Conceptualizing Climate Justice in Kivalina

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Due to climate change, indigenous communities in Alaska are forced to develop in ways that adversely affect their livelihoods and culture. Decreases in sea ice, increases in the frequency of sea storms, and melting permafrost have accelerated erosion of the barrier island on which the village of Kivalina sits to the point where relocation is necessary. It is unjust that communities like Kivalina have contributed little to causing climate change but are limited in their ability to adapt.

This Article examines three broad questions and comes to four preliminary conclusions about relocation as a climate adaptation strategy and its relation to climate justice. First, how are climate-induced impacts understood among indigenous communities in Alaska? Second, how does relocation affect a community's ability to adjust to climatic changes? Third, how can community participation be increased in discussions about, and policies for, relocation? Specifically, do discussions about climate justice help or hinder the relocation process? My preliminary conclusions are that first, climate-induced impacts are symptomatic of ongoing social-historical processes that produce vulnerability and limit adaptive capacity. Second, by taking these processes into account, climate-induced relocation can benefit from utilizing local, indigenous knowledge and increasing community participation in relocation planning. Third, if relocation is viewed as contributing to community resilience, new opportunities to empower communities and collaborate with state and federal agencies are possible. Finally, reframing relocation as a climate justice issue broadens the discussion to include both its environ-

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mental and social-historical drivers, and draws connections between issues of climate change, sovereignty, and cultural survival.[1]

I. INTRODUCTION

Lucy Adams, a Kivalina elder, appeared resigned to a future beyond her control. The corners of her mouth turned down as she sighed, gazed up at the ceiling as if she was looking through it into an uncertain future, and said, "We are standing alone to try and survive."[2] After a moment of solemn silence, I asked her to tell me a story about resilience. Her mood changed as she smiled and began:

> Thirty years ago, we built sod igloos. Men would get wood with dog teams. The dogs would pull the boat out onto the ice. Women would run alongside the dogs. I would run for hours and hours and never get tired. Everything was so clean. Clean water, clean fish. We burned trash. There were no plastic bags. We washed clothes by hand. If we ran out of wax candles, we used seal blubber. Everybody worked and exercised every day.[3]

Lucy's narrative may sound like a depiction of an idealized past, but it stands in stark contrast to the Kivalina of today. According to the 2010 U.S. Census, Kivalina has a total population of 374 living in eighty-five housing units on an eight-mile barrier island in the Chukchi Sea, eighty miles above the Arctic Circle in northwest Alaska.[4] Decreases in sea ice, increases in the frequency of sea storms, and melting permafrost have accelerated erosion of the island to the point where relocation is necessary. The rise in public attention to climate-induced relocation and the desire to document the phenomenon has led to an inundation of indigenous communities in Alaska with journalists, photographers, scientists, lawyers, and politicians eager to engage with "America's first climate change refugees."[5] Media and official reports present the need for reloca-

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1. In Kivalina, community members shared with me their memories, thoughts, and visions of their future through stories. Stories are often constructed to draw out some sort of lesson or moral to inform future research and/or political action. Conscious of this research bias, my research team frequently discussed how to define our research question when conducting interviews in Kivalina. When we spoke with community members, we attempted to listen more than ask, and began our conversations by asking about contemporary life in Kivalina, how it differs from the past, and what the future portends. We found this approach elicited greater dialogue about not just loss and uncertainty, but resiliency and hope in the relocation and recreation of home.

2. Interview with Lucy Adams, in Kivalina, Alaska (Oct. 26, 2012).

3. *Id.*

4. *2010 Demographic Profile: AK-Kivalina ANVSA*, U.S. CENSUS BUREAU, https://www.census.gov/popfinder/?fl=6755 (last modified Aug. 6, 2013).

5. Carol Kuruvilla, *Climate Change Will Cause Alaskan Village to Vanish under Water Within 10 Years: Scientists*, N.Y. DAILY NEWS (July 30, 2013), http://www.nydailynews.com/news/

tion as a direct result of climate change, yet climate change is both an "ecological phenomenon" as well as "an abstract idea with multiple meanings and possible interpretations, according to the context of its enunciation."[6] The meanings, interpretations, and enunciation—the discourse—of climate change, and the particular vulnerability of indigenous communities in Alaska to its impacts, influence both adaptive and confrontational responses, in particular, relocation and litigation. In the case of Kivalina, even though lack of developable space instigated the relocation process, climate change has brought renewed attention to the issue by making visible the village's particular vulnerability and limited adaptive capacity.

The increased visibility of Kivalina and the policies driving its "motionless relocation" raise questions about responsibility and justice.[7] The federally recognized Native Village of Kivalina and the state-recognized city of Kivalina (collectively "Kivalina") boldly entered the climate justice discourse in 2008 when it filed a lawsuit against nearly two dozen energy and utility companies for damages to aid in the relocation process, based on the argument that the defendants bear the greatest responsibility for climate change.[8] The U.S. Court of Appeals for the Ninth Circuit dismissed the case in October 2012, and the U.S. Supreme Court declined to hear the case.[9] These legal hurdles, however, did not end the dialogue about how Kivalina's relocation should proceed and the implications for community resiliency.

The terms adaptation, adaptive capacity, vulnerability, and resiliency are utilized and understood in this Article to be interrelated and applicable to a variety of disciplines, scales, and contexts. The United Nations Office for Disaster Risk Reduction (UNISDR) defines adaptation as the "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities."[10] In the context of climate change, adaptation can be considered "local or community-based adjustments to deal with changing conditions within the constraints of the broader economic-

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national/alaskan-village-vanish-water-decade-scientists-article-1.1412920#commentpostform.

6. Patrick Durrer, *"Global Warming Issues are Here": Ethnography of a Motionless Relocation in Kivalina, Alaska*, EUROPEAN SCI. FOUND., 18 (May 13, 2011), http://doc.rero.ch/record/21621/files/memoire_Durrer.pdf.

7. *Id.* at 2.

8. Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009).

9. Native Vill. of Kivalina v. ExxonMobil Corp., 696 F.3d 849 (9th Cir. 2012), *cert. denied*, 133 S. Ct. 2390 (May 20, 2013).

10. *Terminology*, UNITED NATIONS OFF. FOR DISASTER RISK REDUCTION (Aug. 30, 2007), http://www.unisdr.org/we/inform/terminology.

social-political arrangements."[11] Hence, adaptive capacity involves the "strengths, attributes[,] and resources available within a community, society or organization" to adjust to climatic stimuli, their effects, or both.[12] UNISDR defines vulnerability as the "characteristics and circumstances of a community, system or asset that make[s] it susceptible to the damaging effects of a hazard."[13] In contrast, resilience is the "ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions."[14]

The impacts of climate change exacerbate Kivalina's vulnerability and, consequently, reduce its adaptive capacity. To answer how Kivalina might improve its adaptive capacity to the point of resilience, the specific characteristics and circumstances of Kivalina's vulnerability must be identified. Community-based vulnerability assessments require the "active involvement of stakeholders, considerable effort to ensure legitimacy, information collection on community relevant phenomena and processes, the integration of information from multiple sources, and the engagement of decision-makers."[15] An effective adaptation strategy will acknowledge and attempt to reduce community vulnerability throughout its development and execution.

This Article examines three broad questions and comes to four preliminary conclusions about relocation as a climate adaptation strategy and its relation to climate justice. First, how are climate-induced impacts understood among indigenous communities in Alaska? Second, how does relocation affect a community's ability to adjust to climatic changes? Third, how can community participation be increased in discussions about, and policies for, relocation? Specifically, do discussions about climate justice help or hinder the relocation process? My preliminary analysis based on fieldwork and literature review suggests several conclusions. First, climate-induced impacts are symptomatic of ongoing social-historical processes that produce vulnerability and limit adaptive capacity. Second, by taking these processes into account, climate-induced relocation can benefit from utilizing local, indigenous

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11. Barry Smit & Johanna Wandel, *Adaptation, Adaptive Capacity and Vulnerability*, 16 GLOBAL ENVTL. CHANGE 282, 289 (2006).

12. *Terminology*, *supra* note 10.

13. *Id.* A "hazard" is a "dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage." *See id.*

14. *Id.*

15. Smit & Wandel, *supra* note 11, at 288.

knowledge and increasing community participation in relocation planning. Third, if relocation is viewed as contributing to community resilience, new opportunities to empower communities and collaborate with state and federal agencies are possible. Finally, reframing relocation as a climate justice issue broadens the discussion to include both its environmental and social–historical drivers, and draws connections between issues of climate change, sovereignty, and cultural survival.

Climate change exacerbates existing social vulnerabilities. In Part II of this Article, these vulnerabilities are outlined broadly and detailed specifically in the case of Alaskan indigenous communities. Part III discusses how the framing and construction of climate change in discourse impacts how relocation is articulated and viewed at the community level. Part IV focuses on the day-to-day discourse—the micropolitics—of climate change in Kivalina as the community negotiates its relocation. The evolution and articulation of the climate justice discourse and the implications of the 2008 lawsuit are explored in Part V.

