

THE LONG GOODBYE: HOW TO BUILD A RESPONSIBLE CLIMATE MIGRATION PROGRAM

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ABSTRACT

According to best estimates, millions of U.S. residents are in danger of being displaced by sea level rise and other climate disruptions before the end of the century. Several coastal communities around the country have either considered or are considering relocation on account of sea level rise and erosion; a few are actively planning their exit strategy.

How will the nation decide which households or communities get priority? Who will manage and pay for their resettlement? What steps should be taken now? As the Biden administration labors to tame the climate crisis, the challenge of domestic migration looms large. The United States remains woefully unprepared to help domestic migrants, lacking leadership, geographic and policy assessments, and legal authorities built to scale. This Essay recommends four steps that would set the federal government on track for tackling the migration challenge: (1) establish a specific and accountable leadership structure, (2) assess the geophysical and socioeconomic vulnerabilities of communities at risk, (3) inventory and assess the existing policy frameworks and laws that can be put into service to help them, and (4) enact federal legislation that organizes a unified response, fills the gaps in existing authority, and provides perpetual and reliable revenue streams to address the issue at scale.

The discussion unfolds against the contrasting stories of two tribal communities struggling to relocate from sinking lands—members of the Biloxi-Chitimacha-Choctaw in southern Louisiana and the Yup'ik village of Newtok, Alaska.

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INTRODUCTION

About eighty miles south of New Orleans, as the gull flies, is a narrow spit of land in the Louisiana bayous called Isle de Jean Charles.¹ You approach the mound on a two-lane causeway called Island Road, which rolls through two miles of open water. On a calm, sunny day, pelicans wheel overhead, and locals congregating on the road's shoulder cast spin lines into the surf—some from the front cabs of their pickups. On a windy day, however, ferocious tides smack the shores and fountains of saltwater leap onto the pavement, flooding the road and making passage impossible for island residents, whose work, schools, hospitals, and grocery stores are all on the mainland.²

Island Road is sinking fast, and the island is too. This landmass—home to members of two state-recognized indigenous communities—has lost about ninety-eight percent of its total area since 1955.³ That is more than twenty-two thousand acres.⁴ If one engages in a conversation with one of the island's remaining eighty-five residents, they will be pointed to the many circles of open water where, a generation or two ago, children ran, horses grazed, and ancestors were buried. Society can blame sea level rise, extreme weather, and, most of all, irresponsible practices in water management and oil and gas

1. The description of Isle de Jean Charles in the introductory paragraphs draws from the author's visits and interviews over many years and these sources: U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-20-488, CLIMATE CHANGE: A CLIMATE MIGRATION PILOT PROGRAM COULD ENHANCE THE NATION'S RESILIENCE AND REDUCE FEDERAL FISCAL EXPOSURE (2020) [hereinafter GAO, CLIMATE MIGRATION]; *About the Isle de Jean Charles Resettlement*, ISLE DE JEAN CHARLES RESETTLEMENT, <http://isledejeancharles.la.gov/about-isle-de-jean-charles-resettlement> [https://perma.cc/7UX3-N763] (last visited June 1, 2021); Coral Davenport & Campbell Robertson, *Resettling the First American 'Climate Refugees,'* N.Y. TIMES (May 2, 2016), <http://www.nytimes.com/2016/05/03/us/resettling-the-first-american-climate-refugees.html> [https://perma.cc/QQG2-DBAX]; Ted Jackson, *On the Louisiana Coast, A Native Community Sinks Slowly into the Sea*, YALE ENV'T 360 (Mar. 15, 2018), <http://e360.yale.edu/features/on-louisiana-coast-a-native-community-sinks-slowly-into-the-sea-isle-de-jean-charles> [https://perma.cc/LE9R-HYXT].

2. For a close-up look, see ROB VERCHICK, <http://www.robverchick.com> [https://perma.cc/VK7Y-HYJQ] (last visited June 1, 2021).

3. GAO, CLIMATE MIGRATION, *supra* note 1, at 17–18.

4. *Id.*

production for this loss.⁵ State planners warn that continued sea level rise and coastal erosion will render the island uninhabitable in the near future.⁶

This goodbye has been a long one. Residents have been filtering away for decades, along with the community's cultural practices, healing plants, traditional foods, and lifeways.⁷ After nearly twenty years of tribal efforts, in 2016, the U.S. Department of Housing and Urban Development (HUD) awarded the State of Louisiana \$48.3 million in Community Development Block Grant funds to resettle island communities, as part of the state's application to the 2014 National Disaster Resilience Competition.⁸ One of the communities—the Isle de Jean Charles Band of Biloxi-Chitimacha-Choctaw—worked with the state and other stakeholders to develop the resettlement proposal.⁹

Nevertheless, after years of debate, including over the role (if any) that tribal leadership should play in the decisionmaking, things are falling apart.¹⁰ While the state has acquired new land and has begun building a new development, some Native residents complain the arrangement is unfair and will not suit the tribe's needs.¹¹ Tension between the state and the tribe is palpable, with tribal representatives accusing state officials of misrepresenting facts and impermissibly diverting funds.¹² Some residents say they would rather stay put, perhaps until the sea swallows their land whole.¹³

Four thousand miles away, another native community—a Yup'ik village sagging in the marshlands of southwestern Alaska—is also migrating on account of climate change.¹⁴ The village, Newtok, has a population of about four hundred.¹⁵ In recent years they have seen an average loss of more than eighty feet of land annually, which has been caused by a combination of river scour, storm surge, and rapidly thawing permafrost induced by climate change.¹⁶ As of October 2019, Newtok had lost its barge landing, its

5. *Id.* at 17.

6. See Adam Terando, Lynne Carter, Kirstin Dow, Kevin Hiers, Kenneth E. Kunkel, Aranzazu Lascurain, Doug Marcy, Michael Osland & Paul Schramm, *Southeast*, in 2 U.S. GLOB. CHANGE RESEARCH PROGRAM, FOURTH NATIONAL CLIMATE ASSESSMENT: IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES 743, 761 (David Reidmiller et al. eds., 2018).

7. GAO, CLIMATE MIGRATION, *supra* note 1, at 18.

8. *About the Isle de Jean Charles Resettlement*, *supra* note 1; see also *National Disaster Resilience*, HUD EXCHANGE, <http://www.hudexchange.info/programs/cdbg-dr/resilient-recovery/> [https://perma.cc/AT34-XQMK] (last visited June 1, 2021).

9. GAO, CLIMATE MIGRATION, *supra* note 1, at 19.

10. See *id.* at 19–20.

11. *Id.*

12. See Julie Dermansky, *Isle de Jean Charles Tribe Turns Down Funds To Relocate First US 'Climate Refugees' as Louisiana Buys Land Anyway*, DESMOG (Jan. 11, 2019, 3:56 PM), <http://www.desmogblog.com/2019/01/11/isle-de-jean-charles-tribe-turns-down-funds-relocate-climate-refugees-louisiana> [https://perma.cc/93HB-WB7X] [hereinafter Dermansky, *Tribe Turns Down Funds*]; Julie Dermansky, *Louisiana and Isle de Jean Charles Tribe Seek To Resolve Differing Visions for Resettling 'Climate Refugees.'* DESMOG (Feb. 5, 2019, 1:02 PM), <http://www.desmogblog.com/2019/02/05/louisiana-isle-de-jean-charles-tribe-plans-resettlement-climate-refugees> [https://perma.cc/WA2B-HF4M] [hereinafter Dermansky, *Differing Visions*].

13. GAO, CLIMATE MIGRATION, *supra* note 1, at 20.

14. *Id.* at 13.

