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Planning for Resettlement: Building Partnerships For, By, and With Indigenous Peoples

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Abstract.

Efforts in the United States to plan or implement relocation in response to climate risks have struggled to improve material conditions for participants, to incorporate local knowledge, and to keep communities intact. Mixed methodologies of community geography provide an opportunity for dialogue and knowledge-sharing to collaboratively diagnose the challenges of climate adaptation led by marginalized communities. In this article, we advance a participatory practice model for the co-creation of knowledge initiated during a two-day workshop with members from the Biloxi-Chitimacha-Choctaw Tribe from Isle de Jean Charles in Louisiana, Yup'ik people from Newtok Village in Alaska, and researchers from the MIT Resilient Communities Lab. Building on prior scholarship of indigenizing climate change research, this article shares the experience of the workshop to support knowledge exchange and dialogue, with the goal of understanding how to build participatory and non-extractive community-academic partnerships. We reflect on the community values and principles used to guide this workshop to inform more inclusive and co-produced research partnerships, and pedagogies that can improve and assist the self-determination of groups impacted by climate change. Workshop presentations and discussions highlight interconnected themes of resources, systems & structures, regulatory imbalance, and resilience that underpin climate resettlement. We reflect on the narratives presented by members of both Indigenous tribes and NGO partners that illustrate the

shortcomings of managed retreat planning practices past and present as perpetuating existing inequality. In response to this structured knowledge exchange, we identify potential roles for community-academic partnerships that aim to improve the equity of existing managed retreat models. We propose approaches for incorporating traditional knowledge into the pedagogy, discourse, and practice of academic planning programs.

Key words:

Managed Retreat
Indigenous Environmental Planning
Community Partnerships
Climate Change Adaptation

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1. Introduction

There is a surging global movement to make space for Indigenous sovereignty within research with particularly prominent advocates at universities in North America, New Zealand, and Australia (George et al., 2020). Participants contributing to this movement in Indigenous research and research ethics express hope for how the potential outcomes of their work might enable Indigenous peoples to “reclaim their past, present and future” (George et al., 2020, p. 3). Due to the disproportionate burdens of global climate change borne by Indigenous communities, efforts to adapt to climate risks are a critical area of focus for Indigenous studies and leadership (Whyte, 2017). Without the inclusion of Indigenous values, leadership and perspectives, government approaches to community resettlement deeply undercut Indigenous autonomy and self-determination (Jessee, 2020). This article shares the experience of a workshop to support knowledge exchange and dialogue between two Indigenous communities currently experiencing these challenges , the Isle de Jean Charles Biloxi-Chitimacha-Choctaw Indians of Louisiana

(IDJC-BCC), and Yup'ik community members¹ from Newtok, Alaska, and the Resilient Communities Lab in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology (MIT).² Both Indigenous Nations are experiencing climate change-exacerbated land loss and pursuing resettlement (Dermansky, 2019; Dowie, 2010; Enoch, 2015; Upholt, 2019).

In March of 2019, four members of the MIT Resilient Communities Lab³ traveled to Lower Terrebonne Parish in coastal Louisiana to meet with IDJC-BCC leaders and community members, and to visit their historic home island to develop a more grounded understanding of the place, community, life-way, and their strengths and their challenges currently faced. In September 2019, the MIT Resilient Communities Lab held a workshop at MIT's campus in Cambridge, MA⁴ to create opportunities for building trust and understanding as a component of forming academic-Tribal community partnerships. This article focuses on the knowledge-exchange and workshop. Each is a part of an approach the Resilient Communities Lab is pursuing to center a participatory, pedagogical model that puts those most harmed by climate change and settler colonialism⁵ as full, collaborative partners. In this workshop, we, researchers within the MIT Resilient Communities Lab, investigated how Indigenous communities came to

¹ We use the term “Indigenous” and “Native” interchangeably throughout this article when referring to people of distinct social and cultural groups that share collective ancestral ties to the lands and natural resources where they live, occupy, or from which they have been displaced. “Tribal” refers to a political designation for people who are citizens of three sovereignties: their Tribe, the United States, and the state in which they reside. We capitalize the terms “Native”, “Indigenous” and “Tribe/Tribal” throughout this article in accordance with the [Native Governance Center's style guide](#), including when referring to “non-Native” people.

² At the recommendation of IDJC-BCC Chief Albert Naquin and his long-time partners at the non-profit Lowlander Center, the Resilient Communities Lab engaged with Stanley Tom and Andy Patrick and supported their participation in the workshop at MIT. Though they have served as local leaders in the past, Stanley Tom and Andy Patrick agreed to participate in their individual capacities and not as representatives or officials of Newtok Village.

³ <https://rcl.mit.edu/>

⁴ The Resilient Communities Lab sponsored the travel and lodging of Tribal participants and several community partners to lower their barriers to participation in the workshop.

⁵ Surveying the field of Indigenous studies, Kyle Whyte finds that climate change is often viewed as an “intensification of environmental change imposed by colonialism on Indigenous peoples” (Whyte, 2017; p. 153).

sit at the disappearing margins of the United States requiring direct confrontation of global climate change and its attending political, economic, societal, and geophysical challenges. This article foregrounds the situation in Isle de Jean Charles and Newtok, Alaska using stories, specific themes and content heard across the different sessions of the workshop, and reflections on the workshop experience as a component of the participatory, pedagogical model.

Linda Tuhiwai Smith suggests that partnerships for, by, and with Indigenous peoples can decolonize and indigenize scholarly research (Smith, 2006). Scholarly narratives often privilege the academic voice. In this article, the Resilient Community Lab authors seek to broaden our perspective with the voices of Tribal members from Isle de Jean Charles and Newtok, Alaska, as well as their existing partners who specialize in planning, landscape architecture, participatory action research, and human rights advocacy. We present a descriptive account reflecting the MIT experiences and learning across groups involved in this workshop and the construction of our academic-community partnership to conduct research about Tribal climate adaptations, such as resettlement. This workshop followed from a conversation between the Resilient Communities Lab and IDJC-BCC Tribal members in 2018, that led to a visit of Isle de Jean Charles in Spring 2019, where the RCL sought to get to understand the resettlement challenges faced by the IDJC-BCC Tribe first hand. The workshop followed from this visit to further our collaborative effort to incorporate Indigenous theory, Indigenous views of history, and the framing of lifeways to create the possibility of indigenized pedagogies and discourse for academic policy and planning programs at settler-colonial institutions like MIT (Tuck & Yang, 2012). As programs like MIT's train practitioners who will go on to support community adaptation on the ground, members of the MIT Resilient Communities Lab view this article as an opportunity for reflection on the enhancement of the existing indigenized and participatory planning pedagogy. Indigenous

partners emphasize the importance of having their histories, and experiences heard through their narratives, and the need for academic and other partners to support their work for problem solving.

We develop a deeper understanding of community values and principles to inform more inclusive and co-created (creation of research/problem solving- evolves to co-production planning pedagogies) produced research, partnership, and planning pedagogies that can improve and assist the self-determination of groups impacted by climate change. In section 2, we describe the background of the two Tribal communities whose Tribal citizens attended the workshop, and of the specific challenges that these communities face. In section 3, we review the literature on indigenizing climate change research, with a focus on lowering barriers and understanding culturally-centered resettlement. In section 4, we situate the workshop within the approach the Resilient Communities Lab has taken to engaging Indigenous partners in research and then detail the structure of the workshop and collective themes that were shared. Finally, in section 5 we reflect with members of both communities as well as their community partners and advocates who also attended the workshop on the role of academic-community partnerships, and the possibilities of improving resettlement planning⁶ models by preserving communities' right to self-determination.

