

D I A L O G U E

# THE COASTAL PROPERTY INSURANCE CRISIS

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## SUMMARY

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More severe storms and rising sea levels pose a threat to U.S. coastal communities, including millions of homes and businesses. Insured damages to coastal property are steadily increasing, insurance premiums are increasing, and private insurance companies have stopped serving some coastal states. Taken together, the consequences of declining availability and increasing costs constitute a coastal property insurance crisis. On March 13, 2024, the Environmental Law Institute hosted a panel of experts to discuss the crisis and consider what programs and policies insurance providers and governments could adopt to best guide the coastal property insurance market toward desired national goals. Below, we present a transcript of that discussion, which has been edited for style, clarity, and space considerations.

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**Jeffrey Peterson** (moderator) is a Visiting Scholar at the Environmental Law Institute and Co-Facilitator of the Coastal Flood Resilience Project.

**Alice Hill** is the David M. Rubenstein Senior Fellow for Energy and the Environment at the Council on Foreign Relations.

**Jessica Dandridge** is Executive Director of the Water Collaborative of Greater New Orleans.

**Carolyn Kousky** is Associate Vice President for Economics and Policy at the Environmental Defense Fund.

**Dave Jones** is Director of the Climate Risk Initiative at the UC Berkeley School of Law Center for Law, Energy, and Environment.

**Jeffrey Peterson:** Our goal today is to provide some insight into the challenges that more severe storms and rising seas pose for coastal property insurance and what might be done to strengthen coastal property finance. I'll give a short introduction, then each panelist will offer their thoughts on the challenge. Following each of their presentations, we'll have a short discussion period among the panelists, followed by questions from the audience.

I want to summarize some key points to keep in mind during the webinar. Climate change poses a significant risk to communities throughout the country, but communities along the coast face the combined impacts of more severe storms bringing temporary flooding and permanent inundation by rising seas. Storms and rising seas bring floodwaters to homes and businesses, but they also threaten coastal ecosystems and critical infrastructure assets that provide essential services, such as transportation, energy, and water.

Coastal storms are a major risk to life and property, and major storms can deliver storm surges of up to 14 feet. A warming climate is causing an increase in the number of the strongest storms. By 2100, the National Oceanic and

Atmospheric Administration (NOAA) projects sea-level rise along the U.S. coast to average about four feet in the intermediate scenario, with an average increase of more than seven feet being possible.<sup>1</sup>

A combination of more severe storms and rising seas is projected to result in potential losses of coastal property running into trillions of dollars. Many low-income and disadvantaged communities are among those in harm's way. These communities are disproportionately affected by climate change and often lack the resources to respond. Many property owners along the coast rely on insurance to provide a financial backstop for flood and storm losses.

The insurance comes in several forms. The National Flood Insurance Program (NFIP) provides most of the insurance for traditional storm-driven coastal flood risk and is required by federally insured mortgages. Private insurance companies provide more general property insurance, covering storm damages other than conventional flooding. Some states are now backstopping these private policies with insurance of last-resort programs. These policies offer a degree of financial security to coastal homeowners and stability to the property financial system.

Unfortunately, as climate change drives more severe storms and rising seas, insured damages to coastal property are steadily increasing. Anticipating sharp increases in damage claims from coastal policyholders, private insurance companies have stopped serving some coastal states. There have been reductions in the coverage and some dramatic increases in rates. There have been changes to coastal

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1. NOAA, GLOBAL AND REGIONAL SEA LEVEL RISE SCENARIOS FOR THE UNITED STATES (2022), <https://oceanservice.noaa.gov/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR-scenarios-US.pdf>.

property insurance in California, Louisiana, Florida, North Carolina, and Texas.<sup>2</sup>

In response to increased risks and increased insurance prices, some owners are selling properties or forgoing insurance when not required by a mortgage. These trends pose risks to the financial health and security of homeowners and to the economy more generally. High-cost insurance or the risk imposed by no insurance will gradually reduce the value of coastal homes that are the principal asset for many homeowners, and lead to increased mortgage default rates.

Mortgage defaults can be financially crippling to homeowners, and rising default rates could threaten financial institutions, including federal institutions that guarantee mortgages. Low-income homeowners are least able to absorb premium increases and least able to manage a sale or relocation. Declining coastal property values also threaten to lower municipal tax revenues and the capacity to repay municipal bonds. Taken together, the consequences of declining availability and increasing costs constitute the coastal property insurance crisis.

This discussion is intended to provide expert assessment of this challenge and to consider what steps should be taken to strengthen coastal property in the general financial system. For example, improvements to the current system might include more reliable and sustainable insurance markets, better promotion of risk-mitigation practices, more standard coverage packages, more affordable premiums for low-income people, and better protection of federal guaranteed mortgages. It's a complex problem with no easy answers, but we are fortunate to be joined by an expert panel with deep knowledge of these challenges.

Alice Hill is the David M. Rubenstein senior fellow for energy and the environment at the Council on Foreign Relations.<sup>3</sup> Her work focuses on risks, consequences, and responses associated with climate change. She previously served as special assistant to President Barack Obama and senior director for resilience policy on the National Security Council, where she led the development of national policies to build resilience to catastrophic risk, including climate change and biological threat.

Jessica Dandridge is the executive director of the Water Collaborative of Greater New Orleans, where she focuses on water management, hazard mitigation, water justice, and equitable community transformation through blue-green jobs and the renewable economy. She is the co-chair of the National Academies of Sciences, Engineering, and Medicine's Resilient America Roundtable, and a member of the Community Advisory Board for the Coalition to Restore Coastal Louisiana.

Carolyn Kousky is associate vice president for economics and policy at the Environmental Defense Fund and was previously executive director at the Wharton Risk Man-

agement and Decision Processes Center at the University of Pennsylvania. Dr. Kousky's research examines multiple aspects of climate risk management and policy approaches for increasing resilience. She is the author of *Understanding Disaster Insurance: New Tools for a More Resilient Future* and an editor of *A Blueprint for Coastal Adaptation*.

Dave Jones is director of the Climate Risk Initiative at the University of California, Berkeley, School of Law Center for Law, Energy, and Environment. He was senior director for environmental risk at The Nature Conservancy from 2019 to 2021, where he focused on nature-based risk-mitigation practices. He served as California's insurance commissioner from 2011 through 2018. He also founded and chaired the Sustainable Insurance Forum, an international network of insurance regulators, developing climate risk regulatory best practices.

**Alice Hill:** It is an honor to be on this panel with the leading experts on insurance and climate risk. Insurance is a backbone for the economy. It allows people to get back on their feet after a disaster. They can repair their homes and businesses, reopen their doors, and restock their shelves.

Without insurance, governments or philanthropies have to cover the losses or the losses fall on the individuals themselves. What we're seeing is some real upheaval in the insurance markets because of the changing risk from climate change. If insurance leaves—if they don't want to insure a particular risk—then businesses suffer, families suffer, and as Jeff has mentioned, tax revenues fall, leaving less money for schools, police, and infrastructure. The real estate market can stumble, and mental health suffers as well.

The United States has a lot of property that's located very near our coasts. According to a recent estimate, more than \$1 trillion worth of property is located within 700 feet of the coast.<sup>4</sup> These properties' proximity to water bodies may put them at risk of extreme weather, hurricanes, high-tide flooding, as well as relentless sea-level rise from rising temperatures.

In addition to homes and businesses, we have a lot of critical infrastructure that's right near our coastlines. We tend to locate our wastewater treatment plants right next to the water, for obvious reasons. And we also have many military installations, airports, power plants, oil refining facilities, and other infrastructure right along our coastlines.

We have more than 60,000 miles of roads and bridges located in U.S. coastal floodplains.<sup>5</sup> All of those are at increasing risk from climate-fueled extremes. But climate change is altering the risk picture that we are all suffering under as Americans, as well as for insurance companies.

Forty years ago, the United States experienced on average one disaster causing \$1 billion or more in damage every four months, and that's adjusted to 2022 dollars. Today,

2. See Environmental Law Institute, Read Ahead Paper 4-5 (2024), <https://www.eli.org/sites/default/files/files-general/2024-03-13%20Coastal%20Property%20Insurance%20Read%20Ahead%20Document.pdf>.