15. *Id.*

16. *Id.*

sanitary landfill, its airstrip, and even its source of drinking water.¹⁷ Like the Biloxi-Chitimacha-Choctaw in Louisiana, this Alaska Native group had lobbied federal officials for decades for help to relocate to a safer place—in this case, a village nine miles southeast called Mertavik.¹⁸ And like the Louisiana tribe, they sought a major grant under the 2014 National Disaster Resilience Competition.¹⁹ The proposal, however, was rejected in favor of other communities in need.²⁰ Village leaders then petitioned President Obama to unlock federal emergency funds by declaring a major disaster.²¹ President Obama denied this request.²²

Since that time, village leaders have managed to patch together an array of grants totaling \$64 million from federal, state, and private sources to support the first stages of relocation.²³ Housing and infrastructure are being built at Mertarvik, and more than a hundred people have moved there full time.²⁴ Planners estimate it would take another \$115 million to finish the job, but at this rate, Newtok will be rendered uninhabitable before relocation is complete.²⁵ In addition, tension between the state and the village is obvious, with village representatives accusing state officials of misrepresenting facts and impermissibly diverting funds.²⁶ Short on funds, the village has resorted to redirecting the bulk of its federal COVID-19-relief funds to build new houses in Mertavik.²⁷ By characterizing the new buildings as “isolation homes,” they apparently hope this novel use passes muster.²⁸

The residents of Newtok and Isle de Jean Charles are not alone. According to recent estimates, millions of U.S. residents are in danger of being displaced by sea level rise and other climate disruptions before the end of the century.²⁹ Several coastal

17. *Id.*

18. *Id.* at 15–16.

19. Christopher Flavelle, *The Toughest Question in Climate Change: Who Gets Saved?*, BLOOMBERG OPINION (Aug. 29, 2016, 11:00 AM), <http://www.bloomberg.com/opinion/articles/2016-08-29/the-toughest-question-in-climate-change-who-gets-saved> [https://perma.cc/A73A-AJMA].

20. *Id.*

21. Rachel Waldholz, *Obama Denies Newtok's Request for Disaster Declaration*, ALASKA PUB. MEDIA (Jan. 18, 2017), <http://www.alaskapublic.org/2017/01/18/obama-denies-newtoks-request-for-disaster-declaration/> [https://perma.cc/Q335-9QLL] [hereinafter Waldholz, *Obama Denies*].

22. *Id.*

23. GAO, CLIMATE MIGRATION, *supra* note 1, at 17.

24. *Id.* at 16–17, 16 n.41.

25. *Id.* at 17.

26. See Rachel Waldholz, *Newtok Says State Agency Blocked Access to Disaster Funding*, ALASKA PUB. MEDIA (Oct. 20, 2017), <http://www.alaskapublic.org/2017/10/20/newtok-says-state-agency-blocked-access-to-disaster-funding/> [https://perma.cc/WX4M-HZFL] [hereinafter Waldholz, *Newtok Says*].

27. See Greg Kim, *With Virus Funds, Newtok Will Build More Homes in Mertarvik*, ALASKA PUB. MEDIA (July 30, 2020), <http://www.alaskapublic.org/2020/07/30/with-boon-of-funding-newtok-faces-questions-of-how-to-best-get-to-remaining-residents-to-mertarvik/> [https://perma.cc/WTY3-9TW9].

28. *Id.*

29. Mathew E. Hauer, *Migration Induced by Sea-Level Rise Could Reshape the US Population Landscape*, 7 NATURE CLIMATE CHANGE 321, 321 (2017).

communities in isolated areas around the country are considering relocation on account of sea level rise and erosion; a few are actively planning their exit strategy.³⁰

How will the nation decide which households or communities get priority? Who will manage and pay for their resettlement? What steps should be taken now? As the Biden administration labors to tame the climate crisis,³¹ the challenge of domestic migration looms large. This Essay recommends four steps that would set the federal government on track for tackling the migration challenge: (1) establish a specific and accountable leadership structure,³² (2) assess the geophysical and socioeconomic vulnerabilities of communities at risk,³³ (3) inventory and assess the existing policy frameworks and laws that can be put into service to help them,³⁴ and (4) enact federal legislation that organizes a unified response, fills the gaps in existing authority, and provides perpetual and reliable revenue streams to address the issue at scale.³⁵ These items will be addressed in turn, but first, readers need a brief understanding of the problem.³⁶

I. UNDERSTANDING THE PROBLEM

Years ago, when I first started teaching and writing about climate disaster, many people assumed one might manage those risks by just avoiding a handful of dangerous places. The trouble is, there are *a lot* of dangerous places.³⁷ I teach a course called “Disaster Law and Policy,” whose scope includes fires, floods, and pandemics. Much of the course, as students soon learn, is backlit by global warming. On the first day, the class starts with an icebreaker called, “Escape from Climate Change.”

I pose to the class: “Take rising seas and hotter summers as a given. That is bad news for warm coastal cities like San Diego and New Orleans. Imagine you lived in a such a city and wanted to escape. Where would you go?”

Someone always picks Seattle. “It is wet and clammy,” they say, “but in the future you will be able to grow oranges.” I respond, “Sorry, western Washington is losing its

30. MAXINE BURKETT, DAVID FLORES & ROBERT R.M. VERCHICK, CTR. FOR PROGRESSIVE REFORM, REACHING HIGHER GROUND: AVENUES TO SECURE AND MANAGE NEW LAND FOR COMMUNITIES DISPLACED BY CLIMATE CHANGE 1, 6–7 (2017).

31. See *infra* notes 63–65 and accompanying text for a discussion of the Biden administration’s early treatment of climate issues.

32. See *infra* Part II.A.

33. See *infra* Part II.B.

34. See *infra* Part II.C.

35. See *infra* Part II.D.

36. See *infra* Section I.

37. See GAO, CLIMATE MIGRATION, *supra* note 1, at 28 (“Further, in places such as Annapolis, Maryland; Norfolk, Virginia; and Miami Beach, Florida, substantial investments of time and money are being made to cope with frequent tidal flooding that disrupts daily life and business operations.”).

snowpack to warmer weather, and the local counties are panicked over water shortages.³⁸ Did I mention the region is overdue for a massive earthquake and tsunami?”³⁹

Another student may say, “How about Rapid City? It is far from the coast. Plus it is close to the Sturgis Motorcycle Rally.”⁴⁰ In response, I note, “But South Dakota’s Black Hill forests are drying up, increasing wildfire risk by six hundred percent.⁴¹ You will need more than a biker bandana to keep that smoke out of your lungs.”

Lastly, a student may say, “What about Alaska?” I respond, “Nope. The permafrost is softening, and indigenous villages are sliding into the sea.⁴² As the soil thaws, scientists expect a release of millions of ancient bacteria to which humans have lost immunity.”⁴³

I then tell the class about a recent study explaining that thirteen million people who were displaced by sea level rise in warm coastal cities can be expected to move inland to places like Las Vegas, Orlando, and Houston.⁴⁴ One would be wrong to follow those crowds. Las Vegas is warming faster than any other American city, breaking records for heatwaves and heat-related deaths.⁴⁵ Orlando is bracing for more inland flooding and mosquito-borne illness.⁴⁶ As for Houston, Hurricane Harvey offers a grim reminder of what happens when unchecked development and juiced up storms join forces.⁴⁷ “We’ll never outrun climate change,” I tell my students. “We’ve got to *outsmart* it.”

The way to outsmart climate breakdown is to build climate *resilience*. That means inventing a way to *cope with* and *recover from* climate impacts while maintaining the

38. See Camille St. Onge, *Water Supplies & Climate Change*, WASH. STATE DEP’T OF ECOLOGY, <http://ecology.wa.gov/Air-Climate/Climate-change/Climate-change-the-environment/Water-supply-impacts> [https://perma.cc/N85E-ADRZ] (last visited June 1, 2021).

39. See Kathryn Schulz, *The Really Big One*, NEW YORKER (July 20, 2015), <http://www.newyorker.com/magazine/2015/07/20/the-really-big-one> [https://perma.cc/48P2-Z2BM].

40. See *City of Sturgis Motorcycle Rally 2021*, CITY OF STURGIS MOTORCYCLE RALLY, <http://www.sturgismotorcyclerrally.com/index.php?page=home> [https://perma.cc/9HTK-Q3MN] (last visited June 1, 2021).

41. See Caitlyn Kennedy, *Risk of Very Large Fires Could Increase Sixfold by Mid-Century in the US*, CLIMATE.GOV (Aug. 26, 2015), <http://www.climate.gov/news-features/featured-images/risk-very-large-fires-could-increase-sixfold-mid-century-us> [https://perma.cc/NY8G-LGTQ] (displaying a map illustrating the increased risk of wildfires in South Dakota); Maria Temming, *The U.S. Power Grid Desperately Needs Upgrades To Handle Climate Change*, SCI. NEWS (Feb. 12, 2020, 6:00 AM), <http://www.sciencenews.org/article/u-s-power-grid-desperately-needs-upgrades-handle-climate-change> [https://perma.cc/9DYC-6SVZ] (discussing the impact of wildfires on powerlines).