2. Indigenous Communities Confronting Resettlement in a Changing Climate

2.1. *Isle de Jean Charles*

⁶ In this article, we describe Indigenous community resettlement planning in comparison to other strategies for relocating out of areas that are highly vulnerable to climate change-exacerbated environmental hazard. Though it is not the only goal of resettlement for these two Indigenous communities, Tribal leadership councils from both have expressed desires to undertake a strategic resettlement, or “the purposeful, coordinated movement of people and assets out of harm's way” (Siders, 2019, p. 216).

The Island of Isle de Jean Charles, Louisiana has lost all but 2% of its land since the 1950s, and is now a strip measuring a mere 320 acres. Along the coast of Louisiana, canals carved for oil and gas production have increased saltwater intrusion into freshwater marshland. As a result of industry activity, sea level rise, and the historic leveeing of the Mississippi River reducing sediment flow into the marsh which acted as natural protection against storms, places like Isle de Jean Charles are at extreme risk: Louisiana has lost more coastal wetlands than all other states (USGS, 2017). Isle de Jean Charles is the homeland of the Isle de Jean Charles Biloxi-Chitimacha-Choctaw Indian Tribe (IDJC-BCC). IDJC-BCC members have gradually moved off the Island over time due to repeated flooding and severe hurricanes, loss of housing, and loss of work. With each subsequent hurricane, more families have left: for example, severe flooding and damage during Hurricane Lili in 2002 displaced over fifty families according to Tribal leaders. Since the early 2000s, the IDJC-BCC Tribal Council has been engaging in a deliberate and planned migration process from the lower bayou region to higher ground in order to reunite their diasporic community and preserve traditional cultural lifeways.⁷ Most of those who remain on the Island have incorporated mitigation measures such as elevating their homes 10 feet or more.

To the members of the IDJC-BCC Tribe, the continual loss of land and periodic damage from storms has resulted in a loss of lifeway and communal support structures as members have moved away from the Island seeking safer homes in nearby locations. What was once a land rich with resources for a self-sustaining Tribal community is now “just a skeleton of what it used to

⁷ Resettlement was spurred by the island being excluded from the U.S. Army Corps of Engineers 2001 Morganza to the Gulf Hurricane Protection Levee. In response, the IDJC-BCC Tribal Council voted to resettle further inland in 2002. Subsequent proposals and planning efforts are listed as the Clinton Global Initiative Proposal Planning (2014), Natural Hazards Center’s Workshop (2015), IDJC-Lowlander Resettlement Planning Team Workshop (2016), and the HUD National Disaster Resilience Competition (2016) (Isle de Jean Charles, n.d.).

be” (Watson, 2019). In response to this ongoing land loss and storm damage, the IDJC-BCC Tribe has been actively pursuing resettlement options to reunite their Tribe with the Lowlander Center.⁸ Through that partnership, Lowlander has been able to facilitate other partnerships with Citizens’ Institute on Rural Design⁹, and landscape architecture firm Evans + Lighter¹⁰, National Academy of Science, Grounded Solutions, Handy Village Institute, among others. These short and long-term partners worked collaboratively with IDJC-BCC Tribe to contribute to proposals and portions of the Tribe’s planning processes (in 2007, 2010, 2014, 2015, 2016), as well as knowledge-exchange and learning from other Indigenous communities experiencing flooding impacts and land loss in Washington and Alaska (State of Louisiana Office of Community Development, Lowlander Center, & GCR, 2015).

The most recent planning, and resettlement process started in 2010, when the IDJC-BCC Tribe utilized their previous work and honed it with green sustainable principles to submit to the Clinton Global Initiative, the National Oceanic and Atmospheric Administration (NOAA), and the Mystic Foundation, none of which granted funding. A consortium of experts brought together by Lowlander Center in conjunction with the IDJC-BCC Tribal Council further developed plans over the course of two years with participatory design charettes with extensive planning and leadership from IDJC-BCC members in order to apply to the Department of Housing and Urban Development (HUD) “National Disaster Resilience Competition-Rockefeller Foundation”, which was announced in September 2014. The plan submitted by the Tribal Council and Lowlander Center – a proposal to reunite the IDJC-BCC community in a new low-carbon impact, flood-resilient location 40 miles north of the Island by the year 2020. The design

⁸ <https://www.lowlandercenter.org/>

⁹ <https://www.rural-design.org/>

¹⁰ <http://www.evans-lighter.com>

and the intent of coastal resiliency for a Tribe scored high from all the national submissions. It was awarded funding, scoring 5th in the national competition. However, the competition was a collaboration between U.S. Housing and Urban Development (CDBG-DR) and Rockefeller Foundation, one a government agency with fully developed rules of implementation and the other an organization concerned with innovation. Clarity of what was possible via innovation was not specified when the competition was initiated and confusion occurred as it was implemented after the Obama administration left office and the new HUD administration was not in sync with these goals. The State of Louisiana was inclined to follow the usual CDBG-DR regulations without pursuing a path that could have supported innovations and the Tribe's goals of reunification and cultural enhancement, while still conforming to federal regulations. The competition was for innovative approaches for climate and coastal resiliency, yet not all the waivers within agencies were clarified so that such innovation could take place.

Forty-eight million of a total \$92 million awarded to the State of Louisiana by HUD was allocated to resettle the residents of Isle de Jean Charles to develop "a resettlement model that is scalable, transferrable and supportive of cultural and social networks", a model for a sustainable, and resilient coastal community development (State of Louisiana Office of Community Development, 2016). Though Tribal leaders and state officials all say they aim to enhance the safety, living conditions, and quality of life of the island residents, the resettlement process has become fraught (Jessee, 2020). In September 2018, IDJC-BCC Chief Albert Naquin outlined concerns with how the resettlement project diverged from the original goals he and community partners had established including: leadership by the State of Louisiana's Office of Community Development (OCD) rather than by the IDJC-BCC Tribe; lack of emphasis on ensuring culture and lifeways; and removal of land protections for the remaining Island land. In a public letter in

January 2019, the IDJC-BCC Tribal Council requested that HUD take back the allocated funds due to the State's alleged deviation from the goals and objectives that the Tribe had sought via the grant application. OCD continues to advance the project, having redefined the overall goal as from being one of reunifying the IDJC-BCC Tribe at a new site to one of relocating individuals who reside on the island, or who were displaced by Hurricane Isaac (August 2012) either to the new site or to a new home elsewhere in Louisiana (Dermansky, 2019,; LA OCD, 2020).

2.2. Newtok, Alaska

The risks posed to the Yup'ik community in Newtok, Alaska due to changing water patterns in the region was recognized as far back as the 1980s. Like Isle de Jean Charles, the deep emotional connection and life-threatening struggle with the surrounding environment has been a point of discussion for decades. Newtok faces ecological challenges stemming both from the encroachment of the Ninglick River bringing saltwater in from the Bering Sea and erosion due to melting permafrost. The situation of villages like Newtok was described as a “wake-up call” by President Obama to incite action on climate change (Semuels, 2015). Erosion prevention and restoration efforts may be too late for communities like Newtok, and these communities are left with the challenges of resettlement and adaptation without a guiding federal framework to “assist, overlook, and fund their relocation” (Natural Hazards Center, 2016).

