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Building a Better Model for Flood Protection Planning

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On January 20, 2020, as the final year of his first term began, President Donald J. Trump weighed in on a controversial proposal to build a series of storm barriers in the offshore waterways encircling New York City. These barriers, whose size, complexity, and cost had no precedent, drew a hard no from Trump, who tweeted, “A massive 200 Billion Dollar Sea Wall, built around New York to protect it from rare storms, is a costly, foolish & environmentally unfriendly idea that, when needed, probably won’t work anyway.”¹ Trump was far from alone in warning of the proposed barriers’ adverse impacts on the environment.² Similarly, his claim that they probably wouldn’t work echoed remarks by the study’s own project manager, who told a Manhattan Community Board that we might not even know how well these barriers would work “until the first storm hit.”³

While Trump’s position on the cost, impact, and feasibility of the massive storm barrier proposal may have been well founded, he offered no other plan for the region’s increasingly serious flooding problems.⁴ Instead, he simply defunded the planning project that had come up with the barrier proposal, known as

the New York–New Jersey Harbor and Tributaries Study (HATS), and put the two states on notice that they were on their own when it came to flooding: “Sorry, you’ll just have to get your mops & buckets ready!”⁵ As the second Trump administration proceeds, HATS remains probably the largest, most complex, and most costly study of its kind in the history of the United States, designed as it is to protect sixteen million people living along 900 miles of coastline in two of the nation’s most densely populated states.⁶ President Joseph R. Biden restored funding for this critical study in 2021, and, less than two years later, the United States Army Corps of Engineers (Army Corps) released a new HATS proposal omitting the massive barriers that Trump had vetoed, proposing instead a series of smaller, localized in-water barriers and onshore sea walls.⁷

While an improvement on its predecessor, the Army Corps’ 2022 HATS proposal remains in limbo, due to concerns voiced by over 2,600 local residents, dozens of community-based organizations, members of congress, and the Corps’ own federal, state, and local agency study partners.⁸ A central criticism of the 2022 HATS proposal is that it is designed to protect the region only from wind-driven storms, not from stationary rainstorm-driven flooding, which took at least thirty-six lives in New York and New Jersey during Hurricane Ida in 2021, or from sea level rise, which threatens communities during storms, and, increasingly, even on clear, sunny days.⁹ Another major critique calls out the Army Corps for failing to deliver on its promise to put frontline communities “at the front and center” of projects like HATS to help create flood risk reduction projects more effectively tailored to local needs.¹⁰

Fortunately, significant steps have been taken toward the establishment of new and more innovative approaches to flood reduction planning in New York and New Jersey, which could be useful in other coastal regions as well. On January 8, 2024, the two states invoked a never-before-used provision of the US Water Resources Development Act of 2022, which will require HATS planners to address *all* major sources of flooding, including stationary downpours and sea level rise, in addition to storm surge-related flooding, and to give greater consideration to natural and nature-based approaches, instead of relying solely on concrete seawalls and in-water barriers for flood protection, as do earlier HATS proposals.¹¹

The manner in which the HATS project team engages with involved communities is also changing. On November 16, 2023, echoing calls from numerous community and academic organizations, New York, New Jersey, and the City of New York, in their formal roles as HATS study partners, demanded that the Army Corps adopt a specific, vastly expanded public engagement plan designed to ensure that communities on the front lines of flood risk are meaningfully engaged in the HATS planning process.¹² Soon afterward, the Corps announced the intention to create a first-of-its-kind Environmental Justice Coordination Committee to promote more genuine dialogue, accountability, and empowerment during the remainder of the HATS project.¹³

In view of the change in presidential administrations in January 2025, it's questionable whether this new, more community-centered, holistic, and nature-based planning framework, which I will call "HATS 2.0," will actually be implemented and deliver the protection from flooding that New York and New Jersey so desperately need.¹⁴ However, should it move forward, not only would it make New York and New Jersey's coastal communities safer and more ecologically healthy, it would also provide a model for flood protection planning in other at-risk communities as well.

Even if it does move forward, HATS 2.0 will only be fully successful if it can transcend traditional concepts of resilience, which are based on the implied expectation that frontline communities must endure continued hardships and repeatedly strive to *bounce back* from flooding, and be based, instead, on the goal of helping such communities steadily *advance* toward more restorative and equitable conditions. Instead of merely following the rebuild and bounce back model, a truly transformative HATS 2.0 would also support other community needs, such as access to open space and recreation, ecosystem restoration, job creation, and community revitalization, especially in communities that face structural disadvantages due to legacies of environmental injustice.¹⁵

This chapter offers recommendations as to how agencies, community-based organizations, and researchers can help advance the HATS 2.0 vision, as well as suggestions for planners in other communities who seek to ensure that their residents can rely on something better than "mops and buckets" to protect themselves from flooding.