42. See GAO, CLIMATE MIGRATION, *supra* note 1, at 13.

43. Jasmin Fox-Skelly, *There Are Diseases Hidden in Ice, and They Are Waking Up*, BBC (May 4, 2017), <http://www.bbc.com/earth/story/20170504-there-are-diseases-hidden-in-ice-and-they-are-waking-up> [https://perma.cc/ZFU3-VZ4N].

44. See Hauer, *supra* note 29, at 323 & fig.3.

45. Dan Hernandez, *The Hellish Future of Las Vegas in the Climate Crisis: ‘A Place Where We Never Go Outside.’* GUARDIAN (Sept. 3, 2019, 1:00 PM), <http://www.theguardian.com/us-news/2019/sep/02/las-vegas-climate-crisis-extreme-heat-hellish-future> [https://perma.cc/8RT2-9UGP].

46. See *Florida*, STATES AT RISK, <https://statesatrisk.org/florida/all> [https://perma.cc/T7FR-RJA7] (last visited June 1, 2021) (discussing the greatest climate risks facing the state of Florida).

47. See Shawn Boburg & Beth Reinhard, *Houston’s ‘Wild West’ Growth*, WASH. POST (Aug. 29, 2017), <http://www.washingtonpost.com/graphics/2017/investigations/harvey-urban-planning/> [https://perma.cc/5SX5-XU23].

capacity to *learn, adapt, and thrive*.⁴⁸ Depending on the circumstances, resilience might require restoring natural protective features like sand dunes and barrier reefs or building artificial ones like levees. It might mean adjusting design standards to fortify roofs, widen storm drains, or update the power grid with computerized switches to avoid blackouts. Yes, it will sometimes mean retreating from places that cannot be feasibly saved, like Isle de Jean Charles and the village of Newtok.

As the previous paragraph suggests, climate breakdown punishes the powerless first. While New Yorkers consider designs for a multibillion-dollar seawall to protect Wall Street,⁴⁹ working-class folks have fewer options in Alaska's marshlands or the Gulf Coast swamps—let alone in India or Indonesia.⁵⁰ Already, global warming is shaping a “climate underclass” whose property, culture, and well-being are under threat.⁵¹ Building climate resilience and managing voluntary retreat is more than a smart choice—it is a moral duty.

As of 2017, at least seventeen U.S. communities have already started a process of managed retreat on account of climate change.⁵² Yet the federal government remains grievously unprepared to handle the challenge of climate migration. There is no dedicated funding, no lead agency, and no recommended framework for guiding communities on such a tortuous journey.⁵³

Even so, the U.S. Global Climate Research Program (USGCRP) continues to warn of the potential need to relocate millions of people and billions of dollars' worth of infrastructure, portending legal, financial, and equity issues that officials have little idea how to address.⁵⁴ In its many reports on climate impacts, the Government Accountability Office (GAO) has become increasingly alarmed about federal fiscal exposure, noting that since 2005, federal funding for disaster assistance has totaled at least \$460 billion.⁵⁵ The GAO continues to insist the government needs a robust climate migration program built to scale.⁵⁶

President Obama tried to strengthen migration efforts, but the lack of congressional support during most of his tenure imposed limits.⁵⁷ In its final two years, the Obama

48. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-20-127, CLIMATE RESILIENCE: A STRATEGIC INVESTMENT APPROACH FOR HIGH-PRIORITY PROJECTS COULD HELP TARGET FEDERAL RESOURCES 2 n.6 (2019).

49. See Anne Barnard, *The \$119 Billion Sea Wall that Could Defend New York...Or Not*, N.Y. TIMES (Jan. 17, 2020), <http://www.nytimes.com/2020/01/17/nyregion/sea-wall-nyc.html> [<https://perma.cc/Q2ZS-N57E>].

50. See Hilary Whiteman, *Staten Island Seawall: Designing for Climate Change*, CNN STYLE (July 14, 2019), <http://www.cnn.com/style/article/staten-island-seawall-climate-crisis-design/index.html> [<https://perma.cc/4HSM-KNVJ>].

51. Rob Verchick, *Outsmarting Climate Change*, CONVERSATIONS ON JESUIT HIGHER EDUC., Fall 2020, at 41, 42.

52. See BURKETT ET AL., *supra* note 30, 6–7 (displaying two maps showing the communities in the contiguous United States as well as Alaska that are in the process of climate migration).

53. See *id.* at 14–15.

54. See Alexa Jay et al., *Overview*, in FOURTH NATIONAL CLIMATE ASSESSMENT, *supra* note 6, at 33, 64.

55. GAO, CLIMATE MIGRATION, *supra* note 1, at 2.

56. *Id.* at 38.

57. See, e.g., Marianne Lavelle, *2016: Obama's Climate Legacy Marked by Triumphs and Lost Opportunities*, INSIDE CLIMATE NEWS (Dec. 26, 2016), <http://insideclimatenews.org/news/26122016/obama->

administration took several actions to guide federal officials in climate relocation efforts, most notably in Alaska, where the imminent need is greatest.⁵⁸ Following a visit to the Arctic Circle to review coastal damage, President Obama directed the Denali Commission, an independent federal agency charged with supporting Alaska's rural communities, to play a lead coordination role in assisting relocation efforts.⁵⁹ In his last month in office, President Obama established an interagency working group on voluntary relocation—headed by representatives of the Department of Agriculture and HUD—to “develop a framework for managed retreat.”⁶⁰

Then President Trump was elected. President Obama's executive orders on climate change were rescinded, funding for the Denali Commission was whittled down,⁶¹ and the relocation working group was smashed like crusted snow under an ice cleat.⁶²

At the time of drafting this Essay, President Biden seems eager to dislodge the many cleats that have mangled climate policy in the last four years. Through the new White House Office of Domestic Climate Policy, headed by Gina McCarthy,⁶³ his administration seems poised to elevate climate change issues throughout the executive branch. In January 2021, President Biden issued a directive, titled “Executive Order on Tackling the Climate Crisis at Home and Abroad,” which established a National Climate Task Force aimed at reducing greenhouse gases, preparing for climate change impacts, and ensuring a just economic transition.⁶⁴ The order, which does not specifically address domestic migration or relocation, does stress the need for building “sustainable infrastructure” and preparing for climate change impacts “across rural, urban, and Tribal areas,” suggesting a scope large enough to encompass resettlement.⁶⁵ This is hopeful news, because it is imperative that federal policies reach beyond the ad hoc actions of the past to embrace a permanent framework that is up to the task.

As my hard conversation in the classroom makes clear, there are hundreds, maybe thousands, of communities across America that will flood, burn, or blow away by the end of the century, irrespective of how much carbon society abates. The United States

climate-change-legacy-trump-policies/ [https://perma.cc/WQ8B-ZZ9P] (describing Congress's resistance to climate change legislation).

58. See, e.g., Press Release, White House Office of the Press Sec'y, Fact Sheet: President Obama Announces New Investments To Combat Climate Change and Assist Remote Alaskan Communities (Sept. 2, 2015), <http://obamawhitehouse.archives.gov/the-press-office/2015/09/02/fact-sheet-president-obama-announces-new-investments-combat-climate> [https://perma.cc/A5G3-2YEC].

59. Lisa Rein, *This Tiny Agency's Own Watchdog Said It Should Be Deep-Sixed. Now, It's Helping to Save Alaska from Climate Change.*, WASH. POST (Sept. 4, 2015, 6:00 AM), <http://www.washingtonpost.com/news/federal-eye/wp/2015/09/04/the-little-commission-that-could-barely-save-itself-is-now-helping-save-alaska-from-climate-change/> [https://perma.cc/G564-EJS9].

60. Christopher Flavelle, *Obama's Final Push To Adapt to Climate Change*, BLOOMBERG OPINION (Dec. 16, 2016, 7:30 AM), <http://www.bloomberg.com/opinion/articles/2016-12-16/obama-s-final-push-to-adapt-to-climate-change> [https://perma.cc/N47F-2GL6]; see also GAO, CLIMATE MIGRATION, *supra* note 1, at 39 & n.110.

61. See GAO, CLIMATE MIGRATION, *supra* note 1, at 35.

62. See *id.* at 39.

63. See Juliet Eilperin & Brady Dennis, *Biden Picks Former EPA Chief Gina McCarthy as White House Climate Czar*, WASH. POST (Dec. 15, 2020, 8:13 PM), <http://www.washingtonpost.com/climate-environment/2020/12/15/gina-mccarthy-climate-change-czar-biden/> [https://perma.cc/7DRK-CQG6].

