was not uncommon for white Americans to “question” the legality of land owned by American Indians by illegally removing tribal lands and designating them as “public” (Purser 1964). The bayous of Terrebonne Parish, where the Island is located, were no exception (Fischer 1965). At the turn of the twentieth century, state officials realized that much of this now “public” land had considerable economic value, whether for trapping or later, oil, and put the land up for sale, posting notifications in the local papers (Fischer 1965). The American Indians, who were mostly illiterate because they were legally barred from attending school, were unaware of the notifications. State officials then sold the “public” land. Each year, American Indians were forced to sign leases stipulating they did not have claim to the land (Fischer 1965). Another tactic used to remove land owned or used by American Indians was to raise fences on land to establish claim. This tactic served private companies, such as the Maryland-based Louisiana Land and Exploration Company, now ConocoPhillips, to lay claim to vast acreage. By 1928, the Louisiana Land and Exploration Company had undertaken an exploration of more than half of Louisiana’s two million available acres (Austin 2006). This history of disenfranchisement contributed to residents’ doubt and mistrust in their approach of the proposed Resettlement.

Historical distrust reflected in the present day

The current distrust, steeped in the deep memory of land stolen and promises broken, appeared in the rumors and

misinformation that led to the creation of powerful competing narratives about the grant. The rumors were largely focused on policy ambiguities on future Island scenarios and residents’ roles in the development of their future home. The distrust reflects not only the history of land prospecting, land theft, and rural gentrification but also earlier failed attempts to resettle Island residents⁶. These contestations of land are part of a complicated history of colonialism, land dispossession, and discrimination that coalesce in a space where diverse social actors with uneven political power compete for access to and control of natural resources, land, and livelihoods (Bryant and Bailey 1997). These narratives were persistent frames of reference for many conversations with Island residents about the Resettlement.

The questions, concerns, and sometimes accusations were heard from Island residents and the broader community. They were echoed by the media, where they were repeated over and over (Boyd 2019; Jarvie 2019; Baurick 2020). Rooted in controversies over the land, the fears that residents would be forced to move away and the land sold out from under them held considerable power. As one resident stated: “we can’t be taken by surprise and someone says, you gotta go.” (Steering Committee meeting, April 16, 2018). The leadership and conflict of the two American Indian tribes with whom some residents identify, the Isle de Jean Charles band of Biloxi-Chitimacha-Choctaw and the United Houma Nation, were also part of these narratives (Davenport and Robertson 2016; Utacia Krol 2018).

A decision, not an opportunity

From our analysis, a number of issues emerged that influenced residents’ decisions to move from their ancestral home. Current framing available for resettlements are designed to capture the material concerns of the process: number of houses, location of houses, and other infrastructure decisions (Oliver-Smith 2005), but for residents, it is much more complicated. For the most part, this is a community that has lived together for generations and known each other all their lives. Residents’ deep attachment to place and sense of place underlies how they understand and ultimately come to a decision to move. The following two dimensions, from the residents’

⁶ The first attempt to resettle Island residents was in 2002, as a result of the Army Corps of Engineers’ announcement that Isle de Jean Charles would be excluded from the “Morganza to the Gulf Structural Protection System.” Their cost-benefit analysis revealed that extending protection to the Island failed to meet the requisite benefits over costs (CPRA 2012; Katz 2003). The Corps offered residents financial assistance to relocate, but required 100% participation. In 2008, the United Houma nation applied for CDBG funding from the State of Louisiana to relocate Island residents, but that application was not funded. In 2009, Terrebonne Parish offered to financially assist Island residents to relocate to a nearby town, but also required 100% participation, which could not be obtained.

perspective, were most significant: where and how they live in the new community, and, more importantly, their right to retain their Island properties. These dimensions highlight the tensions between the state and the residents and among the community members themselves.

As with nearly all communities, Isle de Jean Charles is not a homogenous one. Values differ from individual to individual, and there is not a single set of community priorities shared by all Island residents. Several residents remarked that one family could have more than one tribal affiliation: “like I told them, certain houses are divided” (resident interview, June 5, 2018). Residents advocated in their earliest meetings in 2016 and 2017 for self-determination as Island residents. One resident instructed the representatives of the state early on to “find out through the community of who would appreciate it and who wouldn’t” (resident interview, October 1, 2018). In this Resettlement, the project had to balance varying priorities among personal values, community concerns, and compliance with the federal regulations with which the state needed to adhere.