Though the Yup'ik people and their ancestors were seasonally nomadic, they settled or were compelled to settle in certain locations during the 20th Century by U.S. policies, often nearby or proximate to coastlines or riverbanks (Bronen, 2011; Dowie, 2010; Maldonado, Shearer, Bronen, Peterson, & Lazrus, 2013; Rawlings, 2015). For example, Bureau of Indian Affairs (BIA) policy forced the Yup'ik to build a school in Newtok for their children in 1958,

rather than send their children to BIA schools in Anchorage or other states (Dowie, 2010). The Village of Newtok became increasingly threatened by the advancing Ninglick River over subsequent decades. A 1984 assessment of the Ninglick River concluded that resettlement would likely be cheaper than attempting to reroute or prevent the river's encroachment (Koss, 2019). The dual challenge faced by Newtok of increasing environmental risk and limited access to resources has been recognized by U.S. advocates and officials for several decades. In 2003, the Government Accountability Office released a report recognizing that while four Alaska Native villages – Kivalina, Koyukuk, Newtok, and Shishmaref – were planning to relocate or conduct site expansions to account for flooding and erosion, state agencies responsible for providing infrastructure investments in those villages were failing to coordinate with or support these plans (Dowie, 2010; United States Government Accountability Office, 2003).

That same year, passage of federal legislation legally enabled the land exchange of the site of Newtok Village for a new site nine miles away that the Tribe named Mertarvik, which is within the Yukon-Delta National Wildlife Refuge (U.S. Public Law 108-129¹¹). Newtok began a land exchange process during the early stages of relocation planning, with Newtok Native Corporation, the community's village corporation under the Alaska Native Claims Settlement Act (ANCSA), taking an active leadership role in the land transfer with support from the community. The corporation passed a resolution authorizing the negotiation of a land exchange in 1996, negotiated the terms with the U.S. Fish and Wildlife Service, and worked with Congress to draft and pass the legislation after an eight-year long process.

¹¹ "An act to authorize the exchange of lands between an Alaska Native Village Corporation and the Department of the Interior, and for other purposes.", passed November 17, 2003.

However, this U.S. federal law has not facilitated a full Newtok Village resettlement almost two decades later. Complications including limited federal direction or policy, divisions over Tribal authority, and the continued challenge of securing enough funding have slowed down the resettlement (Enoch, 2015; Kim, 2019; Semuels, 2015). Lack of funding spurred Newtok to apply for disaster relief funds in 2017 to support resettlement, citing climate change (Waldholz, 2017). The increasing concerns of health and safety underpin the resettlement of Newtok Village's 450 residents (Koss, 2019; Natural Hazards Center, 2016). At stake in this resettlement is Newtok Village's community, culture, the Yup'ik language, and ultimately, identity (Waldholz, 2017). The first wave of resettlement from Newtok Village to Mertarvik took place when a number of homes were built in late 2019, representing a significant step forward in a complex process (Kim, 2019).

The resettlement experiences of the IDJC-BCC and Newtok highlight important themes of land ownership, access, and Tribal sovereignty, which we sought to unpack in our workshop. Creating a shared understanding of the unique circumstances behind these two resettlement planning initiatives was one of the first priorities in our partnership formation process. By undertaking an extensive literature review, we proceed to explore the complex role that outsiders and particularly external researchers have played or can play in working with Indigenous communities to better understand and adapt to the impacts of climate change.

3. Literature Review: Indigenizing Climate Change Research

Indigenous agrarian and coastal communities base their subsistence, livelihoods and cultural practices on their place (land and water) and to the integrated mutual aid or support networks that sustain their lifeways. Their relationship and connection to place is inseparable

from who they are. The innovation at the core of the IDJC-BCC Tribe's vision for their own resettlement is that it might also serve as a reconvening of their Tribe, such that while they could continue their autonomy and co-existence with the lands in which their ancestors and their lifeway is situated, while providing the revitalized community with space for Tribal ceremonies, job training, and security through further storms.

Indigenous scholars have detailed myriad examples of Native nations being exploited, ignored, and reneged upon in their dealings with the U.S. states and federal government (Wilkins and Lomawaima, 2001). Many small Tribes in Louisiana and Alaska still lack a key legal instrument that secures their identity, autonomy, and ability to seek legal and political recourse: federal recognition. Federally-recognized Tribes are treated as domestic independent nations with inherent powers of self-government by the U.S. government (Crepelle, 2018). Federal recognition confers a political classification upon Tribal citizenship, not just an ethnic classification, enabling Tribes to “receive unique legal treatment without running afoul of the Constitution's Equal Protection Clause” (Crepelle, 2018). Without federal recognition, Tribes like IDJC-BCC have more difficulty protecting their ancestral land, pursuing financial assistance, disaster assistance and having a say in decision-making about coastal restoration projects (Maldonado et al., 2013) due to lack of government-to-government relationship. Planning scholars suggest that a group or people can be intentionally overlooked in order to dispute their tenure on their lands. By casting Tribal occupation of land as informal, actors like oil companies can avoid environmental regulation, more easily shift environmental externalities onto those lands, or displace residents when they discover new value in or under those lands without providing fair compensation (Crepelle, 2018).

3.1. Can reciprocal, consenting relationships indigenize climate change research?

Indigenous and allied efforts to support Indigenous peoples' capacities to address climate change “offer critical, decolonizing approaches” (Whyte, 2017; pp. 154). Potawatomi scholar-activist Kyle Whyte (2020) expresses concern that the timeline for undertaking coordinated action to halt the dangers of climate change in an urgent and just manner may be fundamentally misaligned, given how much time it takes to nurture consenting and reciprocal “kin relationships” necessary for such coordination. Whyte describes ecological and relational tipping points including the approach of a 2degree increase in global average temperature associated with more extreme weather events, sea level rise, ocean acidification, droughts, changes in precipitation, and advocates for the need for relations that connect societal institutions together to support coordinated action (Whyte, 2020; pp. 4; Walker and Salt, 2006). The concepts of relational and ecological tipping points and Whyte’s call to action structured important questions that guided our collective workshop.

- What is the moral imperative for affiliates of settler-colonial academic research institutions deeply rooted in and benefitting from the exploitation of Indigenous peoples and stolen land to take up this call?
- How can our partnerships work on these dueling timelines, even if, as Whyte estimates, it is likely “too late to achieve environmental justice for some indigenous peoples, and other groups, in terms of avoiding dangerous climate change” (Whyte, 2020)?
- And finally, where does this leave Indigenous communities who have been forced to either relocate while facing grave environmental injustices?

Indigenous researchers/scholars express many misgivings about the intentions, practices, and outcomes of non-Native researchers conducting projects with Native researchers (whether they focus on climate change or other subjects). For example, Native researchers problematize

team dynamics when, despite many academics expressing an interest in decolonizing research, inequitable burdens are borne by Native researchers in taking on the educational and emotional work of decolonizing academic institutions. Non-Native researchers may further engage in ‘neo-colonial academic exoticizing’ of their Native colleagues (particularly new or young academics) and their work (Lewthwaite & Deckert, 2020). Non-Native researchers also frequently demonstrate an inability to differentiate between Native nations or between the various constituencies therein (Lewthwaite & Deckert, 2020). This is critical because members of the same Tribe, for example, may not have the same perspective of global climate change or experience the same local impacts.