3. *Editor's Note:* Alice Hill serves on the boards of the domestic subsidiaries of Munich Re. The views she expresses in this Dialogue are her own.

4. Elizabeth Fleming et al., *Coastal Effects, in IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES: FOURTH NATIONAL CLIMATE ASSESSMENT, VOL. II*, at 330 (D.R. Reidmiller et al. eds., 2018).

5. *Id.* at 326.

the nation experiences a \$1 billion disaster on average every three weeks.<sup>6</sup>

You can look at the newspaper today or newsfeeds of what's been happening on the Eastern Seaboard; Maine and New Hampshire suffered four storms this winter. The pictures show that we have people in places that are flooding already, and we have structures that are not built to withstand the type of flooding that's already occurring.

That means there's a lot of loss, and there's a question as to who will pay for that loss. Weather-related disasters currently result in at least \$150 billion per year on average in direct damages.<sup>7</sup> And the frequency and intensity of such disasters are expected to increase in the near term.

Insurers looking at that risk picture have a number of choices. They can try to raise prices, although it's often a highly regulated market so they can't just say they're going to raise prices, or they can stop writing policies. We've seen both avenues pursued by insurers in response to the growing climate risks. If insurers choose to stop writing policies, there's a lot of pressure on the government to step in. In fact, that's what happened with the NFIP.

We had a number of floods in the 1960s. Private insurers looked at it and said, you know what, we're not so interested in insuring this risk and, eventually, the NFIP was created. It hasn't quite worked as well as those who conceived of the idea had hoped. The program is about \$20 billion in the red,<sup>8</sup> and it is still struggling to charge rates that reflect the true risk.

Of course, if it charges rates that reflect the true risk, that means some policyholders will see premiums with really stark increases because they're living in risky areas, like along the East Coast right now. The Federal Emergency Management Agency (FEMA), which runs the NFIP, has over the years tried to charge actuarially sound rates that reflect the true risk—and it has repeatedly run into a buzz saw from the U.S. Congress as to making those reforms. Most recently, it's now being sued for its latest iteration in doing so by a number of states who say that FEMA cannot raise NFIP rates.<sup>9</sup>

We also see government step in, as Jeff has mentioned, with state backup plans. We have about 36 states that have them. These are plans that people can turn to if they cannot find property insurance for their homes. The number of insured in these backup plans is growing. According to Property Insurance Plans Service Office, a research firm that tracks such programs, these plans have more than doubled their market share since 2018.<sup>10</sup>

One plan that's gotten a lot of attention lately is Citizens Insurance of Florida. Florida obviously has a huge sea-level rise risk. Citizens has become the state's largest property insurer and an essential component of Florida's \$1.4 trillion economy. It has grown to provide nearly 20% of Florida's property insurance. According to a 2018 study by the University of Cambridge and Munich Re, if a Category 5 hurricane hit Miami and the Florida coast, it could cause \$1.35 trillion in damages. That's more than \$60,000 for every person in the state.<sup>11</sup>

Now, Florida regulations limit how much Citizens' rates can rise and, because of that, the insurer is backed financially by the state. So, if a particularly destructive event were to occur, like a major hurricane or a series of storms in a single season, there's a chance that Citizens wouldn't be able to cover the losses. Then, the question becomes, what happens if the backup plan can't cover the losses? The question is the same for other backup plans in other states. Some states say they'll put levies on private insurers or state residents, or maybe the state will borrow.

According to Milliman, a consulting firm, 21 states don't explicitly say how they're going to cover a deficit.<sup>12</sup> In their words, these plans become magic hiding places to cover risks that get too big for the private market—and we know that the risk is growing.

People love to live near the water. More than 120 million people live in coastal areas in the United States. In 1960, we only had 47 million living there.<sup>13</sup> That's a marked increase. But coastal areas account for less than 10% of the total land in the contiguous United States, so we're crowding into these areas that are at much greater risk. And the questions about how we build and whether we elevate our homes or implement other flood protection measures rest largely in the hands of state and local governments.

Those state and local governments have not kept up with the changes that we are already experiencing, much less those that lie ahead. In fact, FEMA tells us that two-thirds of counties in the United States don't even adopt the most modern building codes.<sup>14</sup> An important thing to know about our current building codes in the United States is that virtually none of them account for the future risk of climate change. So, we're building stuff right now that is destined to fail with increased sea-level rise and increased storms.

Many of the counties that lack these building codes, even the most modern ones that are only looking back to past risks, are in our Gulf states. As Jeff has said, a lack of

6. Climate Central, *Billion-Dollar Disaster Seasons*, <https://www.climatecentral.org/climate-matters/billion-dollar-disaster-seasons-2024> (last visited May 9, 2024).  
 7. GlobalChange.gov, *The Fifth National Climate Assessment*, <https://nca2023.globalchange.gov/> (last visited May 9, 2024).  
 8. Federal Emergency Management Agency, *NFIP Debt*, <https://www.fema.gov/case-study/nfip-debt> (last updated Nov. 4, 2022).  
 9. Natalie Campisi, *Worried About Your Higher Flood Insurance Rate? These 10 States Are Suing FEMA to Block That*, FORBES (Oct. 9, 2023), <https://www.forbes.com/advisor/insurance/states-sue-fema-flood-insurance/>.  
 10. Insurance Information Institute, *Facts + Statistics: Homeowners and Renters Insurance*, <https://www.iii.org/fact-statistic/facts-statistics-homeowners-and-renters-insurance> (last visited May 9, 2024).

11. ARJUN MAHALINGAM ET AL., IMPACTS OF SEVERE NATURAL CATASTROPHES ON FINANCIAL MARKETS (2018), <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/crs-impacts-of-severe-natural-catastrophes-on-financial-markets.pdf>.  
 12. *Uncovered: A Hidden Crisis in US Housing*, BLOOMBERG (Mar. 5, 2024), <https://www.bloomberg.com/features/2024-home-insurance-real-estate-crisis/>.  
 13. NOAA National Ocean Service, *What Percentage of the American Population Lives Near the Coast?*, <https://oceanservice.noaa.gov/facts/population.html> (last updated Jan. 18, 2024); U.S. Census Bureau, *Emergency Management Coastal Areas*, <https://www.census.gov/topics/preparedness/about/coastal-areas.html> (last updated Nov. 20, 2021).  
 14. FEMA, *Building Code Adoption Tracking*, <https://www.fema.gov/emergency-managers/risk-management/building-science/bcat> (last updated Apr. 10, 2024).

affordable insurance could trigger a real estate crisis or a bailout from the federal government. It was Republican Treasury Secretary Hank Paulson who called our current appropriation system for disasters “climate bailouts.”<sup>15</sup> That’s what we’re seeing right now. The U.S. Government Accountability Office has said that this poses a great risk to the economic security of the United States, to the U.S. Treasury.<sup>16</sup>

And we’re suffering from a lack of good options for how to ensure that communities have access to affordable insurance for property. We just haven’t come up with the right choices yet. That’s why I’m so excited to hear from my fellow panelists about what they’re seeing on the ground as possible solutions to make sure that we have this backbone in place to bolster economic strength in the United States, keep people safe, and prevent greater harm.

**Jeffrey Peterson:** I have a general question to start us off. You talked about the different players involved and that there are so many players on the scene that are interested in this problem, but they don’t seem to be well-coordinated. Have you seen examples of cases where there’s been a successful effort to bring disparate parties from the private sector and the government—federal, state, and local—together to think through more holistically and strategically what should be accomplished? Is there a role for the federal government to provide leadership here, or should it be up to the states?

**Alice Hill:** I chair, and Carolyn is vice chair of, a task force for the California Department of Insurance looking at solutions for the property insurance market in the face of climate change. We’ve had a number of pilot programs through that work. There’s a lot of thought about community-based insurance that can lower the premiums for an entire community based on mitigation measures that are taken. The NFIP includes that concept itself for communities that are interested in NFIP insurance, because they’re in the floodplain. They can lower their premiums if the community takes actions to reduce the risk.