Two federal requirements are significant to the Resettlement Program in terms of policies related to the Island: cost reasonableness and compliance with the Fair Housing Act (FHA). The FHA states that it is illegal for public or private housing developments to discriminate based on race, color, religion, sex, disability, familial status, or national origin. Therefore, any current or former (on or since August 28, 2012) Island resident is eligible for assistance for a new home. Cost reasonableness, in this case, stipulates that “it is neither necessary nor reasonable to use federal funds to relocate families from high-risk properties, only to allow those families to return to those high-risk properties for residential purposes in the future” (OCD 2019). Participating residents will need to maintain permanent residence in their new home, rather than on the Island.

Decision-making inside the planning process

Successful resettlements embody the self-determination of those being resettled (de Sherbinin et al. 2011) and tantamount to a just retreat is the voluntary nature of the decision (UN General Assembly 2007) (Fig. 2). On the Island, the decision to relocate lies with the Island residents themselves: “that [decision] took place between me and my family,” as Brunet notes, “it is not an opportunity because I do not want to leave this place here, but it is a decision that I have to make for tomorrow.” Resettlements are location-specific and context-dependent. In its nascent stages following the announcement of the grant, the intended planning approach almost immediately revealed embedded power and trust struggles between and among the state and the grant beneficiaries. The state worked to create spaces for input from the

residents on the planning process described in this section through meetings, personal conversations, phone calls, and written materials.

In the two initial Resettlement meetings in 2016, past and current residents invoked historical events influencing current discourses. They expressed concerns that this newest attempt to resettle Islanders would fail, just as with earlier attempts (OCD 2016). Some residents worried about the future of the Island, with some asking how the grant would enable the state to take their Island properties as it had in the past. When asked what they saw for the future of the Island, one resident’s feedback was, “Don’t want some politician to buy a piece of land and make a buck” (OCD 2016).

On July 1, 2017, the state convened a community meeting on the Island to discuss and select the future resettlement site. The meeting allowed for current and former Island residents to think through the dimensions of potential sites, largely focusing on the ecological safety. Through a site preference survey distributed by hand and discussed with an author of this paper, 36 of 40 current Island resident families indicated their preferred site choice. The majority of residents (78%) opted for one site, which was subsequently purchased. Construction on “The New Isle,” the name residents chose for their future community site, began in May 2020.

These initial meetings led to the development in January 2018 of a volunteer Steering Committee. The group was intentionally created for diverse input: five current Island residents, the Director of Indian Affairs from the Office of the Governor, a Terrebonne Parish Representative, and a representative from each of the two familial American Indian tribes with which some Island residents identify: the Isle de Jean Charles band of Biloxi-Chitimacha-Choctaw and the United Houma Nation. The Steering Committee was created to guide and inform the Phase II Site Selection, Acquisition, and Master Planning Process, review materials, make recommendations, and provide continued local cultural and contextual insight into the process (OCD forthcoming). The Steering Committee convened six times, for two hours, approximately every four to six weeks on Monday evenings in 2018 beginning in January 2018.

Residents also participated in three design charrettes in 2018. The state used a potential rendering of the new site to situate family-based conversations around a myriad of questions surrounding indoor and outdoor homes design, broader site design, economic opportunities on the site, and other details (OCD forthcoming). In the second and third charrettes, one conducted on the Island, the other in nearby Houma, LA for the residents who had relocated into rental housing off the Island, the architects returned with iterative site models that reflected the ideas and concerns brought forth by residents (Fig. 3).

In between community meetings, charrettes, and interviews, a co-author of this paper made weekly trips to the

RESETTLEMENT OPTIONS		
A NEW HOME IN THE NEW ISLE	AN EXISTING HOME IN LOUISIANA	AN IMPROVED LOT IN THE NEW ISLE
AVAILABLE BENEFIT Eligible households will receive a new home built at the resettlement site.	AVAILABLE BENEFIT Eligible households will receive funding toward an existing home within Louisiana that meets program standards, is located outside the currently recognized 100-year floodplain and is separate from the resettlement site.	AVAILABLE BENEFIT Eligible households will receive an improved lot within the resettlement site that is ready for construction. The program will support residents in identifying potential financing options—as needed—to build a home on the resettlement site.
ELIGIBILITY CRITERIA Current permanent, primary residents on the island. — or — Past permanent, primary residents who lived on the island on Aug. 28, 2012 (Hurricane Isaac), have been displaced since that time and do not currently own an off-island home.	ELIGIBILITY CRITERIA Current permanent, primary residents on the island. — or — Past permanent, primary residents who lived on the island on Aug. 28, 2012 (Hurricane Isaac), have been displaced since that time and do not currently own an off-island home.	ELIGIBILITY CRITERIA Past permanent, primary residents who: <ul style="list-style-type: none"> • Were displaced from the island before Aug. 28, 2012 (Hurricane Isaac), and lived in a program eligible parish at the time of the storm. • Were displaced on or after Aug. 28, 2012, and currently owns an off-island home. • Lived in a program eligible parish on Aug. 28, 2012, and lived on the island after that time. In addition, Option B participants: <ul style="list-style-type: none"> • Must demonstrate financial ability to build a new home at the resettlement site. The program will support participants in identifying potential financing options. • Will be prioritized based on when they lived on the island.
A	D	B