PLANNING FOR FLOODS WITH COMMUNITIES, NOT FOR THEM

The New York–New Jersey HATS project illustrates the challenge of flood risk reduction planning in the face of growing climate-influenced threats that our communities were not built to withstand, such as heightened storm surge, record-breaking downpours, and seas that are in the process of rising by roughly 1–2 feet during the first half of the twenty-first century. At the same time, HATS planners must remain mindful of other, potentially conflicting community priorities, such as providing public access to waterfronts, protecting community character and biodiversity, redressing past inequality, and building social cohesion. For example, enormous proposed flood barriers on the Miami waterfront and along shoreline parks in Brooklyn might stop storm surge, but they are nonstarters for local residents who seek not only to protect their homes from flooding but also to preserve the neighborhood character and other qualities that attracted them to those homes in the first place.¹⁶ The urgent need to address the increasingly complex problem of climate-influenced flooding led the Columbia Climate School to establish the Resilient Coastal Communities Project (RCCP), a partnership between the Climate School and the New York City Environmental Justice Alliance (NYC-EJA), a citywide network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental and climate justice.¹⁷ Since November 2021, RCCP has worked to develop actionable, fundable, and equitable solutions to flood risks that also deliver complementary benefits, like habitat restoration, job creation, and greater community cohesion, through a combination of iterative engaged scientific research and active support for enhanced community participation in public planning.¹⁸

In the spring of 2022, RCCP invited representatives of ten local environmental and climate justice organizations to share their past experiences in resilience planning, provide their perspectives on what a truly just and equitable planning process would look like, and explain what resources they would need to participate fully and effectively in future planning processes.¹⁹ The community-based organizations RCCP interviewed in 2022 seek fundamental changes in the way flood risk reduction planning is done, to lift up community knowledge, support community efforts to act as

leaders, and center social cohesion and restorative justice. They know that none of this will happen unless the planning process moves away from its current model, in which government agencies prepare resilience plans and then perfunctorily take comments on them from affected communities. The goal of the groups RCCP interviewed is for planning efforts like HATS to reset under a new model of full and early engagement with affected communities throughout the entire study process, in order to harness community expertise and establish shared leadership between government and community.²⁰

RCCP's 2022 interviewees expressed a deep willingness to help reform resiliency planning. They offered reasonable, implementable ideas for immediate action to address flood risk and eliminate exclusions and gaps in resiliency planning.²¹ They also explained why narratives of specific places are essential to flood risk reduction planning and illustrated the interconnectedness of flooding and environmental justice in communities with underlying problems of inadequate and poor housing, high asthma rates, insufficient educational opportunities, and other structural disadvantages. Finally, they argued forcefully that community coleadership in the planning process is just as essential to effective resilience planning as agency expertise. As Dariella Rodriguez, director of community development at the Point Community Development Corporation, put it during her interview: "We need community members in those conversations . . . if we're not moving at the speed that our people need us to move in, then all the policy in the world, without that community power . . . we're gonna hit a wall."²² Effective collaboration with communities also requires that planning agencies make full use of any relevant plans created by those communities themselves. As outlined in RCCP's 2022 working paper, "Designing Community-Led Plans to Strengthen Social Cohesion: What Neighborhoods Facing Climate-Driven Flood Risks Want From Resilience Planning," virtually all of the community-based organizations involved in RCCP's 2022 research project have prepared resilience-related plans, reflecting the high level of locally driven resiliency planning in the New York City metropolitan area generally.²³

Finally, communities see social cohesion as an essential consideration for resilience planners. Community plans created by RCCP interviewees,

such as UPROSE’s Green Resilient Industrial District and Staten Island Urban Center’s Maritime, Education and Recreation Corridor, actively seek to maintain social cohesion and counter gentrification by creating jobs and strengthening community institutions based on principles of mutual support, a circular economy, and eco-industrial/environmental justice.²⁴

To summarize, frontline organization leaders want flood risk reduction planners to make full use of the deep store of wisdom that communities possess, rather than simply defaulting to the technical expertise of agency staff. Only by braiding the twin strands of local knowledge and agency expertise, they believe, can we hope to develop fully informed and effective flood protection plans.²⁵ For now, this sort of coproduced resilience planning remains an unfulfilled but deeply imagined vision for the future, vividly illustrated by the following statement, made during RCCP’s interview with leaders of the Williamsburg, Brooklyn-based organization, El Puente: “The deeper context and source of what we might call resiliency is our being able to imagine a future that we ourselves are not just existing but thrive in, and that we ourselves are active leaders in really creating, and re-creating, and continuing to develop.”²⁶

BUILDING A BETTER FLOOD PROTECTION PLANNING MODEL

Efforts to Reform US Flood Risk Reduction Policy

Community aspirations for more collaborative and better-informed approaches to flood risk reduction planning are increasingly being reflected in federal, state, and local policy. On February 15, 2024, the Army Corps released proposed “Agency Specific Procedures” explicitly directing that environmental justice considerations be incorporated into all phases of the Corps’ planning and decision-making process in order to remove barriers to effective community participation, increase community access to benefits, and drive restorative justice. The published overview of these new rules demonstrates a clear intent to center community experience and makes a promise to “listen to the communities and ensure that they are engaged throughout the planning process. The communities themselves will likely help identify concerns and solutions to their water

resources problems and opportunities as well as participate in the identification of any potential effects, mitigation measures, and benefits, including through sharing Indigenous Knowledge, as they deem appropriate.”²⁷ While these new rules, which were finalized on December 19, 2024, and became effective on January 17, 2025,²⁸ are designed to disrupt the Corps’ traditional top-down approach to planning, they have yet to be tested in practice, so their actual impact remains to be seen. Realizing this, the officer in charge of the HATS project, New York District Commander Alexander Young, has expressed his hope that HATS will serve as the “the tip of the spear” for US flood risk reduction planning reform and that it will help convince other agencies and communities to embrace innovation in their own planning processes.²⁹

