

NINA MOINI: Cities along the Mississippi River are planning to try a budding form of disaster insurance to cover things like flooding. The insurance relies on AI, artificial intelligence, satellites, and sensors, and some are saying it could provide crucial help in the immediate aftermath of a disaster. Minneapolis based journalist Katie Thornton dove into the world of what's called parametric insurance for the magazine *Wired*, and she's on the line now to tell us more about her reporting. Thanks so much for being here again, Katie.

KATIE Hi, Nina. Thanks for having me back.

THORNTON:

NINA MOINI: Really appreciate you sharing about this with us. Traditionally communities, individuals prepare for climate related disasters with insurance that responds to the destruction with an adjuster comes out, they take stock of the damage. It's a person. How is parametric insurance different?

KATIE Yeah, absolutely. So as you mentioned, traditional insurance, you have somebody coming out. They're looking at what the damage was. And depending on how much damage the storm or the disaster caused, the policyholders get a payout depending on how much damage they incurred.

It's not a perfect model, but the good thing is that it lets individuals as well as cities show here's the exact damage that happened. My roof got hail damage or the storm took down a ton of trees and power lines across the city. And so we need a specific amount of money to be able to repair those specific things.

The bad thing is that this can be subjective. It can be subject to bias. And crucially, it can be really, really slow to roll out. It can take a while to get the adjuster out there to survey the damage. It can take a while to get payments processed, so payments can come really slowly.

And after a natural disaster, that can be especially hard, because the days immediately following a disaster are super crucial. It's where you see the greatest loss of life, the greatest damage to infrastructure. And if you can nip problems in the bud, you can prevent a long cascade of other issues. If you can pump water out of a building quickly, you're going to have less issues with mold down the line, for example.

NINA MOINI: Yeah, such a terrible time for people after something like that and then just the waiting and the when is something going to move along. Can you explain--

KATIE The waiting can be really hard.

THORNTON:

NINA MOINI: Yeah, absolutely. Can you explain a little more about the technology behind the parametric insurance, the different sensors, and how the AI factors in?

KATIE Yeah, 1,000%. So parametric insurance, the model is different from the traditional adjustment insurance model. Because what it does is it tries to get people money quickly. So rather than sending an adjuster out, they're using these measuring tools, these sensors, things like flood gauges and wind speed monitors, and they basically set-- ahead of time, they'll set parameters. Parametric is derived from the word parameters.

That say, all right, if we have sustained winds of 70 miles an hour for 60 seconds or more, automatically you qualify for a payout. If flooding hits x number of inches on this downtown street, automatically a city can qualify for a payout. At that point, they can then file for the payout and then get that money over to them, often within a handful of days. And so you're able to staunch some of those problems that can cascade while waiting for an adjuster to come out or to deal with these issues.

So a lot of people are very excited about this model. It has a lot of entities like the Nature Conservancy is really excited about it. A lot of people are positing it as a solution to damages in the aftermath of climate change related disasters. Others aren't quite so optimistic, though. There's some pros and some cons.

NINA MOINI: Yeah, and in those days following a disaster when people really need resources, it often falls to community and we're going to do a GoFundMe. And again, it's this how can people fill that gap? But as you just mentioned, there are people who are probably listening thinking, no, I think I want a person still. What are people concerned about when it comes to this?

KATIE THORNTON: Definitely. I mean, the wind speeds and the flood depths, those do not always correlate one to one to damage. I mean, we've seen this on a lot of different occasions. And one of the big concerns about a parametric insurance model and something that has happened with the existing plans that have been sort of exploding throughout the world in recent years, in particular, is that you'll have wind speeds that are very high, but in a certain area it just doesn't cause a lot of damage.

But maybe you have wind speeds a few blocks over that aren't quite as high. Maybe they don't hit that, for example, 70 mile an hour threshold, but they still cause a lot of damage. But those entities then aren't able to get a payout because they didn't hit the parameter.

