

Climate Gentrification: Addressing Displacement
from Sea Level Rise

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ABSTRACT

Climate change poses an immediate threat to coastal communities, reshaping housing markets and exacerbating existing inequities. Sea level rise disproportionately affects marginalized populations who have long faced the brunt of environmental challenges. In the United States, discriminatory housing policies and environmental hazards already place low-income and minority communities at a higher risk for health issues such as asthma and cancer. As sea levels continue to rise, these communities face an additional challenge: displacement driven by climate-induced shifts in real estate markets—a phenomenon known as “climate gentrification.”

This Note examines climate gentrification with a focus on Miami-Dade County, a region struggling both with rising sea levels and housing insecurity. As flooding in beachfront areas has become increasingly common, flood-resistant neighborhoods have become increasingly desirable. An influx of developers and higher-income residents into those neighborhoods, many of which are home to low-income communities, has exacerbated housing insecurity for long-standing residents. Unfortunately, the situation unfolding in Miami will continue to unfold throughout the country as more communities begin to grapple with the impacts of climate change. The Note is structured in three parts: Part I explores the intersection of climate change and gentrification in metropolitan areas, using Miami as a case study. Part II reviews existing policies that aim to address sea level rise and housing insecurity. Part III proposes an integrated approach that aligns climate resilience and housing initiatives to better protect disadvantaged communities from displacement and to promote long-term sustainable housing. The Note underscores the need for policymakers to design strategies that mitigate the impacts of climate change, while safeguarding the housing stability of vulnerable populations, ensuring equitable outcomes in the face of rising sea levels.

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INTRODUCTION

Sea level rise poses an immediate threat to coastal communities. Warming oceans have caused rising tides and stronger storms, resulting in significant flooding in many of the United States’ coastal areas. Thus far, low-income and minority communities have disproportionately shouldered the burdens of environmental degradation. Discriminatory housing policies and development have placed sources of pollution and hazardous chemicals closer to these populations.¹ As a result,

1. Cheryl Katz & News Environmental Health, *People in Poor Neighborhoods Breathe More Hazardous Particles*, SCI. AM., <https://www.scientificamerican.com/article/people-poor-neighborhoods-breathe-more-hazardous-particles/> (last visited Dec. 9, 2022).

these groups are more likely to experience asthma, cancer, and heart disease from environmental sources.²

Now, sea level rise and flooding pose new environmental threats to marginalized groups. As sea levels continue to rise, many residents of low-elevation coastal areas abandon their homes and seek out higher-elevation neighborhoods. In many cases, these higher-elevation areas within cities are home to low-income communities of color, who disproportionately experience housing insecurity and may struggle to find housing as newcomers arrive. In addition, when governments invest in projects designed to increase flood resilience, they may drive up the area's property values. The process through which climate change drives development and displacement has been termed "climate gentrification."³

Due to its precarious coastal location and high levels of economic inequality, Miami-Dade County is "ground zero" for climate gentrification. The dangers and inconveniences of flooding, compounded by rising flood insurance costs, have changed the hierarchy of Miami's real estate market. Neighborhoods long inhabited by low-income and immigrant populations and neglected by investors now represent attractive locations for development.

Climate gentrification in cities like Miami poses complications for policymakers, who must balance the need to prevent the rapid displacement of disadvantaged populations with the need to encourage broader relocation away from coastal areas. In the short term, policymakers must protect residents who already inhabit the more desirable areas of coastal zones from being rapidly driven out by higher-income transplants. However, in the longer term, policymakers must recognize that these zones, too, including higher-elevation areas, will become uninhabitable in the not-too-distant future. Securing lower-income populations in their current neighborhoods will provide stability for now, but it is not a sustainable plan for future generations. In the coming years, inhabitants of these areas will disproportionately experience the costs and health risks of climate change. To balance these competing priorities, efforts to address the impacts of climate change must incorporate comprehensive affordable housing measures and the deployment of new sources of federal funds.

This Note discusses the impact of sea level rise on coastal housing markets and how it can lead to the rapid displacement of disadvantaged communities. Part I describes how climate change and gentrification collide in metropolitan areas to produce climate gentrification. Part II describes the existing policies in place to prepare for sea level rise and provide affordable housing. Part III proposes a new plan where climate and housing policies are interconnected and governments better target disadvantaged communities for sustainable housing initiatives. It also argues that given this interconnection, preexisting climate funds could be allocated toward the development of affordable housing.

2. *Id.*

3. Jesse M Keenan et al., *Climate Gentrification: From Theory to Empiricism in Miami-Dade County, Florida*, 13 ENVIRON. RES. LETT. 054001, 2 (2018).

I. CLIMATE GENTRIFICATION: THE INTERSECTION OF CLIMATE AND HOUSING POLICY

A. Background

1. Risks of Sea Level Rise

Rising tides as a result of climate change⁴ harm coastal communities in two main ways. First, they submerge stretches of coastal land, leading to land loss. Second, they intensify hurricanes and worsen storm surges.⁵ Flooding from rising tides, natural disasters, and storm surges is responsible for much of the damage coastal communities have incurred in recent years.

Rebuilding and recovery efforts from flooding in the United States cost an estimated \$32 billion each year.⁶ An estimated 311,000 homes valued at a combined \$117.5 billion are at risk of chronic tidal flooding over the next three decades.⁷ The problem is particularly severe for low-income residents, who often depend more heavily on federal emergency relief and lack the means to flee flood zones in emergencies. In coastal communities, the increasing prevalence of flooding has also influenced the desirability of neighborhoods.

2. Risks of Gentrification

Gentrification is the process through which wealthier individuals invest in or move to historically under-resourced and lower-income neighborhoods. Gentrification often affects the racial demographics of a neighborhood, as higher-income, generally white newcomers relocate to communities of color.⁸

The influx of resources into historically marginalized communities has wide-ranging effects. New investment can provide funding for education and services and restore dilapidated infrastructure.⁹ However, it often leads to the displacement and exclusion of an area's long-term residents. Displacement can occur when governments clear existing properties for new development,¹⁰ landlords

4. 2022 Sea Level Rise Technical Report, <https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html> (last visited Dec 9, 2022).

5. *How Climate Change Makes Hurricanes More Destructive*, ENV'T DEF. FUND, <https://www.edf.org/climate/how-climate-change-makes-hurricanes-more-destructive> (last visited Dec 9, 2022).

6. Oliver Wing, et al., *New Maps Show U.S. Flood Damage Rising 26 Percent in Next 30 Years*, SCI. AM. (Feb. 1 2022), <https://www.scientificamerican.com/article/new-maps-show-us-flood-damage-rising-26-percent-in-next-30-years/> (last visited Dec 9, 2022).

7. *2.5 Million Homes, Businesses Totaling \$1 Trillion Threatened by High Tide Flooding*, UNION OF CONCERNED SCIENTISTS (June 18, 2018), [https://www.ucsusa.org/about/news/25-million-homes-threatened-high-tide-flooding#:~:text=WASHINGTON%20\(June%2018%2C%202018\),the%20next%2030%20years%E2%80%94](https://www.ucsusa.org/about/news/25-million-homes-threatened-high-tide-flooding#:~:text=WASHINGTON%20(June%2018%2C%202018),the%20next%2030%20years%E2%80%94)

8. Jennifer B. Ayscue et al., *Gentrification's Impact on School Demographics*, BROOKINGS INST. (March 26, 2024), <https://www.brookings.edu/articles/gentrifications-impact-on-school-demographics-a-study-of-3-california-cities/#:~:text=Gentrification%20is%20also%20often%20accompanied,that%20were%20historically%20communities%20of>

9. See *Gentrification and Neighborhood Revitalization: What's the Difference?*, NAT'L LOW INCOME HOUS. COAL. (Apr. 05, 2019), <https://nlihc.org/resource/gentrification-and-neighborhood-revitalization-whats-difference>.