Fig. 2 The resettlement options available to current and former Island residents

Island over the span of three years, forming relationships, providing information and updates, and gathering

residents' input and guidance. These visits were ongoing until March 2020 due to the Covid-19 pandemic. Contact

Fig. 3 One of the early designs for the community site

was largely through text and phone calls. Additionally, the state employed case managers to assist the residents with their resettlement applications. The residents used these planning spaces to frame decisions about house design, space between houses, who they would live by, and most importantly, land ownerships.

Housing decisions

On the Island, many homes are 100 feet or more apart, a much greater distance than in typical urban and suburban settings. Through the design process, the Resettlement team asked the residents how far they wanted their homes from each other. While on the surface, this seemed like an easy question, it turned out to be quite complex. On the Island, individuals have a great deal of privacy, both from their neighbors and outsiders. The importance of maintaining this privacy was reiterated often. One resident stated in an interview, “you know how in some neighborhoods the houses are so close? Yeah I don’t like all that” (resident interview, 2018, March 23). Lots on the new site will be .45 acres, and residential lot patterns will ensure privacy from neighbors, while also allowing closeness to family and close relations. These design decisions came directly from the architects and planners listening to the residents (OCD forthcoming).

The Resettlement team also sought guidance about house design—number of bedrooms, type of roof, design of the house, and elevation. The input and decisions were rooted in residents’ lives on the Island. Residents of Isle de Jean Charles depict their complex senses of place, identity, and belonging in ways that draw upon coastal traditions built around living on the bayou—fishing, shrimping, crabbing, and strong familial ties. The Island homes represent a way of life that they wanted replicated once they moved—especially around family. For many, this was an opportunity for the generations to live near each other, but not with each other. As one resident noted, “we want homes to be close enough to check on each other, yet private” (Design Charette, 2018, May 4–5). Also, nearly every resident wanted a particular kind of space around their house where family and friends could gather. A resident noted a desire for a “covered outdoor space and wrap around porch to use in different times of day” (Design Charette 2018, May 4–5). There was also a preference for “homes to be elevated three to four feet, but still accessible” as well as an “option to expand as needed” (Design Charette 2018, May 4–5). The residents’ preferences helped to develop the six types of housing units available. The Resettlement team created a map that shows where each home will be. This map reflects the views of the residents and their deep concerns about how the community was to be built.

Throughout this design process, many residents reiterated that the Island is a constant presence in their lives and was not to be overlooked or taken from them (Fig. 4). As Brunet states succinctly: “we’re tied to the land because we belong on it.”

Moving decisions

In July 2017, the state created the Optional Relocation Assistance (ORA) Program to assist Island residents wanting to move to a safer place before their new homes were complete. Whether to join this Program was one of the first consequential decisions the residents faced. This was a chance to begin the transition away from permanent residency on the Island.

For many, the possibility of moving away was a difficult decision. In the ORA Participation Agreement, there is a requirement that all participants commit to participating in the larger Resettlement Program. Yet, as a Steering Committee member pointed out, “we want that in there too that you can still come back if this [the Resettlement] would all fall through” (Steering Committee Meeting, 2018, February 26). If the state failed to build or buy residents new homes, the resident explained, the ORA participant would then effectively be homeless after the rental payments ended. To ensure residents that this would not happen, the state amended the policy, noting that if for any reason a permanent housing option is not offered through the Resettlement Program, the participant will not be held responsible and participants can reside again on the Island if they so choose.

As of this writing, more than half the residents have moved off the Island and into rental housing in less flood-prone areas. One participant spoke of the way her life changed after moving:

This is a blessing, a big blessing because now I don’t have to keep a backpack to go. I mean it’s a big difference for me, and it cuts out a lot of two and three days going to the gas station for gas. That was a big difference. And then the wear on the car and the water on the road. Quite a few times when I was unexpectedly going home and then the water—the roads flooded. It was just sometimes I was too afraid to turn back because I have to go through it, and it was like it was too rough. Once we were stuck in it and we couldn’t get out—the road flooded (Resident interview, March 20, 2018).

