

Making Matters Worse

How FEMA endangers people and hampers efforts to address climate change

By Jason Scorse¹

Abstract

The primary purpose of government is to provide security for its citizens. Unfortunately, FEMA's disaster relief system in its current form provides the wrong incentives to citizens and creates a situation that both increases risks of injuries and property. Mandating that all those who reside in high-risk areas purchase their own insurance (mitigation) and helping people to relocate (adaptation) would greatly reduce these risks and the future costs of disaster relief. If these changes were enacted America would likely look markedly different in a few decades, with less people living very close to the coasts, near major floodplains, or the Gulf States that are most prone to hurricanes. This is exactly the type of outcome that an emphasis on environmental security would welcome, especially as the threats from climate change increase.

¹ Assistant Professor at the Monterey Institute of International Studies, Graduate School of International Policy Studies, 460 Pierce St., Monterey, CA 93930; email: jason.scorse@miis.edu. I would like to thank the Brinson Foundation for its generous support for this work.

1. Introduction

Environmental security is an increasingly important topic within policy circles, but is somewhat loosely defined. The definition that I will use for this paper was rated #1 out of various competing definitions by a panel of environmental security experts surveyed by the American Council for the United Nations University²:

Environmental security is the relative public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design and originating within or across national borders.

The key to this definition is “public safety from environmental dangers”. This paper focuses on how the (mis)management and design of the Federal Emergency Management Agency’s (FEMA) disaster insurance program decreases public safety instead of protecting it, and hampers efforts to both adapt to climate change and mitigate its impacts.

I will focus mainly on those citizens who live in the path of recurrent hurricanes and tropical storms, which are likely only to get worse due to the increasing effects of global climate change³. I will also discuss more broadly why FEMA’s public insurance system helps to hide the true economic costs of climate change, which makes it more difficult to

² The full list of definitions and their rankings can be found at: <http://www.acunu.org/millennium/es-2def.html>.

³ This has yet to be proven, but is one of many predictions made by the IPCC. The EPA discusses this at: <http://www.epa.gov/climatechange/effects/extreme.html>.

generate the necessary public awareness of the scope of the problem, and hence the political will to effectively mitigate it.

FEMA provides disaster insurance to all citizens whose property is damaged due to natural disasters that are declared “major emergencies” by the president⁴. FEMA’s budget was a little over one billion dollars in 1992 (Franklin 2005) and has increased to over three billion dollars in 2007. In addition, FEMA’s National Flood Insurance program paid over \$12 billion in claims from Hurricanes Katrina, Rita, and Wilma, with an estimated \$10 billion in additional claims still to be paid⁵.

It is clear from these figures that FEMA’s budget has been growing at a rate much faster than the rate of most other major discretionary government programs. Some see this as evidence that the federal government is carrying through on its commitment to provide disaster relief to its citizens, which is rightfully one of its main priorities. Even most of those who worry about FEMA’s increasing costs do not question the underlying premise that the federal government has a responsibility to provide disaster insurance as one of many social safety nets.

While security is certainly the primary objective of government, this paper will make the argument that FEMA’s disaster insurance is bad policy and should be eliminated for two reasons: 1. It actually increases environmental safety risks for the most vulnerable and 2.

⁴ There is much discussion regarding the extent to which politics enters into the decision of which sites to declare federal emergencies, with key electoral states often receiving more aid and assistance. See Garret and Sobel (2002) and Krueger 2005.

⁵ According to the White House: <http://www.whitehouse.gov/omb/budget/fy2007/dhs.html>

Private markets provide key signals to economic actors that society needs in order to adequately address environmental security challenges, such as climate change.

2. Making Matters Worse

The economic analysis that underpins any discussion of disaster insurance is relatively straight-forward. Insurance spreads the relatively low probability of catastrophic events across large populations such that individuals can hedge against worst-case scenarios at a reasonable cost. Insurance, like an additional bathroom or a new computer system, is simply one of many costs that people (should) take into account when purchasing homes or starting businesses.

To the extent that homeowner insurance significantly increases the price of owning a home in a certain area (whether due to natural forces such as hurricanes or human elements such as crime rates), the less attractive those homes will be; the same is true for businesses. In the extreme, if certain areas of the country are so risky and dangerous that insurance is prohibitively expensive no construction will take place, unless the individuals or businesses are willing to forego insurance, thereby implicitly accepting the high probability of losing their investments.