Reforms Intended to Address Flood Risk More Comprehensively

Perhaps the most significant disrupting influence on the HATS study is the recent decision by the states of New York and New Jersey to invoke section 8106 of the Water Resources Development Act of 2022 (WRDA 2022), which requires the Army Corps to address *all* major flood risks, rather than just storm surge, as part of the HATS study.³⁰ Specifically, this means that the flood protection projects proposed in the next HATS plan must be designed synergistically in order to “maximize the net benefits from the reduction of the comprehensive flood risks within the geographic scope of the study from isolated or compound effects of: (i) *riverine flooding*; (ii) *coastal storms*; (iii) *tidally induced flooding*; (iv) *rainfall*; (v) *tides*; (vi) *seasonal water levels*; (vii) *groundwater upwelling*; (viii) *sea level rise*; (ix) *subsidence*; or (x) *other drivers of flood risk*.”³¹ This is the first time that section 8106 has been invoked, and it imposes daunting responsibilities on the Army Corps, New York, New Jersey, the City of New York, and other stakeholders in the HATS study process, who now must combine the work already done by the HATS project team, which has only addressed storm surge risk, with a new investigation into the “isolated or compound effects” of the nine other types of flooding covered by section 8106. Not only are

HATS planners the first to face this responsibility, they face it in connection with perhaps the largest, most expensive study and project of its kind in Corps history.³²

Fortunately, a wide range of possible flood risk reduction measures is available to the HATS project team. The Army Corps identified over forty different approaches to flood risk reduction, including structural measures like seawalls, berms and surge barriers, nonstructural approaches such as expanded street-level green infrastructure programs and combined sewer overflow reduction strategies, and nature-based solutions like living shorelines, restoring wetlands, aquatic vegetation, and oyster reefs.³³ The key to success will be picking the right combination of these forty-plus interventions for each community in the 900-mile stretch of coastline covered by the HATS study.

The academic community has pledged to support HATS 2.0 with applied research and consultation. Investigators from eight New York- and New Jersey-based research partnerships are partnering with Army Corps and state and local resilience planning officials to organize workshops to share and discuss relevant findings and proposals for further investigation on topics such as the extent of and interaction between varying flood risks, the most productive ways to deploy natural and nature-based flood risk reduction measures, and best practices for centering community expertise in flood risk reduction planning.³⁴ Such efforts represent a significant opportunity for academic researchers to put their findings into service outside the university setting, gain a deeper understanding of the perspectives and experiences of communities and community-based organizations, and do more to meet the urgent need for better flood protection.

The complexity of the HATS 2.0 project will require planners, community stakeholders, and academic partners to shoulder extraordinary responsibilities in service of a project whose success is anything but guaranteed. In fact, any such success may be only incremental, given the long history of top-down, storm surge-focused flood risk reduction planning in the New York-New Jersey region. As HATS 2.0 aspires to break the mold that has shaped past resilience plans by addressing multiple flood risks through synergistic solutions informed by traditional science,

engineering and modeling, and community engagement, it will be closely watched in other regions seeking innovative ways to address their own resilience planning challenges.

Reforms Intended to Address Flood Risk More Justly and Collaboratively

In addition to the challenges of reformulating HATS to address multiple flood risks, this study faces equally significant and important challenges relating to community engagement. The pressure to make the HATS study process more collaborative has been building for years, as community-based organizations and their allies have become increasingly frustrated at planners' lack of responsiveness to their concerns and priorities.³⁵ As previously stated, even the Army Corps' own state and local government partners have pointedly called on the Corps to do more to center communities in HATS planning.³⁶

To put these requests for a more community-centered HATS planning process into perspective, it's helpful to understand the deficiencies in the Corps' public outreach on the project to date. A chief illustration can be found in the public meetings held by the Corps after issuing its most recent HATS plan in September 2022. At the commencement of the first such meeting, on December 15, 2022, Colonel Matthew W. Luzzatto, then the commander of the Army Corps' New York District, promised *meaningful dialogue, community empowerment, and agency accountability* through the remainder of the planning process.³⁷ Yet, the ensuing meetings were poorly advertised and sparsely attended, averaging fewer than twenty public attendees, and there has been no organized follow-up or response to the thousands of written public comments sent to the Corps in the two years since the conclusion of these meetings.³⁸

Prior to the start of the second Trump administration, the Army Corps seemed to be on the cusp of more meaningful engagement with communities within the HATS study area. On January 24, 2024, New York District Commander Young admitted that “the model of Corps outreach is failing

and needs to be remade,” and he pledged to establish an Environmental Justice Coordinating Committee (EJCC) to follow through on his predecessor’s December 2022 promise to build HATS on dialogue, accountability, and community empowerment.³⁹ Colonel Young’s commitment to the EJCC demonstrates the Army Corps’ deepening acknowledgment that, while government experts may have specialized training and experience in resilience planning that community representatives generally do not possess, those government experts often lack the time and training necessary to establish meaningful collaborations with the communities they are responsible for protecting and thus fail to adequately understand or respond to specific community concerns and priorities, let alone take full advantage of what communities know about the specific risks they face and the best options for reducing those risks.⁴⁰

However, a January 20, 2025, executive order stating the second Trump administration’s vehement opposition to equity-oriented initiatives strongly suggests that the success of the EJCC will depend on whether the Army Corps’ local partners will insist on its full and effective implementation.⁴¹ Fortunately, since the 2024 election, the New York City Department of Environmental Protection and Mayor’s Office of Climate and Environmental Justice have signaled their willingness to support and perhaps even lead the EJCC.⁴² On paper, the EJCC represents a promise not just to take and give responses to community input, but *to actively use that input to shape HATS planning*. The Army Corps’ draft invitation to potential EJCC members reflects this aspiration in its ten stated goals for the committee:

- Ensure that environmental justice considerations are brought to the fore, both within the community engagement around the plan, and within the implementation and distribution of flood protections.
- Ensure that the HATS plan delivers multiple social, environmental, ecological, and economic benefits and incorporates partnerships with other government agencies that can enhance a variety of solutions, including natural and nature-based features.
- Ensure that the HATS plan includes sufficient protection for disadvantaged frontline communities.

