COASTAL DISASTER INSURANCE IN THE ERA OF GLOBAL WARMING

The Case for Relying on the Private Market

Justin R. Pidot
Georgetown Environmental Law & Policy Institute
Georgetown University Law Center
About the Author:

Justin R. Pidot is a Fellow at the Georgetown Environmental Law & Policy Institute. He graduated with distinction from Stanford Law School in 2006 where he was a co-Editor-in-Chief of the Stanford Environmental Law Journal and student in the Stanford Environmental Law Clinic. Prior to attending law school, Mr. Pidot coordinated outreach efforts in Washington State for the Save Our Wild Salmon Coalition. He graduated with a B.A. from Wesleyan University.
COASTAL DISASTER INSURANCE IN THE ERA OF GLOBAL WARMING

The Case for Relying on the Private Market

Justin R. Pidot

Georgetown Environmental Law & Policy Institute
Georgetown University Law Center
EXECUTIVE SUMMARY

This report examines proposals before Congress for the federal government to take on an expanded role in providing insurance to property owners threatened by hurricanes and other coastal storms. Its basic conclusion is that most of the pending proposals are misguided and, to the extent possible, the United States should stay out of the insurance business and allow private companies to provide disaster coverage that reflects its true market cost.

Proposals for greater federal intervention in coastal insurance are being driven by citizens’ concerns about affordability and availability of insurance along the Atlantic and Gulf coasts of the United States, particularly in Florida, and public officials’ understandable efforts to address them. Recent rate hikes appear to partly reflect a normal cycle in the insurance business following severe disasters, and a response to the boom in coastal development and the corresponding increase in coastal real estate values. But longer-term causes also may be at work, including the commencement of a natural cycle of heavy hurricane activity, a realization by the insurance industry that it had systematically underestimated potential economic losses from hurricanes and others storms, and the growing industry perception that global warming may produce more serious property damage in the future.

The current proposals before Congress to address the “crisis” in coastal insurance rates take three different forms. One proposal is to expand the forty-year-old federal flood insurance program to include coverage for wind damage from hurricanes and other storms. Another proposal is to make the United States a reinsurer (i.e., an insurer of insurance companies) for coastal insurance. The third proposal is to expand the ability of private insurance companies to offer coastal insurance by eliminating taxation of premiums that companies dedicate to reserve funds to pay for future catastrophic losses.

Our analysis indicates that proponents of federal intervention have failed to make the case for a significantly larger federal role in coastal insurance or that coastal disaster insurance cannot continue to be provided largely, if not exclusively, by private companies. Contrary to the proponents of the proposals, there is no convincing evidence that hurricanes represent an inherently uninsurable risk or that private companies lack the capacity to handle coastal disasters. While many citizens and elected representatives are understandably concerned about higher insurance rates and market cycles that temporarily leave some property owners uninsured, at the
end of the day these hurdles are not inherently problematic if they accurately reflect the risks associated with building in hazardous areas.

The report’s analysis further indicates that a major new federal intervention in the private insurance market would likely have several unintended negative consequences, including imposing a potentially large financial burden on U.S. taxpayers, unfairly forcing those who live and own businesses in less hazardous areas to subsidize those in more hazardous areas, creating an incentive for additional coastal development that would increase the nation’s long-term vulnerability to hurricanes and harm valuable coastal ecosystems, and displacing private insurance companies and stifling the development of new and innovative techniques to spread the risks posed by coastal hazards.

Policy makers could reasonably decide to provide some form of relief to some homeowners and certain other property owners who may have purchased property in hazardous coastal areas many years ago without understanding the risks involved. However, policy makers should draw a sharp distinction between long-time owners, on the one hand, and developers and new owners, on the other, to avoid subsidizing unwise decision making by those on notice about coastal hazards. In addition, this relief should take the form of targeted, direct payments to the intended recipients, not complex government insurance programs that would tend to distort the private marketplace.

In sum, the best federal policy appears to be one that does the least, that is, that largely leaves the business of providing insurance for hurricanes and other coastal storms to the private sector. Private insurance companies can generally provide appropriate coverage for the risks of property damage associated with hurricanes and other coastal storms while providing consumers reasonably accurate price signals about the dangers of building, living, and operating businesses in hazardous areas. Some states, Florida in particular, have arguably made reckless financial commitments to provide a short-term solution to the perceived crisis in insurance affordability and availability; many of the proposals before Congress would simply compound the problem by shifting responsibility for paying for these bad policy decisions to the federal taxpayer.

Our analysis shows that there are several useful, limited reforms that could be undertaken by the federal and state governments. The federal government could provide a valuable public service by generating maps and other information on how risks vary in different areas of the coast, which insurance companies could use to create more fine-grained rate structures that better
match the hazards associated with particular properties. State insurance regulators should consider making wind-damage coverage mandatory in coastal areas. In view of the overwhelming evidence that the national flood insurance program has been a public policy disaster, Congress should consider phasing it out over time. Finally, Congress should consider eliminating taxation of insurance premiums that companies commit to dedicated reserve funds to pay future catastrophic losses.
INTRODUCTION

In the wake of the record-breaking hurricane years of 2004 and 2005, the cost of insurance for wind damage increased dramatically and some insurance companies reduced the amount of insurance they offer in coastal areas. Global warming, which will likely increase flood damage and storm intensity, could push insurance rates still higher and make private insurance even more difficult to obtain. Some states have taken aggressive, risky, and expensive steps to ensure that coastal insurance remains affordable and available.

In response to this “insurance crisis,” Congress is considering a series of proposals to federalize certain aspects of coastal insurance. Some elements of the insurance industry and various other advocacy groups have conducted a highly visible effort in support of some of these proposals. For instance, a major lobbying group named ProtectingAmerica.org, backed by the Allstate Corporation,\(^1\) the second largest insurance company in the country, has placed full-page advertisements in major newspapers, stating “How do you deal with an enemy that has no government, no money trail and no qualms about killing women and children? The enemy is Mother Nature.”\(^2\) The answer, according to ProtectingAmerica.org, is to have the federal government shoulder a significant portion of the financial risk associated with catastrophic hurricanes.

The proper role of government and of the federal government in particular in the coastal insurance market presents a complicated policy problem. On the one hand, access to reasonably affordable property insurance is an important priority for American property owners. Therefore, it is hardly surprising that many citizens are concerned about the high price and lack of availability of insurance in the private market. Nor is it surprising that leaders in Congress feel a responsibility to consider these concerns.

---

\(^1\) Spencer S. Hsu, *Insurers Retreat from Coasts: Katrina Losses May Force More Costs on Taxpayers*, WASH. POST, Apr. 30, 2006, at A1 (noting that Allstate has contributed more than $1 million to ProtectingAmerica.org). Ironically, one of the chairmen of ProtectingAmerica.org, former FEMA Director James L. Witt, once championed changes to the National Flood Insurance Program to reduce subsidies, stating “It’s time to quit wasting money and rebuilding in high risk areas. . . . If someone is going to build and live in a high-risk area, they ought to pay the price.” Judy Warrick, *Seeking an End to a Flood of Claims*, NAT’L WILDLIFE MAG., June/July 1999 (quoting James L. Witt), available at http://www.nwf.org/nationalwildlife/article.cfm?issueID=45&articleID=537.

\(^2\) Advertisement, N.Y. TIMES, Aug. 29, 2006, at A11.
On the other hand, the recent spikes in insurance rates reflect recognition of the true economic cost of developing property and choosing to live in hazardous coastal areas. As suggested in an insurance industry publication, “Though it would seem obvious, enormous effort continues to be expended in trying to escape the reality that where places, things, and people are expensive to insure, insurance will be expensive.” Federal financial support for ensuring the availability of coastal insurance has the potential to encourage more coastal development, place more citizens at risk, expand the vulnerability of the United States to hurricanes, and increase the cost of providing coastal property insurance. In weighing these arguments, there is an important distinction between established residents of coastal areas that may not have been aware of the severity of the danger posed by hurricanes when they purchased their properties and developers of new structures and potential new arrivals that are on notice about this hazard.

In approaching the issue of providing insurance for coastal hazards, Congress is not writing on a clean slate. In 1968, Congress established the National Flood Insurance Program (“NFIP”) to provide insurance to property owners in flood zones, which include many coastal areas. The NFIP provides insurance for property damage due to flooding, and does not encompass wind damage. The current proposals before Congress are designed in effect to establish a new federal role in wind insurance that would match the role the federal government already plays in flood insurance. In fact, one of the pending proposals involves converting the NFIP into a multi-peril insurance program that would cover both natural hazards.

The current regime in which the federal government provides insurance for flood damage and private companies provide insurance for wind damage has given rise to numerous difficulties. From the perspective of a citizen whose home has been destroyed by a hurricane, the distinction between these two types of coverage may represent a meaningless technicality. Furthermore, in the aftermath of Hurricane Katrina, the wind-water distinction produced voluminous litigation about whether property damage was caused by one natural hazard or the other. It is understandable that some policy makers might respond by seeking to eliminate the distinction between wind and water damage by applying to wind risks the same policies the federal government has long applied to flood risks.

---

However, this proposal begs the question whether the NFIP represents a successful model. As discussed below, the general view is that the NFIP has been a public policy disaster, both because of the burden it has imposed on the federal taxpayer and because it has failed to stem the tide of development in hazardous floodplains. While this report does not focus in detail on the flood insurance program, one option Congress should consider is phasing out the NFIP and fostering private-sector, multi-peril insurance.

Another basic question is the proper roles of the federal and state governments in addressing these issues. The states have traditionally taken the lead in regulating the insurance industry. According to proponents of federal intervention, however, the challenge of providing coastal disaster insurance is too big for the states to handle, requiring a larger federal role. At the same time, some states have taken on significant new liabilities in an effort to reduce the price their residents pay for hurricane insurance in the short-term. Some of the pending proposals in Congress can be viewed as an effort to foist onto the federal taxpayer the costly burden of fiscally questionable choices made at the state level.

This report seeks to unpack these complex issues as follows: Part I discusses the origins and nature of the coastal insurance crisis and discusses how global warming may exacerbate coastal insurance problems in the future. Part II describes current government insurance programs, including the National Flood Insurance Program, federal disaster assistance programs, and several state programs designed to make coastal disaster insurance more readily available to consumers at a reasonable cost. Part III discusses the current proposals in Congress to expand the federal government’s role in coastal insurance. Part IV describes in theoretical fashion some economic challenges facing private companies in providing insurance coverage for hurricanes and other coastal storms. Part V discusses the challenges facing public policy makers in crafting a sensible approach to coastal insurance, particularly at the federal level. Part VI critically evaluates the primary arguments of the proponents of federal intervention in insurance for hurricane and other coastal storms. Part VII discusses some likely unintended adverse consequences of federal intervention. Finally, in Part VIII, we lay out a few useful, limited reforms that could be undertaken.
I. THE BROODING PERFECT STORM: AMERICA’S COASTAL “INSURANCE CRISIS”

In 2004 and 2005, the United States suffered record-breaking hurricanes, including seven of the thirteen most costly storms in American history. In 2005, Hurricane Katrina caused more damage than any hurricane on record and the season as a whole set the record for the most number of named storms. In response, the price home and business owners pay for insurance has dramatically increased and, in some areas, insurance can be hard to obtain on the private market at any price.

In Florida, according to a Mason-Dixon Poll, 42 percent of voters saw an increase in their insurance rates of more than $1,000 between 2005 and 2006. In Louisiana, there are anecdotal accounts of businesses receiving notices increasing their rates five to ten-fold in a single year. The Allstate Corporation announced that it would no longer write new policies in Florida, Louisiana, Mississippi, New York, and coastal Texas, and that it would reduce by one quarter the number of existing Florida policies. Similarly, State Farm has adopted a policy of no longer

---

4 ERIC S. BLAKE ET AL., NATIONAL HURRICANE CENTER, THE DEADLIEST, COSTLIEST, AND MOST INTENSE UNITED STATES TROPICAL CYCLONES FROM 1851 TO 2006 (AND OTHER FREQUENTLY REQUESTED HURRICANE FACTS), NOAA Technical Memorandum NEWS TPC-5 at 5 (Updated Apr. 15, 2007). These figures are indexed for inflation. NOAA also provides damage estimates indexed for changes in population and wealth. As a testament to the flood of money and people to the coasts, when such changes are taken into account, only three of the 2004 and 2005 hurricanes are among the top twenty most-damaging storms. Id. at 9.

5 Id. at 5, 13.


7 In recent congressional testimony, Mark Drennen, the president and CEO of an economic development organization in Louisiana, provided eleven examples of businesses experiencing astronomical increases in insurance premiums between 2005 and 2006, including a restaurant that faced an increase from $27,000 to $242,000; a health insurer that secured $200 million in coverage for $1.3 million but then was required to pay $6.3 million for $70 million in coverage the following year; and a country club that saw its premium increase from $60,000 to $100,000 while the deductible also increased from $10,000 to $250,000. Stabilizing Insurance Markets for Coastal Communities Testimony Before the House Comm. on Financial Services., Subcomm. on Capital Markets, Insurance and Government Sponsored Enterprises, Hearing 109-119, 109th Cong., at 122-123 (Sept. 13, 2006) [hereinafter September 2006 House Hearing] (statement of Mark Drennen, Greater New Orleans, Inc.).