10. *Id.*

evict tenants to take advantage of increased real estate prices, and rising rents push out existing residents.¹¹ It can also occur indirectly, when landlords allow their properties to deteriorate while they wait for the ideal time to sell them for redevelopment.¹² Landlords may neglect maintenance, ignore service requests, or cut off utilities, resulting in “soft evictions” of their tenants and creating unsafe living conditions in the process.¹³ Together, these factors can push vulnerable populations into even lower income areas, where they may experience reduced community support, inferior schools, and lower earning potential.¹⁴ Even if investment brings benefits to the neighborhood itself, longstanding residents are driven from the neighborhood and thus unable to enjoy them.¹⁵ The Centers for Disease Control and Prevention identifies gentrification as a public health issue, citing its associations with food insecurity, increased stress and mental health problems, and higher rates of disease.¹⁶

Federal and local governments have struggled to address the needs and concerns of long-term residents in gentrifying neighborhoods.¹⁷ Policymakers must now contend with an additional concern—the influence of climate change on urban development. In coastal cities, rising sea levels are beginning to drive decisions about which neighborhoods are ripe for investment, and which are not.

3. Putting the Two Together: Climate Gentrification

The term “climate gentrification” was first coined in a 2018 study on Miami-Dade County.¹⁸ It set out a simple theory: that “climate change impacts arguably make some property more or less valuable by virtue of its capacity to accommodate a certain density of human settlement and its associated infrastructure.”¹⁹ Looking at Miami-Dade County, the study found that naturally occurring lower levels of exposure to climate change risks may make properties once considered inferior to be considered superior.²⁰ In turn, these environmentally sturdy areas become attractive for settlement and investment, driving up housing costs.²¹ This movement, driven by the relative exposure of different land, presents one form of climate gentrification.

11. *Id.*

12. *Id.*

13. What Are Gentrification and Displacement, URB. DISPLACEMENT PROJECT, <https://www.urbandisplacement.org/about/what-are-gentrification-and-displacement/> (last visited Dec 4, 2022).

14. *Id.*

15. See *Gentrification and Neighborhood Revitalization: What's the Difference?*, *supra* note 10.

16. HEALTH EFFECTS OF GENTRIFICATION, CTRS. FOR DISEASE CONTROL (Aug. 21, 2013), <http://medbox.iiab.me/modules/en-cdc/www.cdc.gov/healthyplaces/healthtopics/gentrification.htm>.

17. Justin Dorazio, *Localized Anti-Displacement Policies: Ways to Combat the Effects of Gentrification and Lack of Affordable Housing*, CTR. FOR AMER. PROGRESS (Sep. 26, 2022), <https://www.americanprogress.org/article/localized-anti-displacement-policies/>.

18. Keenan et al., *supra* note 4.

19. *Id.*

20. *Id.*

21. *Id.*

In addition to naturally occurring advantages, there are two other pathways by which climate gentrification occurs. First, public investments in climate resilient buildings and infrastructure can increase the value of the underlying property to the point where previous residents can no longer afford to live there.²² In some cases, climate resilience initiatives have helped to create healthy and unpolluted neighborhoods, only to see the marginalized communities who lived there forced out as those drawn to the neighborhood's sustainability move in.²³ Second, environmental conditions in an area may deteriorate so significantly that only wealthier households can afford the overall cost of living.²⁴ The costs of repairs, energy, or fortification, for example, may be prohibitive for lower-income households. In all three pathways, the ensuing patterns of gentrification and displacement are familiar, but climate change is the driver.

When climate gentrification occurs, displaced individuals face the same social and economic risks of typical gentrification. However, they also face risks related to environmental hazards. In rapidly gentrifying areas, displaced people may relocate to communities that are less expensive because they are less resilient to climate change, and more prone to flooding and pollution.²⁵ This in turn increases displaced populations' exposure to viruses, waterborne illnesses, and other forms of disease.²⁶ In addition, as evacuations become more frequent due to storms, low-income populations disproportionately endure crowded shelter conditions, which expose them to negative physical and mental health outcomes.²⁷

B. Miami: The Epicenter of Climate Gentrification

Miami, Florida represents the intersection of climate and housing issues. As a beachfront city and one of the country's least affordable metropolitan areas, Miami has become the epicenter of climate gentrification.

1. Climate Issues in Miami

Miami is one of the world's most at-risk cities for damage from coastal flooding and storms.²⁸ Over the last decade, the frequency of flooding in Miami has

22. *Id.* at 3.

23. Shelia Hu, *What is Climate Gentrification?*, NAT. RES. DEF. COUNCIL (Aug. 27, 2020), <https://www.nrdc.org/stories/what-climate-gentrification>.

24. Keenan et al., *supra* note 4 at 3.

25. South Florida PBS, *Is Climate Gentrification Happening in Miami?*, YOUTUBE (Jan. 6, 2020), <https://www.youtube.com/watch?v=sa55kMXxXCQ>.

26. *Climate Change and Health Equity*, U.S. DEP'T OF HEALTH AND HUM. SERVS. (May 6, 2022), <https://www.hhs.gov/climate-change-health-equity-environmental-justice/climate-change-health-equity/index.html>.

27. *See id.*

28. Zelalem Adefris, *Making the "Miami Forever Bond" a Model for Equitable Climate Adaptation*, URB. RESILIENCE PROJECT (Oct. 22, 2018), <https://urbanresilience.medium.com/making-the-miami-forever-bond-a-model-for-equitable-climate-adaptation-c4826b4b209c> (last visited Dec 8, 2022).

increased by 400%.²⁹ An estimated \$400 billion in assets are at risk in Miami, the highest value of any major coastal city.³⁰ By 2045, one-third of Miami Beach is expected to experience chronic flooding.³¹ By 2100, Miami may be gone entirely, decimated by hurricanes and rising sea levels.³² Even if the area remains above water, the adaptations necessary to make Miami inhabitable may prove prohibitively expensive, forcing residents to abandon the land entirely.³³

In Florida, nearly 490,000 people live on property that is lower than three feet above the ocean's high-water mark.³⁴ Miami, however, is particularly unstable because it sits atop porous limestone.³⁵ This means that in addition to tidal flooding, Miami floods from below.³⁶ The porous nature of Miami's land also threatens the city's drinking water and agriculture. The Biscayne aquifer, which supplies water to roughly 4.5 million people in Miami-Dade County, is at risk of saltwater contamination as sea water moves further inland and permeates the land.³⁷

In anticipation of these issues, the city of Miami has invested \$500 million to protect and reinforce buildings, roads, and water systems on Miami Beach.³⁸ Other initiatives in the city include the construction of sea walls, the restoration of wetlands and beaches, and the elevation of existing structures.³⁹ This attention to the imminent risk of flooding has also transformed the hierarchy of desirable housing in the city.

2. Housing Insecurity in Miami

Miami is a city known for its immigrant enclaves and distinctive neighborhoods. It is also, like many American cities, heavily divided by class and race.⁴⁰ In Miami, wealthier white communities have historically inhabited the city's beachfront areas while low-income and minority communities remained inland.⁴¹ In the early 20th century, restrictive covenants and exclusionary zoning confined

29. Daniel Raimi et al., *Florida Climate Outlook: Assessing Physical and Economic Impacts through 2040*, RES. FOR THE FUTURE (Jan 30., 2020), <https://www.rff.org/publications/reports/florida-climate-outlook/> (last visited Dec 3, 2022).

30. *Id.*

31. AJ+, *Sea Levels Are Rising In Miami, Turning Little Haiti Into Hot Property*, YOUTUBE (Jan. 7, 2020), <https://www.youtube.com/watch?v=gLnziDdYNQA>.

32. Simon Kuper, *The Future of Coastal Cities Looks Like Miami*, FIN. TIMES (Nov. 4, 2021), <https://www.ft.com/content/221c437a-c8a3-4928-8de7-c81354811263>.

33. Raimi et al., *supra* note 30.

34. *Id.*

35. Kuper, *supra* note 33.

36. *Id.*

37. Raimi et al., *supra* note 30.

38. *Id.*

39. *Id.*

40. See *Race and Ethnicity in Miami, Florida*, STAT. ATLAS, <https://statisticalatlas.com/place/Florida/Miami/Race-and-Ethnicity> (last visited Oct. 8, 2024) (showing racial composition by neighborhood).

41. See Mario Alejandro Ariza, *As Miami Keeps Building, Rising Seas Deepen Its Social Divide*, YALE ENV'T 360 (Sep. 29, 2020), <https://e360.yale.edu/features/as-miami-keeps-building-rising-seas-deepen-its-social-divide>.