Contemporary Native skepticism of settler colonial institutions and representatives is rooted in decades of extractive, one-sided research with little control, consent, or benefit by Native nations or individuals, as well as neglect or omission, or honoring of Traditional Ecological Knowledge (TEK) (Leonard et al., 2020). Tribes’ concerns over such practices led them to place moratoria on research and establish their own Human Research Review protocols overseen by Tribal IRBs (Naquin et al. 2019; Begay et al., 2019; Henderson, 2018). In her seminal work, *Decolonizing Methodologies*, Linda Tuhiwai Smith (Ngāti Awa and Ngāti Porou, Māori) summarizes how damaging research projects are when conducted by non-Native academics on, rather than with, Indigenous communities. Smith notes what she sees as a “new wave of exploration, discovery, exploitation, and appropriation”, explaining, “... researchers enter communities armed with goodwill in their front pockets and patents in their back pockets...” (Smith, 2006; p. 24). Smith calls for groups of non-Native researchers – professionals, professors, or students – to begin their work with an Indigenous group in full

awareness of the harm that continues to be wrought on Indigenous peoples' by purportedly well-intentioned outsiders.

While establishing more just and reciprocal models of climate change research, planning and action is a concern voiced by scholars, activists, philanthropic funders, national governments, and international governing bodies¹² around the world, Native scholars make specific calls for both decolonization and indigenization. Nicole Latulippe and Nicole Klenk extend the concept of sovereignty of Indigenous nations by suggesting that the global environmental change research community should prioritize Indigenous knowledge sovereignty (Latulippe & Klenk, 2020). Indigenization requires academics to not just ask permission, but to “make room and move over”, a process of institutional transformation oriented at “[responding] to the needs and priorities of Indigenous researchers, students and communities” (Latulippe & Klenk, 2020). This includes practices that, first, strengthen Traditional Ecological Knowledge systems and their continued transmission in accordance with Indigenous governance structures, and second, remove external barriers to their expression on the land.

However, in the two decades since Tuhiwai's *Decolonizing Methodologies* was released, Native scholars problematized the loose usage of the term decolonization to describe “other things we want to do to improve our societies and schools” (Tuck, 2013; Tuck & Yang, 2012, p. 3). Tuck and Yang (2012) argue that projects advancing social justice, critical methodologies,

¹² The 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) established Free, Prior, and Informed Consent (FPIC) as a specific right in a normative international human rights framework under which Indigenous and Tribal peoples can give, or withhold, informed consent to a project like a research initiative (United Nations, 2007). FPIC enables Indigenous peoples to negotiate the conditions under which an individual project is designed, implemented, monitored, and evaluated, in theory upholding a universal right to self-determination. Some researchers question the cultural validity of such agreements: Carolyn Smith-Morris problematizes the presumption of autonomy behind informed consent documents, calling attention to how many Indigenous cultures have stronger communalist value systems than Western notions of individualism allow. Smith-Morris suggests that this issue can be addressed only if the community as a whole, or those instructed to speak for it, are recognized as granting consent to share knowledges (Smith-Morris, 2019).

and even attempts to decenter settler perspectives have been miscast as decolonization, which they view more strictly as processes of repatriation of Indigenous life and lands. Shoehorning or combining projects with other goals by calling them decolonization allows settlers to “problematically attempt to reconcile [their] guilt and complicity” (Tuck & Yang, 2012, p. 3). To reflect this evolution in Indigenous theory, we characterize our own processes as an attempt at indigenizing climate change research and planning, and not as decolonization.

3.2. *How do settler-colonial planning programs present barriers to indigenizing research on climate change and resettlement?*

Scholars have offered a wide range of criticism to the ‘generations’ of planning theory and practice commonly taught in U.S. university-based planning programs (Forester, 2019). In the U.S., planning programs rarely offer structured educational opportunities for students to learn about Indigenous planning theories and practices or about how Western planning has affected or continues to affect Native peoples (Lane & Hibbard, 2005; Porter et al., 2017). Critics writing from an Indigenous perspective often highlight the white supremacist roots of Western or settler-colonial planning theory, as well as the genocide and displacement U.S. planning practices and planners have enacted on Indigenous peoples (Corntassel, 2009; Lane & Hibbard, 2005; Porter et al., 2017). For the most part, these critical perspectives sit at the margins of planning pedagogy. Though U.S., university planning programs sporadically offer courses on Native American and Indigenous planning (and even Indigenous planning for climate change), only the University of New Mexico seems to have established a formal concentration in Indigenous planning.¹³

¹³ The University of British Columbia and several other Canadian schools offer foundation courses and full academic concentrations in community planning for Native Nations.

Since the 1970s, non-Native planning scholars have called for more inclusive processes as a pathway to justice for marginalized communities, such as Indigenous peoples (Forester, 2019). However, Libby Porter (2017) warns that the rush to engage Indigenous peoples has exhausted and tokenized many because it has largely been conducted on the terms of settler-colonial institutions like universities. To facilitate planning that is led by Tribes on their own terms, Indigenous and allied community leaders, scholars, and planners have generated sets of practices for non-Native climate change researchers and planners who seek to work with Indigenous knowledge-holders. For example, the non-profit Lowlander Center has worked with the IDJC-BCC Tribe and other partners to create a toolkit for communities undergoing environmental and developmental pressures: *Preserving Our Place: A Community Field Guide to Engagement, Resilience, and Resettlement* (Naquin et al., 2019). The guide is intended to provide principles and methods for communities “at high environmental risk and attempting adaptation” in order to help them “maintain control of the planning process and its narratives” (Naquin et al., 2019, p. 7). Such resources not only offer insight on how to build relationships that are less transactional and extractive, but they also offer the possibility of knowledge exchange that protects non-Native communities from the damaging impacts of climate change.

Planning for community resettlement often fails to incorporate or provide opportunities to preserve or protect the long-standing elements of culture and community that may have kept Indigenous communities together in the first place, such as Indigenous ways of life (‘lifeways’) that different groups use to pass on Traditional Ecological Knowledge (‘TEK’).¹⁴ Whyte (2013a) define TEK as an “entire systems of responsibilities that are intrinsically valuable insofar as the systems are at the very heart of communities’ worldviews and lifeways,” specifying that

including TEK in climate adaptation, environmental management, and land stewardship strategies is about respecting those systems (p. 527). Whyte (2013b) recommends that, rather than attempt to create a strict definition of Traditional Ecological Knowledge (TEK), actors engaged in environmental governance at Native and non-Native institutions should explore the role that different forms of TEK can play in facilitating “cross-cultural and cross-situational collaboration.” By respectfully sharing local communities’ understandings of that suite of responsibilities, we conclude that TEK may help indigenize the methods, pedagogy, and discourse around climate adaptation planning in academic programs.

3.3. *What are the perils and opportunities of Indigenous resettlement?*

For both the IDJC-BCC Tribe and the Yup’ik of Newtok peoples, their battles to control their own vision of resettlement, processes and funding have become highly contested. Indigenous and allied planners and communities’ attempts to assert greater control over modern resettlement processes must be viewed with the full context of histories of forced displacement of Indigenous peoples (Bronen, 2011; Jessee, 2020). In 1825, President Monroe announced to Congress that he thought all Indians should be relocated west of the Mississippi (Smithers, 2015). Perhaps the most infamous Indigenous removal-relocation programs in U.S. history is President Andrew Jackson’s removal of the Cherokee from Georgia in the Trail of Tears beginning in 1838 (Smithers, 2015). This move was enabled by Congress’ passage of the Indian Removal Act of 1830 and the Supreme Court’s 1831 ruling in *Cherokee Nation v. State of Georgia* (Cave, 2003; Smithers, 2015). The federal government used the U.S. Army to conduct several additional ‘death marches,’ forced mass relocations of Indigenous peoples including the removal of Chickasaw, Creek, Choctaw, and Seminole Tribes to the West in the 1830s, and in

the 1860s, the forcible march of thousands of Navajo and Yavapai (Apache) to reservations (Akers, 2004; Tohe, 2007). Land dispossession, forced displacement, and cultural genocide of Indigenous peoples by the U.S. has thereby long been a domain where violations of sovereign control over community and land use have left multi-generational traumatic legacies.

