JUNE 2026
R: 26-06-D

REPORT

FROM CRISIS TO OPPORTUNITY:

BUILDING A JUST FRAMEWORK FOR PLANNED RELOCATION IN THE UNITED STATES

AUTHORS:
Idowu Ajibade, Meghan Sullivan, Adelle Thomas

ACKNOWLEDGMENTS

NRDC would like to thank the following people who contributed to improving this publication: Rachel Jacobson (Center on Budget and Policy Priorities), Randall Abate (George Washington University Law School), Amanda Maxwell (NRDC), and Khalil Shahyd (NRDC). We also thank the William Reeves Dependent Sub Fund for its generous support of this work.

NRDC Senior Policy Publications Editor: Leah Stecher
NRDC Director of Peer Review, Science Office: Laurie Geller

Cover image: © J Henry Fair for NRDC
Design and Production: www.suerossi.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Climate change is already driving large-scale displacement across the United States, with approximately 11 million people forced from their homes by climate-related disasters in 2024 alone. As climate risks intensify, more communities will face difficult decisions about whether, when, and how to relocate.

Planned relocation, also known as managed retreat or strategic resettlement, has emerged as a critical—albeit controversial and complex—adaptation strategy to reduce long-term risk, enhance adaptive capacity, and build resilience in communities. Despite the growing need, the United States lacks a coordinated national framework for planned relocation. Existing efforts are fragmented, reactive, and heavily reliant on post-disaster funding mechanisms that often reinforce social and racial inequities.

This report evaluates current U.S. approaches to planned relocation, including case studies such as Newtok, Alaska, and Isle de Jean Charles, Louisiana, and situates them within a global context to identify best practices and policy gaps.

As this report shows, planned relocation is not only a tool for reducing climate risk but also a potential pathway for advancing equity, protecting cultural heritage, and improving long-term well-being when implemented proactively and collaboratively. Relocation can reduce ongoing public costs and create opportunities for improved livelihoods. Achieving these outcomes, however, requires a national framework that integrates planned relocation into broader climate adaptation, land-use planning, and infrastructure policy; ensures sustained funding and clear accountability; and centers the leadership, knowledge, and consent of affected communities.

Ultimately, the United States must shift from reactive disaster response to proactive, justice-centered planning. By learning from global best practices and addressing long-standing structural inequities, the United States can transform planned relocation from a last resort into a strategic, community-driven approach to managing climate risk.

1. INTRODUCTION

Climate change is increasingly driving displacement and reshaping population patterns within the United States.[1] According to a 2025 report, approximately 11 million U.S. residents were internally displaced in 2024 due to hurricanes, floods, wildfires, and other climate-related disasters.[2] Climate-related hazards are forcing more and more communities—particularly those at high risk and with limited resources—to confront the difficult decision of whether, when, and how to relocate.

Planned relocation, also known as managed retreat or strategic resettlement, is the government-, institution-, or community-led process of proactively moving people or communities out of harm's way and into safer geographic locations. For at-risk communities, planned relocation can mitigate long-term risk and enhance climate resilience.[3] However, without careful planning and inclusive policies, relocation efforts can reinforce existing inequalities or create new forms of vulnerability, harm, and exclusion.[4] The ultimate goal for communities is a "just relocation," which requires policies that go beyond physical movement to address historical injustices, secure land and housing rights, preserve cultural and social ties, and ensure meaningful participation in both decision making and the broader implementation of climate adaptation strategies.

This report explores how planned relocation does and does not work within the United States and considers what we can learn from existing policies in other countries. It begins by clarifying what planned relocation means, particularly in contrast to other forms of climate mobility. Then, drawing on a review of more than 300 global cases and evaluation of global policies, we highlight best practices from international cases, policies, and community experiences. We then outline the policy shifts needed in the United States, identifying key gaps in legal and policy frameworks at the local, state, and federal levels. Finally, we examine the core principles of justice-centered relocation, emphasizing why such an approach is essential to ensure safe, dignified, and sustainable transitions for frontline and vulnerable populations facing the accelerating impacts of climate change.

2. UNDERSTANDING CLIMATE MOBILITY

Climate migration models estimate that more than 216 million people worldwide are likely to move within their own countries over the next 25 years due to the projected increase in natural hazards and exposure to extreme weather events.[5] Numerous factors, such as hazard type, frequency, and intensity, as well as institutional preparedness or lack thereof, contribute to people's decisions to move. Some studies estimate that by 2100, between 880 million and 1.4 billion people around the world could be susceptible to rising sea levels and coastal flooding.[6] Therefore, it is crucial to understand why and how people move and the protections available to different populations.

2.1 SPECTRUM OF CLIMATE MOBILITY

Climate mobility can be understood as a spectrum of movement options with vastly different processes and outcomes for individuals and communities (table 1).

There are four main types—planned relocation, climate migration, forced displacement, and immobility—all of which involve a broad range of human needs, rights, and aspirations for durable solutions, including for physical safety and access to health care, housing, education, and sustainable livelihoods.[7] While these different forms of mobility are growing in scale and often intersect, there are key differences in their temporality, coordinating actors, and outcomes. Forced displacement, for example, is typically immediate and reactive; it may be short-term and driven by the urgent need to escape danger from a climate-related disaster. Planned relocation is a long-term, reactive or proactive process aimed at reducing future risk. Climate migration often falls somewhere in between, influenced by both gradual and sudden environmental changes, and may be voluntary, forced, or semi-voluntary depending on the context.

Floodwaters from Hurricane Helene cover Hickory Grove, North Carolina, on September 28, 2024. Large-scale movement of people away from areas at high risk to sea level rise are expected in coastal states such as Florida, Louisiana, Texas, North Carolina, and California.

TABLE 1: CLIMATE MOBILITY DEFINITIONS AND EXAMPLES[8]

Type	Definition	Examples
Planned Relocation	In the context of disasters or environmental degradation, including when due to the effects of climate change, a planned process in which persons or groups of persons move or are assisted to move away from their places of residence, are settled in a new location, and are provided with the conditions for rebuilding their lives. Also called managed retreat or strategic resettlement. May also include the relocation of critical infrastructure, businesses, ecosystems, and other valuable assets from high-risk areas to safer places.[9] Buyouts are a specific type of voluntary property acquisition in which a government agency purchases a privately owned, high-risk property and converts the land to parkland or open space in perpetuity. Buyouts facilitate planned relocation.	■ A coastal community moves inland to higher ground due to sea level rise. ■ A group of homeowners receives financial compensation for relocating after a flooding or wildfire event.
Climate Migration	The movement of a person or group of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a country, or across an international border.	■ An individual/household or agricultural community leaves a drought-prone area in search of food security or better job opportunities in the city. ■ A family moves to another country due to rising flood impacts and increased food insecurity.
Forced Displacement	The movement of persons who have been forced or obliged to leave their homes or places of habitual residence as a result of a disaster or in order to avoid the impact of an immediate and foreseeable natural hazard. Also called disaster displacement.	■ People permanently or temporarily evacuate due to hurricane or storm impacts. ■ Families are housed in temporary shelters while their homes are rebuilt after a typhoon.
Immobility	People cannot move, choose not to move, or may temporarily move and return to their homes despite imminent climate risks. Also called trapped populations.	■ An Indigenous community desires to relocate its village to a safer site but does not have sufficient finances to implement its plan. ■ A farming household does not want to move away from a drought-prone area because of social connections.

2.2 CLIMATE MOBILITY IN THE UNITED STATES

Today, disaster-induced, forced displacement has rapidly emerged as one of the most significant drivers of human mobility worldwide.[10] This form of movement occurs when individuals or communities are compelled to leave their homes due to the immediate or anticipated impacts of natural hazards such as floods, hurricanes, and wildfires. Unlike planned relocation or voluntary migration, these displacements are typically temporary, sudden, unplanned, and reactive, with little time for preparation or for institutional support systems to be activated.

The overall cost of a disaster can help us understand the scale of displacements. When we talk about how much a disaster "costs," that number accounts for things like destroyed properties (both business and residential) as well as infrastructure required to make a place habitable, such as roads, water, and sewer lines. Between 1980 and 2024, the United States experienced 403 climate- and weather-related disasters that each exceeded $1 billion in costs, resulting overall in an estimated $2.9 trillion in inflation-adjusted damages.[11] In the last five years alone, the average annual cost of climate-related disasters in this country has been close to $150 billion, suggesting massive displacements.[12]

Projections suggest that up to 13.1 million Americans could need to move away from areas that are at high risk to sea level rise alone by 2100.[13] This large-scale movement is expected to occur primarily in coastal states such as Florida, Louisiana, Texas, North Carolina, and California. In these cases, movement will be driven not by flooding alone, but also by coastal erosion; saltwater intrusion; and the cascading economic impacts of rising seas, damaged infrastructure, unaffordable housing, and reduced property values. While sea level rise may be the largest potential cause of climate mobility in the United States, other climate hazards such as wildfire and extreme weather will add to the number of people affected.

These projected migration patterns are poised to fundamentally alter regional demographics. As people move away from high-risk coastal areas, inland regions may see sudden increases in population, with serious implications for housing, infrastructure, and social services. At the same time, those unable to relocate, particularly low-income and aging populations, may become further isolated and vulnerable. Without a proactive national policy framework to guide climate adaptation and mobility planning, the United States risks turning foreseeable challenges into major crises.

© Marko Georgiev/Getty Images

Lower Ninth Ward residents stranded on roofs after Hurricane Katrina await rescue in New Orleans, Louisiana on August 29, 2005.

© Carol M. Highsmith

The James A. Byrne U.S. Courthouse in Philadelphia, Pennsylvania where the *Cruz Galicia v. Garland* case was tried.

2.3 CLIMATE MIGRANTS IN THE UNITED STATES AND GLOBALLY

While planned relocations and climate migration most commonly occur within the same country, cross-border movement happens as well.[14] While people moving across borders are often colloquially referred to as "climate refugees," their actual status reveals major gaps in current refugee law. The existing legal framework under the 1951 Refugee Convention, the first global document to codify the rights of refugees, does not explicitly recognize environmental or climate-related factors as grounds for cross-border refugee protection.[15] Therefore, under international law, people fleeing environmental threats like sea level rise, desertification, or hurricanes typically do not meet the legal definition of a refugee, which requires evidence of persecution based on race, religion, nationality, political opinion, or membership in a particular social group.[16]

The case *Cruz Galicia v. Garland* exemplifies how the United States' complex immigration law intersects with climate mobility. In 2021, Cruz Galicia and his family entered the United States from Guatemala, where "droughts, storms, and the Covid-19 pandemic" affected their ability to live and feed themselves.[17] The petitioner argued that the Guatemalan government's neglect in providing economic aid constituted persecution and that the "particular social group" to which his family belonged was that of "climate refugees."[18] After an immigration judge denied the application, the First Circuit Court of Appeals rejected the challenge to the denial of asylum based on the fact that "climate refugees" were not a distinct social group in Guatemalan (or general) society.[19] This case and others demonstrate the growing significance and ambiguity of language around climate mobility worldwide, particularly in legal and governance processes.

2.4 COMPLEXITIES OF PLANNED RELOCATION

Despite the growing number of planned relocation efforts worldwide, planned relocation remains a complex and often controversial policy issue, drawing attention to critical questions about land rights, livelihood access, community agency and sovereignty, equity in planning, and long-term sustainability.[20] When executed well, a planned relocation can lessen vulnerability and enhance long-term resilience by facilitating access to safer housing and improved infrastructure and reducing exposure to certain climate-related risks.

However, without the proper infrastructural and technical support, planned relocation has the potential to violate human rights and negatively affect communities' quality of life. In some cases, such as among communities in Bangladesh's riverine areas, relocation has increased the physical and social vulnerability of residents in their new locations.[21] Disruption to livelihoods, social cohesion, cultural continuity, and access to essential services are among the most commonly reported adverse outcomes. The challenge is magnified when relocation is reactive or rushed due to sudden-onset disasters or policy pressures, often resulting in fragmented or inequitable implementation.[22]

Crucially, not all people have equal access to mobility options. Unsupported or self-funded planned relocation may be out of reach for many, leading to involuntary immobility, especially among low-income and marginalized communities.[23] Without adequate financial, institutional, and logistical support, these communities may remain vulnerable to repeated and cascading hazards, perpetuating cycles of inequality and environmental injustice.

The overall range of formal and informal climate mobility options provides both opportunities and risks depending on individual circumstances. For relocation to effectively reduce risks, institutions and policymakers must recognize that marginalized and vulnerable communities have unique needs. Top-down and rigid approaches to mobility can simply replicate risk in a new location.[24]

3. PLANNED RELOCATIONS AROUND THE WORLD

We reviewed 318 documented cases of planned relocation worldwide between 1950 and 2024 (see Appendix 1 for full methodology). Our analysis shows a steady rise in climate-related relocation over the past two decades (figure 1).

While the start dates of the relocations were generally traceable, completion timelines varied widely, ranging on average from 5 to 30 years. The wide variation in timelines highlights the complexity, resource intensity, and long-term commitments required to implement relocation effectively.

Planned relocations are driven primarily by flooding (43 percent), followed by storms (19 percent) and coastal erosion (18 percent) (figure 2). In the Americas and Africa, flooding and storms were the primary drivers of relocation (figure 3). In Asia, flooding followed by landslides were the most frequent drivers, while in Oceania, coastal erosion was the dominant driver. In Europe, flooding emerged as the major cause of relocation. Overall, these findings suggest that increased attention to flooding, storms, and coastal erosion is essential to ensuring community safety and security in a changing climate.

Figure 4 presents a global map of planned relocation hot spots, illustrating the distribution, type, and scale of population movements. There is a clear concentration of large-scale mobility in South and Southeast Asia, sub-Saharan Africa, and Central and South America. In the United States, community-led planned relocations, particularly in Alaska, and buyouts are the predominant forms of planned relocation.