Miami's black residents to a small area of land outside of downtown Miami.⁴² As the city grew, local officials often relocated black residents to neighborhoods further from downtown Miami, to clear the way for new development and infrastructure designed to benefit the city's white population.⁴³ Miami Beach, a low-elevation stretch of beachfront real estate, became the city's most desirable property, predominantly inhabited by white and wealthy residents.⁴⁴

Two large waves of immigration occurred in the second half of the 20th century. From 1959 to 1980, over 800,000 Cuban people immigrated to the United States, the majority settling in Miami.⁴⁵ In the late 1970s and early 1980s, nearly 60,000 Haitian immigrants arrived in Miami, as well, fleeing persecution and violence in their home country.⁴⁶ These groups concentrated in higher-elevation Miami neighborhoods now known as Little Havana and Little Haiti, respectively.

The racial and economic divides in Miami's geography, cemented in the 20th century, largely persist today. For the area's marginalized groups, affordable housing remains scarce.⁴⁷ In metropolitan Miami, white non-Hispanic households have a median net worth of \$107,000.⁴⁸ Cuban households, the second-wealthiest demographic, have a median net worth of only \$22,000.⁴⁹ Some of the city's predominantly black and low-income neighborhoods are located on the sites of housing projects that were constructed decades ago to prevent black residents from settling in downtown Miami.⁵⁰ These properties are now prime targets for developers. Already, Miami-Dade County has an estimated affordable housing shortage of 90,000 units.⁵¹

3. Changes in Property Values and Movement to Higher Ground

In a short span of time, climate change has upended the traditional approach to property valuation in the Miami area. After decades of focus on beachfront property, Miami's developers and homebuyers increasingly favor elevation.⁵² Miami Beach floods regularly, but for the time being, higher-elevation

42. Miami Housing Policy Timeline, UNIV. OF MIAMI: HOUS. SOL. LAB, <https://affordablehousing.miami.edu/housing-timeline/timeline/index.html> (last visited Dec 4, 2022).

43. *Id.*

44. Hu, *supra* note 24.

45. *Changing Neighborhoods*, UNIV. MIAMI, MIAMI HOUS. SOL. LAB, <https://affordablehousing.miami.edu/housing-timeline/change-neighborhoods/index.html#:~:text=Cuban%20Exodus%20%2D%201960&text=Between%201959%20and%201980%2C%20over,impact%20on%20Miami's%20residential%20patterns> (last visited Oct. 7, 2024).

46. *Id.*

47. Katherine Kallergis, 'Largest Affordability Crisis' in US: Miami-Dade is Short 90K Housing Units, MIAMI HOMES FOR ALL, <https://www.miamihomesforall.org/media/https://therealdeal.com/miami/2024/05/15/miami-dade-short-90k-affordable-units-amid-housing-crisis>.

48. Ariza, *supra* note 42.

49. *Id.*

50. *Public Housing and Urban Renewal*, MIAMI-DADE CNTY. OFF. OF HISTORIC PRES., <https://storymaps.arcgis.com/stories/330f6f29774746acba1f99fd49d4553a>.

51. Kallergis, *supra* note 48.

52. Hu, *supra* note 24.

neighborhoods do not.⁵³ This realization has sparked a frenzy of investment in the city's previously neglected neighborhoods. The Little Haiti neighborhood is one example. Situated 13 feet above sea level, Little Haiti is shielded from the worst effects of flooding and storms.⁵⁴ As a result, the property values in Little Haiti have skyrocketed. In 2012, the average price of a home in Little Haiti was \$99,600.⁵⁵ Only ten years later, it was \$548,000.⁵⁶ This spike contrasts with trends in the United States more broadly. Nationwide, the average price of a home in was \$292,200 in 2012 and \$540,000 in 2022.⁵⁷ In only a decade, housing prices in Little Haiti moved from significantly below the national average to above it.

Examination of current investment initiatives in Little Haiti provides insight into some of the drivers behind this rapid transition. Currently, Little Haiti is the site of Miami's largest-ever development project, a \$1 billion dollar mixed-used development titled "Magic City Innovation District." The development will span 17 acres and include high-rise residential units, hotel rooms, office space, and retail space.⁵⁸ Miami commissioners granted the project initial approval in 2019 and approved construction on the first building in 2021.⁵⁹

The Magic City development has been controversial from its inception. Advocates for the project argue that it will bring much-needed investment to a historically under-funded community.⁶⁰ Opponents warn that the project will contribute to a spiral of intense gentrification, displacing current residents into more economically and environmentally vulnerable areas.⁶¹ Current residents of Little Haiti have expressed concerns with rising rents, harassment from developers looking to buy their properties, and exclusion from the planning of Magic City.⁶²

The initial plan for Magic City contained requirements for the creation of affordable housing and the hiring of local residents.⁶³ However, by the time the city commission approved the project, those criteria were largely abandoned in

53. AJ+, *supra* note 32.

54. AJ+, *supra* note 32.

55. Kuper, *supra* note 33.

56. Little Haiti Home Values, ZILLOW, <https://www.zillow.com/home-values/269071/little-haiti-miami-fl/> (last visited Dec 5, 2022).

57. John Csiszar, *What an Average Home Cost in the Year You Were Born*, YAHOO FIN. (May 28, 2024), <https://finance.yahoo.com/news/average-home-cost-were-born-180001011.html>.

58. Jerry Iannelli, *New Report Warns Magic City Development Could Displace Thousands of Low-Income Residents*, MIAMI NEW TIMES (JUNE 21, 2019), <https://www.miaminewtimes.com/news/little-haiti-miami-activists-warn-magic-city-innovation-district-could-displace-thousands-11201465>.

59. John Robbins, *First Building in Vast Little Haiti Project Gets OK*, MIAMI TODAY (Nov. 30, 2021), <https://www.miamitodaynews.com/2021/11/30/first-building-in-vast-little-haiti-project-gets-ok/>.

60. *See id.*

61. Dieu-Nalio Chéry & Christina Morales, *Little Haiti Residents Fear Losing Their 'Home Away from Home'*, N.Y. TIMES (June 15, 2023), <https://www.nytimes.com/2023/06/12/realestate/little-haiti-miami.html>.

62. CBS NEWS, *Rising Tide: Priced Out In Miami, Full Documentary* (2020), https://www.youtube.com/watch?v=PB_sVUXg4Lc (last visited Dec 4, 2022).

63. Iannelli, *supra* note 59.

favor of a \$31 million donation to a fund for the residents of Little Haiti.⁶⁴ The fund is marked for the creation of affordable housing and the provision of services for local residents,⁶⁵ but critics argue that the process through which city commissioners agreed to the proposal was opaque.⁶⁶ They have also expressed concerns about the timeline of payments, noting that developers will make payments in installments over the course of the project's 16-year development phase.⁶⁷ Even if the full \$31 million were invested in affordable housing, residents argue that it would still fail to meet the urgent needs of Little Haiti's residents, over 40% of whom live below the poverty line.⁶⁸ The Magic City project demonstrates how Miami lacks the comprehensive initiatives and policies necessary to address climate gentrification.

Magic City is one of many large-scale development projects currently underway in Miami's higher-elevation and historically less expensive areas. As these areas collectively gentrify, the city's supply of affordable housing in more climate-protected areas shrinks. This phenomenon has affected housing options in several ways. Most immediately, rising rents, driven by investment and wealthier new arrivals, push out existing renters and small businesses.⁶⁹ Yet, mobile homeowners and landowners are also affected. Some projects, for example, sit on plots of land that have served as mobile homes parks, which are usually located at higher elevations.⁷⁰ Because residents of mobile home parks typically rent the land below their homes, they are especially vulnerable to displacement as rents increase for this newly desirable property. Miami mobile home park tenants report that, as their neighborhoods have gentrified, landlords have implemented steep rent hikes for their plots, beyond what they can afford.⁷¹ Other nearby mobile home parks are then increasingly difficult for the tenants find, as they, too, are purchased and developed by investors.

Even homeowners, who might otherwise be the beneficiaries of increased property values, have reported harassment and coercive tactics from developers.⁷²

64. *Id.*

65. *Magic City Innovation District – Little Haiti Presents Local Miami Leaders with \$3 Million Check for Little Haiti Revitalization Trust*, MAGIC CITY INNOVATION DIST. (July 12, 2021), <https://magiccitydistrict.com/press/magic-city-innovation-district-little-haiti-presents-local-miami-leaders-with-3-million-check-for-little-haiti-revitalization-trust/>.