64. Exec. Order No. 14,008, 86 Fed. Reg. 7619, 7623 (Jan. 27, 2021).

65. *Id.* at 7626, 7629.

needs a program that coordinates across sectors, operates at scale, and emphasizes the needs of the most vulnerable populations.

II. BUILDING THE PROGRAM

Toward the goal of building a responsible federal climate migration program, this Section suggests a set of staged recommendations that focus on assigning leadership,⁶⁶ assessing community risk,⁶⁷ inventorying the financial and legal resources,⁶⁸ and expanding authority and dependable funding mechanisms.⁶⁹ In terms of political possibility, the first three fall into the “easy to somewhat-challenging” category. The fourth one is harder.

A. Assign a Leader

In its extensive 2020 report on climate relocation, having combed the published research and interviewed a range of stakeholders, the GAO announced what it determined to be “the key challenge to climate migration as a resilience strategy”—“[u]nclear federal leadership.”⁷⁰

Specifically, unclear leadership prevented federal agencies from providing effective assistance to states and communities.⁷¹ The GAO continued:

Because no agency has been given the authority to lead and organize federal assistance for climate migration, the federal government’s support for climate migration efforts has been limited and provided on an ad hoc basis under the broad legislative authority of programs designed for other purposes. Officials from the Denali Commission, [the Federal Emergency Management Agency], HUD, and [the National Oceanic and Atmospheric Administration] said it is not clear who should lead such efforts, and this lack of clarity has led to problems in the few climate migration efforts currently under way.⁷²

The GAO noted, for instance, that while the Denali Commission was able to play a significant role in Newtok’s relocation, the commission had no authority to assist the other Alaska Native villages in navigating federal program requirements or securing funding and technical assistance.⁷³ Unclear leadership, according to the GAO, also hobbled and prolonged the twenty-year resettlement process for Isle de Jean Charles.⁷⁴ To raise just one example, because neither of the tribes present on the island were federally recognized, HUD was required to interact with state rather than tribal officials, an arrangement which led to confusion, distrust, and allegations of bad faith among the parties.⁷⁵

66. See *infra* Part II.A.

67. See *infra* Part II.B.

68. See *infra* Part II.C.

69. See *infra* Part II.D.

70. See GAO, CLIMATE MIGRATION, *supra* note 1, at 38.

71. *Id.*

72. *Id.*

73. *Id.* at 38–39

74. *Id.* at 39.

75. See Dermansky, *Differing Visions*, *supra* note 12.

President Obama's short-lived working group on relocation could provide a model. The body, dubbed the "Interagency Working Group on Community-Led Managed Retreat and Voluntary Relocation," drew representation from HUD, the Federal Emergency Management Agency (FEMA), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Army Corps of Engineers, the Denali Commission, and six other partners.⁷⁶ Part of its unrealized charge was to propose a way to define agency roles and to select a lead federal agency.⁷⁷ The idea makes sense, but there is also need for an interagency group devoted to climate resilience more generally. This is because decisions to relocate occur not in a vacuum but instead in the context of other options that are realistically available.⁷⁸ Another concern is that there is some work—namely, the information-gathering work described below—that should not have to wait for such a working group to be organized.

The President could assign immediate information-gathering projects to an entity that already exists—NOAA, the Environmental Protection Agency (EPA), or the more expansive USGCRP. If the former, President Biden should resurrect the USGCRP's federal advisory committee—the Advisory Committee for the Sustained National Climate Assessment—to refine and promote the work.⁷⁹ Before President Trump disbanded the group in 2017, the advisory committee had been charged with helping local policymakers integrate climate analysis into local long-term planning.⁸⁰

B. *Assess the Risk*

With some leadership in place, the government's first move should be to comprehensively assess the scale of the country's potential climate migration. As the USGCRP noted in its fourth climate assessment, there exists only vague ideas about the magnitude, timing, and spatial distribution of this problem.⁸¹ Some of that uncertainty involves geophysical factors like the variability of midwestern downpours⁸² or the fire sensitivity of emaciated forests.⁸³ The GAO reports that today's researchers are nowhere near having models with the resolution necessary to identify the hundreds or thousands of places that could face an existential threat.⁸⁴ When demographer Mathew Hauer

76. GAO, CLIMATE MIGRATION, *supra* note 1, at 39.

77. *Id.*

78. See *infra* Part II.B for a discussion on assessing community risk from climate crises.

79. See Juliet Eilperin, *The Trump Administration Just Disbanded a Federal Advisory Committee on Climate Change*, WASH. POST (Aug. 20, 2017, 7:00 AM), <http://www.washingtonpost.com/news/energy-environment/wp/2017/08/20/the-trump-administration-just-disbanded-a-federal-advisory-committee-on-climate-change> [<https://perma.cc/C2NK-FNU2>].

80. *Id.*

81. Jeremy Martinich, Benjamin DeAngelo, Delavane Diaz, Brenda Ekwurzel, Guido Franco, Carla Frisch, James McFarland & Brian O'Neill, *Reducing Risks Through Emissions Migration*, in *FOURTH NATIONAL CLIMATE ASSESSMENT*, *supra* note 6, at 1346, 1372–73.

82. See Katherine Hayhoe, David R. Easterling, David W. Fahey, Sarah Doherty, James P. Kossin, William V. Sweet, Russell S. Vose, Michael F. Wehner & Donald J. Webbles, *Our Changing Climate*, in *FOURTH NATIONAL CLIMATE ASSESSMENT*, *supra* note 6, at 72, 111–12.

83. See James M. Vose, David L. Peterson, Grant M. Domke, Christopher J. Fettig, Linda A. Joyce, Robert E. Keane, Charles H. Luce & Jeffrey P. Prestemon, *Forests*, in *FOURTH NATIONAL CLIMATE ASSESSMENT*, *supra* note 6, at 243–44.

84. GAO, CLIMATE MIGRATION, *supra* note 1, at 30.

released his pathbreaking studies projecting national patterns of climate migration, he confined his analysis to coastal cities because sea level rise was one of the *only* climate variables that seemed reliable enough.⁸⁵ Decisionmakers need Hauer-like projections for other kinds of migrations too, including those whipped up by wildfires, heatwaves, and agricultural dustbowls.

In addition to the geophysical uncertainties, there are social, economic, and cultural questions. Whether a family or community chooses migration will depend on its access to relocation resources, its cultural ties to a place, and, of course, the other options available. Nobody expects the well-heeled residents of Lower Manhattan to pick up and leave; the U.S. Army Corps is already looking into a multibillion-dollar seawall.⁸⁶ Conversely, many residents in Louisiana's coastal parishes are planning moves.⁸⁷

Parish communities lost the fight for a regional levee system because of economic and environmental concerns.⁸⁸ Louisiana's coastal adaptation plan (significantly aided by HUD's Community Development Block Grant Disaster Recovery Program) is offering millions of dollars in risk-mitigation grants for "floodproofing" homes within fourteen feet of FEMA's projected base flood elevation.⁸⁹ The hundreds of homes that do *not* meet this criterion will be invited to seek voluntary buyouts, whisking them into a new stream of climate migration.⁹⁰

One point is that the need for resettlement is determined by more than geographic location; it is also determined by the economic and political power a climate-affected group can muster to protect itself in other ways. A second point is that even where retreat *is* such a group's preferred option, social and economic factors may inhibit its ability to exercise the option. A poor family or community that lacks the resources to fortify itself against a flood-prone river will probably also lack the resources to acquire safer land and resettle it.

Institutional barriers can also disproportionately affect socially vulnerable populations from choosing adaptive options, including relocation. For instance, a town completely dependent on recovery funds from FEMA to rebuild damaged property might find that the costs of moving to another site are not covered.⁹¹ To take another example, the GAO reports that some federal programs may "constrain tribal communities' ability to pursue self-determined management of their resources and built environment" because

85. See Hauer, *supra* note 29, at 321.

86. Barnard, *supra* note 49.

87. See Della Hasselle, *Voluntary Relocation, Construction Limits Among the Options to Deal with Rising Water Along Louisiana Coast*, LENS (Feb. 15, 2018), <http://thelensnola.org/2018/02/15/voluntary-relocation-construction-limits-among-the-options-to-deal-with-rising-water-along-louisiana-coast/> [<https://perma.cc/Y37U-F8A7>].