Because the Island has become increasingly vulnerable with each year and each storm, residents understand the fragility of the Island. Yet, one resident said: “look around, it is still here; it has not left yet” (Steering Committee meeting, 2018, January 29). The longing to stay in a place they know is significant, but that half the residents have moved off into

Fig. 4 An enlargement of the residents' lots and placement of homes within the larger site plan

temporary housing illustrates the awareness that their Island homes and lives are vulnerable. When asked why she opted to move into a rental home, one resident stated, “the reality has set in. I realized that it is not going to be there. That road is sinking, and it is disappearing. And sooner or later if the road doesn’t fall apart, the houses will. And truly, just, reality. You know, if you don’t leave, here’s your chance to leave” (resident interview, 2018, March 20).

“Our power is our community”: a departure in policy

The current policy pertaining to the Island permits owners continued ownership of and access to their Island properties. This is a hybrid approach not often engaged or cited in managed retreat toolkits. It is a marked departure from traditional HUD- or Federal Emergency Management Agency (FEMA)–funded relocation programs, which require vacated land to become permanent open space. This policy went through several iterations before its final one.

From the outset, the state understood that the residents had a deep attachment to the Island. Initially, the state approached residents with most of the traditional elements of a buyout: receive assistance towards a new home and raze the old one. They would still retain ownership of the land. This approach was immediately determined to be problematic by residents. Most told the state that they would not participate in the program if the state demolished their family homes.

My dad’s home, the one I was brought up in, was built by his own two hands. You see, that’s like a big sentimental value type thing right there...The home was built with his two hands. It may not be the nicest thing

anymore, the greatest looking thing. It might be an eyesore now, but I have so many memories...I would not like to see it torn down, because maybe one day in my future, I would love to go back down, and fix it, remodel it... Everything there reminds me of my mom and my dad, and my brothers and sisters (resident interview, March 22, 2018).

The second approach by the state was to propose a mortgage on participants’ Island property, valued at 25% of the appraised value of the new property for 40 years or until the Island property became open water. This mortgage came accompanied with certain restrictions, i.e., prohibition to rent or lease on-Island property; inability to convey, dispose of, sell, or otherwise transfer on-Island property to any person or entity; or make or permit any major repairs, renovations, or improvements to the property. Furthermore, if a participating owner defaulted on the Island mortgage, i.e., installed a new roof after a storm, or failed to comply with the terms agreed to within the new property, the state could pursue foreclosure of the Island property. If the state then became an owner through this process, the Island home would be demolished and a permanent deed restriction recorded, limiting the property to open space in perpetuity. A Steering Committee member described the policy at that time:

There’s so many gray areas in there. I was just floored at how much of it. And I’m really concerned about the residents on the Island. I’m concerned about the mortgage, the community property versus the Island property. There’s a lot of loopholes in here. And our people have been taken advantage of one too many times with

the state, with the legal, the Feds, everyone (Steering Committee meeting, September 24, 2018).

Reaction to this policy fed into the skepticism and distrust that dominated these discussions. Rumors and fears of land speculators on the Island bringing busloads of potential buyers and the state selling and profiting from a sale of the potential foreclosed land grew louder. The complexities of the agreement and confusion about the term itself, mortgage, fueled fears among some residents of foreclosure and echoed the older strategies of losing their land (resident interviews).

In response, the state understood that the mortgage requirement was not viable and worked out a solution with residents and HUD that permits Resettlement participants' existing Island structures to remain intact, while ensuring that they not use them for permanent residential purposes or redevelopment. If they choose to sell their new off-Island home, residents can return as a permanent resident to their Island home with no legal repercussions. Brunet sums up this final policy change:

Even the OCD head people heard enough from not only me, but from others, about how much this Island meant to us. And so I do believe that was noted and as time went on, even HUD and the state got the message about how Island people felt about the Island. With that, we're still able physically to come over here and enjoy this scenery, and we get to keep what we have over here and enjoy it until.

Discussion

The Island serves as a framework for both individual and cultural identity, particularly among Indigenous groups (Dardar 2008). As residents depart the Island, there will be both material and psychosocial losses, closely interwoven with the physical landscape and their related socio-cultural meanings (Oliver-Smith 2010). In an interview, an Island resident expressed his desire to say goodbye to the Island on his own time stating, “[we want to move] after the houses are built, we just don’t want to have a time limit” (resident interview, 2018, June 20). The ability to use the homes left behind as family camps will reduce these losses. Most residents rarely wavered on their need to return to the land as a requirement for their participation. Brunet sums up the dilemma the residents, the state, and HUD face:

The Island is still there, it’s real. And tonight we’re stressing how we’re attached to it. It means a lot to us.

We need to unfold that and find answers. The Island is real. Just because the resettlement is taking place, that’s not pulling the plug on it. They ain’t got no plug on the Island to sink it just because that \$48 million was given. It’s there until. It’s there until the elements say so (Steering Committee meeting, January 29, 2018).