66. *Is \$31M Deal Right for Little Haiti? Miami Commission Weighs Magic City Development*, THE HAITIAN TIMES (Mar. 28, 2019), <https://haitiantimes.com/2019/03/28/is-31m-deal-right-for-little-haiti-miami-commission-weighs-magic-city-development>.

67. *See id.*

68. *See id.*

69. *See Bill Weir, Miami's Little Haiti Wasn't a Target for Developers. Until the Seas Started to Rise*, CNN (July 12, 2019), <https://edition.cnn.com/2019/07/11/us/miami-little-haiti-climate-gentrification-weir-wxc/index.html>.

70. *Id.*

71. *Id.*

72. *See Daniel Chang, Little Haiti Residents, Businesses Say Developers Pricing Them Out of Neighborhood*, MIAMI HERALD (Dec. 3, 2015), <https://www.miamiherald.com/news/local/community/miami-dade/article47835450.html>.

Developers on the hunt for properties to purchase have approached homeowners with incentives to sell that can expose them to additional environmental threats.⁷³ One such incentive has been to offer temporary free rent in another area of the city.⁷⁴ However, these “free” accommodations frequently sit at lower elevations and are therefore more susceptible to flooding and its accompanying health risks.⁷⁵ Some residents have reported selling their homes for prices that appear to be good deals, only to realize that there is nowhere else in the city for them to buy.⁷⁶ Thus, economically vulnerable residents hoping to take advantage of seemingly beneficial financial opportunities find themselves exposed to new environmental hazards.

II. CURRENT INITIATIVES TO PROVIDE HOUSING AND ADAPT TO CLIMATE CHANGE

Climate gentrification in Miami and other coastal cities implicates both housing and climate change policies. These two policy areas have historically operated in separate silos, as housing insecurity and environmental harm have been considered distinct from one another. As Miami demonstrates, these two spheres are now intertwined.

A. Policies that Address Housing Insecurity

Legacies of segregation and ongoing disinvestment continue to disadvantage low-income and minority communities. As a result, these communities disproportionately rely on affordable housing programs and initiatives designed to encourage investment in their neighborhoods. Public housing developments, low-income housing tax credits, and community reinvestment legislation are three major federal policies that have aimed to promote housing security. However, each program has experienced obstacles and limitations that prevents it from providing an adequate housing supply.

The U.S. Department of Housing and Urban Development (HUD) administers the federal government’s public housing program. Through this program, HUD provides federal aid to local housing agencies, who manage housing for low-income families and individuals. Approximately 970,000 households in the United States currently live in public housing units.⁷⁷ Nearly two-thirds are people of color.⁷⁸ Despite increased need, the number of public housing units has declined in recent decades. Today, there are 250,000 fewer public housing units than there were in the mid-1990s.⁷⁹

73. *Is Climate Gentrification Happening in Miami?*, *supra* note 26.

74. *Id.*

75. *Id.*

76. *See* Weir, *supra* note 70.

77. HUD’s Public Housing Program, U.S. DEPT. HOUS. AND URB. DEV. (2017), https://www.hud.gov/topics/rental_assistance/phprog (last visited Dec. 6, 2022).

78. Policy Basics: Public Housing, CTR. ON BUDGET AND POL’Y PRIORITIES (Sep. 30, 2024), <https://www.cbpp.org/research/housing/public-housing>.

79. *Id.*

Several factors have contributed to the decline of available public housing. In 1998, the federal Faircloth Amendment capped public housing stock at 1999 levels.⁸⁰ The Amendment effectively prevented the construction of additional units.⁸¹ However, the current number of housing units is even lower than the levels set out in the cap.⁸² Long-term underfunding and shifting housing policies led to the decay and eventual demolition of many developments, and few units have been rebuilt.⁸³

In 1986, the federal government incentivized private sector developers to construct affordable housing with the Low-Income Housing Tax Credit (LIHTC).⁸⁴ The LIHTC program is currently the largest federal program for the creation of housing for low-income individuals and subsidizes the development and rehabilitation of lower-cost rental housing.⁸⁵ The Internal Revenue Service issues credits to state governments, who then award them to private sector developers.⁸⁶ Developers may claim the credit if they agree to rent to residents below a certain income threshold and charge gross rents below a certain portion of the area's median income.⁸⁷ Through the LIHTC, roughly 110,000 such rental units are developed each year.⁸⁸ However, the program does not consider climate risks in its implementation, at either the federal or state levels.

In an effort to compensate for a long national history of credit discrimination against minorities, Congress enacted the Community Reinvestment Act (CRA) in 1977. Under the CRA, regulators examine the lending patterns of private banks to ensure that they are making loans to low-income borrowers.⁸⁹ Banks receive a positive rating under the Act if they lend adequately to (1) borrowers making less than 80% of the median income in their metropolitan area, or (2) borrowers living in low-income census tracts.⁹⁰ Regulators do not distinguish between the two categories in their evaluations. Banks with positive ratings are more likely to receive government approval to engage in future business expansion.

However, in many cases, the CRA does more to fund gentrification than it does to provide loans to low-income borrowers. Because regulators view loans to low-income individuals and loans to low-income districts in the same way, banks

80. *What is the Faircloth Amendment?*, NAT'L COAL. FOR THE HOMELESS, <https://nationalhomeless.org/pepeal-faircloth-amendment/#:~:text=Simply%20put%2C%20the%20Faircloth%20Amendment,new%20construction%20of%20public%20housing.>

81. *Id.*

82. *Id.*

83. *Id.*

84. Urban Institute & Brookings Institution, *Key Elements of the U.S. Tax System*, TAX POL'Y CTR., <https://www.taxpolicycenter.org/briefing-book/what-low-income-housing-tax-credit-and-how-does-it-work> (last visited Dec 6, 2022).

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. Diego Zuluaga, *How a 40-year-old Federal Law is Speeding Gentrification*, POLITICO (Jul. 24 2019), <https://www.politico.com/agenda/story/2019/07/24/gentrification-credit-discrimination-000937/> (last visited Dec 5, 2022).

90. *Id.*

can fulfill their CRA obligations by loaning to high-income individuals living in disadvantaged neighborhoods.⁹¹ Consequently, the CRA incentivizes lending to families looking to buy property in gentrifying neighborhoods, instead of increasing homeownership opportunities for existing residents. Most newcomers to gentrifying neighborhoods do not need preferential treatment to get a loan, and their inclusion in the program has allowed banks to avoid giving loans to low-income families.

The current landscape fails to address the shortage of affordable housing nationwide. Among “extremely low-income” renters alone, there is an estimated shortage of 7.3 million homes.⁹² This shortage will be compounded by lost housing and habitable land in coastal areas in the coming years.

B. Policies that Address the Impacts of Sea Level Rise

Climate change’s direct impact on coastal areas has made initiatives to address that impact all the more pressing. A federal flood insurance program that has long funded rebuilding after natural disasters has come under scrutiny as floods more regularly decimate coastal properties. Concurrently, the disproportionate vulnerabilities of low-income and minority communities to sea level rise have led to calls for environmental justice. Existing flood insurance and environmental justice programs are outlined below.

1. National Flood Insurance Program

Longstanding federal insurance subsidies have made development in flood zones financially viable. As coastal communities grew in appeal, these subsidies have enabled development on tracts of land projected to be underwater in only a few generations. After a series of flood disasters, private insurers began to exclude flood insurance from their homeowners’ insurance policies.⁹³ As a result, the Federal Emergency Management Agency (FEMA) launched the National Flood Insurance Program (NFIP) in 1968.⁹⁴ The NFIP intended to reduce the economic risk of flooding and protect homeowners from displacement or homelessness due to natural disasters.⁹⁵

By the 1980s, the federal government assumed responsibility for most of the program’s operations and created flood maps that outlined flood risk by

91. *How CRA Can Promote Integration and Prevent Displacement in Gentrifying Neighborhoods*, NAT’L CMTY. REINVESTMENT COAL. 5 (Dec 2016), <https://ncrc.org/how-cra-can-promote-integration-and-prevent-displacement-in-gentrifying-neighborhoods/>.

92. *No State Has an Adequate Supply of Affordable Rental Housing for the Lowest-Income Renters*, NAT’L LOW INCOME HOUS. COAL., <https://nlihc.org/gap>.

