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FEMA: Caught Between Climate Change and Congress

By Katherine Bagley - Jan 27, 2014

InsideClimate News -- Thanks to climate change, extreme weather disasters have hammered the United States with increasing frequency in recent years—from drought and wildfires to coastal storms and flooding.

It is perhaps surprising, then, that the U.S. agency in charge of preparing for and responding to these disasters, the Federal Emergency Management Agency (FEMA), doesn't account for climate change in most of its budget planning and resource allocation or in the National Flood Insurance Program it administers.

"Climate change is affecting everything the agency does, and yet it isn't given much consideration," said Michael Crimmins, an environmental scientist at the University of Arizona who is leading a project to try to improve FEMA's use of climate science data. "FEMA has to be climate literate in a way that many other agencies don't have to be."

A main problem, he and other experts say, is that FEMA doesn't use short- or long-term climate science projections to determine how worsening global warming may affect its current operations and the communities it serves. Instead, FEMA continues to base its yearly budget and activities almost entirely on historical natural disaster records. That practice is exacerbated by the fact that the agency is at the mercy of economic and political pressures. In addition to having to deal with years of recession that ate into its budget, FEMA has repeatedly been caught in the crosshairs of partisan politics that forced funding cuts and blocked proposed increases.

And so while the number of billion-dollar-plus weather disasters in the United States has increased five percent a year since 1980, FEMA's annual budget has stayed roughly the same, straining its ability to function.

"Recent events have been so big that they've swept through the agency, affecting every corner of funding," Crimmins said. "It is hugely problematic. FEMA is reeling and saying, 'Wait, we have to become more efficient at every timescale because this isn't sustainable from a budget stand point.'"

In 2011, 14 natural disasters with price tags of $1 billion or more struck the United States. As a result, FEMA was forced to divert funds from long-term rebuilding projects to cover the immediate response needs—things like food, water and shelter—for victims of Hurricane Irene. It faced a similar budget crunch following Superstorm Sandy in 2012, a year that saw 11 billion-dollar-plus disasters. In fact, FEMA has needed Congress to approve additional disaster relief funds nearly every year over roughly the past decade to handle the mounting climate-related damage.

FEMA's National Flood Insurance Program, which provides coverage for more than 5.5 million Americans, faces particular risks from warming. It's already $18 billion in debt from Hurricanes Katrina and Irene, Superstorm Sandy and other disasters. And that deficit will only increase. According to a FEMA-commissioned study, released last year, flood zones could grow 55 percent in size by 2100 from mainly climate change, but also population growth along coastlines—doubling enrollment in the program and straining the entire insurance system. The report, recommended by the Government Accountability Office back in 2007, could eventually influence recommendations about how to reform the flood insurance program.

The 35-year-old emergency response agency has about 7,500 employees scattered across the country and operates on an approximately $10 billion annual budget.

FEMA spokesman Dan Watson denied claims that the agency is dragging its feet on including climate threats in its current budgets and plans.

"FEMA is working within its existing statutes and authorities to incorporate climate change adaptation into ongoing plans, policies and procedures," he wrote in an email. Watson pointed to the agency's recent announcement that it developed a way for states and regions to incorporate sea level rise projections into grant applications for disaster mitigation projects. The move was made in response to President Obama's mandate last November that federal agencies help states adapt to climate change.

With the trend of extreme weather intensifying, critics say that reports and suggestions are not enough, and they are urging FEMA to take a more proactive and aggressive approach. Two leading environmental groups, the Natural Resources Defense Council and the National Wildlife Federation, have petitioned FEMA for more than a year to overhaul its disaster mitigation program, asking to require—not just suggest—that communities include climate impacts in their grant requests and strategic plans.

According to the groups, FEMA officials agreed earlier this month in a private meeting to meet that request and update the process by the end of the year.

"It is encouraging news ... a great example of the direction FEMA needs to be heading in more," said Rob Moore, head of the water and climate team at the NRDC.

"We can't afford to simply respond as disasters happen and muddle through," he said. "The time has come to look forward 20, 30 years."