That makes sense with wildfire or flooding because, sometimes, you need a community-based action. For example, you need a whole seawall to prevent flooding. You can’t just have an individual home put up some kind of barrier, because the property next door, with the physics of water, will be flooded.

What we’ve seen less of is the uptake. And part of that is the structure, in my opinion, of the insurance. Insurers have been around for a long time. They’re always going to find risks to insure. Property insurance is a big part of their portfolio.

AXA is one of the largest reinsurers in the world. It offers insurance to property insurers so that when a big disaster happens, the insurers can pull from the reinsurers to cover their losses. In 2015, the head of AXA said that if the world warms by four degrees Celsius above pre-industrial levels, it will be uninsurable.<sup>17</sup>

Today, we’re about 1.2 degrees above pre-industrial terms. We’re seeing the beginning of that, and I think we’re going to see an uninsurable world well below two degrees because property insurers write on an annualized basis so they can get out of a particular market. The commissioners in the states can try to keep them there for a while, but they can get out and go underwrite other risks, because there are other risks to make money on.

They’re not in the business of trying to figure out community solutions. That’s not how they have historically acted. There is a meme out there that insurance companies will solve the current climate risk challenge, but we haven’t seen significant movement forward on this. That’s not to criticize them, that’s just the nature of their business model and that’s the way it’s been. I think it’s going to require action at the federal level to really bring home the problem and the greater risk to the U.S. economy.

**Jessica Dandridge:** It’s also worth noting that the National Academies of Sciences, Engineering, and Medicine have been having conversations on this. We had a panel on this last year. The struggle is that multiple federal agencies aren’t speaking to each other. They’re not sharing data. They’re not sharing information. Also, their policies and even their grant programs, like community block grants, are a direct affront to insurance.

Particularly in Louisiana and other coastal cities, we’re seeing an expansion of ports. We’re seeing an expansion of U.S. Army Corps of Engineers projects. But they’re hurting insurance for residents that live locally or near those projects. There needs to not only be alignment in data, but also alignment in values in order for us to get to a better insurance property system for both flood and homeowners insurance.

I also want to say that this is not a relatively new problem. This is something that’s been going on for 20-plus years. As someone who lives in Louisiana, I know this challenge has been ongoing. The first time people really had this conversation was after Hurricane Katrina. That’s almost 20 years ago.

To Alice’s point, when people were rebuilding their homes and they said, “Hey, shouldn’t we elevate our home? Shouldn’t we get a fortified roof?,” no one offered that option—neither the state nor the federal government. There was no building code update to make sure communities along coastal Louisiana, especially in the highly populous areas, such as Orleans Parish, would not flood

15. ALICE C. HILL & LEONARDO MARTINEZ-DIAZ, *BUILDING A RESILIENT TOMORROW: HOW TO PREPARE FOR THE COMING CLIMATE DISRUPTION* 81 (Oxford Univ. Press 2019).

16. U.S. Government Accountability Office, GAO-07-285, *Climate Change: Financial Risks to Federal and Private Insurers in Coming Decades Are Potentially Significant* (Apr. 19, 2007), <https://www.gao.gov/products/gao-07-285>.

17. Alice C. Hill, *Climate Change and U.S. Property Insurance: A Stormy Mix*, COUNCIL ON FOREIGN RELATIONS (Aug. 17, 2023), <https://www.cfr.org/article/climate-change-and-us-property-insurance-stormy-mix>.

again. Sure enough, it has flooded continually and continues to do so.

I want to also recognize that while climate change is creating more pressure on the problem and for us, which is why we're here today, this problem is ongoing and long-term. Many coastal communities—in Texas, Louisiana, and Mississippi—have been grappling with the challenges of insurance for a while.

**Jeffrey Peterson:** Jessica, you're the next stop on our agenda, so I'll turn the floor over to you.

**Jessica Dandridge:** I'm honored to be here, and I appreciate the invitation to speak. For context, I run a community-based organization called The Water Collaborative of Greater New Orleans. We work on a variety of issues, including nature-based solutions.

One of the reasons I was invited to this conversation, particularly with the National Academies, is that we were not seeing nature-based solutions reflected in insurance rates on the municipal, regional, or state level. That is an ongoing problem.

Speaking to an earlier question about the experience in coastal communities, I would argue the experience in Louisiana, Mississippi, and coastal Texas is not the same as coastal Florida or coastal California. These communities tend to have higher poverty rates. They tend to be not only Black and Indigenous, but also there are a lot of migrant communities that are working in offshore drilling. They're working in oil and gas, expanding oil and gas, as well as in fisheries and many other economies. So, people tend to be poorer along coastal Louisiana and along the Gulf of Mexico than you would argue in, say, a place like Miami or Fort Lauderdale.

I did a coastal Louisiana tour last week. We went out to the United Houma Nation, which is an Indigenous tribe that is really struggling to rebuild after Hurricane Ida in 2021. Hurricane Ida was a windstorm. There was some obvious flooding, but it mostly caused wind damage. On the way there, you see tarps on roofs. There are people literally living without power, with nowhere else to go.

Many of the people we spoke to on this coastal tour said they've been basically fighting their insurance companies for years—not months, but years—having to sue them to get any type of recognition for the services that they need. And the insurance rates are skyrocketing on top of that. Most insurance companies have left Louisiana altogether, and what is left is simply unaffordable, including Louisiana Citizens, which is technically the option of last resort, but has become the one and only for most.

I want to just pull out a few statistics because I think it's extremely important, and to set the context for what it's like living in coastal Louisiana and the Gulf of Mexico for coastal communities. According to the Louisiana Department of Insurance, the premiums in 2023 rose an average of 63% for coastal plans, which means a 65.6% increase if you live in a designated flood zone. But it doesn't get better from here.

The homeowner's insurance rates for Orleans Parish, which is the most populous community in Louisiana

and includes New Orleans, is at an 81.7% increase. That affects 24.7 million policyholders. St. John the Baptist Parish, which is further up the river, has seen a 111.3% increase in homeowner's insurance. Lafourche Parish, which is a coastal community—the one I did a coastal tour in—with a lot of fisheries and oil and gas exploration, has had an 88.3% increase, affecting roughly 1.8 million policyholders.

For the NFIP, this is where it gets really troublesome. Orleans Parish is at a 92% increase, and the average premium amount for the NFIP is \$1,326. That's not including homeowners insurance. That's not including mortgage. That's on top of them.

St. John the Baptist Parish is not a coastal community, and still the NFIP rates rose 144%; the average premium was \$1,903. And for Lafourche Parish, which has a poverty rate of about 20%, NFIP rates rose 376%. Let me repeat that: 376%. The average premium for a policyholder there is \$3,270. Again, that's on top of, not including, homeowners insurance and mortgage costs. It is basically impractical and unaffordable to have both homeowners and flood insurance, especially when all of the communities that I mentioned have a poverty rate that is over 10%.

I want to also make it very clear that on the ground, it is nearly impossible to navigate the situation for most homeowners. As I mentioned in my last comment, the building codes of Louisiana do not support risk-mitigation efforts on a mass scale, not even on a localized scale or an individual scale. There is no benefit or very little benefit now to elevating your home, getting nature-based solutions around your home, or even seeing any type of grey infrastructure increases, such as levee systems, canals, ditches, and so on.

I also want to point out the challenges. I want to elevate that there are communities that are shrinking at a rapid rate. Louisiana ranks top 10 in the country for loss of individual residents.<sup>18</sup> That is extremely high, especially when you compare it to the states on that list—California and New York—that have millions more people. Louisiana is a relatively small state. For us to be in the top 10 of people leaving the state is incredible, and it's partially because of insurance rates.

You have a mass amount of climate migration because of the increasing cost, but the people who are still there are the people who cannot afford to leave. Those are the ones who have the highest risk. Those are the ones who are living without utilities. Those are the ones who are living without any particular support from local or state government.