FIGURE 1: PLANNED RELOCATION PROJECTS CATEGORIZED BY YEAR OF PLANNING INITIATION (N = 308)

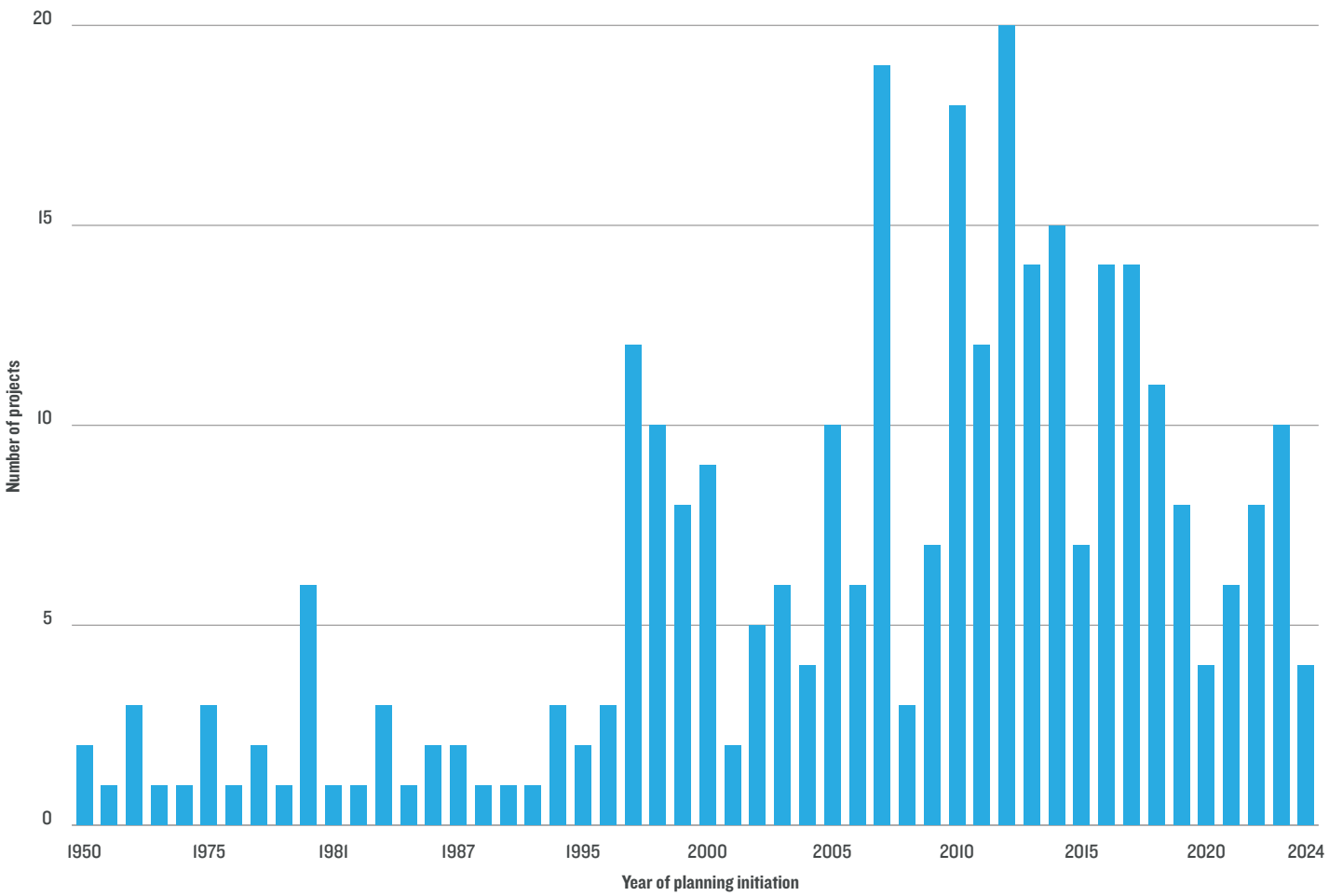
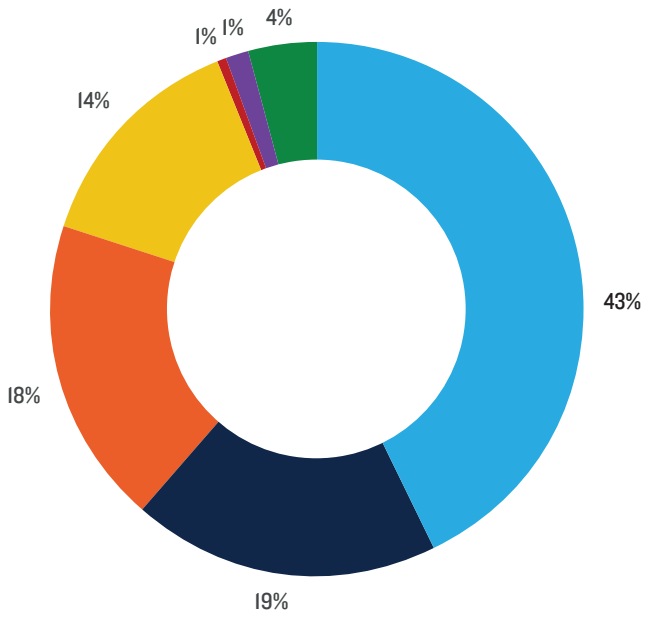


FIGURE 2: PRIMARY HAZARDS DRIVING PLANNED RELOCATION GLOBALLY (N = 313)



Note: *Flood* = repeated flooding events or a single catastrophic incident, both coastal and inland.

Storm = severe storms and related impacts, including wind gusts, storm surges, etc. Can be a single storm or repeated exposure to severe storms.

Coastal erosion = permanent loss of land, sand, or rock along the coastline due to sea level rise. Can be in response to current or projected future conditions.

Landslide = the sliding down of a mass of earth or rock from a mountain or cliff.

Wildfire = unplanned, uncontrolled, and unpredictable fire burning in natural vegetation.

Grassland degradation = decline of grassland health and productivity.

Drought/heat = lack of fresh water, desertification, and extreme heat.

- Flood
- Storm
- Coastal Erosion
- Landslide
- Wildfire
- Grassland Degradation
- Drought/Heat

FIGURE 3: PRIMARY HAZARDS DRIVING PLANNED RELOCATION, BY REGION

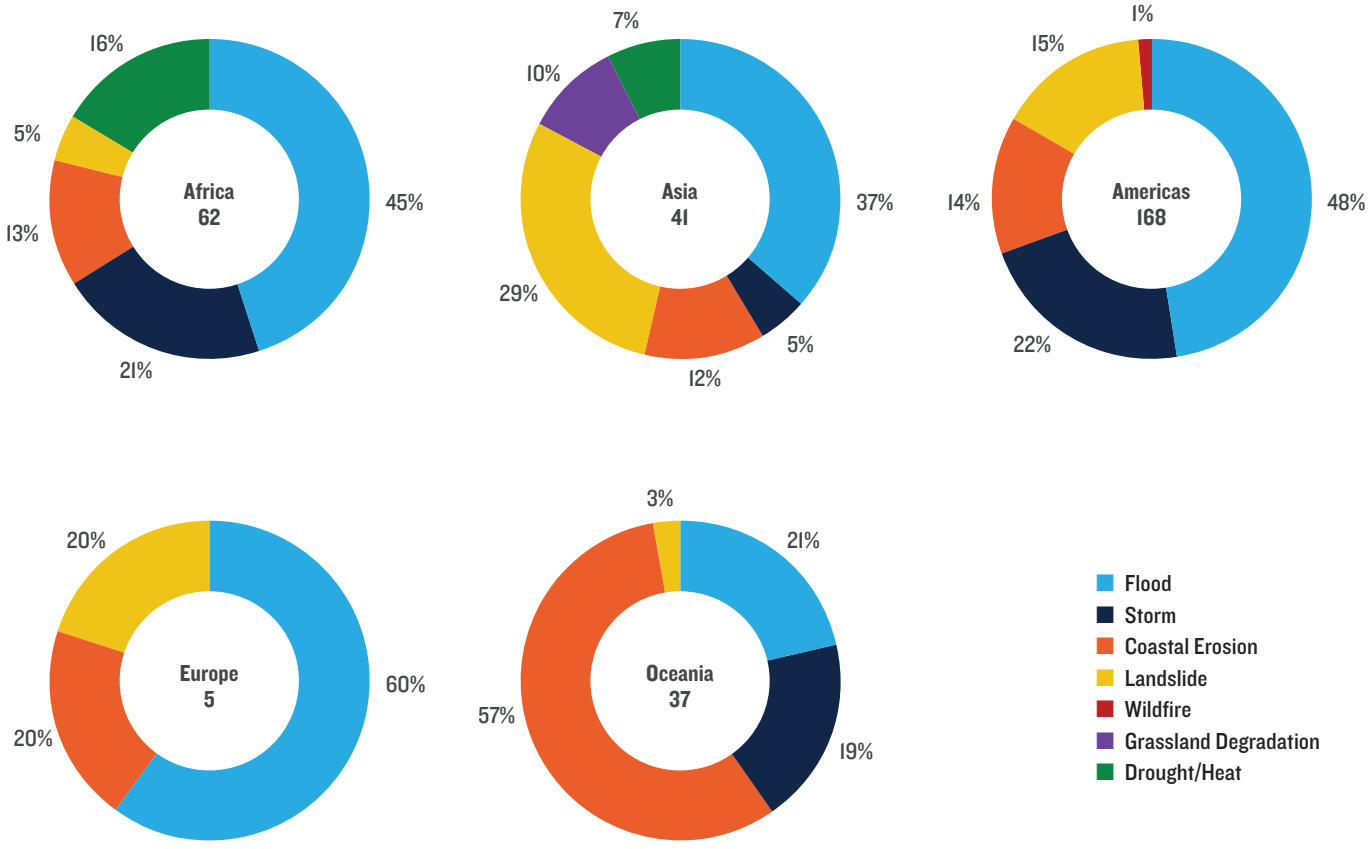
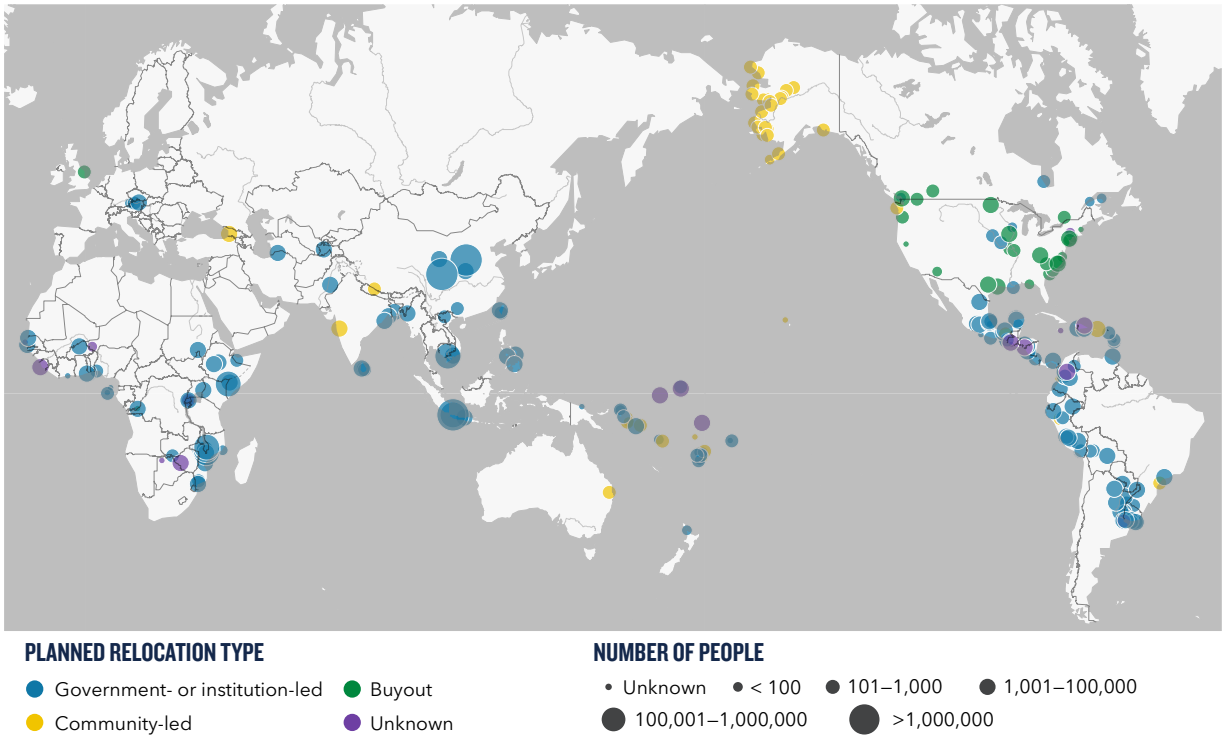


FIGURE 4. GLOBAL DISTRIBUTION OF PLANNED RELOCATION, 1950–2024



4. MOVING FROM BUYOUTS TO PROACTIVE PLANNED RELOCATION POLICY IN THE UNITED STATES

North America, and the United States in particular, is subject to the same global climate mobility trends outlined in section 3. But as shown in figure 4, buyouts or property acquisition programs remain the primary mechanism for relocating residents in high-risk areas in the United States.[25] While the United States is recognized as a global leader in buyouts, this approach is limited in its usefulness for safely and equitably facilitating climate relocations.[26] Instead of relying so heavily on buyouts, the United States must be proactive in creating a robust relocation policy. For insight on how to do so, we can look at the examples of community-led relocations among Indigenous communities in the United States.

4.1 BUYOUTS ARE LIMITED IN THEIR EFFECTIVENESS

Buyouts are a specific type of voluntary property acquisition in which a government agency purchases a privately owned, high-risk property and converts the land to parkland or open space in perpetuity. Buyouts are predominantly post-disaster interventions, triggered by federally declared disasters.[27] This reactive model leads to delayed implementation, often taking several years from the time of a disaster to the actual disbursement of funds and acquisition of properties. Additionally, the lack of pre-disaster planning means that relocations are often uncoordinated and individually administered, disrupting community cohesion and failing to support broader adaptation goals.

Abandoned homes stand at Bay Point Marina in Cedarville, New Jersey, U.S., on Tuesday, June 28, 2016. Through the Superstorm Sandy Blue Acres program, New Jersey has sought to purchase large chunks of property, raze the homes that stand on them, and turn the land into open fields and marshlands that can absorb floods and rainwater and protect homes farther inland.

© Master Sgt. Mark C. Olsen/U.S. Air Force

Aerial views during an Army search and rescue mission show damage from Hurricane Sandy to the New Jersey coast, Oct. 30, 2012.

Since the 1990s in the United States, there have been more than 40,000 property buyouts across 49 states, particularly after major flood events like the 1993 Midwest floods; 2005 Hurricane Katrina; 2012 Superstorm Sandy; and 2017 Hurricanes Harvey, Irma, and Maria.[28] Despite these efforts, the United States lacks a comprehensive legal or policy framework specifically designed for climate-induced relocation. In practice, federal agencies rely on ad hoc mechanisms such as disaster recovery funding from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program or Community Development Block Grant Disaster Recovery programs administered through the Department of Housing and Urban Development (HUD) to facilitate buyouts and community relocations.[29] While these tools can be effective in certain contexts, they are limited in scope, chronically underfunded, and often reactive rather than preventive.