8 Hsu, supra note 1.

9 Andrew Ward, In Harm’s Way: How America’s Rush to the Coast is Driving up the Cost of Hurricanes, FIN. TIMES, June 5, 2006, at 13.
offering insurance within one mile of the ocean\textsuperscript{10} and announced that it would sell no new policies in Mississippi.\textsuperscript{11}

This tumult in the insurance industry has produced a passionate public and media response. For instance, prior to the 2006 elections, more Florida voters ranked the cost of property insurance as their top priority than any other issue.\textsuperscript{12} One candidate for the Florida state legislature noted that “What I spend my days talking about . . . is the thing that is strangling our pocketbooks . . . homeowners insurance.”\textsuperscript{13} Feeding off of the public mood, newspapers have run headlines like “Rising Insurance Rates Push Florida Homeowners to the Brink,”\textsuperscript{14} “Wilma Spawns Insurance Crisis,”\textsuperscript{15} and “Insurance Rates Skyrocket.”\textsuperscript{16}

The price spikes and availability shortages are attributable to a confluence of factors. First, these conditions are predictable market responses to the recent hurricanes, which required insurance companies to make large payments to policy holders. The payments diminished the financial reserves of many companies, eroding their ability to cover potential future claims. In response, insurance companies raised their rates to replenish their reserves, canceled some of their coverage to reduce their exposure, and entered into reinsurance contracts and took advantage of capital market instruments to lay off part of their risk.\textsuperscript{17} These steps have led to rate hikes and reduced coverage, at least in the short term.\textsuperscript{18}

\textsuperscript{11} Joseph B. Treaster, \textit{State Farm Ends New Property Coverage in Mississippi}, N.Y. TIMES, Feb. 15, 2007, at C2. There is some question as to whether State Farm is withdrawing from Mississippi to gain leverage in ongoing negotiations with state regulators involving thousands of claims related to Hurricane Katrina. \textit{Id.}
\textsuperscript{12} Julie Pace, \textit{Rising Rates a Top Priority: For Most Voters, Poll Shows Candidates Have Ideas on How to Stop Crisis}, TAMPA TRIB., Oct. 26, 2006, at Metro Section 1.
\textsuperscript{17} Borrowing money directly from the capital market will often be a disfavored strategy because of its high cost. Depending on market conditions and regulatory factors, insurance companies may prefer to replenish capital reserves through higher premiums. \textit{See} Neil A. Doherty & Lisa
Second, insurance companies have raised their rates based on a more accurate assessment of the risks facing coastal communities. Prior to Hurricane Andrew in 1992, hurricane experts believed that the worst possible storm could inflict no more than $10 billion in damage.19 To the industry’s dismay, Hurricane Andrew resulted in $15.5 billion in insured losses,20 leading to a fundamental reassessment of coastal risk. After the hurricane years of 2004 and 2005, modelers of hurricane damage again increased their predictions of hurricane risk. Today’s sophisticated models yield estimates that a worst-case hurricane could cause over $100 billion in insured losses.22

Third, scientists have determined that the Atlantic Multidecadal Oscillation (“AMO”), a twenty to forty year cycle in hurricane frequency and intensity, entered its intense phase in 1995.23 This means that in the coming decades the United States is likely to be hit by more frequent hurricanes than it experienced in preceding years.24

Fourth, the steep price and limits on availability of coastal insurance reflect the enormous amount of valuable development that has occurred in the coastal zone, especially in the southeastern region of the country. The population of the United States has been moving toward the coast for decades, and today more than half the people in the country live within fifty miles of the ocean.25 Between 1950 and today, the number of people living in hurricane-prone areas


18 Cycles of short-term supply constraints and higher rates followed by a return to equilibrium have been observed in other sectors of the insurance industry, including commercial insurance during the 1980s and medical malpractice insurance during the 1970s. See id. at 55.


20 Id. at 99.

September 2006 House Hearing, supra note 7, at 35 (statement of Franklin Nutter, Reinsurance Association of America).


23 See generally Stanley B. Goldenberg et al., The Recent Increase in Atlantic Hurricane Activity: Causes and Implications, 293 SCIENCE 474 (2001).

24 See id. at 474.

25 Ward, supra note 9.
between North Carolina and Texas more than tripled to 34.6 million.\textsuperscript{26} Even after the devastation caused by Hurricane Katrina, approximately 1,000 people a day continue to move into the hurricane zone.\textsuperscript{27} In 2005, Florida, the most hurricane-prone state in the nation, gained 321,697 residents, more new residents than any other state but Texas.\textsuperscript{28} As Table 1 shows, many of Florida’s most rapidly growing counties have been repeatedly hit by hurricanes.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Osceola</td>
<td>172,483</td>
<td>205,870</td>
<td>19.3%</td>
<td>13</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Lake</td>
<td>210,528</td>
<td>245,877</td>
<td>16.8%</td>
<td>15</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Saint Johns</td>
<td>123,135</td>
<td>142,869</td>
<td>16.0%</td>
<td>22</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Collier</td>
<td>251,377</td>
<td>286,634</td>
<td>14.0%</td>
<td>17</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>117,743</td>
<td>133,092</td>
<td>13.0%</td>
<td>10</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Pasco</td>
<td>344,765</td>
<td>388,906</td>
<td>13.8%</td>
<td>9</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Clay</td>
<td>140,814</td>
<td>157,502</td>
<td>11.9%</td>
<td>10</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Lee</td>
<td>440,888</td>
<td>492,210</td>
<td>11.6%</td>
<td>11</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Saint Lucie</td>
<td>192,695</td>
<td>213,447</td>
<td>10.8%</td>
<td>10</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Hernando</td>
<td>130,802</td>
<td>143,449</td>
<td>9.7%</td>
<td>11</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

Sources: NOAA Coastal Service Center, maps.csc.noaa.gov/hurricanes/viewer.html
Note: This table includes only storms the eye of which passed within 10 km of the county. Because many hurricanes are much wider than 10 km, these numbers probably underestimate the number of storms that could have caused damage within each county. Mild hurricanes are defined as those of force one and two on the Saffir-Simpson Hurricane Scale and severe hurricanes are defined as those of force three, four, and five.

Finally, higher insurance premiums reflect the rapid appreciation of real estate values in the coastal zone. All told, the value of insured coastal properties along the East Coast and the Gulf of Mexico doubled over the last decade; by the end of 2006, the value of insured property in this area exceeded $7 trillion dollars.\textsuperscript{29}

\textsuperscript{27} Haya El Nasser & Paul Overberg, \textit{Despite Storms, Coasts Fill Up}, USA TODAY, Oct. 21, 2005, at A1. USA Today included coastal areas between Virginia and Texas in its assessment.
The wild card for the coastal insurance business is the extent to which global warming will increase the hazards associated with coastal development and put even more pressure on insurance premiums. It is likely, at a minimum, that global warming will lead to a significant rise in sea level, increasing the amount of property at risk from storm-related flooding; scientists predict that a one-half meter rise in sea level would place six times more people at risk from storm surges. Furthermore, the Intergovernmental Panel on Climate Change has indicated with more than a 66 percent confidence that global warming will increase hurricane and tropical storm activity. While the scientific connection between global warming and hurricane strength and frequency is not yet clearly established, insurance companies must consider the risk that global warming is already increasing hurricane damage in assessing their current level of exposure on the coast.

All of these factors have combined to create the perception that the insurance market for property damage due to hurricanes and other storms is in the midst of a serious crisis, setting the stage for the current proposals being presented to Congress.

II. CURRENT GOVERNMENT PROGRAMS RELATED TO HURRICANE INSURANCE

Both federal and state programs already address, to some degree, insurance for property damage caused by hurricanes and other coastal storms. Before examining the current proposals before Congress, it will be helpful to lay out what already exists.

A. The National Flood Insurance Program

In 1968, Congress established the National Flood Insurance Program to provide home and business owners with insurance against flood damage. The NFIP has two primary elements.

---

30 Robert J. Nicholls, *Coastal Flooding and Wetland Loss in the 21st Century: Changes Under the SRES Climate and Socio-Economic Scenarios*, 14 GLO Balm CHANGE 69, 70 (2003); see also Cornelia Dean, *Will Warming Lead to a Rise in Hurricanes?*, N.Y. TIMES, May 29, 2007, at F1 (noting that while most experts think climate change will increase hurricane frequency and severity, there is more of a scientific consensus that it will increase coastal flooding).

First, the program produces flood maps, demarcating 100-year floodplains, which serve as the basis for the program’s rate structure and mitigation requirements. Second, the program offers up to $250,000 in insurance against flood damage to homeowners in communities that have adopted floodplain regulations meeting minimum federal standards. The program also offers up to $500,000 in coverage for non-residential properties. As of 2005, about 20,000 communities, three quarters of those in the country, participated in the program.

In adopting the NFIP, Congress proceeded on the assumption that it was impossible to rely on the private insurance industry to provide adequate insurance in flood-prone areas. Advocates of federal intervention believed that flooding events were too unpredictable, and that the potential magnitude of the claims so enormous, that private insurance companies would steer clear. The validity of this crucial judgment is debatable, given that a number of other nations rely on private insurance companies to provide flood insurance. In any event, since Congress made this judgment forty years ago, the federal government has provided most flood insurance coverage, including coverage for most water damage associated with coastal storms, and the private insurance industry has largely abandoned the field.

Because few property owners purchased insurance voluntarily during the early years of the program, Congress amended the NFIP to require owners within the 100-year floodplain with

---

32 A 100-year flood plain is an area that is expected to flood, on average, once every 100 years.
33 42 U.S.C. §§ 4012, 4013.
34 Id.
36 National Flood Insurance Act, P.L. 90-448 § 1302(b) (1968) (reciting finding that “many factors have made it uneconomic for the private insurance industry alone to make flood insurance available to those in need of such protection on reasonable terms and conditions”).
37 See SWISS RE, FOCUS REPORT, FLOODS ARE INSURABLE! (2002) [hereinafter SWISS RE I]; SWISS RE, FLOODS AN INSURABLE RISK? A MARKET SURVEY (1998) [hereinafter SWISS RE II] (identifying countries that provide flood insurance largely through private insurance companies, including: Argentina, Brazil, Canada, Czech Republic, France (with national reinsurance), Germany (storm surge excluded), Israel, Italy, Japan, Poland, Portugal, South Africa, Taiwan, and United Kingdom).
federally insured mortgages to purchase and maintain flood insurance.\textsuperscript{38} Beginning in 1983, in another effort to expand participation in the program, the federal government permitted private companies to write NFIP coverage under the Write-Your-Own (“WYO”) program.\textsuperscript{39} Under the WYO, private companies write the policies and handle claims adjustment and, in exchange, receive 30 percent of the premiums as a sales commission and 3.3 percent of incurred losses for adjusting claims.\textsuperscript{40} As of 2004, approximately 95 percent of NFIP policies were written under the WYO program.\textsuperscript{41}

The NFIP is generally viewed as a colossal public policy failure. First, the program is a major burden on taxpayers because it has not been run in a financially responsible fashion. The program provides an explicit subsidy for structures built before a community joined,\textsuperscript{42} charging owners of such properties an estimated 38 percent of the market rate.\textsuperscript{43} As of 2000, approximately 30 percent of NFIP policies were for pre-existing buildings.\textsuperscript{44} In addition, while owners of structures constructed or substantially improved after a community joined are supposed to be pay actuarial rates,\textsuperscript{45} they too have been heavily subsidized. The subsidy arises

\textsuperscript{38} Flood Disaster Protection Act of 1973, Pub. L. No. 93-234; National Flood Insurance Reform Act of 1994, Pub. L. No. 103-325. Despite this legislation, in 1997, only 27 percent of those with a high risk of flooding were thought to carry flood insurance. See Risa Palm, Demand for Disaster Insurance: Residential Coverage, in Paying the Price, supra note 19, at 51, 55. Today, penetration may have improved. The RAND Corporation recently estimated that approximately half of single-family homes located in 100-year floodplains now have flood insurance. RAND NFIP STUDY, supra note 35, at xvi; see also GAO, Challenges Facing the NFIP, supra note 35, at 8-10.


\textsuperscript{42} 42 U.S.C. § 4015(c).


\textsuperscript{44} GAO, Financial Condition of the NFIP, supra note 43, at 2.