Brunet’s account shows the strength of the attachment to place for Islanders in the decision-making process. They know the Island is changing and going away, but as many residents stated over and over, “the Island is still there.” This liminal moment for the Islanders, betwixt and between, contributed to the decision that their land and their home on the Island remain, as Brunet states, “until.” Gramling and Hagelman (2005) connect land loss to another form of loss, a kind felt on a deep and intimate level by residents. The worries and keen awareness of a vanishing environment intensify the feelings of the uniqueness of their “place” and in many cases makes residents more compelled to hang on to it and remain in place as long as possible.

Over the length of this process, Brunet returned again and again to what became the focus of the paper, which reflected his own experience and what he heard in conversation with others—how the residents came to their decisions to leave or stay on the Island. He notes: “It [the policies] had to change, they had to, because of what we experienced before this—the history here. It wouldn’t be successful if we weren’t heard on this.” This quote illustrates the key theme of this paper and one that emerged continually in conversations, in writing, and in a variety of meetings.

Increasingly, communities across the USA are expressing interest in collective buyout programs (Koslov 2014) as well as community resettlement (Marino 2018). The U.S. Government Accountability Office recently recommended that a federal agency or agencies establish a pilot program in order to offer assistance to communities interested in relocation before a major disaster (GAO-20-100SP 2019; GAO-20-488 2020). Considering both the level of demand and the documentation of known incongruities between federal policies and affected residents, the federal government needs to consider a broader range of options with greater flexibility to enable more equitable and just processes and outcomes. Brunet states that “a perfect model for resettlement will be almost impossible because it will always depend on who is speaking and who is listening with the attitudes, understandings, and histories that they bring to the conversation.” Due consideration of past injustices can prevent a repeat or reinforcement of historical inequities in managed retreats (Siders 2019). As De Sherbinin et al. (2011) recommend, this can be addressed in part by instituting legal frameworks to safeguard the welfare and human rights for those undergoing climate-driven resettlements. Despite the

inherent and enormous complexities in a community-scale relocation, this resettlement has the potential to inform future managed retreats. This Resettlement also calls into question the elements of a just retreat.

In this case study, the community's collective ownership over place was a central tenet in policy planning. Every aspect of Island residents' lives—including, and significantly, their sense of self and place—is deeply intertwined with Isle de Jean Charles and its surrounding marshland. When creating a life-enhancing and just future that meets the needs of those relocating, the complexity of sense of place is crucial to understanding the underlying decision-making processes, both locally and globally.

To the residents of Isle de Jean Charles, the significance of place was fundamental to their decision-making process. The history of the Island and the history of the Indigenous peoples who have resided there for centuries are intertwined with the residents' decision to leave their homes. Their sense of place largely determined their view of house design, space between houses, who lived next to each other, the ability to return to the Island, and ownership of their land. In many ways, this is a unique case study, where the researchers actively met everyone on the Island over a period of years.

This resettlement is one of several government-led managed retreat initiatives. Both the Army Corps of Engineers and the Federal Emergency Management Agency (FEMA) recently began allocating funds and developing managed retreat policies as part of pre-disaster mitigation activities in the USA (Flavelle 2020). Yet, there is still insufficient policy support for just and equitable transition processes (Siders 2019). Of particular interest to this case study, both the Army Corps and FEMA require participatory requirements to implement deed restrictions on participating properties (Flavelle 2020). These restrictions ensure that the land left behind will be acquired and maintained in perpetuity as open space. As this paper demonstrated, the land left behind, even though residents are choosing to move away from it, is still part of their identities—it still plays a significant role in their lives. As such, it can be of prime concern for residents in planning a resettlement. Prioritizing social and economic justice in managed retreat as an adaptation policy, including an ability to return to the unoccupied land, can make the loss of leaving less devastating.

Conclusion

Because of its scale, the Isle de Jean Charles Resettlement will prove to be unique among managed retreat programs. Even when negotiating policy, permitting residents to keep their Island homes and land, the minefields, detours,

and barriers are enormous. What, as scholars, we cannot forget is that we are asking people to leave not only their home, but their way of life, an essential, integral part of themselves. When sitting under Brunet's house on the Island, we would often ask him to talk about the loss (Fig. 5). His answer shows the depth of this link of (him)self to place:

you know whenever somebody asks me about that—because for me it is so simple. Because I am just so much a part of this, that you're looking for 100 words when maybe all you gotta do is look at it [gestures to the surrounding land and water]. I mean that's how I take it, so whenever you ask for me to put it into perspective, then you're asking me to put it in words. But then all I figure is, just look. This here still catches me that caught

Fig. 5 A photo Brunet took of the view from his porch

me before. And then you say well, put it in 100 words, put it in 50 words—I can't.

Availability of data and material Not applicable.