- Facilitate dissemination of information generated by the study.
- Foster relationships and build a network of community members and representatives.
- Facilitate feedback from the community on the framework for, as well as the results of, assessing the benefits and impacts of study alternatives to communities with historical marginalization.
- Identify ways to improve participation in the study process for communities who have historically been marginalized.
- Incorporate community feedback into the formulation of alternatives and design of project features.
- Identify and work to close relevant data gaps on the study that are of importance to communities who have historically been marginalized.
- Ensure that analyses are not skewed, disproportionate, or favored to any particular community.⁴³

Based on discussions with advocates in other regions, the HATS EJCC would be the Army Corps' most serious effort so far to put communities "at the front and center" of regional coastal flood risk reduction planning instead of merely presenting them with an agenda that has already been set by the time they are brought into the process.⁴⁴ The community-based organizations serving on the EJCC would surely do everything they could to help build a HATS 2.0 based on dialogue, accountability, and empowerment, reflecting community needs and priorities. But for this process to be successful, the Corps or its local partners would have to invest the EJCC with sufficient time, funding, and decision-sharing power to enable it to reshape HATS outcomes. Should they fail to do so, the EJCC would merely replicate the corrosive pattern of failed consultation reflected in other coastal flood protection planning exercises in the New York City metropolitan area and perpetuate what Colonel Young admitted to be a "failing" model of community engagement.⁴⁵ Stakeholders in the New York–New Jersey area and in other flood-prone parts of the nation alike will be watching the HATS to see whether it can avoid this fate and deliver on the Army Corps' promise to shift flood risk reduction planning to a process based on dialogue, accountability, and empowerment.⁴⁶

CONCLUSION: SOLVING THE WICKED PROBLEM OF FLOOD RISK

There is no simple answer to the question of what success looks like when it comes to coastal flood risk reduction projects like the New York–New Jersey HATS. Because flooding has so many different causes, including storm surge, erosion, subsidence, intense rainfall, and sea-level rise, planners need to consider a wide range of structural, nonstructural, and nature-based features in order to identify the proper mix of solutions to address the different risk patterns and physical, socioeconomic, and demographic factors in each community under study. As a reminder, to make matters even more complex, many of the available solutions to flooding may work at cross-purposes with other important community goals like maintaining waterfront access and views, protecting neighborhood character and views, and safeguarding natural systems and biodiversity. Flood risk is a truly *wicked* problem, in that it poses a serious threat to life, limb, and property, lacks easily implementable solutions, and is highly interrelated with other societal challenges, not just for New York and New Jersey but for countless other coastal communities as well.⁴⁷

Given the complexity of flood protection planning, it is clear that the more thoroughly understood the conditions in local communities, the more likely it will be that effective combinations of flood safety interventions will be found for each community, and the less likely planners are to propose projects that miss their mark or have unintended negative consequences.⁴⁸ The Army Corps' promised commitment to community engagement on the HATS study would reduce the risk of such outcomes. On the other hand, while more data and more holistic thinking can certainly improve planning, there is no way to tell how soon the next major storm will hit, so planners must strive to find the best balance between *planning well* and *planning quickly*.⁴⁹

New York and New Jersey's decision to invoke WRDA 2022 Section 8106 to broaden the scope of the HATS study will most likely result in planners having at least another three years to revisit and reconsider the wisdom of centering the HATS study plan on the shoreline barriers and in-water gates that were the backbone of their 2022 proposal.⁵⁰ This will allow sufficient time for new data gathering, research, and modeling and may

help generate a HATS 2.0 plan relying more on natural and nature-based solutions, green infrastructure, and other, nonstructural solutions, in addition to or instead of some previously identified shoreline and in-water barriers. Ideas for additional HATS-related research will surely arise from the coastal science convening between the Army Corps and researchers from eight local research partnerships referred to earlier, which could help clarify the extent of, and interaction between, the varying flood risks facing the study area; the intersection between flood risk, vulnerability, exposure, and socioeconomic factors; and the role biodiversity and nature-based interventions and solutions can play in improving equity and stability in urban shoreline social systems.

It is also essential that any additional scientific research and modeling undertaken during HATS 2.0 planning be dovetailed with the community-level information and priorities identified through the EJCC. Specific tasks the EJCC might take on to inform HATS 2.0 in this manner could include:

- Creation of a comprehensive, ranked list of localized priorities for addressing climate-related risks, and a methodology for factoring them into the models developed by risk-reduction planners.
- Establishment of standards for more effective participation in planning decisions by underrepresented and/or disadvantaged communities, through which agency planners not only promise dialogue, accountability, and empowerment but make them central organizing principles.
- Identification of reliable and sufficient funding for community leaders and organizations that would not otherwise have sufficient resources to participate in flood risk reduction and planning.
- Support for a stronger tie between flood risk reduction planning and efforts to achieve complementary goals like community cohesion, habitat restoration, and job creation.
- Fostering of intra- and interregional collaboration between community-based and climate justice-based organizations seeking to provide mutual support for one another's efforts to ensure that local resiliency planning centers community goals.