Respecting the autonomy of Indigenous-led resettlement takes on a critical weight in light of these histories. Past partnerships between Tribal government representatives and researchers have brought to light alignments between the needs of Indigenous communities in Coastal Alaska and Louisiana when undertaking adaptation measures that include resettlement. For example, Maldonado et al. (2013) link forced resettlement and inadequate governance mechanisms and budgets to address climate change and support adaptation strategies with the loss of community and culture, health impacts, and economic decline (Maldonado, Shearer, Bronen, Peterson, & Lazrus, 2013). This adaptive response to climate impacts threatens to perpetuate legacies of genocide and environmental injustice if not undertaken by Indigenous peoples in an entirely voluntary manner and self-directed manner.

Native planners of community-led, culturally-centered resettlements may offer *all* (Native and non-Native) communities resettlement strategies that yield greater benefits for participants. Studies of voluntary home buyout programs in the U.S. – by far the most common form of resettlement initiative currently offered by local governments through which homeowners are bought out of their property so they can relocate – find that these programs have largely failed to produce meaningful improvements in health, socio-cultural, and economic conditions for participants (Dannenberg, Frumkin, Hess, & Ebi, 2019). Some voluntary resettlement schemes, like the New York Rising home buyout program, incentivized neighbors moving to a new location together, but it is not a standard practice to prioritize keeping

communities intact during this process. It is rarer still to encounter adaptation plans authored by non-Native governments with the notion that resettlement might serve as an opportunity to strengthen or reconvene a pre-existing community to further their own autonomy or preservation of their culture. Yet this is a core innovation and motivation behind both the Newtok and IDJC-BCC resettlements. As such, both offer a holistic vision of what a resettlement process could achieve in terms of benefits for individuals and their communities, not just reduced vulnerability to climate impacts.

4. *How do we identify ourselves and our responsibilities to indigenize climate research?*

The Resilient Communities Lab continues to reflect on and incorporate the above themes and questions of resettlement, Indigenous sovereignty, and the critical responsibility and reflexivity of academic organizations in our approach to forming partnerships to indigenize climate change research. In particular, the authors have begun confronting the appropriation of Indigenous lands by MIT unearthed by new reporting: extensive historical, financial, and geographic analysis released in March 2020 revealed how the Morrill Land Grant College Act of 1862 redistributed nearly 11 million acres of public land (Lee & Ahtone, 2020). As one of 48 U.S. land-grant colleges, MIT received public land from the federal government via the Morrill Act. This land was in large part stolen by the federal government from Indigenous Tribes and resold by land-grant schools for a profit. The proceeds from the land grant to MIT endowed the university with the resources used to construct its earliest academic buildings.

The vast majority of the lands granted to MIT were seized by federal treaty from 82 different Western and Midwestern Tribes, including the Greater and Little Osage, Chippewa, Omaha, Kansas, Sisseton-Wahpeton Sioux Tribe, Oto, Missouri, Ya-wil-chine, Wo-la-si, and

Wack-sa-che peoples (Lee & Ahtone, 2020). Because those parcels were “scattered mostly across 24 Western states,” Lee and Ahtone conclude that, “[the Morrill Act’s] place in the violent history of North America’s colonization has remained comfortably inaccessible” (Lee & Ahtone, 2020, para. 4). To our knowledge, the Tribes discussed in this article are not amongst those lands from which MIT directly profited. However, the MIT Resilient Communities Lab resolves to foreground the exploitative acts of our institution. We seek to be accountable to the Indigenous peoples of North America for the land-grab from which we continue to benefit. To us, accountability in our climate change research begins with constructing partnerships with deference to Indigenous expertise about what is just and desirable.

The Resilient Communities Lab is just beginning its relationship with community members from Isle de Jean Charles and Newtok, Alaska, but it is not the beginning of their challenge and efforts to resettle. The MIT participants in this partnership are stepping into a long history of work, advocacy, and relationship-building. Additionally, members of IDJC-BCC Tribe and residents of Newtok, Alaska were already involved in processes of learning and engagement with one another (before and independent of this workshop which began in the spring of 2010). Part of the learning process for the Resilient Communities Lab is to consider how to thoughtfully and respectfully join existing collaborative efforts, within and across regions. Our engagement recognizes the long-standing partnerships these communities have with other organizations and their varied histories and experiences with a variety of academic, political, and economic institutions. As this partnership grows, the Resilient Communities Lab hopes to, in turn, offer the capacity of our institution and work to generate resources in support of the needs and goals of partners. The history of these two communities informs our work and shapes the opportunities

for ongoing community-academic partnerships to address the process of climate adaptation in Indigenous communities. We initiated this process through dialogue and knowledge sharing.

5. Dialogue as a stage of partnership formation: themes from the workshop

The two-day workshop held in Cambridge, Massachusetts in September 2019 was designed to support a dialogue and knowledge sharing among participants to better scope out the challenges to equitable relocation planning. The first day of the workshop was centered on sharing the stories and challenges of community-resettlement in response to climate change in Newtok, Alaska and Isle de Jean Charles, Louisiana. The second day of the workshop centered on sharing the experiences of MIT and Department of Urban Studies and Planning affiliates (staff and faculty) related to climate resettlement and resilience. In design, the workshop was structured to first share the challenges faced by the communities of Newtok and Isle de Jean Charles and the experiences of researchers and organizations that worked closely with each Tribe in the past, followed by an opportunity to workshop those challenges and build bridges to research and teaching activities. In practice, this model of exchange and workshopping generated a range of ideas related to resettlement. However, the open workshop format also faced the challenges of achieving sufficient continuity of participants throughout the two days to integrate across sessions and engage in deeper workshopping of the resettlement challenges of Newtok and Isle de Jean Charles. It became more a series of presentations instead of the workshop concept of co-creation of knowledge through rigorous exchange.

We provide an overview of the workshop and a discussion of the themes that emerged through presentations and discussion. During the workshop, notes on the presentations and discussions were recorded using a graphic notetaking method to help all participants track the

workshop dialogue. Snapshots from the graphic notetaking highlight themes discussed in this section in Figures 2-6. We present the full graphic in Figure 1. The graphic representation maps the workshop in a circular fashion beginning in the top left corner moving clockwise across the themes and experiences. At the end, the participants dipped their hands in paint and placed these in the center of the diagram symbolizing our continued desire to work together.

Figure 1. Graphic notetaking illustrating themes, presentations, and key concepts throughout the two-day workshop. Names and titles of participants removed, but organizational affiliations included. Graphic notetaking by Agustín Cepeda.

5.1. Themes from Isle de Jean Charles and Newtok, Alaska experiences with climate resettlement

The stories, experiences, and challenges of resettlement formed the foundation of this workshop, which built on the willingness of members of Isle de Jean Charles and residents of Newtok, Alaska to share their experiences with a broader audience. The workshop was designed by the Resilient Communities Lab, in consultation with IDJC-BCC Tribal leadership, partners they had worked with for their resettlement planning, Yup'ik community members from Newtok, Alaska, and other advocates and scholars familiar with resettlement issues in Alaska. Some of the workshop participants (MIT or Boston-area students, faculty, and staff) were familiar with the Newtok and Isle de Jean Charles efforts to resettle, while others learned of these resettlements for the first time. Members of each community shared about their governance, a sense of how the notion of community shapes their identity, the physical challenges they are experiencing, past and ongoing experiences collaborating with regulatory agencies, and how such experiences shape their ambitions and strategies for the future. From the narratives shared

by members of each community, themes emerged on preserving and strengthening cultural traditions and languages, a need for Tribal self-determination in resettlement processes, and strong practices of community planning and co-visioning for resettlement.