In terms of solutions, one of the things I keep saying is that it needs to be people-centered risk mitigation. It is possible to do that. That's not just elevating your home or building—you know, catch basins or ditches or what makes sense for your community. It's also about building community into those solutions, and having them be a part of the building of that.

18. *Louisiana Parishes Among Top in the U.S. for Population Loss*, AP NEWS (Mar. 31, 2023), <https://apnews.com/article/population-decrease-parish-county-louisiana-06b3a604e96ffea56d4dce0975365ed>.

That is one of the reasons why, if you look at Hurricane Katrina and the impacts on southeast Louisiana, rebuilding failed. Many people have argued that Louisiana is worse off post-Katrina because the rebuilding plans did not include the people that live in those communities. And they did not include changes in how we understand insurance and how we build around that.

One thing that we're doing with The Water Collaborative is building the first ever community-centric storm-water fee. That's a unique way to raise funding. But the funding won't just go to grey infrastructure; it will actually go to risk mitigation—elevating homes and creating nature-based solutions on a community scale so we can actually get community-based insurance and parametric insurance enacted in Orleans Parish and hopefully across the state. That's one small solution.

The other thing I want to talk about is the disconnect that we have between development jobs and insurance. While we are talking about people needing to leave, the opposite is actually happening in Louisiana. They are building more and more offshore drilling. We actually have the largest offshore wind farm going in by 2025. We also have one of the largest liquefied natural gas (LNG) plants in the United States being built by Venture Global off the coast.

In order for Venture Global to mitigate the flooding that they know will happen, they built a levee wall around a 630-acre site. Around them, people are living in trailers, living without electricity or running water or sewage treatment, not living in elevated homes. What that means is if there is a hurricane, the community around them is more prone to flooding because they built a wall. The water is going to just build up where they live. It is putting communities more at risk.

And what did Venture Global do when they added 2,000 jobs for this new LNG plant? They hired people from outside of Louisiana. Not one individual from Louisiana got those jobs. And in response to that, the state is paying for Venture Global to rebuild parts of Plaquemines Parish to create communities for these incoming workers. What sense does that make? We're talking about insurance. We have people who are living in deep poverty. But then, you're building one of the largest plants and you're continually expanding on that plant.

Most people in Louisiana are stuck there. The jobs that they've been trained for, the jobs that they know how to do, are coastal jobs. Where do you plan to put these people?

With that being said, climate migration needs to have a strategy. We actually have a failed experiment related to that called Isle de Jean Charles. Isle de Jean Charles was an experiment by Louisiana to do just what we're talking about. Well, this community is literally underwater. Every single side of the community is surrounded by water. Louisiana butchered this program to no end. This is an Indigenous community. The state didn't actually create a mortgage system that worked for the people in the community. It didn't know how to deal with properties being given to family members.

What if a family member has multiple children? They never thought through that. So, most people in the program ended up losing or they didn't participate in it altogether.

I'm actually working with an organization called Climigration that creates plans for climate migration that are people-centered and that actually work.

The last thing I'll say is that we have conflicting reports from federal agencies. FEMA says it is increasing costs, but the NFIP actually allowed for growth in Louisiana. We wouldn't see the growth that we have there if it wasn't for the NFIP. We have to keep that in mind. We want to fix it, but we also have to realize that it created the problem that exists today.

As for federal regulation oversight, we have expanding ports in Louisiana, Texas, and Mississippi that actually support increased flooding. Many of the organizations, one of which I sit on—the Commission for the Coastal Protection and Restoration Authority of Louisiana—took \$50 million from the BP oil spill settlement to reinvest in coastal Louisiana.

One of those projects is called Mardi Gras Pass, where they said, "Hey, we could rebuild the Mississippi River. It can do its job by itself." On the other hand, they have other massive, amazing feats of engineering projects. What's standing in the way of that? The Army Corps of Engineers. Every time we get a large project, the Corps pushes back and says we need to continue building bridges and expanding port systems.

So, which one do you want? Do you want to have expanding ports and expanding income? Or do you want to have communities that are thriving? It is possible to save coastal Louisiana. It is possible to save parts of the Mississippi River Valley. But in order to do that, you need to invest in nature-based solutions and grey infrastructure together, and you have to have policies and values that align across multiple institutions and agencies.

It is a very complicated situation. It's not as simple as fixing the NFIP. It's not as simple as fixing homeowners insurance. We need to understand that all of these homeowners do not have the ability to leave. They do not always have the ability to be bought out. And they don't always have the ability to expand or create risk mitigation on their own land, as we've discussed. It's going to require multiple institutions to participate in the program. And it's also going to require homeowners to be supported in this process and having it be people-centered.

**Alice Hill:** I'll add that Jessica has described what other communities are beginning to experience. I think Louisiana has experienced it earlier. But these are extremely hard issues that will require coordination and planning. That's the reason that the federal government needs to take a more concerted role here, not just in insurance. Because underlying the insurance is the question of where people live and how they build. We have, as Jessica said, populations that are already there, but we're also adding to those populations and increasing our problem.

That's to some extent because of perverse incentives that governments have created to allow development in areas that we now know are very dangerous. Essentially, we've created a moral hazard with the NFIP, but we also are not requiring communities that take federal dollars to build in a more prudent way that accounts for this risk.

We don't have a national adaptation plan. The United States is behind in its vision for how all these different contributors need to coordinate with each other and to say what the federal government will be doing; what the state, local, tribal, and territorial governments will be doing; what the private sector has been doing; and what individuals, in the case of property insurance, need to be doing.

There is no overall plan. It doesn't have to be highly detailed. But we do need to define the roles so we're not getting this mishmash of conflicting signals that allows for continued investment in areas that we know will be under-water in our coastal regions.

**Jessica Dandridge:** I saw a question asking me to speak to how insurance coastal resilience issues affect marginalized communities and how the disparity should be addressed and solutions approached. I think I spoke a bit to that. Marginalized communities can't leave, and they're the ones that are on the frontline.

If you drive through any part of coastal Louisiana, you'll see people living in deep, deep poverty. These are people who barely have a house. I've actually met several community members, elders as well as children, living in homes with holes in the ceiling, with broken floors, with standing water, because they don't have insurance or their insurance companies went bankrupt or they're in the middle of suing them.

Many people in Louisiana are living like this. This is not one particular parish or one particular community. Indigenous communities have an even harder time because if you're not federally recognized or state-recognized, you have to go through an even more arduous process to apply for insurance.

Indigenous communities are really stuck and are also facing an affront from the Corps, because many of those coastal communities work in fisheries. They work in shrimping, oysters, and other fisheries. They are seeing increases in their risk but reduction in their ability to navigate the federal system.

How that can be addressed is what Alice just described. We need to have coordination amongst these agencies. There needs to be planning. And that planning needs to include communities that are on the frontline. Many of the articles I read about insurance cite places like Maine or Miami or California. Those are important to the conversation, but they also have to include impoverished communities that are on the frontline and also are not adding to the problem.

We're talking about climate change. But they're building the largest LNG plant, more than 630 acres large, that is contributing to climate change. There needs to be alignment.

The Biden Administration has done a lot of work with the Infrastructure Investment and Jobs Act<sup>19</sup> to help these communities, but on the flipside, it has opened up offshore drilling. It can't be both. I know Louisiana is a hard place to work because of its politics. But these are communities that are not only working in oil and gas, but are falling victim to oil and gas as well.

**Jeffrey Peterson:** Next up is Carolyn Kousky.

**Carolyn Kousky:** It's an honor to be on this panel with such thoughtful and insightful colleagues. I'm going to build on Jessica's and Alice's remarks and talk a bit more about inclusivity and equity in our insurance markets.

Let me start by reiterating what you've already heard, which is that insurance is a really essential part of our disaster safety net. As we've been talking about, disasters are severe financial shocks for households. They are times when expenditures go way up. That includes rebuilding and replacing damaged property, but households also face many non-property costs as well.

We also see that after a disaster many households lose income, due to business interruption, at the same time that they have this spike in expenses, creating a double financial hit. Most households do not have enough savings to cover these costs and declines in income. Many are locked out of access to credit post-disaster. And we know that federal assistance is woefully insufficient and can take a very long time to reach people.