In many cases, they also exacerbate existing inequalities by compensating homeowners only at pre-disaster fair market value without providing assistance for replacement housing, relocation costs, or long-term recovery. This disproportionately disadvantages low-income households, residents of rural communities, and communities of color. Moreover, navigating these programs requires significant administrative capacity, which many under-resourced communities lack. Disenfranchised groups, including low-income households and communities of color, frequently encounter disproportionate barriers in even accessing buyout programs.[30] Buyout participants with fewer financial resources are more likely to experience prolonged displacement, relocate to similarly hazardous areas, or withdraw from buyout programs altogether due to delays and financial gaps, reinforcing patterns of vulnerability rather than reducing them.[31]

Additionally, participation in relocation programs is often fragmented due to multiple factors including the lack of coordination across government agencies (housing, transportation, environment, and disaster management); jurisdictional overlap and conflicting policies across federal, state, and local levels; and funding sources with different timelines, criteria, and objectives.[32] Property owners may also resist moving due to emotional ties, generational land ownership, lack of trust, or skepticism of government intervention.[33] Relocation can also disrupt social identity and linguistic connections within communities, particularly when the process strips individuals of their agency.[34] Furthermore, relocated communities may have decreased levels of place-based attachment, both to their local community and to their individual home.[35]

While there have been more than 50 major community-led or Tribal relocations in the United States that did not rely on buyouts, including the Valmeyer relocation in Illinois and the Isle de Jean Charles relocation in Louisiana, these instances of planned relocation are subject to similar funding and bureaucratic constraints.[36]

Many of these problems could be eliminated or substantially reduced by adopting a proactive—rather than reactive—approach. Proactive voluntary pre-disaster buyouts can lessen long-term public costs, minimize human suffering, and allow for thoughtful, community-driven relocation planning. However, creating conditions in which a community voluntarily relocates requires an inclusive, deliberative process that emphasizes transparency, engagement, trust building, accountability, informed science, and adaptive governance.[37] For example, New Jersey's Blue Acres Program uses hundreds of millions of dollars in state funds to acquire flood-prone properties ahead of disasters.[38] Similarly, Washington State's $283 million Floodplains by Design initiative integrates property acquisition with ecosystem restoration and community engagement, offering a more holistic approach.[39] These programs prove that it can be done.

That said, the U.S. reliance on buyouts also conflicts with deeply entrenched private property rights. The Fifth Amendment establishes eminent domain, the government's right to take private property for public use, provided the owner receives "just compensation." A 2005 U.S. court ruling found that governmental seizure of private property for environmental and climate adaptation reasons (i.e., forcing a buyout) is valid.[40] However, the use of eminent domain for planned relocation is likely to be seen as government overreach. Even where legal authority exists, invoking eminent domain for climate relocation raises serious ethical and financial concerns.

4.2 BUYOUTS SELL PEOPLE OF COLOR SHORT

The current buyout system can exacerbate longstanding systemic inequities such as redlining, which delineated urban neighborhoods according to their perceived level of risk regarding loans and mortgages.[41] Under redlining, areas with African American populations were graded as "hazardous," effectively barring residents from bank loans. These practices led to systemic disinvestment in these neighborhoods, decreasing property values and limiting these communities' abilities to accrue generational wealth. Redlining also forced communities of color to reside in neighborhoods situated on

less desirable land, which was frequently more susceptible to environmental hazards such as flooding, extreme heat, and industrial pollution—a pattern that continues to shape climate vulnerability to date.[42]

Today, in many Black and Latino neighborhoods, property valuation and assessment methods commonly used in buyouts fail to account for the long-term impacts of historic redlining and racialized disinvestment, resulting in homes being valued significantly lower than comparable properties elsewhere. These valuation gaps persist even after controlling for housing quality and location, reflecting the enduring influence of discriminatory financial practices on property markets.[43] The limited compensation that results from these property valuation methods may not provide enough capital for homeowners to buy homes in safer locations. These homeowners may stay in an unsafe area rather than accept the low buyout or, if they accept the buyout, may be forced to buy in an equally unsafe area elsewhere. This not only threatens the well-being of vulnerable populations but also contributes to higher long-term recovery costs and perpetuates cycles of risk and disinvestment.

Buyout programs typically do not come with funding or provisions for livelihood restoration, social services, or long-term planning, making relocation especially difficult for marginalized groups.[44]

4.3 LESSONS FROM TRIBAL COMMUNITIES

The need for a coherent, just, and forward-looking relocation strategy is especially urgent for Tribal Nations and Native Alaskan villages, many of which are on the front lines of climate impacts.[45] In Indigenous, agrarian, and coastal communities, cultural practices are deeply intertwined with place, ecology, and shared histories. These practices form the backbone of social cohesion and intergenerational continuity.[46] When climate-related disruptions alter or sever people's connection to their ancestral lands and daily cultural practices, the effects reach far beyond physical relocation or economic loss.[47] These disruptions can heighten psychological stress and erode community resilience by weakening networks of mutual support that traditionally buffer households during crises.[48] For these communities, relocation is a question not only of physical safety but also of cultural survival, legal sovereignty, and historical justice.

Despite their high levels of exposure to climate hazards, Tribal groups in the United States are less likely to participate in federal risk management programs. For instance, of the 573 federally recognized Tribes, fewer than 50 are in the National Flood Insurance Program.[49] This indicates an institutional failure by FEMA to adequately meet the needs of Tribal Nations. A study at the University of Washington found that while FEMA acknowledges that Tribal governments should have equal access to its grant programs, institutional and technological barriers, such as unreliable access to high-speed internet and lack of appropriate technical assistance, impede applications to FEMA grant programs.[50] Additionally, there is a serious lack of Tribal liaisons, professionals who facilitate relationships between government agencies and Tribal Nations. For example, the Associated Press reported that a single regional Tribal liaison is in charge of assisting more than 200 Native villages in Alaska.[51]

In recognition of this growing crisis, in August 2022 the Biden administration established the Voluntary Community-Driven Relocation (CDR) program, specifically aimed at assisting Tribal Nations severely impacted by climate-related threats. In total, $175 million was allocated to advance the relocation planning of 11 severely impacted Tribes and support community-driven relocation of seven Native villages in Alaska.[52] The CDR program has since been suspended by the second Trump administration, leaving many Tribes unable to advance their plans or secure long-term safety for their communities.[53] The sudden withdrawal of federal support not only undermines these efforts but also signals a troubling disregard for Indigenous rights and climate justice.[54]Appendix 2 provides an overview of changing climate adaptation policy in the United States over the past four presidential administrations and implications for planned relocation.

Still, in the face of federal inaction and chronic underinvestment, Tribal communities have continued to advance community relocation projects. For example, the community-led relocations of Newtok, Alaska, and Isle de Jean Charles, Louisiana, underscore the urgent need for coordinated federal support and streamlined funding mechanisms for climate-resilient relocation across the United States.

"The legacy of forced relocations in the United States is still present through generational trauma and current reservation boundaries—the same boundaries that some Tribes are now having to relocate from once again."

—Taryn Bell, Institute for Tribal Environmental Professionals, Northern Arizona University.[55]

COMMUNITY-LED RELOCATION OF THE NATIVE VILLAGE OF NEWTOK, ALASKA

The relocation of Newtok, Alaska, is one of the most prominent examples of climate-induced relocation in the United States. In the face of catastrophic erosion, permafrost thaw, and repeated flooding due to climate change, the community of almost 400 people voted in the early 1990s to relocate to a safer site: Mertarvik, located nine miles away across the Ningliq River. By 2024, the Newtok Village Council had secured and spent approximately $160 million through a patchwork of federal, state, and Tribal funds to complete the move.[56] The process took more than three decades, involving complex interagency coordination, legal battles over land ownership, and chronic underfunding. By September 2024, the final 88 residents had been relocated into homes in the new village. All remaining public services in Newtok, such as the power plant and school, were decommissioned in December 2024.[57]

© Andrew Burton/Getty Images

A Yupik girl riding her bicycle at sunset in Newtok, Alaska, on July 3, 2015. Newtok is one of several remote Alaskan villages being forced to relocate due to warming temperatures causing the melting of permafrost, widening of rivers and the erosion of their land and coastline.

The relocation of nearly 400 people stands as a testament to the power of Indigenous self-determination in the face of climate disruption. However, the project also underscores the urgent need for coordinated federal support and streamlined funding mechanisms to respond to the growing demand for climate-resilient relocation across the United States. For example, in 2024, the Alaska Native Tribal Health Consortium released a report documenting the unmet needs of Alaska Native villages threatened by climate change and offering recommendations for addressing these needs.[58]

FEDERALLY FUNDED RELOCATION OF ISLE DE JEAN CHARLES, LOUISIANA

Located in coastal Louisiana, the Isle de Jean Charles community became the first federally funded, climate-induced relocation in the continental United States. Coastal land loss driven by sea level rise, subsidence, and increasingly severe storms made continued habitation unsafe and unsustainable.[59] In 2016, the state received $48.3 million earmarked by HUD to relocate approximately 100 residents, many of whom belong to the Isle de Jean Charles Band of Biloxi Chitimacha-Choctaw of Muskogees, to New Isle, approximately 40 miles inland.[60] However, because the Tribe is not federally recognized, the funds were administered by the state of Louisiana rather than through a Tribal governance structure. This led to ongoing tensions over community agency and Tribal sovereignty.[61] Although the state emphasized voluntary participation and held public meetings, community members argued that decision-making power was concentrated in state agencies. In particular, decisions about land acquisition, site design, and eligibility criteria were made without full consultation with the Tribe's governing body. As a result of persistent conflicts, the Tribe formally disassociated itself from the resettlement in October 2018, after which the Louisiana Office of Community Development (OCD) continued the implementation while removing many of the original design features, including solar infrastructure, flood mitigation measures, and Tribal cultural elements.[62]

© Josh Haner/The New York Times via Redux

An aerial view of the coastal Louisiana village of Isle de Jean Charles, which is being swallowed by rising waters in the Gulf of Mexico, April, 7, 2016. A billion-dollar program to protect cities from climate change is at risk of failing because of the pandemic.

In 2022, residents began moving to the 34 newly constructed homes on the resettlement site. In January 2024, the Tribe filed a civil rights complaint with HUD, alleging that the OCD had engaged in racial and ethnic discrimination, ignored Tribal sovereignty, and provided substandard replacement housing.[63] The complaint also accused OCD of displacing island residents in favor of the development of a small subdivision.[64] The project remains a landmark effort in U.S. climate adaptation, but also a cautionary tale about the importance of centering community governance and Tribal sovereignty in future climate relocation initiatives.

5. KEY TAKEAWAYS FROM PLANNED RELOCATION POLICIES AROUND THE WORLD

The United States currently does not have a federal planned relocation policy. But planned relocations are already happening within the country, and more are certain to come. Without a clear framework in place, these relocations are likely to be underfunded, inequitable, or even unsuccessful. As the United States considers the future, there is much we can learn from planned relocation policies around the world.

The United States is not uniquely behind the curve here. A recent study assessing how human mobility is addressed in the national adaptation plans of 57 countries revealed a gap between recognition of the issue and action.[65] While 89 percent of the plans mention human mobility, only about 60 percent include concrete policies or measures to support those displaced by climate change. Many governments propose relocating people to safer areas, yet few plans address land conflicts, housing rights, or whose interests are prioritized, all of which can raise risks of land grabbing, displacement, or "climate gentrification," a process in which climate adaptation or risk-reduction efforts increase property values and living costs, displacing lower-income or marginalized residents from safer areas. The study noted that most countries focus on mobility driven by physical risks like floods or droughts but rarely consider long-term impacts such as shifting economies or job markets. Indigenous knowledge, gendered effects, and the needs of children and disabled people are also largely overlooked.

Addressing these gaps requires not only a commitment to inclusive planning processes but also a holistic, clear, and meaningful solution. It also requires policies that facilitate and support climate-related relocation.

There is currently no binding international policy that specifically and explicitly recognizes planned relocation or the rights of people displaced by climate change. However, there are soft law frameworks and guiding principles such as the U.N. Guiding Principles on Internal Displacement, the Platform on Disaster Displacement, and the Global Compact for Safe, Orderly and Regular Migration, which acknowledge climate mobility but are nonbinding.[66] Several countries, such as Fiji, Peru, and Bangladesh, have frameworks or planned relocation policies already in place.[67] Together, these policies demonstrate the importance of pre-disaster planning, standard operating procedures, post-settlement support, public participation, mechanisms to ensure policy implementation and enforcement, and multilateral cooperation.

PLANNED RELOCATION FRAMEWORKS IN FIJI

Fiji has multiple frameworks, including its Planned Relocation Guidelines, Standard Operating Procedures for Planned Relocation, and Displacement Guidelines in the Context of Climate Change and Disasters.[68] Its SOPs, which are informed by past relocations, are designed to help make relocation processes equitable and allow citizens to remain resilient to climate change–fueled disasters.[69] The SOPs provide for services beyond bare necessities such as access to environmentally sound and resilient housing and sustainable waste management. The procedures revolve around consensus-based decision-making processes and deeply value community input. Furthermore, the SOPs emphasize the importance of ensuring the sustainability of cultural heritage and religious practices throughout the relocation process.

For example, a few *iTaukei* (Indigenous Fijian) villages have relocated in response to sea level rise and coastal erosion, doing so in line with Fiji's SOPs.[70] Even in relocations that occur after a disaster, Fiji's established national policy frameworks helped to guide the coordination of multiple government agencies, private sector partners, and local stakeholders. In the case of the village of Denimanu, where 19 homes were destroyed by Cyclone Evan in 2013, residents who were relocated reported improved living conditions, including better access to sanitation facilities and electricity.[71]

The son of the pastor of the Christian Mission Fellowship sits in what remains of the destroyed church after Cyclone Evan blew through the area in the village of Malomalo, east of the Bay of Natadola on the Coral Coast in Fiji, Tuesday, Dec. 18, 2012.

5.1 PRE-DISASTER PLANNING AND STANDARD OPERATING PROCEDURES

Pre-disaster planning and the use of clear standard operating procedures (SOPs) are essential for ensuring that planned relocation processes are both equitable and efficient. Proactive planning allows governments and communities to establish legal frameworks, financing mechanisms, and participatory processes before crises occur, reducing the likelihood of rushed, reactive decisions that often lead to inequitable outcomes.[72] Successful relocations depend heavily on inclusive planning, strong coordination, and clearly defined roles and responsibilities, all elements that SOPs can formalize and standardize across institutions.[73] SOPs improve coordination and information sharing among multiple actors, enabling more consistent decision making and reducing confusion during complex, multi-stakeholder relocation processes. Pre-disaster planning helps to identify and prioritize the needs of vulnerable populations, ensuring that equity considerations, including access to resources, participation, and livelihood restoration, are embedded from the outset rather than addressed retrospectively. Together, pre-disaster planning and SOPs create the institutional readiness needed to implement relocation in a way that is transparent, participatory, and aligned with long-term resilience goals.

