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Who Pays for the Next Wave? The American Welfare State and Responsibility for Flood Risk

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Abstract

In preparing for and responding to natural hazards and disasters, the welfare state establishes a social contract, distributing responsibilities for what will be collectively managed and what will be individually borne. Drawing on archival, interview, and ethnographic data, this article examines the renegotiation of that social contract through the lens of contested efforts to reform the massively indebted US National Flood Insurance Program (NFIP) from 2011 to 2014. In the face of a morally charged debate about deservingness and individual choice, Congress passed legislation that committed to incorporating need-based considerations to the NFIP for the first time. The result defined "deservingness" in terms of ability to pay for risk exposure, qualifying an individualization of responsibility for addressing the problem of flood loss—a problem that might instead demand broader risk sharing, particularly as climate change worsens the threat of flooding.

Keywords

welfare state, flood insurance, risk, moral economy, climate change

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Through governance of natural hazards and disasters, states play a central role in keeping people safe and in helping them recover economically in the event of catastrophe. In doing so, they establish a kind of social contract, determining what will be collectively managed and what will be individually borne. How that balance is struck depends, in part, on the relative strength of moral claims for solidarity from fellow citizens and taxpayers. In this article, I examine the renegotiation of that social contract through the lens of contested efforts to reform the US National Flood Insurance Program (NFIP) from 2011 to 2014. In the face of massive debt the program incurred after Hurricane Katrina, reformers easily won a technocratic fix that would enhance individual responsibility, premised on moral claims about deservingness and individual choice. However, less than two years later, following Hurricane Sandy and backlash from affected policyholders, Congress abandoned some of the changes with new legislation that committed to incorporating need-based considerations to the NFIP for the first time. Drawing on archival, interview, and ethnographic data, I trace the morally charged debate. I argue that the result defined "deservingness" around ability to pay for risk exposure, qualifying an individualization of responsibility for addressing the problem of flood loss—a problem that might instead demand broader risk sharing, particularly as climate change worsens the threat of flooding.

In the sections that follow, I begin by situating the case in a theoretical tradition in welfare state scholarship that typically excludes this policy domain—natural hazards and disasters—from its view. As in social policy debates more generally, NFIP stakeholders articulated and disputed claims about deservingness and choice to justify rival visions of the fair terms of social interdependence in flood insurance. After describing the methodology and evidence, I turn to the history of the NFIP. I show how its design and implementation created space for these rival visions through the incorporation of individualistic and solidaristic elements in the program. I then tell the story of NFIP reform in three acts, following the

advocacy that led to reform, the backlash to reform, and the "reform of the reform" that was ultimately passed. In the discussion, I analyze how the emergent definition of deservingness reorganized the arrangement of federal assistance and individual responsibility, forging a tentative resolution to the competing demands made on the NFIP. I conclude with the implications of these changes, and the arguments that produced them, for the question of how states and citizens adapt to a future defined by climate change.

The Moral Economy of American Natural Hazards and Disaster Policy

Political sociologists and political scientists have connected the scope and generosity of social policy to the articulation and mobilization of "categories of worth," particularly whether policymakers and the public perceive recipients as "deserving" or "undeserving." Such distinctions serve discursively to justify the balance of individual and collective obligations and to institutionalize programmatic boundaries between categories of beneficiaries. In the United States, this normative distinction has been especially powerful. 2 The deserving are generally believed not to be to blame for the adversity they face, whereas the undeserving are often narrated in policy debates as those who have made poor choices; they are in some way personally responsible for their own troubles. Claims of deservingness thus implicate judgments about the existence and meaningfulness of individual choice. This implication has been apparent in the last several decades of American social policymaking. where "deservingness" has not always been explicitly invoked by political elites.³ Instead, arguments for cutting back on spending, adding requirements, or reducing eligibility have been premised on ideas about choice, not only as a way of attributing blame (i.e., past choices create present suffering), but also as a strategy of governing. Policymakers seek to manage the choices of beneficiaries, scrutinizing the "perverse incentives" that disincline the target population from taking personal responsibility and that keep them dependent. These arguments and strategies address the welfare state's "moral hazard" problem: that rational

individuals will, if protected from the consequences of their actions by social insurance or other policies, make irresponsible choices to their own detriment and that of the collective. According to this particular logic about how policies affect behavior, it is more efficient, fair, and even more compassionate to foster self-reliance and personal responsibility—and to limit collective obligations on that basis.⁴

This article examines contestation surrounding deservingness and choice in natural hazards and disaster policy, a domain in which questions of moral economy warrant greater attention. Though not conventionally considered to fall under the umbrella of American social protection (and neglected in welfare state scholarship for that reason), natural hazards and disaster policy commits federal expenditures to respond to those in need. Policymakers may not design such policy as a form of antipoverty welfare, but it nevertheless shares risk and compensates individuals for loss and suffering. Framed this way, extending an analysis of moral claims about deservingness and choice to this policy domain can help explain designations of how much, or what kinds of, responsibility individuals and local communities are expected to assume to protect themselves.

As in the context of social policy, money is the driver of contests over the designation of deservingness and the meaning of choice in natural hazards and disaster policy. In the United States, the ability to represent loss after a catastrophe as blameless enhances claims for federal resources. Blamelessness, in turn, has historically corresponded to the treatment of natural disasters as "acts of God," whether literally or figuratively understood: unfortunate events that can be neither foreseen nor prevented. Those afflicted by them are thus blameless victims, facing misfortune that might befall anyone, even those who had made the "right" choices. Policymakers and the public have therefore treated measures to socialize the risks of natural disasters as "legitimate exceptions to the usual liberal insistence on individual responsibility." Flood insurance was one such measure, established by Congress in the late

1960s to provide coverage for a previously uninsurable risk. Yet flood insurance at the same time transformed floods "into a different kind of event": not acts of God, but scientifically foreseeable, patterned events that can ostensibly be planned for by individuals on the basis of probabilistic risk assessment. Developments in natural hazards risk science made it possible to assess and assign risk levels and costs even to the individual property. As a condition of socializing the risk, flood insurance created new individual responsibilities. Individuals would now have to account for and manage the costs of living in a floodplain.

With the establishment of the NFIP, the federal government forged a new kind of social interdependence in the face of this particular natural disaster. With the design and implementation of its technical features, it sets the *terms* of that social interdependence: who pays how much and for whose security, what kinds of conditions accompany access to coverage, and the incentives to which insureds are expected to respond. This recasts questions of deservingness and choice related to natural hazards and disasters. Who deserves help, and what kind, if natural hazard risks can be individually assessed and foreseen? Are individuals to blame for their vulnerability to natural disasters? How should flood insurance manage the incentives and choices of the insured? When the NFIP faced financial crisis, stakeholders debated these questions of deservingness and choice in pursuit of divergent visions for how the terms of social interdependence should be reset: the particular ways in which flood insurance should individualize or socialize flood risk. As in the case of social policy, the distinctions that emerged from this debate, discursively and institutionally, reorganize arrangements for managing the costs of living with uncertain and changing risks.