That's why insurance—and insurance that works smoothly—is critical. I want to come back to that because Jessica raised some of these challenges, too. But when the process is working, those with insurance are more likely to rebuild, and to rebuild faster. A lack of insurance can also widen inequality post-disaster.

A colleague at Freddie Mac and I completed some research recently on the financial recovery of households. We found that households with insurance are much less likely after a hurricane to have high financial burdens in both the short and medium run; they are much less likely to have unmet funding needs. We also found that post-disaster visitation rates to local businesses increase as more people in the community have insurance.<sup>20</sup> So, there are positive spillover benefits of having insurance to the local community and local economy as well.

Unfortunately, though, research suggests that often what we see in practice are two groups of households—the haves and the have-nots—when it comes to disaster recovery.<sup>21</sup> There is a group that has insurance. These households are also the same ones that are most able to make use of other resources for recovery. They're more likely to have

19. Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

20. Xuesong You & Carolyn Kousky, *Improving Household and Community Disaster Recovery: Evidence on the Role of Insurance*, J. RISK & INS. (2024), <https://doi.org/10.1111/jori.12466>.

21. Ben Collier & Carolyn Kousky, *Household Financial Resilience After Severe Climate Events: The Role of Insurance*, HANDBOOK INS. (Georges Dionne ed., forthcoming).

savings, to be able to access credit, and to navigate government assistance programs. They are able to put together all these different sources of funds to achieve more complete and faster recoveries. They tend to have higher levels of financial literacy to navigate all the difficulties of many of these sources of funding.

Then, we have a group of households that is uninsured, usually because they can't afford the coverage. That means they're also much less likely to have savings to draw on and can be locked out of access to credit. Instead, they have to turn to their social network for their recovery. Friends and family helping each other is important, but also has severe limitations in scale. We see in our research that aid from friends and family comes faster but is much less than other sources, particularly if your social network lives near you and they were also impacted by the same disaster.<sup>22</sup>

We've been undertaking some work at the Environmental Defense Fund around how to make a more inclusive disaster insurance system. We defined an "inclusive system" as all the policies, programs, and products across the public and private sectors that make appropriate and affordable insurance available to those who are unserved or underserved by the market. In a report on this last year, we found that there are many barriers to inclusivity right now in our markets.<sup>23</sup>

One barrier is insurance gaps. Many households don't have the disaster coverage that they need. It is often carved out of standard homeowners' policies. We already talked about how flood coverage is not included in your standard homeowners or standard property policy. We also see additional limitations on coverage provided for disasters, such as full exclusions for mold or sewer backups. Policies may also have sublimits, which are caps on coverage for certain losses, meaning your insurer isn't going to pay you as much for certain damages, such as hail damage or burst pipes. Policies may also have higher deductibles for disasters, meaning you have to pay more of the loss yourself if it's from a disaster.

Often, you can purchase complementary coverage to fill some of these holes. You can purchase a separate flood policy. You can purchase endorsements to increase your coverage, such as adding in coverage for sewer backups. But this gets to the second challenge: most people can't afford the comprehensive coverage. And disaster insurance is fundamentally more expensive than non-disaster insurance, because when you have correlated and catastrophic losses, that stresses our basic model of risk pooling. To provide disaster cover, insurers use instruments that Alice talked about, such as global reinsurance. But those costs get passed on to policyholders. So, it makes disaster insurance pricier and often can put disaster insurance out of reach for the households that need it the most.

We also see that some post-disaster needs, particularly non-property losses, are not well met by our current mar-

ket. For example, for renters, often the biggest cost that they face after a disaster is higher rent because demand goes up and supply goes down. There is not an insurance product to protect renters against that type of cost.

Finally, while the research seems to say that direct discrimination in insurance markets is likely limited, there is concern about indirect discrimination, including procedural inequities in accessing fair claims payments and navigating the contentious negotiation that you often have to go through with your insurer. There are also concerns around issues like the rising use of artificial intelligence and machine learning for pricing. Also, correlations between climate risk and race or income can mean certain groups face higher prices.

Since the cost of insurance includes not just the risk of the hazard, but the likelihood of damage that the insurer is going to have to pay, premiums are also influenced by things like historical disinvestment in a neighborhood's infrastructure, inability to afford protective measures, or deferred maintenance. All of this can mean that insurance costs more or is less available in our most vulnerable communities.

So, our insurance system is not meeting everyone's needs right now. We've thus been looking at a range of interventions to improve inclusivity in the market. This includes policy changes like means-tested assistance for flood insurance, which has been talked about for more than a decade in Congress and still hasn't been adopted, or things like the creation of mandatory or voluntary systems akin to a Community Reinvestment Act for insurers to encourage greater investments in frontline communities.

We are also exploring regulatory reforms like baseline coverage standards or regulations that would enable new types of approaches. That brings me to the last intervention, which is new products that the private sector could offer—that is, innovations in the way we offer insurance.

I want to take a couple of minutes to expand on this idea of insurance innovation for greater inclusivity. Many groups have become interested recently in using something called parametric insurance, which has been used for several decades now. Basically, instead of having a loss adjuster come and look at your damage to assess what you're owed, a parametric policy pays a predetermined amount based on an observable metric of the hazard itself.

For example, if wind speeds within so many miles of your house exceed a specified threshold, then you would automatically get the payment. That has opened up a lot of other types of approaches to providing insurance coverage. One is microinsurance, which has been used for many years now throughout the global South. Parametric insurance lowers the transaction costs of providing payments since loss adjustment is not needed. That changes the business model and allows firms to offer policies in places that otherwise would be difficult to access. It also allows them to offer policies that are smaller in amount and more targeted at poorer populations. In the United States, Puerto Rico is the only U.S. jurisdiction that has adopted the enabling regulations to create a microinsurance market.

22. You & Kousky, *supra* note 20.

23. CAROLYN KOUSKY & KARINA FRENCH, INCLUSIVE INSURANCE FOR CLIMATE-RELATED DISASTERS (2023), <https://blogs.edf.org/markets/wp-content/blogs.dir/32/files/2023/01/Inclusive-Insurance-Report.pdf>.



Another new approach is a group or community approach to providing insurance, where there is an intermediary sitting between the insurer and the beneficiaries. There are a number of ways this can be designed, but the idea is to provide coverage for greater numbers of people.

One design is similar to an employer providing health insurance. An employer often negotiates with an insurance company the terms and pricing for a few health insurance policies. But then, employees contract with the insurer and pay at least part of the premium. You could think about taking that model for disaster insurance and replacing the employer with any other type of group, like a local government or a community organization, and having them provide disaster insurance instead of health coverage.

Another approach is to embed disaster insurance in other products or programs. Again, this has been done in many different places around the globe. One common example is in agriculture, tying crop insurance or livestock insurance to things like the purchase of seed or feed. Another example is coupling insurance to a loan.

A third model is an intermediary purchasing the coverage and using the payout to help finance assistance for a group of people. This was an approach we took in New York City in a recent pilot that's only been up and running for a year now.<sup>24</sup> Working with the Center for New York City Neighborhoods, the Mayor's Office of Climate and Environmental Justice, and two private-sector partners, Guy Carpenter and Swiss Re, we designed one of the first rainfall-related flood parametrics. The idea is to provide fast and flexible dollars to help with the immediate needs that low- and moderate-income households face right after a severe flood, and to get them that assistance quickly to prevent a downward financial spiral that can occur when households don't receive the dollars they need for immediate post-disaster costs.

The Center for New York City Neighborhoods has now secured this parametric product. A qualifying flood would trigger the use of these dollars to make emergency grants to households in their pilot neighborhoods. We've put together a "lessons learned" report on how other communities can learn from this pilot, not necessarily to replicate this exact model, but to replicate the approach of identifying the holes in the safety net and how to design programs to start filling them.<sup>25</sup>

**Alice Hill:** Carolyn and others are really trying to pioneer solutions that are attractive to insurance companies and that will better preserve the market. Kudos to her because she's working on the solution side versus just looking at this growing problem and throwing up her hands.