5.2 POST-RESETTLEMENT PROGRAMS AND LONG-TERM SUPPORT

Comprehensive post-relocation planning strategies that include provisions for long-term support of communities can play a critical role in reducing decision fatigue and uncertainty in an already complex and ambiguous process. Establishing clear frameworks, roles, and timelines in advance helps create a shared understanding among institutions and affected communities about what relocation will entail, thereby improving coordination and building confidence throughout the process. Relocation must be approached as a long-term, developmental process—rather than a short-term intervention—that requires sustained support, monitoring, and evaluation to ensure equitable and durable outcomes.[74]

A view of a flooded park due to the overflowing of Waal River, the main distributary branch of Rhine River in the Nijmegen, Netherlands on December 29, 2023.

MANAGED RETREAT FROM FLOOD-PRONE AREAS IN THE NETHERLANDS

In response to increasing flood risks exacerbated by climate change, the Netherlands implemented a national adaptation strategy known as Room for the River, which differs from traditional flood-control approaches by creating space for rivers through floodplain restoration, dike relocation, and, where necessary, the relocation of residents from high-risk flood zones to reduce disaster vulnerability. One notable example is the relocation of households in the village of Lent, near Nijmegen, undertaken as part of a broader effort to widen the River Waal between the early 2000s and 2016.[75]

Residents were offered comprehensive relocation packages, including compensation for lost property, assistance in finding new homes, and infrastructure investments in the receiving communities.76 While some initial resistance emerged, ongoing engagement and transparent planning processes helped build public trust and minimize disruption. The program respected property rights under Article 17 of the Universal Declaration of Human Rights and demonstrated how planned relocation can be integrated into national climate adaptation strategies while ensuring that affected populations are fairly compensated and supported.

Wharf in the new Walande site on mainland Malaita Province, Solomon Islands.

5.3 PUBLIC PARTICIPATION, INTEGRATION, AND COMMUNITY DECISION MAKING

People being relocated are often resettled into existing towns or cities where infrastructure and populations are already in place. This integration can impact both the receiving and incoming communities' cultural practices, social networks, and well-being and presents unique challenges for social cohesion, resource distribution, and cultural preservation. Even where relocation occurs within the same jurisdiction or across short distances, social integration issues can impact people's willingness to participate in civic life as well as remain in the resettlement location long-term.[77] Understanding these dynamics is crucial for designing relocation policies that help both relocated and host communities achieve equitable and sustainable adaptation outcomes.

Establishing appropriate communal venues and spaces for cultural and social activities—such as multipurpose community centers, places of religious worship, and shared green spaces—can help to foster cohesion between newcomers and existing residents.[78] In the absence of these supportive measures, efforts to promote integration may fall short, jeopardizing the long-term effectiveness and sustainability of planned relocation as a strategy for climate adaptation.[79] To mitigate tensions, many experts emphasize the need for a long-term, inclusive, and participatory process that engages both the relocating and host communities, ideally before any formal relocation decisions are made.[80]

5.4 POLICY IMPLEMENTATION AND ENFORCEMENT MECHANISMS

While a growing number of national and regional governments have recognized the need for planned relocation, existing policy frameworks remain uneven in implementation and enforcement. The contrast between comprehensive guidelines and the limited follow-through on operationalization underscores a critical gap between policy ambition and practical outcomes.

For example, the Solomon Islands' Planned Relocation Guidelines, adopted in 2022, outline key cross-cutting issues to address before, during, and after relocation, including shelter; health, nutrition, and psychosocial well-being; education; agriculture, food security, and livelihoods; traditional knowledge and customs; and infrastructure and connectivity.[81] However, a 2025 report by Human Rights Watch found that the policy has yet to be fully implemented or operationalized to support community-led relocation.[82] The report noted that members of the Walande community, one of the most threatened by coastal disasters, designed, financed, and executed its planned relocation largely without government or international support.

For relocation efforts to be effective and just, policies must move beyond aspirational language to include mechanisms to ensure implementation and enforcement. Only then can relocation frameworks truly provide equitable protection for vulnerable populations.

5.5 MULTILATERAL COOPERATION

Multilateral frameworks enable countries and institutions to pool financial, technical, and operational resources, enhancing the overall effectiveness of planned relocation and climate adaptation initiatives. By aligning efforts across governments, international organizations, and development agencies, multilateral cooperation reduces duplication, strengthens institutional capacity, and accelerates implementation timelines. Crucially, multilateral frameworks provide smaller or resource-constrained countries access to funding, expertise, and policy tools that would be difficult for them to secure independently. They also facilitate knowledge sharing and policy harmonization across borders, which is critical for addressing transboundary climate impacts. For policymakers, investing in and supporting multilateral partnerships ensures that relocation planning is not only better resourced but also more inclusive, coordinated, and sustainable.

However, the effectiveness of these frameworks ultimately depends on strong political will, consistent implementation, and meaningful participation of affected communities.

For example, the Australia-Tuvalu Falepili Union Treaty is a regionally situated bilateral relocation framework that provides a pathway for Tuvaluans to obtain Australian permanent residency and citizenship. This first-of-its-kind agreement was designed to strengthen bilateral ties by promoting regional security, climate resilience, and human mobility with dignity.[83] The treaty establishes a special "climate visa" for citizens of Tuvalu, which faces severe threats from rising seas, with major population centers such as Funafuti sitting just feet above sea level.[84] Since opening in June 2025, the visa lottery has received applications from nearly half of Tuvalu's population of 10,000. In addition to the visa program, Australia is investing millions in Tuvalu's coastal adaptation efforts, including land reclamation projects around Funafuti aimed at protecting the country's habitability.

However, the treaty has drawn criticism for its lack of meaningful consultation with Tuvaluan communities, raising concerns about the democratic process and national sovereignty.[85] Critics argue that it frames relocation as the default response to climate change, undermining Tuvaluans' expressed desire to adapt in place. This risks normalizing migration as the primary or inevitable response to climate change in small island developing states, potentially eroding international commitments to climate justice. Partnerships like this one can offer tailored support and focused commitments but also raise concerns when they bypass inclusive processes or reinforce asymmetrical power dynamics. Without strong commitments to cultural preservation, land rights, and community-led adaptation, the Australia-Tuvalu treaty may fall short of delivering true climate justice.

Australian Foreign Minister Penny Wong and Tuvalu Foreign Minister Paulson signing the Falepili Union explanatory memorandum in May 2024.

6. RECOMMENDATIONS FOR ADVANCING U.S. PLANNED RELOCATION POLICY

As climate-related hazards intensify, the United States must move beyond ad hoc disaster recovery and invest in proactive, equitable strategies for planned relocation. Despite growing awareness of the risks and realities of climate-induced displacement, the federal policy landscape remains fragmented and underprepared to support long-term, community-driven relocation efforts. Addressing this policy gap is a matter not only of climate resilience but of environmental justice and sustainable development. Drawing on international policies, we offer the following recommendations.

6.1 USE A HUMAN RIGHTS FRAMEWORK

Planned relocation must be guided by a robust human rights framework to ensure that the dignity, agency, and well-being of affected communities and disenfranchised groups are fully respected. International human rights instruments, such as the Universal Declaration of Human Rights (UDHR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), the International Covenant on Civil and Political Rights, and the Guiding Principles on Internal Displacement, provide a legal and moral foundation for establishing just and equitable relocation standards.[86] Embedding human rights principles into relocation governance not only protects affected populations but also strengthens trust, accountability, and long-term resilience in the face of escalating climate risks.

6.2 ENSURE COMMUNITY CONSENT AND AGENCY

Planned relocation must be grounded in the protection of individual and collective rights, particularly the right to free, prior, and informed consent and the ability of communities to maintain meaningful agency over their futures. Consent is not merely a procedural step; it is a fundamental human right that reflects the autonomy, freedom, and self-determination of affected populations.[87] Upholding consent and community agency in planned relocation supports dignity, autonomy, and sustainable futures. Relocation planners and policymakers should understand consent as an ongoing, iterative process ensuring that communities have access to clear information, viable alternatives, and the time and resources needed to make decisions aligned with their values, cultural ties, and long-term well-being.

6.3 PROTECT PROPERTY RIGHTS AND PROVIDE FAIR COMPENSATION

Respect for property rights and the provision of fair compensation are foundational to ethical and effective planned relocation. When households are asked to move to reduce climate risk, they should not be forced to absorb the financial and social costs. Fair compensation must extend beyond the market value of a structure to account for land, livelihoods, cultural attachments, and the costs of reestablishing homes and social networks elsewhere. Transparent and participatory valuation processes that help affected residents understand how compensation is calculated and what options are available to them are especially critical, as they help build trust and reduce conflict. Relocation programs must provide comprehensive support, including housing replacement, moving assistance, income stabilization, and access to services, that reflects the full economic and social costs of relocation. When property rights and compensation are treated as central pillars rather than afterthoughts, planned relocation is more likely to support durable recovery, social stability, and equitable outcomes.

CYCLONE-AFFECTED COMMUNITIES IN BANGLADESH'S CHAR AREAS

In Bangladesh, low-lying "char" islands in the Ganges-Brahmaputra Delta are highly vulnerable to cyclones, river erosion, and flooding—hazards that are intensifying with climate change. The government and international nongovernmental organizations have supported relocation and resettlement efforts for displaced populations, such as those relocated from Bhola Island following repeated cyclones.[88] Some families were moved to government-allocated lands with access to cyclone shelters, potable water, and livelihood support, including vocational training and agricultural inputs.

However, while these efforts made progress in addressing immediate physical vulnerabilities, gaps in long-term housing security, education access, and health-care services have underscored the importance of fully integrating human rights protections.[89] The example highlights both the potential and the challenges of realizing Articles 22–26 of the UDHR and the ICESCR. It also reinforces the idea that planned relocation must go beyond physical safety to ensure a holistic standard of living in line with international obligations.

6.4 COORDINATE ACROSS LEVELS OF GOVERNMENT

Subnational efforts on planned relocation led by states, Tribes, and municipalities are essential, but without coordination and sustained investment at the federal level, these efforts risk remaining fragmented and insufficient to address the growing scale of displacement nationwide. A proactive, multilevel approach to planned relocation must recognize practical constraints such as political volatility, limited administrative capacity, and fragmented governance systems. Addressing these challenges requires stronger coordination across all levels of government.[90]

States, regions, and municipalities can play a critical role by developing interoperable policies, shared planning standards, and regional compacts that better align housing, land use, disaster recovery, and infrastructure decisions. Multilevel governance structures create opportunities for experimentation and learning, enabling subnational governments to pilot relocation frameworks that integrate equity, community participation, and long-term risk reduction. Policymakers should invest in mechanisms, such as data-sharing platforms, technical assistance hubs, and intergovernmental partnerships, that support coordination to facilitate collaboration across jurisdictions. Over time, these efforts can build the evidence base, best practices, and institutional capacity needed to support a more cohesive national approach to planned relocation.

In particular, the United States can strengthen interjurisdictional collaboration by leveraging regional planning bodies to manage climate impacts that cross administrative boundaries. These entities are well positioned to allocate resources according to regional needs, especially in areas with diverse social and ecological risks. The federal government could further support this work by authorizing new governance structures that clarify roles, responsibilities, and accountability across jurisdictions, improving coordination and effectiveness in managing planned relocation.[91]

6.5 DIVERSIFY AND STREAMLINE FUNDING SOURCES

Social safety net programs that support housing, health care, and energy access do not adequately integrate climate considerations. This gap is evident, for instance, in disruptions to Medicaid, the Supplemental Nutrition Assistance Program, and housing assistance following interstate moves due to forced displacement.[92] There is also a growing need to expand programs to address climate-related risks such as extreme heat exposure, for instance, through Low Income Home Energy Assistance Program cooling assistance and the use of Medicaid waivers for air conditioners and air purifiers. [93] Closing this gap will require both new federal funding mechanisms and more flexible, climate-responsive uses of existing programs. Anticipatory policies that account for mobility, health protection, and economic stability must be developed alongside place-based adaptation strategies.

Federal policy should complement competitive grants with funding mechanisms that allocate resources on the basis of risk, exposure, and unmet need rather than competition. Developing clear, risk-based protocols for funding eligibility, grounded in climate projections, hazard exposure, and social vulnerability, would allow communities to access support automatically when thresholds are met. Embedding these principles in federal resilience finance would reduce bureaucratic burdens, improve equity, and ensure that the communities most at risk are not the last to receive support.

Nontraditional financing mechanisms such as wetland mitigation banks, transfer of development rights (TDR) programs, and utility fees may also be used for planned relocation. Wetland mitigation banking, through which wetlands are restored to compensate for wetland development impacts at another location, may be helpful for local governments seeking to preserve bought-out land.[94] TDR programs can provide funding to communities that are receiving displaced populations, as development rights can be transferred from the "sending" communities to the receiving ones.

A neighborhood is engulfed in floodwater on December 16, 2025 in Pacific, Washington. Mass flooding along the Pacific Northwest caused historic flooding, tens of thousands of evacuations, and dozens of Coast Guard rescues.

In Washington State, King County has a TDR program that has permanently conserved 144,290 acres of designated conservation land while shifting development potential equivalent to approximately 2,400 residential units to designated growth areas.[95] One unique financing mechanism is the creation of a utility fee by which residents subsidize a buyout program. This approach was also used by the city of Charlotte, North Carolina, which created a stormwater services utility fee along with Mecklenburg County and a few surrounding towns.[96] A portion of the revenue generated was subsequently used to buy out city homeowners whose residences were at risk for flooding, and the rest was directed toward floodwater infrastructure and stormwater management programs.

6.6 ENSURE RESILIENT HOUSING, INFRASTRUCTURE, AND LAND USE

Relocated communities must have access to culturally appropriate housing, sustainable public services, and resilient infrastructure to preserve and ideally improve their well-being and standard of living. Housing and infrastructure should adhere to updated standards that take into account climate impacts and rely on accurate climate risk data.[97] Creating resilient housing and infrastructure will mean building in margins of safety to make new communities more able to withstand climate disasters, supported by robust and equitable policies.[98]

Land-use regulation reforms in climate-vulnerable regions must take planned relocation into account by requiring a more community-forward use of land in relocated areas. For example, these regions could implement a community land trust that holds land for the community's benefit and stewards land sustainably for relocated persons, helping to design affordable housing options and aiding in the relocation process.[99]

Local governments should move to prioritize policies supporting multifamily housing, which will allow relocated residents to be more effectively integrated into existing communities. Local governments could also consider changing zoning practices that ultimately drive the need for planned relocation, particularly for flood-prone communities.