Methodological Approach and Evidence

Insurance is, by its nature, a mechanism for socializing risk. However, it can do that to a greater or lesser extent. ¹⁰ The technical characteristics of programs and policies include and exclude, forge communities of fate, and assign obligations to members. ¹¹ In this article, I

examine the claims made by participants in flood insurance reform to justify and oppose proposed changes to such technical characteristics. I offer a "close reading" of these events, based on data from a multisited, mixed methods study of the crisis facing the NFIP. My analysis relies on congressional and federal agency archives and transcripts (1967–73 and 2011–14); eleven interviews¹² with government officials, environmentalists, insurance industry professionals, flood risk modelers and engineers, think tank representatives, and homeowner activists who participated in flood insurance reform; and ethnographic observation in New York City and Washington, DC (from October 2013 to November 2014), at sites in which flood insurance reform was discussed, implemented, or debated, including public meetings of a National Academy of Sciences study committee, meetings and conference calls with homeowner activist groups, and academic events on flood insurance reform. I also reviewed legislation, scientific reports on flood risk assessment and mapping, Government Accountability Office (GAO) and Federal Emergency Management Agency (FEMA) reports, insurance industry reports and presentation materials regarding flood risk, and news media accounts of the flood insurance reform process. By combining fieldwork with information and accounts in relevant documents, I strove for an abundance of data about how these reforms unfolded.

The overall approach provides a "policy-focused" analysis that treats policy as a terrain of struggle as well as the prize of political action. In outlining this approach, Hacker and Pierson observe that the stuff of modern politics is often about "reshaping governance in enduring ways" via public policy changes, rather than gaining office. This shifts our analytical gaze from elections to those policies. ¹³ Applied to this case, flood insurance policy provides both the terrain for competing claims about the efficient and fair terms of social interdependence and the prize that various interests and groups pursued through the promulgation of moral claims.

The History of the NFIP

To contextualize the post-Katrina financial crisis facing the NFIP and the debate that ensued, we need to examine how the terms of social interdependence in the face of flood risk were initially established and how they broke down. In the history of the NFIP's origins and implementation, these terms have been connected to the set of public policy objectives that policymakers hoped to achieve with a public flood insurance program. In practice, they yielded a flood insurance program that encompassed elements of both a more individualistic private insurance program and a more solidaristic social insurance program. When the program appeared in need of major reform, stakeholders prioritized these elements differently, mobilizing claims about deservingness and choice to make competing demands on the program.

Congress established the NFIP in 1968 as a new mechanism for managing and distributing the rising costs of flood losses. Federal flood risk management had previously combined structural flood protection (e.g., the funding of walls, dams, levees) and subsidized loans or disaster relief following catastrophe—a combination that was a growing and unpredictable drain on public resources by the 1950s. Structural flood protection had made flood-prone areas appear unduly safe for development and habitation, encouraging more people to move in and putting more property at risk of loss when structures failed (a dynamic referred to as the "levee effect"). ¹⁴ According to a 1966 study commissioned by Congress from the Department of Housing and Urban Development (HUD), public flood insurance, premised on scientific developments that made catastrophic risk assessment possible, would achieve several public policy goals simultaneously. First, it would stem growing relief costs by having people prefund at least a portion of their own recovery through the payment of premiums, decreasing burdens on taxpayers. Second, actuarial premiums, that is, rates based on assessments of flood risk, would create "much stronger" price incentives that individuals

would incorporate into rational decisions about whether to buy or build in a flood zone.

Individual policyholders, rather than the federal government, would thus bear personal responsibility for managing the costs of living in the floodplain. In doing so, they would enhance collective flood security through their own individual calculations, which would presumably lead them away from the riskiest and most uneconomical uses of the floodplain. Under an actuarial system, the problem of flood, transformed into risk, could now be governed through the calculating actions of individuals on behalf of themselves and their families.

The outlines of the NFIP codified expectations regarding individual choice, dependent on the availability of scientific risk assessment that would produce both information and incentives.

Yet even with the creation of these new individual responsibilities, policymakers in the 1960s narrated flood insurance as coherent with the way the federal government socialized other risks through insurance: flood insurance would extend financial security to homeowners who previously had gone without. The private insurance market had long declined to underwrite flood risk, leaving flood victims at the mercy of politically capricious relief. The situation provided "neither security nor dignity," in the words of Representative Carl Albert during 1967 congressional debates about initiating a flood insurance program. With the establishment of such a program, the federal government would in a single act transform flood from uninsurable to insurable risk, protecting property owners by spreading flood risks nationwide and providing more reliable compensation. For people already living in flood-prone areas, who had lacked risk information on which to make an informed and economical choice, actuarial rates could be unaffordable. In congressional debates to authorize the NFIP, policymakers insisted that premiums needed to be "reasonable," as a matter of fairness. They did not want to penalize homeowners for choices made before floodplains were mapped. The NFIP thus put in place subsidies that would allow such

floodplain occupants to access protection at lower, "reasonable," rates. ²⁰ Members of Congress also expressed a desire for rates to be reasonable more generally to encourage participation and broaden the accessibility of what was, at its launch in 1969, a voluntary program of insurance. As a condition of accessing the protection offered by the NFIP, communities would also have to accept some collective responsibility by adopting a set of land use and building code regulations. In the broader context of natural hazards and disaster policy, flood insurance was never meant to replace, but to be "carefully interrelated with," other various responses to floods, including flood protection works and disaster relief. The 1966 HUD described the relationship between these responses as "complementary, not competitive, with each strengthening the other to promote the national welfare." ²¹

The NFIP, under HUD before being transferred to FEMA in 1979, would rate insurance for individual properties based on "flood insurance rate maps," which graft onto the landscape official flood zones and expected flood elevations. In 1973, after the NFIP showed sluggish growth in its first few years, Congress made flood insurance compulsory for all property owners with federally backed mortgages in high-risk flood zones (areas determined to be subject to flooding by the 1-percent-annual-chance flood event or the "100-year floodplain"). ²² The program also put in place a grandfathering provision that allowed homeowners to hold onto previous (lower) rates if, when risk maps were updated (as they were mandated to be for the sake of accuracy), they were shown to be at greater risk. With subsidies and grandfathering in place, in practice Congress and the NFIP did not commit to implementing fully the actuarial calculus of choice, targeting instead an objective of broader risk sharing through "reasonable," that is, affordable, rates. The NFIP emulated a more individualistic private insurance institution in classifying risk and assigning individual contributions on that basis. In decoupling some premium levels from risk, providing guaranteed coverage (such that no flood risk is too bad to insure, even for properties that

repeatedly flood), and, after 1973, mandating coverage, the NFIP resembled a more solidaristic social insurance program. From its early years, the NFIP was meant to be both actuarial and affordable, risk-based and broadly accessible: objectives that were not necessarily compatible and that created space for competing demands when the program reached a crisis point.

Even with the NFIP in place, development of flood prone areas proceeded apace. The program struggled to enforce land use restrictions as a condition of enrolling communities in the program, which was growing so quickly in the 1970s that it could not keep up with the need for new and updated maps to communicate and price risk. The population in coastal shoreline counties, where densities are six times greater than in inland counties, has grown almost 40 percent since 1970.²³ More than 120 million Americans live in counties that border the open ocean or Great Lakes or include a 100-year coastal floodplain.²⁴ According to 2009 estimates, 10 percent of the population resides in an official high-risk flood zone.²⁵ In short, many more people live near the water, but only a relatively small percentage are "officially" at-risk and subject to the mandatory purchase requirement. That requirement has also been inconsistently enforced over the years. Because of gaps in FEMA's data, estimates of insurance take-up vary, but a 2006 RAND report suggested that about 49 percent of single-family homes in high-risk flood zones are covered by flood insurance. This further narrows the risk pool and leads to billions of dollars in uninsured property losses, some of which may be compensated by disaster relief.²⁶

At the program's outset, policymakers recognized that continued subsidization of insurance could encourage rather than discourage floodplain habitation, contravening a major goal of the program. They expected there would be "natural attrition" of subsidized policies from the NFIP, as properties flooded and presumably would not be rebuilt. Yet as of 2011, about 20 percent of the NFIP's 5.6 million policyholders still carried subsidized rates and

"severe repetitive loss" properties that have filed numerous expensive claims are a major issue for the program. ²⁷ FEMA does not know how many properties are currently paying grandfathered rates. ²⁸ Nevertheless, despite the subsidies and grandfathering, which lowered the total amount of premiums relative to the assessed risk, the NFIP was financially functional for several decades. ²⁹ Then in 2005 Hurricane Katrina hit the Gulf Coast, overwhelming the claims capacity of the NFIP and plunging it into over \$16 billion of debt to the US Treasury. In 2006, the GAO put the NFIP on its High Risk List of government operations that pose significant fiscal threats to the state. Hit soon after by the Midwest floods of 2008, the program owed \$18 billion that it seemingly could not repay. ³⁰ The NFIP's financial crisis after Katrina laid open a conflict between the actuarial promises of the NFIP and measures that kept had rates "reasonable," that is, affordable, for many policyholders. In the 2011–14 reform controversy, examined in the next section, stakeholders advanced claims about deservingness and choice in order to prioritize actuarialism or affordability in the future of the NFIP.