II. SOCIAL VULNERABILITY AMONG INDIGENOUS COMMUNITIES IN ALASKA

Climate change, and its associated policies, can reveal and exacerbate social vulnerability, which is defined as a community's sensitivity to environmental changes and its ability to respond and recover from their impacts.[16] Social vulnerability has roots in social structures and settlement and development patterns that affect a community's access to resources, power, information, and networks.[17] Conversely, social vulnerabilities of people and societies shape the damages associated with storms, droughts, and slow-onset climatic changes.[18] The interplay between climate change and vulnerability "involves the totality of relationships in a given social situation producing a set of conditions that render a society unable to absorb the impacts of a natural or social agent without significant disruption of its capacity to fulfill the basic needs of its members."[19] In other words, climate change may be "much more explainable in terms

16. Susan L. Cutter & Christina Finch, *Temporal and Spatial Changes in Social Vulnerability to Natural Hazards*, 105 PROC. OF THE NAT'L ACAD. OF SCI. OF THE U.S. 2301, 2301 (2008).

17. *See* KATHY LYNN ET AL., U.S. DEP'T OF AGRIC., SOCIAL VULNERABILITY AND CLIMATE CHANGE: SYNTHESIS OF LITERATURE, GENERAL TECHNICAL REPORT PNW-GTR-838, at 8 (2011).

18. Jesse Ribot, *Vulnerability Does Not Fall from the Sky: Toward Multiscale, Pro-Poor Climate Policy*, *in* SOCIAL DIMENSIONS OF CLIMATE CHANGE 47, 47 (Robin Mearns & Andrew Norton eds., 2010).

19. Anthony Oliver-Smith, *Climate Change and Population Displacement: Disasters and Diasporas in the Twenty-First Century*, *in* ANTHROPOLOGY AND CLIMATE CHANGE: FROM ENCOUNTERS TO ACTIONS 116, 120 (Susan A. Crate & Mark Nuttall eds., 2009).

of . . . the conditions of inequality and subordination in the society rather than the accidental geophysical features of a place."[20] Community responses to climate change, therefore, are the result of complex relationships between climate change and social vulnerabilities.[21] In Kivalina, community members expressed concerns about the ability to adapt in ways that sustain their livelihoods in a just, equitable manner. For Kivalina, and other indigenous communities who face climate-induced relocation, there is a need to address social vulnerability by increasing access to information and participation in policymaking; maintenance of local and traditional knowledge; and adaptive capacity.[22]

The causes, consequences, and interconnection of climate change and social vulnerability among indigenous communities in Alaska are contextualized by environmental changes and extractive resource development; limited authority and resources to adapt to climate-induced impacts; socioeconomic and sociocultural stress; indigenous identity and knowledge; and subsistence livelihoods.

A. Environmental Changes and Extractive Resource Development

The 2005 Arctic Climate Impact Assessment (ACIA) concluded that "[i]f the scientific projections and scenarios are realized, climate change could have potentially devastating impacts on the Arctic and on the peoples who live there, particularly those indigenous peoples whose livelihoods and cultures are inextricably linked to the arctic environment and its wildlife."[23] Alaska has seen an increase in winter temperatures of three to four degrees Celsius over the past fifty years with a projected rise of another three to give degrees by the end of the century.[24] This

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20. *Id.*

21. LYNN ET AL., *supra* note 17, at 8. Social vulnerability within indigenous populations is shaped by (1) equity and justice; (2) culture and knowledge; and (3) adaptive capacity. *Id.* at 7. Equity and justice include "access to and participation in the processes and outcomes of policymaking, as well as ethical and legal issues related to responsibility among governments and populations to address climate change." *Id.* Culture and knowledge include "the impact of climate change on current and future generations, local and traditional knowledge, sense of place, and treaty rights and access to traditional resources." *Id.* Adaptive capacity refers to the "relative power among populations, ability to address climate effects, and access to social processes and resources." *Id.*

22. Kyle Powys Whyte, *Justice Forward: Tribes, Climate Adaptation and Responsibility*, 120 CLIMATIC CHANGE 517, 523–24 (2013).

23. ARCTIC COUNCIL & INT'L ARCTIC SCI. COMM., ARCTIC CLIMATE IMPACT ASSESSMENT 659 (Carolyn Symon et al. eds., Cambridge Univ. Press 2005), *available at* http://www.acia.uaf.edu/pages/scientific.html.

24. JONATHAN M. HANNA, NATIVE COMMUNITIES AND CLIMATE CHANGE: PROTECTING TRIBAL RESOURCES AS PART OF NATIONAL CLIMATE POLICY 11 (Jonathan M. Hanna, ed. 2007), *available at* http://www.tribesandclimatechange.org/docs/tribes_116.pdf.

warming trend significantly impacts the extent and volume of Arctic sea ice.

The December 2012 Arctic Report Card found Arctic sea-ice levels in September to be the lowest on record, with continual decreases in multi-year sea ice.[25] Lack of summer sea ice raises development concerns, as areas for fossil fuel exploration and extraction change, and new shipping routes become available.[26] While there is the potential for jobs and increases in tax revenue from fossil fuel and mineral development,[27] there is also the potential for increases in contamination, pollution, and environmental degradation directly from exploration and extraction activities, as well as indirectly from the greenhouse gas emissions of fossil fuel combustion.[28]

Warmer temperatures on land and sea also result in less shore ice, which leaves coastal villages more vulnerable to storm surges and floods. A 2003 U.S. General Accounting Office (GAO) report found that 184 out of 213 (86% percent) Alaska native villages are becoming more susceptible to flooding and erosion due in part to rising temperatures.[29] The report also found that four villages—Kivalina, Newtok, Koyukuk, and Shishmaref—"are in imminent danger from flooding and erosion" and will need to relocate.[30] The Executive Subcabinet on Climate Change, established in 2007 by former Alaska Governor Sarah Palin, formed the Immediate Action Workgroup (IAW) to identify the immediate needs of communities imminently threatened by erosion, flooding, permafrost degradation, and other climate change-related impacts.[31] The IAW identified communities, including Kivalina, in need of immediate assistance and facilitated meetings with community representatives to develop response strategies.[32] Based on IAW recommendations, the Alaska legislature established the Alaska Climate Change Impact Mitigation Program[33]

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25. *See Arctic Report Card: Update for 2012*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://www.arctic.noaa.gov/report12/ (last visited June 10, 2014).

26. HANNA, *supra* note 24, at 11–12.

27. Oil and gas revenue comprised 92% of Alaska's unrestricted revenue in fiscal year 2011. *State Revenue*, ALASKA OIL & GAS ASS'N, http://www.aoga.org/facts-and-figures/state-revenue/ (last visited June 10, 2014).

28. HANNA, *supra* note 24, at 11–14.

29. *See* U.S. GEN. ACCOUNTING OFFICE, GAO-04-142, ALASKA NATIVE VILLAGES: MOST ARE AFFECTED BY FLOODING AND EROSION, BUT FEW QUALIFY FOR FEDERAL ASSISTANCE 2–3 (2003) [hereinafter GAO 2003 REPORT].

30. *Id.* at 4.

31. IMMEDIATE ACTION WORKGROUP, RECOMMENDATIONS TO THE GOVERNOR'S SUBCABINET ON CLIMATE CHANGE 1 (2009), *available at* http://www.climatechange.alaska.gov/docs/iaw_finalrpt_12mar09.pdf.

32. *Id.* at 3–4.

33. ALASKA ADMIN. CODE tit. 3, § 195.040 (2009).

(ACCIMP) to "address the immediate planning needs of communities imminently threatened by the impacts of climate-related natural hazards such as erosion, flooding, storm surge, and thawing permafrost."[34] The ACCIMP permits the Commerce, Community, and Economic Development Department to award, on a non-competitive basis, a grant of $10,000 to $50,000 to six eligible communities, including Kivalina, for a Hazard Impact Assessment (HIA) to identify climate change-related impacts and recommend actions in response.[35] Based on the HIA recommendations, the department may award, on a competitive basis, grants of up to $150,000 per community for planning services.[36] To date, none of the six communities have successfully relocated.

In 2009, the Army Corps of Engineers (ACE) conducted the Alaska Baseline Erosion Assessment, which compared the cost of erosion control versus the cost of relocation, and found sizeable funding gaps.[37] The assessment estimated infrastructure costs due to erosion over a twenty-year period in Kivalina at $105 million; however, given the amount of current and projected erosion, the community may become uninhabitable over the next ten to fifteen years.[38] The relocation of Kivalina is estimated to cost $123.4 million, but this amount may be too low because it would provide for only a minimal level of housing, water, and sanitation facilities.[39] In addition, both federal and Alaskan post-disaster response statutes limit funding to restoration of infrastructure to its condition prior to the disaster, not to relocation efforts.[40] Funding to address relocation is often unavailable to communities because they lack approved disaster mitigation plans, have not been declared a federal disaster area by the Federal Emergency Management Agency (FEMA), or are unincorporated villages in an unorganized borough and do not qualify for the U.S. Department of Housing and Urban Development (HUD) Community Development Block Program.[41] Furthermore, federal funds are designed to

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34. *See Alaska Climate Change Impact Mitigation Program*, ALASKA DEP'T OF COM., COMMUNITY, & ECON. DEV., http://commerce.alaska.gov/dnn/dcra/PlanningLandManagement/ACCIMP.aspx (last visited June 10, 2014).