\textsuperscript{45} 42 U.S.C. § 4015(c) (“[T]he chargeable rate shall not be less than the applicable estimated risk premium rate for such area (or subdivision thereof) under section 4014(a)(1)”); 42 U.S.C. § 4014(a)(1) (stating that rates shall be based on “consideration of the risk involved and accepted actuarial principles,” including the cost of administering the program).
from the fact that program managers have relied on a moving twenty-five year loss experience to set rates.46 Because the NFIP had not suffered a catastrophic loss year prior to 2005, it charged premiums that did not generate reserves to protect against foreseeable, severe losses.47 Furthermore, this backward-looking analysis failed to account for the continuously accelerating level of risk in the coastal zone, further underestimating the risks that covered properties would be flooded. As a result, when Hurricane Katrina struck, generating approximately $23 billion in claims, the NFIP paid for the vast majority of claims out of loans from the federal treasury that are unlikely to ever be repaid.48

Second, some property owners have received numerous payments because their properties flooded time and again. Unlike private insurers, which would almost certainly cancel coverage for such properties, federal officials are required to offer insurance to all comers in eligible communities, and have no authority to prevent rebuilding in hazardous areas. Repetitive loss properties make up roughly 1 percent of the NFIP properties but account for 38 percent of total insured losses.49 In one particularly extreme case, the owner of a Houston area home valued at $115,000 received $807,000 based on fifteen flooding events over an eighteen-year period.50

47 Id. In an additional demonstration of bureaucratic mismanagement, prior to Hurricane Katrina, the NFIP estimated that it faced a 1 in 1,000 chance of experiencing losses between $5.5 and $6 billion during a “catastrophic year.” GAO, FINANCIAL CONDITION OF THE NFIP, supra note 43, at 2. However, at that time, many experts, including some within the U.S. Army Corps of Engineers, had predicted that even a category three hurricane could lead to massive failure of the New Orleans levees. See, e.g., SENATE COMM. ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS, SPECIAL REPORT, HURRICANE KATRINA: A NATION STILL UNPREPARED 133 (2006); Ivor L. van Heerden, Report, Coastal Land Loss: Hurricanes and New Orleans, Center for the Study of Public Health Impacts of Hurricanes, LSU Hurricane Center 6 (2003); Brian Wolshon, Planning for the Evacuation of New Orleans, ITE JOURNAL, Feb. 2002, at 44, 45 (2002).
50 Frencesca Ortiz, The Tide is Nigh: Rethinking Urban Flood Management, 9 CHAP. L. REV. 435, 438 (2006). In 2004, Congress passed the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, P.L. 108-264, to create a pilot program to provide state and local governments funding to purchase land that has been flooded multiple times in a single decade to prevent further losses to the NFIP.
Third, the NFIP has generally failed in the goal of controlling construction of additional structures vulnerable to flooding.\textsuperscript{51} When Congress designed the NFIP, it was well aware that the program had the potential to encourage development in floodplains, thereby increasing the vulnerability of the nation to flood damage. As a 1966 Bureau of the Budget report explained:

A flood insurance program is a tool that should be used expertly or not at all. Correctly applied, it could promote wise use of floodplains. Incorrectly applied, it could exacerbate the whole problem of flood losses. . . . To the extent that insurance [is] used to subsidize new capital investment, it would aggravate flood damages and constitute gross public irresponsibility.\textsuperscript{52}

Unfortunately, this dire possibility has turned into reality. By one estimate, more than 2.3 million buildings have been constructed in 100-year floodplains in communities after they joined the program.\textsuperscript{53} This may help explain why the number of properties subject to repetitive-loss claims keeps climbing; in 1995, 75,000 homes experienced repetitive losses and by 2005 the number had climbed to 134,000.\textsuperscript{54}

Finally, the NFIP has failed in its mission to maintain up-to-date flood maps. As of 2005, 70 percent of the 92,222 flood maps created under the NFIP were more than ten years old. But the properties in a community subject to flood risk constantly change in response to new development, shoreline and riverbank erosion, and other factors.\textsuperscript{55} As a result, outdated flood maps fail to identify many properties that are within the current 100-year year floodplain. The

\textsuperscript{51} The failure of land use planning to channel development away from floodplains predated the NFIP. As noted by two prominent members of the U.S. Geological Survey in 1955, “Flood zoning, like almost all that is virtuous, has great verbal support, but almost nothing has been done about it.”\textsuperscript{52} \textsc{William G. Hoyt & Walter B. Langbein, Floods} 95 (1955).


magnitude of the problem was underscored by a recent study that found that 20 percent of repetitive loss properties are currently located outside of the official 100-year floodplain.\textsuperscript{56}

The problems plaguing the NFIP have persisted despite numerous efforts at reform. In 2006 testimony before Congress, the former Federal Insurance Administrator in the Ford and Carter administrations went so far as to question whether the program should be abandoned altogether.\textsuperscript{57}

\textbf{B. Federal Disaster Assistance}

The federal government expends substantial resources on direct disaster assistance in the aftermath of hurricanes and other coastal storms. While not conventionally thought of as such, federal disaster assistance represents a form of insurance, albeit one funded with general tax revenues. Between 1990 and 2001, the Federal Emergency Management Agency (“FEMA”) spent more than $27 billion in disaster assistance.\textsuperscript{58} After Hurricane Katrina, Congress appropriated over $110 billion to assist affected states.\textsuperscript{59}

Federal disaster assistance comes in a variety of forms and is used for many purposes. The majority of federal dollars are spent repairing public infrastructure.\textsuperscript{60} Other disaster assistance is used to fund emergency operations during and immediately after natural disasters.

\footnotesize{\textsuperscript{56} Proposals to Reform the National Flood Insurance Program Before the Senate Comm. on Housing and Urban Affairs, 109th Cong. (Feb 2. 2006) [hereinafter Senate 2006 NFIP Hearing] (statement of David R. Conrad, National Wildlife Federation).

\textsuperscript{57} Id. (statement of J. Robert Hunter, Consumer Federation of America). Mr. Hunter’s suggestion is reluctant. During his testimony, he stated: “I love the National Flood Insurance Program. I poured 10 years of my life into getting it started. . . . I say this as background because I must sadly raise the question of whether the flood insurance program should be ended.”

\textsuperscript{58} GOVERNMENT ACCOUNTABILITY OFFICE, DISASTER ASSISTANCE: IMPROVEMENTS NEEDED IN DISASTER DECLARATION CRITERIA AND ELIGIBILITY, GAO 01-837 at 1 (2001) [hereinafter GAO DISASTER ASSISTANCE].


\textsuperscript{60} GAO DISASTER ASSISTANCE, \textit{supra} note 58, at 1.
Florida’s Regulation of Hurricane Insurance

On the eve of Hurricane Andrew in 1992, Florida had a population of about thirteen million people and real property in the state had a value of about $421 billion. Today, Florida has nearly sixteen million people, 80 percent of whom live within ten miles of the coast. The State continues to grow by leaps and bounds and is expected to top twenty-five million by 2025. All told, real property in Florida is now worth more than $1.2 trillion.

Since Hurricane Andrew, Florida has been shoulder-deep in the business of providing and reducing the cost of hurricane insurance. These efforts have taken three primary forms. First, Florida provides hurricane insurance directly to consumers through the Citizens Property Insurance Corporation (“Citizens”). Second, the state provides private insurers with reduced-cost reinsurance through the Florida Hurricane Catastrophe Fund (“FHCF”). Finally, Florida has used an array of regulatory tools to force reluctant insurance companies to continue selling property insurance in the state.

Citizens provides hurricane insurance to over 1.2 million homeowners in Florida. In the past Citizens provided insurance at “above market” rates to avoid direct competition with the private sector. However, this changed in 2007, when a special session of the Florida Legislature enacted the Insurance Industry Accountability and Consumer Protection Act. The most immediate impact of this legislation was cancellation of a planned 56 percent rate hike for Citizens’ policyholders. In addition, the act authorized Citizens to directly compete with private insurance companies. Even charging “above-market” rates, Citizens has a bad track record for obtaining sufficient premiums to cover its losses. For instance, after the 2005 hurricane seasons, Citizens was more than $1.7 billion in the red. The Florida legislature bailed the program out by appropriating $715 million from the state treasury. Citizens made up the remaining deficit by imposing a surcharge on all types of property insurance sold in the state. Under the new legislation, Citizens now has the authority to impose surcharges on virtually every line of insurance, not just varieties of property insurance.

The FHCF offers reinsurance to private insurance companies. It charges primary insurance companies a premium based on the risks they insure and, in exchange, will cover a portion of the losses from catastrophic hurricanes. Unlike a private reinsurer, the FHCF can cover any shortfall it experiences by imposing an assessment on privately sold insurance or
raising money through the sale of bonds.\textsuperscript{1} Under the 2007 law, the FHCF now provides $32 billion in coverage despite having only $1 billion in assets.\textsuperscript{m}

Florida has also used a number of regulatory tools to prevent insurance companies from leaving the state. In the aftermath of Hurricane Andrew, Florida enacted a moratorium prohibiting insurance companies from canceling policies for coastal property owners.\textsuperscript{n} During a phase-out period that lasted until 1996, companies were allowed to cancel no more than 10 percent of their policies per year.\textsuperscript{9} In the 2007 legislative special session, the legislature resisted a call from the governor to impose a new four year moratorium. However, the 2007 law does require companies that market auto insurance in Florida to sell property insurance, including hurricane coverage, if they sell property insurance in other states.\textsuperscript{p}

\textsuperscript{a} Data from the Florida Research and Economic Database, based on information from the Florida Department of Revenue, available at http://fred.labormarketinfo.com (select economic indicators then property value) (last visited July 26, 2007).

\textsuperscript{b} COASTAL HIGH HAZARD STUDY COMMITTEE, FINAL REPORT 9 (2006).


\textsuperscript{e} 2007 Florida H.B. 1A/C.S 1A (2007).


\textsuperscript{g} MILLIMAN CONSULTANTS AND ACTUARIES, ANALYSIS OF FLORIDA LEGISLATIVE REFORM: SPECIAL SESSION, JANUARY 2007 17 (2007) [hereinafter MILLIMAN REPORT]; Klas & Caputo, supra note f.

\textsuperscript{h} Waddell, supra note 14.

\textsuperscript{i} Id.; MILLIMAN REPORT, supra note g, at 16 (noting that prior to 2007, Citizens had the authority to assess fire, allied lines, homeowners, farmowners, mobile homeowners, and commercial multi-peril insurance).

\textsuperscript{j} See id. (noting that now Citizens can assess all but “workers compensation, medical malpractice, accident and health, National Flood Insurance, and Federal Crop Insurance”).

\textsuperscript{k} See Lecomte & Gahagan, supra note 19, at 111-12, for a history of the FHCF.

\textsuperscript{l} MILLIMAN REPORT, supra note g, at 14-15.


\textsuperscript{o} See Lecomte & Gahagan, supra note 19, at 110-11.

\textsuperscript{p} Klas & Caputo, supra note f; Shelly Sigo, Florida’s Insurance Reform Legislation Plays the Odds Against New Bonding, BOND BUYER, Jan. 25, 2007, at 8.
and to assist in cleanup operations.\textsuperscript{61} The federal government also funds housing for displaced persons.\textsuperscript{62} In addition, disaster assistance is used to facilitate economic recovery; the government provides subsidized loans to damaged businesses and may provide funding for economic revitalization programs in damaged areas.\textsuperscript{63} Furthermore, following Katrina, the federal government provided affected states with $15 billion in Community Development Block Grants that could be used to provide payments to uninsured owners of property damaged by the 2005 hurricanes.\textsuperscript{64} According to some federal officials, this funding was intended to compensate property owners without flood insurance that were damaged by storm surge or flooding because of the failed levees near New Orleans.\textsuperscript{65}

C. State Catastrophe Programs

Unlike most segments of the U.S. economy, the insurance industry is primarily regulated by the states.\textsuperscript{66} Each state legislature has delegated responsibility for enforcing its insurance law to an administrative body, in most cases a state insurance commission.\textsuperscript{67} While insurance regulations vary, most states impose financial requirements on insurance companies in order to protect their solvency and conduct some type of review of insurance rates to ensure, in the

\begin{footnotesize}
\begin{footnotes}
\item[61] See, e.g., \textsc{Government Accountability Office, Disaster Assistance: Information on FEMA’s Post 9/11 Public Assistance to the New York City Area}, GAO-03-926 at 4-5 (2003).
\item[63] See, e.g., \textsc{Government Accountability Project, Small Business Administration: Actions Needed to Provide More Timely Disaster Assistance}, GAO 06-860 at 11 (2006); \textsc{Government Accountability Project, September 11: Overview of Federal Disaster Assistance to the New York City Area}, GAO-04-72 at 6 (2004).
\item[64] See \textsc{May 2007 Disaster Senate Hearing, supra} note 59 (statement of Donald E. Powell, Department of Homeland Security).
\item[66] States regulate insurance under the McCarran-Ferguson Act, 15 U.S.C. §§ 1011 et seq., passed in 1945 to restore state authority following a U.S. Supreme Court decision, \textit{United States v. South-Eastern Underwriters}, 322 U.S. 533 (1944), in which the Court ruled that the dormant commerce clause preempted state regulation.
\item[67] \textsc{Kenneth S. Abraham, Insurance Law and Regulation: Cases and Materials} 107-08 (4th ed. 2005).
\end{footnotes}
\end{footnotesize}
language of many state laws, that rates are not “excessive, inadequate, or unfairly discriminatory.”

Thirty-two states and the District of Columbia have created Fair Access to Insurance Requirements Plans (“FAIR Plans”) to provide coverage to some property owners that cannot secure insurance in the private market. FAIR Plans were initially created to provide property owners in inner-city communities with insurance after widespread civil unrest broke out across the country in the late 1960s. However, the scope of some of these programs has expanded and, today, Georgia, Massachusetts, New Jersey, and New York all provide insurance to coastal property owners through their FAIR Plans.

Seven other states have created Beach and Windstorm Insurance Plans that provide insurance coverage specifically in coastal communities. Between 1990 and 2005, the value of property insured by state FAIR Plans and Beach and Windstorm Plans increased from $40.2 billion to $387.8 billion. In every state except Florida, these programs are under mandates to set rates “above market” to avoid direct competition with private insurance companies. Under a 2007 law, Florida’s program can offer competitive insurance rates in high-hazard areas.

Several states have created other types of programs to increase availability and reduce the cost of wind insurance. For instance, Florida has a catastrophe fund that provides inexpensive reinsurance to private insurance companies in order to reduce rates for hurricane coverage.

---

68 See id. FAIR Plans were established pursuant to the Housing and Urban Development Act of 1968, which, among other things, established a federal program to sell reinsurance for riot damage to state insurance programs that provided coverage to inner city communities.


71 See III Residual Markets, supra note 69.

72 Id. Both Florida and Louisiana have merged their FAIR Plans and Beach and Windstorm Plans to respectively form the Citizens’ Property Insurance Corporation and the Louisiana Citizens’ Property Insurance Corporation.

73 Insurance Information Institute, State-Backed Insurance Schemes: The Role of Insurers, London Institute Centenary Lecture (Mar. 6, 2006), available at server.iii.org/yy_obj_data/binary/769059_1_0/london.pdf.

74 2007 Florida H.B. 1A/C.S 1A.

Other states are considering creating similar catastrophe funds. Still other states have enacted
tax measures to expand the availability of hurricane insurance. For example, in South Carolina,
homeowners can deduct part of the cost of making their property more resistant to hurricanes and
and can set up tax-free hurricane savings accounts to pay their deductible if a hurricane strikes. South Carolina also gives tax credits to insurance companies that provide hurricane insurance in high-risk areas.