88. Mark Schleifstein, *No Levees in Corps' \$1.8 Billion Flood Plan for Southwest Louisiana*, TIMES-PICAYUNE (March 21, 2015, 4:38 AM), http://www.nola.com/news/environment/article_b300928d-fef8-5d22-800f-0558535f6a87.html [<https://perma.cc/V6ZD-PFN6>].

89. See COASTAL PROT. & RESTORATION AUTH., 2017 COASTAL MASTER PLAN, APPENDIX E: FLOOD RISK AND RESILIENCE PROGRAM FRAMEWORK 32 (2017), http://coastal.la.gov/wp-content/uploads/2016/04/Appendix-E_FINAL_10.09.2017.pdf [<https://perma.cc/2WJ7-ZE9J>].

90. *Id.* at 33.

91. See GAO, CLIMATE MIGRATION, *supra* note 1, at 31.

they do not “account for the unique context of tribal communities and tribal sovereignty.”⁹²

So where does one start in assessing the scope of the climate migration problem? First, the treasure of geophysical and sociopolitical information amassed by the USGCRP must be further analyzed, organized, and, most importantly, integrated into products (reports, scenario exercises, interactive maps, real-time consultations) directed toward political decisionmakers, community advocates, and business leaders. Gaps in knowledge should be identified, prioritized, and communicated to other agencies, research institutions, and foundations to encourage more learning.

Crucially, research and mapping related to social vulnerability (determined by class, race, gender, age, linguistic isolation, education level, and more) should be incorporated into any migration assessment; such vulnerability is, after all, not only an indication of special risk but also, in some cases, an indication that non-retreat-based options may be practically unavailable.⁹³ The “Social Vulnerability Index”⁹⁴ and “EJSCREEN,”⁹⁵ two mapping tools maintained by the Centers for Disease Control and Prevention and the EPA, respectively, could provide starting points. Both tools use data drawn from the U.S. census to identify communities whose demographics could make them more vulnerable to climate change impacts.

C. *Inventory the Law*

A second inventory involving funding opportunities and legal authorities is also needed. Federal programs fall dramatically short in supporting climate adaptation efforts generally, and migration efforts in particular.⁹⁶ Most adaptation resources come through ad hoc agency projects that are driven by primary missions (i.e., secure housing, sound transportation) that, while relevant to climate impacts, exist independent of them.⁹⁷

Plus, the programs that individuals rely on to help communities replace damaged infrastructure and housing after disasters were never intended to take into account the size and complexity of relocating entire populations.⁹⁸ The fragmented and ad hoc nature

92. *Id.* at 29.

93. See Elizabeth Fleming, Jeffrey Payne, William V. Sweet, Michael Craghan, John Haines, Juliette Finzi Hart, Heidi Stiller & Ariana Sutton-Grier, *Coastal Effects*, in *FOURTH NATIONAL CLIMATE ASSESSMENT*, *supra* note 6, at 322, 334–35.

94. *CDC Social Vulnerability Index*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, <http://www.atsdr.cdc.gov/placeandhealth/svi/index.html> [<https://perma.cc/S6AC-UTAV>] (last visited June 1, 2021).

95. *EJSCREEN: Environmental Justice Screening and Mapping Tool*, U.S. ENVTL. PROTECTION AGENCY, <http://www.epa.gov/ejscreen/> [<https://perma.cc/M5KL-3LUA>] (last visited June 1, 2021).

96. See GAO, *CLIMATE MIGRATION*, *supra* note 1, at 41.

97. See generally *id.* at 30–37.

98. *Id.* at 31.

of hazard mitigation funding has made it difficult to even know how much the federal government is spending on this work.⁹⁹ State funding is similarly difficult to track.¹⁰⁰

Legal authority is, of course, baked into the soufflé of all funding options. An agency's authority is often limited to situations where disaster has already hit.¹⁰¹ Sometimes, though, there are ways around this problem in the form of "pre-disaster" aid.¹⁰² In addition, there are legal authorities that might help ensure that migration and other forms of resilience aid go to the socially vulnerable populations who need it most—or at least do not make things worse for such groups.¹⁰³ Experts do not often think of laws like these as part of "disaster law," but they should.¹⁰⁴

A comprehensive archive of legal tools related to climate migration is thus essential. The situation resembles what policymakers and community advocates faced in the years following President Clinton's Executive Order on Environmental Justice.¹⁰⁵ Although no federal environmental laws targeted or even mentioned justice concerns (they still do not), researchers began assembling a list of statutory and regulatory provisions that could be used as levers to inch the boulder forward.¹⁰⁶ Over several years, EPA lawyers reviewed this work, expanded on its scope, depth, and reasoning, and eventually released a comprehensive manual of "EJ Tools," which is now used by federal and state policymakers, environmental lawyers, and community organizers across the country.¹⁰⁷

Here, then, is a starting point for analyzing the strengths and weaknesses of disaster-risk funding tools that could be mobilized for climate migration. This Essay categorizes them by the lead agency involved—FEMA,¹⁰⁸ HUD,¹⁰⁹ and other agencies.¹¹⁰ This catalog is followed by a discussion of authorities that promote the needs of disadvantaged communities and that apply to disaster-risk management programs.¹¹¹

99. ANNE STAUFFER, JUSTIN THEAL & COLIN FOARD, PEW CHARITABLE TRUSTS, NATURAL DISASTER MITIGATION SPENDING NOT COMPREHENSIVELY TRACKED (2018), http://www.pewtrusts.org/-/media/assets/2018/09/fiscal_federalism_federal_and_state_funding_issue_brief_v1.pdf [https://perma.cc/2EG3-PAZE].

100. PEW CHARITABLE TRUSTS, WHAT WE DON'T KNOW ABOUT STATE SPENDING ON NATURAL DISASTERS COULD COST US 2 (2018).

101. GAO, CLIMATE MIGRATION, *supra* note 1, at 37.

102. *See id.* at 31.

103. *See* Robert R.M. Verchick & Abby Hall, *Adapting to Climate Change While Planning for Disaster: Footholds, Rope Lines, and the Iowa Floods*, 2011 BYU L. REV. 2203, 2223–30 (discussing how policymakers can establish "footholds" through climate-adjacent issues to direct the attention of federal officials).

104. *See* Robert R.M. Verchick, *Disaster Justice: The Geography of Human Capability*, 23 DUKE ENVTL. L. & POL'Y F. 23, 67–68 (2012).

105. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994).

106. *See, e.g.*, Richard J. Lazarus & Stephanie Tai, *Integrating Environmental Justice into EPA Permitting Authority*, 26 ECOLOGY L.Q. 617, 619 (1999) (examining EPA statutory provisions, guidelines, and Environmental Appeals Board decisions to determine the scope of the EPA's environmental justice authority).

107. *See* OFFICE OF GEN. COUNSEL, U.S. ENVTL. PROTECTION AGENCY, PLAN EJ 2014: LEGAL TOOLS (2011) <http://www.epa.gov/sites/production/files/2016-07/documents/ej-legal-tools.pdf> [https://perma.cc/VZ7N-WYAL].

108. *See infra* Part II.C.1.

109. *See infra* Part II.C.2.

110. *See infra* Part II.C.3.

111. *See infra* Part II.C.4.

1. FEMA

FEMA oversees two risk-mitigation programs that could offer life rings to climate-migration planners. The Hazard Mitigation Grant Program (HMGP) is the longest-running FEMA program offering buyouts of flood-prone property.¹¹² The program, which provides recovery funds after a presidentially declared disaster, has supported the relocation efforts of many communities and neighborhoods that have been flooded and battered by storms.¹¹³ An oft-cited example is the village of Valmeyer, Illinois, which was swamped multiple times during riverine floods in 1993.¹¹⁴ Municipal leaders successfully combined funds from the HMGP and the National Flood Insurance Program to acquire \$8 million worth of damaged properties and rebuild the community on a nearby bluff.¹¹⁵

Nevertheless, the requirement of a presidentially declared disaster obviously narrows this tool's potential. Recall that in 2017, Newtok leaders had hoped to unlock hazard mitigation funds by petitioning President Obama to declare the existential threat they faced to be a "major disaster," and that the president declined.¹¹⁶

Some officials argue that a president lacks authority under the Stafford Act¹¹⁷ to declare a disaster based on a slow-moving hazard like coastal erosion or thawing permafrost.¹¹⁸ There is room for argument here. While most of the listed examples of disasters in the Stafford Act are sudden-onset events, the statute does not confine itself to these examples. Moreover, some of the examples listed, like droughts,¹¹⁹ do slowly accumulate over time.¹²⁰ In the case of Newtok, in addition to coastal erosion and thawing permafrost, the village has also documented threats from sudden winter storms and heavy snow.¹²¹

Perhaps the larger point is that had the president declared a disaster and unleashed disaster recovery funds, consistency might have required similar declarations for several other Alaska Native villages. Funds distributed through this program vary annually depending on the number and severity of major disasters in any given year.¹²² In 2014,

112. See *Hazard Mitigation Grant Program (HMGP)*, FEMA, <http://www.fema.gov/grants/mitigation/hazard-mitigation> [https://perma.cc/3VMM-EWGL] (last updated Feb. 26, 2021).