35. ALASKA ADMIN. CODE tit. 3 § 195.040(a) (2009).

36. *Id.* § 195.040(b).

37. *See generally* U.S. ARMY CORPS OF ENG'RS ALASKA DIST., ALASKA BASELINE EROSION ASSESSMENT: AVETA REPORT SUMMARY—KIVALINA, ALASKA (2009), *available at* http://www.poa.usace.army.mil/Portals/34/docs/civilworks/BEA/Kivalina_Final%20Report.pdf.

38. *See id.* at 3.

39. *Id.*

40. *See* ALASKA STAT. § 26.23.010 (2008).

41. *See* U.S. GEN. ACCOUNTING OFFICE, GAO-09-551, ALASKA NATIVE VILLAGES: LIMITED PROGRESS HAS BEEN MADE ON RELOCATING VILLAGES THREATENED BY FLOODING AND EROSION 20–24 (2009) [hereinafter GAO 2009 REPORT].

supplement state and local resources for reconstruction in the current location, not to fully fund relocation.[42]

To help address these statutory and financial gaps, the GAO recommended the following: a feasibility study of response alternatives to flooding and erosion; a policy to guide future infrastructure investments; a flood assessment conducted by ACE to augment their recent erosion assessment; grants for housing and community development; and the creation of a lead federal entity that could work with a lead state agency to help communities coordinate and oversee relocation efforts.[43] The 2009 GAO follow-up report found that "no single comprehensive proactive federal program to assist villages with their relocation efforts" exists.[44]

These environmental changes in the Arctic increase the social vulnerability of indigenous communities in Alaska in a number of significant ways: limited authority and resources to adequately adapt to climate change; socioeconomic and sociocultural stress; the maintenance of traditional knowledge; and the ability to practice a subsistence way of life.[45]

B. Limited Authority and Resources

For indigenous communities in Alaska, climate-induced relocation cannot be separated from the history of government-mandated relocation and land dispossession, which have hindered the application of traditional knowledge to climate change adaptation.[46] When Alaska became a state in 1959, the Bureau of Land Management (BLM) divided village land into lots, determined a base price for each, and auctioned them off.[47] Because many indigenous people were either hunting or had little money or experience with auctions, many missed the auction and were dispossessed, becoming "homeless in [their] homeland."[48] Most Alaskan territory was under federal jurisdiction, and Congress granted the new state government the right to select up to 104 million acres of federal land for

42. Robin Bronen, *Climate-Induced Community Relocations: Creating an Adaptive Governance Framework Based in Human Rights Doctrine*, 35 N.Y.U. REV. L. & SOC. CHANGE 357, 365 (2011).

43. *See generally* GAO 2009 REPORT, *supra* note 41; GAO 2003 REPORT, *supra* note 29.

44. GAO 2009 REPORT, *supra* note 41, at 20.

45. HANNA, *supra* note 24, at 11–14.

46. *See* Julie Koppel Maldonado et al., *The Impact of Climate Change on Tribal Communities in the US: Displacement, Relocation, and Human Rights*, 120 CLIMATIC CHANGE 601, 603 (2013).

47. *See* WILLIAM L. IĠĠIAĠRUK HENSLEY, FIFTY MILES FROM TOMORROW: A MEMOIR OF ALASKA AND THE REAL PEOPLE 109–10 (Sarah Crichton Books 2009).

48. *Id.* at 108.

state ownership.[49] Consequently, land with the greatest potential for oil, gas, and mineral development fell under state control.[50] In 1971, Congress passed the Alaska Native Claims Settlement Act (ANCSA) that awarded forty-four million acres, approximately 16% of Alaska's territory, and $962.5 million to Alaskan Natives for relinquishing claims to the rest.[51]

Soon, however, it became clear that ANCSA was not the just transition to land sovereignty that Congress envisioned. ANCSA extinguished all claims of aboriginal title, including hunting and fishing rights, and replaced them with multiple regional corporations and the ability to establish village corporations, wholly owned by qualified Alaska natives (i.e., those born prior to December 18, 1971).[52] William Hensley, Alaska's first Native state representative in Congress who also helped write ANCSA, admits in his memoir that in the attempt to "accommodate modernization," ANCSA was responsible for crowding out "the consciousness of our people's heritage, purpose, and survival as a culture."[53] The replacement of rights in land and resources with individual shares in corporations "can be seen as being driven by the policy of assimilation" that limits the ability of indigenous peoples to maintain their subsistence and cultural patterns as well as self-determination.[54] Hensley states that "[r]ules were being made for us by people whose mandate was to change us by attacking the very essence of what made us unique: our languages, our names, our religion, our customs, and our values."[55]

During the forty years since ANCSA passed, James Anaya, the United Nations Special Rapporteur on the rights of indigenous peoples, was "struck by indications about how the economic and cultural transformations accelerated by ANCSA have bred or exacerbated social ills among indigenous communities, manifesting themselves, for example, in high rates of suicide, alcoholism, and violence."[56]

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49. *Id.* at 111.

50. *Id.*

51. *Id.* at 159.

52. *See* Special Rapporteur on the Rights of Indigenous People, *The Situation of Indigenous Peoples in the U.S.,* Hum. Rts. Council, ¶¶ 58–60, U.N. Doc. A/HRC/21/47/Add.1 (Aug. 30, 2012) (by James Anaya) [hereinafter Special Rapporteur]; Alaska Native Claims Settlement Act, 43 U.S.C. §§ 1607–1608 (2012).

53. HENSLEY, *supra* note 47, at 214.

54. Special Rapporteur, *supra* note 52, ¶ 59.

55. HENSLEY, *supra* note 47, at 129.

56. Special Rapporteur, *supra* note 52, ¶ 62.

C. Socioeconomic and Sociocultural Stress

Kivalina displays many of the "social ills" referred to by Special Rapporteur Anaya. Tribal Administrator Stanley Hawley mentioned that due to limited building space, there has been no new construction of homes in Kivalina, which leads to overcrowding.[57] "People are paying the price" for the lack of developable land space, he said, referring to a three-room house occupied by seventeen people.[58] The combination of overcrowding, unemployment, and inhibited ability to practice a subsistence lifestyle creates tension within the community, which continues to experience cases of drug and alcohol abuse, sexual and domestic violence, suicides, and crime. For example, in October 2012, two teenagers were charged with burglary, theft, criminal mischief, and tampering with evidence when they broke into the Kivalina Native Store and stole $189,000.[59] Incidents like these are compounded by a lack of adequate policing, health care, and other public services.[60] These socioeconomic and sociocultural stressors characterize social vulnerability within the context of climate variability.[61]

D. Indigenous Identity and Knowledge

Indigenous knowledge, a rich source of observations of environmental changes that goes back for millennia, plays an important role in climate change adaptation strategies and assessments.[62] Indigenous knowledge is defined generally as a "cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment."[63] Indigenous knowledge is of particular im-

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57. Interview with Stanley Hawley, Tribal Adm'r, Native Vill. of Kivalina IRA Council, in Kivalina, Alaska (Oct. 25, 2012).

58. *Id.*

59. *Teens Charged in Theft of $189K at Kivalina Store*, JUNEAU EMPIRE (Oct. 3, 2012), http://juneauempire.com/state/2012-10-03/teens-charged-theft-189k-kivalina-store#.UMNcQJPjmQY.

60. E-mail from Stanley Hawley, Tribal Adm'r, Native Vill. of Kivalina IRA Council, to Marissa Knodel (Mar. 17, 2014) (on file with author).

61. Timothy J. Finan, *Climate Science and the Policy of Drought Mitigation in Ceará, Northeast Brazil*, *in* WEATHER, CLIMATE, AND CULTURE 203, 205 (Sarah Strauss & Benjamin S. Orlove eds., 2003).

62. *See* KRISTEN VINYETA & KATHY LYNN, U.S. DEP'T OF AGRIC., EXPLORING THE ROLE OF TRADITIONAL ECOLOGICAL KNOWLEDGE IN CLIMATE CHANGE INITIATIVES, GENERAL TECHNICAL REPORT PNW-GTR-879, at 9 (2013); Henry Huntington & Shari Fox, *The Changing Arctic: Indigenous Perspectives*, *in* ARCTIC CLIMATE IMPACT ASSESSMENT 62, 62–95 (2005), *available at* http://www.acia.uaf.edu/PDFs/ACIA_Science_Chapters_Final/ACIA_Ch03_Final.pdf.