Presentations on the Isle de Jean Charles and Newtok, Alaska resettlement processes highlighted the centrality of community values principles and vision in resilience planning. As indicated in Figure 2, Tribal members shared their experiences with clashing visions for resettlement, and communication with state agencies that have fractured their planning efforts. Central to the divergence of values were the states' focus on individual rights rather than the collective, hindering self-determination and autonomy as defined by Indigenous practices and principles.

Figure 2. Section of graphic notetaking illustrating narratives shared by members of Newtok, Alaska and Isle de Jean Charles.

Partners of Isle de Jean Charles and Newtok, Alaska emphasized the central role of participatory processes in their ongoing work with both Tribal communities. Partners emphasized themes of self-determination, decolonization, Traditional Ecological Knowledge, and co-design to bridge historical lifeways with a changing climate and resettlement, as indicated in Figure 3. Across these dimensions of self-determination, decolonization, Indigenous knowledges, and co-design was an emphasis on securing funding and resources for communities as collaborative partners, and elevating communities through legal support. These challenges have shaped the approach and interests of the Resilient Communities Lab and we have since been working to pursue grant funding for joint research initiatives that weave Traditional

Ecological Knowledge with Science, Technology, Engineering, Arts, and Mathematics (STEAM) disciplines for improved climate change research, education and policy.

Figure 3. Section of graphic notetaking illustrating narratives focused on participatory and collaborative research and support activities.

5.2. Themes on the intersection of research and the lived experiences of climate change and resettlement

The workshop also sought to bridge the experience shared by Isle de Jean Charles and Newtok, Alaska, with research experiences and projects in MIT's School of Architecture and Planning. The geographic scope of these presentations differed but offered parallels to the resettlement experiences of the Isle de Jean Charles and Newtok Alaska communities. Themes highlighted by MIT affiliates illustrated in Figure 4 recognized the opportunities and challenges of resilience and the built environment, assessing equitable outcomes across community and environmental outcomes, and the challenge of sustaining resources (financial and institutional). This segment of the workshop has since engaged other members of the community in the work to build partnerships with Indigenous communities.

Figure 4. Section of graphic notetaking illustrating academic research projects and activities at MIT in the School of Architecture and Planning that relate to climate resettlement, adaptation, and participatory research approaches (1 of 2).

Dialogue between MIT researchers and Tribal members also delved into topics of the existing limitations of academia to meet community needs. Illustrated in Figure 5, themes on academic-community partnerships indicate a need to reduce the extractive nature of research endeavors and

center participatory processes, and to enhance local capacity and educational opportunities for Indigenous students to enroll at MIT. In response, we created a course offering in the Department of Urban Studies and Planning on Indigenous Environmental Planning that brings together Indigenous activists, researchers and DUSP faculty and students for applied project work. The class has been opened to students from Indigenous communities across the US. Other experiences and stories illustrated in Figure 5 also highlight important challenges to overcome in university and Indigenous community partnerships, such as the potential for misalignments of values, funding needs, as well as the struggle to sustain financial support for ongoing partnerships.

Figure 5 Section of graphic notetaking illustrating academic research projects and activities at MIT in the School of Architecture and Planning that relate to climate resettlement, adaptation, and participatory research approaches (2 of 2).

5.3. Themes associated with opportunities and challenges from workshop dialogue

Focusing on the opportunities and challenges embedded in research collaborations, the workshop's dialogue and ongoing efforts since the workshop have focused on efforts to center Indigenous participants, as well as their experiences and lifeways in research partnerships on climate adaptation: resources, systems & structures, regulatory imbalance, and resilience. Indicated in Figure 6, workshop discussions emphasized the need for financial and non-monetary resources focused on five topics and associated questions:

1. Knowledge: How do we document knowledge while also respecting Indigenous Knowledge sovereignty?

2. Academia: Whether or how can academic institutions play a role in trust-building between communities and governments?
3. Financial: Can we set aside grant funds to support implementation by Tribal governments or leaders?
4. Legal: What options exist (or could exist) for legal support or assistance in between the pro bono to direct payment spectrum?
5. Ecological: How can future development practices build relationships with and empower Tribes?

These five central themes or areas identified in the workshop are highly interconnected. Concerns of access to and allocation of resources spanned the other themes, with concerns of transparency and ownership of resources. Across issues of systems and structures, comments centered on longstanding issues of interactions with the U.S. government, opportunities to support local Indigenous councils, engage students, and restore Native Nations as custodians of the land, especially their historic homelands. Yet the inconsistency and rigidity in U.S. agencies and regulations, emphasis on individuals rather than community, and limited resources to interpret regulations result in power imbalances. Pedagogy in university design and planning curricula that centers cultural preservation and Indigenous leadership in these models of education is a critical element of resilience. For partnerships, such as ours, how to build networks that provide opportunities for capacity building and shared resources to more effectively address challenges communities are facing is key to how we move forward.

Figure 6 Section of graphic notetaking illustrating themes from breakout group discussions centered on building responsive partnerships and networks

6. Discussion: Takeaways for Community Engagement and Planned Relocation

6.1. Takeaways from workshop hosts: MIT Resilient Communities Lab

As a reflection on this process of Knowledge sharing, from the perspective of academic researchers, we suggest three takeaways for community-academic partnerships that aim to improve the equity of climate adaptation and resettlement by preserving a community's right to self-determination.

6.1.1. Working Toward Community-Led Research Practices

Dismantling the tendency and long-history of studying or teaching “about” communities rather than “with” communities, requires commitment and a willingness to build partnerships and to learn from others already embarking on community-centered research. The well-documented and problematic history of the colonization of Traditional Ecological Knowledge by researchers who extract from communities rather than developing meaningful long-term problem-solving exchanges (Burkett, 2018; Hughes, 2018; Latulippe & Klenk, 2020; Mitchell, 2018; Roosvall & Tegelberg, 2015), is a call to action for new approaches to research.

Given the importance of self-autonomy and the avoidance of a colonial mindset in which research has historically been conducted with Tribes (Smith, 2006; Latulippe & Klenk, 2020), we recognized the need to establish ourselves as independent organization to work with the community so that we can develop a Memorandum of Understanding and a Declaration of Principles (West and Peterson, 2008). To this end we formalized the Resilient Communities Lab's goal to support communities experiencing climate change in developing strategies of resilience.

Universities are well prepared to engage in contractual arrangements with a range of partners (for example, Memoranda of Understanding (MOU), or Data Use Agreements). Such agreements are advisable for community-engaged research, even at early exploratory phases such

as partnership formation workshops like the one described here. Voluntary research practices that develop common value statements, principles for collaboration, data sharing agreements, research review by Tribal Institutional Review Boards (Tribal IRBs), and MOUs detailing Tribe-specific engagement guidelines can help hold collaborative work accountable to a mutually agreed-upon vision and purpose. These structures and procedures can help partners decide upon a fair division of labor, compensation, and resources, and define resolution processes for interpersonal conflicts.