113. *Id.*; see also Robert R.M. Verchick & Lynsey R. Johnson, *When Retreat Is the Best Option: Flood Insurance After Biggert-Waters and Other Climate Change Puzzles*, 47 J. MARSHALL L. REV. 695, 703–04 (2014).

114. FED. EMERGENCY MGMT. AGENCY, VALMEYER ACQUISITION: FULL MITIGATION BEST PRACTICE STORY (2011), <http://www.hsd.org/?view&did=682466> [https://perma.cc/6BLT-8RP8].

115. See *id.*

116. See Waldholz, *Obama Denies*, *supra* note 21.

117. 42 U.S.C. §§ 5121–208 (2018).

118. Waldholz, *Newtok Says*, *supra* note 26.

119. See 42 U.S.C. § 5122(1).

120. See Hayhoe et al., *supra* note 82, at 91.

121. NEWTOK, ALASKA, VILLAGE OF NEWTOK, ALASKA: LOCAL HAZARDS MITIGATION PLAN 43–45 (2008), http://web.law.columbia.edu/sites/default/files/microsites/climate-change/files/Arctic-Resources/Community-Adaptation-Plans/Newtok_HMP.pdf [https://perma.cc/2CBS-7YUE].

122. See GAO, CLIMATE MIGRATION, *supra* note 1, at 16–17.

disaster funds topped \$1 billion in response to Hurricane Sandy.¹²³ Two years later, in 2016, distributed funds were less than half of that.¹²⁴

In August 2020, FEMA launched another big initiative—the Building Resilient Infrastructures and Communities (BRIC) grant program—which notably applies *before* a catastrophe hits.¹²⁵ BRIC, which was authorized by a recent amendment to the Stafford Act, replaces the more modest Pre-Disaster Mitigation program that had provided limited (and somewhat fluctuating) assistance to states and territories that are trying to prepare for the worst.¹²⁶ BRIC offers pre-disaster mitigation activities to states, local communities, tribes, and territories.¹²⁷ Eligible activities include infrastructure projects, “nature-based” resilience efforts, and the design and enforcement of better building codes.¹²⁸ Climate migration also seems to be on the list.¹²⁹ The grant program, which is funded by six percent set aside from Congress’s post-disaster grant funding,¹³⁰ is expected to distribute \$500 million for the 2020 fiscal year, devoting the lion’s share (\$446.4 million) to a national competition for mitigation projects.¹³¹

During the drafting of this Essay, the *New York Times* reported that FEMA officials are considering freeing up as much as \$10 billion “to pre-emptively protect against damage by building seawalls, elevating or relocating flood-prone homes and taking other steps as climate change intensifies storms and other natural disasters.”¹³² The plan would make use of a “budgeting maneuver” that allows the agency to repurpose a portion of its overall disaster spending to these ends.¹³³ The tactic—which involves “count[ing] Covid dollars toward” existing grant programs without the need of congressional approval—could reportedly add as much as \$3.7 billion to the BRIC grant program and around \$6.3 billion to the HMGP.¹³⁴ An infusion like this would be transformative, to

123. STAUFFER ET AL., *supra* note 99, at 4 fig. 2 (2018).

124. *See id.*

125. *See Building Resilient Infrastructure and Communities (BRIC)*, FED. EMERGENCY MGMT. AGENCY, <http://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities> [<https://perma.cc/Q3YQ-D2HW>] (last updated Feb. 17, 2021).

126. *See id.*; *see also FEMA Pre-Disaster Mitigation Grant Program*, AM. LIBRARY ASS’N, <http://www.ala.org/advocacy/advleg/federallegislation/govinfo/disasterpreparedness/pdmitigation> [<https://perma.cc/DU8T-83F5>] (last visited June 1, 2021).

127. FED. EMERGENCY MGMT. AGENCY, FEMA FACT SHEET: NOTICE OF FUNDING OPPORTUNITY FOR HAZARD MITIGATION ASSISTANCE GRANTS 1 (2020), http://www.fema.gov/sites/default/files/2020-09/fema_bric_fy-2020_nofa_fact-sheet.pdf [<https://perma.cc/4XCJ-HFAK>] [hereinafter FEMA, FEMA FACT SHEET].

128. *Id.*

129. A support document on the grant webpage features Newtok’s relocation as an example of the type of activity that might be funded. *See* FED. EMERGENCY MGMT. AGENCY, MITIGATION ACTION PORTFOLIO 29–30 (2020), http://www.fema.gov/sites/default/files/2020-08/fema_mitigation-action-portfolio-support-document_08-01-2020_0.pdf [<https://perma.cc/C57R-RMF7>].

130. DIANE P. HORN, CONG. RESEARCH SERV., NO. IN11515, FEMA PRE-DISASTER MITIGATION: THE BUILDING RESILIENT INFRASTRUCTURE AND COMMUNITIES (BRIC) PROGRAM 1 (2020).

131. FEMA FACT SHEET, *supra* note 127; *see also Building Resilient Infrastructure and Communities*, *supra* note 125.

132. Christopher Flavelle, *New U.S. Strategy Would Quickly Free Billions in Climate Funds*, N.Y. TIMES (Jan. 25, 2021), <http://www.nytimes.com/2021/01/25/climate/fema-climate-spending-biden.html> [<https://perma.cc/Y9FN-54XS>] [hereinafter Flavelle, *New U.S. Strategy*].

133. *Id.*

134. *See id.*

say the least—but not a panacea. That is because the need for this work will never end; it is always in the present tense.

Revenue streams must be not only robust but also committed over time. Further, not all deserving communities are well positioned to apply for or make use of these grants. Drafting a winning proposal for a complicated project is notoriously demanding, requiring dozens or sometimes hundreds of hours of research and planning. Smaller or poorer communities often do not have the information, staff, or connections to succeed in such a process without help.¹³⁵ The Biloxi-Chitimacha-Choctaw, for instance, relied on substantial technical assistance that the nonprofit Lowlander Center, based in Gray, Louisiana, provided.¹³⁶ In addition, FEMA programs often require state or local governments to provide up to twenty-five percent of the cost of the project, a deal breaker in many situations.¹³⁷

2. HUD

HUD operates a set of block grant programs that, while not directed specifically at climate migration, can be used for that purpose. The most prominent initiative, the Community Development Block Grant Disaster Recovery Program, provides aid for disaster recovery and hazard mitigation for a large range of needs, including planning, construction, and relocation.¹³⁸ Like FEMA's disaster mitigation grants, these recovery grants are attached to particular destructive events.¹³⁹ In contrast to FEMA grants, Congress appropriates money for HUD recovery block grant awards on an ad hoc basis, as finances and political will allow.¹⁴⁰

The Obama administration creatively used block grant funding left over from Hurricane Sandy to launch the \$1 billion National Disaster Resilience Competition, aimed mainly at promoting climate change resilience. The State of Louisiana received \$92.6 million for a variety of plans to address coastal erosion in its southern parishes.¹⁴¹ Of that award, \$48 million was assigned to relocate the Isle de Jean Charles community.¹⁴² The village of Newtok appealed to a different block grant program—HUD's Indian Community Development Block Grant Program—for almost half a million dollars to install electrical and plumbing infrastructure at the community's resettlement site in Mertarvik.¹⁴³

135. See CARMEN GONZALEZ, ALICE KASWAN, ROBERT VERCHICK, YEE HUANG, SHAWN BOWEN & NOWAL JAMOUR, CTR. PROGRESSIVE REFORM, CLIMATE CHANGE, RESILIENCE, AND FAIRNESS 31–37 (2016) (describing challenges faced by small communities in securing FEMA's Pre-Disaster Mitigation program).