63. Matthew Lauer & Shankar Aswani, *Indigenous Ecological Knowledge As Situated Practices: Understanding Fishers' Knowledge in the Western Solomon Islands*, 111 AM. ANTHROPOLOGIST

portance to climate adaptation in the Arctic, where accelerated global warming makes weather conditions increasingly difficult to forecast and presents dangers to subsistence hunters.[64]

Among the Iñupiaq,[65] the northernmost group of aboriginal people that inhabit northwest Alaska and parts of northern Canada and Greenland, the classroom is the environment of snow, ice, and ocean, and the teachers are the elements as well as community elders. Iñupiaq knowledge as it relates to the environment is informed by over 1,000 years of experience and preserved in the form of oral tradition.[66] The Iñupiaq language consists of a group of dialects and adaptive behaviors passed down from one generation to the next through stories that help transform practice and experience into memory.[67] Generational inheritance of elders' knowledge and experience depends upon "community-based oral histor[ies]" and "land-based experiential learning" in order to pass on the knowledge and experience of elders through successive generations.[68] Joe Swan, a Kivalina elder, said that elders know people "learn through experience,"[69] but that the younger generation is "spoiled" because they don't want to hunt, get a job, or provide for their family, yet "survival is dependent on cultural heritage."[70] Swan further stated, "There is no future survival unless there's something you think and create. These are not just old stories. The younger generation needs help to carry on Iñupiaq traditions because culture is going to change."[71] The cultural attitudes and values such as patience, persistence, calmness, respect for elders, and respect for the environment embedded within traditional knowledge allow indigenous communities to remain resourceful and resilient in a changing world.[72]

317, 322 (2009) (quoting Fikret Birkes, *Traditional Ecological Knowledge in Perspective*, *in* TRADITIONAL ECOLOGICAL KNOWLEDGE CONCEPTS AND CASES 3 (Julian T. Inglis, ed. 1993)).

64. *See* DOUGLAS NAKASHIMA ET AL., WEATHERING UNCERTAINTY: TRADITIONAL KNOWLEDGE FOR CLIMATE CHANGE ASSESSMENT AND ADAPTATION 35 (David McDonald ed., Stéphanie Ledauphin et al. trans., 2012), *available at* http://www.ipmpcc.org/wp-content/uploads/2012/06/Weathering-Uncertainty_FINAL_12-6-2012.pdf.

65. Iñupiaq and Inuit tend to be used interchangeably, although Inuit usually refers to the people living in Canada and Greenland.

66. Anne Henshaw, *Climate and Culture in the North: The Interface of Archaeology, Paleoenvironmental Science, and Oral History*, *in* WEATHER, CLIMATE, AND CULTURE, *supra* note 61, at 217, 226.

67. *Id.* at 220.

68. *Id.* at 226.

69. Interview with Joe Swan, in Kivalina, Alaska (Oct. 26, 2012).

70. *Id.*

71. *Id.*

72. *See* James Ford et al., *Reducing Vulnerability to Climate Change in the Arctic: The Case of Nunavut, Canada*, 60 ARCTIC 150, 158 (2007).

The recognition and incorporation of indigenous knowledge and ways of comprehending the environment, weather, and climate were issues of contention between Alaska Natives and the U.S. government prior to the prominence of climate change in the policy arena. When Alaska became a U.S. territory in 1867, the Bureau of Indian Affairs (BIA) subsequently removed children from their homes to classrooms designed to sever any connection to their indigenous identity and culture.[73] The use of native language was forbidden and continuously suppressed as native children were told "who they were was not good enough" and that "they should leave behind the world of their parents and grandparents and become something different."[74]

Despite this assimilationist policy, the use of indigenous knowledge continues to demonstrate a "holistic understanding" of the environment that looks at how different components of an ecosystem relate.[75] By embedding this knowledge within the context of climate change, the resilience of vulnerable indigenous communities may be strengthened.

E. Subsistence Culture

The Iñupiaq practice a subsistence lifestyle of hunting whale, caribou, seal, walrus, polar bear, musk-ox, fish, and birds, which gives them an intimate understanding of the Arctic landscape and ocean. Climate change has the potential to adversely impact subsistence culture through limitations on the availability and abundance of species and the increased risk and difficulty of activities associated with subsistence living.[76] Kivalina City Mayor Austin Swan said, "Climate change impacts our lifestyle. We have to go farther to get what we need, but we're losing the sea ice."[77] In Kivalina, I was told the community has been unable to successfully hunt whale since the mid-1990s,[78] and caribou are becoming scarcer.[79] Further, a drought in June and July of 2012 was followed by heavy rain in August, which decimated the berry harvest.[80]

For many indigenous communities in Alaska, subsistence culture is about more than sustenance; it is about the process of sharing and reaffirming "fundamental values and attitudes towards animals and the environment and provides[s] a moral foundation for continuity between gen-

73. *See* HENSLEY, *supra* note 47, at 72.
74. *Id.* at 78.
75. *See* Henshaw, *supra* note 66, at 218–19.
76. *See* HANNA, *supra* note 24, at 11.
77. Interview with Austin Swan, Mayor, City of Kivalina, in Kivalina, Alaska (Oct. 26, 2012).
78. Interview with Lucy Adams, *supra* note 2.
79. Interview with Stanley Hawley, *supra* note 57.
80. Interview with Lucy Adams, *supra* note 2.

erations."[81] In the words of Joe Swan: "No food, no future. Period."[82] Even though many indigenous communities in Alaska practice only a partially subsistence lifestyle, commentators suggest that such a close connection to ecosystem goods and services allow these communities to "interpret and react to climate change impacts in creative ways, drawing on traditional knowledge as well as new technologies to find solutions, which may help society at large to cope with the impending changes."[83]

Climate change undermines the foundation for indigenous worldviews, which are "embedded in a holistic framework that connects the land to the air and water, the earth to the sky, the plants to the animals, the people to the spirit."[84] For indigenous peoples, "climate change is not something that comes in isolation; it magnifies already existing problems of poverty, deterritoriality, marginalization, and noninclusion in national and international policy-making processes and discourses."[85] In sum, climate change both causes and exacerbates the inability of indigenous communities in Alaska to practice a subsistence way of life and maintain their traditional knowledge in a place of health and safety, which undermines their land and cultural sovereignty in an already contested landscape. Given that climate-induced vulnerabilities have led several indigenous communities in Alaska to plan for community relocation, it is important to understand how relocation as a climate adaptation strategy is viewed within the climate change discourse.

III. RELOCATION WITHIN THE CLIMATE CHANGE DISCOURSE

Environmental disasters and the people they impact are constructed and framed by social, economic, and political factors, which provide a theoretical basis for the assertion that "we construct our own disasters insofar as disasters occur in the environments that we produce."[86] Similarly, the impacts of climate change are "socially, politically, and economically mediated, distributed, and interpreted, with measures to miti-

81. HANNA, *supra* note 24, at 11 (citing ARCTIC COUNCIL & INT'L ARCTIC SCI. COMM., *supra* note 23).

82. Interview with Joe Swan, *supra* note 69.

83. VINYETA & LYNN, *supra* note 62, at 9 (citing Jan Salick & Nanci Ross, *Traditional Peoples and Climate Change*, 19 GLOBAL ENVTL. CHANGE 138 (2009)).

84. Patricia Cochran et al., *Indigenous Frameworks for Observing and Responding to Climate Change in Alaska*, 120 CLIMATIC CHANGE 557, 559 (2013); Susan A. Crate & Mark Nuttall, *Introduction: Anthropology and Climate Change*, *in* ANTHROPOLOGY AND CLIMATE CHANGE: FROM ENCOUNTERS TO ACTIONS 12 (Susan A. Crate & Mark Nuttall eds., 2009).

85. Crate & Nuttall, *supra* note 84, at 11.

86. Anthony Oliver-Smith, *Theorizing Disasters: Nature, Power, and Culture*, *in* CATASTROPHE AND CULTURE: THE ANTHROPOLOGY OF DISASTER 23, 43 (Susanna M. Hoffman & Anthony Oliver-Smith eds., 2002).

gate and respond similarly structured."[87] Climate change is both a "narrative" and "material phenomenon" such that its meanings and consequences are shaped by particular cultural values and practices of particular groups of people in particular places.[88] Climate change may also be characterized as a "moving target" because the "media portrayal of climate change, the excessive dramatizing of apocalyptic events, or the downplaying of scientific evidence and the critique of scientific motive . . . have significance for how climate change is defined, understood, and legitimated."[89]

The climate change discourse emerging from international development agencies, research institutions, NGOs, consultancies, and investigative journalism position climate-vulnerable populations as both victims and evidence of the climate crisis, which changes the way local events are framed and understood.[90] People who are forced or who voluntarily move in response to climate change "appear as subjects who seem to speak directly for the climate" and become a visible entity by which the public can engage with the climate change discourse.[91] Discourses that describe climate change "refugees" are "actively and continually negotiated as part of their production" and, "like any representations, are neither static nor innocent. . . . [T]hey are vehicles for power, characterised [sic] by fluid, ongoing claims of inclusion and exclusion, dependent on the interests of those engaged in them."[92] Hence, in discussions about climate-induced relocation, characterizing the community as victims versus empowered agents changes the nature of the discourse from disasters to resiliency.