As encouraging as it may be to witness the HATS study's turn toward multihazard flood risk planning and community engagement, the incoming policymakers of the second Trump administration are not the only ones who must support these reforms; responsible agency staff, also, must truly commit to them before they can succeed. If those staff members instead view community consultation as an obligation rather than an opportunity, perhaps doubting the value of collaborating with community members who are not as highly trained as themselves, studies like HATS will remain mired in top-down thinking and fail to consider critical on-the-ground information.⁵¹ However, if agency staff are ready to join community organizations at the table for a planning process based on dialogue, accountability, and empowerment, those organizations say they are ready to come to that table and help design more collaborative and restorative flood protection plans.⁵²

In sum, to address the growing risk of climate-related disruption and repair the damage inflicted on frontline communities by systemic underrepresentation and disadvantage, coastal resilience planning must center local wisdom, address all major sources of flooding synergistically, and rely more heavily on natural and nature-based solutions. New York and New Jersey's invocation of Section 8106 of the Water Resources Development Act of 2022, which will drive a more comprehensive, "multihazard" approach to flood risk reduction, and the establishment of an Environmental Justice Coordinating Committee for the NY-NJ Harbor and Tributaries Study, are laying the groundwork for a more just and restorative flood risk reduction planning model which could provide sixteen million residents of New York and New Jersey (and, potentially, millions more in other coastal communities in red and blue states alike) with better protection from flooding and more equitable, vibrant, connected, and ecologically sound communities.

Notes

1. Papenfuss, "'Get Your Mops & Buckets Ready!'"
2. Fecht, "Should New York Build a Storm Surge Barrier?"
3. In August 2018, HATS project manager Bryce Wisemiller told the Manhattan Community Board 1 that this barrier plan "would be a monumental engineering challenge . . . you have the concern that all those gates have to work perfectly while

- that storm is approaching, and there's really no way to test those systems until there is a storm in place." Pereira, "Anti-flood Plan Surging Ahead."
4. According to projections by the New York City Panel on Climate Change, sea levels in the 2050s are likely to be 11 to 21 inches higher than in 2000. Heavy downpours like Hurricane Ida and enormous storm surges like those seen during Superstorm Sandy will become more frequent, with the greatest impacts falling on communities already most vulnerable due to a history of redlining, disinvestment, and other inequitable land use policies. New York City Panel on Climate Change, "2019 Report, Executive Summary."
 5. Papenfuss, "Get Your Mops & Buckets Ready!"
 6. Joseph Seebode, deputy New York district commander, United States Army Corps of Engineers, conversation with the author, November 15, 2022.
 7. In September 2022 the Army Corps identified five possible approaches to flood prevention from which the corps designated "Alternative 3B" as their tentatively selected plan. The flood protection elements in Alternative 3B are in-water storm barriers at the mouths of Gowanus, Newtown, and Flushing Creeks in Brooklyn and Queens; structural shore-based barriers in Jersey City, on the lower west side of Manhattan, and in East Harlem; a combination of shore-based measures; and in-water barriers from the mouth of Jamaica Bay to the Rockaway Peninsula, lower Brooklyn, and two storm-surge barriers on the mouth of the Arthur Kill and Kill van Kull tidal straits. In total, Alternative 3B comprises 2.2 miles of in-water barriers, 50 miles of shoreline-based walls and berms, and various other measures designed to compensate for the environmental damage that these barriers will cause. Alternative 3B is projected to cost \$52 billion dollars, protect 63 percent of the HATS study area, and take fourteen years to construct. New York–New Jersey Harbor and Tributary Draft Feasibility Study and Environmental Impact Statement, September 2022, https://www.nan.usace.army.mil/Portals/37/NYNJHATS%20Draft%20Integrated%20Feasibility%20Report%20Tier%20I%20EIS_3Oct2022.pdf, 189–219.
 8. See, for example, the comment letters sent to the United States Army Corps of Engineers regarding the 2022 New York–New Jersey Harbor and Tributaries Study Plan, March 24, 2023; National Oceanic and Atmospheric Administration, March 29, 2023; New York City Environmental Justice Alliance & Columbia Climate School, March 23, 2023; and Bipartisan Coalition of 14 Members of Congress, September 12, 2023.
 9. Hurricane Ida's record-setting rainfall in September 2021 caused widespread inland flooding, killing at least thirty-six New York and New Jersey metropolitan area residents, including eleven who drowned in illegally converted, basement apartments in neighborhoods that house predominantly poor and immigrant New Yorkers. Calvin et al., "More than 45 Dead"; NYC Mayor's Office of Climate and Environmental Justice, "Chronic Tidal Flooding," <https://climate.cityofnewyork.us/challenges/chronic-tidal-flooding/>; Floodnet.org, "Flooding Data for Hamilton Beach, Queens," <https://dataviz.floodnet.nyc/viz?v=WZVYQzqyEgsCp27wUUXvW>, both accessed June 8, 2024.