There's also this issue of sensors and the technology not always being perfect. We've seen this as well. This model has been used in a lot of farmlands across parts of Asia and some African nations. And there have been instances where farmers reported a lot of drought, but these drought monitors didn't pick them up or didn't sort of clock the drought in the same way that the farmers were experiencing it on the ground. And so they weren't able to get a payout despite being very impacted by drought.

NINA MOINI: You're mentioning different parts of the world where this might be used. Where is parametric insurance most common right now? Do you have to be living somewhere where there is quite often more natural disasters than maybe in other parts of the country? Or how is it looking like as far as the United States?

KATIE THORNTON: Yeah, it's somewhat new in the United States. It did have a big boom several years ago across farmland, sort of vast, vast distances, vast quantities of land, places where the risk pool was larger. And so a lot of different people, a lot of national governments, local governments were paying into these models, and then they could pay out when and where they hit. So everybody would pay in annually and get a payout every handful of years when a problem hit their area.

More recently, it's been brought to the Americas largely protecting natural ecosystems. So several years back, I believe it was in 2018, there was a parametric insurance policy taken out on a natural ecosystem, the first natural environment with its own insurance policy. It was taken out on a coral reef down near Cancun in Mexico.

And it was a combination of local governments and local hoteliers who were paying into this program, people who depended on the reef for their industry. And when the reef was damaged in 2020, in a hurricane, they were able to get divers out very quickly to re-affix these parts of the reef that had broken off from the reef. And they were able to do that because that immediate relief work was funded right in the aftermath of the disasters.

NINA MOINI: And your story focuses in on the Mississippi River basin and this group, this nonprofit, the Mississippi River Cities and Towns Initiative. What are they trying to do with the parametric insurance? Because the Twin Cities, this isn't here quite yet.

KATIE THORNTON: True. It isn't here quite yet. So they're hoping to roll out a sort of pilot model of this next year. It would be taking place across the mid Mississippi is what they're thinking it might be. So I went down to St. Louis this spring to meet with a man named Colin Wellenkamp. He leads this nonprofit, the Mississippi River Cities and Towns Initiative. It's a group of several dozen, often over 100 Mississippi River cities and towns up and down the Mississippi River basin.

And they have been working since 2018 to design a model where cities and towns who are part of this organization on the river pay into this insurance model. And when flooding hits or other disaster hits, but specifically thinking about flooding because that's such an issue on the Mississippi River, if those parameters are hit, a city or a town could get an immediate payout. And it doesn't disqualify an entity from getting a FEMA payment down the line, but it can just give them something to tide them over.

NINA MOINI: Yeah. And you mentioned FEMA. I mean, where do you think this insurance is going next on a more large scale level?

KATIE THORNTON: Yeah, there's a couple of different places where this is growing. It's growing certainly in the private market, in addition to the nature conservancies and the other nonprofits that are pretty excited about this model. It's also looking like it could be quite profitable for some of the world's largest insurers, and it has been quite profitable for some of the world's largest insurers.

There's a lot of hesitation about that, because advocates will say we're seeing insurance collapse all over the country, all over the world. What's stopping an insurer from pulling out of a parametric model? Just because it's parametric doesn't mean that once it stops being profitable, they won't necessarily just leave.

Also, a lot of these companies have a lot of data. They're acquiring data sometimes through public sources, sometimes through private sources. They're really, really, really good at being able to predict risk. And there's been a push among advocates for a little bit more data transparency, because at this point, a lot of people are saying that these insurance companies are better at predicting risk than even some public entities. And if that data was more publicly available, we could perhaps do more prevention and abatement rather than just profiting off of the disasters and the aftermath.

NINA MOINI: Well, Katie, I hope you'll come back and continue to share your reporting with *Wired* with us around this topic. Very interesting. Thanks so much for your time.

KATIE THORNTON: Thanks for talking with me, Nina.

NINA MOINI: That was Minneapolis based journalist Katie Thornton.