The nature of the climate change and refugee discourses impact how relocation is articulated and viewed at the community level. One perspective views displacement and resettlement as "second disasters" following environmental and climatic changes.[93] Oliver-Smith writes that the "uprooting of livelihood and community" implies a loss of individual and social identity tied to a particular environment; thus, relocation requires a reinvention of self and community that has both "material and

87. Oliver-Smith, *Climate Change and Population Displacement*, *supra* note 19, at 120.

88. *See* Carol Farbotko & Heather Lazrus, *The First Climate Refugees? Contesting Global Narratives of Climate Change in Tuvalu*, 22 GLOBAL ENVTL. CHANGE 382, 382 (2012).

89. Crate & Nuttall, *supra* note 84, at 11.

90. *See* Farbotko & Lazrus, *supra* note 88, at 382; Kay Milton, *Anthropological Perspectives on Climate Change: Introduction*, 19 AUSTL. J. ANTHROPOLOGY 57, 57–58 (2008); Durrer, *supra* note 6, at 18.

91. Farbotko & Lazrus, *supra* note 88, at 385.

92. *Id.* at 383.

93. Oliver-Smith, *Climate Change and Population Displacement*, *supra* note 19, at 122.

social aspects," the resources for which are often diminished during the relocation process:[94]

> [L]osses of community, family, and self compound each other to create a cumulative loss of meaning. . . . They challenge the culturally constructed vision where the world is a place imbued with logic and life makes sense, even if it can be unfair. Major disasters rob people of the social context in which they live meaningful lives that are considered significant by others. This loss of personal relationships and the social context in which they were expressed and in which the individual was affirmed may leave people bereft of a sense of meaning and purpose in life.[95]

An alternative perspective is to view relocation as an adaptation strategy that builds resiliency. If the impacts of relocation on communities result in the negative consequences listed above, then moving in anticipation of climate change may precipitate and minimize its social and political costs by allowing adequate time for community consultation and planning.[96] Researchers Carol Farbotko and Heather Lazrus discuss how in Tuvalu, an island in the South Pacific, migration in response to climate change threats can be considered a source of economic and social strength because of its long-term approach to climate change adaptation.[97] They conclude by advocating for the incorporation of "cultural values, national identity, ongoing practices of migration and change, sovereignty, and compensation"[98] into the climate change adaptation discourse and that relocation as an adaptation strategy must address "equity, identity[,] and human rights."[99] As discussed in the next Part, the relocation discussion that began in the late 1960s has evolved from a debate over developable space between Kivalina and the state of Alaska to include climate adaptation and other institutions. For relocation to be seen as a strategy to build resilience, significant changes must be made to engage the community to collectively address all of Kivalina's social and environmental vulnerabilities.

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94. *Id.* at 122–123.

95. *Id.* at 123.

96. *See* Jon Barnett & Michael Webber, *Migration As Adaptation: Opportunities and Limits*, *in* CLIMATE CHANGE AND DISPLACEMENT: MULTIDISCIPLINARY PERSPECTIVES 37, 53 (Jane McAdam ed., 2010).

97. Farbotko & Lazrus, *supra* note 88, at 388.

98. *Id.*

99. *See id.* at 383, 388.

IV. CLIMATE CHANGE MICROPOLITICS IN KIVALINA

Climate change micropolitics examines the term "climate change" through the day-to-day discourse of communities, which has the potential to foster new opportunities for collaboration, resistance, or both. Professor Tania Murray Li defines "micro political economy" as "day-to-day discourse and practice through which people seek to gain or defend access to land, labour [sic] and other productive resources."[100] Micropolitics emphasizes human agency and focuses on the "creative ways in which cultural ideas are adapted to meet new conditions, and culturally informed practices, in turn, structure daily life and shape and reshape institutions at various levels."[101] This process of transformation involves the "contestation and revision of meanings of key terms"[102] through "[a]ction and inaction, speech and silence, compliance and resistance."[103]

For example, a group of five professors studied the words used to describe climate change and its environmental impacts between two African-American communities in the Chesapeake Bay Region to see how they influenced expressions of adaptation options.[104] They found that instead of a scientific understanding of the linkages between greenhouse gas emissions and global warming, most people had "robust and varied understandings of climate change"[105] based primarily on local experiences and media sources.[106] When it came to adaptation responses, the two communities expressed consciousness of the influence of power and money in terms of support to prepare for climate change, but they differed when it came to how to prepare, due primarily to differences in their physical location and level of risk exposure to flooding.[107] The study concluded that it is essential to better understand how climate change becomes situated in communities that face different risks and social vulnerabilities and that adaptation will ultimately be "site specific" and "a human endeavor of social relationships with exchanges of infor-

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100. Tania Murray Li, *Images of Community: Discourse and Strategy in Property Relations*, 27 DEV. & CHANGE 501, 509 (1996).

101. *Id.*

102. *Id.*

103. *Id.* at 510–511.

104. *See generally* Michael Paolisso et al., *Climate Change, Justice and Adaptation Among African American Communities in the Chesapeake Bay Region*, 4 WEATHER, CLIMATE, & SOC'Y 34 (2012).

105. *Id.* at 42.

106. *See id.* at 42–44.

107. *Id.* at 45.

mation and resources."[108] In sum, climate change simultaneously fosters diverse meanings and offers the potential for collaboration by a variety of social groups at the local level.[109]

The micropolitics of climate change demonstrate that communities are not passive players with predictable reactions to a changing environment. Rather, community responses will be determined by "endogenous factors that vary considerably from location to location, reflecting variations in culture, economy, social history, and land-use practices."[110] The micropolitics of climate change in Kivalina reveal a community well aware of the need to relocate, but unable to do so due to geographical, financial, and political factors beyond their control or influence.

A. Geographical Factors

The barrier island where Kivalina is now located used to be a seasonal hunting ground. However, in 1905 the BIA built a school there and ordered parents to enroll their children or face imprisonment.[111] The island's location between the Chukchi Sea and Kivalina lagoon make it susceptible to natural hazards such as storms, flooding, erosion, melting permafrost, and sea-level rise.[112] This location also limits adaptation responses because there is no land area to expand, no water distribution, sewer, or waste disposal systems, and only one and a half miles of unmaintained trails for transportation.[113] The later formation of sea ice, which normally provides a buffer, has accelerated erosion of the island in recent years and increased impacts from storms.[114] The governor of Alaska and FEMA declared Kivalina a disaster area in 2002, 2004, and 2005.[115] The state of Alaska again declared Kivalina a disaster emergency in September 2012 when record rainfall raised the water level of the Kivalina and Wulik rivers and flooded the village landfill.[116] The flood-

108. *Id.* at 46.

109. ANNA LOWENHAUPT TSING, FRICTION: AN ETHNOGRAPHY OF GLOBAL CONNECTION 245 (2005).

110. Frank Duerden, *Translating Climate Change Impacts at the Community Level*, 57 ARCTIC 204, 206 (2004).

111. CHRISTINE SHEARER, KIVALINA: A CLIMATE CHANGE STORY 34 (2011).

112. *See* Glenn Gray & Assocs., *Situation Assessment: Kivalina Consensus Building Project* 2, 7, RE-LOCATE KIVALINA (July 2010), http://www.relocate-ak.org/wordpress/wp-content/uploads/2012/09/Situation_Assessment_Final_July_20105.pdf [hereinafter *Kivalina Consensus Building Project*].

113. *Id.* at 4–5.

114. *Id.* at 15.

115. *Id.* at 11.

116. Alaska Governor Sean Parnell, *Declaration of Disaster Emergency*, ST. OF ALASKA (Sept. 7, 2012), http://gov.alaska.gov/parnell_media/resources_files/09072012_disaster_declaration.pdf.

ing damaged water transmission lines before the city could refill the water tanks, resulting in a high reported incidence of dehydration among elders and infants.[117] Due to financial and statutory limitations that are detailed below, erosion control projects were largely unsuccessful and only temporary solutions to ongoing climatic changes.

B. Financial Factors

In response to the violent storms in 2005, the Northwest Arctic Borough attempted to build a seawall using Hesco Concertainers—wire mesh baskets filled with sand and gravel—that villagers were told had been used successfully in other parts of the state to control erosion.[118] However, because there was no scoping meeting and the Concertainers were filled with sand and gravel from Kivalina's beaches, the opposite occurred.[119] The day before the ceremony to celebrate the wall's completion in October 2006, a storm pulled the sand from underneath the baskets and completely dismantled the multi-million dollar project.[120]

In 2005, Congress passed § 117 of the Consolidated Appropriations Act, which granted federal funds for ACE to conduct storm damage protection projects for Alaska Native villages.[121] As a temporary protection measure, ACE approved construction of a rock revetment project designed to be 3,200 feet long and encase the entire island. Funding was only secured, however, for 1,600 feet on the seaside of the island.[122] All construction stopped in 2009 when § 117 was rescinded.[123] Funding authorization was replaced in October 2009, but only provided a 35% match of non-federal funds and did not appropriate any funds for Alaska erosion control or relocation projects.[124]

C. Political Factors

With ACE and others forecasting increasing storms and erosion, no room for settlement expansion, and limited fortification options, Kivalina residents know that relocation is inevitable. In fact, the village first voted

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117. E-mail from Stanley Hawley, *supra* note 60.