Code availability Not applicable.

Funding Funding was provided by the Office of Community Development (OCD) for the collection of data for the outreach process.

Declarations

Conflict of interest The authors declare no competing interests.

References

- Adger WN, Barnett J, Chapin FS III, Ellemor H (2011) This must be the place: underrepresentation of identity and meaning in climate change decision-making. *Global Environmental Politics* 11(2):1–25
- Amall A (2019) Resettlement as climate change adaptation: what can be learned from state-led relocation in rural Africa and Asia? *Clim Dev* 11(3):253–226. <https://doi.org/10.1080/17565529.2018.1442799>
- Austin DE (2006) Coastal exploitation, land loss, and hurricanes: a recipe for disaster. *Am Anthropol* 108(4):671–691. <https://doi.org/10.1525/aa.2006.108.4.671>
- Barra MP (2020) Good sediment: race and restoration in coastal Louisiana. *Annals of the American Association of Geographers* 111(1):266–282
- Baurick T (2020). Deadline set for residents of vanishing Isle de Jean Charles to apply for relocation. *Times-Picayune*. https://www.nola.com/news/environment/article_bcad8766-3897-11ea-aa1a-afd169d0be02.html
- Boyd R (2019). The people of the Isle de Jean Charles are Louisiana's first climate refugees—but they won't be the last. NDRC. <https://www.nrdc.org/stories/people-isle-jean-charles-are-louisianas-first-climate-refugees-they-wont-be-last>
- Bryant RL, Bailey S (1997) *Third world political ecology*. Routledge, New York
- Bullard RD (1993) Anatomy of environmental racism and the environmental justice movement. *Confronting environmental racism: voices from the grassroots* 15:15–39
- Burley DM (2010) *Losing ground: identity and land loss in coastal Louisiana*. University Press of Mississippi, Jackson, Mississippi
- Casey ES (1997) *The fate of place*. University of California Press, Berkeley, California
- Cave AA (2003) Abuse of power: Andrew Jackson and the Indian removal act of 1830. *Historian* 65(6):1330–1353
- Cernea M, McDowell C (eds) (2000) *Risks and reconstruction: experiences of resettlers and refugees*. Washington, DC: World Bank. <https://doi.org/10.1596/0-8213-4444-7>
- Coastal Protection and Restoration Authority of Louisiana (CPRA) (2017) Louisiana's comprehensive master plan for a sustainable coast. Coastal Protection and Restoration Authority of Louisiana, Baton Rouge, Louisiana
- Coastal Protection and Restoration Authority (CPRA) (2012) Louisiana's comprehensive master plan for a sustainable coast. Coastal Protection and Restoration Authority of Louisiana, Baton Rouge, Louisiana
- Colten CE, Simms JR, Grismore AA, Hemmerling SA (2018) Social justice and mobility in coastal Louisiana, USA. *Reg Environ Chang* 18(2):371–383
- Convery I, Corsane G, Davis P. (Eds.). (2014) *Making sense of place: Multidisciplinary perspectives* (Vol. 7). Boydell & Brewer Ltd
- Corelogic, 2020 CoreLogic Estimates \$8 Billion to \$12 billion in insured losses from Hurricane Laura wind and storm surge <https://www.corelogic.com/news/corelogic-estimates-8-billion-to-12-billion-in-insured-losses-from-hurricane-laura-wind-and-storm-surge.aspx>
- Creswell JW (2009) *Research design: qualitative, quantitative, and mixed methods approaches*. Sage Publications, Thousand Oaks, Calif