10. Shannon, “Environmental Justice Guidance.
11. Snider, “New Provisions Included.”
12. Correspondence from New York, New Jersey, and the City of New York to the United States Army Corps of Engineers, November 16, 2023. For example, in May 2022 RCCP met with the Army Corps’ HATS planning team to share the findings of its research interviews and press for a fully collaborative HATS process. At that meeting, the Army Corps made a promise to convene a HATS environmental justice working group. New York district commander Colonel Matthew Luzzatto and a dozen of his colleagues then visited Columbia University on November 18, 2022, for a briefing and dialogue with RCCP staff and advisory board members, at which the environmental justice working group was again discussed. RCCP again called for the establishment of the environmental justice working group in its March 23, 2023, comments on the Army Corps tentatively selected HATS action plan. Finally, on December 11, 2023, over twenty months after the Army Corps’ first promise of a HATS environmental justice working group, RCCP and twenty-one frontline community organizations, environmental advocacy groups, and other nongovernmental stakeholders wrote to the states of New York and New Jersey to protest the Army Corps’ failure to establish the environmental justice working group and appeal to those agencies for their assistance in this regard (multiparty letter to the commissioner of the Department of Environmental Conservation of the State of New York and the commissioner of the Department of Environmental Protection of the State of New Jersey, December 11, 2023).
13. District Commander Alexander M. Young of the US Army Corps New York District committed to establishing the HATS Environmental Justice Coordination Committee during a January 24, 2024, meeting with the New York City Environmental Justice Alliance, El Puente, and researchers from the Columbia Climate School, including the author. Later that day, Colonel Young shared this announcement with officials from New York, New Jersey, and the City of New York, as well as investigators from six academic research partnerships, at a planning meeting for a proposed HATS technical advisory workshop.
14. The likely impact of the second Trump presidency on HATS and other climate adaptation-oriented studies is uncertain. Although policies relating to decarbonization are widely expected to change, Trump’s approach to climate change adaptation (or, as some prefer to put it, preparing for *extreme weather*) may reflect greater continuity, given evidence that flooding and other climate change-driven impacts are likely to hit red states harder than blue states. Muro et al., “How the Geography of Climate Damage”; Kahn et al., “Don’t Call It Climate Change”; Wilson, “Rising Tides Are Coming.”
15. Gallay et al., “Designing Community-Led Plans.”
16. Cunningham, “Locals React to Plan”; Dembicki, “Coastal Residents Fear ‘Hideous’ Seawalls.”
17. New York City Environmental Justice Alliance, “Waste Equity,” accessed June 8, 2024, <https://www.nyc-eja.org/>.

18. Partnerships like the one between NYC-EJA and the Columbia Climate School don't happen overnight; this one has roots that stretch back to the 1990s, when the author served as a policymaker and law enforcement official at the New York State Department of Environmental Conservation with responsibilities for reduction of the disproportionate number of solid waste transfer stations in Brooklyn, Queens, and the Bronx, which was also a top priority for NYC-EJA. Shared successes in this work, like the establishment of an official fair share policy for waste facility distribution in 2006, helped build the trust needed to establish RCCP. New York City Environmental Justice Alliance, "Waste Equity"; Calmes and Khurshid, "Fair Share: Design Flaws."

RCCP's effort to foster new collaborations on flood risk reduction between environmental justice communities, practitioners, and researchers is also in keeping with Columbia University's commitment in 2019 to adopt an institutional "Fourth Purpose," designed to leverage scholarly knowledge to create more rapid and transformational societal and global impact. "Fourth Purpose Task Force Report on Directed Action," Columbia University, December 15, 2020, <https://president.columbia.edu/sites/default/files/content/Additional/Fourth%20Purpose%20Task%20Force%20Report.pdf>. The author of this chapter, Paul Gally, who directs the RCCP, is deeply indebted to its core team and advisory board, who have collaboratively shaped the project's research and advocacy work. RCCP website, <https://csud.climate.columbia.edu/research-projects/resilient-coastal-communities-project>, accessed June 8, 2024.

19. The community leaders interviewed included staff members from El Puente, GOLES, Guardians of Flushing Bay, Ironbound Community Corporation, New Jersey Environmental Justice Alliance, Newtown Creek Alliance, RISE, Staten Island Urban Center, The Point CDC, and UPROSE.
20. Time and again, interviewees told RCCP researchers in 2022 that they put far more energy into coastal resilience planning processes than they get out of such processes, due to the organizing agencies' inability or unwillingness to make them true partners in developing effective resilience solutions. The growing sense of frustration that communities feel in the wake of such unsuccessful planning efforts threatens to undermine the region's ability to prepare for the growing climate-related risks facing our communities and surrounding ecosystems. Gally et al., "Designing Community-Led Plans," 1–2.
21. The local organizational leaders spoke extensively about such needs as more extensive and effective floodproofing of homes and businesses, better maintenance of stormwater infrastructure, and more effective agency response in flood situations. They also pointed out that studies like HATS tend to focus too much on building barriers and other physical structures, rather than giving due attention to strengthening community partnerships and local response capacity, which has been shown to save lives during climate-related emergencies. Morris et al., "Advancing