6.7 PRIORITIZE MARGINALIZED GROUPS

Ensuring equitable planned relocation processes requires proactive engagement with marginalized communities. Accordingly, the United States must establish federal guidelines that help to identify areas at high risk for planned relocation, particularly those that are also economically marginalized. These guidelines should also determine household eligibility for relocation assistance, considering housing status, income, climate risk, social vulnerability, and other demographic factors, and create incentives for eligible households to relocate. This would allow relocation efforts to then prioritize vulnerable populations, promote equitable access to resources, and incorporate community input.

Successful relocation requires long-term livelihood planning and economic development. Relocation policies should incorporate job training programs, local business development, and workforce integration. Such approaches will be especially critical in low-income and rural areas, where climate vulnerability often overlaps with economic marginalization.

Addressing the climate mobility needs of Tribal Nations demands a systemic transformation in how federal agencies engage with Indigenous communities. Any future relocation strategy must be rooted in Tribal leadership, sustained funding, legal clarity, and institutional accountability. The path forward must be grounded in meaningful partnership with Tribal Nations, not merely consultation.

QUINAULT INDIAN NATION RETREATS TO HIGHER GROUND IN WASHINGTON STATE

Since 2012, the Quinault Indian Nation (QIN) has been proactively planning for the relocation of two villages, the Village of Taholah and Queets, located on Washington State's Pacific coast.[100] The goals of the relocation are to address the escalating threats posed by climate change, including sea-level rise, storm surges, and the potential for tsunamis.

As a federally recognized Tribe, the Quinault Indian Nation is better positioned to access state and federal grant funding than the Isle de Jean Charles band of the Biloxi Chitimacha-Choctaw of Muskogees Tribe (discussed in an earlier text box). In 2022, the QIN received $25 million from the Biden administration as part of a new voluntary community-driven relocation program aimed at assisting Tribal communities severely impacted by climate-related environmental threats.[101] The Tribe received an additional $13 million in matching funds from the Washington State Climate Commitment Act to further support the relocation from Taholah and Queets.[102]

Taholah: Once complete, the relocation will move approximately 660 people (including 100 Tribal elders and 150 school-age children) from the lower village of Taholah to higher ground, approximately one-half mile from the existing village center.[103] This new site is being developed with climate-resilient infrastructure, including the Generations Building, which houses child-care and senior services and has been designated as a potential tsunami evacuation shelter. Phase I infrastructure for the Taholah relocation was completed in 2023, and phase 2 planning and housing construction at the relocation site are ongoing.[104]

Queets: In 2018, planning and stakeholder engagement began with the development of a community-informed relocation vision document. Engineering and master-planning for the Queets Relocation Master Plan are currently underway.[105]

© Courtesy Quinault Indian Nation Division of Natural Resources

New streets, away from rising seas and tsunamis, await housing construction in the Quinault Reservation village of Taholah in November 2023.

7. CONCLUSION: PLANNED RELOCATION AS A PATHWAY TO EQUITY AND TRANSFORMATION

As climate risks intensify, the United States must move beyond fragmented, disaster-driven responses and adopt a proactive national strategy for planned relocation. International examples offer valuable lessons: Strong institutional frameworks, human rights–based policies, and inclusive, multilateral coordination can help close the gap between intention and implementation. Yet, without multilevel governance and sustained funding, even the best-designed guidelines may fall short.

A comprehensive national framework is urgently needed to guide strategic relocation efforts, coordinate across levels of government, and ensure sustained funding and accountability. Financial incentives and compensation must go beyond covering property value to reflect the full costs of relocation, including moving expenses, lost livelihoods, and the loss of cultural and social ties.[106] To avoid reproducing or exacerbating existing vulnerabilities, planned relocation should also be integrated into existing land use, infrastructure development, and climate action plans to address the root causes of social and physical risks. Without federal coordination, subnational efforts by states, Tribes, and municipalities will remain fragmented and insufficient to meet the scale of climate-induced displacement.

When designed and implemented effectively, planned relocation can catalyze the creation of more just and resilient systems of governance, infrastructure, and community belonging that are responsive not only to present vulnerabilities but to future climate realities. For historically marginalized communities, planned relocation is not merely a technical solution—it is an opportunity to strengthen community agency, support more just and resilient futures, and confront entrenched legacies of disinvestment and environmental injustice.[107] Achieving this vision demands that we center the voices, leadership, and lived knowledge of affected communities, particularly Indigenous Peoples, Tribal Nations, and other frontline groups. We must align relocation efforts with broader commitments to decolonization, economic self-determination, and ecological restoration. Only by doing so can we transform climate-induced displacement into a pathway toward collective resilience, dignity, and justice.

APPENDIX 1: GLOBAL REVIEW METHODOLOGY

We conducted a systematic review and verification of global planned relocation cases to situate U.S. practices within broader international experience and policy trends. The analysis built on and updated existing global databases of planned relocation, with particular attention to identifying community-scale, climate-related cases and examining how relocation has been planned, implemented, and governed across different contexts.[108]

The review followed a structured and transparent methodology informed by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework.[109] Literature searches were conducted across major academic and policy databases, including Web of Science, JSTOR, and Google Scholar, as well as selected gray literature sources. Search terms combined concepts related to community relocation, managed retreat, and climate- or disaster-related hazards, to capture a wide range of relevant case studies. We limited searches to materials published between 2020 and 2025 in order to update prior reviews, while also drawing on earlier, foundational cases documented in the literature.

Sources were screened in multiple stages. Titles and abstracts were first reviewed to assess relevance, followed by full-text screening against predefined inclusion and exclusion criteria. To be included, sources had to describe empirical case studies involving the collective relocation of people—rather than solely infrastructure or assets—in response to current or anticipated climate-related hazards such as flooding, storms, sea level rise, coastal erosion, drought, wildfire, or landslides. The analysis focused on community-scale relocations involving multiple households and excluded development-driven resettlement, geological hazards, individual household moves, and unassisted migration.

For each included case, detailed information was systematically recorded and coded using a standardized codebook. Variables captured included location, hazard type, scale of relocation, year of initiation, number of people or households affected, implementing actors, relocation typology (e.g., buyouts, community-led relocation, institution-facilitated planned relocation), and reported outcomes. A key step in the coding process involved distinguishing planned relocation from forced displacement and migration, given the important legal, ethical, and governance differences among these forms of climate mobility.

To strengthen the reliability of the dataset, a second round of verification and database cleanup was conducted. This phase included targeted supplementary searches in regions known to have relocation experience that may have been underrepresented in initial searches, such as the United States, China, parts of Africa, South America, and Oceania. During verification, key variables—including project status, dates, geographic details, and approximate numbers of relocatees—were cross-checked against additional sources. Where information could not be confirmed, data gaps were explicitly noted.

This methodology supports a robust, comparable, and policy-relevant analysis of planned relocation practices. While recognizing limitations in data availability and reporting consistency across regions, the approach provides an empirical foundation for assessing trends, identifying governance gaps, and drawing lessons applicable to the development of a more just, proactive, and community-centered framework for planned relocation in the United States.

APPENDIX 2: CHANGING U.S. CLIMATE ADAPTATION POLICY AND IMPLICATIONS FOR PLANNED RELOCATION

Over the past four presidential administrations, U.S. climate adaptation policy has evolved significantly. Earlier federal approaches, particularly under the Obama and Biden administrations, reflected a growing recognition of rising climate risks, with increased attention to managed retreat, voluntary buyouts, and community-based resilience planning. These administrations also made efforts to address the legal, financial, and governance challenges that often complicate relocation, such as property rights, funding restrictions, interagency coordination, and long-term land use controls.[110] However, gains have been uneven and politically challenging—and many of them have been reversed by the two Trump administrations. Moreover, past adaptation and relocation policies have highlighted the difficulty of working within the constraints of U.S. private property rights—which is something future policies will need to contend with as well.

In the following sections, we discuss how adaptation policy has shaped and been shaped by funding investments, scientific collaborations, buyout practices, and legal constraints over the past two decades. Understanding historical approaches to adaptation—especially in regard to U.S. private property law—is essential for evaluating the future of planned relocation and resilience planning in the United States.

FEDERAL CLIMATE ADAPTATION STRATEGIES AND PROGRAMS (2010–2015)

The early 2010s saw a growing recognition of climate change impacts, leading to foundational policies aimed at enhancing national resilience. In 2013, President Barack Obama issued Executive Order (E.O.) 13653, "Preparing the United States for the Impacts of Climate Change," which required federal agencies to develop adaptation plans that would systematically assess and address the climate vulnerability of their facilities, infrastructure, and mission-critical assets.[111] These plans supported targeted resilience investments and helped build climate literacy within the federal workforce by requiring staff to understand climate risks, incorporate scenario planning, and apply climate data in day-to-day decision making. (These foundations were further developed and scaled under E.O. 14008 in the Biden administration in 2021.[112]) Furthermore, the order strengthened interagency bodies and coordination mechanisms so that agencies could pursue more effective, efficient, and holistic approaches to climate science, policy development, and resource deployment. This collaborative structure underpinned key federal resilience tools and processes, including the creation and continual refinement of the U.S. Climate Resilience Toolkit and the evolution of a more robust, user-centric National Climate Assessment.[113] Together, these outputs translated complex climate information into accessible resources that were intended to support decision makers at federal, state, local, Tribal, and territorial levels.

Following this order, HUD developed the Rebuild by Design initiative in 2013 as part of the Hurricane Sandy Rebuilding Task Force.[114] Through a competitive design process, HUD awarded $930 million to six major initiatives across New York, New Jersey, and Connecticut. Unlike conventional infrastructure programs, Rebuild by Design emphasized co-production with affected residents, community-based organizations, and local governments. By prioritizing low-income and racially diverse communities, the initiative addressed not only physical flood risks but also the social vulnerabilities that shape communities' capacity to adapt, relocate, or remain safely in place.

HUD extended this model nationally through the National Disaster Resilience Competition (NDRC), which ran from 2014 to 2016, allocating nearly $1 billion in Community Development Block Grant–Disaster Recovery (CDBG-DR) funds to 13 finalist jurisdictions.[115] Many NDRC projects incorporated elements directly relevant to planned relocation, including voluntary buyouts, resettlement planning, elevated housing, and neighborhood redesign. However, according to a report published in 2022, there were several inequities in the CDBG-DR–funded flood resilience efforts that primarily impacted low-income and systemically marginalized residents, especially in New Jersey, Pennsylvania, Chicago, and Nashville–Davidson County, Tennessee. Challenges included funding gaps and delays, administrative burdens, added hurdles for renters and seniors, initial planning flaws, and predatory practices by developers who used high-pressure tactics to encourage low-income residents to sell their properties for below-market value, which accelerated gentrification.[116]

Nevertheless, other CDGR-DR–funded projects, such as LA SAFE in Louisiana, demonstrated how locally led planning processes can help communities evaluate when protection is feasible, when relocation may be necessary, and how relocation can be implemented in ways that preserve social networks, cultural ties, and livelihoods.[117]

Other initiatives on adaptation were strengthened by partnerships with applied climate science institutions, including the National Oceanic and Atmospheric Administration's (NOAA) Climate Adaptation Partnerships

(CAP/RISAs), the U.S. Geological Survey Climate Adaptation Science Centers, and the Sea Grant network.[118] These organizations provided downscaled climate projections, technical assistance, and sustained engagement. Together, Rebuild by Design and the NDRC offer a scalable federal model for integrating science, community leadership, and equity into resilience planning.

FOCUS ON HAZARD MITIGATION AND INFRASTRUCTURE RESILIENCE (2016–2020)

At the beginning of the first Trump presidency, the administration rolled back the federal climate framework implemented by the Obama administration. Interagency climate adaptation initiatives, including the Climate Adaptation Task Force, Interagency Working Group on Environmental Justice, and other collaborative efforts, were also disbanded.

In October 2018, Congress authorized FEMA's Building Resilient Infrastructure and Communities (BRIC) program, so long as it was framed using politically acceptable terms such as *resilience*, *hazard mitigation*, and *disaster preparedness*.[119] While not explicitly designated for climate adaptation funding, the BRIC program provided funding for public infrastructure projects that reduced risk from floods, wildfires, drought, and extreme heat. BRIC thus marked an important paradigm shift in U.S. policy, moving from reactive post-disaster recovery toward proactive community resilience. However, this window of opportunity closed under the second Trump administration, which adopted a more regressive posture toward climate governance and related federal programs.

INVESTMENTS IN CLIMATE ACTION AND ENVIRONMENTAL JUSTICE INITIATIVES (2021–2024)

In 2021, the Biden administration implemented a suite of policies aimed at enhancing the nation's resilience to climate change. In a complete reversal of Trump's priorities, President Biden formed the National Climate Task Force to combat the "climate crisis" through a coordinated, government-wide approach based on science.[120] Under the Bipartisan Infrastructure Law and the Inflation Reduction Act, the administration also directed historic investments to reduce greenhouse gas emissions and support the development of clean energy sources.[121] Furthermore, under the Biden administration, the nationally competitive Building Resilient Infrastructure and Communities grant program awarded more than $5 billion in federal funding to local and state governments and Tribal Nations to strengthen disaster preparedness, support climate resilience, and reduce future losses.[122]

Recognizing the disproportionate impact of climate change on marginalized communities, President Biden introduced environmental justice and equity as priorities in the fight against climate change. "Revitalizing Our Nation's Commitment to Environmental Justice" (E.O. 14096) and the earlier E.O. 14008 launched the Justice40 program, mandating that 40 percent of the benefits from federal climate investments flow to disadvantaged communities.[123]

Within three years of its launch, the Justice40 initiative had covered 518 programs across 16 federal agencies.[124] Importantly, all programs supported by the Justice40 initiative were required to engage in meaningful consultation with local community members to gather input on program decisions. However, many programs supported by Justice40 required competitive grant applications, and many underserved communities lacked the capacity and resources to submit successful applications. Although the program faced implementation challenges, Justice40 illustrates the opportunity for federal guidance and priorities to influence policy decisions and investments of state and local governments.[125]

In September 2023, the first National Climate Resilience Framework (NCRF) was published by the White House Office of Science and Technology Policy, signaling a major shift in how climate adaptation and resilience were conceptualized in the United States.[126] The framework promoted an all-hands-on-deck strategy that emphasized coordination across federal, state, Tribal, and local governments, alongside partnerships with philanthropic, nonprofit, academic, and private-sector actors. Importantly, it reframed resilience as a social and governance challenge, not just a technical one, by centering the lived experiences of communities facing repeated climate risks.

The NCRF explicitly recognized planned relocation as a legitimate and necessary component of climate resilience. It prioritized policies that provided sustained technical assistance, funding, and institutional support for community-driven relocation processes, including voluntary buyouts, resettlement planning, and long-term recovery. By emphasizing informed consent, local leadership, and culturally grounded decision making, the framework departed from past approaches that treated relocation as a reactive or emergency measure, instead positioning it as a proactive strategy to reduce long-term risk while preserving social networks and livelihoods.