From an environmental security standpoint these types of incentives produce exactly the desired outcome; they dissuade people from living or doing business in dangerous places that are at high risk for damage, both to humans and property. It is not safe for people to

build homes in the paths of hurricanes, in flood zones, or near rapidly eroding cliffs. It is not good for business to do so either, especially businesses that contain lots of toxic materials that could pose an even greater risk if they were released into the environment in the event of a disaster.

Unfortunately, FEMA, with its system of public insurance, circumvents and short-circuits this rational incentive structure. By providing free ex-post disaster insurance to citizens and businesses—when FEMA bails them out in the aftermath of a natural disaster—the government artificially lowers the price of real estate in disaster-prone areas. This has the predictable effect; it increases building in these areas, which invariably leads to more death, injury, and property damage when disaster strikes than would otherwise have taken place in the absence of government insurance (Detlefsen 2006). In many of the Gulf States, where hurricanes are almost as regular as snow in the Rockies, this cycle is repeated over and over again, with the government subsidizing the reconstruction of areas that are likely to be hit again in the not-so-distant future. We are sadly witnessing this in the aftermath of Katrina, which is startling given the massive loss of life and destruction that occurred during this episode.

Given that one of the results of climate change may be an increased prevalence and strength of hurricanes, it is imperative that FEMA stop subsidizing homes and businesses in disaster-prone areas; otherwise, the loss of property and human life will only grow over the next few decades. Since large-scale changes in population demographics can

take many years, the longer we wait to make the necessary policy changes in FEMA the more people we will eventually need to uproot and the larger the costs will be.

Aside from the distortion in market prices brought about by FEMA insurance and the huge costs that come with it, FEMA's insurance program also obscures the true costs of climate change. To the extent that climate change is likely to increase the prevalence of natural disasters such as hurricanes and floods, it will also influence the price of insurance. However, to the extent that FEMA shields people from the true costs of insurance the public does not experience the full costs of climate change firsthand. This makes it more difficult to generate public consensus on what to do about climate change; if the costs are not salient then citizens will not be able to accurately balance the potential benefits and costs of climate change mitigation.

Although ultimately all costs of climate change must be borne by society—through taxpayer-funded programs such as FEMA—these are often hidden and do not affect consumers directly where it matters most—their pocket books. FEMA's current policy can create a self-perpetuating cycle: the more the effects of climate change harm citizens the more FEMA intervenes, which then masks the true costs, and delays action so that these costs increase with time, again leading to greater outlays on the part of FEMA.

While the government has so far done very little to address climate change, the insurance industry is taking the issue very seriously (Lloyds 2006) since their fortunes hinge upon a careful examination of risk. The cost to insurers of the 24 major disasters in 2005, all of

which were weather-related, was over \$61 billion⁶. It is conceivable that instead of increasing premiums in disaster-prone areas insurers may opt to stop offering insurance in these areas altogether if a mandatory insurance system is not put in place.

3. Making Matters Better

Diagnosing problems is often much easier than solving them and the problems with FEMA's insurance program are no exception, but they are by no means insurmountable. The key political (and in some sense moral⁷) reality is that in the case of natural disasters we as a society are not willing to subject people to complete financial ruin if their homes or businesses are destroyed. We may talk about personal responsibility but even for those without insurance the government has always stepped in to help with recovery. Nonetheless, it is possible for government to change the incentives so that *less* people are in harm's way in the first place.

This leads to the most sensible first step: making private disaster insurance mandatory in high-risk areas. This means making it so that people must provide evidence of disaster insurance before finalizing the purchase of all homes and businesses, and that people face penalties for not doing so. This would immediately have a huge impact. The prices of insurance in high-risk areas would rise, perhaps significantly, and make these areas much

⁶ Insurance Information Institute (2006): <http://www.iii.org/media/hottopics/insurance/xxx/>

⁷ It is an interesting to ponder why it is we feel compelled to help people rebuild after natural disasters, but do relatively little to help those same people before disaster occurs.

less attractive to live in. Such a policy shift would also assure that in the event of a disaster the damages would be covered by private insurers and not the government.