93. Mary Williams Walsh, *A Broke, and Broken, Flood Insurance Program*, N.Y. TIMES (Nov. 4, 2017), <https://www.nytimes.com/2017/11/04/business/a-broke-and-broken-flood-insurance-program.html> (last visited Dec 6, 2022).

94. Jeff Turrentine & Brian Palmer, *It’s Time to Fix Our Water-Logged National Flood Insurance Program*, NAT. RES. DEF. COUNCIL (July 22, 2022), <https://www.nrdc.org/stories/time-fix-water-logged-national-flood-insurance-program>.

95. *Id.*

geographic area.⁹⁶ Policyholders in high-risk areas paid higher premiums than those in low-risk areas, but few policyholders paid rates that reflected the actual risk to their homes.⁹⁷ The federal government required anyone with a federal mortgage living in a flood zone to purchase flood insurance through NFIP.⁹⁸ Today, the NFIP provides \$1.3 trillion in coverage to more than five million policyholders in the United States.⁹⁹

The NFIP was not designed to accommodate the repeated rebuilding of large swaths of the country and recent disasters have stretched it beyond its capacity. The NFIP repeatedly rebuilds the same coastal areas, sustaining growth in regions that are quickly becoming uninhabitable. Historically, the NFIP has not placed limits on the number of times it would finance the repair or rebuilding of an insured home.¹⁰⁰ As a result, there are many homes in the program that have been rebuilt after flooding ten or more times.¹⁰¹

The program has been in debt since Hurricane Katrina in 2005 and exhausted its \$30 billion borrowing capacity in 2017.¹⁰² Congress cancelled \$16 billion of the NFIP's debt that same year, but the program continues to hemorrhage funds.¹⁰³ Since the partial debt cancellation, its debt has again increased to over \$20 billion.¹⁰⁴

In addition to distorting incentives for development and investment, the NFIP has disadvantaged low-income residents in flood-prone areas. The early rate maps used rough metrics based primarily on elevation and did not account for property characteristics or rebuilding costs.¹⁰⁵ They calculated premiums based on loosely defined flood zones, with each property in the flood zone paying a similar rate.¹⁰⁶ Consequently, residents with low-valued properties paid a disproportionately large share for flood insurance than residents with high-valued properties.¹⁰⁷ Despite significant advancements in scientific understanding, rate-setting methodologies remained largely unchanged for nearly five decades.¹⁰⁸

96. *Id.*

97. *Flood Insurance*, FEMA (2022), <https://www.fema.gov/flood-insurance> (last visited Dec 6, 2022).

98. *Id.*

99. Turrentine & Palmer, *supra* note 95.

100. See Rob Moore, *Flood, Rebuild, Repeat: The Need for Flood Insurance Reforms*, NAT. RES. DEF. COUNCIL (Aug. 11, 2016), <https://www.nrdc.org/bio/rob-moore/flood-rebuild-repeat-need-flood-insurance-reforms>.

101. *Id.*

102. Walsh, *supra* note 94.

103. *Introduction to the National Flood Insurance Program*, CONG. RSCH. SERV. (2022), <https://sgp.fas.org/crs/homesec/R44593.pdf>.

104. *Id.*

105. *Risk Rating 2.0: Equity in Action*, FEMA, <https://www.fema.gov/flood-insurance/risk-rating> (last visited Dec 6, 2022).

106. *Flood Insurance: FEMA's New Rate-Setting Methodology Improves Actuarial Soundness But Highlights Need for Broader Program Reform*, U.S. GOV'T ACCOUNTABILITY OFF. (July 2023), <https://www.gao.gov/assets/gao-23-105977.pdf>.

107. *FEMA Updates Its Flood Insurance Rating Methodology to Deliver More Equitable Pricing*, FEMA (2021), <https://www.fema.gov/press-release/20210401/fema-updates-its-flood-insurance-rating-methodology-deliver-more-equitable> (last visited Dec 6, 2022).

108. *Id.*

In 2021, in an effort to better reflect market rates and increase equity, FEMA announced updates to its pricing methodology. The Agency's "Risk Rating 2.0" incorporates more complex risk indicators like flood frequency, coastal erosion, and distance from a flood source.¹⁰⁹ Importantly, the new rates also consider the structure's replacement cost value.¹¹⁰ Thus, many low-income homeowners will see their rates decrease under the new plan. In contrast, many developers and policyholders with high-value properties will begin to pay more.

Risk Rating 2.0 went into effect in April 2022, and the new rates will apply as existing policies are renewed or new policies are purchased.¹¹¹ FEMA intends to phase out flood insurance subsidies, eventually charging all policyholders the risk-based rates for their properties.¹¹² However, statutory limits on increases to premiums delay the implementation of fully risk-based charges.¹¹³ Risk Rating 2.0 itself capped premiums for single-family homes at \$12,125 in the first year of its rollout.¹¹⁴ In addition, pre-existing legislation restricts the level to which flood insurance premiums can increase. Under the Homeowner Flood Insurance Affordability Act, enacted in 2014 to respond to concerns about the rising costs of flood insurance,¹¹⁵ FEMA may not increase NFIP rates beyond 18% per year for primary residences and 25% a year for business properties and non-primary residences.¹¹⁶ Together, these caps delay the onset of a risk-based cost structure.

2. Environmental Justice and Resilience

Environmental justice initiatives aim to address the disproportionate impact that environmental harms have on marginalized communities.¹¹⁷ The Environmental Protection Agency describes environmental justice as "the fair treatment of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."¹¹⁸ To help address the exposure to climate hazards and resulting health effects that some communities face, the federal government has incorporated environmental justice principles into its policies.

As part of this goal, both the Biden Administration and Congress launched several major programs. In 2021, President Biden issued Executive Order 14008—Tackling the Climate Crisis at Home and Abroad. The order launched the Justice40 Initiative, which mandates that at least 40% of federal investments in

109. *Risk Rating 2.0*, *supra* note 106.

110. *National Flood Insurance Program Risk Rating 2.0: Frequently Asked Questions*, CONG. RSCH. SERV. (2022), <https://crsreports.congress.gov/product/pdf/IN/IN11777/4>.

111. *Id.*

112. *Id.*

113. *Id.*

114. *Id.*

115. Homeowner Flood Insurance Affordability Act of 2014, Pub. L. 113-89, 128 Stat. 1020 (2014).

116. *Risk Rating 2.0*, *supra* note 106.

117. *Id.*

118. U.S. Environmental Protection Agency, *Environmental Justice*, <https://www.epa.gov/environmentaljustice> (last visited Dec 6, 2022).

climate and clean energy flow to disadvantaged communities.¹¹⁹ In 2022, the Administration created the Office of Environmental Justice and External Civil Rights. The Office, housed within the Environmental Protection Agency, aims to deliver grant money to low-income and minority communities across the United States.¹²⁰

Funding for these programs largely flows from two significant acts of Congress: the Bipartisan Infrastructure Investment and Jobs Act (Bipartisan Infrastructure Law, or BIL) and the Inflation Reduction Act (IRA). Enacted in 2021, the BIL includes \$47 billion in funding for resilience initiatives to mitigate the damage of extreme weather events.¹²¹ The IRA, enacted in 2022, provides \$60 billion for environmental justice initiatives, including \$3 billion for the Office of Environmental Justice.¹²² These laws represent the largest investments in climate initiatives in U.S. history. However, without a proactive approach to climate-related real estate shifts, these initiatives will not adequately safeguard the housing of lower-income populations.

III. A PATH FORWARD: POLICY RECOMMENDATIONS

A two-pronged approach is needed to reduce the threat that sea level rise poses to the housing security of disadvantaged groups. On one hand, policy solutions must recognize that large communities of low-income individuals already exist in coastal cities. Many of these communities depend upon responsive government policies to provide them with safe and affordable housing. The federal government, in partnership with local agencies, must enact housing and climate policies to ensure that economic changes caused by rising sea levels do not rapidly displace and scatter these vulnerable groups, exposing them to associated economic and health risks.