NFIP Reform in Three Acts

The reform at the heart of the controversy examined here, the Biggert-Waters Flood
Insurance Reform Act (henceforth "Biggert-Waters"), became law in July 2012 with
overwhelming bipartisan support from an otherwise highly polarized Congress. BiggertWaters was the most comprehensive reform of the NFIP since its establishment, intended to
make the program "actuarially sound," namely, to restructure the program to bring in enough
in premiums to cover the risk. The key provisions of Biggert-Waters (a) eliminated premium
discounts (from subsidies and grandfathering) and imposed new actuarial rates, programwide,
that reflected the individual's "true cost" of risk coverage, and (b) recommitted resources to
fund flood risk studies and maps for the sake of providing up-to-date and accurate scientific
risk assessments and risk-based insurance rates. The legislation also toughened the penalties

on lenders who fail to enforce the mandatory insurance purchase requirement; mandated that FEMA study the effectiveness of building codes and made grants available for building code enforcement; and mandated that FEMA study the affordability of actuarial rates—but did not indicate that this study should come *before* FEMA increased rates as it implemented the rest of the law.

In the sections that follow, I tell the story of Biggert-Waters and the backlash that followed in three acts. Supporters and opponents of Biggert-Waters alike cited the NFIP's failures but disagreed about what constituted a fair and effective path forward. The first act traces the successful efforts of reformers to pass Biggert-Waters: a technocratic fix that reaffirmed the actuarial commitments of flood insurance. The reformers articulated arguments about the choice-sensitivity of exposure to flood risk, and what floodplain residents versus taxpayers therefore deserved. The second act chronicles the backlash to Biggert-Waters, led by a group of activist homeowners who subjected the choice-sensitivity of flood risk to scrutiny, highlighting implementation failures and economic pressures that contributed to a collectively produced crisis facing the NFIP. Having complicated the argument about choice—whether or for what homeowners were to blame—the debate about what homeowners deserved became a matter of who would be affected and what they could afford. The third act discusses the "reform of the reform" that was ultimately passed in response to the controversy. The new legislation maintained a bipartisan commitment to informed choice as a basis for governing flood risk, but qualified the individualization of responsibility, preserving continued federal support for those who could be determined truly to need it.

Act I: Choice and Deservingness in Biggert-Waters

Much of the energy behind Biggert-Waters came from an unlikely coalition of environmentalists³¹ and conservative, libertarian, and taxpayer groups³² called SmarterSafer.

In its advocacy, SmarterSafer defined NFIP reform as a matter of technical adjustments that would have individuals pay risk-based rates for their own expected losses, for moral, economic, and environmental reasons. Living in a risky floodplain was an individual choice and, as a matter of fairness, low-risk policyholders and taxpayers should not be forced to support high-risk policyholders financially for the expensive consequences of their choices. From an economic standpoint, the NFIP needed to make an actuarial shift to bring in enough premiums to meet expected losses and to inform better choices going forward (i.e., reduce future flood losses through individual risk mitigation measures or relocation). Risk-based rates would also yield environmental protection, acting as a control over real estate development in hazardous natural terrains.³³ In essence, SmarterSafer asked Congress to make the NFIP do in practice what it promised to do on paper in 1968: reduce flood losses through signaling risk in actuarial premiums. By 2011, SmarterSafer had begun working closely with the House Subcommittee on Insurance, Housing, and Community Opportunity to draft what became Biggert-Waters, named for the then-subcommittee chair, Rep. Judy Biggert (R-IL) and ranking member Rep. Maxine Waters (D-CA).³⁴ Insurance industry interests also supported the reform.³⁵ Private insurance companies administer the NFIP; they do not bear the risk, but receive a commission (about 30 percent of the policy) for servicing policies and managing claims.

In March 2011 Congressional hearings on legislative proposals to reform the NFIP, witnesses (including SmarterSafer members) and members of Congress connected the apparent impossibility of NFIP debt repayment to "the persistence of federally subsidized premiums," in the words of Rep. Robert J. Dold (R-IL).³⁶ Keeping these subsidies was also, in the words of a witness from the Association of State Flood Plain Managers (ASFPM), "help[ing] people ignore their risk," by not sending a clear signal through risk-based insurance prices. Instead, the NFIP should "enable market-based financial decisions." The

ASFPM witness went on: "It is very important that the people who are living at risk, know the risk and share the—and be part of paying for their risk. It is, we feel, inappropriate to externalize that risk to the rest of the taxpayers, the Federal taxpayers." This was particularly true in the case of severe repetitive loss properties. The chairwoman of the National Association of Mutual Insurance Companies (NAMIC) testified: "Quite simply, American taxpayers should not be forced to subsidize a small subset of NFIP policyholders who continue to rebuild in high-risk areas." This was, she later stated,

simply not fair to the American taxpayer. There are folks who wish to [rebuild]. If they wish to rebuild in these areas, they need to be charged actuarially sound rates. If they want to absorb that risk, they need to pay for that risk. They need to pay for it, not the American taxpayer.³⁹

A representative from Taxpayers for Common Sense (a member of SmarterSafer) testified about the importance of homeowners' engaging in some "decision-making to deal with about where their home is, or mitigation measures they could take that would reduce the cost or reduce their vulnerability." The issue was, in his words, about "trying to remove that risk off the back of the taxpayer and putting it back on to the policyholders where it logically belongs." In written testimony, added to the official record, Taxpayers for Common Sense argued, "taxpayers deserve to have those who choose to live in harm's way pick up their share of the tab." In May 2012 Senate hearings on NFIP reauthorization, a Montana floodplain administrator testified:

The American taxpayer is increasingly unwilling to provide financial support for those who have time and time again received handouts post-flood who then do absolutely nothing to prevent future damages as they know Uncle Sam will be there check in hand to quite literally bail them out again. ⁴²

Neither were taxpayers willing to support irresponsible NFIP policyholders: "Gone, too, are the days that the taxpayer will support those who knowingly choose to live in areas and in homes with severe flood risk." In the same Senate hearing, a representative from the Heartland Institute (a libertarian think tank) submitted a statement urging that "The federal

government should not encourage the choice to live in harm's way" through below-risk insurance rating and outdated flood risk assessments and maps. ⁴³ Experts at these hearings were asked to address how an actuarial shift would affect low- and middle-income policyholders. They suggested voucher programs, like those administered by HUD for housing, or separate appropriations for supplementing insurance payments.