III. PROPOSED FEDERAL INTERVENTIONS

There has been a great deal of discussion in Congress about possible federal legislation
on coastal hazards insurance. In the first half of 2007, there were at least three hearings
examining the coastal insurance crisis and potential federal responses and two additional
hearings examining the broader potential impact of global warming on the insurance market.

Not surprisingly, the congressional champions of federal legislation represent hurricane-
prone states. They are supported by an array of constituencies, including property owners

---

76 See, e.g., LOUISIANA RECOVERY AUTHORITY SUPPORT FOUNDATION, LOUISIANA HURRICANE
CATASTROPHE FUND ANALYSIS (2007); Governor Mark Sanford, State of the State Address

77 III Catastrophes, supra note 22.

78 Id.

79 Perspective on Natural Disaster Insurance Before House Comm. on Financial Services,
Subcommittee on Housing and Community Opportunity, 110th Cong. (Mar. 27, 2007)
[hereinafter March 2007 House Hearing]; An Examination of the Availability and Affordability of
Property and Casualty Insurance in the Gulf Coast and Other Regions Before the Senate Comm.
on Banking, Housing and Urban Affairs, 110th Cong. (Apr. 11, 2007) [hereinafter April 11, 2007
Senate Banking Committee Hearing]; Oversight of the Property and Casualty Insurance Industry
There was also a hearing on the NFIP’s coverage of hurricane damage. National Flood
Insurance Program: Issues Exposed by the 2005 Hurricanes Before House Financial Services
Subcomm. on Management, Investigations and Oversight, 110th Cong. (June 12, 2007).

80 The Impact of Global Warming on Private and Federal Insurance, Before the Senate Comm.
19, 2007 Senate Hearing]; Economic Impacts of Global Warming - Insurance Before the House
Select Comm. on Energy Independence and Global Warming, 110th Cong. (May 3, 2007)
[hereinafter May 3, 2007 House Hearing].

81 From Mississippi, Representative Gene Taylor introduced H.R. 920; from Louisiana,
Representative Bobby Jindal introduced H.R. 164; and from Florida, Representative Ginny
Brown-Waite introduced H.R. 91 and H.R. 330 and Representative Kendrick Meek introduced
H.R. 537.
A Sampling of Interested Parties

Independent Insurance Agents & Brokers of America: This trade association represents independent insurance agents that act as intermediaries between consumers and insurance companies. The association supports a federal hurricane insurance program because “coverage is not sufficiently available at affordable rates.”

The National Association of Insurance Commissioners: This organization represents state insurance regulators. It supports formation of a commission to develop recommendations for reducing the price of insurance because, “[f]rom the perspective of insurance regulators, the key component is affordability, because if consumers in our states can’t afford to buy the coverage, its availability is irrelevant.”

The Reinsurance Association of America: The Association represents reinsurance companies operating in the United States. It believes that “[t]he private reinsurance market is financially strong and diverse . . . [and] does not believe a federal role is appropriate.”

ProtectingAmerica.org: While this nonprofit organization represents a range of parties interested in catastrophe insurance, a large part of its funding comes from the Allstate Corporation. ProtectingAmerica.org supports the creation of a federal reinsurance program to “provide more protection at lower cost to consumers.”

National Association of Realtors: The Association represents the residential and commercial real estate industry and supports an array of proposals to reduce the cost of insurance, which “is a key component to financing the purchase of real estate.” The Association argues that the real estate industry is “the linchpin of a healthy economy” and could be harmed by expensive insurance.

Florida Chamber of Commerce: The Florida Chamber of Commerce states that one of the greatest threats facing the Florida business climate is “rising property insurance rates for coverage of hurricanes and other windstorm events.” The Chamber supports “legislation to stabilize the market and provide affordable, available property insurance to Florida business owners.”

---

a April 19, 2007 Senate Hearing, supra note 80 (statement of Charles Chamness, National Association of Mutual Insurance Companies).
b Id. (statement of Walter A. Bell, President, National Association of Insurance Commissioners).
c March 2007 House Hearing, supra note 79 (statement of Franklin W. Nutter, Reinsurance Association of America).
d Id. (statement of Robert W. Porter, Executive Director of ProtectingAmerica.org).
e Id. (statement of F. Gary Thomas, National Association of Realtors).
impacted by recent insurance rate hikes; developers and realtors promoting coastal
development; and some primary insurance companies that stand to profit from a government
program that would assume some of the risk of catastrophic hurricane damage. Vocal opponents
of government intervention are less visible. Reinsurance companies, which could be displaced
by a new federal program, have argued that the private market can successfully insure hurricane
risk. Advocates of free-market approaches to social problems also have opposed federal
intervention.

There are three primary proposals pending in Congress:

**Expanding the NFIP to Cover Wind Damage.** The first proposal is to expand the
scope of the National Flood Insurance Program to include wind damage from hurricanes and
other storms. Under H.R. 920, the Multi peril Insurance Act of 2007, the Federal Emergency
Management Agency would offer wind coverage to citizens on the condition that their
communities adopt mitigation measures in accordance with federal guidelines. FEMA would
“encourage, where necessary, the adoption of adequate State and local measures which, to the
maximum extent feasible, will assist in reducing damage caused by windstorms.” Unlike flood
insurance, which is mandatory for all those with a federally insured mortgage that own property
in high-hazard areas, coverage for wind damage would be optional.

H.R. 920 would establish a higher coverage limit for damage from wind than from
floods. As noted, federal flood insurance currently provides up to $250,000 in coverage for a
single-family home and $500,000 for nonresidential properties. H.R. 920 would provide
coverage for wind damage up to $500,000 for a single-family home and $1 million for

---

82 See, e.g., March 2007 House Hearing, *supra* note 79 (Statement of Gary Thomas, National
Association of Realtors).  
83 See, e.g., September 2006 House Hearing, *supra* note 7, at 104-09 (statement of Franklin
Nutter, Reinsurance Association of America).  
84 See, e.g., CATO, *CATO HANDBOOK FOR CONGRESS: POLICY RECOMMENDATIONS FOR THE
108TH CONGRESS* 390 (Edward H. Crane & David Boaz eds. 2003); Statement of the Shadow
Financial Regulatory Committee Meeting, American Enterprise Institute, Proposed Federal
Catastrophe Reinsurance (2000), *available at*
85 H.R. 920 § 2 (c)(2).  
86 Id. at § 5(d)(2). This provision mirrors language in the National Flood Insurance Act. 42
U.S.C. § 4102; see also 44 C.F.R. § 60.1.
nonresidential properties.\textsuperscript{87} Wind insurance, like flood insurance, would ostensibly be provided at an “actuarially sound” rate.\textsuperscript{88} However, H.R. 920 reflects no recognition of the failure of FEMA to successfully determine risk-adjusted rates for flooding events,\textsuperscript{89} and there is little reason to believe that an expanded version of the program would perform any better.

**Providing Federal Reinsurance.** Another proposal is for the federal government to become a reinsurer of catastrophic insurance. Congress is considering two bills adopting this approach, H.R. 91, the Homeowners Insurance Protection Act (“HIPA”),\textsuperscript{90} and H.R. 330, the Homeowner Insurance Availability Act (“HIAA”).\textsuperscript{91} Both bills would provide excess of loss reinsurance for catastrophic natural disasters including hurricanes and other windstorms, earthquakes, tornados, and volcanoes.\textsuperscript{92} HIPA would create a program providing reinsurance to state-run catastrophe funds and state insurers of last resort;\textsuperscript{93} on the other hand, HIAA would provide reinsurance to a larger universe of entities including both private insurance companies and state insurance programs.\textsuperscript{94}

Pricing of reinsurance policies would be done differently under each bill. Under HIPA, the Department of the Treasury would set the price for reinsurance contracts based on a number of factors including the level of risk facing each state program.\textsuperscript{95} Under HIAA, the Department would divide the country into separate regions based on similarity of risk and auction off

\begin{itemize}
\item \textsuperscript{87}H.R. 920 § 2(7).
\item \textsuperscript{88}H.R. 920 § 2(5).
\item \textsuperscript{89}For discussion of FEMA’s inability to charge risk-adjusted rates, see Section II.A, supra.
\item \textsuperscript{90}Senator Bill Nelson from Florida has introduced, S. 928, a companion to HIPA.
\item \textsuperscript{91}No Senate companion to HIAA has been introduced.
\item \textsuperscript{92}H.R. 91 § 6; H.R. 330 § 4.
\item \textsuperscript{93}H.R. 91 § 7. The federal government relied on a similar model for distributing reinsurance in the late 1960s and early 1970s under the Urban Property Protection and Reinsurance Act of 1968, Pub. L. 90-448, which provided federal reinsurance for damage caused by riots to insurance companies that participated in state FAIR plans. See generally Dwyer, supra note 70. The federal government created this program after a spate of urban riots swept forty-one states and the District of Columbia in the 1960s. Prior to that period, widespread civil unrest in urban areas had been largely unknown in the United States. See John R. Lewis, A Critical Review of the Federal Riot Reinsurance System, 38 J. RISK & INSURANCE 29, 29, 34 (1971). By the late 1990s, authorization for federal riot reinsurance had expired, ending the program. Keith Bea, FEMA AND DISASTER RELIEF, Congressional Research Service 97-159 GOV at 6 (1998).
\item \textsuperscript{94}H.R. 330 § 5.
\item \textsuperscript{95}H.R. 91 § 7(b)(6).
\end{itemize}
Reinsurance

Reinsurance is essentially insurance for insurance companies.\textsuperscript{a} By purchasing reinsurance, a primary insurance company (i.e., one that sells insurance policies to consumers) can protect itself against risk that it cannot otherwise diversify. This can occur because many primary insurers, unlike reinsurers, sell policies in limited geographic areas.

Reinsurers offer two distinct types of reinsurance, each of which plays an important role in expanding the capacity of primary insurers to assume hurricane risk. The first is excess of loss reinsurance, which protects the primary insurer from a “layer” of loss. For example, a primary insurer could take out a policy that would cover losses that exceed $10 million (the attachment point) until the losses reached $20 million, i.e., it would cover the $10 to $20 million loss layer. Typically, a reinsurer agrees to cover only some portion of the losses in the loss layer to ensure that insurance companies retain an incentive to minimize losses. Insurance companies will often purchase multiple layers of tiered reinsurance to cover losses of varying amounts. Excess of loss reinsurance increases the predictability of losses facing primary insurers, and thus decreases their risk exposure. This allows primary insurers to write additional policies without risking insolvency.

The second type of reinsurance is a proportional reinsurance policy. In a proportional reinsurance policy, the reinsurer agrees to pay some proportion of all losses faced by a primary insurer, typically in exchange for some portion of premium payments. Again, such a policy allows a primary insurer to underwrite additional policies.

\textsuperscript{a}For a detailed explanation of reinsurance, see generally ROSS PHIFER, REINSURANCE FUNDAMENTALS: TREATY AND FACULTATIVE (1996).
reinsurance contracts to insurance providers in each region. During the auction, the minimum bid would be established by the Department based on an estimate of the risk facing the particular region. Companies that made a winning bid could subsequently sell their contracts to other companies operating in their region.

Advocates for both of these bills argue that rates would be actuarially sound and that the programs would be financially self-sufficient. However, based on experience with the NFIP, these statements necessarily have to be taken with a grain of salt.

Reinsurance coverage would be provided in a slightly different form under each bill. Under HIPA, reinsurance would cover 90 percent of losses in excess of either the capacity of the state program or the projected losses from a 200-year event, whichever is greater. Under HIAA, reinsurance would cover losses above a threshold based on the total claims received by providers in a particular region. The Department would set the threshold at a level between the losses projected to occur from a 100-year event and from a 200-year event. Once reinsurance liability was triggered, the government would cover 50 percent of the excess losses sustained by the holder of a reinsurance contract.

Both bills would place a cap on federal liability. HIPA would limit the Department to selling reinsurance contracts that, in aggregate, are “unlikely to exceed” $200 billion in total losses, and would restrict each state to purchasing an amount of reinsurance that does not exceed projected losses from a 500-year event. HIAA similarly would cap coverage in each region at the 500-year event level and further restrict aggregate coverage to a level “unlikely to exceed” $25 billion in losses.

---

96 H.R. 330 § 5 (a).
97 Id.
98 Id. at § 5 (b)(2).
100 H.R. 91 § 8(b)-(c).
101 H.R. 330 § 6 (b).
102 Id.
103 Id.
104 H.R. 91 § 8(d).
105 H.R. 330 § 7(c).
Both HIPA and HIAA would mandate that federal reinsurance should not compete with private reinsurers. HIPA contains a further provision stating that participating state programs should not compete with the private sector. However, this HIPA provision, which requires that state programs “not supplant coverage that is otherwise reasonably available and affordable in the private market,” might prove difficult to enforce for two reasons. First, it is often difficult to determine whether a government program “competes” with the private sector because, once the government has entered a field, the private sector may be squeezed out. Furthermore, by making affordability a criterion for avoiding competition, HIPA implicitly authorizes the states to supplant the private sector when they believe private insurance rates are too high.

**Insurance Company Catastrophe Funds.** A third proposal is to amend the federal tax code to permit insurance companies to avoid paying corporate income tax on premiums they place in dedicated funds to cover losses from catastrophic natural disasters. Under current tax law, premiums are taxed as regular corporate income in the year in which they are received, even if a company wants to place the premiums in a reserve to cover potential future losses. Because companies must hold large amounts of surplus to protect themselves against low-probability events, this tax treatment can substantially increase the cost of providing hurricane insurance, up to 140 percent for insuring 200-year events by one estimate, deterring companies from offering coastal disaster insurance.