118. *Kivalina Consensus Building Project*, *supra* note 112, at 15–16.

119. *Id.*; *see also* Molly Lane, *Kivalina Endangered: An Eroding Village*, EXTREME ALASKA, http://www.uafjournalism.com/extreme/index.php/frozen-phenomena/kivalina-weathers-the-storm-but-for-how-long (last visited June 12, 2014).

120. *Kivalina Consensus Building Project*, *supra* note 112, at 16 tbl.2.

121. SHEARER, *supra* note 111, at 132.

122. *Id.* at 138.

123. *Id.*

124. *See* H.R. 3183, 111th Cong. § 116 (2010) (enacted).

to relocate in 1992 and formed a Relocation Planning Committee.[125] In 2000, a special election to select a relocation site was held, and Kivalina residents overwhelming chose Kiniktuuraq, located seven and a half miles southeast of the village that has long been used as a camping ground during hunting trips.[126] When ACE released its 2006 *Kivalina Relocation Master Plan*, it declared Kiniktuuraq was "geotechnically inappropriate and strategically problematic" because the site is a floodplain with ice rich soil that would need to be replaced with twelve feet of gravel.[127] Kivalina elders and other community members disputed this conclusion and argued that when it flooded in Kivalina, there was no flooding in Kiniktuuraq because it was located at a slightly higher elevation.[128] Instead of offering the community a vote to select an alternative site, the ACE recommended the Imnaaquq Bluffs or Tatchim Isau instead, both of which were unacceptable to the community because they would be too expensive and inconvenient to continue their subsistence lifestyle.[129]

Disagreement over the relocation site illustrates the challenge of integrating indigenous and scientific knowledge. Indigenous knowledge often lacks the systematic and quantitative measurements and data collection on which scientific knowledge relies, while scientific knowledge often fails to include locally appropriate variables and parameters.[130] Both indigenous communities and scientific researchers stand to benefit, however, from respectful collaboration. Scientific researchers acquire a better understanding of indigenous values and local expertise, while indigenous communities gain a better understanding of climate change and technologies for coping with its impacts.[131] Climate change adaptation strategies, such as relocation, should be based on the best available knowledge that comes from constructive dialogues and co-production of new knowledge between indigenous peoples, scientists, and policymakers.[132] Knowledge co-production that includes traditional knowledge for

125. SHEARER, *supra* note 111, at 140.

126. *Id.* at 142.

127. U.S. Army Corps of Eng'rs, Alaska Dist., *Relocation Planning Project Master Plan: Kivalina, Alaska*, CLIMATE ADAPTATION KNOWLEDGE EXCHANGE, at ES-1 (June 30, 2006), http://www.cakex.org/sites/default/files/Executive%20Summary.pdf.

128. SHEARER, *supra* note 111, at 143; E-mail from Stanley Hawley, *supra* note 60.

129. Rachel M. Gregg, *Relocating the Village of Kivalina, Alaska Due to Coastal Erosion*, CLIMATE ADAPTATION KNOWLEDGE EXCHANGE (Dec. 18, 2010), http://www.cakex.org/case-studies/2773.

130. *See* NAKASHIMA ET AL., *supra* note 64, at 36.

131. Terry Williams & Preston Hardison, *Culture, Law, Risk and Governance: Contexts of Traditional Knowledge in Climate Change Adaptation*, 120 CLIMATIC CHANGE 531, 532 (2013).

132. *See* NAKASHIMA ET AL., *supra* note 64, at 66.

adaptation as well as indigenous processes, techniques, and tactics of developing, sustaining, and refreshing such knowledge is fundamental for research and projects that strive to integrate traditional and scientific knowledge.[133]

Co-learning and co-production of knowledge do not, however, guarantee fairness or understanding, or address power asymmetries.[134] When indigenous communities are asked to share their traditional knowledge, safeguards provided through free, prior, and informed consent procedures should be invoked to ensure the provision of all appropriate information necessary to make an informed decision.[135] Because indigenous knowledge embodies the identities, histories, legacies, and responsibilities for generations that comprise what remains of indigenous cultures, it ought to be researched and utilized for the purpose of self-determination in lieu of commercialization or exploitation.[136]

In order to help resolve the conflict between Kivalina and federal agencies over the relocation site, the Kivalina Consensus Building Project was launched.[137] The project lasted from September 2009 to July 2010, and involved door-to-door surveys, meetings, and workshops between community members and state and federal officials. During these negotiations, community leaders asked whether "it was . . . the federal government's responsibility to relocate Kivalina" and often expressed frustration, mistrust, and "battle fatigue" from years of discouragement.[138] State and federal officials noted that the lack of progress towards relocation and the continuing threat of natural hazards have serious implications for the mental health of the community. Many community members expressed a sense of hopelessness.[139] In reference to community attitudes to relocation, one environmental coordinator said,

> It's like they are stuck here and it feels that way. We need to somehow build their dreams again, we need to somehow give them a vision again, some kind of hope again, that thing[s] will get better,

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133 . INDIGENOUS PEOPLES, MARGINALIZED POPULATIONS AND CLIMATE CHANGE: VULNERABILITY, ADAPTATION AND TRADITIONAL KNOWLEDGE WORKSHOP REPORT 33 (2011), *available at* http://www.unutki.org/downloads/File/2011_IPMPCC_Mexico_Workshop_Summary_Report-Final.pdf.

134. Williams & Hardison, *supra* note 131, at 532.

135. *Id.* at 536.

136 . *See* LINDA TUHIWAI SMITH, DECOLONIZING METHODOLOGIES: RESEARCH AND INDIGENOUS PEOPLES, 220–21 (Zed Books Ltd. 2d ed. 2012).

137. *See* Durrer, *supra* note 6.

138. *Id.* at 49–50.

139. *Kivalina Consensus Building Project*, *supra* note 112, at 5, 30.

> that here will be water and sewer, that there will be places to build for the children and grandchildren.[140]

By the end of the project, participants reached consensus on five main conclusions:

1. Relocation efforts have been blocked thus far and need to be reconsidered with the local village government in the lead, along with collaboration with state and federal agencies;
2. Hope must be created and maintained;
3. There is a need to further address communication difficulties between stakeholders;
4. The relocation process requires participation and consensus among all stakeholders; and
5. Relocation policies must incorporate ongoing climatic changes.[141]

As of 2012, Kivalina has prepared Community Evacuation and Emergency Operations plans, and ACE and Kivalina are finally in agreement on a potential terminal site for an evacuation route in case of emergency, located on a hill five miles inland called Kisimigiuktuk.[142] Kivalina's village government and its contractor, WH Pacific, are working with the BIA-Anchorage and the Maniilaq Corporation—a native non-profit organization that provides social and health services to twelve federally recognized tribes in the Northwest Arctic Borough—to try and secure funding for the evacuation route.[143] When asked about a community relocation plan, Stanley Hawley called the idea a "dead horse."[144] Frustration with the lack of progress, resources, and attention given to Kivalina's relocation by state and federal agencies instigated the 2008 lawsuit that entered the community into the climate justice discourse, discussed in the following Part.

V. CLIMATE JUSTICE DISCOURSE IN KIVALINA

Climate change is a global phenomenon that has and will continue to affect every person on the planet, though with disparate impacts. These disparities are disproportionately felt by the people who are the most

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140. Durrer, *supra* note 6, at 51.

141. *See id.* at 56.

142. E-mail from Stanley Hawley, *supra* note 60.

143. Letter from Stanley Hawley, Tribal Adm'r, Native Village of Kivalina IRA Council, to Marissa Knodel (Oct. 25, 2012) (on file with author).