In the Crosshairs of Congress

Even if FEMA made global warming a top priority, however, experts agree that the agency needs a major increase in funds to deal with the coming threats.

That means approval from Congress—a difficult prospect. Republicans have threatened several times in recent years to reject additional relief funds following disasters, such as Sandy, without first slashing money from other government programs. Democrats have refused to deplete other programs for the sake of FEMA.

"It is very clear that FEMA isn't being given the resources to tackle the scope of the problem in front of us," Moore said.

Between fiscal year 2012 and 2013, the agency's overall budget lost $364.2 million. Between fiscal year 2013 and 2014, FEMA will lose another $500 million overall.

"Should FEMA's budget be increased? Absolutely," said Susan Cutter, director of the Hazards and Vulnerability Research Institute at the University of South Carolina, who believes that Congress has chronically underfunded FEMA and that the agency needs a funding boost that is consistent and across the board, not necessarily a deeper focus on climate science.

"But where does the money come from? Which other agency loses out? No one wants to makes that political move."

In Arizona, an Experiment

As FEMA faces growing challenges from global warming, a team of climate and social scientists at the University of Arizona is trying to inspire change at the regional level by helping local FEMA staffers better use climate information to try to anticipate where disaster may strike months in advance.

The aim of the two-year project is to improve communication between scientists at the National Weather Service and "watch teams" in FEMA's region nine, an area that includes Arizona, Nevada, California and

the Pacific Islands. It started in late 2012 and is funded by a $166,000 grant from the National Oceanic and Atmospheric Administration.

If all goes smoothly, the researchers hope it could be a model for other regions.

The National Weather Service (NWS), a division of NOAA, runs a climate prediction center that puts out seasonal forecasts projecting precipitation and temperature trends, which can provide clues on coming droughts, wildfires, floods and other natural disaster risks. To date, FEMA hasn't done a good job using the data to track where the next disaster might be brewing, according to Crimmins, the University of Arizona scientist who is leading the project.

"The weather service was throwing information at FEMA, but no one was sure whether FEMA actually understood what they were getting," he said. "It meant missed opportunities to take early action. With climate change, this disconnect was becoming an even bigger problem."

Crimmins and his colleagues are currently building an online dashboard for FEMA staffers that has the latest information from NWS in a more approachable format. It will include the weather service's most recent seasonal forecasts, as well as historical trends so that FEMA can easily understand the scope and scale of any looming threats.

"The hope is that in six months, an analyst in a particular region can very quickly look and say, 'Oh, it is going to be mellow for the next month,' or 'oh, there's a drought in this area, so there's going to be an increased fire risk,' or 'there's an El Nino developing, so this winter we're going to need to focus on the southwestern states and not northern California,'" Crimmins said.

The information could help FEMA foresee its short-term staffing and resource needs—two things that could help the agency better address weather extremes under its existing budget, he said.

Although FEMA has said it is interested in the online dashboard, it's still uncertain the extent to which the agency will actually use it, Crimmins said.

Cutter, the disaster expert from the University of South Carolina, who was a co-author of an Intergovernmental Panel on Climate Change report about managing the risks of climate change, is skeptical about whether using climate projections could help the agency better budget for climate threats. Seasonal projections don't provide exact dates for when a disaster will strike and can sometimes be wrong. And while climate models are good at showing long-term trends—decades to centuries—the projections aren't specific enough to be really useful on a year-to-year basis, the timescale on which the agency sets its budget, she said.

"There's a lot of variability from year to year," Cutter said. "This last year was a quiet year. I don't think FEMA was strained that much at all." With seven billion-dollar-plus disasters in 2013, FEMA was able to make its budget last the year. This doesn't diminish the need to boost FEMA's funding, she said, acknowledging that its budget has been strained because of more frequent climate-related disasters.

But it makes the matter trickier.

"FEMA is very different than NOAA or the Environmental Protection Agency, which have a primary focus on understanding climate change and science. FEMA thinks about these things, but it doesn't have any immediate responsibility to respond," Cutter said.

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