Taken together, these reformers sought to motivate policy change by emphasizing the knowability of flood risk, which carried with it obligations surrounding individual choice and what flood zone policyholders thus deserved vis-à-vis taxpayers. Floods were not calamities that hit people unaware; they had long been scientifically assessed risks, visualized on maps. The availability of risk information made flood risk choice-sensitive: policyholders put themselves at risk when they chose to buy or build in the flood zones and were therefore not blameless in the event of a loss. The assignment of risk-based cost at the individual level worked against a sense of shared vulnerability, bolstering the argument that taxpayers who had made the choice not to expose themselves to flood risk ought not be made to pay for the risks of others. A reformed NFIP would not only enhance fairness based on prior choices, but also enact a more sensible risk-based calculus of choice going forward—one that had long been promised, but not delivered because of subsidization and grandfathering. The prudent future role of the NFIP was not to provide support in the form of subsidized insurance; that was feeding an ongoing moral hazard that invited development in the floodplains. Rather, echoing arguments in other arenas of policymaking, individuals needed information visualized on maps and transformed into a price signal—that would allow them to make the best choices. Reform needed to involve some restructuring of the incentives of the insured, with the individual taking more responsibility for exposure to and for managing his/her risk.

The Biggert-Waters bill won bipartisan enthusiasm, passed both houses of Congress, and was signed by the president. Under the law, subsidized policyholders would see a 25

percent increase each year until premiums reflected the "full risk" rate. The end of grandfathering would affect all policyholders when their maps were updated. Properties that had been intentionally built outside the flood zones could find themselves "mapped in" and subject to flood insurance purchase requirements for the first time—at actuarial rates. Or, if new maps showed that a property was now at higher risk, the policyholder would not be able to retain his or her earlier (lower) rate. FEMA began implementing the law without completing the affordability study.

Act II: Backlash to Biggert-Waters: Disputed Choice and Deservingness

Just three months after Biggert-Waters was signed into law, its implementation was tested: Hurricane Sandy devastated coastal New York and New Jersey (the storm also added another \$6 billion to the NFIP's debt). FEMA had been updating the map for the region when the storm hit. Wanting homeowners to rebuild with information about the new landscape of risk and what it would cost under Biggert-Waters, FEMA disseminated the "best available" versions of what the new maps would look like. In the winter of 2013, after learning he was to be remapped into a higher risk zone and being quoted an actuarial rate of \$30,000 per year, Toms River, New Jersey, resident George Kasimos started "Stop FEMA Now," a network of floodplain homeowners, specifically to protest Biggert-Waters. 44 The group—later called a "grass-roots political juggernaut" in the pages of the Wall Street Journal—grew quickly through social media, with chapters forming first in Sandy-affected New York City, and later in coastal and riverine communities nationwide. 45 Homeowners on the political right and left joined in, united in the goal of staving off the financial shocks from increased premiums under Biggert-Waters. Stop FEMA Now also gained powerful allies in the National Association of Realtors, the National Association of Home Builders, the American Bankers Association, and the US Chamber of Commerce, who viewed flood insurance increases as a threat to property values, real estate markets, and local economies. Via YouTube, Twitter,

and Facebook, Kasimos urged homeowners to write and call their representatives in Congress, and to tweet politicians and journalists with the hashtags "#stopfemanow," "#saveourhomes," and "#fixflood." The coincidence of Hurricane Sandy with the implementation of Biggert-Waters reopened questions about whether (or what) homeowners could or did "choose" and what homeowners in risky areas deserved when it came to managing the rising costs of flood risk under Biggert-Waters.

In its efforts to make increasing insurance rates morally and politically indefensible, and to preserve the affordability of flood insurance, Stop FEMA Now articulated a set of NFIP implementation failures that, it argued, made meaningful choice over exposure to risk effectively nonexistent. The failures had chiefly to do with the way the NFIP maps and communicates risk, which both Stop FEMA Now and reformers agreed was a major weakness of the program. Stop FEMA Now did not argue that the flood risk facing an individual property could not be assessed scientifically. Rather, it argued that FEMA was bad at producing and communicating those scientific assessments; as a result, many homeowners did not and could not know their "true" flood risk, nor could actuarial premiums be established on a scientific basis. In the first place, many of the maps were long outdated and therefore inaccurate visualizations of current risk. Mapping flood risk takes considerable time and resources, which FEMA and the NFIP have had difficulty sustaining. ⁴⁶ For any given community, the many years that pass between reassessments compromise the basis of sensible zoning. When Sandy hit, most of the data underlying New York City's maps, for instance, were from 1983.

Stop FEMA Now urged homeowners to fight new maps on the grounds that they "overestimated" risk whenever possible. Even if maps were up to date, their scientific and technical accuracy could be contested, through FEMA's formal appeals process, on the basis of competing and justifiable assumptions, data, and models. Stop FEMA Now argued that

homeowners would take responsibility for their individual risk but, because of the weaknesses in mapping, they could not trust that the risk was itself legitimately established. In the words of Queens, New York City activist with Stop FEMA Now:

We're not trying to say we shouldn't look at risk, and we're trying to dodge things here, but we want it to be accurate. And if you're going to tell someone you're going to lose a huge value on your house based on Biggert-Waters and maybe somebody won't invest here, or maybe you got to raise your house for 100,000 dollars, we said to them, we don't want it 99 percent correct. What you're already telling us is, it's not even 80 percent correct. We want 100 percent correct.⁴⁷

Stop FEMA Now also claimed that the NFIP had not communicated to subsidized policyholders that their rates did not in fact reflect their risk. Indeed, in the case of most subsidized properties, the "true risk" rate could not be estimated on the available data; FEMA did not have complete records of property elevations that would make such estimates possible. Because of these technical and communication failures, Stop FEMA Now argued, there had been no effective "signal" that would allow homeowners to exercise choice and control over their personal flood risk. In interviews, several officials who have audited the NFIP backed up this claim; as one of them put it, it is "not inconceivable that people have no idea what their risk actually is" and "people didn't even know they were subsidized to begin with."

Stop FEMA Now and its allies also worked to highlight histories of coastal and riverine development spurred by economic pressures for growth and facilitated by public officials and policymakers who deferred to developers. In December 2013, Columbia Law School convened a panel discussion called "Soaring Flood Insurance Rates: Should Congress Step In?," gathering flood risk and insurance experts, New York City officials, and representatives from SmarterSafer. Kevin Boyle, a Rockaway, Queens, homeowner and editor of a local newspaper, was there to provide his firsthand experience of the changes. He referenced the question of risk and choice, with visible irritation:

The other thing is, we've been in the communities. . . . There was a compact, a promise somewhat; they encouraged coastal development. And I bought my house with flood insurance, and other people built the community with a subsidized program in place. It's changing the game a little late for a lot of people.⁵⁰

To the extent that homeowners in the coastal areas of New York's boroughs had chosen to live in high-risk areas, their choice was facilitated not only by flood insurance implementation problems, but also by the interests of powerful actors, inside and outside government, who encouraged real estate development (some of whom were now political allies of Stop FEMA Now). In the words of the president of the Broad Channel (Queens) Civic Association and a New York organizer with Stop FEMA Now:

The government made a program, it was the stated policy of the United States government from '68 on, is that [flood insurance] will be available, and it will be affordable. It wasn't because oh, we want to help these people out. Maybe part of it is. It was because of the fact that all of these neighborhoods around here, back then, were looking, 'Do we build around here?' And of course the government's always been building and creating these areas! And it's been a huge tax return for the government in general, and for the American people.⁵¹

In effect, these homeowners agreed with SmarterSafer and other supporters of Biggert-Waters on this point, as well: the federal government *had* allowed or even encouraged habitation in areas that should perhaps never have been developed. As described above, FEMA had not ensured that local communities were complying with the land use requirements that were supposed to be a condition of accessing the NFIP, despite early and consistent warnings from the GAO and other experts.⁵² Communities were getting protection—and individuals were getting subsidies and grandfathered rates—but local officials were not actually restricting or regulating development in the flood zones and were thus putting more people and property at risk. In fact, over time, the federal government weakened the standards such that "by 1994 the Clinton administration simply required that 'positive attitudes' with respect to floodplain management be 'encouraged.'"⁵³ But Stop FEMA Now drew a different conclusion from this history, arguing instead that the problem and its solution were to be found, not in the incentives facing insured individuals, but rather

in the collective failures and contradictions of public policy related to natural hazards and economic development.