- Equitable Partnerships,” sec. 3—Findings and Discussion; Klinenberg, “Adaptation: How Can Cities Be ‘Climate Proofed?’”
22. RCCP interview with Rodriguez, *The Point CDC*, March 15, 2022.
 23. Gallay et al., “Designing Community-Led Plans,” 2–3; NYC Climate Regional Plan Mapper, Regional Planning Association, November 2022, <https://rpa.org/maps/resilience.html>.
 24. UPROSE’s “Green Resilient Industrial District,” in particular, provided the blueprint for the offshore wind turbine assemblage plant currently under construction in Sunset Park, Brooklyn, which unites traditional environmental justice concerns relating to health, safety, and equity with the creation of new green manufacturing jobs, job training programs, and other community benefits. Gallucci, “A Brooklyn Neighborhood’s Long Fight.”
 25. Atalay, *Community-Based Archaeology*, 69; Atalay, “Braiding Strands of Wellness.”
 26. Staff member at El Puente (name withheld on request), March 8, 2022, <https://www.elpuente.us/>.
 27. “Overview of Proposed Rule: Corps of Engineers Agency Specific Procedures to Implement the Principles, Requirements, and Guidelines for Federal Investments in Water Resources,” Federal Register, February 15, 2024, section 234.6(c)(1), <https://www.federalregister.gov/documents/2024/02/15/2024-02448/corps-of-engineers-agency-specific-procedures-to-implement-the-principles-requirements-and>. See also section 234.7. The procedures also make reforms to the way in which the Corps will calculate the relative value of different flood risk reduction options. While the Corps’ current “benefit-cost” scoring system puts economic goals above all others, these new rules give equal weight to economic, environmental, and social factors, thus rebalancing the scales in favor of more socially beneficial or environmentally restorative flood protection investments. In section 234.4(c), the Corps characterized its new benefit cost calculation rule as follows: “Federal investments in water resources have been mostly based on economic performance assessments [focusing] on investments that will improve national economic efficiency. This focus on national economic gains sometimes resulted in an unduly narrow benefit-cost comparison of the monetized and quantified effects. [R]elevant environmental, social and economic effects should all be considered. . . . This more integrated approach would allow decision-makers to view a more complete range of effects of alternative actions and lead to more socially beneficial investments.”
 28. 33 Code of Federal Regulations Part 234, 2024–29652 (89 FR 103992), <https://www.federalregister.gov/documents/2024/12/19/2024-29652/corps-of-engineers-agency-specific-procedures-to-implement-the-principles-requirements-and>.
 29. Alexander M. Young, New York District commander, United States Army Corps of Engineers, conversation with nonprofit and academic organization members of the Rise 2 Resilience Coalition, March 27, 2024.
 30. Water Resources Development Act of 2022, Division H, Title LXXXI of the National Defense Authorization Act for Fiscal Year 2023, Public Law 117–263, 136 STAT. 2395

- (2023). Also, correspondence from New York, New Jersey, and the City of New York with the United States Army Corps of Engineers, November 16, 2023; correspondence from the states of New York and New Jersey to the assistant secretary for civil affairs and policy, United States Army, January 8, 2024.
31. Cited in Snider, “New Provisions Included.”
 32. Joseph Seebode, deputy New York District commander, United States Army Corps of Engineers, conversation with the author, November 15, 2022.
 33. New York–New Jersey Harbor and Tributary, Draft Feasibility Study and Environmental Impact Statement, September 2022, https://www.nan.usace.army.mil/Portals/37/NYNJHATS%20Draft%20Integrated%20Feasibility%20Report%20Tier%201%20EIS_3Oct2022.pdf, 151–157.
 34. The research partnerships are the Center for Climate Systems Research, the Center for Policy Research and the Environment, the Consortium for Climate Risk in the Urban Northeast, the Megalopolitan Coastal Transformation Hub, the National Center for Disaster Preparedness, the New York City Climate Vulnerability, Impact and Adaptation Study, the New York City Panel on Climate Change, and the Resilient Coastal Communities Project.
 35. New York City Environmental Justice Alliance and Columbia Climate School, Center for Sustainable Urban Development, March 23, 2023.
 36. For example, in March 2023 New York, New Jersey, and the New York City Mayor’s Office of Climate and Environmental Justice demanded that the Army Corps “lead, fund, and facilitate” the promised environmental justice working group, which they referred to as the HATS Climate & Environmental Justice Advisory Group, or CEJAG. New York State, New Jersey, and New York City, March 31, 2023, 2. The two states and New York City later expanded on this request in their November 16, 2023, correspondence with the Army Corps, calling on the Corps to “retain consultants with expertise in reaching and educating affected communities, especially environmental justice and disadvantaged communities, to discuss proposed project elements” and “effectively obtain and appropriately act upon community guidance or critique.” Correspondence from New York, New Jersey, and the City of New York to the United States Army Corps of Engineers, November 16, 2023, 3.
 37. Colonel Luzzatto’s comments to this effect can be accessed at the Army Corps’ recording of the December 15, 2022, meeting at which they were made, https://www.youtube.com/watch?v=KofJ4_OaOTE4&t=23s, minute 3:20.
 38. The shortcomings contributing to this outcome are illustrated in this excerpt from written comments on the HATS Tentatively Selected Plan submitted by RCCP and NYC-EJA: “Many community members found it difficult to attend or provide feedback in town halls because the information wasn’t presented in a clear, timely way. NYNJHATS is a complex, dense project that is difficult to understand for most people.” To address this barrier, we asked USACE to create and present simple, accessible briefing materials tailored to specific neighborhoods and languages for their town halls, but have yet to see them do this. USACE also does not make it easy for people to attend their town halls, which is reflected in very low

participation rates. . . . The challenge is that USACE is under- resourced and not positioned to substantively engage with community members and facilitate conversations on a neighborhood’s flooding spots, mitigation measures, and project impacts. USACE has failed to deliver on promises to better engage EJ communities, including working with local stakeholders in their proposed “Climate and Environmental Justice Working Group.” USACE charged the working group with conducting community engagement on behalf of it but has still declined to provide a scope of work for the group, organize it, or fund it. New York City Environmental Justice Alliance and Columbia Climate School, Center for Sustainable Urban Development, March 23, 2023.