**Carolyn Kousky:** I'll echo, though, that these solutions only get us part of the way. To really stabilize the market and meet needs, we need what Jessica and Alice discussed. We have to lower our risks and invest in all those resilience measures as step one.

**Jeffrey Peterson:** You've talked about the difference between government action and what insurance companies can do. We've been talking on the panel about where the responsibility lies for trying to get toward a better system. Should we expect insurance companies to figure this out? Or should government play an expanded role? If so, how should it be?

**Dave Jones:** Maybe that's a great segue to my remarks. It's been a privilege to get to spend some time with these terrific panelists. And I have appreciated all of the insights and the wealth of knowledge that folks have brought to bear in this discussion.

But yes, Jeff, one of the important things that insurance does is act as the canary in the coal mine with regard to the climate crisis. Insurers are rational economic actors. And as each of the speakers has alluded to, insurers are losing more money because of climate-driven risks and increasing losses, particularly, but not uniquely, on the coasts in this country. It's happening in various geographies with regard to various climate-driven impacts. So, insurers raise the price, and they stop renewing or stop writing new insurance.

There's a felt need to try to address that. I want to talk about how we might address that, as the other speakers have as well. It's also important to recognize that, in my view, it will be a mistake to artificially suppress the price or artificially require private insurance to write in the areas because, right now, there is really no other signal out there other than the tragic damages that are occurring, and with greater acuity for communities of color and poorer communities because of where they're located. Insurance price increases and insurance unavailability send a very important signal to markets, local decisionmakers, state decisionmakers, federal decisionmakers, developers, and lenders that these are really risky places in which to develop, and that we've got to stop developing there.

If you want to have an insurable future on the coast, it seems to me, first and foremost, you have to look at what's driving this risk, and that's climate change, which is driven by greenhouse gas emissions. We need to accelerate the transition away from fossil fuels and greenhouse gas-emitting industries.

What can insurance companies do in this regard? Well, Ceres issued a report last year based on data that I collected from insurers when I was insurance commissioner in California. They found that insurers have \$536 billion invested in the fossil fuel industry.<sup>26</sup> Now, why the heck are

24. See Environmental Defense Fund, *Inclusive Insurance: Promoting the Post-Flood Financial Resilience of Low and Moderate Income Households*, <https://www.edf.org/inclusive-insurance> (last visited May 9, 2024).

25. CAROLYN KOUSKY & HELEN WILEY, COMMUNITY-DRIVEN AND RESEARCH-INFORMED: INSURANCE INNOVATION TO MEET SOCIAL NEEDS (2023), <https://www.edf.org/sites/default/files/documents/EDF-Insurance-Innovation-to-Meet-Social-Needs.pdf>.

26. Isla Binnie, *US Insurers Invested in Fossil Fuels as Climate Risks to Underwriting Mount—Report*, REUTERS (Aug. 8, 2023), <https://www.reuters.com/sustainability/sustainable-finance-reporting/us-insurers-invested-fossil-fuels-climate-risks-underwriting-mount-report-2023-08-08/>.

insurance companies invested in the very industry that's contributing to their inability to write insurance in coastal areas and other areas across the United States? Similarly, insurance companies are insuring the fossil fuel industry.

One contribution insurance companies could make is to stop insuring and stop investing in fossil fuels. I think that insurance companies ought to be required to prepare net-zero transition plans with a short time horizon, which will indicate how they're going to get to net zero in terms of both their underwriting and investment portfolios.

Conversely, while there's been some insurance company investment in green bonds, wind, solar, and other investment classes that provide a market rate of return while supporting the transition away from fossil fuels, there is room for even more investment by insurers in this regard.

Then, what do you do about the fact that, as everyone has said, insurance is becoming unaffordable, particularly for low-income households, and increasingly unavailable in these coastal areas and other areas hit by the impacts of climate change?

First, there's always suggestions to create some sort of national insurance program and intervene nationally, and perhaps create some national subsidized insurance scheme. We have an example of that, the NFIP. And as each of the speakers has alluded to, that hasn't gone very well, and for a number of reasons that have already been discussed.

I'm very skeptical about creating some national scheme of insurance coverage to substitute for the private market. But we need to do something. If we don't want to suppress the price, which I think is a mistake, and we don't want to artificially require the private insurers to write insurance in areas because we want to keep setting the price signal, we need something else.

Right now, we have what are called residual markets or fair access to insurance requirements (FAIR) plans that operate in 37 states. And yes, Milliman did a study, as Alice alluded to, that found that some 21 of these FAIR plans don't have really detailed explanations as to what they're going to do in the wake of a reserve shortfall. But Milliman also found that almost every single one of them does have language in their charter or their state-enabling statute that says that the FAIR plans, in the event of a shortfall, can surcharge insurers.<sup>27</sup>

FAIR plans are generally state statutorily mandated involuntary associations of insurers. They're writing an insurance product in various states for the risks that the private insurers won't cover. And that's where people are being forced to when they can't find private insurance.

Yes, there are challenges with the FAIR plans. How could we shore them up? One policy solution that's been surfaced is a national reinsurance scheme. Rep. Adam

Schiff (D-Cal.) has introduced a bill to do this.<sup>28</sup> It would not be limited just to the FAIR plans, but would provide a national reinsurance pool for all direct writers of insurance. My concern about that is that it would be a significant federal subsidy for private writers of insurance and its goal is to try to reduce the price of insurance or make it more available everywhere. I'm concerned about doing that in the very areas where we want to be sending a signal that we shouldn't be undertaking new development.

Instead, you could narrow that proposed federal reinsurance program to provide reinsurance to FAIR plans. But I would have some strings attached to it. I would say, if we're going to create a federal reinsurance facility for FAIR plans and help reduce the price of FAIR plans, that Congress should require a couple of things. One is that states ought to enact a premium subsidy for low-income households who are purchasing FAIR plan policies. Make it means-tested. Make sure that the coverages offered by FAIR plans are broader coverages than just narrow coverages for fire, flood, or other single perils.

Second, I would condition any federal reinsurance facility on states meeting a requirement to enact legislation to limit or restrict new development in high-risk areas. That's controversial, I know, but we simply have got to limit the amount of new development that's occurring in high-risk areas.

Maybe we could have exceptions for high-density, multifamily, permanently affordable housing, or certain housing stocks that are necessary to meet the needs of low-income families, or permanently affordable single-family housing. But it seems to me that before we stand up some federal subsidy scheme to try to make either private insurance more available or FAIR plan insurance more available, there need to be restrictions on shoving more people and businesses into the high-risk areas. And we need to do all the things the other speakers have talked about with regard to requiring higher building code standards and more investments in resiliency, including nature-based investments in adaptation and mitigation.

Jessica talked about some terrific work that she and her team are doing with regard to trying to encourage nature-based mitigation. She's spot-on that insurers are not currently accounting for nature-based mitigation in their underwriting modeling or their rate modeling.

Here are some examples of how nature-based mitigation can make a real difference. In the wake of Superstorm Sandy, the U.S. Geological Survey did a study that found that those communities along the New England and southeastern coast that had intact salt marshes avoided about \$629 million in economic losses versus those communities that did not have salt marshes.<sup>29</sup> It turns out replanting salt marshes can dramatically reduce flood risk. We need to require the insurers to reflect that in their insurance modeling and rating.

27. NANCY WATKINS ET AL., A SURVEY OF RESIDUAL MARKET ASSESSMENT PLANS AND RECOUPMENT 2 (2023), <https://www.milliman.com/-/media/milliman/pdfs/2023-articles/12-5-23-milliman-residual-market-survey-for-pifc.ashx> ("Residual market plans generally have some provision that member insurance companies provide funds to cover deficits in event of events exceeding plan surplus and reinsurance.").

28. H.R. 6944, 118th Cong. (2024).

29. Siddharth Narayan et al., *The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA*, 7 SCI. REPS. art. 9463 (2017), <https://www.nature.com/articles/s41598-017-09269-z>.