136. See generally LOWLANDER CTR., RESETTLEMENT AS A RESILIENCE STRATEGY AND THE CASE OF ISLE DE JEAN CHARLES (2015), http://www.doa.la.gov/OCDDRU/NDRC/IDJC_Prospectus_final_27Oct15_updated_logos.pdf [<https://perma.cc/S9YP-8MMB>] (providing a prospectus for the resettlement of Isle de Jean Charles).

137. Flavelle, *New U.S. Strategy*, *supra* note 132.

138. See *CDBG-MIT Overview*, HUD EXCHANGE, <http://www.hudexchange.info/programs/cdbg-mit/overview/> [<https://perma.cc/NA4P-X6AM>] (last visited June 1, 2021).

139. See *id.*

140. See GAO, CLIMATE MIGRATION, *supra* note 1, at 33.

141. COASTAL PROT. & RESTORATION AUTH., *supra* note 89, at 37.

142. *Id.* at 38.

143. Press Release, Lee Jones, U.S. Dep't of Hous. & Urb. Dev., HUD Awards \$1.4 Million in Indian Community Development Block Grant Funds to Four Native Alaska Villages to Meet Community Development

Finally, HUD's Community Development Block Grant Mitigation Program offers disaster mitigation funds to certain states and territories recovering from qualifying disasters.¹⁴⁴ Grantees have included California, Missouri, Puerto Rico, and South Carolina, among others.¹⁴⁵ Available funds, which total almost \$7 billion, can be used for a wide variety of resilience measures, including relocation.¹⁴⁶ Again, though, this aid comes *after* catastrophic damage, not before.

3. Other Agencies

Other agencies also provide funding, services, or technical assistance that either have been used to aid migratory efforts related to climate or could be used in this way. NOAA, for instance, promotes climate resilience through its National Coastal Zone Management Program and its Coastal Resilience Grants Program.¹⁴⁷ The U.S. Army Corps of Engineers Civil Works Program (the Corps) helps communities assess climate-based risks from flooding, storms, and coastal erosion, which is of obvious use to populations considering the need to relocate.¹⁴⁸ The Corps could also help secure a chosen resettlement site through civil works projects like sea walls and levees.¹⁴⁹ For a short time, beginning in 2005, the Corps was authorized to deploy resources, at full federal expense, to mitigate risks that coastal erosion and damaged ice and glaciers posed in rural Alaska; the remit specifically included "relocation of affected communities and construction of replacement facilities."¹⁵⁰ Congress withdrew the authority in 2009.¹⁵¹

The Bureau of Indian Affairs, the Department of Defense (independent of the Corps), and the Department of Energy have all lent a hand in community relocation efforts. The Bureau of Indian Affairs helped design the homes in Mertavik that Newtok residents will be moving into, while the Department of Defense is helping to build them.¹⁵² Years ago, the Department of Energy helped the village of Valmeyer, Illinois, design efficiency standards for its resettled community.¹⁵³ These initiatives, however, like much of the federal assistance discussed in this Essay, were extemporaneous, limited in scope, and decidedly after the fact.¹⁵⁴

Needs (Oct. 19, 2017), <http://archives.hud.gov/local/ak/news/pr2017-10-19.cfm> [<https://perma.cc/E9WY-V6D7>].

144. *Community Development Block Grant Mitigation Program*, HUD EXCHANGE, <http://www.hudexchange.info/programs/cdbg-mit/> [<https://perma.cc/HTT9-W3WX>] (last visited June 1, 2021).

145. *Id.*

146. GAO, CLIMATE MIGRATION, *supra* note 1, at 34.

147. *Id.* at 34–35.

148. *Id.* at 36.

149. *See id.*

150. Consolidated Appropriations Act, 2005, Pub. L. No. 108-447, § 117, 118 Stat. 2809, 2944–45 (2004).

151. *See* Omnibus Appropriations Act, 2009, Pub. L. No. 111-8, § 117, 123 Stat. 524, 608 (2009).

152. GAO, CLIMATE MIGRATION, *supra* note 1, at 37; *see also* Kim, *supra* note 27.

153. GAO, CLIMATE MIGRATION, *supra* note 1, at 37.

154. *See id.* at 37–38.

4. Authorities Promoting the Interests of Disadvantaged Groups

Because climate impacts are more likely to threaten communities that are socially and economic disadvantaged, it is important to catalog the authorities that promote the needs of disadvantaged communities in the context of disaster-risk-management programs. This is not the place for a comprehensive list,¹⁵⁵ but three antidiscrimination statutes deserve special attention in this inventory. First, consider the Fair Housing Act of 1968¹⁵⁶ and the Housing and Community Development Act of 1974.¹⁵⁷ The Fair Housing Act outlaws discrimination in the administration of housing-related programs on the basis of race, national origin, religion, sex, familial status, and disability.¹⁵⁸ The Housing and Community Development Act outlaws discrimination on the basis of race, color, national origin, sex, and religion in any program making use of HUD's Community Development Block Grants.¹⁵⁹ These laws would apply to any HUD-funded residential buyout program, including those used for managed retreat.

Indeed, Louisiana's post-Katrina buyout program, known as the "Road Home" program appeared to run afoul of both laws when it was discovered that the state's grant formula tended to award Black homeowners less favorable grants than white homeowners.¹⁶⁰ The State of Louisiana eventually settled with HUD after agreeing to distribute an additional \$62 million to thirteen hundred homeowners.¹⁶¹

A third statute, Title VI of the Civil Rights Act of 1964,¹⁶² reaches beyond housing and HUD. The statute in fact launched scores of environmental justice challenges through the EPA, though few have proved successful.¹⁶³ Title VI requires federal agencies to ensure that any funds they distribute are not used to subsidize discrimination based on race, color, or national origin.¹⁶⁴ This, of course, would include funds distributed through FEMA's hazard mitigation programs.

155. Several agencies provide inventories of antidiscrimination laws that apply to their programs. *See, e.g., Fair Housing and Related Law*, HUD.GOV, http://www.hud.gov/program_offices/fair_housing_equal_opp/fair_housing_and_related_law [<https://perma.cc/L7NT-7PFH>] (last visited June 1, 2021) (providing access to various statutes, executive orders, and regulations relating to fair housing); *Title VI Laws and Regulations*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/ocr/title-vi-laws-and-regulations> [<https://perma.cc/EK9A-JHQV>] (last visited June 1, 2021) (including summaries of Title VI and other federal antidiscrimination laws relevant to EPA's work).

156. 42 U.S.C. §§ 3601–19, 3631.

157. 42 U.S.C. §§ 5301–22 (2018).

158. 42 U.S.C. §§ 3604–06.

159. *Id.* § 5309(a).

160. *See* David Hammer, *Road Home's Grant Calculations Discriminate Against Black Homeowners*, *Federal Judge Rules*, TIMES-PICAYUNE (Aug. 17, 2010, 4:38 AM), http://www.nola.com/news/politics/article_b5077f8c-2b64-57f3-a4d9-792f67295c55.html [<https://perma.cc/2MHQ-DLME>]. While the Road Home program was not conceived as a managed retreat initiative, it did facilitate household relocations for those who so desired.

161. Press Release, Brian Sullivan, U.S. Dep't of Hous. & Urb. Dev., HUD and Louisiana Announce Settlement Agreement To End Legal Challenge to Road Home Program (2011), <http://archives.hud.gov/news/2011/pr11-138.cfm> [<https://perma.cc/XHY2-5G29>].

162. 42 U.S.C. §§ 2000d to 2000d-7.

163. CLIFFORD VILLA, NADIA AHMAD, REBECCA BRATSPIES, ROGER LIN, CLIFFORD RECHTSCHAFFEN, EILEEN GUANA & CATHERINE O'NEILL, *ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION* 140–43 (3rd ed. 2020).

164. 42 U.S.C. § 2000d.