This shift had important policy implications. By elevating community-driven processes, the NCRF created space for transitioning away from top-down, technocratic relocation models toward more equitable, bottom-up approaches rooted in justice and self-determination. It also established a foundation for evaluating and improving relocation policies over time through accountability, cross-sector collaboration, and iterative learning, helping to institutionalize planned relocation as an ethical, effective, and community-centered adaptation strategy.

WHERE WE ARE TODAY: THE SECOND TRUMP ADMINISTRATION (2025–PRESENT)

Since retaking office in January 2025, President Trump has made significant cuts to investments in climate adaptation and resilience planning. According to a *Carbon Brief* analysis, nearly 10 percent of global climate finance will be eliminated under the newest Trump budget cuts, particularly the freeze on U.S. foreign aid and dissolution of the U.S. Agency for International Development.[127] In terms of domestic funding support, the administration halted $20 billion in climate financing awarded by the Environmental Protection Agency under the Greenhouse Gas Reduction Fund, jeopardizing the construction of affordable and environmentally sustainable housing projects across the nation.[128]

The Department of Government Efficiency (DOGE) instituted sweeping cuts to the federal workforce as part of its Workforce Optimization Initiative.[129] Approximately 134,000 federal employees lost their positions during the first half of 2025, and roughly 144,000 more were approved for deferred resignation programs requiring them to leave federal service by the end of 2025, amounting to nearly 280,000 total workforce reductions either completed or authorized across federal agencies.[130] These reductions affected programs related to climate research, including initiatives at the Department of Energy, NOAA, the National Science Foundation, and the Department of Agriculture. These reductions will have significant implications for the nation's ability to address climate-induced displacement, migration, and planned relocation.

The Trump administration also canceled environmental justice–related funds and unwound more than 140 environmental regulations through executive actions; agency rule changes; and regulatory reviews on water, food, energy, climate, and health—significantly reshaping the U.S. environmental policy landscape.[131] The dismantling of adaptation and equity-focused initiatives, like Justice40, will likely greatly impact vulnerable communities' access to funding and resources to proactively manage climate relocation.

The Trump administration has also made significant reductions in federal disaster preparedness and recovery programs administered by FEMA. On April 4, 2025, the BRIC program was effectively dismantled.[132] This was part of a broader strategy to shift disaster preparedness responsibilities and infrastructure resilience to state and local governments, as outlined in the executive order "Achieving Efficiency Through State and Local Preparedness."[133]

ENDNOTES

1 Zachary Hirsch et al., "A Multi-Hazard Approach to Climate Migration: Testing the Intersection of Climate Hazards, Population Change, and Location Desirability from 2000 to 2020," *Climate* 12, no. 9 (2024), https://doi.org/10.3390/cli12090140.

2 Internal Displacement Monitoring Centre, *Global Report on Internal Displacement 2025*, accessed May 14, 2026, https://doi.org/10.55363/IDMC.XTGW2833.

3 Julie Maldonado, E. Marino, and L. Iaukea, "Reframing the Language of Retreat," Eos, November 10, 2020, https://eos.org/author/e-marino.

4 Idowu Ajibade, Meghan Sullivan, and Melissa Haeffner, "Why Climate Migration Is Not Managed Retreat: Six Justifications," *Global Environmental Change* 65 (November 2020): 102187, https://www.sciencedirect.com/science/article/pii/S0959378020307706.

5 Viviane Clement et al., *Groundswell Part 2: Acting on Internal Climate Migration* (World Bank, 2021).

6 Klaus Desmet et al., "Evaluating the Economic Cost of Coastal Flooding," *American Economic Journal: Macroeconomics* 13, no. 2 (2021): 444–86; https://www.aeaweb.org/articles?id=10.1257/mac.20180366; Barbara Neumann et al., "Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding—A Global Assessment," *PLOS One* 10, no. 3 (2015): e0118571, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118571.

7 Erica Bower and Elizabeth Ferris, "Planned Relocations and Durable Solutions: Learning from Parallel Conversations," Researching Internal Displacement, March 12, 2024, https://researchinginternaldisplacement.org/short_pieces/planned-relocations-and-durable-solutions-learning-from-parallel-conversations/.

8 International Organization for Migration (IOM), "Glossary on Migration," *International Migration Law* no. 34, 2019, https://publications.iom.int/books/international-migration-law-ndeg34-glossary-migration.

9 Idowu Jola Ajibade and A. R. Siders, *Global Views on Climate Relocation and Social Justice*, 1st ed. (Routledge, 2021).

10 Fengjue Huang et al., "Human Mobility Under Disasters: A Systematic Review and Framework for Equitable and Resilient Mobility Governance," *Natural Hazards* 2, article 99 (2025), https://doi.org/10.1038/s44304-025-00153-9.

11 NOAA National Centers for Environmental Information, "U.S. Billion-Dollar Weather and Climate Disasters," 2025, https://www.ncei.noaa.gov/access/billions/.

12 Ibid.

13 Matthew Hauer, Jason Evans, and Deepak Mishra, "Millions Projected to Be at Risk from Sea-Level Rise in the Continental United States. *Nature Climate Change* 6, (March 14, 2016): 691–95, https://doi.org/10.1038/nclimate2961.

14 Brookings Institution, "Planned Relocations, Disasters and Climate Change: Consolidating Good Practices and Preparing for the Future," March 14, 2014, https://www.brookings.edu/articles/planned-relocations-disasters-and-climate-change-consolidating-good-practices-and-preparing-for-the-future/.

15 United Nations High Commissioner for Refugees, "The 1951 Refugee Convention," accessed November 10, 2025, https://www.unhcr.org/about-unhcr/overview/1951-refugee-convention.

16 A citizen of the South Pacific island nation of Kiribati applied for refugee status as a "climate refugee" in New Zealand because he was in danger of losing his land due to sea level rise. Though his application was denied and he was repatriated, since he was not facing persecution or a particular threat to his life, the U.N. Covenant on Civil Liberties held in 2016 that those facing climate impacts that violate humans' right to life cannot be repatriated to their country of origin. This decision paved the way for the creation of policies that account for the rights of relocated peoples and climate refugees. For more, see Tetsuji Ida, "Climate Refugees—The World's Forgotten Victims," World Economic Forum, June 18, 2021, https://www.weforum.org/stories/2021/06/climate-refugees-the-world-s-forgotten-victims/. See also U.N. Human Rights Committee, *Ioane Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016 (September 23, 2020), https://digitallibrary.un.org/record/3979204/files/CCPR_C_127_D_2728_2016-EN.pdf.

17 *Cruz v. Garland*, 106 F.4th 141, 143 (2024), https://admin.climatecasechart.com/wp-content/uploads/case-documents/2024/20240701_docket-23-1910_opinion.pdf.

18 Ibid., at 143.

19 Ibid., at 146.

20 Ajibade and Siders, *Global Views*.

21 Z. R. M. Abdullah Kaiser, "Analysis of the Livelihood and Health of Internally Displaced Persons Due to Riverbank Erosion in Bangladesh," *Journal of Migration and Health* 7 (2023): 100157, https://www.sciencedirect.com/science/article/pii/S2666623523000077.

22 Shaye Palagi Bodine, Andrew Tracy, and Amy Javernick-Will, "Questioning the Effectiveness of Risk Reduction via Post-Disaster Relocation," *International Journal of Disaster Risk Reduction* 71 (March 2022): 102834, https://www.sciencedirect.com/science/article/abs/pii/S221242092200053X.

23 Lisa Thalheimer et al., "Prioritizing Involuntary Immobility in Climate Policy and Disaster Planning," *Nature Communications* 16, no. 1 (2025): 2581, https://www.nature.com/articles/s41467-025-57679-9.

24 Bodine, Tracy, and Javernick-Will, "Questioning the Effectiveness."

25 Linda Shi et al., "Equitable Buyouts? Learning from State, County, and Local Floodplain Management Programs," *Climatic Change* 174, article 29 (2022), https://doi.org/10.1007/s10584-022-03453-5.

26 Katharine J. Mach et al., "Managed Retreat Through Voluntary Buyouts of Flood-Prone Properties," *Science Advances* 5, no. 10 (October 9, 2019): eaax8995, https://pmc.ncbi.nlm.nih.gov/articles/PMC6785245/.

27 Alex Lubben et al., "Climate Relocation: Trapped in Harm's Way as Climate Disasters Mount," Center for Public Integrity, August 3, 2022, https://publicintegrity.org/environment/harms-way/disasters-mount-climate-relocation-assistance/.

28 Mach et al., "Managed Retreat Through Voluntary Buyouts."

29 Federal Emergency Management Agency, "Hazard Mitigation Planning," June 26, 2025, https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning; HUD Exchange, "Community Development Block Grant Disaster Recovery Funds," accessed November 10, 2025, https://www.hudexchange.info/programs/cdbg-dr; and National Climate Task Force Community-Driven Relocation Subcommittee, *Opportunities for Federal Support of Community-Driven Relocation*, December 2024, https://bidenwhitehouse.archives.gov/wp-content/uploads/2024/12/Opportunities-for-Federal-Support-of-Community-Driven-Relocation-vF.pdf.

30 A. R. Siders, "Social Justice Implications of US Managed Retreat Buyout Programs," *Climatic Change* 152, no. 2 (2019): 239–57, https://doi.org/10.1007/s10584-018-2272-5.

31 Katherine Lieberknecht and Elizabeth J. Mueller, "Planning for Equitable Climate Relocation: Gaps in Knowledge and a Proposal for Future Directions," *Journal of Planning Literature* 38, no. 2 (2023): 229–44, https://journals.sagepub.com/doi/abs/10.1177/08854122221147696; Shi et al., "Equitable Buyouts?"; U.S. Government Accountability Office, *"Flood Mitigation: Actions Needed to Improve Use of FEMA Property Acquisitions*," GAO-22-106037, 2022, https://www.gao.gov/products/gao-22-106037; and Mach et al., "Managed Retreat Through Voluntary Buyouts."

32 Robin Bronen, "Cllimigration: Creating a National Governance Framework for Climate-Forced Community Relocation," *New York University Review of Law and Social Change* 45, no. 4 (2021): 574, https://socialchangenyu.com/review/climigration-creating-a-national-governance-framework-for-climate-forced-community-relocation/; and Jonathan Boston, Architesh Panda, and Swenja Surminski, "Designing a Funding Framework for the Impacts of Slow-Onset Climate Change—Insights from Recent Experiences with Planned Relocation," *Current Opinion in Environmental Sustainability* 50 (June 2021): 159–68, https://www.sciencedirect.com/science/article/pii/S1877343521000555.

33 John A. Lovett, "Moving to Higher Ground: Protecting and Relocating Communities in Response to Climate Change," *Vermont Law Review* 42 (2017): 25–59; Linda Shi et al., "Integrating Social and Ecological Considerations in Floodplain Relocation and Restoration Programs," *Socio-Ecological Practice Research* 5, no. 3 (2023): 239–51, https://link.springer.com/article/10.1007/s42532-023-00152-y.

34 Shu-Mei Huang, "Heritage and Postdisaster Recovery: Indigenous Community Resilience," *Natural Hazards Review* 19, no. 4 (2018): 05018008, https://ascelibrary.org/doi/10.1061/%28ASCE%29NH.1527-6996.0000308.

35 Mumuni Abu et al., "Social Consequences of Planned Relocation in Response to Sea Level Rise: Impacts on Anxiety, Well-Being, and Perceived Safety," *Scientific Reports* 14, no. 1 (2024): 3461, https://www.nature.com/articles/s41598-024-53277-9; and Annah Piggott-McKellar, Jasmine Pearson, and Celia McMichael, "Life After Climate-Related Planned Relocation: A Review of Well-Being Outcomes," *Climate and Development* 7 (2025), 1–10, https://www.tandfonline.com/doi/full/10.1080/17565529.2025.2592262?mi=dh4mg7.

36 Nicholas Pinter, "The Lost History of Managed Retreat and Community Relocation in the United States," *Elementa: Science of the Anthropocene* 9, no. 1 (August 2021): 00036, https://online.ucpress.edu/elementa/article/9/1/00036/118392/The-lost-history-of-managed-retreat-and-community; and Ajibade, Sullivan, and Haeffner, "Why Climate Migration Is Not Managed Retreat."

37 R. H. Moss et al., "Planned Relocation: Pluralistic and Integrated Science and Governance," *Science* 372, no. 6548 (2021): 1276–79, https://www.science.org/doi/10.1126/science.abh3256.

38 New Jersey Department of Environmental Protection, "Blue Acres," accessed November 10, 2025, https://dep.nj.gov/blueacres/; and New Jersey Department of Environmental Protection, "Blue Acres Receives Record $24.7M Allocation Through State's Corporate Business Tax," February 27, 2025, https://dep.nj.gov/blueacres/blue-acres-receives-historic-24-7m-allocation-through-states-corporate-business-tax/.

39 Floodplains by Design, "About," December 3, 2025, https://floodplainsbydesign.org/about/.

40 In *Kelo v. City of New London* (2005), the Supreme Court interpreted public use to include any measure that furthers economic development. Under this definition, governmental takings of private property for environmental and climate adaptation reasons are valid; they could include relocation projects designed to protect the public from climate threats, which significantly hinder economic development. [*Kelo v. City of New London*, 545 U.S. 469 (2005) https://caselaw.findlaw.com/court/us-supreme-court/545/469.html. For more on takings and climate adaptation, see Mark Nevitt, "When Climate Change Forces Flight: Legal Duties in the Age of Retreat," *Iowa Law Review* 111, no. 3 (2026): 1065-1136, https://ilr.law.uiowa.edu/volume-111-issue-3/when-climate-change-forces-flight-legal-duties-age-retreat.

41 Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America* (Liveright Publishing, 2017); National Community Reinvestment Coalition, "The Injustice of Redlining," accessed April 10, 2026, https://ncrc.org/redlining.

42 Arianna Salazar-Miranda, Claire Conzelmann, Toàn Phan, and Jeremy S. Hoffman, "Long-term Effects of Redlining on Climate Risk Exposure," *Nature Cities* (2024), https://doi.org/10.1038/s44284-024-00076-y. Leah Schinasi et al., "Associations Between Historical Redlining and Present-Day Heat Vulnerability Housing and Land Cover Characteristics in Philadelphia, PA," *Journal of Urban Health*, no. 99 (2022): https://link.springer.com/article/10.1007/s11524-021-00602-6 ; and Robert D. Bullard, "Race and Environmental Justice in the United States," *Yale Journal of International Law* 18 (1993): 319–35, https://openyls.law.yale.edu/server/api/core/bitstreams/66394f35-3725-4303-b3fb-c2eb37ab7050/content.