- Dardar TM (2008) Tales of wind and water: Houma Indians and hurricanes. *Am Indian Cult Res J* 32(2):27–34. <https://doi.org/10.17953/aicr.32.2.g3t0v8544k620885>
- Davenport C, Robertson C (2016) Resettling the first American climate refugees. *New York Times* p 3 (May 2, 2016)
- de Sherbinin A, Castro M, Germanne F, Cernes MM, Adamo S, Fearnside PM, Krieger G, Lahmani S, Oliver-Smith A, Pankhurst A, Scudder T, Singer B, Tan Y, Warner G, Boncourt P, Ehrhart C, Hugo G, Pandey B, Shi G (2011) Preparing for resettlement associated with climate change. *Science* 334(6055):456–357. <https://doi.org/10.1126/science.1208821>
- Displacement Solutions (2013) The Peninsula principles on climate displacement within states. <http://displacementsolutions.org/wp-content/uploads/FINAL-Peninsula-Principles-FINAL.pdf>
- Ferris E (2015) Climate-induced resettlement: environmental change and the planned relocation of communities. *SAIS Rev Int Aff* 35(1): 109–117. <https://doi.org/10.1353/sais.2015.0001>
- Fischer A (1965) History and current status of the Houma Indians. *Midcontinent American Studies Journal* 6(2):149–163. <https://doi.org/10.2307/40640562>
- Flavelle C (2020) U.S. flood strategy shifts to 'unavoidable' relocation of entire neighborhoods. *New York Times*. August 26, 2020. <https://www.nytimes.com/2020/08/26/climate/flooding-relocation-managed-retreat.html>
- Freudenberg R, Calvin E, Tolkoff L, Brawley D (2016) Buy-in for buy-outs: the case for managed retreat from flood zones. Lincoln Institute of Land Policy, Cambridge, MA
- Fricker M (2007) *Epistemic injustice: power and the ethics of knowing*. Oxford University Press
- GAO-20-100SP 2019 Disaster resilience framework: comprehensive reform could improve solvency and enhance resilience, Washington, D.C
- GAO-20-488 2020 Climate change: a climate migration pilot program could enhance the nation's resilience and reduce federal fiscal exposure. Washington, D.C
- Garrison TA (2002) *The legal ideology of removal: the southern judiciary and the sovereignty of Native American nations*. University of Georgia Press
- Gramling R, Hagelman R (2005) A working coast: people in the Louisiana wetlands. *Journal of Coastal Research*. Special Issue 44. Saving America's Wetland: Strategies for Restoration of Louisiana's Coastal Wetlands and Barrier Islands. 112-133. <https://doi.org/10.2307/25737052>
- Haake, C. (2007). *The state, removal and indigenous peoples in the United States and Mexico, 1620-2000*. Routledge.
- Hess JJ, Malilay JN, Parkinson AJ (2008) Climate change: the importance of place. *Am J Prev Med* 35(5):468–478. <https://doi.org/10.1016/j.amepre.2008.08.024>
- Jarvie J (2019) The Los Angeles Times. On a sinking Louisiana Island, many aren't ready to leave <https://www.latimes.com/nation/la-na-jean-charles-sinking-louisiana-island-20190423-htmlstory.html>
- Jenkins P (2016) *A sense of place at risk: perspectives of residents of coastal Louisiana on nonstructural risk reduction strategies*. Oxfam America. Oxfam, Boston, MA
- Katz M (2003) Staying afloat: how federal recognition as a Native American tribe will save the residents of Isle De Jean Charles, Louisiana. *Journal of Loyola University New Orleans College of Law Public Interest Law* 4(1)