Stop FEMA Now had complicated the argument about past choices, asserting that homeowners were not to blame for the crisis facing the NFIP, their individual at-risk situations, or their troubles in the face of actuarial rating. They were indeed still victims—of policy failures and contradictions—deserving of sympathy and solidarity. By late in the summer of 2013, it was clear that the mobilization had the attention of the national media and of politicians. Senators Mary Landrieu (D-LA), David Vitter (R-LA), Robert Menendez (D-NJ), and Charles Schumer (D-NY) vowed to address the concerns of Stop FEMA Now and reopened discussions of flood insurance in Congress. SmarterSafer and its allies had reason to worry about the longevity of their reform; they ramped up their media outreach to explain and justify Biggert-Waters. In their attempts to wrest control of the public perception of Biggert-Waters, the reformers—particularly environmentalists and scientists—continued to stress the importance of risk-based rating for the purposes of planning and individual decision making in the context of climate change.⁵⁴ Though they acknowledged the existence of mapping errors, the general picture painted by the science was unambiguous; these were tough but nevertheless urgent and necessary changes, meant to make individuals more resilient.

Defenders of Biggert-Waters confronted the "deservingness" of homeowners by turning to arguments about whom the shift to actuarial rating would really affect. There were "truly needy" policyholders, as experts had testified in congressional hearings, but in the wake of the backlash they called any retreat on NFIP reform a "beach house bailout." Taxpayers were being asked to continue to support the owners of vacation homes and luxury condominiums. The president and chief economist of the Insurance Information Institute (III) argued that below-risk premiums were subsidizing millionaires:

I mean, it was subsidizing vacation homeowners, businesses, properties that have been repeatedly flooded. Is this a good use of taxpayer money in this time of austerity? Probably not. Does it make sense at all for people to be subsidizing for people to live on the beach? My answer to that is no. And I think, unless you're one of the people who's receiving that subsidy, the answer is generally no. . . . Why on earth should the federal government be providing subsidized coverage to millionaires to have a beach house? There's no rationale for that.⁵⁵

The notion of the beach house bailout also steered the argument for reform out of the potential trap of entrenched sympathy for and solidarity with disaster victims. Biggert-Waters' implementation had coincided with Hurricane Sandy. In the national media, the optics of the backlash to Biggert-Waters centered on how its changes were affecting areas devastated by the storm, where Stop FEMA Now had its origins. Stories in the press showed families, standing in the wreckage of their homes, describing how even if they could rebuild, they might not be able to afford to insure and thus faced displacement. These were sympathetic figures: not only had they just suffered catastrophic loss, only to face a new source of financial strain, but they tended to be white and working- or middle-class families. A slow and complex process for settling claims after Sandy also made the NFIP appear insufficiently responsive to the plight of those who had paid in, attracting the ire of members of Congress.

Defenders of Biggert-Waters argued that, despite the optics, these homeowners were *not* representative of who was really going to be affected by the changes to the NFIP. The NFIP needed reform because the majority of the people who were benefiting from a subsidized system could afford *not* to be subsidized. They did not deserve the sympathy of the public, or the support of taxpayers, because they could and should take responsibility for living on the water. One of the founders of the SmarterSafer coalition, a leader of a libertarian think tank, distinguished those who deserved sympathy from those who did not:

First, the places that have been hit the hardest so far [by Biggert-Waters] are non-primary residences—second homes—and severe repetitive loss properties that taxpayers have already rebuilt. The affordability issue? I don't care, and I don't think anybody else should, either. Nobody's entitled to a second home, and almost nobody

is entitled to have the taxpayers rebuild their house more than once. . . . In the case of severe repetitive loss properties, there are a handful of people who are maybe old or long-term incumbent homeowners, who you do have to feel sorry for. . . . Yes, there may well be pain to them. But I don't understand how or why there's a public responsibility to subsidize somebody to live in a particular house in a particular place. There's some public responsibility to house people. People like to live near water. The houses facing the highest rates are the houses right near water, which are expensive. To me, there is an affordability issue, but it's actually reasonably small. ⁵⁶

A reformed NFIP would withdraw support from the undeserving wealthy: a group that was receiving an unneeded and unjust subsidy. The editorial board of the *Wall Street Journal* concurred, describing flood insurance as "a classic example of powerful government aiding the powerful, encouraging the affluent to build mansions near the shore," in a December 2013 editorial.⁵⁷

Stop FEMA Now argued instead that Biggert-Waters was affecting a population deserving of solidarity: ordinary, hardworking families, trying to hold onto a piece of the American dream through homeownership. They could not afford the increase in premiums; actuarial rates would force them out of their homes and devastate them economically. On September 28, 2013, three days before some of Biggert-Waters' rate increases were to go into effect, protests took place across ten states, all under the banner of Stop FEMA Now. At the rally in Queens, New York, a resident of Hamilton Beach told the crowd that his neighborhood consisted of:

mostly single family homes. Most of our residents have family ties to our community, having grown up there and later purchased their first homes there. The homes are modest but they are *our homes*. Homes that would become unaffordable if the flood insurance rates are allowed to skyrocket. Homes that would become virtually unsellable if the buyer is required to carry an outrageously high flood insurance premium.⁵⁸

In an open letter to Congress posted to Stop FEMA Now's website in February 2014, a Rockaway organizer, a retired firefighter himself, wrote:

Although some groups lead you to believe that all flood policyholders and people who live by the water are multimillionaires, nothing could be further from the truth. In reality we are police officers, firemen, teachers, nurses, sanitation men, and soldiers, also senior citizens and retirees greatly devastated by ruinous flood premiums. We are

also families who must live by the water for our livelihood: fishermen, oil workers, engineers, sailors, etc. We are people who have survived for years living in areas that have never been flooded. Now a manmade disaster—the Biggert-Waters Act—will destroy our neighborhoods, causing the unthinkable prospect that we will lose our homes.⁵⁹

The "man-made disaster" of Biggert-Waters would push out workers and families on the basis of risk assessments and insurance prices. NFIP policyholders deserved support and solidarity because actuarial rates would have unequal and economically catastrophic effects for the many policyholders who could not afford them.

In truth, property owners of highly varied resources were affected by Biggert-Waters. Luxury condominium developments and vacation homeowners have benefited from subsidized flood insurance, along with working-class communities. ⁶⁰ In the wake of Biggert-Waters and Sandy, opposing sides of the reform issue staked a position as to whether NFIP policyholders deserved redress by foregrounding one group or the other. What emerged discursively from the contestation between the two was a notion of deservingness as determined around an axis of ability to pay for risk exposure—ability to take responsibility on the basis of risk and its price. Those who deserved sympathy and support were those who truly could not financially support their exposure to risk.