H.R. 164, the Policyholder Disaster Protection Act, would authorize insurance companies to create Policyholder Disaster Protection Funds to cover a portion of losses associated with

---

106 H.R. 91 § 4 (c) (stating that reinsurance contracts “shall not displace or compete with the private insurance or reinsurance markets or the capital market”); H.R. 331 § 2 (c) (same).
107 H.R. 91 § 7 (a)(8).
108 Both HIPA and HIAA include provisions that would allow private reinsurers to substitute for federal contracts to the extent they are willing to provide reinsurance that is “substantially similar” both in terms of coverage and price. H.R. 91 § 7 (c); H.R. 330 § 5 (d).
109 The Policyholder Disaster Protection Act, H.R. 164. HIPA includes a similar provision to allow companies to create such reserves. Another bill, H.R. 1787, the Catastrophe Savings Accounts Act, targets consumer behavior, rather than the insurance industry, and would allow individuals to create tax exempt savings accounts to pay for damage they sustain from a federally declared natural disaster that is not covered by insurance.
natural disasters that are officially designated catastrophes.\textsuperscript{111} Companies could place surplus revenues in the funds up to a cap; the funds would not be permitted to grow larger than the total premiums for qualifying lines of insurance received by the company, adjusted by a designated multiplier.\textsuperscript{112} In the event that the cap were exceeded, H.R. 164 provides a mechanism for the company to draw down the fund to the designated maximum level.\textsuperscript{113}

\* \* \*

At the same time that Congress is considering these proposals addressing insurance for wind damage, it is also debating proposed amendments to the National Flood Insurance Program. H.R. 1682, the Flood Insurance Reform and Modernization Act would, among other things, (1) phase out subsidies for approximately 450,000 commercial properties and non-primary residences that receive preferential treatment because they were constructed before the community joined the NFIP; (2) authorize the NFIP to increase rates by up to 15 percent a year, up from the current limit of 10 percent annual increases; (3) increase the maximum coverage available under the NFIP; and (4) require the NFIP to have an ongoing program to update flood maps.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|}
\hline
 & Federal Multi-Peril Insurance & Federal Reinsurance & Tax-Deferred Funds for Insurers \\
\hline
Bush Administration & O & O & \\
\hline
CATO Institute & O & O & F \\
\hline
Reinsurance Association of America & & O & \\
\hline
ProtectingAmerica.org & & & F \\
\hline
Independent Insurance Agents & F & F & F \\
& & & \\
& & & \\
& & & \\
National Association of Realtors & F & F & F \\
\hline
American Insurance Association & O & O & O \\
\hline
\end{tabular}
\caption{Table 2. Views of Selected Parties on Proposals Before Congress}
\end{table}

Note: An F denotes being in favor of the measure and an O denotes being opposed.

\textsuperscript{111} H.R. 164 § 3 (adding section (h)(8) to section 832 of the Internal Revenue Code).
\textsuperscript{112} For example, the fund may contain assets equal to 75 percent of total premiums for homeowners multiple peril insurance. \textit{Id.} (adding section (h)(9) to section 832 of the Internal Revenue Code).
\textsuperscript{113} \textit{Id.} (adding section (h)(1)(B) to section 832 of the Internal Revenue Code).
IV. THE ECONOMICS OF HURRICANE INSURANCE

Policy makers weighing the appropriate role for the federal government in the hurricane insurance arena should consider some unique economic characteristics of this type of natural catastrophe insurance.

A. Large, Highly-Variable Losses

Hurricanes produce vastly different amounts of insured losses each year. This is in part because damaging hurricanes occur on an irregular basis, not only locally but also regionally, nationally, and even internationally. In 2004 and 2005, hurricanes hitting the U.S. coast caused tens of billions of dollars in property damage; by contrast, in 2006 there were no major hurricanes that struck the United States.\textsuperscript{114} In addition, when a hurricane does strike in a particular area, it generally produces a large number of highly correlated losses. Hurricane Katrina, for example, led to the filing of approximately 1.75 million claims across four states.\textsuperscript{115}

In these respects, providing insurance for hurricane damage is very different from providing insurance for other types of perils, such as automobile accidents. Automobile accidents are relatively frequent and each generally impacts a limited number of policy holders. Thus, as a result of the so-called “law of large numbers,”\textsuperscript{116} a company that sells a sufficient number of auto insurance policies can predict the magnitude of the insurance claims it will receive each year with a fair degree of accuracy. Table 3 illustrates the difference between the predictability of auto insurance losses and the high variability of hurricane losses.

\textsuperscript{114} This comparison is slightly skewed by the fact that the Insurance Services Office excludes tropical storms that cause less than $25 million in insured losses from these statistics. However, including such storms would not change the highly variable nature of losses related to hurricanes.

\textsuperscript{115} March 2007 House Hearing, \textit{supra} note 79 (statement of Marc Racicot, American Insurance Association).

\textsuperscript{116} To illustrate the law of large numbers, consider flipping a coin. As the coin is flipped more times, it becomes more likely that it will come up heads close to half the time. After 1,000 coin flips, it is exceedingly likely that the coin will have come up heads almost exactly 50 percent of the time. Similarly, if the average driver in a community faces a 2 percent chance of getting into an accident in a given year, a company that provides 10,000 car insurance policies will have to cover close to 200 car accidents by the end of the year.
One possible response by insurance companies to the variability of claims based on hurricane damage is to build up reserves against potential future disasters. Another strategy is to diversify geographically by purchasing reinsurance from firms that operate around the globe. Through reinsurance, even a company operating in a narrow geographic market can avoid the possibility of serious financial losses from a major natural disaster.

### B. Variable Vulnerability

Hurricane risk is not evenly distributed across coastal properties. In theory, insurance companies could charge a different amount for providing insurance to each property based on such factors as the property’s proximity to the ocean, topography and nearby vegetation, construction methods and materials, and the character of neighboring buildings. However, risk evaluation is time-consuming and complex insurance programs are costly to administer. Furthermore, state insurance regulators tend to support the use of aggregate risk estimates because they disfavor complex rate structures and may prefer the apparent equity achieved by relatively level insurance rates.\(^\text{117}\) In addition, insurance companies have a limited financial incentive to tailor rates to individual risk because they can obtain the same level of revenue from many policy holders paying an average premium as from the same group paying different, highly tailored amounts. Therefore, all other things being equal, companies prefer to use less costly,

---

\(^{117}\) See Council of Economic Advisers, Economic Report of the President 107, 119 (2007). The Council of Economic Advisers also warns that state regulatory approval processes can prevent insurance companies from rapidly adjusting premiums based on emerging information, and thus further undermine the ability of the industry to tailor premiums to risks. Id.
aggregate estimates of risk. In practice, most insurance companies use a single premium for each zip code, and then apply their underwriting policies to decide whether to provide insurance to individual properties at that price.

On the other hand, two factors tend to counterbalance insurance companies’ incentive to use broadly applicable, average rates. First, as a result of adverse selection, the averaging approach may undermine a company’s customer base over time. Adverse selection refers to the phenomenon in the insurance business that those individuals most likely to suffer a loss are those most likely to obtain insurance. If an insurance company uses an average premium across a broad area, it will tend to disproportionately attract high-risk customers. Everything else being equal, the greater the level of risk aggregation and the less consideration given to differences between properties, the greater the likelihood that a company’s premium structure will undermine its long-term viability.

Second, potential competition from other insurance companies also counterbalances insurers’ economic incentive to use average insurance premiums. A company that sets its rates by broadly averaging risk may lose more valuable, low-risk consumers to a competitor offering lower-priced, better-tailored policies. A new Florida insurance company provides an example of this type of competitive threat. The Privilege Underwriters Reciprocal Exchange (“PURE”) recently started offering insurance in Florida for valuable homes (worth more than $1 million) that meet exacting engineering requirements. In PURE’s assessment, the owners of these properties, which are relatively unlikely to suffer serious hurricane damage, were being overcharged for insurance coverage, creating the opportunity for PURE to offer the same level of protection at a lower price. By incorporating more detailed information into its premium structure, PURE gained a competitive advantage over less-discriminating companies.

When no insurer will offer insurance for high-risk properties, secondary insurance providers may fill the gap. For instance, in Connecticut, state-licensed insurance companies are largely unwilling to provide property insurance to homes located within 1,000 feet of the ocean.

---

118 See ROBERT H. JERRY II, UNDERSTANDING INSURANCE LAW 114 (3rd ed. 2002) (“Due to the expense of risk evaluation, an unbounded effort to categorize and subdivide risks in search of the fair rate would eventually lead to prohibitively expensive rates.”).
As a result, non-admitted insurance providers have become the major source of insurance for this area. Non-admitted insurance is offered by providers that are not licensed by the state in which the property is located and thus have broader policy-writing and rate-setting discretion than licensed companies. Generally, consumers are permitted to purchase non-admitted insurance only when no admitted policy is available.

C. Consumer Errors

The insurance business is further complicated by the difficulties consumers face in making fully rational decisions about obtaining insurance for low-probability events. Threshold bias, which refers to a consumer’s tendency to treat low probabilities as zero probabilities, leads some consumers to not purchase hurricane insurance even if it is cost-justified in economic terms. The so-called salience and availability heuristics may lead consumers to underinsure if they have not recently experienced a hurricane and the nature of the risk they face is therefore not “salient” or “available” to them. On the other hand, if a property owner has recently experienced a hurricane, the “gambler’s fallacy” may lead the owner to assume that such a low-probability event is unlikely to reoccur any time soon, and therefore forego obtaining insurance coverage. In a striking illustration of how these psychological processes operate, a property owner of St. Bernard Parish near New Orleans described his decision to rebuild less than two

---

121 CONNECTICUT INSURANCE DEPARTMENT, A REPORT ON THE AVAILABILITY OF HOMEOWNERS INSURANCE ALONG THE CONNECTICUT COAST 2 (2006) [hereinafter CONNECTICUT REPORT ON HOMEOWNERS INSURANCE], available at www.ct.gov/cid/lib/cid/app9_iso.pdf. Non-admitted policies can cost two to three times as much as traditional homeowners’ policies and have engendered some controversy. See April 19, 2007 Senate Hearing, supra note 80 (statement of Florida Governor Charlie Crist) (describing the cost differences and noting that “[s]imilar problems are being felt” elsewhere).

122 See PETER M. LENCIS, INSURANCE REGULATION IN THE UNITED STATES: AN OVERVIEW FOR BUSINESS AND GOVERNMENT 87-90 (1997). Insurance providers offering non-admitted insurance escape state regulation by transacting their business outside of state lines. States do, however, regulate insurance brokers, generally requiring them to make a “diligent effort” to find coverage in the admitted insurance market.

123 Neil A. Doherty et al., Insuring September 11th: Market Recovery and Transparency, 26 J. OF RISK & UNCERTAINTY 179, 186 (2003). In some circumstances, the gambler’s fallacy and salience and availability may counteract each other. These effects could interact such that availability and salience create short-term spikes in demand immediately after a horrific natural disaster, but, as the vividness of the event recedes, the gambler’s fallacy kicks in to depress demand for insurance.
years after Hurricane Katrina, stating “something like Katrina happens only once in a hundred years. . . . By that time, I’ll be dead.”

The mortgage financing system provides a potential check on consumers’ tendency to forego hurricane insurance. Many banks and other lenders require borrowers to secure and maintain insurance as a condition of a home loan. Furthermore, the federal government requires borrowers within designated flood zones to purchase and maintain flood insurance through the NFIP. However, these requirements are not always rigorously enforced. A recent study by the RAND Corporation concluded that, while the national compliance rate under the NFIP may be as high as 75 to 80 percent, in the Northeast and Midwest compliance may be as low as 45 to 50 percent. Furthermore, these compliance rates have been achieved only after decades of effort to ensure that mortgage holders live up to their legal obligations.

Underutilization of hurricane insurance has various adverse consequences for the insurance system. It undermines the effectiveness of insurance as a risk-spreading device, particularly if large numbers of low-risk property owners opt out. It also undermines the utility of insurance as a way of promoting socially useful behavior; if consumers forego purchasing insurance altogether they are missing market signals about the relative risks they are running. Finally, underutilization can contribute to greater volatility in insurance markets if consumers rush to obtain insurance after a hurricane but then fail to renew over time.

D. Moral Hazards

Another problem inherent in the insurance business is moral hazard, the tendency of those covered by insurance to run careless risks because they will not bear the financial consequences. For instance, an insured might tend to be negligent about closing storm shutters prior to a hurricane knowing that he will be indemnified for any loss. An extreme example of moral hazard is property owners in the flood plain who repeatedly rebuild, safe in the knowledge that they can file repetitive loss claims under the NFIP.

---

125 RAND NFIP STUDY, supra note 35, at 23.
126 Swiss Re, a European reinsurance company, discusses the importance of bringing low-risk property owners into the risk pool in two reports it produced discussing the insurability of floods. SWISS RE I, supra note 37; SWISS RE, FLOODS - AN INSURABLE RISK? (1998) [hereinafter SWISS RE III].
Insurance companies take various steps to control moral hazard. For example, some companies require customers to engage in hazard mitigation as a condition of retaining their insurance.\(^{127}\) Companies also can employ high deductibles to force policy holders to absorb some of the economic loss from an insurable event.\(^{128}\) Deductibles are particularly effective in promoting low-cost mitigation steps, like closing storm shutters. Deductibles are less effective in encouraging expensive measures, such as installing hurricane glass or outfitting a house with hurricane shutters,\(^{129}\) because the owners receive only part of the benefits of increasing a property’s resistance to storm damage but may bear all of the cost.\(^{130}\)

V. THE POLITICAL ECONOMY OF HURRICANE INSURANCE

Alongside the special economic dynamics of the hurricane insurance business, there are also some peculiar political dynamics at work.