When I was at The Nature Conservancy, I authored a joint paper with Munich Re that looked at a nature-based approach to reducing river flooding—setting back levees—that is good for nature and ecology, but also reduces flood risk.<sup>30</sup> We were able to show that not only did it reduce losses associated with floods, but it could be modeled and accounted for in insurance modeling.

In the South Bay of San Francisco, there's a project currently underway in San Mateo County to look at replanting salt marshes there and looking at the risk-reduction benefits associated with replanting those salt marshes in combination with existing grey infrastructure like levees.<sup>31</sup>

These are some examples. There are others outside the coastal context as well. For example, another nature-based mitigation measure is forest treatment—using prescribed fire and ecological thinning to reduce fuels in forests and reduce the risk of severe wildfires. Insurers are not currently accounting for the billions of dollars being spent on forest treatment, in their underwriting or rating models. They should be required to do so.

So yes, I agree with those speakers who have said we need to invest more in these nature-based mitigations that are currently proven to reduce risk and reduce loss. We also need to require the insurance companies and federal insurance schemes like the NFIP to recognize those investments in their rating and in their underwriting. That's going to require legislation. And since we regulate insurance at the state level, it would require state legislation. If you want to make sure the NFIP accounts for it, you need to enact federal legislation.

I think that, importantly, there is this tension, as Jeff alluded to, between the felt need to make sure that insurance is available to everyone at an affordable price for both individuals and businesses and, at the same time, to make sure that we are not sending the wrong signal and encouraging more development, population increase, more assets at risk, whether they're public assets or private assets, in the very areas where the risk is highest. We've got to strike a balance between those two things, and I have offered one suggestion as to how we might strike that balance.

**Jeffrey Peterson:** I understand that California has a policy that basically says if your home is damaged by a storm and you're going to be paid a substantial amount in your insurance policy, you have the option of either restoring the property on the site where it is, or taking the payment you would have received and using it to buy a different home, ideally in a safer place. It's essentially a financing tool to assist relocation—not a full buyout, but not forcing you to rebuild in that same place. Is that a policy that you think

could help make it easier for individuals to adapt to the changing risk that they're facing?

**Dave Jones:** That's a standard clause in all standard homeowners insurance policies in California. You have the ability to take your insurance payout and rebuild your home on-site, or take it and build a new home somewhere else. I think that's true of the HO-6 home insurance policy form, which is the standard policy form used in every place in the United States.

But I want to respond to a comment posed in the chat, which is, "Look, if you don't suppress insurance prices, that's going to impact on the poor." Yes, but what I'm proposing instead is to not suppress the price, but rather provide a means-tested premium subsidy for FAIR plan policyholders who can't otherwise afford it.

We have a great experience with that in the Affordable Care Act. We've done exactly that across this country with regard to health insurance and health benefits exchanges, where the prices charged for the health maintenance organizations and health insurance are what they are. They're sending an appropriate price signal with regard to the cost of providing medical care. But we subsidize the premium for lower-income and middle-income households that are buying health insurance in the Affordable Care Act state and federal exchanges.

You could do the same thing with regard to FAIR plans. It requires state legislation and a state premium subsidy, or maybe enacting one federally and providing it to the FAIR plans. That then balances that tension between not suppressing the price signal, but also helping those that are in greatest need, making sure that they can afford an insurance product.

**Carolyn Kousky:** I completely agree with Dave's policy proposal here. It makes a lot of sense. But I also want to circle back to Jeff's earlier question about information and signals. Insurance is a really important information and financial signal, but we also need to remember that it only sends information on this year's risk. Insurance policies are for one year, and the price is only an indication of that year's risk. It is not a good tool to be signaling and creating the incentives about how risk is changing over time with climate change. We need public-sector solutions to complement insurance for longer-term decisions.

Also, the insurance signal comes at the point when you purchase your insurance. We know that, sometimes, that is pretty late in the process for some decisions, such as buying a new home, and that risk information might be a lot more impactful if people received it earlier in the process.

There's been work, for example, around addressing flood insurance in the home-buying process; people don't get information on the cost of flood insurance until close to closing. You're really committed to a property at that point, and it might be hard to make different decisions. But if you knew the first time you stepped into a potential new home what the cost of flood insurance would be, and not only that, but because it is an area of increasing risk, that you could expect that premium to be going up year over year,

30. THE NATURE CONSERVANCY & MUNICH RE, NATURE'S REMEDY: IMPROVING FLOOD RESILIENCE THROUGH COMMUNITY INSURANCE AND NATURE-BASED MITIGATION (2021), [https://www.nature.org/content/dam/tnc/nature/en/documents/ImprovingFloodResilienceThroughInsuranceandNatureBasedMitigation\\_21NOV01.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/ImprovingFloodResilienceThroughInsuranceandNatureBasedMitigation_21NOV01.pdf).

31. See RAE TAYLOR-BURNS ET AL., VALUING THE FLOOD REDUCTION BENEFITS OF MARSHES IN THE SAN FRANCISCO BAY (2022), [https://www.scienceforconservation.org/assets/downloads/TNC\\_SMC\\_MarshRestorationValuation.pdf](https://www.scienceforconservation.org/assets/downloads/TNC_SMC_MarshRestorationValuation.pdf).

and if you knew that a place had three prior losses, you might think twice about going further with the purchase. That type of transparency is critical to making sure we're not accidentally trapping people in high-risk areas who would have preferred not to be in the high-risk areas if they had only known.

This is me getting on my policy soapbox now! For flood insurance, such transparency should be easy. We have one federal program. Prices are set nationally by FEMA. It's a trivial exercise to create an online lookup tool where you could put in any property address, get the premium, get flood risk information, and see prior losses. We need FEMA to do that.

**Jessica Dandridge:** I want to chime in, too, about the concept of relocation. I agree with everything Dave said, but I'm really honing in on this planning part because one-quarter of Louisiana alone—we're not even talking about the other Gulf states—is supposed to be underwater by 2050.<sup>32</sup>

I ask people all the time, where are the communities from Lake Charles over to Plaquemines Parish supposed to go if they're not reinsured, and if we're advocating for relocation? And with them leaving, are you preparing them with jobs, and if you're preparing them with jobs, are you preparing the communities that are going to take them in?

One of the questions we have been asking is, who is going to be the communities that are taking in other communities from coastal states? We have to also consider the infrastructure needs. New Orleans is actually increasing in size even though we don't have the infrastructure to hold that many people. We're taking in people from coastal communities even though our infrastructure in Orleans Parish is actually degrading. It's one of the oldest infrastructure systems in the United States.

But one question that I haven't heard asked in this conversation is, who are the incoming communities and are there policies and protections for them as well? Schools, jobs, infrastructure, water, energy—can they hold those migrating communities? And who's willing to take them? There are many examples across the United States where communities migrate, but the incoming communities are not willing to take them in.

And ironically, people from southeast Louisiana, for example, are going to Houston, which is also flood-prone and the fastest growing city in Texas. When Houston is underwater, where are those people supposed to go? How are we supposed to help these coastal communities? People don't think of Houston as a coastal city, but it is a coastal city.

There's a lot to consider. With Dave's plan, it's not relocation. It seems feasible on the front end, but is it actually feasible on the back end? I don't think we're actually having that long-term discussion.

**Dave Jones:** I don't think that the insurance industry is going to solve that problem. That's going to require state and federal legislation and substantial resources to help communities with managed retreat and relocation of their populations from areas that are not sustainable. What the insurance industry is telling us is that those areas are not sustainable. That's why they're jacking up the price, and that's why they're getting out.

And I'm saying, well, we could either take our limited taxpayer resources and put them into the very things that Jessica and others talked about with regard to mitigation, relocation, and adaptation. Or we can shove them into some massive insurance scheme that will help people stay in these various places, which are suffering repeated losses due to climate change, and encourage them to stay, and actually encourage more people to move in, because we've made insurance super affordable. That's really the story of the NFIP.

I know where I am on that choice. Put the money in to what Jessica has talked about, not into some massive insurance scheme. But at the same time, do some things to make sure that insurance remains affordable for the folks that are still there.