Act III: Reforming the Reform

In response to the controversy, in October 2013, Rep. Maxine Waters (D-CA), whose name was on the original bill, organized a bipartisan congressional group to begin work on new flood insurance measures in the House and Senate. Her office issued a statement: "Neither Democrats nor Republicans envisioned [Biggert-Waters] would reap the kind of harm and heartache that may result from this law going into effect." In March 2014, again with bipartisan support, Congress passed the Homeowner Flood Insurance Affordability Act (HFIAA). Kasimos, the founder of Stop FEMA Now, was invited to the signing. The terms of the HFIAA make further technical adjustments to the NFIP that reflect the arguments made

in the wake of Biggert-Waters. The HFIAA maintained Biggert-Waters' resource commitment to flood risk assessment and mapping; the NFIP must produce up-to-date, accurate scientific information to rate insurance and to provide a sound basis for individual choices going forward. This reaffirmed personal exposure to flood risk as something individuals could and should play an active role in understanding and managing. The HFIAA also reinstated grandfathering. Homeowners would return to paying the rate they had been quoted at the time they purchased the policy—when they made a choice on the best or only information available to them at the time.

Congress also addressed the issue of deservingness as it had been framed in the backlash to Biggert-Waters. The two sides had disputed whether at-risk homeowners deserved sympathy, the key contention being whether or not these homeowners could actually afford to pay actuarial insurance premiums: were they beach house millionaires or ordinary folks? With its new legislation, explicitly an "affordability act," Congress indicated that the NFIP first needed to identify and institutionalize methods for telling the difference, and to define criteria for treating the two groups differently in order to avoid unduly harming homeowners when rates increased. The HFIAA did not repeal Biggert-Waters, but it did delay the most dramatic premium increases while FEMA completes its affordability study and produces a "framework." Now, although homeowners could return to below-risk rates, they could expect their premiums to increase by as much as 18 percent every year, moving toward actuarial rates. The HFIAA makes it clear that any assistance should be offered in consideration of a policyholder's income or wealth, providing "targeted assistance to flood insurance policyholders based on their financial ability to continue to participate in the National Flood Insurance Program." 62

The next year, in March and December 2015, the study committee, convened by the National Academy of Sciences (NAS) and comprising social scientists, flood experts, and

statisticians, released two reports to guide the design of an affordability framework. The fundamental question it had to answer was how the federal government might assess the affordability of premiums and policyholders' ability to pay. As the committee pointed out, introducing an affordability framework would require the NFIP to collect and use new kinds of data on its policyholders: their income, wealth, and housing costs. 63 In addition, the committee noted, introducing means testing to the NFIP for the first time would require further political decisions regarding eligibility: Who counts as "truly needy" of continued federal support in order to afford flood insurance? Whereas these kinds of distinctions are common in housing and public assistance, they represent a significant change in the particular context of natural hazards and disaster policy, where means tests and need-based considerations are not so familiar. After natural disasters, for instance, federal relief is damage-based, not income-based.⁶⁴ In their first report, the NAS committee looks to other federal agencies and programs that use means tests, including HUD's housing vouchers, the Supplemental Nutrition Assistance Program, Medicaid, and the Children's Health Insurance Program for potential methods of distinguishing eligibility and determining attendant support. 65 Following the release of the NAS reports, a February 2016 GAO study determined that depending on the eligibility threshold used, 47–74 percent of subsidized policyholders would likely be eligible to receive some form of assistance.⁶⁶

Discussion

The effort to reform the NFIP, to address its massive deficit and restore its fiscal stability, was waged as a debate about the fair terms of social interdependence. How should individual responsibility mitigate each policyholder's contribution to the risk pool of the NFIP? Who gets to live how and where and at what cost to whom? Supporters of Biggert-Waters argued that flood risk was choice-sensitive, since risk information is available, and that those affected by Biggert-Waters were affluent vacation homeowners who did not deserve

sympathy. The NFIP thus ought finally to adhere to its actuarial aims, underwriting risks more tightly so that individuals are responsible for the risks they bring to the pool and for understanding and managing the true cost of living in the floodplain. Opponents of Biggert-Waters argued instead that homeowners had not been able to exercise choice over their risk exposure and that it was ordinary, hardworking Americans who would suffer under a fully actuarial regime. Flood insurance premiums thus needed to remain affordable, with reasonable contributions to the risk pool. The controversy surrounding Biggert-Waters arrived at a definition of deservingness around ability to pay for risk exposure: those who could afford their full-risk rates should pay them; those who could not should get some form of assistance. Subsidies were unwarranted and unjust, and should be withdrawn, if they were going to those who could afford to go without them. In other words, it now mattered who was receiving assistance and on what terms: rich and poor alike might face flood risk, and find themselves at some point under water, but deservingness of sympathy and support could not be assured on that basis alone.

As discussed above, the deservingness of natural disaster victims has historically been premised on an understanding that their suffering is not the result of their own choices. In the flood insurance context, where floods are not treated as acts of God but rather as probabilistic risks, this is open to contestation and uneasily coexists with continued sympathy for victims—and the provision of disaster relief—once the flood eventually hits. In the controversy over Biggert-Waters, given the historical failures of the NFIP, it became difficult to assign blame for *past* choices. The ultimate outcome, however, enshrined choice on the basis of actuarial price signals as central to the governance of flood risk going forward.

Defining deservingness around ability to pay for risk exposure makes the designation not about blame for the choice but about who can bear the costs of it. And as in other arenas of social policymaking, this definition undergirded the institutionalization of changes to natural

hazards policy: with its affordability framework, the NFIP is pursuing methods and criteria that will make such distinctions practically possible in the administration of flood insurance as it makes its actuarial shift. Contributions to the risk pool will be attenuated by a consideration of means, drawing a line internal to the program in order to adjust obligations to those who can and cannot afford to cover their personal exposure to risk.

The incorporation of need-based considerations in the NFIP qualifies an individualization of responsibility for addressing the problem of flood loss. Given the hybrid public-private nature of the program, this individualization takes a particular form. The NFIP does not individualize responsibility by excluding people from the community of fate, leaving them completely on their own, as a truly private system might. Instead, it individualizes responsibility in two different but related senses. It makes all policyholders more *accountable* for their own risks through the programwide shift to risk-based premiums, as well as responsible for managing their own exposure to risk by modifying their consumer choices on that basis. ⁶⁷ Stop FEMA Now's achievement, in the end, was to blunt the negative distributional effects of this individualization, through the commitment to provide assistance to those who cannot afford to be fully accountable for the risks they bring to the pool. This outcome protected those homeowners for whom the income shocks could be catastrophic and placated the protesters for the time being.

Fundamentally, the core presumptions are that individuals are the source of risk and that greater individual responsibility on the part of those facing high risk, expressed as a form of market-based financial decision making, will most effectively manage our relationship to catastrophe. The faith in individual incentives remains, despite the evidence that a combination of factors has prevented them from working very well in practice, not least of which is policymakers' aversion to acting on that faith. The legislation does toughen penalties on mortgage lenders who fail to enforce the mandatory purchase requirement and

provides resources to strengthen enforcement of land use regulations and building codes. These measures address important implementation failures, but it remains to be seen whether they can withstand the enduring pressure for local growth and development that have compromised such efforts in the past. Higher prices of insurance may well encourage—or force—some residents to relocate out of harm's way, potentially taking huge losses on their most important assets, but the affluent may never be "priced out" of risky areas and more may even move in. As flood risks spread and worsen—as FEMA itself expects they will under further conditions of climate change—insuring them will require more and more of household budgets, with households having to find ways to manage the pressure on their finances. This will unfold in a broader context of risk shifts that have left American families providing more and more for their own security.⁶⁸ For the time being, the program remains in debt, bringing in total premiums that will likely be insufficient to cover the next catastrophic flood event.⁶⁹

The affluent among subsidized NFIP policyholders may indeed be able to afford full-risk costs and have been benefiting from a policy that, like many others of the American welfare state, inequitably, and often invisibly, enhances the position of the relatively well-off. Homeowners are a powerful political constituency and mobilize to defend their privileges when threatened. To Stop FEMA Now's priority was to fight off income shocks and threats to their property values, a set of immediate but rather limited interests that aligned them with some of the very actors who had helped put them at risk. Stop FEMA Now was not putting forth a vision of broad collective responsibility that would have, perhaps, led it to make common cause instead with renters and poor people who suffer worse from floods. After Sandy, public housing residents in the outer boroughs of New York City—neighbors of the activists in Stop FEMA Now—went without power or heat for weeks and, over four years later, over a dozen public housing sites are still using temporary boilers. Renters affected by

Sandy, more likely to be poor and people of color, reported increased rents, displacement from their pre-Sandy homes, overcrowding, and dangerous and unsanitary housing conditions. Flood insurance is itself a policy that helps only those who have something to lose, and these populations struggle to recover without the benefit of natural hazard and disaster policies that target homeowners. Yet in mounting their own reactive set of claims about choice and deservingness, the Stop FEMA Now homeowners laid open some of the public policy contradictions that left individuals responsible for managing risks that were collectively produced, imperfectly understood, and constantly changing.