- Kirsch S, Worlds L (2001) Environmental disaster, “Culture Loss” and the Law, 42(2)
- Koslov L (2014) Fighting for retreat after sandy: the ocean breeze buyout tent on Staten Island. *Metropolitiques*. eu, 23. <https://metropolitiques.eu/IMG/pdf/met-koslov.pdf>
- Marino E (2018) Adaptation privilege and voluntary buyouts: perspectives on ethnocentrism in sea level rise relocation and retreat policies in the US. *Glob Environ Chang* 49:10–13. <https://doi.org/10.1016/j.gloenvcha.2018.01.002>
- Massey D (1994) *A global sense of place. Space, place and gender*. Minneapolis: University of Minnesota Press
- McConkey J (2004) Knowledge and acknowledgement: ‘epistemic injustice’ as a problem of recognition. *Politics* 24(3):198–205. <https://doi.org/10.1111/j.1467-9256.2004.00220.x>
- McDowell C (2013) Climate-change adaptation and mitigation: implications for land acquisition and population relocation. *Dev Policy Rev* 31(6):677–695. <https://doi.org/10.1111/dpr.12030>
- McGaw J, Pieris A, Potter E (2011) Indigenous place-making in the city: dispossessions, occupations and implications for cultural architecture. *Architectural Theory Review* 16(3):296–311. <https://doi.org/10.1080/13264826.2011.621544>
- Morrissey J, Oliver-Smith A (2013) Perspectives on non-economic loss and damage: understanding values at risk from climate change. *Loss and Damage Series*. United Nations University Institute for Environment and Human Security, Bonn
- Nejad S, Walker R (2018) Contemporary urban Indigenous placemaking in Canada. In *The handbook of contemporary Indigenous architecture* (pp. 223–251). Springer, Singapore
- Norton-Smith K, Lynn K, Chief K, Cozzetto K, Donatuto J, Redsteer MH, Kruger LE, Maldonado J, Viles C, Whyte KP (2016) Climate change and indigenous peoples: a synthesis of current impacts and experiences. Gen. Tech. Rep. PNW-GTR-944. Portland, OR: US Department of Agriculture, Forest Service, Pacific Northwest Research Station. 136 p., 944
- Office of Community Development (forthcoming) State of Louisiana (forthcoming) Community master planning and program development for the resettlement of Isle de Jean Charles. Baton Rouge, LA
- Office of Community Development, State of Louisiana (2016, November, Updated 2017). The resettlement of Isle de Jean Charles: report on data gathering and engagement phase. Baton Rouge, LA. <http://isledejeancharles.la.gov/sites/default/files/public/IDJC-Final-Report-Update.pdf>
- Office of Community Development, State of Louisiana (2019) Isle de Jean Charles Resettlement – what is required to participate? Baton Rouge, LA. <http://isledejeancharles.la.gov/sites/default/files/public/IDJC-Mortgage-Document-11-14-19.pdf>
- Office of Community Development, State of Louisiana (2021) Program Materials. Baton Rouge, LA. <http://isledejeancharles.la.gov/program-materials>
- Oliver-Smith A (2005) Communities after catastrophe: reconstructing the material, reconstituting the social. In: Hyland S (ed) *Community Building in the 21st Century*. School of American Research Press, Santa Fe, pp 45–70
- Oliver-Smith A (2009) Climate change and population displacement: disasters and diasporas in the twenty-first century. *Anthropology and climate change. From encounters to actions*, pp 116–136
- Oliver-Smith A (2010) *Defying displacement: grassroots resistance and the critique of development*. University of Texas Press
- Pellow DN (2000) Environmental inequality formation: toward a theory of environmental injustice. *Am Behav Sci* 43(4):581–601. <https://doi.org/10.1177/0002764200043004004>
- Purser J (1964) The administration of Indian affairs in Louisiana, 1803–1820. *Louisiana History* pp:401–419
- Ralph E (2009) A pragmatic sense of place. *environmental and architectural. Phenomenology* 20(3):24–31
- Saldaña K (2018) *The coding manual for qualitative researchers*. Sage Publications, Thousand Oaks, CA.
- Schlosberg D (2013) Theorising environmental justice: the expanding sphere of a discourse. *Environmental politics* 22(1):37–55. <https://doi.org/10.1080/09644016.2013.755387>
- Scott AJ (1998) *Regions and the world economy: the coming shape of global production, competition, and political order*, vol 82. Oxford University Press, Oxford
- Seamon D (2015) *A geography of the lifeworld (Routledge Revivals): movement, rest and encounter*. Routledge, New York
- Siders AR (2019) Social justice implications of US managed retreat buy-out programs. *Clim Chang* 152(2):239–257. <https://doi.org/10.1007/s10584-018-2272-5>
- Simms JRZ (2017) “Why would I live anywhere else?”: resilience, sense of place, and possibilities of migration in coastal Louisiana. *J Coast Res* 33(2):408–420
- Stein MI (2018) CityLab. <https://www.bloomberg.com/news/articles/2018-01-24/moving-a-louisiana-town-out-of-the-path-of-climate-change>
- Törnqvist TE, Jankowski KL, Li YX, González JL (2020) Tipping points of Mississippi Delta marshes due to accelerated sea-level rise. *Sci Adv* 6(21):eaaz5512. <https://doi.org/10.1126/sciadv.aaz5512>
- Trepanier J (2020) Here’s a way to make communities more resilient to hurricanes. *New York Times*. <https://www.nytimes.com/2020/09/08/opinion/hurricanes-scientists-damage.html?action=click&module=Opinion&pgtype=Homepage>
- United Nations General Assembly (2007) United Nations declaration on the rights of indigenous peoples. *UN Wash* 12:1–18
- Utacia Krol D (2018 23) HuffPost. In Louisiana, a plan to relocate the country’s first ‘climate refugees’ hits a roadblock https://www.huffpost.com/entry/louisiana-climate-refugees-plan-roadblock_n_5ab402ade4b008c9e5f55c1b
- Whyte KP (2016) Is it colonial déjà vu? Indigenous peoples and climate injustice. In *Humanities for the Environment* (pp. 102–119). Routledge
- Whyte KP (2017) The Dakota access pipeline, environmental injustice, and US colonialism. *Red Ink: An International Journal of Indigenous Literature, Arts, & Humanities* 19(1)
- Wrathall DJ, Oliver-Smith A, Fekete A, Gencer E, Reyes ML, Sakdapolrak P (2015) Problematising loss and damage. *International Journal of Global Warming* 8(2):274–294. <https://doi.org/10.1504/IJGW.2015.071962>
- Wylie J (2007) *Landscape*. Routledge, New York
- Yawn A (2020) The American South. “As Gulf swallows Louisiana Island, displaced tribe fears the future” <https://www.usatoday.com/in-depth/news/investigations/2020/02/27/isle-de-jean-charles-louisiana-climate-refugees-resettlement/4890004002/>