A. Dividing Public Liability from Public Regulatory Authority

A central feature of the United States’ approach to natural hazard insurance has been a policy of assigning financial responsibility for coping with disasters to federal or state governments, while assigning responsibility for exercising regulatory authority to forestall

---

\(^{127}\) In some cases, however, insurance regulators may impede such efforts. For example, in 2007 the Connecticut Insurance Department published guidelines prohibiting insurance companies from canceling policies because a policy holder refused to engage in hurricane mitigation. STATE OF CONNECTICUT INSURANCE DEPARTMENT, FILING REVIEW GUIDELINES RELATED TO UNDERWRITING COASTAL HOMEOWNERS INSURANCE POLICIES at 3 (Jan. 23, 2007).

\(^{128}\) Insurers also use deductibles to reduce their overall exposure to hurricanes by reducing the amount of compensation they must pay after an event. However, state regulators sometimes interfere; for instance, most coastal states in the eastern U.S. prohibit insurance companies from utilizing more than a 5 percent deductible in windstorm policies. AMERICAN INSURANCE ASSOCIATION, NATURAL CATASTROPHE AGENDA: TO REDUCE LOSS AND PROMOTE STABILITY 5 (2006).

\(^{129}\) Hurricane glass can cost up to $35 to $50 per square foot, Hurricane shutter guide: Compare types and calculate costs, SUN SENTINEL website, http://www.sun-sentinel.com/news/weather/hurricane/sfl-hc-shutterguide,0,2678313.htmlstory (last visited July 25, 2007), and outfitting a house with hurricane shutters can cost over $40,000. David Royse, Fla. Senate Says No to Requiring Storm Shutters in High-Risk Areas, INSURANCE J., May 2, 2007.

\(^{130}\) In some circumstances, state or federal grants may be available to help defray the cost of mitigation. See, e.g., 42 U.S.C. § 4104c(e)(5) (grants eligible for flood-proofing and elevation of private structures under National Flood Mitigation Fund); III Catastrophes, supra note 22 (noting proposed and existing state programs to provide tax incentives for windstorm proofing).
disasters to local governments. At the same time, local governments have the most to gain from new development through increased local tax revenue. This situation has created a perverse set of incentives akin to those created by the moral hazard problem; just as the availability of insurance causes property owners to be careless about controlling and mitigating risk, federal or state assumption of financial responsibility for natural disasters causes local governments to be relatively indifferent to the many public costs of pro-development regulatory policies in the coastal zone.

This perverse dynamic has plagued the NFIP from its inception. When Congress created the NFIP, it mandated that localities adopt land use regulations and other mitigation measures to protect the federal government from mushrooming liability. But those requirements have never been effectively enforced, with the result that the NFIP has actually spurred more growth in high-risk flood plains than would have occurred in the absence of the program.

Local governments can sometimes actively obstruct the federal government’s effort to reduce risk. In Biloxi, Mississippi, shortly after Hurricane Katrina, a member of the city council urged residents who had lost homes to rebuild quickly to avoid an expected announcement from the NFIP that buildings would have to meet higher elevation requirements. This recommendation made sense from the city’s perspective because it would bear little direct financial risk from greater hurricane vulnerability but would reap larger tax revenues from rebuilding. In the words of the President of the Insurance Information Institute, “The bottom line is that coastal development is economically rational from the perspective of coastal stakeholders only because most benefits are retained locally while a high proportion of costs are redistributed to others.”

133 Kellie Lunney, A Tale of Two Cities, NAT. J., July 29, 2006, at 32.
134 April 19, 2007 Senate Hearing, supra note 80 (statement of Robert P. Hartwig, Insurance Information Institute).
Recent hurricane-related legislation in Florida has created the same kind of problem at the state level. In 2007, the Florida legislature took aggressive action to reduce hurricane insurance premiums by having the state assume financial responsibility for more than $32 billion in potential liability.\footnote{Peter Whoriskey, \textit{Florida’s Big Hurricane Gamble: To Cut Insurance Rates, State Pledges Billion for Future Claims}, \textit{WASH. POST}, Feb. 20, 2007, at A2.} At the same time, hurricane-prone communities in Florida have resisted enacting land use and mitigation restrictions. The City of Punta Gorda has proposed an extensive waterfront redevelopment plan in areas devastated by Hurricane Charley that would actually move buildings closer to the water.\footnote{Baird Helgeson, \textit{Risky Rebuilding}, \textit{TAMPA TRIB.}, Nov. 5, 2006, at 1. The Mayor of Punta Gorda went so far as to suggest that “[Hurricane] Charley did us a favor . . . . What you are going to see in the next couple of years would have taken 15 years [before the Hurricane].”} In the City of Pensacola, struck by Hurricane Ivan, the mayor has opposed any restrictions on development, suggesting that “the free market drives [development], the way it should be.”\footnote{Id.} However, all of Pensacola’s state legislators voted in favor of the Florida legislation making the state government financially responsible for hurricane damage exacerbated by poor local land use planning.\footnote{Indeed, the hurricane insurance bill passed the Florida Senate unanimously; only two representatives voted against it.}

B. The Wind Versus Water Dichotomy

The U.S. approach to disaster insurance has created a house divided — between water damage and wind damage. In general, private companies offer insurance against wind damage while the federal government covers damage from storm surges and other flooding through the NFIP. This dichotomy does not, of course, reflect the reality of hurricanes and storms. Property damage is often caused by a mix of wind and water. In addition, because the damage often occurs in the middle of a dangerous storm, it may be difficult if not impossible to determine the proportional share of damage caused by one or the other.

The wind-water dichotomy has generated considerable consumer dissatisfaction. Many consumers who purchase insurance against windstorms do not appreciate the importance of policy exclusions for water damage or of anti-concurrent causation provisions. Anti-concurrent causation provisions, the source of many lawsuits after Hurricane Katrina, exclude from coverage damage that is caused by both a covered peril (like wind) and an uncovered peril (like
water). After a hurricane, consumers have been distraught to discover that they were not covered for all (or sometimes any) of the resulting damage because it was either caused by water or jointly caused by water and wind.

The wind-water dichotomy also has created both an opportunity and an incentive for insurance companies to avoid paying claims by improperly classifying damage as flood damage. For consumers without flood insurance, this tactic has sometimes led to a total denial of compensation. For those that do have flood insurance, the federal government is burdened with paying their claims. Under the NFIP’s “Write Your Own” program, private insurers often administer and adjust NFIP claims for the federal program. Thus, in many circumstances, a single company provides private wind coverage and administers federal flood insurance, creating powerful pressure on adjusters to characterize damage as flood damage and thereby shift losses to the federal government. Currently, the federal government collects insufficient information to assess whether and to what extent insurance companies abuse their role as NFIP claims adjusters to improperly characterize losses.

There is evidence that in the wake of Hurricane Katrina insurance companies both shifted losses to the federal government and improperly denied claims for those without flood insurance. Two former claims adjusters have alleged that State Farm Insurance officials instructed them and others to attribute damage to flooding, quickly pay NFIP claims, and deny that properties suffered any wind damage. Disputes over whether insured property owners had been improperly denied compensation also sparked massive litigation, much of it brought by those lacking flood insurance, who constitute more than half of property owners in New Orleans.

140 FEMA, NATIONAL FLOOD INSURANCE PROGRAM: PROGRAM DESCRIPTION 22-23 (Aug. 1, 2002).
141 See Id. at 36-38.
142 See GOVERNMENT ACCOUNTABILITY OFFICE, NATIONAL FLOOD INSURANCE PROGRAM: PRELIMINARY VIEWS ON FEMA’S ABILITY TO ENSURE ACCURATE PAYMENTS ON HURRICANE-DAMAGED PROPERTIES, GAO-07-991T at 2-3 (2007).
144 See Scales, supra note 39, at 23-29, for an excellent discussion of the litigation and the contract provisions at its heart.
and more than 80 percent of those in coastal Mississippi.\textsuperscript{146} Residents in Mississippi alone have filed over 2,000 lawsuits.\textsuperscript{147} State Farm Insurance, Mississippi’s largest provider of home insurance, recently settled with 640 claimants for $80 million and agreed to reopen the claims process for 36,000 other homeowners, promising to provide them with at least $50 million in compensation.\textsuperscript{148}

C. The Public Choice Problem

Government regulation of insurance for hurricanes and other coastal storms presents a classic public choice problem.\textsuperscript{149} Public choice theory suggests that political leaders, constantly facing popular elections, will often be tempted to respond to the short-term demands of vocal, highly motivated factions, even at the expense of their constituents as a whole.\textsuperscript{150}

Coastal property owners facing dramatic increases in insurance rates, or altogether unable to obtain private market insurance, represent the kind of highly motivated interest group that can exert powerful political pressure. As mentioned previously, prior to the 2006 elections, more Floridians ranked insurance as their top priority than any other issue. The political significance of hurricane insurance is compounded by the fact that those living closest to the ocean, and thus at most risk from hurricanes, tend to be disproportionately affluent and well-connected.\textsuperscript{151}

On the other hand, those who would be adversely affected by aggressive federal action to reduce the cost of hurricane insurance, even if more numerous, may not be able to exert as much political influence. An increased tax burden may be too abstract, and may be affected by so many other government policies, to generate a significant political response. Many citizens may object in principal to subsidizing coastal development, but such objections may not translate into voting decisions. Furthermore, many of the adverse consequences of subsidizing coastal development, such as greater risks to life and limb and the possibility of massive federal liability

\textsuperscript{146} Joseph B. Treaster, \textit{A Lawyer Like a Hurricane; Facing Off Against Asbestos, Tobacco and Now Home Insurers}, N.Y. TIMES, Mar. 16, 2007, at C1.

\textsuperscript{147} Id.


\textsuperscript{151} See Poirier, supra note 149, at 260.
sometime in the future, may have little current political valence. Many politicians may not be in office when the harms from today’s unwise policy choices are realized.

D. The Need to Respond to Citizens in Crisis

Finally, the challenge of crafting sensible coastal insurance policy is complicated by the obligation of the government, aided by the private sector, to respond to hurricanes and similar events with disaster relief. The catastrophe wrought by Hurricane Katrina riveted Americans across the country, prompting Congress to dedicate billions of dollars to assist in the Gulf recovery effort and leading to hundreds of millions of dollars in private donations to relief organizations. While there is continuing debate about whether the response has been adequate or well managed, there is no room for debate that it was a national priority to respond to those in need following Hurricane Katrina.

One policy concern, however, is that, depending on how disaster relief is designed, the relief may have the perverse effect of encouraging people to forego purchasing insurance. Most of the post-Katrina disaster relief was spent on emergency services, temporary housing and food for disaster victims, and funding to communities to rebuild public infrastructure. But a small portion of the funds has been dedicated to providing rebuilding assistance to homeowners who were uninsured or underinsured. In effect, the government took on the role of a retroactive insurer, using taxpayer funds to provide compensation. If this approach encourages other coastal residents to forego voluntarily purchasing insurance in the future, citizens may be more

152 Cf. COUNCIL OF ECONOMIC ADVISORS, supra note 117, at 116 (noting that “the NFIP was able to cover losses in most of the program’s recent history, but . . . exposed the American taxpayers to a huge potential financial liability which became an actual liability in 2005”).

153 State mandated term limits on government officials may exacerbate the short-sighted view of elected officials. In Florida, for instance, term limits prohibit any person from serving more than eight years as governor or as a member of either house of the state legislature. See National Conference of State Legislatures website, http://www.ncsl.org/programs/legismgt/about/states.htm (listing term limits for each state’s legislatures) (last visited July 25, 2007); U.S. Term Limits website, http://www.ustl.org/Current_Info/State_TL/gubernatorial.html (listing term limits for each state’s governor) (last visited July 25, 2007).

154 See, e.g., Press Release, Bush-Clinton Katrina Fund, Dec. 20, 2006 (noting that the fund had raised over $130 million).

155 See, e.g., U.S. HOUSE OF REPRESENTATIVES BIPARTISAN TASK FORCE ON DISASTERS REPORT 1 (Dec. 14, 1994), quoted in PLATT, supra note 132, at 234 (“If homeowners mistakenly believe that the Federal Government will rebuild their homes after a natural disaster, they have less incentive to buy all-hazard insurance for their homes.”).
financially vulnerable when the next hurricane strikes. In addition, current and future residents of coastal areas who avoid purchasing insurance would be missing an important economic signal about the costs of living along the coast.

In the midst of tragedy, it can be challenging for government to formulate sensible policy to respond to the needs of disaster victims. At such moments, it is of paramount importance to recognize that those that suffer from natural disasters are often not just victims of Mother Nature, but also of development policies that placed them in harms way and masked the natural hazards they faced.156

VI. THE ARGUMENTS FOR FEDERAL INTERVENTION

An array of arguments has been presented for federal intervention in the coastal insurance business, including assertions that “there is currently a clear case of market failure,”157 that “the unpredictability and scope of potential catastrophes are beyond the means of the private sector alone,”158 and that “the insurance industry is broken and as a result the state [of Florida] is facing an economic crisis.”159 Based on a review of the testimony presented to Congress, as well as the academic literature and various other publications, we have identified three basic policy arguments in favor of federal intervention: (1) that hurricane risk is not insurable; (2) that the private insurance industry lacks the capacity to make hurricane insurance widely available; and (3) that property owners’ insurance rates are simply too high and have risen too rapidly. We address each of these arguments below.

A. The Insurability of Hurricane Risk

The first argument is that hurricanes and other coastal storms are uninsurable by private insurance companies. Proponents of this argument contend that the occurrence of hurricanes is too rare and unpredictable, and the resulting claims when disaster strikes too highly correlated,

159 March 2007 House Hearing, supra note 79 (statement of U.S. Representative Tim Mahoney).
for a private insurance system to function effectively.\textsuperscript{160} While this argument is certainly not trivial, the available evidence suggests that hurricane risks are insurable, and they are becoming more so each year with advances in forecasting and the emergence of increasingly sophisticated risk-spreading instruments.