There is at least some evidence to suggest that discriminatory effects have occurred. For instance, a recent study of forty thousand FEMA-funded voluntary buyouts from 1989 to 2017 raised serious questions about distributional outcomes across the United States.¹⁶⁵ Specifically, it found that while counties with locally administered buyout projects were likely to have higher incomes and education levels than counties without buyouts, the bought-out properties were more likely to be located in “poorer, less densely populated areas, also with relatively lower education levels, lower English language proficiency, and greater racial diversity.”¹⁶⁶ The authors of the study did not speculate about the cause—whether it be programmatic design, a desire to help the needy, or a result of after-the-fact affluent flight—but the findings on their own suggest the field is rich for study.¹⁶⁷

There are also policies and laws that affirmatively promote activities helpful to disadvantaged populations. For instance, the Executive Order on Environmental Justice, issued in 1994, focuses federal attention on the environmental and human health conditions in minority communities, low-income communities, and “[f]ederally recognized Indian Tribes.”¹⁶⁸ The order, though it created no new legally enforceable rights,¹⁶⁹ provided important focus and political momentum in both the Clinton and Obama administrations.¹⁷⁰ President Biden, too, has promised a strong commitment to environmental justice in the executive agencies, a commitment that is reaffirmed in his executive order on tackling climate change.¹⁷¹

What might this order mean for climate migration? At minimum, the order on environmental justice directs agencies to analyze the environmental, human health, economic, and social effects of federal actions, with an eye toward avoiding situations that would create or magnify disproportionate impacts on environmental justice communities.¹⁷² Meaningful public participation is also necessary. But there is far more potential here. In its environmental justice guidelines on rulemaking, the EPA (whose understanding of environmental justice matters is influential with other agencies) went even further, stating that “a potential EJ concern” also arose where a contemplated action could “[p]resent *opportunities to address existing disproportionate impacts* on minority populations, low-income populations, and/or indigenous peoples through the action under development.”¹⁷³

165. See Katharine J. Mach, Caroline M. Kraan, Miyuki Hino, A.R. Siders, Erica M. Johnston & Christopher B. Field, *Managed Retreat Through Voluntary Buyouts of Flood-Prone Properties*, SCI. ADVANCES, Oct. 9, 2019, at 1, 1.

166. *Id.* at 6.

167. *See id.*

168. Exec. Order No. 12,898, 59 Fed. Reg. 7629, §6-606 (Feb. 11, 1994).

169. *Citizens Concerned About Jet Noise, Inc. v. Dalton*, 48 F. Supp. 2d 582, 604 (E.D. Va. 1999), *aff'd*, 217 F.3d 838 (4th Cir. 2000).

170. *See VILLA ET AL.*, *supra* note 163, 361–62.

171. *See* Exec. Order No. 14,008, 86 Fed. Reg. 7619, 7629 (Jan. 27, 2021); *see also* Lisa Friedman, *With the Biden-Harris Ticket, Environmental Justice Is a Focus*, N.Y. TIMES (Aug. 12, 2020), <http://www.nytimes.com/2020/08/12/climate/kamala-harris-environmental-justice.html> [<https://perma.cc/UL7F-P4BV>].

172. Exec. Order No. 12,898, 59 Fed. Reg. at 7629.

173. U.S. ENVTL. PROT. AGENCY, GUIDANCE ON CONSIDERING ENVIRONMENTAL JUSTICE DURING THE DEVELOPMENT OF REGULATORY ACTIONS 10 (2015) (emphasis added).

In this view, a federal agency contemplating a climate resilience strategy in a community would be charged with considering not just how to avoid *new* disproportionate harm, but how to relieve disproportionate harm that *already exists*. In the context of climate migration, that might mean prioritizing the needs of minority, low-income, and tribal people, so as to offset some of the historical disadvantages that have put these groups at risk.

A related Clinton-era directive charges federal agencies with identifying and, where feasible, *mitigating* the environmental, economic, and social effects on environmental justice communities as part of any analysis required by the National Environmental Policy Act.¹⁷⁴ Although courts generally defer to agencies in such matters, a court recently rejected the Army Corps's environmental justice analysis concerning the Dakota Access Pipeline on the grounds that the geographic scope was too narrow.¹⁷⁵

To add a last—and very intriguing—item to the list of affirmative duties that agencies might have to promote environmental justice, this Part looks to the law concerning native peoples. Scott Stern, an environmental lawyer, has persuasively argued that the trust duty compels the government to relocate Indian communities facing climate annihilation.¹⁷⁶ This position is founded in a commonsense reading of case law, statutes, treaties, and common law trust principles.¹⁷⁷ Stern believes the duty may even apply to Alaska Natives and native Hawaiians.¹⁷⁸

D. Create New Funding Mechanisms and New Authority

This Essay's last recommendation is the most difficult to achieve politically because it would require legislative action from a Congress that is notoriously divided over climate change.¹⁷⁹ It is, therefore, described more generally. The truth is that, even with sterling executive leadership and the most robust informational inventories, the government cannot serve an effective climate relocation program—one that makes good on its moral obligation to the citizenry and reduces the treasury's astronomical fiscal exposure—without bold and creative federal legislation.

The most ambitious plan would empower and fund an existing or new federal agency to oversee and advise voluntary, community-led climate relocations. One idea might be to implement on a national level the vision President Obama had for the Denali Commission in the latter half of his second term. This new agency would function as a counselor to eligible communities, with formal relationships with all relevant federal agencies (FEMA, HUD, NOAA, EPA, the Army Corps, the Bureau of Indian Affairs,

174. 42 U.S.C. § 4321–70m (2018); see Presidential Memorandum for the Heads of All Departments and Agencies: Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 30 WEEKLY COMP. PRES. DOC. 279, 280 (Feb. 11, 1994).

175. *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, 255 F. Supp. 3d 101, 137–40 (D.D.C. 2017), *aff'd*, 985 F.3d 1032 (D.C. Cir. 2021).

176. Scott W. Stern, *Rebuilding Trust: Climate Change, Indian Communities, and a Right to Resettlement*, 47 *ECOLOGY L.Q.* 179, 240 (2020).

177. *Id.* at 184.

178. *Id.* at 185.

179. See Nathan Rott, *Biden's Climate Change Plans Could Face Serious Challenges in a Divided Congress*, NPR (Nov. 10, 2020, 4:12 PM), <http://www.npr.org/2020/11/10/933548716/bidens-climate-change-plans-could-face-serious-challenges-in-a-divided-congress> [<https://perma.cc/WU2U-FK88>].

and more), to provide a kind of one stop shop for technical assistance, bureaucratic troubleshooting, the assembling of grant packages, and social and cultural needs.

Along with new agency leadership would come new funding—funding that is equal to the scale of the problem, based on a predictable source of revenue, earmarked specifically for climate resilience efforts (perhaps, more specifically, relocation efforts) and, crucially, funding that is available *before* disaster strikes. Practically speaking, it probably makes sense for funding sources to be divided among agencies and designed to suit an array of particular uses or recipients. It might also make sense to integrate such funds into the current legislative agenda.

President Biden’s highly anticipated infrastructure bill presents an ideal vehicle for public works projects aimed at resettling endangered villages in Alaska or flood-prone towns along the Gulf and Atlantic Coasts.¹⁸⁰ New climate legislation could include resilience grants funded by carbon fees, the sale of pollution credits, or other mechanisms. Finally, when Congress gets serious about revamping the National Flood Insurance Program,¹⁸¹ it should consider a generous package of voluntary buyout provisions—designed to promote collective, community-based relocation decisions—to help populations that choose to move to higher ground.

CONCLUSION

It is hard to walk the waterlogged fields on Isle de Jean Charles and not feel a sting of despair. There is much to do, after all, and the United States has dismissed many opportunities for early action. That, however, does not absolve the government and its citizenry from persevering. Tackling the migration challenge requires a deliberate, staged approach that includes establishing a specific and accountable leadership structure, assessing the geophysical and socioeconomic vulnerabilities of communities at risk, inventorying existing relevant laws, and enacting federal legislation that organizes a unified response, fills the gaps in existing authority, and provides perpetual and reliable revenue streams to address the issue at scale. Hope is alive, but time is running short. The water is lapping at our heels.

180. See Alayna Treene, *Scoop: Biden Privately Pushes First Big Deal*, AXIOS (Dec. 18, 2020), <http://www.axios.com/joe-biden-infrastructure-deal-congress-e753dd11-cf81-4395-8aca-6b13f9bcfd75.html> [<https://perma.cc/C46F-EDLH>].

181. See *Flood Insurance*, FEMA, <http://www.fema.gov/flood-insurance> [<https://perma.cc/D7WP-3UXV>] (last updated Jan. 8, 2021).