There are some distributional problems, however, with such a policy. Existing homeowners in high-risk areas currently without insurance would face new costs. Many of these people are poor, which is why they don't have insurance in the first place. As a way to mitigate the effects of mandatory insurance current residents could be given subsidies that help them cover it. However, we have experience with such a system under the National Flood Insurance Program (NFIP), which both mandates and subsidizes those currently living in areas prone to flooding (RAND 2006). The results have been predictable; the subsidized rates encourage people to live in high-risk areas and even after repeated flooding homes are rebuilt time and again in these flood plains (King 2005-1).

This is why subsidies should be replaced by relocation assistance for those who cannot afford to pay the full cost of private insurance. Given that the social value of having people relocate is greater than the private value—due to lower costs of future disaster relief operations—relocations payments should actually be higher than the equivalent payment for an insurance subsidy. For example, a resident who faced a 10-year insurance premium of \$20,000 could be offered \$50,000 to move to a safer location. The extra money used to pay residents to move away from high-risk areas would be offset by lower future government costs, both due to the mandatory insurance law and the shift of people to safer areas⁸.

⁸ The political realities make such a policy difficult because the administration making such a shift would need to increase government expenditures in the short-term and would likely not be around to reap the

Although relocation policies make the most sense from an environmental security and social cost position, they may face political resistance. Insurance vouchers paid to current residents in disaster-prone areas, whether they chose to move or not, may be a compromise solution. Government would be doing its part to help low-income individuals and those already located in high-risk areas afford the higher cost insurance, while at the same time decrease the government's exposure to financial risk. Individuals would also be faced with the true cost of insurance and have the option of using their subsidy to cover a greater portion of their insurance bill if they were to move to a safer location. Ideally, the insurance vouchers would be available for a limited time-period (e.g. 10 years) so that eventually individuals would be faced with the full cost of the risks.

On a macroeconomic scale it is possible that such a mandatory disaster insurance policy and the demographic shifts that would accompany it would lead to slightly higher housing costs in safer areas as well due to the increased demand. This too would have distributional consequences. Although beyond the scope of this paper, it is important to note that there are hosts of policies that are much better at helping poor families afford housing than simply allowing them by default to be concentrated in some of the most high-risk areas in the country, where they both suffer increased risk of physical harm and society ends up paying much more money in disaster relief down the road⁹.

financial savings in the future. This is why both courageous political leadership and public pressure is required.

⁹ Some examples of possible policies to help with increased housing costs are increases in the Earned Income Tax Credit, housing vouchers, and subsidized loans for low-income families.

Finally, the government should play a large role in providing information to the public regarding the environmental risks in different parts of the country. Laws requiring that homeowners be made aware of the latest government assessments of the relative environmental risks in different regions could help buyers better incorporate this knowledge into their decisions, and help shift populations centers towards safer areas. Such information is a public good, which the private market will not provide in sufficient quantity because once it is made available anyone can use it. It is important to emphasize, however, that the most salient indicator of risk is the price of insurance. Individuals have been shown to have a very poor ability to assess risks with relatively small probabilities and factor these into their decision-making. This is the primary job of insurance companies and higher priced disaster insurance is the surest way of conveying to citizens that a given property faces greater risk (Kunreuther 2006).

Of course, there are some places that are so nice to live that the risks of disaster are outweighed by the benefits; risk is just one of many important criteria and no one can expect to live in a perfectly risk-free environment. But to the extent that changes in FEMA policy can help change people's perceptions and behavior, even at the margins, this would likely result in significant saving of both lives and money¹⁰.

¹⁰ Earthquakes pose a particular set of problems since California, which is the country's largest economy, is most prone to a catastrophic event and many insurers don't offer earthquake insurance. In this case, maintaining a system where the government essentially acts as the insurer of last resort may be warranted given California's immense contribution to the overall economy and the very low probability of a serious event. Regulations for building codes and engineering standards for infrastructure may be preferable. See King 2005-2.

4. Conclusion

The primary purpose of government is to provide security for its citizens. In an era of increasing threats from climate change and natural disasters, environmental security is going to become an increasing objective of government policy. Unfortunately, FEMA's disaster relief system provides the wrong incentives to citizens and creates a situation that both increases risks of injuries and property. Changes to FEMA, such as mandating that all people in high-risk areas purchase their own insurance and helping people to relocate would greatly reduce these risks and the future costs of disaster relief. If these changes were enacted America would likely look markedly different in a few decades, with less people living very close to the coasts, near major floodplains, or the Gulf States that are most prone to hurricanes. This is exactly the type of outcome that an emphasis on environmental security would welcome, especially as the threats from climate change increase.

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