The knowledge exchange of this workshop represents a first step toward trust and collaboration, but discussion in this workshop also emphasized the mismatch in research funding as well as a need for adoption of participatory research practices and formal structures for this partnership. Maldonado et al. (2013) provide a cautionary note about how this process could unfold, warning that, “Respectful partnerships may be difficult to achieve without changes in national and international legal systems to accommodate Indigenous concepts and ways of being” (p. 536). Western legal frameworks may override or conflict with voluntary agreements protecting Traditional Ecological Knowledges that have been taken out of community boundaries.

6.1.2. *Emphasize self-determination and decolonization and recognize the values dominant underlying planning and policy tools*

As examined in our literature review, there has been a shortcoming to develop educational initiatives that engage in a meaningful way with Tribal histories, values and processes of governance. In prior scholarship and this workshop, Tribal members and their longtime partners emphasize self-determination, including with respect to climate resettlement.

Here we see friction generated by planning processes and policies that fail to recognize or adhere to Indigenous self-determination, and by colonial frames of land tenure and individualistic policies that continue to erode sovereignty. The emphasis on market-based relocation processes in the United States render community-led relocations exceedingly difficult. Marino (2018) notes that existing relocation mechanisms tend to embody prevailing cultural biases as well as the emphasis on individual 'family unit'. The case of the IDJC-BCC Tribe lends itself to the study of questions of how communities can effectively preserve their cultures, practices and identities, while working within the constraints of regulatory systems that do not fully recognize them.

In planning, we often focus on issues of equity and resilience divorced from the colonial legacy that underpins many planning tools, such as rights, ownership, and permits to land, air, water, and other resources. The challenge is a challenge of educating planners, architects, designers, and policymakers to be attuned to what climate justice means to affected communities. It also calls us to build cultural competencies with issues and histories often left out of planning, and to maintain community values and principles in practice and in collaboration (Jessee et al. 2015). As researchers and educators at research universities, we see the importance of and are developing pedagogical approaches and educational opportunities that build on this workshop to bring awareness of the cultures, values, and needs of Indigenous research in planning and design education in the United States.

6.2. *Takeaways from workshop participants: Barriers in the academic institution of relationship building.*

Following the workshop, the Resilient Communities Lab and workshop participants engaged in conversations to reflect on the workshop experience and initiatives following the dialogue and Knowledge sharing initiated by this workshop.

6.2.1. *Perseverance is essential to building meaningful and long-term relationships*

Long Term relationships are difficult to foster in academia, but they are essential to meaningful engagement with communities. In the first step of relationship-building a willingness to reach out and make mistakes is necessary. In reaching out to build new relationships, academics should take the time to talk through expectations. Different stakeholders may have different expectations about what they are going to get out of a knowledge-sharing or dialogue workshop that may or not be that same as the risk-bearers. Academics should seek to understand and tailor the structure of the engagements to suit the needs and desires of visiting communities. For example, our workshop sought to introduce the communities to a broader set of researchers and students within our department. Participants in the workshop enjoyed the opportunity for educational exchange with a broader audience, but also felt the workshop would have been more effective if it had been reduced to a cohesive and consistent set of attendees. Focusing the content of the workshop allows participants to seek more in-depth questions, while continuity of participants supports deeper conversations.

While the structure of the event and flow of conversation would have been improved by limiting attendance, the participants overwhelmingly appreciated the fact that the Resilient Communities Lab treated the encounter as the first step in building a relationship. Since the event we have been actively discussing and pursuing other research and educational

opportunities. In efforts such as these, scholars and non-Native partners must continually ask what is the benefit to the community.

6.2.2. *It is important to tailor academic partnerships to support Tribal needs and other ways of knowing*

Relationship building is a long-term process that does not always adhere to the timelines or funding streams of academia. In participatory approaches to indigenizing research, it is important for academics to be present in the ways they are asked. The institutional challenge for academia is to “make room and move over” for Indigenous voices and leadership (Latulippe & Klenk, 2020, p. 9). For the purposes of a single workshop, the agenda should be designed to support the goal as determined by partners, rather than just by academics. For example, the agenda may be quite different if the goal is to build trust rather than just to share knowledge. Communities should drive the agendas, goals, and work. Non-Native academics and partners who are trusted may be able to act as translators or intermediaries with the full approval of their long-time Native partners, but also must be cautious to not overstep or speak for Indigenous communities.

In reflection on the pursuit of indigenizing environmental and climate research, partners highlighted the story Robin Wall Kimmerer shares in *Braiding Sweetgrass* (2013) of the academically constructed world of science and biology rejecting her question of “why asters and goldenrod looked so beautiful together” (p. 39) as not science. The undergraduate biology class shifted plants into objects to be studied for functions and mechanisms, rather than subjects to be learned from. Kimmerer reflects on “the questions science does not ask, not because they aren’t important, but because science as a way of knowing is too narrow for the task” (pp. 44-45). So too in the realm of climate adaptation and resettlement, the constructed bounds of what is

“important” or “acceptable” must make room for and work in harmony with other questions and other ways of knowing the world.

7. Conclusion

Climate change is both global and local. It is both an abstract, theoretical phenomenon and a very real lived experience. It is both perceptible in graphs of steadily rising carbon dioxide concentrations and in the fights for survival of marginalized communities. Through the experience of developing this workshop and reflecting on it in this article, we put forward a model of participatory scholarship aimed at integrating the lived experience and local knowledge of climate at-risk communities into the production of co-created knowledge. The reflections on this workshop experience do not seek to propose or reveal a universal approach to climate adaptation or a standard recipe for diagnosing policy success or failure. Instead, it seeks to draw the attention of scholars and policy makers to the need for intellectual openness, flexibility, and responsiveness as communities struggle to determine what it means to survive both physically and ontologically in the face of climate change. Openness, flexibility, responsiveness, and long-term commitment are not traits common to either the modern techno-bureaucratic state or hyper-neo-positivist social science. But they are traits scholars and policy makers will need to cultivate if they want to produce outcomes with lasting benefits for communities that have been made most vulnerable to climate change.

Partnerships between researchers and Indigenous communities illustrate new ways to make visible the histories, Traditional Ecological Knowledges, and social ties that underpin community and ecological resilience (Bethel et al. 2011). As more Indigenous and place-based communities are under threat by climate change, the development of new methodologies for

adaptation and retreat that account for the layers of colonialism and support the realization of self-determination is fundamental. With the goal of understanding how to build participatory and non-extractive community-academic partnerships, this article describes and reflects on a process of bringing members of communities together with scholars in an exercise of joint knowledge production. We acknowledge and reflect upon the learning process of building these relationships. First steps are often awkward and imperfect but the dialogue shared by members of the ICJD-BCC and Newtok, Alaska, community partners, and MIT affiliates suggested critical directions of inquiry and approaches to partnership to support collaborative research and teaching.

First, it is essential to understand and recognize values in design and planning, particularly around the subject of community resettlement. Second, ownership of knowledge and respect for the contributions and methods of knowledge generation of various communities and ways of knowing are essential. Third, sharing and respecting time and resources are absolutely necessary. Finally, it is important to advocate for climate justice both in education as well as practice.

The stories of the Isle de Jean Charles and Newtok resettlements highlight key conversations currently occurring in the realm of climate change adaptation and climate-induced displacement. These examples draw out what it means to engage in a meaningful and community-centered planning effort to develop a resettlement strategy. The relocation and displacement of people from close-knit communities with long, place-based histories are deeply painful processes. Regardless of socioeconomic status, the decision to leave one's home is profoundly difficult and complex, and deeply interwoven with one's sense of place, lifeways, and belonging. The move includes all the human and non-human inhabitants seeking a safer,

sustainable home. For lower-income communities and communities of color, who bear a disproportionately high burden of environmental hazards, relocation may not be an option without government assistance. It is essential that Indigenous peoples lead their own efforts to resettle their communities to avoid replicating systems of vulnerability constructed by the U.S. Government, such as the historic siting of BIA schools for Alaska Native peoples in floodplains.