43 André M. Perry, Jonathan Rothwell, and David Harshbarger, "The Devaluation of Assets in Black Neighborhoods: The Case of Residential Property," Brookings Institution, November 27, 2018, https://www.brookings.edu/articles/devaluation-of-assets-in-black-neighborhoods/; Jacob W. Faber, "We Built This: Consequences of New Deal Era Intervention in America's Racial Geography," *American Sociological Review* 85, no. 5 (2020): 739–75, https://doi.org/10.1177/0003122420948464; and Carlos Avenancio-León and Troup Howard, "The Assessment Gap: Racial Inequalities in Property Taxation," *Quarterly Journal of Economics* 137, no. 3 (2022): 1383–1421, https://doi.org/10.1093/qje/qjac009.

44 Mark Scott et al., "Climate Disruption and Planning: Resistance or Retreat?," *Planning Theory & Practice* 21, no. 1 (2020): 125–54, https://www.tandfonline.com/doi/full/10.1080/14649357.2020.1704130.

45 U.S. Department of the Interior, "Biden-Harris Administration Makes $135 Million Commitment to Support Relocation of Tribal Communities Affected by Climate Change," press release, November 30, 2022, https://www.doi.gov/pressreleases/biden-harris-administration-makes-135-million-commitment-support-relocation-tribal.

46 Ajibade and Siders, *Global Views*.

47 Colette Mortreux and Jon Barnett, "Climate Change, Migration and Adaptation in Funafuti, Tuvalu," *Global Environmental Change* 19, no. 1 (February 2009): 105–12, https://www.sciencedirect.com/science/article/abs/pii/S0959378008000903; Celia McMichael et al., "Rising Seas, Immobilities, and Translocality in Small Island States: Case Studies from Fiji and Tuvalu," *Population and Environment* 43, no. 1 (2021): 82–107, https://link.springer.com/article/10.1007/s11111-021-00378-6; and Piggot-McKellar, Pearson, and McMichael, "Life After Climate-Related Planned Relocation."

48 Chuan-Zhong Deng, Hsiang-Chieh Lee, and Sue-Huei Chen, "The Impact of Relocation Patterns on Psychological Stress," *Psychological Science* 35, no. 6 (2024): 597–612, https://journals.sagepub.com/doi/10.1177/09567976241239915; and Huang, "Heritage and Postdisaster Recovery."

49 U.S. Government Accountability Office, "Flood Insurance: Participation of Indian Tribes in Federal and Private Programs," GAO-13-226, 2013, https://www.gao.gov/products/gao-13-226; and Congressional Research Service, "Tribal Disaster Risk and Selected Federal Resources," IF12460, updated May 2, 2025, https://www.congress.gov/crs-product/IF12460.

50 Evan C. Mix et al., "The Whole Community? Assessing FEMA's Inclusion of Tribal Governments in Hazard Mitigation Efforts," *PLOS Climate* 3, no. 8 (2024): e0000479, https://journals.plos.org/climate/article?id=10.1371/journal.pclm.0000479.

51 Associated Press, "FEMA Declares New Strategy to Engage Native American Tribes," August 18, 2022, https://www.wwnytv.com/2022/08/18/fema-declares-new-strategy-engage-native-american-tribes/.

52 National Climate Task Force Community-Driven Relocation Subcommittee, *Opportunities for Federal Support of Community-Driven Relocation*, December 2024, https://bidenwhitehouse.archives.gov/wp-content/uploads/2024/12/Opportunities-for-Federal-Support-of-Community-Driven-Relocation-vF.pdf.

53 Angela C. Jones, *Trump Administration Environmental-Justice-Related Executive Orders: Potential Implications for EPA Programs*, Congressional Research Service, 2025, no. IF12922, https://www.congress.gov/crs-product/IF12922. Even before the rollback, the funding provided under the CDR program was vastly inadequate relative to the scale of need. A 2020 Bureau of Indian Affairs report estimated that at least $5 billion would be necessary over the next 50 years to address the infrastructure needs associated with tribal relocation. That figure does not account for escalating climate risks, rising construction costs, or the full range of social, cultural, and environmental needs inherent in such efforts. The $175 million allocated by the federal government represented an important acknowledgment, but it barely scratched the surface. See Department of Interior, Tribal Climate Resilience Program, *The Unmet Infrastructure Needs of Tribal Communities and Alaska Native Villages in Process of Relocating to Higher Ground as a Result of Climate Change*, May 2020, https://www.bia.gov/sites/default/files/dup/assets/bia/ots/tcrp/Informational_Report.pdf.

54 Randall S. Abate and Aashini Choksi, "Coastal Migration with Dignity: Safeguards for Vulnerable Communities," *Environmental Law Reporter* 54 (September 2024): 10744, https://scholarship.law.gwu.edu/faculty_publications/1788/.

55 Taryn Bell, "Quinault Indian Nation Relocation, Managed Retreat, and Protect in Place Efforts," Climate Change Program, Institute for Tribal Environmental Professionals, Northern Arizona University, 2025, https://itep.nau.edu/tw7g/tribes/pacific-northwest/pn_quinault/.

56 Rick Bowmer and Mark Thiessen, "Climate Change Destroyed an Alaska Village. Its Residents Are Starting Over in a New Town," AP News, September 28, 2024, https://apnews.com/article/climate-change-permafrost-melting-alaska-newtok-relocation-moving-292694f057b75f75a9438c794853ee25.

57 Emily Schwing, "'All Public Services. . . Decommissioned and Shut Down': Newtok's End Is Imminent," Alaska Public Media, November 13, 2024, https://alaskapublic.org/news/2024-11-13/all-public-services-decommissioned-and-shut-down-newtoks-end-is-imminent.

58 Alaska Native Tribal Health Consortium, *The Unmet Needs of Environmentally Threatened Alaska Native Villages: Assessment and Recommendations*, 2024, https://anthc.org/wp-content/uploads/2025/04/Unmet_Needs_Report_22JAN24-1.pdf.

59 Jessica R. Z. Simms et al., "The Long Goodbye on a Disappearing, Ancestral Island: A Just Retreat from Isle de Jean Charles," *Journal of Environmental Studies and Sciences* 11, no. 3 (2021): 316–28, https://doi.org/10.1007/s13412-021-00682-5.

60 Isle de Jean Charles, Louisiana, "Tribal Resettlement," accessed November 10, 2025, http://www.isledejeancharles.com/our-resettlement.

61 Eva Tesfaye, "Former Isle de Jean Charles Residents Express Frustrations with Housing at Resettlement Site," Coastal Desk, WWNO, November 4, 2024, https://www.wwno.org/coastal-desk/2024-11-04/former-isle-de-jean-charles-residents-express-frustrations-with-housing-at-resettlement-site; and Will McGrew, "Jean Charles Choctaw Nation Challenges State Resettlement Plan in Legal Complaint to HUD," Coastal Desk, WWNO, December 23, 2023, https://www.wwno.org/coastal-desk/2023-12-23/jean-charles-choctaw-nation-challenges-state-resettlement-plan-in-legal-complaint-to-hud.

62 Julie Dermansky, "Leaving the Island: The Messy, Contentious Reality of Climate Relocation," Center for Public Integrity, August 17, 2019, https://publicintegrity.org/environment/harms-way/leaving-isle-de-jean-charles-climate-relocation/; Julie Dermansky, "The Isle de Jean Charles Resettlement Project: Relocating a Coastal Community Threatened by Climate Change," DeSmog, September 8, 2022, https://www.desmog.com/isle-de-jean-charles-resettlement-climate/; and Simms et al., "The Long Goodbye on a Disappearing, Ancestral Island."

63 EarthRights International, *Complaint Under Title VI of the Civil Rights Act of 1964 Against the Louisiana Division of Administration, Office of Community Development*, filed December 21, 2023, https://earthrights.org/wp-content/uploads/2023/12/IDJC-Resettlement-Title-VI-Complaint-for-website.pdf; and Dianna Hunt, "Louisiana Tribe Files Civil Rights Complaint over Relocation," ICT, January 19, 2024, https://ictnews.org/news/louisiana-tribe-files-civil-rights-complaint-over-relocation/.

64 Hunt, "Louisiana Tribe Files Civil Rights Complaint."

65 The formal national adaptation plan process under the United Nations Framework Convention on Climate Change is for least-developed countries and other developing nations to get support for planning adaptation to climate change. See Jesse M. Keenan, Idowu Ajibade, and Bethany C. Tietjen, "The State of Planning, Policy, and Justice for Human Mobility in National Adaptation Plans," *Earth System Governance* 25 (August 2025): 100266, https://www.sciencedirect.com/science/article/pii/S2589811625000321.

66 United Nations Office for the Coordination of Humanitarian Affairs, *Guiding Principles on Internal Displacement*, UN Doc. E/CN.4/1998/53/Add.2, 1998, https://www.unhcr.org/us/media/guiding-principles-internal-displacement; Platform on Disaster Displacement, "The Platform on Disaster Displacement," accessed December 18, 2025, https://disasterdisplacement.org/; and International Organization for Migration, "Global Compact for Safe, Orderly and Regular Migration," accessed December 18, 2025, https://www.iom.int/global-compact-migration.

67 Adelle Thomas and Moushumi Chaudhury, *Planned Relocation Policies and Practices: Lessons from Fiji, Bangladesh, and Peru*, NRDC, April 2026, https://www.nrdc.org/sites/default/files/2026-04/Planned_Relocation_R_26-04-A_04_locked.pdf.

68 Republic of Fiji, Ministry of Economy, *Planned Relocation Guidelines: A Framework to Undertake Climate Change Relate Relocation*, 2018, https://fijiclimatechangeportal.gov.fj/wp-content/uploads/2022/01/Planned-Relocation-Guidelines_Fiji.pdf; Republic of Fiji, Office of the Prime Minister, *Standard Operating Procedures for Planned Relocation in the Republic of Fiji*, 2023, https://www.giz.de/de/downloads/Fiji_SOP_Planned_Relocation_March2023_FINAL_web.pdf; and Republic of Fiji, Ministry of Economy, *Displacement Guidelines in the Context of Climate Change and Disasters*, 2019, https://fijiclimatechangeportal.gov.fj/ppss/displacement-guidelines-in-the-context-of-climate-change-and-disasters/.

69 Paulo Baleinakorodawa and Volker Boege, "Climate Change–Induced Community Relocation in Fiji: Challenges and Ways Forward," Toda Peace Institute, policy brief no. 192, June 4, 2024, https://toda.org/policy-briefs-and-resources/policy-briefs/report-192-full-text.html.

70 Annah E. Piggott-McKellar and Celia McMichael, "The Immobility-Relocation Continuum: Diverse Responses to Coastal Change in a Small Island State," *Environmental Science & Policy* 125 (November 2021): 105–15, https://www.sciencedirect.com/science/article/abs/pii/S1462901121002392.

71 Annah Piggott-McKellar and Karen Vella, "Lessons Learned and Policy Implications from Climate-Related Planned Relocation in Fiji and Australia," *Frontiers in Climate* 5 (March 2023): 1032547, https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2023.1032547/full.

72 Ibid.

73 Paula Gaviria Betancur, Elizabeth Ferris, and Atle Solberg, "When a Community Has to Relocate Because the Environmental Risk Is Simply Too Great," United Nations High Commissioner for Refugees, November 2025, https://www.unhcr.org/sites/default/files/2025-11/ipeg-commentary-planned-relocations.pdf.

74 Erica R. Bower et al., "Enabling Pathways for Sustainable Livelihoods in Planned Relocation," *Nature Climate Change* 13 (2023): 919–26; https://www.researchgate.net/publication/372683695_Enabling_pathways_for_sustainable_livelihoods_in_planned_relocation; Tomy Ncube and Una Murray, "Rethinking Planned Relocation as Social Protection in an Era of Increasing Climate Change Risks," Researching Internal Displacement, March 12, 2026, https://researchinginternaldisplacement.org/working-papers/rethinking-planned-relocation-as-social-protection-in-an-era-of-increasing-climate-change-risks/; Gabriela Nagle Alverio et al., "The Role of International Organizations in Equitable and Just Planned Relocation," *Journal of Environmental Studies and Sciences* 11, no. 3 (2021): 511–22, https://pmc.ncbi.nlm.nih.gov/articles/PMC8117123/; and Hari Mohan Mathur, "Resettlement Planning: Reversing Displacement Impacts of Development Projects," in H. Mathur, ed., *Assessing the Social Impact of Development Projects* (Springer, 2019).

75 Chloé ten Brink, "Returning Land to the River: Planned Relocation in the Netherlands," *Green European Journal*, June 12, 2024, https://www.greeneuropeanjournal.eu/land-to-the-river-planned-relocation-in-the-netherlands/; and Laura Quadros-Aniche and Robert Martinez Varderi, "Room for the River Waal in Nijmegen," Urban Climate Change Research Network, February 2026, https://doi.org/10.7916/fbk3-e544.

76 Ten Brink, "Returning Land to the River."

77 Lu Feng et al., "The Path of Social Integration of Migrants in Poverty Alleviation Relocation: A Case Study of Dongchuan from Yunnan Plateau Mountainous Areas," *Journal of Rural Studies* 110 (August 2024): 103381, https://www.sciencedirect.com/science/article/pii/S0743016724001852.

78 Patrick Daly et al., "Social Capital and Community Integration in Post-Disaster Relocation Settlements After the 2004 Indian Ocean Tsunami in Indonesia," *International Journal of Disaster Risk Reduction* 95 (September 2023): 103861, https://www.sciencedirect.com/science/article/pii/S2212420923003412.

79 Swenja Surminski and Ana Lopez, "Concept of Loss and Damage of Climate Change—A New Challenge for Climate Decision-Making? A Climate Science Perspective," *Climate and Development* 7, no. 3 (2015): 267–77, https://www.tandfonline.com/doi/full/10.1080/17565529.2014.934770.

80 Giovanna Gini et al., "Navigating Tensions in Climate Change-Related Planned Relocation," *Ambio* 53, no. 9 (2024): 1262–66, https://link.springer.com/article/10.1007/s13280-024-02035-2.

81 Solomon Islands Government, *Planned Relocation Guidelines 2022*, 2022, https://www.refworld.org/legal/decreees/natlegbod/2022/en/124338.

82 Erica Bower, *"There's Just No More Land": Community-Led Planned Relocation as Last-Resort Adaptation to Sea Level Rise in Solomon Islands*, Human Rights Watch, 2025, https://www.hrw.org/report/2025/03/17/theres-just-no-more-land/community-led-planned-relocation-last-resort-adaptation.