39. Colonel Alexander M. Young, January 24, 2024, meeting between US Army Corps staff, RCCP, NYC-EJA, and El Puente.
40. Morris et al., “Advancing Equitable Partnerships,” section 3.11.
41. Executive Order of January 20, 2025, “Ending Radical and Wasteful Government DEI Programs and Preferencing,” <https://www.whitehouse.gov/presidential-actions/2025/01/ending-radical-and-wasteful-government-dei-programs-and-preferencing/>.
42. Correspondence from the United States Army Corps of Engineers, December 13, 2024.
43. Draft invitation [unsent] developed by Army Corps staff on May 3, 2024. These goals were formulated during discussions between the Army Corps, NYC-EJA, El Puente, and the Columbia Climate School during the spring of 2024. As of January 31, 2025, the Corps’ stated intention in relation to the issues to be addressed by the Environmental Justice Coordination Committee is to “continue community engagement and consultation efforts, including adherence to the Agency Specific Procedures published in the Federal Register (33 CFR Part 234) on December 19, 2024, and which became effective on January 17, 2025.” Correspondence from the United States Army Corps of Engineers, January 31, 2025.

As stated earlier, these regulations are designed to incorporate environmental justice considerations into “all phases of the Corps’ planning and decision-making process in order to remove barriers to effective community participation, increase community access to benefits, and drive restorative justice.” “Overview of Proposed Rule,” Section 234.6(c)(1) Former assistant army secretary for civil works Michael Connor indicated that he would consider it worth spending “a year or two” on the Environment and Climate Justice Working Group to assure that the community enfranchisement goals of the Justice40 program can be achieved during the HATS study. Michael Connor, conversation with the author, September 20, 2022. Looking at this from a different angle, the community buy-in the Army Corps could gain through the successful establishment of such a working group could conceivably save a similar or even greater amount of time during the funding and implementation stage of HATS.

44. In January 2024 coastal storm risk reduction advocates from Galveston, Texas, Miami, Florida, Charleston, South Carolina, Norfolk, Virginia, and New York

organized a mutual support and policy development interregional working group, during which issues associated with community engagement in flood protection planning are frequently discussed. None of these advocates is aware of any previous community engagement initiative with the scope and intention of the NY-NJ HATS Environmental Justice Coordinating Committee. State and local partners in the NY-NJ HATS are mindful of such community concerns and so are themselves working to increase and improve community engagement. For example, New York City has agreed to develop more just, inclusive, accountable, and reliable decision-making models through its Climate Knowledge Exchange program (<https://climate.cityofnewyork.us/initiatives/climate-knowledge-exchange/>, accessed June 9, 2024).

45. New York City is still dealing with the fallout from its controversial 2018 decision to abandon a proposed \$700-million plan for an “East Side Coastal Resiliency Project” (ESCR) on the Lower East Side of Manhattan, which had been developed by consensus through a multiyear partnership with local community organizations. Instead, the city unilaterally selected a vastly different and deeply unpopular alternative plan for the ESCR project, prepared in secret while its community partners still believed the city was going to implement the consensus plan. City officials subsequently acknowledged the fundamentally untransparent and unaccountable manner in which they managed this critical final stage of the ESCR project, but the damage had been done, leading to extensive litigation delays and a near-complete loss of trust in the project in the community. Kimmelman, “What Does It Mean to Save A Neighborhood.”
46. Flood risk reduction advocates in the communities referred to earlier are following the reforms described in this chapter to determine how they influence the HATS study and have expressed interest in adopting those reforms that prove effective into their own local processes.
47. On the topic of “wicked problems” generally and in relation to climate change specifically, see Rittel and Webber, “Dilemmas in a General Theory of Planning.” See also Incropera, *Climate Change*.
48. For example, researchers from seven universities collaborating as the Megalopolitan Coastal Transformation Hub (<https://coastalhub.org/>, accessed June 9, 2024) warned that the HATS action plan tentatively selected by the Army Corps in 2022, which includes over fifty miles of shoreline and in-water barriers designed to block storm surge, may increase the likelihood that rainfall-driven flooding will accumulate and worsen flooding in the communities on the land side of those barriers. Such concerns are also referred to as seeking to avoid “maladaptation.” Letter on HATS from researchers at Rutgers, Dartmouth, Princeton, and other institutions working together as the Megalopolitan Coastal Transformation Hub (MACH) Project, March 1, 2023.
49. Given the challenges described here, it’s fortunate that new funding for flood risk reduction projects is provided for in federal legislation such as the Infrastructure

Investment and Jobs Act of 2021, Pub. L. No. 117–58, 135 STAT. 429 (2021), which will pump over \$13 billion dollars into such efforts. Tompkins, “5 Ways the Infrastructure Bill Would Improve.” As of the time this book went to print, the second Trump administration has placed on hold new investments under the Investment Infrastructure and Jobs Act.

50. This potential time extension was shared during the January 24, 2024, meetings referenced in note 14. Also, US Army Corps of Engineers, “Request for Additional Resources,” December 2023, slide presentation.
51. Most of the community interviewees with whom RCCP spoke in 2022 indicated that, under such circumstances, they would rather not be at the table at all, given the myriad other responsibilities they are balancing at any given time. Gallay et al., “Designing Community-Led Plans,” 1–2; Morris et al., “Advancing Equitable Partnerships,” section 3.2.
52. Gallay et al.; Morris et al.

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