The re-reformed NFIP represents a tentative political resolution to the competing individualistic and solidaristic demands made on the program—tentative because it must be reauthorized every five years, when these arrangements can change again. It maintains the actuarial status of the NFIP, insuring natural hazard risk much like a private insurer in order to manage the incentives and responsibilities of individuals. However, it maintains its solidaristic commitment to providing guaranteed coverage and to keeping it within financial reach—no longer through subsidies based on risk, but through some new form of "targeted assistance" based on means. Some flood insurance experts have observed that true actuarialism and affordability in the NFIP, given its embattled history, may be economically and politically incompatible.⁷³ In high-risk flood zones truly actuarial rates will be unaffordable for too many people, and every move in that direction has been and will be met with opposition, even as some communities face a future in which they will almost certainly be underwater. The case examined here shows that reconciling the two is, at a minimum, politically contentious.

It may make more sense then to extend insurance solidarity, widening the pool of people who must buy into flood insurance to the 500-year floodplain or beyond, or even making it a mandatory part of all homeownership financing. After all, floods have never

stopped short at the borders of the official flood zones, beyond which disaster relief continues to compensate uninsured losses. Already, over 20 percent of flood insurance claims come from losses outside of currently mapped high-risk zones (where flood insurance is available but not mandatory). 74 A FEMA-commissioned report on the future effects of climate change on the NFIP found high-risk flood zones increasing an average of 40-45 percent by the year 2100.⁷⁵ Rather than engage in political debates about what people in those zones did or ought to choose, we might instead see the coming floods, which we have scientific reason to believe will affect more and more people, as requiring—economically and morally—a broader sharing of the burdens and gains of social interdependence. Economically, extending the risk pool (which would also demand stronger enforcement of the mandatory purchase requirement than has historically existed) protects more people and brings more revenue into the program, helping the program cover the losses of the next flood and keeping it on firmer financial footing. Morally, it treats the coming disasters as a shared challenge, the costs of which we have a duty to share broadly—not because they are an act of God, but because no matter how much we know about the risk, no matter how precisely we can map and price it, collective failures both create flood risk and expose people to it. Some communities are already starting to see things this way, turning the financial pressure on individuals into a mandate to pursue collective flood security, in the form of mitigation projects and buyouts that provide resources for entire communities to retreat from risky waterfronts. ⁷⁶ The goal, ultimately, is to keep people safe in the face of those hazards, by combining insurance protection with stronger land use regulations and collective investments in rebuilding safer and smarter, higher up or further from the water's edge.

Conclusion

Scientists have concluded that coastal flooding due to global warming has already begun.⁷⁷ Yet scholars, policymakers, and publics are only beginning to grasp the challenges climate

change poses to welfare states and how individuals and communities might be made more resilient to its worst effects. In some sense, climate change represents the kind of "exogenous shock" described by Esping-Andersen, putting immense new strain on the existing institutional configuration and revealing mismatches between policies and programs and the new and changing social (and natural) risks that citizens face. The experience of natural disasters has serious, long-term consequences for the economic well-being of individuals and communities. How the state distributes responsibility in this policy domain—who gets risk, who gets security, on what terms and at what cost—constitutes an important way in which the state provides for the welfare of its citizens. We ought to include within our analytical view the moral underpinnings of arguments for shifting the costs associated with natural disasters across the balance sheets of families and of the state, particularly as those disasters increase in frequency and severity.

Whether flood insurance, disaster relief, and other forms of natural hazards and disaster policy can organize a social response that adequately protects citizens from an uncertain and changing hazard is an unsettled question. As the NFIP heads into its next reauthorization, much of the policy discussion has focused on potential privatization of the program. Private insurers now believe they have the technical capacity to underwrite flood risk and, with the NFIP moving in the direction of actuarial rating, will be able to compete on price. However, private insurers may skim off the low risks, leaving only the high risks to the state. That will compound the strain. And as other risks, currently privately underwritten, intensify under climate change (e.g., wind, wildfire), increasing insurance premiums may mean that more and more people cannot afford to buy their way into private networks of risk sharing. They too may be left to the state to handle, and a "splintering protectionism" generated in which increasing burdens are unequally felt by different citizens.

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 Affordability of National Flood Insurance Program Premium: Report 1 (Washington,
 DC: National Academies Press, 2015).
- ²⁹ In especially bad flood years, the NFIP would borrow money from the US Treasury, but before Katrina, it had always been able to repay its debts. See King, *The National Flood Insurance Program*.
- ³⁰ Since 1994, recipients of federal flood disaster assistance have been required to purchase and hold flood insurance to protect against future flood losses. See King, *The National Flood Insurance Program*.
- ³¹ As of October 2014, the environmental group members included American Rivers, the Center for Climate and Energy Solutions, Ceres, ConservAmerica, Defenders of Wildlife, the Natural Resources Defense Council, the National Wildlife Federation, the Nature Conservancy, and the Sierra Club. Ceres and the Nature Conservancy have since left the coalition.
- ³² As of October 2014, the conservative, libertarian, and taxpayer group members included the Coalition to Reduce Spending, the R Street Institute, the National Taxpayers Union, Taxpayers for Common Sense, and Taxpayers Protection Alliance.
- ³³ For more on the formation and strategy of SmarterSafer, see Eli Lehrer, "Strange Bedfellows: SmarterSafer.Org and the Biggert-Waters Act of 2012," *Duke Environmental Law & Policy Forum* 23 (2013): 351–61.
- ³⁴ SmarterSafer founding member, interview by Rebecca Elliott, October 25, 2013.
- ³⁵ Allianz of America, Liberty Mutual, USAA, and Swiss Re, as well as the National Association of Mutual Insurance Companies (NAMIC). all signed on to support Biggert-Waters. They are also part of the SmarterSafer coalition.
- ³⁶ US Congress, House, Subcommittee on Insurance, Housing, and Community Opportunity, Legislative Proposals to Reform the National Flood Insurance Program, Part I: Hearing before the Subcommittee on Insurance, Housing, and Community Opportunity, House of Representatives, 112th Cong., 1st sess., 2011, 3.

³⁷ Ibid., 7–8, 10.

³⁸ Ibid., 8, 10, 27.

³⁹ Ibid., 35.

⁴⁰ US Congress, House, Subcommittee on Insurance, Legislative Proposals, Part I, 37, 39.

⁴¹ Ibid., 69.

⁴² US Congress, Senate, Subcommittee on Economic Policy of the Committee on Banking, Housing, and Urban Affairs, *Examining the Need for Long-Term Reauthorization and Reform of the National Flood Insurance Program*, 112th Cong., 2nd sess., 2012, 3.