On the other hand, in the coming decades, cities like Miami will inevitably experience the debilitating effects of climate change. Chronic storms and flooding will make the area increasingly inhospitable.¹²³ Even higher-elevation neighborhoods, which currently enjoy relative protection from the worst impacts of flooding, will also endure storm surges more regularly.¹²⁴ Flooding will threaten

119. U.S. DEP'T HOUS. AND URB. DEV. (HUD), PURSUING ENVIRONMENTAL JUSTICE (2021), https://www.hud.gov/climate/environmental_justice (last visited Dec 6, 2022).

120. Emma Newburger, *Biden's New Environmental Justice Office Will Oversee \$3 Billion in Grants to Polluted Communities*, CNBC (Sept. 26, 2022), <https://www.cnbc.com/2022/09/26/biden-new-environmental-justice-office-to-oversee-3-billion-in-grants.html> (last visited Dec 8, 2022).

121. The Bipartisan Infrastructure Investment and Jobs Act Bolsters Climate Resilience, Prioritizes Environmental Justice, and Advances Clean Energy Goals, OFF. OF MAJORITY LEADER STENY HOYER (2021), <https://www.majorityleader.gov/content/bipartisan-infrastructure-investment-and-jobs-act-bolsters-climate-resilience-prioritizes> (last visited Dec 9, 2022).

122. Newburger, *supra* note 121.

123. See Jeff Goodell, *Miami: How Rising Sea Levels Endanger South Florida*, ROLLING STONE (Aug. 30, 2013), <https://www.rollingstone.com/feature/miami-how-rising-sea-levels-endanger-south-florida-200956/>.

124. Kevin Krajick, *Rising Seas Will Tighten Vise on Miami Even for People Who are Not Flooded, Says Study*, COLUMBIA CLIMATE SCH.: LAMONT-DOHERTY EARTH OBSERVATORY (Oct. 16,

water supplies, making sources of clean drinking water particularly precarious for future generations.¹²⁵ Those who remain in these areas will be increasingly vulnerable to the health risks of environmental hazards. Consequently, in the longer-term, most residents of coastal cities will need to relocate entirely.

Thus, policies should aim to reduce the displacement of marginalized communities currently in coastal cities in the short-term, while encouraging gradual movement to safer inland areas. The ultimate aim of federal policy in this field should be to create affordable housing outside of flood zones. This will prevent low-income residents from congregating in the increasingly dangerous low-elevation areas of cities that wealthy residents leave behind as prices in those areas decrease. It will also provide a needed incentive for relocation to sustainable neighborhoods. Because the implementation of climate change and housing initiatives often involves federal, state, and local government partnerships, all levels of government play a role in addressing this issue.

A. Preventing Rapid Displacement

1. NFIP: Short-Term Rates

Despite the challenges that rising premiums pose, FEMA's move toward risk-based rates for flood insurance is necessary. The NFIP will collapse if it continues to charge rates that do not reflect the true risk levels of the properties it insures. In addition, government subsidies for projects and development in flood zones are an increasingly futile use of resources given the frequent flooding and storms that these areas will endure in the coming years. They will also expose residential populations to flood zones that are no longer sustainable or safe. However, through adjustments, policymakers can reduce the likelihood of immediate displacement from rising insurance rates, which would further harm low-income communities.

For the NFIP to continue to protect families who rely on the program, while moving towards a self-sustaining business model, two major reforms are needed. First, the NFIP should move toward charging market-based insurance rates to all properties in a shorter span of time. This would require Congress to amend the Homeowner Flood Insurance Affordability Act and eliminate the caps on premium increases. These caps incentivize construction in dangerous zones and prevent the NFIP from earning adequate compensation for the risks it takes on. Even under Risk Rating 2.0, many homeowners do not pay fully for the precarious nature of their properties, because they are protected by rate caps. An elimination of

2023), <https://lamont.columbia.edu/news/rising-seas-will-tighten-vice-miami-even-people-who-are-not-flooded-says-study>.

125. See Rachel Rhode, *Sea Level Rise Threatens Miami's Future. Here's How the Army Corps Can Help Keep Florida, Florida*, ENV'T DEF. FUND (July 23, 2021), <https://blogs.edf.org/growingreturns/2021/07/23/sea-level-rise-threatens-miamis-future/>; *Miami Beach and Rising Seas*, PENN STATE & NASA, <https://www.e-education.psu.edu/earth103/node/1185>.

rate caps would help the NFIP remain solvent and continue to provide coverage to the five million policyholders who depend on it.

However, a swift transition to risk-based rates would place financial hardship on many low-income families already living in high-risk areas. Currently, NFIP Risk Rating 2.0 aims to address inequity by accounting for rebuilding costs in its fee assessments. Thus, in many cases, owners of modest properties see reductions in their premiums due to lower estimated rebuilding costs. However, in rapidly gentrifying coastal areas, the rebuilding costs of a property may be high, even if the property is owned by a low-income family. Thus, the NFIP should consider a policyholder's income in its coverage calculations, not simply the value of the property.

Rather than capping *all* rate increases, which will benefit many financially secure individuals, income-based calculations will ensure that subsidies for existing policyholders go to those who are least able to find alternative housing on the private market. The most efficient way for FEMA to do this is likely for the agency to issue vouchers to policyholders in households making below a certain threshold of the area's median income. Thus, low-income homeowners could continue to stay in their homes and pay a more affordable rate. This would help reduce short-term displacement among low-income homeowners in vulnerable cities, while offsetting the cost through market-based rates for higher-income residents.

2. Revising the Community Reinvestment Act

Because it aims to encourage homeownership and investment in marginalized communities, the CRA can increase housing security for residents of gentrifying neighborhoods. Homeowners are better positioned to avoid displacement than renters. If they do eventually sell their home in a gentrifying neighborhood, they enjoy some of the benefits of rising property values. To ensure that the program actually benefits low-income individuals and families, the Federal Reserve should revise the program's ratings methodology. Instead of including low-income borrowers and *any* resident of a low-income census tract in the program, the CRA should rate banks based on loans to low-income residents exclusively.

Changes to the ratings methodology will improve opportunities for low-income borrowers to get loans to purchase homes, without incentivizing gentrification. This can reduce displacement and encourage housing stability for low-income families with strong ties to a community. It will also reduce the preferential treatment that currently goes to high-income borrowers looking to buy property in low-income areas, who are often the primary drivers of gentrification. High-income borrowers can continue to get loans to buy property, but they do not need the assistance of federal government programs to do so.

B. Encouraging Relocation to Lower-Risk Areas

In addition to preventing the short-term displacement of existing low-income residents, government policies must encourage widespread relocation away from flood zones over time.

1. NFIP Changes to Encourage Longer-Term Relocation

As discussed above, the NFIP should implement immediate changes to its calculation of premiums and protect low-income inhabitants from displacement through the provision of vouchers. However, because it is important to disincentivize new movement to high-risk areas, the NFIP should not issue vouchers to new residents. Those who want to take out a policy for the first time should be charged risk-based rates, regardless of income. This will ensure that NFIP disincentivizes both low-income and high-income individuals from relocating to high-risk areas, while providing some protection for existing low-income residents. These adjustments balance the need to discourage movement to flood zones with the need to accommodate existing low-income residents with ties to a neighborhood's community and culture.

In addition, the repeated reconstruction of high-risk properties is a disproportionate drain on NFIP funds. The program's 30,000 most frequently flooded properties represent only 0.60% of insured homes, yet have received 10.6% of all claims, a portion that amounts to \$5.5 billion.¹²⁶ Properties that consistently flood prove themselves to be on uninhabitable land and should not be repeatedly repaired through subsidies. Consequently, NFIP should place a cap on the number of times it will fund repairs for flood damage on a single property. Once that cap is reached, the property should lose eligibility for the program. At that point, homeowners can relocate to a more stable location or seek insurance through a private vendor if they desire to continue living in a high-risk area.

2. Revisions to LIHTC Program

While existing housing policies cannot create a sufficient supply of affordable housing on their own, the LIHTC program can be made more effective through the incorporation of flood risk. As the primary method through which affordable housing has been created in the United States, the LIHTC program must take climate risks into account when it grants credits to projects. The IRS should change the program's eligibility guidelines so that it does not issue any tax credits to projects in a city's highest-risk areas. Otherwise, the program will subsidize the construction of low-income housing in environmentally unsafe locations, while allowing developers to continue to benefit from tax breaks for dangerous projects.