Community-led relocations are fundamental to maintaining Indigenous lifeways, and the social and environmental integrity of Native Nations. The story of the Isle de Jean Charles Tribe bears on conversations on predictions of upwards of 150 million people displaced by sea level rise, extreme weather events, drought and water scarcity, by the year 2050 (Kulp and Strauss, 2019). As our climate becomes increasingly volatile and more settlements become too wet, too hot, too dry or too storm-prone to inhabit, new strategies are needed to assist in adaptation with resources that give justice and equity to communities.

We hope that the co-creation of knowledge through academic-community partnerships will support the pressing challenge of climate resilience that is becoming more prevalent for coastal communities. We seek to co-design social and physical processes to indigenize resettlement planning, making it more equitable and better attenuated to Traditional Ecological Knowledges, adaptation principles, and values. We hope our reflection on this workshop and these efforts will inspire others. First steps to community academic-partnerships, such as the workshop described in this article, offer geographers, planners, researchers in other disciplines, and practitioners more broadly the opportunity to engage in meaningful processes of design and planning that recognize the historical and ongoing effects of settler-colonial planning and work to break down Western logics to support community-led responses to climate change.

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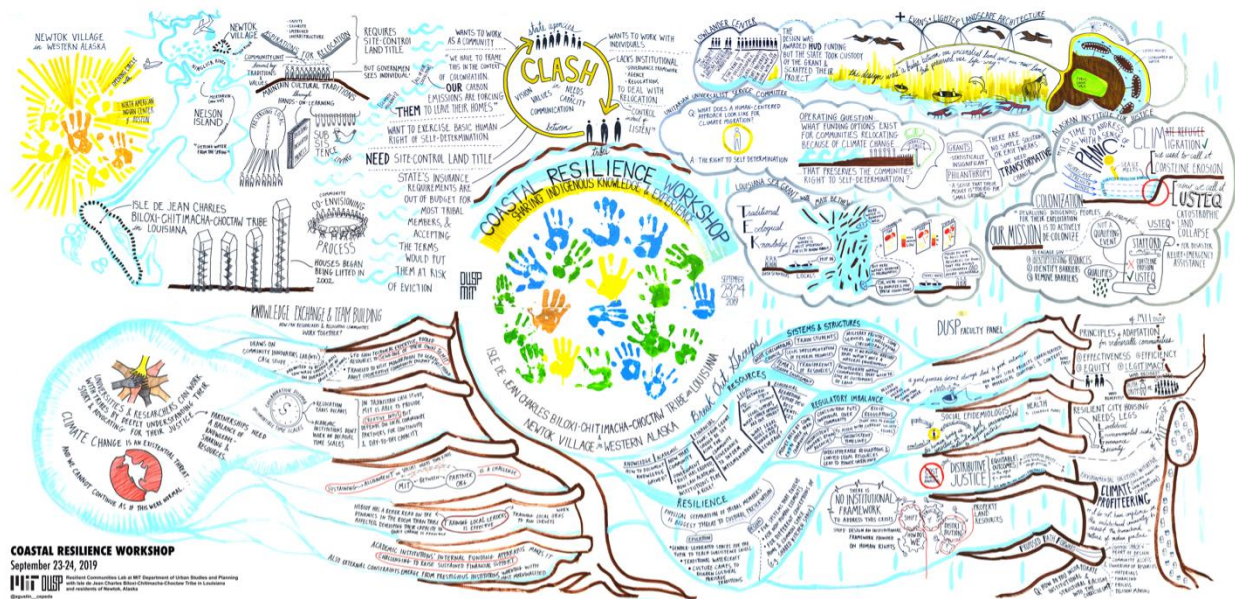
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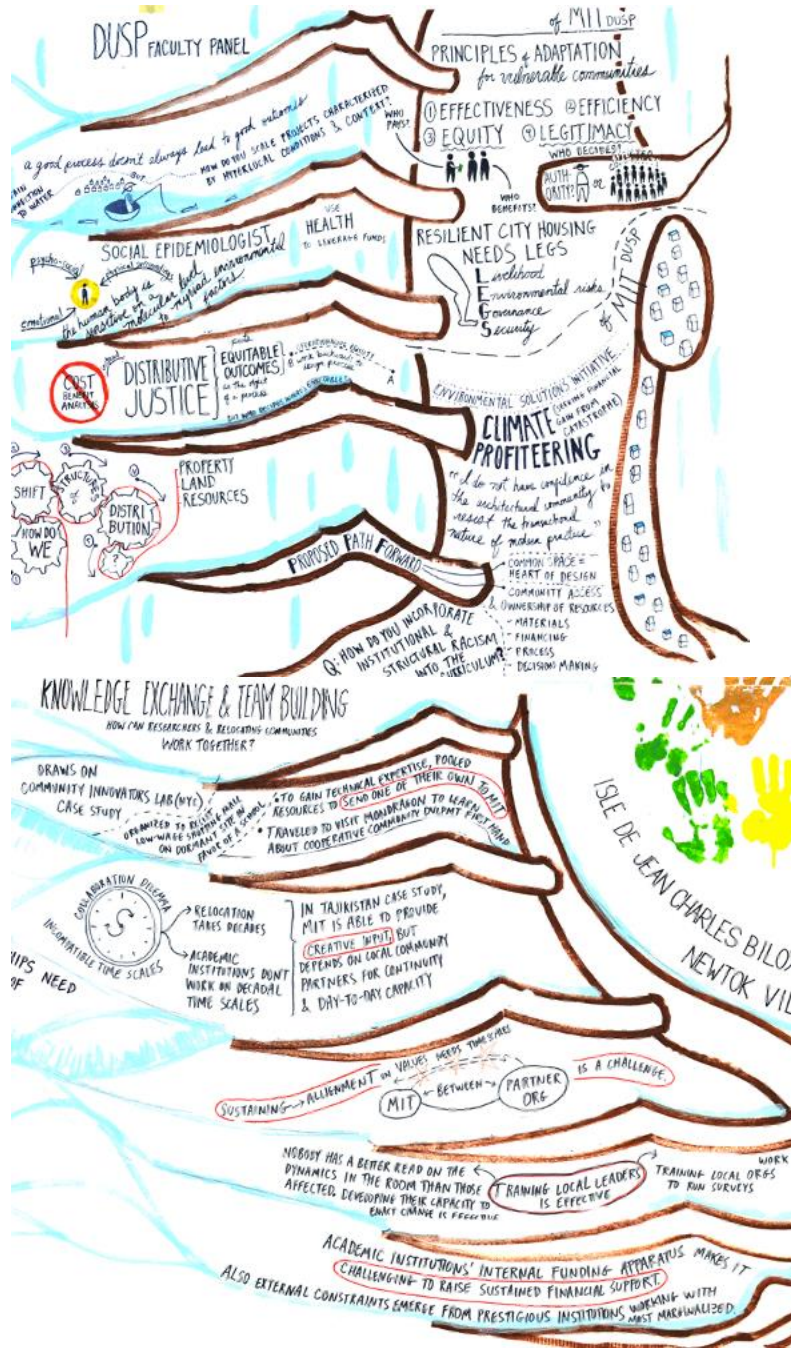
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