- ⁴⁵ Josh Dawsey, "The Super Activist That Sandy Made," *Wall Street Journal* (March 23, 2014).
- 46 Political jockeying with budgets and the shifting priorities of Congress have meant that, throughout its history, the NFIP has not been able to count on the consistent commitment required to keep maps updated; see Knowles and Kunreuther, "Troubled Waters."
- ⁴⁷ Stop FEMA Now activist, interview by Rebecca Elliott, October 22, 2013.
- ⁴⁸ Committee on the Affordability, *Report 1*.
- ⁴⁹ Federal official, interview with Rebecca Elliott, October 26, 2013.
- ⁵⁰ "Soaring Flood Insurance Rates: Should Congress Step In?" (panel discussion, Columbia Law School, Center for Climate Change Law, New York City, December 4, 2013).
- ⁵¹ President of the Broad Channel Civic Association, interview by Rebecca Elliott, September 26, 2013.
- ⁵² Government Accountability Office (GAO), Formidable Administrative Problems Challenge Achieving National Flood Insurance Program Objectives, RED-76-94: (Washington, DC: GAO, 1976); Oversight of the National Flood Insurance Program: Hearing before the Committee on Banking, Housing, and Urban Affairs of the United States Senate, 109th Cong., 1st sess. (2005), statement of Robert J. Hunter, Director of Insurance, Consumer Federation of America; Knowles and Kunreuther, "Troubled Waters."

- ⁵⁴ Rachel Cleetus, *Overwhelming Risk: Rethinking Flood Insurance in a World of Rising Seas* (Cambridge, MA: Union of Concerned Scientists, 2013); Rob Moore, "The Changing Climate for Flood Insurance," *NRDC Switchboard* (August 16, 2013).
- ⁵⁵ President and chief economist of the Insurance Information Institute, interview by Rebecca Elliott, October 17, 2013.

⁴³ Ibid., 103.

⁴⁴ George Kasimos, interview by Rebecca Elliott, October 16, 2013.

⁵³ Steinberg, Acts of God, 11.

⁵⁶ SmarterSafer founding member, interview by Rebecca Elliott, October 25, 2013.

- ⁵⁷ "Editorial: Flooding Taxpayers Again: A Bipartisan Caucus Wants to Keep Subsidies Flowing to the 1%," *Wall Street Journal* (December 1, 2013).
- ⁵⁸ Roger Gendron, remarks at Rockaway, New York Stop FEMA Now rally, 28 September 2013.
- ⁵⁹ Palmer Doyle, Open letter on Stop FEMA Now Facebook page, available at https://www.facebook.com/StopFemaNow/photos/a.120204218150455.21829.120198
 111484399/256475421190000/. Accessed 27 February 2014.
- ⁶⁰ Bill Dedman, "Meet the Flood Insurance 'Robin Hood' Who Saves Condo Owners Millions," *NBC News* (February 19, 2014); Leitsinger, "For Average Joes."
- 61 "Rep. Waters, Author of Flood Reform Act, Calls for Delay in Implementation," *Insurance Journal* (September 30, 2013); online at http://www.insurancejournal.com/news/national/2013/09/30/306602.htm.
- ⁶² Committee on the Affordability, *Report 1*.
- ⁶³ Committee on the Affordability of National Flood Insurance Program Premiums, Affordability of National Flood Insurance Program Premiums—Report 2 (Washington, DC: National Academies Press, 2015), 4.
- ⁶⁴ The Small Business Administration also offers loans for repair and rebuilding, which provide essential financial resources to many homeowners; these are means-tested and must be repaid.
- ⁶⁵ Committee on the Affordability, *Report 1*.
- ⁶⁶ Calculated according to policyholders' income. The range captures eligibility thresholds of 80 and 140 percent of area median income, thresholds commonly used in HUD and other government programs; see GAO, *National Flood Insurance Program: Options for Providing Affordability Assistance*, GAO-16-190 (Washington, DC: GAO, 2016). At the time of writing, FEMA and Congress had not yet implemented a new schedule of rates or established the particulars of the NFIP's affordability framework. An April 2017 GAO study of NFIP reform further recommended that Congress consider (a) funding such an assistance program through appropriation rather than discounted premiums, (b) making any assistance temporary, (c) allowing assistance to be used for the purchase of private policies, (d) prioritizing investments in mitigation over premium assistance where feasible, and (e) prioritizing mitigation loans over mitigation grants. See GAO, *Flood Insurance: Comprehensive Reform Could Improve Solvency and Enhance Resilience*, GAO-17-425 (Washington, DC: GAO, 2017).

- ⁶⁷ See Baker, "Containing the Promise of Insurance," on the multiple meanings of "responsibility" in insurance.
- ⁶⁸ Jacob S. Hacker, *The Great Risk Shift: The Assault on American Jobs, Families, Health Care, and Retirement* (Oxford: Oxford University Press, 2006); Craig Calhoun, "The Privatization of Risk," *Public Culture* 18, no. 2 (2006): 257–63; Marianne Cooper, *Cut Adrift: Families in Insecure Times* (Berkeley: University of California Press, 2014); Margaret Somers, *Genealogies of Citizenship: Markets, Statelessness, and the Right to Have Rights* (Cambridge: Cambridge University Press, 2008).
- ⁶⁹ Keith Hall, Congressional Budget Office, to Jeb Hensarling, Chairman, US House Financial Services Committee, April 19, 2017, *Re: Preliminary Results from CBO's Analysis of the National Flood Insurance Program;* online at https://www.cbo.gov/system/files/115th-congress-2017-2018/reports/52638-nfipletter.pdf.
- Nuzanne Mettler, The Submerged State: How Invisible Government Policies Undermine American Democracy (Chicago: University of Chicago Press, 2011); Isaac Martin, The Permanent Tax Revolt: How the Property Tax Transformed American Politics (Stanford, CA: Stanford University Press, 2008).
- ⁷¹ Christopher Robbins, "Gentrified Aquarium: De Blasio's Streetcar and the Tale of Two Waterfronts," *Village Voice* (September 13, 2016).
- ⁷² Make the Road New York (MRNY), *Treading Water: Renters in Post-Sandy New York City* (New York: MRNY, 2014).
- ⁷³ David Moss, "Courting Disaster? The Transformation of Federal Disaster Policy since 1803," in K.A. Froot, ed., *The Financing of Catastrophe Risk* (Chicago: University of Chicago Press, 1999), 307–62; Committee on the Affordability, *Report 1*.
- FEMA, *The National Flood Insurance Program*; online at https://www.fema.gov/national-flood-insurance-program.
- ⁷⁵ AECOM, *The Impact of Climate Change and Population Growth*. The ranges reflect different assumptions about shoreline recession.
- ⁷⁶ Liz Koslov, "The Case for Retreat," *Public Culture* 28, no. 2 (2016): 359–87. The pressures of the NFIP's actuarial shift have also increased interest in FEMA's own grants program for mitigation projects meant to reduce flood damage.

William V. Sweet and Joseph Park, "From the Extreme to the Mean: Acceleration and Tipping Points of Coastal Inundation from Sea Level Rise," *Earth's Future* 2, no. 12 (2014): 579–600.

⁷⁸ Gøsta Esping-Andersen, *Social Foundations of Postindustrial Economies* (New York: Oxford University Press, 1999).

⁷⁹ Leigh Johnson, "Catastrophic Fixes: Cyclical Devaluation and Accumulation through Climate Change Impacts," *Environment & Planning A* 47 (2015): 2503–21; Ericson, Barry, and Doyle, "The Moral Hazards of Neo-Liberalism"; Dean Curran, *Risk*, *Power, and Inequality in the 21st Century* (London: Palgrave MacMillan, 2016).