Some risks are not insurable. For instance, no insurance company will sell a policy covering intentional actions, such as arson, and some events may be too unpredictable and potentially disastrous to be insurable. The risk of a terrorism attack is arguably such a risk because attacks are extremely infrequent, their occurrence is highly unpredictable, they could wreak untold damage, and the resulting damages are too correlated to allow for effective risk pooling.\textsuperscript{161} While hurricanes present serious challenges to the insurance industry, they do not fall into the category of uninsurable risks.

Hurricanes are hardly an every day event but, unlike terrorism attacks, their occurrence can be predicted with fair accuracy. The National Oceanic and Atmospheric Administration has identified 1,320 named tropical storms, 799 hurricanes, and 282 major hurricanes (defined as a hurricane scoring a 3, 4, or 5 on the Saffir-Simpson Hurricane Scale) that occurred in the Atlantic Basin (including the Gulf of Mexico and Caribbean Sea) between 1851 and 2004.\textsuperscript{162} Furthermore, hurricanes have become more frequent in recent years. Indeed, one commentator has suggested that, “At a country level, the last five years have demonstrated that . . .[hurricane] catastrophes are not low probability anymore.”\textsuperscript{163} In addition, insurance companies have developed increasingly sophisticated risk models to estimate the damages that could result from different hurricanes and the level of potential exposure facing their portfolio of insurance policies.\textsuperscript{164}

\textsuperscript{160} See, e.g., id. (statement of Gary Thompson, National Association of Realtors) (“Some disasters are just too large or unpredictable for the private market to deal effectively with the resulting damage.”); see also, e.g., Robert H. Jerry II & Steven E. Roberts, Regulating the Business of Insurance: Federalism in an Age of Difficult Risk, 41 Wake Forest L. Rev. 835, 836-37 (2006).
\textsuperscript{161} See Michelle E. Boardman, Known Unknown: The Illusion of Terrorism Insurance, 93 Geo. L.J. 783, 784 (2005).
\textsuperscript{163} Michel-Kerjan, supra note 131, at 12.
\textsuperscript{164} However, neither New York nor Georgia permit insurance companies to rely on computer based models in ratemaking. American Insurance Association, supra note 128, at 4.
Uncertainty about the timing of hurricanes does lead insurance companies to charge higher premiums for this type of coverage, a phenomenon called “risk loading.” Higher premiums compensate insurance companies for the cost of holding capital against unpredictable future losses. However, risk loading simply means that hurricane insurance is relatively expensive, not that there has been a market failure.

The problem of correlated risk — when a disaster strikes, many property owners are likely to be affected and file claims for compensation — presents another challenge, but again not an insurmountable one. Correlated risk poses a particular problem for companies that provide insurance within a limited geographic area, because a major disaster can produce thousands of claims depleting their reserves and threatening their solvency. But private insurers have developed a number of techniques to diversify catastrophic hurricane risk.

First, there are significant opportunities to diversify the risk of hurricane damage geographically. Nineteen states and the District of Columbia lie within the reach of hurricanes in the Atlantic basin and Pacific hurricanes can strike Hawaii. Furthermore, coastal countries around the world are exposed to hurricane threats. In an average year, fifteen tropical storms approach coastlines somewhere on Earth. Hurricane risk also can be pooled with other types of catastrophic risks, such as hail, tornado, or earthquakes. Pooling numerous different natural hazards can reduce the gap between actual losses and estimated losses in any given year. International reinsurance companies and capital markets provide avenues for even small, locally-based insurance companies to take advantage of this kind of broad risk spreading.

165 See, e.g., Howard Kunreuther, Insurability Conditions and the Supply of Coverage, in Paying the Price, supra note 19, at 17, 33.
166 See Jerry & Roberts, supra note 160, at 844.
168 A Dutch bank and a member of Lloyd’s of London announced the creation of the first catastrophe bond that bundles different natural disaster risks in order to take advantage of this type of diversification. Paul J. Davies, Catlin and ABN Innovate on Risk, FIN. TIMES, Nov. 20, 2006.
169 See, e.g., Philippe Auffret, Catastrophe Insurance Market in the Caribbean Region: Market Failures and Recommendations for Public Sector Interventions, WORLD BANK POLICY RESEARCH WORKING PAPER 2963 (2003) (discussing the role reinsurance and capital markets can play in allowing small, island-based insurance companies in the Caribbean to provide hurricane insurance despite intense levels of correlated risk).
Second, a company can diversify risk temporally by pooling risk across a number of years, that is, by establishing a catastrophe reserve to bank premiums against future losses. Furthermore, foreign reinsurance companies not subject to U.S. corporate tax law may be able to accumulate such reserves tax-free, providing temporal diversification through their reinsurance contracts.

B. The Financial Capacity of Private Insurers

A second, related argument for federal intervention is that the private insurance industry lacks the financial “capacity” to offer hurricane insurance given the possible losses from a truly catastrophic series of hurricanes. A spokesperson for the Allstate Corporation stated that, “Our view is that there are some events that have the potential to be so large as to exceed the capabilities of the insurance industry, as well as the funding and financing capability of individual states.” In addition, a Florida taskforce has argued that, “Because of the absolute size of the economic losses that are possible due to hurricanes in Florida, the private market, public mechanisms, and even the state itself simply do not have sufficient capacity to provide recovery from a truly mega-catastrophic hurricane event.” Upon analysis, none of these claims appears persuasive.

In technical terms, “capacity” refers to the ability of an insurance company to take on risk, or framed another way, to pay claims in the event of a loss. The capacity constraint is largely driven by three things. First, rating agencies like Moody’s and Standard & Poor’s require insurance companies to maintain a certain level of capital reserves in order to maintain a

---


172 TASK FORCE ON LONG-TERM SOLUTIONS FOR FLORIDA’S HURRICANE INSURANCE MARKET, FINAL REPORT [hereinafter FLORIDA TASK FORCE REPORT](2006).

173 As the Government Accountability Office noted in a 2005 report examining approaches to catastrophe risk, insurance experts do not agree on a precise definition of capacity. GOVERNMENT ACCOUNTABILITY OFFICE, CATASTROPHE RISK: U.S. AND EUROPEAN APPROACHES TO INSURE NATURAL CATASTROPHE AND TERRORISM RISKS, GAO-05-199 at 1, 9 (2005) [hereinafter GAO CATASTROPHE RISK]. However, all agree that capacity roughly defines the ability of the industry to take on risk while still retaining adequate reserves to cover expected losses and protect against insolvency.
favorable credit rating. Second, state insurance regulators enforce complex regulations designed to constrain companies from issuing policies in excess of their capital resources. Finally, an insurance company’s interest in corporate self-preservation will presumably discourage it from writing policies that might place it at risk of insolvency.

The capacity argument is contradicted by the fact that the insurance industry has large financial resources that have continued to increase even in the face of recent hurricanes. The private insurance industry reportedly has total worldwide capital of close to $1 trillion. As of December 31, 2005, the surplus of the U.S. insurance industry stood at $439 billion. The reinsurance industry also provides an important and growing backstop for primary insurers. Since Hurricane Katrina, the reinsurance industry raised $26 billion in new capital, with $10.4 billion being invested in startup reinsurance companies.

As a result, the insurance industry has successfully weathered a number of destructive hurricanes in recent years with little financial strain. Indeed, the industry has improved its financial situation markedly since Hurricane Andrew. In the immediate wake of that hurricane, eleven insurance companies became insolvent. A little over a decade later, only one insurance company became insolvent after the 2004 hurricane season and there were no additional insolvencies in the wake of 2005’s record-breaking season.

Furthermore, innovative new instruments are being developed that should allow insurance companies to spread risk even further, tapping into the $42 trillion in the world capital market. Two instruments show particular promise, catastrophe bonds and hurricane damage

---

174 April 11, 2007 Senate Banking Committee Hearing, supra 79 (statement of Franklin Nutter, Reinsurance Association of America).
175 See Jerry, supra note 118, at 118-19.
177 April 11, 2007 Senate Banking Committee Hearing, supra note 79 (statement of Franklin Nutter, Reinsurance Association of America).
178 Id.
179 Gao Catastrophe Risk, supra note 173, at 6.
180 Id.
182 World Bank, supra note 176, at 21.
contract options. Catastrophe bonds have already generated significant funding for catastrophic event coverage, including $4.5 billion of capacity in 2004 alone. As originally designed, catastrophe bonds were high-risk investments: if no catastrophe occurred the investor received his or her investment back plus significant interest; if a catastrophic event did occur the investment was used to cover losses. In November, 2006, a new type of catastrophe bond was unveiled that bundled together different types of catastrophe risk from around the world, spreading risk more broadly and making this investment vehicle less risky.

A second capital market instrument designed to increase private insurers’ capacity is hurricane damage contract options. The Chicago Board of Trade (“CBOT”) initially offered options based on a hurricane catastrophe index in the early 1990s. Investors sold option contracts agreeing to make payments to the option holders if the index increased above the strike point. Despite their theoretical appeal, few insurance companies utilized the CBOT instruments, perhaps because of regulatory obstacles, including the fact that some states, as part of their regulation of insurance company investment portfolios, prevented insurance companies from purchasing a sufficient number of options to create an effective hedge. Perhaps because of this constraint, CBOT discontinued offering these contracts. However, in 2006, in response to growing demand for access to the capital markets after the hurricanes of 2004 and 2005, the Chicago Mercantile Exchange started offering a similar instrument.

C. Insurance Affordability

The final argument in favor of federal intervention is that insurance premiums are too high and have risen too fast, harming families, businesses, and the economy as a whole. In

---

183 GAO CATASTROPHE RISK, supra note 173, at 26.
184 Davies, supra note 168.
185 See Kathleen McCullough, Catastrophe Insurance Futures: Despite Their Value in Hedging Loss, Catastrophe Insurance Futures Issued by the Chicago Board of Trade Face Several Obstacles Before They Can Be Widely Accepted by the Insurance Industry, 42 RISK MANAGEMENT 31 (1995) for a discussion of different obstacles facing the CBOT futures.
188 March 2007 House Hearing, supra note 79 (Statement of U.S. Representative Ron Klein).
2006, for instance, State Farm sought approval for a 74 percent average premium increase for its hurricane insurance in Florida.\textsuperscript{190} Insurance premiums of some businesses in Louisiana have increased by factors of five or even ten.

While consumer alarm at these hefty rate increases is certainly understandable, that does not necessarily mean that rates are too high given the character of the insured risk. One member of Congress recently acknowledged the risks involved in living in areas facing high hurricane premiums, “I can tell you, in my own State of Florida, that there is not one square inch of Florida that has not been devastated by some hurricane over the last 2 years.”\textsuperscript{191} Is it any wonder that insurance companies charge hefty premiums to provide insurance in a state so frequently hit by hurricanes?

From a broader social welfare perspective, high insurance rates that reflect the risks of living in coastal areas are appropriate because they require property owners to internalize the costs of their decisions. By contrast, a government policy to promote the “affordability” of coastal insurance sends the wrong signal, encouraging investment in hazardous areas.

To some degree, the sharp increases in insurance rates, and the resulting public outcry, represent transitory responses to the major hurricanes of 2004 and 2005. Changes in hurricane models, credit rating practices, and reductions in reserves led insurance companies to increase their premiums and, in some cases, withdraw from sectors of the market. Over the longer term, however, as capital reserves are replenished, and new companies enter the market in order to profit from increases in premiums, insurance rates should stabilize. For instance, during the last two years, new companies have entered the Florida property market, arguably the market most at risk from hurricanes; between October 2004 and January 2006, the Florida Office of Insurance Regulation licensed sixteen new companies to sell property insurance.\textsuperscript{192}

In weighing the argument for federal intervention, there is a reasonable basis for distinguishing between long-time property owners and new development. Homeowners and business owners, through no fault of their own, may have purchased property in hazardous

\textsuperscript{190} Waddell, \textit{supra} note 14.
\textsuperscript{191} \textit{Id.} at 14 (statement of Representative Clay Shaw).
\textsuperscript{192} \textit{FLORIDA TASK FORCE REPORT, supra} note 172, at 35.
coastal areas in the past based on widespread underestimates of the risks involved. Congress could decide to soften the financial burden from insurance rate hikes on these long-time owners just as Congress sometimes provides direct grants to other citizens in need of assistance. Low- and moderate-income families are obviously most vulnerable to the effects of insurance rate hikes. On the other hand, developers and prospective new residents stand in a very different position. Those who are considering moving into hazardous coastal areas are on notice of the risks associated with hurricanes and global warming, and of the insurance rates that accompany such risks. Artificially reducing their insurance rates would encourage disregard for the public and private costs of unwise land use decision making and cannot be justified by considerations of fairness.

Thus, while requiring property owners to bear the full cost of obtaining insurance against hurricanes is generally the most efficient policy, Congress could decide that high premiums impose too great a financial burden on some coastal residents. To address this problem, while minimizing distortions to the insurance market, relief could be provided in the form of direct subsidies rather than through either adjustments in insurance rates or broad government-run insurance programs. This approach would ensure that the price signals provided by insurance policies would be widely broadcast, while minimizing their impact on certain segments of the population. It would also allow Congress to fully debate the public cost of helping coastal residents in light of its broader budgetary priorities. Finally, by creating a tailored, direct-subsidy program, Congress would reduce the risk that insurance regulations would be hijacked in the future by those seeking broader subsidies for coastal development, including new construction. To achieve its narrow purpose, this type of subsidy should be non-transferable and limited to those currently living in pre-existing structures.

VII. UNINTENDED CONSEQUENCES OF INTERVENTION

Not only have advocates failed to make a strong affirmative case for federal intervention in the hurricane insurance business, but such action could have a variety of harmful unintended consequences.