83 Australian Government, Department of Foreign Affairs and Trade, "Australia-Tuvalu Falepili Union Treaty," November 9, 2023, https://www.dfat.gov.au/geo/tuvalu/australia-tuvalu-falepili-union-treaty.

84 Max Bearak, "A Special 'Climate' Visa? People in Tuvalu Are Applying Fast," *New York Times*, June 28, 2025, https://www.nytimes.com/2025/06/27/climate/climate-visa-tuvalu.html.

85 Taukiei Kitara and Carol Farbotko, "This Is Not Climate Justice: The Australia-Tuvalu Falepili Union," Toda Peace Institute, November 13, 2023, https://toda.org/global-outlook/2023/this-is-not-climate-justice-the-australia-tuvalu-falepili-union.html.

86 Amnesty International, "Universal Declaration of Human Rights," accessed November 12, 2025, https://www.amnesty.org/en/what-we-do/universal-declaration-of-human-rights/. Under the International Covenant on Civil and Political Rights, 174 nations are legally bound and six are signatories but have not ratified: China (1998), Comoros (2008), Cuba (2008), Nauru (2001), Palau (2011), and Saint Lucia (2011). Under the International Covenant on Economic, Social and Cultural Rights, 173 states are legally bound by the terms of the covenant and 4 states are signatories but have not ratified: United States (1977), Comoros (2002), Cuba (2008), and Palau (2011).

87 United Nations, "Universal Declaration of Human Rights," accessed November 12, 2025, https://www.un.org/en/about-us/universal-declaration-of-human-rights.

88 Rafiqul Islam Montu, "Why Thousands Are Fleeing the River Islands of Bangladesh," IndiaSpend, August 6, 2022, https://www.indiaspend.com/climate-change/as-bangladeshs-river-islands-erode-people-struggle-for-a-stable-life-and-livelihood-829569.

89 Lieberknecht and Mueller, "Planning for Equitable Climate Relocation."

90 United Nations Department of Economic and Social Affairs, "Multilevel Governance for Climate Change Mitigation and Adaptation," policy brief no. 162, 2024, https://desapublications.un.org/policy-briefs/un-desa-policy-brief-no-162-multilevel-governance-climate-change-mitigation-and.

91 Frédéric Gouardères, "European Groupings of Territorial Cooperation (EGTCs)," European Parliament, Fact Sheets on the European Union, September 30, 2025, https://www.europarl.europa.eu/factsheets/en/sheet/94/european-groupings-of-territorial-cooperation-egtcs-.

92 U.S. Department of Agriculture Food and Nutrition Service, "Supplemental Nutrition Assistance Program (SNAP)," accessed December 18, 2025, https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program.

93 U.S. Department of Health and Human Services, Office of Community Services, "Low Income Home Energy Assistance Program (LIHEAP)," May 7, 2025, https://acf.gov/ocs/programs/liheap.

94 USDA Natural Resources Conservation Service, "Wetland Mitigation Banking Program (WMBP)," accessed November 12, 2025, https://www.nrcs.usda.gov/programs-initiatives/wetland-mitigation-banking-program.

95 Adaptation Clearinghouse, "Managing the Retreat from Rising Seas: King County, Washington Transfer of Development Rights Program," accessed April 10, 2026, https://www.adaptationclearinghouse.org/resources/managing-the-retreat-from-rising-seas-eo-king-county-washington-transfer-of-development-rights-program.html.

96 ULI Developing Urban Resilience, "Charlotte-Mecklenburg Floodplain Buyout Program," accessed November 12, 2025, https://developingresilience.uli.org/case/charlotte-mecklenburg-floodplain-buyout-program/.

97 Romany M. Webb et al., Climate Risk in the Electricity Sector: Legal Obligations to Advance Climate Resilience Planning by Electric Utilities (Sabin Center for Climate Change Law, Columbia Law School, 2020), https://scholarship.law.columbia.edu/sabin_climate_change/44.

98 Organisation for Economic Co-operation and Development (OECD), Infrastructure for a Climate-Resilient Future (Paris: OECD Publishing, 2024), https://doi.org/10.1787/a74a45b0-en.

99 Jessica Grannis, "Community Land = Community Resilience: How Community Land Trusts Can Support Urban Affordable Housing and Climate Initiatives," Adaptation Clearinghouse, January 2021, https://www.adaptationclearinghouse.org/resources/community-land-community-resilience-how-community-land-trusts-can-support-urban-affordable-housing-and-climate-initiatives.html.

100 Quinault Indian Nation, "Project Background," accessed November 12, 2025, https://www.quinaultindiannation.com/247/Project-Background.

101 KXRO News Radio, "Quinault Indian Nation to Receive $25 Million for Relocation Efforts," December 1, 2022, https://www.kxro.com/quinault-indian-nation-to-recieve-25-million-for-relocation-efforts/.

102 Washington State Department of Ecology, "Climate Commitment Act," accessed November 12, 2025, https://ecology.wa.gov/air-climate/climate-commitment-act.

103 Quinault Indian Nation, "Project Background."

104 Ibid.; Quinault Indian Nation, "Generations Building," accessed April 7, 2026, https://www.quinaultindiannation.com/242/Generations-Building; John Ryan, "Quinault Tribe Builds New Village Site Away from Rising Seas," KUOW Public Radio, December 4, 2023, https://www.kuow.org/stories/quinault-tribe-builds-new-village-site-away-from-rising-seas; and Dina Walters, "Quinault Indian Nation Engages in Multi-Year Effort to Move Village to Reduce Flood Risk," American Planning Association, November 12, 2025, https://w1.planning.org/blog/9321301/quinault-indian-nation-engages-in-multi-year-effort-to-move-village-to-reduce-flood-risk/.

105 Sachi Arakawa et al., "Queets Village Relocation Vision: A Community Vision for a Safe Future Queets," Portland State University, 2018, https://pdxscholar.library.pdx.edu/usp_murp/160; Quinault Indian Nation, *Queets Village Relocation Vision*, 2018, https://quinaulttribalcourt.org/DocumentCenter/View/329/Queets-Village-Relocation-Vision-Document-PDF; Red Plains Professional, Inc., "Quinault Nation On-Call Engineering and Planning Services," accessed April 7, 2026, https://red-plains.com/portfolio-2/project-one-ephnc-nz8zk-hk3zx-pazyx-zycg7-k7zxn (describing ongoing development of the Queets Village Relocation Phased Master Plan [2024–2025]); and Institute for Tribal Environmental Professionals, "Quinault Indian Nation: Relocation, Managed Retreat, and Protection in Place Efforts," accessed April 7, 2026, https://itep.nau.edu/tw7g/tribes/pacific-northwest/pn_quinault/.

106 Michael M. Cernea, "For a New Economics of Resettlement: A Sociological Critique of the Compensation Principle," *International Social Science Journal* 55, no. 175 (2003): 37–45, https://onlinelibrary.wiley.com/doi/10.1111/1468-2451.5501004; and Rebecca Witter and Terre Satterfield, "Invisible Losses and the Logics of Resettlement Compensation," *Conservation Biology* 28, no. 5 (October 2014): 1394–1402, https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/cobi.12283.

107 Ajibade and Siders, *Global Views*.

108 Idowu Jola Ajibade, Erica Bower, and Sanjula Weerasinghe, "A Systematic Review of Planned Relocation, Resettlement and Managed Retreat," *Global Environmental Change* 72 (2022): 102413, https://doi.org/10.1016/j.gloenvcha.2022.102413; and Erica Bower and Sanjula Weerasinghe, "Leaving Place, Restoring Home: Enhancing the Evidence Base on Planned Relocation Cases in the Context of Hazards, Disasters, and Climate Change," Platform on Disaster Displacement, UNSW, and Kaldor Centre for International Refugee Law, March 2021, https://environmentalmigration.iom.int/sites/g/files/tmzbdl1411/files/documents/pdd-leaving_place_restoring_home-2021-screen_compressed.pdf.

109 PRISMA Group, "The PRISMA Statement," accessed April 16, 2026, https://www.prisma-statement.org/.

110 A. R. Siders, "Managed Retreat in the United States," *One Earth* 1, no. 2 (October 2019): 216–25, https://www.sciencedirect.com/science/article/pii/S2590332219300806; Linda Shi and Susanne Moser, "Transformative Climate Adaptation in the United States: Trends and Prospects," *Science* 372, no. 6549 (2021): eabc8054, https://www.science.org/doi/10.1126/science.abc8054; and Nicole Lambrou and Anastasia Loukaitou-Sideris, "Resilience Plans in the US: An Evaluation," *Journal of Environmental Planning and Management* 65, no. 5 (2022): 809–32, https://doi.org/10.1080/09640568.2021.1904849.

111 White House, "Executive Order—Preparing the United States for the Impacts of Climate Change," press release, November 1, 2013, https://obamawhitehouse.archives.gov/the-press-office/2013/11/01/executive-order-prEPAring-united-states-impacts-climate-change.

112 White House, "Executive Order 14008—Tackling the Climate Crisis at Home and Abroad," Daily Compilation of Presidential Documents, January 27, 2021, https://www.govinfo.gov/content/pkg/DCPD-202100095/pdf/DCPD-202100095.pdf.

113 National Oceanic and Atmospheric Administration, "Climate Resilience Toolkit," accessed April 10, 2026, https://toolkit.climate.gov/.

114 Rebuild by Design, "Rebuild by Design," accessed November 10, 2025, https://rebuildbydesign.org/.

115 HUD Exchange, "National Disaster Resilience," accessed November 11, 2025, https://www.hudexchange.info/programs/cdbg-dr/resilient-recovery.

116 Rachel Bogardus Drew, *Evaluating Equity Efforts and Outcome of CDBG-DR Funded Flood Resilience Efforts in Four Communities*, U.S. Department of Housing and Urban Development, Office of Policy Development and Research, November 2022, https://www.huduser.gov/portal/sites/default/files/pdf/CDBG-DR-Study.pdf.

117 LA SAFE, *Louisiana's Strategic Adaptation for Future Environments: The Collective Search for Common Ground—An Evaluation*, 2019, https://locd.la.gov/programs/louisianas-strategic-adaptations-for-future-environments-la-safe.

118 NOAA Climate Program Office, "Climate Adaptation Partnerships Program," accessed December 18, 2025, https://cpo.noaa.gov/divisions-programs/climate-and-societal-interactions/cap-risa/; and U.S. Geological Survey, "Climate Adaptation Science Centers," December 9, 2025, https://www.usgs.gov/programs/climate-adaptation-science-centers.

119 Federal Emergency Management Agency, "Building Resilient Infrastructure and Communities," October 23, 2025, https://www.fema.gov/grants/mitigation/learn/building-resilient-infrastructure-communities.

120 President Biden begins E.O. 14008 with this statement: "The United States and the world face a profound climate crisis."

121 White House, *Guidebook to the Bipartisan Infrastructure Law*, last updated January 2024, https://bidenwhitehouse.archives.gov/build/guidebook/; and Arik Levinson et al., "The Inflation Reduction Act's Benefits and Costs," U.S. Department of the Treasury, March 1, 2025, https://home.treasury.gov/news/featured-stories/the-inflation-reduction-acts-benefits-and-costs.

122 White House, *Guidebook to the Bipartisan Infrastructure Law*; Levinson et al., "The Inflation Reduction Act's Benefits and Costs"; Congressional Research Service, "FEMA's Building Resilient Infrastructure and Communities (BRIC): Recent Developments," CRS Insight IN12609, April 9, 2026, https://www.congress.gov/crs-product/IN12609.

123 White House, "Justice40: A Whole-of-Government Initiative," accessed November 11, 2025, https://bidenwhitehouse.archives.gov/environmentaljustice/justice40/.

124 Margaret Walls, Sofia Hines, and Logan Ruggles, *Implementation of Justice40: Challenges, Opportunities, and a Status Update*, Resources for the Future, 2024, https://media.rff.org/documents/Report_24-01.pdf.

125 Ibid.

126 White House, *National Climate Resilience Framework*, September 2023, https://bidenwhitehouse.archives.gov/wp-content/uploads/2023/09/National-Climate-Resilience-Framework-FINAL.pdf.

127 Josh Gabbatiss, "Analysis: Nearly a Tenth of Global Climate Finance Threatened by Trump Aid Cuts," *Carbon Brief*, March 10, 2025, https://www.carbonbrief.org/analysis-nearly-a-tenth-of-global-climate-finance-threatened-by-trump-aid-cuts/; and Jennifer Kates, Anna Rouw, and Stephanie Oum, "U.S. Foreign Aid Freeze & Dissolution of USAID: Timeline of Events," KFF, October 24, 2025, https://www.kff.org/global-health-policy/u-s-foreign-aid-freeze-dissolution-of-usaid-timeline-of-events/.

128 U.S. Environmental Protection Agency, "Administrator Zeldin Terminates Biden-Harris $20B 'Gold Bar' Grants," press release, March 11, 2025, https://www.epa.gov/newsreleases/administrator-zeldin-terminates-biden-harris-20b-gold-bar-grants; Matthew Daly, "EPA Terminates Biden-Era Climate Grants Worth $20 Billion," Associated Press, March 12, 2025, https://apnews.com/article/epa-green-bank-zeldin-climate-trump-5168d11b7f63aeaf72001b50221c3c19; and Lara Heard, "EPA Terminates Already-Awarded Climate Funding," Shelterforce, March 14, 2025, updated March 9, 2026, https://shelterforce.org/2025/03/14/epa-terminates-already-awarded-climate-funding/.

129 On May 22, 2025, a federal judge issued a preliminary injunction blocking the executive order that mandated a reduction of the federal workforce. The injunction was upheld by the Ninth Circuit U.S. Court of Appeals on May 30, 2025. Some employees have been temporarily reinstated following these rulings.

130 U.S. Government Accountability Office, *Federal Agency Workforce Changes: Update for January to June 2025*, GAO-26-108719, February 24, 2026, https://www.gao.gov/assets/gao-26-108719.pdf.

131 Gabrielle Canon et al., "'A Ruthless Agenda': Charting 100 Days of Trump's Onslaught on the Environment," *The Guardian*, May 1, 2025, https://www.theguardian.com/us-news/2025/may/01/trump-100-days-climate-environment.

132 As of August 2025, a federal judge had temporarily halted the termination of the BRIC grant program. The ruling came after 20 states sued to stop the reallocation of funds, arguing that it would endanger communities and essentially undermine disaster preparedness efforts. See American Society of Civil Engineers, "FEMA Ends Building Resilient Infrastructure and Communities Program," April 24, 2025, https://infrastructurereportcard.org/fema-ends-bric-program/.

133 Executive Order No. 14239, "Achieving Efficiency Through State and Local Preparedness," 90 F.R. 13267 (2025), https://www.whitehouse.gov/presidential-actions/2025/03/achieving-efficiency-through-state-and-local-preparedness/.