126. See Rob Moore, *Flood, Rebuild, Repeat: The Need for Flood Insurance Reforms*, NAT. RES. DEF. COUNCIL (Aug. 11, 2016), <https://www.nrdc.org/bio/rob-moore/flood-rebuild-repeat-need-flood-insurance-reforms>.

In the short term, this measure is likely to be controversial. In most coastal cities, beachfront properties are still considered luxury real estate. A refusal to grant credits to beachfront areas will likely meet criticism that the federal government and the local governments who administer the credits are reserving those properties for wealthy and influential residents. However, in the long term, this approach addresses several issues.

Developers have long used affordable housing tax credits to offset the expenses of developing their properties. The rising cost of flood insurance is likely to encourage developers to seek tax credits, as they look for ways to make construction in flood zones profitable. Allocating credits to projects in flood zones would delay the sustainable relocation of coastal residents and place those who move to affordable housing in low-elevation areas at risk of further displacement and accompanying health hazards. Federal policy should not incentivize the exposure of low-income families and individuals, who often have few housing choices and are less able to evacuate during emergencies, to inevitable flooding and its accompanying health risks. Tax credits for affordable housing in these areas would encourage the type of development that policymakers must seek to discourage.

Therefore, the LIHTC program should be amended to ensure that no subsidies go to projects in a city's most climate-exposed areas. Accounting for flood risk when providing tax credits requires a methodology for assessing a region's most flood-prone areas. Fortunately, the NFIP flood maps and risk assessments provide this data. Policymakers looking for a reliable way to evaluate flood risk for housing tax credits could turn to NFIP maps to make their evaluations.

3. Construction of Inland Public Housing

Through public housing programs, policymakers exert significant control over the construction, maintenance, and allocation of housing units. Most importantly in the context of sea level rise, they can select safe locations for their development. Through increased funding to the construction of inland housing near coastal cities, the federal government can play a larger role in ensuring that displaced residents relocate to environmentally sustainable housing.

Unless the Faircloth Amendment is repealed to allow for a net increase in public housing units, public housing programs will be unable to prepare for impending displacement and housing need. Thus, a repeal of the Faircloth Amendment and renewed focus on the construction of public housing are necessary. HUD should work with local housing agencies to phase in relocation to developments in safer areas. This will require major investments in inland housing complexes, but also carries the benefit of reduced hazards to low-income households with few alternative housing options. Ultimately, it will promote the relocation of communities away from hazardous flood zones and reduce the cost incurred for disaster assistance and repairs.

4. Managed Retreat: A Last Resort

In some cases, where rising tides threaten to submerge entire communities, FEMA and HUD have pursued “managed retreat,” a strategy aimed at relocating coastal communities inland en masse.¹²⁷ Managed retreat aims to preserve community ties and traditions by keeping populations together in a new location. The agencies offer “voluntary buyouts” to communities looking to relocate.

Managed retreat is likely not a broad solution to displacement because few communities accept buyouts.¹²⁸ Large scale relocation of entire neighborhoods is often unpopular and very expensive.¹²⁹ However, for communities with strong cultural traditions, managed retreat can offer an attractive way to maintain social ties while relocating to more sustainable housing. The BIL tripled FEMA’s budget to buy or elevate homes at risk of flooding.¹³⁰ Buyouts of communities at risk of displacement, if desired by those communities, could have a more positive longer-term impact than large-scale flood insurance.

C. Using New Funds for New Initiatives

Even with these changes, current policies lack the funding and capacity to meet the demand for affordable climate-safe housing. However, new funding provides new opportunities to prepare for sea level rise. As federal agencies begin to acknowledge that housing security is a form of environmental justice, they can use the significant sources of funding allocated for climate change initiatives to fund sustainable housing and encourage local governments to remove obstacles to affordable housing.

Without the provision of housing for low-income residents, improvements to a neighborhood’s sustainability and resilience will only serve to draw newcomers to the area and drive out existing residents who cannot afford the increased cost. As discussed above, efforts to make disadvantaged communities more climate resilient often have unintended consequences. When federal funds create better adapted, more sustainable infrastructure, they leave behind more appealing neighborhoods, sparking the familiar cycle of gentrification.¹³¹ If affordable housing initiatives can reach neighborhoods before the gentrification cycle starts, they can create an adequate housing supply in advance of the arrival of newcomers.

127. Yuliya Panfil, *The Case for ‘Managed Retreat’*, POLITICO (Jul. 14 2020), <https://www.politico.com/news/agenda/2020/07/14/climate-change-managed-retreat-341753> (last visited Dec 9, 2022).

128. *Id.*

129. Anne C. Mulkern, *Managed Retreat: Unpopular, Expensive and Not Going Away*, E&E NEWS (Nov. 5, 2021), <https://www.eenews.net/articles/managed-retreat-unpopular-expensive-and-not-going-away/>.

130. Coral Davenport & Christopher Flavelle, *Infrastructure Bill Makes First Major U.S. Investment in Climate Resilience*, N.Y. TIMES (Nov. 6, 2021), <https://www.nytimes.com/2021/11/06/climate/infrastructure-bill-climate.html> (last visited Dec 9, 2022).

131. Katie Jo Black & Mallory Richards, *Eco-gentrification and Who Benefits from Urban Green Amenities: NYC’s High Line*, 204 LANDSC. URBAN PLAN. 103900 (2020).

1. Sources of Funds

The challenges of sea level rise require that federal agencies allocate climate-related funds to housing development. Early drafts of the IRA included \$150 billion for housing-related spending, but the final bill allocated only \$1 billion to HUD for use on energy and water efficiency grants in affordable housing.¹³² HUD has expressed its support for environmental justice,¹³³ but cannot fund the development necessary to address nationwide displacement on this \$1 billion allocation alone.

In contrast to HUD's allocation, the BIL and IRA provide \$60 billion for environmental justice projects and \$47 billion for climate resilience, respectively. These funds will support emergency preparedness and resilience initiatives in a range of areas, such as the construction of flood walls, restoration of water resource infrastructure, and waste reduction.¹³⁴ As part of these packages, the Office of Environmental Justice and the National Oceanic and Atmospheric Administration each received \$3 billion for grant programs.¹³⁵ To use this funding effectively, federal agencies must understand that climate resilience and affordable housing are linked. They can then prioritize sustainable housing as they allocate grants and launch new projects.

2. Encouraging Local Zoning Changes

Local communities have been eager to make use of the federal climate budget and similar allocations of resources will likely be necessary to address climate issues in the future. Coastal communities increasingly look to the federal government to fund climate adaptation and resilience initiatives as the effects of sea level rise grow more severe. These funds will mitigate the economic and health risks of sea level rise through direct investments in infrastructure. However, in the event that local governments are unwilling to prioritize the provision of affordable housing, federal agencies should use climate resilience funds to incentivize changes to local zoning laws that limit affordable housing.

Local zoning ordinances are one of the largest impediments to the development of subsidized or naturally occurring affordable housing for low-income people.¹³⁶ Because state and local governments manage zoning regulations and

132. Owen Minott, *What Does the Inflation Reduction Act Mean for Housing?*, BIPARTISAN POL'Y CTR. (Sept. 14, 2022), <https://bipartisanpolicy.org/blog/inflation-reduction-act-mean-for-housing/> (last visited Dec 9, 2022).

133. Pursuing Environmental Justice, *supra* note 130.

134. Ayesha Mehrotra, *Bipartisan Infrastructure Law Helps Communities Prepare for Their Climate Futures*, NAT'L LEAGUE OF CITIES (Nov. 7, 2023), <https://www.nlc.org/article/2023/11/07/bipartisan-infrastructure-law-helps-communities-prepare-for-their-climate-futures/>.

135. *Biden Administration Announces Historic Coastal and Climate Resilience Funding*, NAT'L OCEANIC AND ATMOSPHERIC ASS'N (June 29, 2022), <https://www.noaa.gov/news-release/biden-administration-announces-historic-coastal-and-climate-resilience-funding> (last visited Dec 9, 2022).

136. Jenny Schuetz, *Four Reasons Why More Public Housing Isn't the Solution to Affordability Concerns*, BROOKINGS INST. (Jan. 14, 2021), <https://www.brookings.edu/articles/four-reasons-why-more-public-housing-isnt-the-solution-to-affordability-concerns/>.

approvals, zoning poses a unique challenge to housing initiatives. Under current zoning laws, more than 75% of land in the United States is exclusively reserved for detached single-family homes.¹³⁷ These measures limit the construction of affordable apartments, duplexes, and mixed-use complexes for new residents, and they contribute to housing shortages in metropolitan areas. As sea level rise pushes residents of beachfront cities toward inland suburbs, those suburbs will need to expand their housing capacities. In most parts of the country, zoning restrictions prevent that possibility.