A. Large Potential Liability for Federal Taxpayers

A federal hurricane insurance program could be extremely expensive for taxpayers. Moreover, depending on how such a program were structured, the actual cost of such a program
might not be apparent for many years. By providing multi-peril insurance or catastrophic reinsurance, the federal government would accept liability for future events in exchange for current premium payments. The extent of the subsidy provided by taxpayers would only become clear when one or more catastrophic storms occurred.

The NFIP illustrates this problem. Between 1985 and 2005, the NFIP was financially self-supporting. In some years losses exceeded premiums and the program borrowed money from the federal treasury, and in other years the premiums exceeded losses and the program paid off its debts. Throughout this period, however, the program failed to accumulate reserves in anticipation of an extreme flood year. In order to cover its losses from the 2005 hurricane season, the NFIP may have to borrow over $24 billion from the federal treasury, and the program is widely believed to be incapable of repaying its debt. If Congress eventually forgives much or all of the NFIP debt, it will transform the program’s failure to adequately price flood insurance into a direct government subsidy.

There is little reason to believe that federal multi-peril insurance would not similarly fail to generate premiums sufficient to cover losses from extreme hurricane years. Given the fact that the United States is experiencing accelerating hurricane losses, the potential for taxpayer liability is enormous. Federal catastrophe reinsurance poses a similar, albeit somewhat more limited danger. Unlike the proposed multi-peril insurance program, which would presumably be widely available to those living along the coasts, both of the current proposals to create federal reinsurance would cap federal liability ($200 billion for HIPA and $25 billion for HIAA), limiting to some degree the exposure of future taxpayers.

The taxpayer expenditures associated with these hurricane programs would likely be shielded from serious public review. Because both multi-peril insurance and reinsurance would impose potential future liabilities, they would not require congressional appropriations during most years and might not require budget offsets under pay-as-you-go rules at the time of their

193 King I, supra note 48, at 5 tbl. 1. Prior to 1985, Congress appropriated money to cover NFIP debt.
194 Id. at 4-5.
196 See, e.g., Marron Letter, supra note 195, at 1; GAO HIGH-RISK SERIES UPDATE, supra note 195, at 91; KING I, supra note 48, at 5.
creation. Thus, despite directly competing with future funding for other government programs, each would escape consideration during the budget process. By the time program shortfalls are realized, it would be too late. Much like the NFIP, these insurance programs might borrow substantial amounts from the federal treasury in order to pay claims with no ability repay the debt, necessitating large congressional appropriations in the wake of severe hurricane seasons.

B. Unfair Subsidies

Federal intervention could result in significant, unfair public subsidies for those who make the hazardous choice to construct or maintain a home or business in a coastal area.

Those that live in the most hurricane-prone areas already receive subsidized insurance rates. Private insurers create some degree of cross-subsidy across different property owners by using average premium rates for particular geographic areas. Federal and state governments directly subsidize premiums for many coastal homeowners. For example, the NFIP provides subsidized insurance to protect against storm surge and other floods and both of Florida’s primary insurance programs impose assessments against other lines of private insurance to make up program deficits, forcing the holders of automobile or medical malpractice insurance to pay some of the cost of insuring coastal property owners.

Proposals for expanded federal intervention in the insurance business could greatly increase the level of subsidy if the government failed to charge a fully risk-adjusted rate. These subsidies would be unfair because they would force those who have chosen to live in relatively safe locations, like rural homeowners in Michigan, to pay for the risky decisions of those who have elected to live in or operate businesses in more hazard-prone areas, like beachfront property owners in Florida. In addition, these subsidies would likely result in unfair wealth transfers from the general taxpayer to the relatively affluent. This is not to say that all residents of high-risk property are wealthy; Hurricane Katrina made abundantly clear that many low-income people live in the danger zone. But real estate values and wealth tend to increase dramatically as one approaches the ocean shore.

198 See id.
C. Displacing Private Enterprise

Another predictable adverse effect of federal intervention in the coastal insurance market is that it would tend to drive out private insurers, eliminating the market discipline imposed by the profit motive. This would occur because private companies cannot effectively compete in the marketplace if the government is offering insurance at subsidized rates.

The NFIP illustrates the crowding-out effect of a government insurance program. In the early twentieth century, private insurance companies provided flood insurance. After a series of disastrous floods along the Mississippi River, Congress began debating a plan to create a federal flood insurance program, which resulted in the NFIP.199 In other countries that have chosen not to create a government flood insurance program, private companies continue to provide coverage for flood risk.200 It seems plausible that, had the federal government not interceded, the United States would also enjoy the benefits of private flood insurance. However, with a federal program in place, private insurance companies have all but abandoned the field.

Displacing private insurers from the business of insuring against wind damage from hurricanes would have several potentially serious drawbacks. Without a private market for reference, setting public insurance premiums could become a purely political exercise. This would create the risk that, over time, motivated and well-organized interest groups could agitate for lower rates, increasing the public subsidy they receive.

Second, market pressure creates incentives for private insurance companies to operate efficiently and seek lower-cost ways of administering their products. Without this motivation, a federal insurance program is likely to be economically wasteful.

Finally, on a longer term basis, displacing private enterprise reduces the likelihood that new and more effective insurance strategies will emerge to help cope with hurricane losses. As discussed, innovative financial instruments for spreading disaster risks, such as catastrophic bonds, are rapidly evolving. Government intervention may stifle the development of these new financial instruments.

199 See Scales, supra note 39, at 7-8.
200 See, e.g., SWISS RE II, supra note 37.
D. Increasing Hurricane Vulnerability

Federal intervention would increase the vulnerability of coastal areas and their residents to future hurricanes and other storms. By further relieving local governments of financial responsibility for hurricane damage, a federal program could encourage inefficient land use planning and undermine efforts to impose building codes and other mitigation requirements. As discussed previously, many commentators believe that the NFIP has encouraged local governments to leave floodplains largely unregulated because the federal government has assumed financial responsibility for flood losses.

To the extent federal intervention constrained insurance premiums, it would reduce the cost of coastal development and thereby increase its pace and scope. In other words, insurance rates that do not reflect the actual level of risk result in an economically inefficient level of development. Moreover, more development along the coast would only increase the concentration of valuable property subject to the risk of hurricane damage.

By encouraging new coastal development, a federal hurricane insurance program could increase the vulnerability of already existing coastal structures. Dunes and salt marshes provide defenses against storm surges caused by hurricanes, and coastal vegetation provides some relief from intense winds. As global warming causes sea level to rise, an increasing number of people will be at risk from storm surges, making remaining natural defenses all the more important. Development of these natural areas reduces or eliminates their effectiveness as storm defenses, increasing the vulnerability of neighboring properties.

Encouraging more people to live along the shore has moral implications as well. Subsidized insurance may lull citizens into a false sense of security, imperiling themselves and their families.

Finally, subsidizing the risks associated with hurricanes has the potential to create an addictive, vicious cycle. If government provides such subsidies, more people will move into

---

201 Rutherford H. Platt notes that political pressure to federalize flood insurance and create broad disaster relief for those in flood plains grew out of federal policies that encouraged growth in those hazardous areas, including Veterans Administration loan policies, the federal highway system, and tax policies that encouraged home building. Federal largess for those that built in flood plains created a perceived need to provide low-cost flood insurance. In Professor Platt’s words, “In the process, an implicit new social compact was gradually forged between
hazardous areas. This would lead to an ever-expanding constituency for government subsidized insurance, and ultimately more vulnerability to hurricanes and other storms.

Insurance premiums that reflect the actual nature of the covered risk can inform consumers and investors about the hazards they face. In this fashion, insurance can help individuals make good decisions about where they wish to live, restrain inefficient development, and help stabilize the United States’ vulnerability to hurricanes. To the extent a federal program interferes with these salutary functions of the insurance system, it would exacerbate the United States’ hurricane vulnerability.

E. Destruction of Ecologically Important Areas

Finally, federal intervention in the market for hurricane insurance would harm the environment by encouraging the destruction of ecologically fragile areas. Such areas, which are already becoming increasingly scarce, are a valuable natural resource, providing vital habitat to 45 percent of the endangered and threatened species in the United States.

Extensive development in the coastal zone has already led to serious environmental losses. The U.S. Fish and Wildlife Service estimates that between the mid-1970s and 2004, the coastal United States lost, in net, over 157,000 acres of saltwater wetland and beaches. This estimate is likely to understate the damage because it offsets the destruction of natural wetlands with newly created wetlands, an effort that, in many cases, has only debatable value.

---

206 See, e.g., Craig Pittman & Matthew Waite, Mitigation: A Solution or Just Absolution?, St. Petersburg Times, May 23, 2005, at 5A (describing a failed wetland creation projects in Florida).
Florida alone lost over 84,000 acres of fresh and saltwater wetlands between the late 1980s and 2003, and a scientist with the U.S. Geologic Survey suggests that Louisiana, which houses more than 40 percent of the tidal wetlands in the continental United States, loses over 24,700 acres each year. Making coastal development more profitable by subsidizing insurance would increase the development pressure on the natural areas that remain.

The prospect of global warming increases the importance of avoiding policies that would destroy remaining coastal natural areas. As sea level rises, remaining salt marshes, estuaries, mangroves, and other coastal wetlands will be threatened. Scientists estimate that a one-meter rise in sea level could itself destroy more than 6,500 square miles, or as much as half, of remaining U.S. coastal wetlands.

VIII. RECOMMENDATIONS

Wise public policy counsels against major federal government intervention in the business of coastal insurance. Advocates for pending proposals before Congress have failed to demonstrate that these policies respond to any genuine need, and they would have harmful unintended consequences. Nonetheless, there are a handful of targeted reforms worth considering.

A. Government-Generated Information

The federal government could play a useful role by generating detailed information about the types of risks different properties face from hurricanes, including producing hazard maps that identify wind risks based on such factors as proximity to the ocean, local topography, and vegetation.

Insurance companies have only limited economic incentive to set individual insurance rates based on the risk characteristics of each property. On the other hand, tailored insurance rates would create a public good by providing consumers more detailed information about the risks associated with different living and business choices and dissuading investors from

---

207 Craig Pittman & Matthew Waite, Satellite Photographs Show Losses, St. Petersburg Times, at National Sec. 11A (May 22, 2005).
209 Turner et al., supra note 167, at 163.
210 Nicholls, supra note 30, at 71.
purchasing and developing high-hazard properties. Thus, there may be a role for government in generating more fine-grained hazard information than insurance companies would generate on their own.

Government has played a similar role in the past. In conjunction with the initial effort to use state FAIR Plans to increase the availability of property insurance in urban areas in the 1960s, some states created programs to provide insurance companies with detailed information about the risks facing individual properties.211 While this information would have been too costly for the insurance industry to gather on its own, it made it easier for private insurers to quantify the risks facing properties in urban areas and to decide whether or not to provide coverage.

If the government embarks on such a program, the goal should be to provide more accurate, up-to-date information than is currently contained in NFIP flood maps. Insurance companies would have a powerful incentive to ensure that this occurs and could provide supportive feedback to both Congress and the public based on their experience using the maps or other information.

B. Mandatory Wind Coverage

States should consider requiring coastal owners who are vulnerable to hurricanes to carry hurricane insurance, 212 just as most states require automobile owners to carry some level of insurance,213 and Massachusetts now requires all residents to carry health insurance.214 As discussed, for a variety of understandable psychological reasons, property owners tend to discount low-probability hazards and therefore fail to obtain insurance even though it would be economically rational for them to do so. A mandatory insurance requirement would overcome these psychological obstacles and have a number of other advantages, including (1) increasing the number of low-risk property owners in hurricane zones carrying insurance, (2) improving

211 Dwyer, supra note 70, at 621.
212 C.f. SWISS RE III, supra note 126, at 32 (recommending mandatory flood insurance requirement to better spread risk).
213 JERRY, supra note 118, at 122. In some states, car owners can avoid the insurance requirement by demonstrating that they have the financial ability to pay for any injury.
companies’ ability to spread risk, (3) minimizing market disruptions caused by abrupt changes in consumer demand for insurance coverage caused by high-profile disasters, (4) reducing future political demands for federal disaster relief that includes compensation for property losses by uninsured owners, and (5) compelling all property owners to pay attention to the market signals regarding risk provided by insurance premiums.

C. Phasing Out the NFIP and Replacing It with Private Multi-Peril Insurance

Congress should consider phasing out the NFIP in favor of private insurance over time. The NFIP has been a public policy disaster for a number of reasons, and the current distinction between wind damage and water damage is confusing to the public and unworkable in practice. While this proposal would undoubtedly upset many vested interests, it is neither novel nor radical. A former Federal Insurance Administrator testified before Congress that the time has come to reconsider the federal government’s role in providing flood insurance. The change could be phased in through a public/private partnership in which the federal government would agree to provide reinsurance to private insurance companies to absorb catastrophic flood losses until the private market has matured. The federal government also might have a continuing, more productive role to play in creating flood maps; while the NFIP has not succeeded in the past in maintaining up-to-date flood maps, the watchful oversight of private insurance companies relying on the maps could improve the situation.

D. Private Insurance Catastrophe Funds

Eliminating taxation of insurance premiums that companies devote to reserve funds to pay for catastrophic losses appears to be a promising way of increasing the capacity of the private sector without distorting the insurance market. As discussed, current tax policy makes hurricane insurance, which requires high levels of surplus, relatively more costly for insurance companies to provide than other forms of insurance. A change in the law that allowed insurers to bank premiums against future expected hurricane losses would level the playing field and expand capacity for hurricane insurance. However, if Congress pursues such a policy, it should take care to avoid creating an opportunity for insurance companies to use catastrophe funds as a tax avoidance device. This could be accomplished by requiring that distributions from the fund be used exclusively to pay insured losses.
The Georgetown Environmental Law & Policy Institute conducts research and education on legal and policy issues relating to protection of the environment and conservation of natural resources.