144. *Id.*

poor, vulnerable, and unable to react, adapt, and plan for climatic changes. Because climate change impacts are ultimately experienced at the local level, they are difficult for policymakers to address because issues of justice, equity, and inequality create different vulnerabilities.[145] The interconnection between climate change and social vulnerabilities leads to questions about blame for the causes of climate change, responsibility for reducing greenhouse gas emissions, and help for communities to prepare for and adapt to the inevitable effects.[146] When climate change adaptation strategies turn to relocation, contentious questions about where to relocate—how, who should be involved, and who should pay—are raised. The fact that communities like Kivalina have contributed little to causing climate change but are limited in their ability to adapt to its consequences speaks to injustice. Inadequate governance mechanisms and budgets to address climate-induced relocation and support adaptation strategies "may cause loss of community and culture, health impacts, and economic decline, further exacerbating tribal impoverishment and injustice."[147] In this light, relocation as a climate adaptation strategy "represents several formal and retrospective layers of injustice" against indigenous communities because they "cannot escape having to deal with problems they largely did not bring about[,] and there are no obvious institutional options that avoid substantial tradeoffs."[148]

A. Evolution of the Climate Justice Discourse

Climate *injustice* is "the idea that harm from the deleterious effects of climate change, and the production and materialist processes associated with it, is unevenly distributed and deliberately falls disproportionately on the marginalized and the disadvantaged."[149] Climate *justice*, therefore, holds that because the richest most developed nations have contributed the most to causing climate change, they have a greater obligation to take immediate action.[150] Central to this assignment of responsibility are the principles of equity and common but differentiated responsibility, which are included in the U.N. Framework Convention on Climate

145. Paolisso et al., *supra* note 104, at 34.

146. LYNN ET AL., *supra* note 17, at 7.

147. Maldonado et al., *supra* note 46, at 601.

148. Whyte, *supra* note 22, at 523.

149. Michael K. Dorsey, *Climate Knowledge and Power: Tales of Skeptic Tanks, Weather Gods, and Sagas for Climate (In)justice*, 18 CAPITALISM NATURE SOCIALISM 7, 14 (2007), *available at* http://envs.ucsc.edu/internships/available-internships/new-internships/dorsey-climate-reading.pdf.

150. BARBARA ADAMS & GRETCHEN LUCHSINGER, U.N. NON-GOVERNMENTAL LIAISON SERV., CLIMATE JUSTICE FOR A CHANGING PLANET: A PRIMER FOR POLICY MAKERS AND NGOS, at ix, U.N. Doc. UNCTAD/NGLS/2009/2, U.N. Sales No. E.09.I.19 (2009).

Change (UNFCCC). The UNFCCC was created in 1992 for the purpose of "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" and concluded that developed countries should "take the lead in combating climate change and the adverse effects thereof" and provide new and additional resources, both financial and technical, to developing countries to help implement the Convention.[151] During the twenty years since the UNFCCC was agreed to by the community of nations, minimal progress toward its stated goal has been achieved; in fact, a significant gap exists between country pledges to mitigate greenhouse gas emissions and the chance of holding global average temperature below 2°C above preindustrial levels—the threshold beyond which very serious and irreversible consequences that threaten life, sovereignty, and societal sustainability will occur.[152] The lack of progress in the face of an increasing number of adverse climatic changes has sparked climate justice debates that go beyond the distributional aspects of climate change impacts, responsibilities, and costs, to the instruments created to deal with these aspects and the processes by which they are developed and implemented.

B. Articulations of Climate Justice

The theory of articulation seeks to understand "how ideological elements come, under certain conditions, to cohere together within a discourse" and "how they do or do not become articulated, at specific conjunctures, to certain political subjects."[153] In other words, the theory of articulation asks how an ideology "discovers" its subject and "empowers" it to make sense of its situation.[154] For example, Professor Li argues that a group's self-identification as tribal or indigenous is not something natural or inevitable, but neither is it invented, adopted, or imposed.[155] Rather, it is a "positioning" that emerges from patterns of global–local

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151. U.N. Framework Convention on Climate Change 4 (May 9, 1992), http://unfccc.int/resource/docs/convkp/conveng.pdf.

152. *See* U.N. Env't Programme, Bridging the Emissions Gap Report, U.N. Doc. No. DEW/1470/NA (2011).

153. STUART HALL, CRITICAL DIALOGUES IN CULTURAL STUDIES 141–42 (David Morley & Kuan-Hsing Chen eds., 1996), *available at* http://filsafattimur.files.wordpress.com/2012/10/critical-dialogues-in-cultural-studies.pdf.

154. *Id.* at 142.

155. Tania Murray Li, *Articulating Indigenous Identity in Indonesia: Resource Politics and the Tribal Slot*, 42 COMP. STUDS. IN SOC'Y & HISTORY 1, 151 (2000), *available at* http://www.jstor.org/discover/10.2307/2696637?uid=2129&uid=2&uid=70&uid=4&sid=21103684755187.

engagements that create new boundaries as well as connection.[156] An articulation, therefore, is a linkage that is "not necessary, determined, absolute and essential for all time," but given different form and meaning depending on how it is articulated in a particular context.[157]

The variety of linkages that exist between climate change and other environmental, social, political, and economic issues contribute to the articulation of climate justice. At the 2002 Earth Summit in Johannesburg, South Africa, a coalition of organizations called the International Climate Justice Network[158] produced the "Principles of Climate Justice," which seek to redefine climate change from a human rights and environmental justice perspective. These principles were largely based on the "Environmental Justice Principles" prepared by the People of Color Environmental Justice Leadership Summit in Washington, D.C. in 1991, which require "democratic decision making, community empowerment, and the incorporation of social culture" in environmental decision-making processes, with the most important concept being "community self-determination."[159] The Environmental Justice and Climate Change Initiative (EJCC), a coalition of climate and environmental justice, policy, religious, and advocacy organizations in the United States, defines climate justice as "the fair treatment of all people and freedom from discrimination with the creation of policies and projects that address climate change and the systems that create climate change and perpetuate discrimination."[160] In sum, the climate justice movement binds together liberation and economic and ideological sovereignty not by one uniform belief or message, but by the common belief that present systems and processes of decision making are insufficient to resolve the crisis of climate change, and other paths are both necessary and possible.[161] Key to fair treatment is equitable representation and participation of vulnerable communities in the development and implementation of strategies to improve their resiliency. Climate justice strategies should therefore consider "how the people most vulnerable to climate change are involved in the

156. *Id.* at 151, 174.

157. HALL, *supra* note 153, at 141.

158. The International Climate Justice Network includes the following: CorpWatch; Friends of the Earth International; Greenpeace International; Groundwork; Indigenous Environmental Network; Indigenous Information Network; National Alliance of People's Movements; National Fishworkers Forum; OilWatch Africa; OilWatch International; Southwest Network for Environmental and Economic Justice; Third World Network; and World Rainforest Movement. *International Climate Justice Network*, CORPWATCH (Aug. 28, 2002), http://www.corpwatch.org/article.php?id=3748.

159. LUKE W. COLE & SHEILA R. FOSTER, FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT 16 (2000).

160. LYNN ET AL., *supra* note 17, at 14.

161. *See* Dorsey, *supra* note 149, at 20.

development of policies, the language used to address them, and, ultimately, how they are affected by the outputs and outcomes of climate policies and plans."[162]

C. The Articulation of Climate Justice in Kivalina

The frustrating lack of support and action in the midst of an eroding island prompted Kivalina to examine other alternatives for gaining voice and funds for relocation. In 2008, Kivalina filed suit in the U.S. District Court for the Northern District of California against two dozen oil, coal, and power companies, including Exxon Mobil Corp., BP America, Duke Energy Corp., and Shell Oil Co., for public and private nuisance, as well as conspiracy and concert of action.[163] The complaint asserted these companies emitted greenhouse gases they knew contributed to the global warming that has melted the sea ice surrounding the village, leaving the residents there vulnerable to storms and erosion that will force the village to relocate.[164] Kivalina sought money damages to assist with relocation and other adaptation measures.[165] The court granted the companies' motion to dismiss the suit for lack of jurisdiction over the common law nuisance claim, which is based on U.S. federal law (the remaining claims relied on state law). The court declared that Kivalina lacked standing because "there is no realistic possibility of tracing any particular alleged effect of global warming to any particular emissions by any specific person, entity, group at any particular point in time."[166] The court also determined that resolution of the nuisance claim would require the Judicial Branch to make a policy determination concerning appropriate limits on greenhouse gas emissions and who should bear the cost of global warming, which are political questions better left to the Legislative or Executive Branches of government.[167] The court dismissed the state law-based claims without prejudice, which means that Kivalina may re-file the case in Alaska state court.[168] Kivalina appealed the dismissal to the U.S. Court of Appeals for the Ninth Circuit, which affirmed the district court's decision.[169] The Ninth Circuit, however, chose a different theory on which to

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162. LYNN ET AL., *supra* note 17, at 14.

163. *See generally* Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009).

164. *Id.* at 868.

165. *Id.* at 869.

166. *Id.* at 880.

167. *Id.* at 876–77.

168. *Id.* at 882–83.