Rezoning will be a challenge, as it is a deeply unpopular political issue, and homeowners tend to rally against large-scale developments or low-income housing projects proposed in their neighborhoods.¹³⁸ Motivations include homeowners' desires to protect their property values, claims of maintaining the "character" of their neighborhoods, and fears of low-income newcomers.¹³⁹ The federal government will need to combat this resistance to successfully combat climate gentrification.

The federal government's most powerful leverage over coastal communities lies in its ability to use federal funds to encourage state and local governments to engage in certain behaviors. Under the Spending Clause of the U.S. Constitution, the federal government may attach conditions on the funds it grants to state and local governments.¹⁴⁰ In *South Dakota v. Dole*, the Supreme Court considered the limitations on the federal government's conditional spending power.¹⁴¹ In that case, the Court held that any conditions attached to the receipt of federal funds must be unambiguously established prior to acceptance, related to the purpose of the federal funds, not in violation of other provisions of the Constitution, and not coercive such that they compel state governments to carry out a federal regulatory scheme. Programs that explicitly condition funds for climate resilience on inclusive zoning would likely be permissible under this test. Because Congress did not place explicit conditions on the funds allocated in the BIL and IRA, federal agencies are likely unable to use these funds to encourage changes to zoning regimes. However, Congress should address this issue through the inclusion of zoning conditions in future legislation and appropriations.

137. *What is Single-Family Zoning?*, PLANOPEDIA, <https://www.planetizen.com/definition/single-family-zoning> (last visited Dec 9, 2022).

138. See Teo Armus, *Lawsuit to Keep Single-Family Zoning in Alexandria Likely Heading to Trial*, WASHINGTON POST (Aug. 26, 2024), <https://www.washingtonpost.com/dc-md-va/2024/08/26/alexandria-zoning-housing-lawsuit-trial/>; Zitlali Solache, *Marion County Residents Oppose Potential Rezoning Next to 'On Top of The World'*, ABC (Mar. 9, 2024), <https://www.wcjb.com/2024/03/08/marion-county-residents-oppose-potential-rezoning-next-top-world/>.

139. See Scripps News Staff, *How Zoning Laws Prevent Affordable Housing and Separate Classes*, SCRIPPS NEWS (Feb. 1, 2022), <https://www.scrippsnews.com/us-news/in-the-loop/how-zoning-laws-prevent-affordable-housing-separating-rich>.

140. *The Federal Government's Authority to Impose Conditions on Grant Funds*, CONG. RSCH. SERV. (Mar. 23, 2017), <https://www.everycrsreport.com/reports/R44797.html>.

141. *South Dakota v. Dole*, 483 U.S. 203 (1987).

In recognition of the effects of zoning, progressive lawmakers have increasingly aimed to condition federal funds on zoning changes but have so far been unable to do so on the scale needed. Advocates for placing zoning-related conditions on federal funds have emphasized the link between exclusionary zoning and increased housing prices, as well as the environmental impact of single-family homes.¹⁴² In its initial infrastructure plan, the Biden Administration included a proposal to offer grants and tax credits to cities that amended their zoning laws.¹⁴³ The proposal was ultimately dropped from the final bill, but subsequent smaller scale initiatives aim to tackle zoning issues. At the end of 2022, Congress included an \$85 million “Yes in My Backyard” grant program as part of its omnibus spending bill.¹⁴⁴ Administered through HUD, the grants would aim to help communities enact zoning reforms like increasing housing density, reducing minimum lot sizes, and donating vacant land for the development of affordable housing.¹⁴⁵ These projects represent an important federal focus on the effects of zoning on housing costs.

As future appropriations are marked for climate initiatives, if the federal government clearly sets out the terms of climate-related grants, it can argue that climate resilience and coastal preparedness are inextricably linked to the development of environmentally friendly housing. Without changes to zoning laws, the housing needed to address displacement from sea level rise cannot be built, either by private developers or government agencies. Finally, because climate-related grants simply involve the distribution of money for resilience and adaptation, there is no coercive regulatory scheme at issue.

Specifically, the federal government should condition funds on inclusionary zoning, which mandates that a portion of units in new developments be reserved for low-income families. Developers in cities like Miami have often secured zoning approval without firm commitments to build affordable housing. Requirements that cities taking federal climate funds move toward inclusive zoning would ensure that a portion of new development accommodates low-income residents. This will help prevent situations like that of Little Haiti and Liberty Square, where rapid development occurred without the provision of affordable rental housing for existing residents. Requirements for affordable housing will

142. See Richard D. Kahlenberg, *Tearing Down the Walls: How the Biden Administration and Congress Can Reduce Exclusionary Zoning*, CENTURY FOUND. (Apr. 18, 2021), <https://tcf.org/content/report/tearing-walls-biden-administration-congress-can-reduce-exclusionary-zoning/>.

143. Melissa Winkler, *Leveraging Federal Funds to Incentivize Land Use and Zoning Reform*, UP FOR GROWTH (Jan. 2021), <https://upforgrowth.org/wp-content/uploads/2022/08/policy-brief-january-2021.pdf>; Romina Ruiz-Goiriena, *Biden's Infrastructure Plan Calls for Cities to Limit Single Family Zoning and Instead Build Affordable Housing*, USA TODAY (Apr. 15, 2021), <https://www.usatoday.com/in-depth/news/nation/2021/04/14/zoning-biden-infrastructure-bill-would-curb-single-family-housing/7097434002/>.

144. Jason Jordan, *Congress Funds New 'YIMBY' Grants for Zoning Reform*, AMER. PLAN. ASS'N (Jan. 10, 2023), <https://www.planning.org/blog/9262900/congress-funds-new-yimby-grants-for-zoning-reform/>.

145. *Id.*

also slow the financial incentives that drive developers to these neighborhoods in the first place, by placing some checks on the profitability of luxury developments. Zoning changes would provide additional housing for those in gentrifying neighborhoods and ensure that families fleeing acute flood zones can find housing in safer neighboring towns and districts.

3. Raising Awareness

In addition to leveraging law and policy to incentivize development away from flood zones, policymakers can influence housing choices by promoting public awareness of the risks of climate change. Despite the existential risk that sea level rise poses to coastal communities, inhabitants are often unaware of the scale and urgency of the issue. According to a 2021 study by the Yale Program on Climate Change Communication, fewer than half of Florida's residents believe global warming will harm them personally.¹⁴⁶ Even in Miami-Dade County, only about 60% of residents believe global warming will harm them a moderate amount or more.¹⁴⁷ These numbers are strikingly low for a county projected to lose significant portions of its largest city to sea level rise. The study suggests that many United States residents do not grasp the threats of climate change, and thus may not factor flood risks into their housing decisions. A focus on education, particularly of those in coastal zones, can aid governments in their efforts to reduce beachfront development and promote relocation inland.

CONCLUSION

Policymakers must support the creation of a sustainable supply of affordable housing, while at the same time discouraging migration to vulnerable coastal areas. Otherwise, climate gentrification will displace low-income populations to high-risk flood zones, where they will face exposure to constant flooding, poor sanitation, and contaminated water.

To reduce the negative effects of displacement from sea level rise, the federal government, in partnership with state and local agencies, must make development in the highest-risk flood zones financially unappealing. Policies should encourage migration away from low-elevation coastal cities entirely, which will only become increasingly dangerous in the coming decades. To ensure that groups displaced from these areas can have safe places to live and maintain community ties, the federal government must rethink its approach to affordable housing and fund projects on a larger scale than ever before. The link between climate change and housing insecurity shows that resources for climate initiatives can help fund the creation of new climate-resilient affordable housing. To tackle climate gentrification, all levels of government must take proactive policy measures to ensure an inclusive response to the effects of sea level rise.

146. Yale Climate Opinion Maps 2021, YALE PROGRAM ON CLIMATE CHANGE COMM'C'N, <https://climatecommunication.yale.edu/visualizations-data/ycom-us/> (last visited Dec 9, 2022).

147. *Id.*