**Jeffrey Peterson:** There is an audience question following up on Jessica's comment on community development block grant disaster relief funding. I think it applies more generally to other federal disaster funding essentially being a form of reinsurance where people feel like, even if they're not fully insured and there is a disaster, they're going to get a big chunk of federal aid to help them recover their costs.

Are we making that money and that financial backstop too easily available without having expectations that there be comparable efforts to invest at the state and homeowner levels in practices that discourage the rise in the disaster cost, like building to current codes or not building a new development in really risky places? Should there be more of—I'm not sure it's a quid pro quo exactly—a connection between the disaster money that's incoming and is likely to keep coming in the future, and expectations about understanding and adapting to risks?

**Jessica Dandridge:** I think Jeff already did a great job of framing it. That's a considerable issue in Louisiana. Every time there's a national disaster declaration, we get funding from community block grants, FEMA, the U.S. Department of Housing and Urban Development, NOAA sometimes, the Corps—you name it. They step in if it's a Mississippi River challenge.

None of those funding cycles requires changes to building codes or risk mitigation, or supports you to rebuild better. They just require you to rebuild to the standard that you were in. That is a massive challenge that we're seeing in Louisiana, where communities have rebuilt five times in the past 10 years. Can you imagine that?

My mother had to get her roof replaced. She wanted a better option. She requested a better option from the insurance company. She requested a better option from the city. They said the only thing they could do for her was to build

32. See COASTAL PROTECTION AND RESTORATION AUTHORITY OF LOUISIANA, 2023: LOUISIANA'S COMPREHENSIVE MASTER PLAN FOR A SUSTAINABLE COAST (2023), <https://coastal.la.gov/our-plan/2023-coastal-master-plan/>.

the standard that she already had. She knew that there was a fortified roof program, but she did not have access to it, and she was given the lowest grade type of roof, even though she wanted better.

There are communities that want to mitigate their risk, but the insurance companies are not incentivizing it, and the federal funding is not incentivizing it. That's really the struggle in Louisiana that we're seeing on a continual basis.

**Carolyn Kousky:** That story of Jessica's mother wanting a stronger roof but the broader system not enabling that and making it easy is quite upsetting to me, because disasters should be this opportunity for us to build back better. We know the areas that are high-risk, and we also know how to build stronger. For example, the Insurance Institute for Business and Home Safety (IBHS) FORTIFIED Standards are proven to dramatically reduce losses.<sup>33</sup> Yet, time after time, we're putting households back in places where we know they're just going to be hit again and that are built in ways we know are unsafe.

That's really unfortunate. To rebuild stronger is going to require changes in our post-disaster federal policies, how they're implemented by states and localities, and in how private insurance operates in order to provide extra funds and technical expertise to make sure that those changes happen during rebuilding.

I also want to come back to the earlier part of your question, Jeff, which I thought was touching on moral hazard. Does our assistance create perverse incentives? I think definitely; the fact that it's failing to help us rebuild stronger is a problem.

But also when we're thinking about our post-disaster aid, we need to separate out money that goes to households from monies that go to states and local governments, because it is a misunderstanding that households get anything close to made whole from federal dollars after a disaster. The amounts they get are typically very small, maybe a few thousand dollars.

The program is intentionally designed not to make households whole, but to just get them back to safety, and sometimes they don't even do that. There's plenty of research showing that there's a lot of procedural inequities in these programs. FEMA, to their credit, made some really important improvements to their individual assistance grant program recently under the Biden Administration. We'll see how those changes play out, but I'm hopeful. Still, households cannot rely on the government to get back on their feet after a disaster.

But the question about moral hazard for local governments is, I think, a different question. They get a lot more money. I wanted to make that distinction.

**Alice Hill:** I would like to add that the Obama Administration tried to create a system that would incentivize better action at the state level. It was called the "disaster

deductible."<sup>34</sup> Under the system, appropriations post-disaster would be reduced if a community or a state had not invested in risk-reduction measures in advance of the disaster. That would be better building codes, land use decisions, and the like. It just never went anywhere. There was too much political pushback from vested interests to maintain the status quo. It's really hard for the federal government to use that lever to get communities to better protect themselves.

**Jeffrey Peterson:** We have a couple questions on some specific points. The topic of coastal armoring and shoreline degradation came up. To what extent might coastal armoring, for example, be a measure to reduce risk or perhaps be a further consideration in some of the insurance premium price setting? Does anyone have thoughts on what a good policy for shoreline armoring is?

**Jessica Dandridge:** In terms of shoreline protection and nature-based solutions, the Corps finally has a nature-based solutions office that is starting to think about how ports can embed nature-based solutions. I don't know if Dave or Carolyn or Alice is aware of whether they have a report yet. I just know that their office is starting to finally work on these issues.

Because of the ongoing coastal restoration efforts, many of the communities that saw unprecedented damage during Hurricane Katrina saw absolutely no flooding during Hurricane Ida. So, we know nature-based solutions work. What does not work is when homeowners insurance and flood insurance are not speaking to each other.

Many of the homes in those communities were elevated, but they didn't require a fortified roof program. So, now they're up in the sky and the wind is strong, and they lose their roof. That's why many of the communities I mentioned are struggling, because they have open roofs still to this day. Who do you blame for that? I elevated my home, and you didn't require me to get a fortified roof. But the homeowners insurance was saying, well, it's flooding. And the communities were like, well, the flood came from the sky, not from the ground.

What does the planning look like? There need to be conversations between all levels of government and different forms of insurance. You're going to keep running into these issues no matter where you're going.

I also want to point out what the risks are with the relocation measures. We've been talking about flooding. We haven't even talked about wildfires and tornado risks. There's always going to be risk. What does it look like to have risk mitigated across all different sectors? I think that's another big red flag that we haven't talked about.

33. See IBHS, *Construction Standards*, <https://ibhs.org/guidance/fortified-construction-standards/> (last visited Apr. 22, 2024).

34. Fact Sheet, White House, Obama Administration Announces Public and Private Sector Efforts to Increase Community Resilience Through Building Codes and Standards (May 10, 2016), <https://obamawhitehouse.archives.gov/the-press-office/2016/05/10/fact-sheet-obama-administration-announces-public-and-private-sector>.

**Dave Jones:** I want to make one other point. We're having a real-time experiment in Florida as to whether giving insurers pretty much all they have asked for is going to be sufficient to keep them writing in a market suffering substantial losses due to major catastrophic weather-related events—in Florida's case, hurricanes. Rates in Florida are about three to four times the national average.

Florida has created two publicly funded reinsurance facilities to reduce the cost of reinsurance for home insurers. They've limited assignment of benefits and litigation against insurers. They've limited attorney fees for lawsuits against insurers. They allow reinsurance costs to be included in rates. They allow forward-looking probabilistic modeling over a longer time horizon, a point that Carolyn raised earlier. Florida has done all these things and more to increase rates and reduce costs to home insurers.

Yet, the jury is still out whether that's going to be sufficient to bring back the private insurance market in Florida. At the last count, Citizens was at about 1.2 million policyholders. Florida is trying to depopulate or move Florida Citizens policyholders back onto the rolls of private insurers.<sup>35</sup>

But Florida has had this ebb and flow with regard to its insurance market. When there is a hurricane, insurers suffer major losses. Some Florida insurance companies go bust. Some Florida insurers leave the state entirely or stop renewing some or all insurance in the state. Then, opportunistic capital comes back into the market. Some small insurance companies get formed to make some money. And they make money for a while until the next hurricane, and then they lose their shirts again. So, we may be approaching, in some geographies like Florida, a point where these more traditional interventions really aren't going to work because even at a high price, insurers simply can't collect enough to cover their losses and make a profit.

It's a pessimistic note to close on, but I think a number of the longer-term and deeper interventions that various panelists have talked about, including most importantly accelerating the transition away from fossil fuels, are really what's necessary here, because we're essentially reaching uninsurability in a lot of places in the United States.

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35. *Florida Lawmakers Pass Citizens Insurance Changes*, CBS NEWS MIAMI (Mar. 8, 2024), <https://www.cbsnews.com/miami/news/florida-lawmakers-pass-citizens-insurance-changes/>.