169. Native Vill. of Kivalina v. ExxonMobil Corp., 696 F.3d 849 (9th Cir. 2012), *cert. denied*, 133 S. Ct. 2390 (May 20, 2013).

dismiss the case. Relying on the U.S. Supreme Court decision in *American Electric Power Co. v. Connecticut*,[170] the Court declared that Kivalina's public nuisance claim was not justiciable because the Clean Air Act, which directly addresses domestic greenhouse gas emissions from stationary sources, had displaced it.[171] According to the Ninth Circuit, the fact that Kivalina was seeking damages and not emissions reductions made no difference to the doctrine of displacement.[172] The Ninth Circuit concluded that while it is aware its decision does not aid Kivalina, "which itself is being displaced by the rising sea," the solution to the village's situation rests with the Legislative and Executive Branches of government.[173] While both the lawyers and supportive villagers expressed doubts that the lawsuit would ultimately be successful, they saw value in the attention that would be gained to their situation and cause.[174] Researcher Elizabeth Marino points out that Kivalina's lawsuit may be an attempt to "gain, not just state and federal money towards relocation, but to regain control over movement of people over traditional lands; an effort . . . to reinvent the power relationship between Native villages and government."[175]

The articulation of climate justice in Kivalina reflects the struggle to maintain their subsistence culture in a place of their choosing. Enoch Adams, a Kivalina community member, noted the power dynamics involved in the relocation process as part of a history of injustice and inequality:

> The federal government has a trust responsibility to the tribes, and they need to enact that. The state of Alaska needs to pony up monies that they have been taking by getting resources from our land, and share it with the communities that need it the most. When you take a real close look at this, this is a human rights issue. There is racism involved. There is class warfare.[176]

Do legal actions like the *Native Village of Kivalina v. ExxonMobil Corp.* lawsuits promote a "shared fairness" that take the principles of responsi-

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170. Am. Electric Power Co. v. Connecticut, 131 S. Ct. 2527 (2011).

171. *Native Vill. of Kivalina*, 696 F.3d at 856.

172. *Id.* at 858.

173. *Id.*

174. Letter from Colleen Swan, Kivalina City Council, Relocation Project Coordinator, to Marissa Knodel (Oct. 25, 2012) (on file with author).

175. Elizabeth Marino, Immanent Threats, Impossible Moves, and Unlikely Prestige: Understanding the Struggle for Local Control as a Means Towards Sustainability, 8–9 (U.N. Univ. Inst. For Env't and Human Sec., Summer Academy Working Paper, 2008), *available at* https://www.ehs.unu.edu/file/get/3822.

176. SHEARER, *supra* note 111, at 147.

bility based on equity, empowerment through participation, and a reconfiguration of power dynamics into account?[177] Voices at the community level are mixed. Some expressed support for the lawsuit because it raised their voice in the call for attention to the responsibility fossil fuel companies and energy utilities bear for contributing to climate change.[178] Others viewed the lawsuit as a waste of resources that attracted negative attention to the village and limited the willingness of outside entities to fund the relocation effort.[179] Regardless of the legal outcome, the lawsuit served as an intervention that created a new, though confrontational, space for dialogue about relocation as a climate justice issue from the perspective of a small Native village in Alaska. What remains to be seen is whether this intervention also created new opportunities for collaborative action and community participation to advance the relocation effort in a just and equitable manner. Thus, climate justice for Kivalina is both an ideological discourse about responsibility and a political struggle for equal participation, sovereignty, and cultural survival.

VI. CONCLUSION

The impacts of climate change place stress on the people, practices, and institutions responsible for the adaptive capacity and resilience of a community.[180] The indigenous peoples of the Arctic have been living and adapting to environmental changes for centuries and are not ignorant of the increasing pace of change.[181] As climate change drives the relocation of several indigenous communities in Alaska, strong emphasis has been placed on finding ways to adapt that create resilient communities in new locations. However, state action and community involvement in cases of relocation cannot be divorced from environmental and social vulnerabilities. Even though indigenous communities in Alaska are able to observe climate change, understand its ecological and societal consequences,[182] and develop potential response strategies,[183] the limited choices and re-

177. *See* J. TIMMONS ROBERTS & BRADLEY C. PARKS, A CLIMATE OF INJUSTICE: GLOBAL INEQUALITY, NORTH-SOUTH POLITICS, AND CLIMATE POLICY 136 (2006).

178. Letter from Colleen Swan, *supra* note 174.

179. Letter from Stanley Hawley, *supra* note 143.

180. Whyte, *supra* note 22, at 518.

181. *See generally* ARCTIC RESEARCH CONSORTIUM OF THE U.S. & ARCTIC STUDIES CTR., THE EARTH IS FASTER NOW: INDIGENOUS OBSERVATIONS OF ARCTIC ENVIRONMENTAL CHANGE (Igor Krupnik et al. eds., 2002).

182. *See generally id.*

183. *See generally* Garrit Voggesser et al., *Cultural Impacts to Tribes from Climate Change Influences on Forests*, 120 CLIMATIC CHANGE 615 (2013); *see also* Cochran et al., *supra* note 84, at 558.

sources community members have available increases the likelihood that relocation will produce negative consequences.[184] In other words, the struggles of the past shape discussions of the future.[185]

When the inevitable prospect of community relocation enters the climate change discourse, the dominant image that arises is the climate change "refugee"—a victim of the climate crisis forced to adapt in ways that may lead to loss of home, identity, and certain cultural practices. This perspective is not without merit, because climate change exacerbates many existing vulnerabilities that persist due to Kivalina's location on a barrier island, subsistence lifestyle, and related socioeconomic and sociocultural stressors. Communities like Kivalina that have limited access to information, resources, power, and networks can benefit from the visibility such public attention produces.[186] However, playing the role of the climate victim risks the loss of community voice and agency within this dominant discourse. The articulation of climate change and relocation as a climate justice issue may present a contradiction in intent and outcome as Kivalina's vulnerability and victimization are emphasized within a discourse driven largely by discussions at international climate change negotiations and among outside interest groups. Whether the lawsuit pushes new boundaries for collaboration and resistance with state and federal agencies for relocation assistance remains to be seen.

An alternative perspective is to view relocation as an opportunity to build resilience and address contentious issues such as responsibility for the drivers of climate change, allocation of resources to help with relocation, and justice in terms of equal participation, sovereignty, and maintenance of cultural identity during the relocation process. The complexity of the causes, consequences, and processes to address climate-induced relocation requires a more comprehensive and open-ended approach to migration planning and decision making so that mobility may be seen as part of the solution rather than the problem.[187] By recognizing and addressing the contextual elements that interconnect climate change and social vulnerability, Kivalina can improve its adaptive capacity and foster resilience. For example, relocation may provide both increased secu-

184. Elizabeth Mikow, Negotiating Change: An Overview of Relocations in Alaska with a Detailed Consideration of Kaktovik 104 (May 25, 2011) (unpublished M.A. thesis, Univ. of Alaska Fairbanks), *available at* http://www.alaska.edu/move/result/alaska/negotiating-change-anove/Elizabeth-Mikow-MA-Thesis.pdf.

185. *Id.* at 105.

186. LYNN ET AL., *supra* note 17, at 8.

187. Oliver-Smith, *supra* note 86, at 131; Cecilia Tacoli, *Crisis or Adaptation? Migration and Climate Change in a Context of High Mobility*, 21 ENV'T & URBANIZATION 513, 514 (2009).

rity from natural hazards and opportunities to improve housing, energy, water, sewer, and waste systems.[188]

The key question for Kivalina in the near future is how to incorporate participation into the relocation process with a discourse sensitive to indigenous conceptions of terms that carry meaning within their specific historical, political, and cultural contexts.[189] A participatory approach to relocation would take the community perspective into account by placing local, traditional knowledge on an equal footing with foreign—particularly scientific—expertise, as well as include free, prior, and informed consent procedures.[190] An adaptive governance framework to implement the relocation policy would include planning and funding for relocation; creating institutional leadership to facilitate dialogue between scientists, community leaders, policymakers, and government representatives; authenticating the local government's role as a leader and decision maker in the relocation process; and establishing an operational plan that provides for staffing, capacity building, agency coordination, health monitoring, and information dissemination within an urgent and realistic timeline.[191] Colleen Swan told me that "we need recognition that our traditional ways are still alive."[192] Future research into the evolving climate change and justice discourses and actions taken to relocate the community should ensure local participation by taking their situated knowledge and experiences into account and making the process of relocation their own. There is still community resilience of the kind Lucy Adams spoke; one has only to see Kivalina through the eyes of the people who call it home.

188. *Kivalina Consensus Building Project*, *supra* note 112, at 33.

189. David Mosse, *The Ideology and Politics of Community Participation: Tank Irrigation Development in Colonial and Contemporary Tamil Nadu*, *in* DISCOURSES OF DEVELOPMENT: ANTHROPOLOGICAL PERSPECTIVES 279 (R.D. Grillo & R.L. Stirrat eds., 1997).

190. James Fairhead & Melissa Leach, *Reading Forest History Backwards: The Interaction of Policy and Local Land Use in Guinea's Forest-Savanna Mosaic, 1893–1993*, 1 ENVT. & HISTORY 55, 85 (1995), *available at* http://www.environmentandsociety.org/sites/default/files/key_docs/Fairhead-Leach-1-1.pdf.

191. Bronen, *supra* note 42, at 400–03

192. Letter from Colleen Swan, *supra* note 174.