

# America Adapts the Climate Change Podcast

**Doug and Madison discuss climate models, their limitations, and the need to regulate the climate analytics industry. They also speak about the importance of computing power and the need for a national adaptation plan.**

2023, Madison Condon Wild, Wild West of Climate Modeling

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### Long Summary

In this episode of the America Adapts podcast, host Doug Parsons and Madison Condon, a law professor at Boston University School of Law, discuss various aspects of climate models and their role in adaptation planning. They delve into the different types of climate models, such as the global climate models (GCMs) and impact models, and their limitations. They also touch on the emerging climate industrial complex and whether or not the government should regulate this sector. Several questions are raised concerning liability for companies that make bad climate projections, and how they can be held accountable for projections set decades in the future.

The podcast explores the booming industry of climate analytics, where firms sell climate risk data, physical risk models, and adaptation-focused services to private equity and asset managers. The speakers question the accuracy and usefulness of the information provided by these firms and the potential maladaptation that could result from decisions based on flawed data. They suggest that there needs to be more intervention in decision-making regarding climate change.

The podcast also touches on the need for a national adaptation plan in the US, but notes that progress

towards this plan has been limited. The speakers discuss the challenges facing adaptation practitioners and how they can effectively engage with climate analytics firms. They emphasize the importance of understanding climate modeling in adaptation planning, recommended the potential guest Nicola Ranger.

The podcast raises concerns about the potential legal liability companies could face for failing to adapt to climate change risks that were foreseeable. It also highlights the lack of quality control in the private sector and the need for institutional change.

The speakers also talk about computing power and downscaling algorithms, recommending more people to seek advice from climate scientists and to ask different communities for vetting or double-checking before proceeding. The podcast also points out the disconnect between law and the adaptation world, but suggests that Twitter is a great convening space to cross paths with adaptation experts.

In conclusion, the podcast episode underscores the importance of climate models for adaptation planning and the need for more regulation in the climate industrial complex. It raises concerns about liability, quality control, and the lack of a national adaptation plan. Overall, it promotes greater confidence in using climate models for adaptation planning and encourages listeners to provide feedback on the show or suggest guests for future episodes.

## Brief Summary

In this episode of the America Adapts podcast, host Doug Parsons and law professor Madison Condon discuss different aspects of climate models and their importance in adaptation planning. They talk about the different types of models, their limitations, and the emerging climate industrial complex and whether or not it should be regulated. The podcast explores the booming industry of climate analytics and questions the reliability of the data provided. The speakers also highlight the need for a national adaptation plan in the US and discuss the challenges that adaptation practitioners face. They raise concerns about the potential legal liability companies could face for failing to adapt to climate change risks. Finally, the episode emphasizes the importance of computing power and downscaling algorithms, understanding climate modeling in adaptation planning, and the need for more regulation in the climate industrial complex.

## Tags

American Adapts podcast, climate models, adaptation planning, models limitations, climate industrial complex, regulation, climate analytics, reliability, legal liability, computing power

# Transcript

[0:00] Hi, everyone. This is America adapts the climate change podcast.

## Introduction to the Wild West of Climate Modeling

[0:14] Doug Parsons: Hey, adapters, welcome to the wild, wild west of climate modeling.

Joining me is Madison Condon, a law professor at Boston University School of Law.

We'll be exploring the critical role climate models play in adaptation planning.

But more importantly, we'll discuss their capabilities, what they can and cannot do.

Madison will explain what is the climate industrial complex, and if there's a need for the government to step in and regulate this emerging sector.

Also, should these climate analytic and modeling companies be liable for making bad projections?

And how can you hold a company liable for a projection that's set decades in the future?

Yes, it's the Wild West at the moment, and Madison helps untangle some of these issues so we can have a bit more confidence moving forward using these tools.

I hope you enjoy this conversation. I certainly did. OK, let's join Madison Condon and take a visit to the wild, wild west of climate modeling.

Hey, Adapters, welcome back to a very exciting episode. Joining me is Madison Condon.

Madison is an associate professor at Boston University School of Law where she teaches environmental law.

Hi, Madison. Welcome to the podcast.

Madison Condon: Thanks so much for having me. I'm happy to be here.

Doug Parsons: All right, we are going to dig down and learn about climate models and what's going on in that space. But first off, let's just hear a bit more about you.

You're at Boston University. Can you tell us a bit about what you do there?

[1:31] Madison Condon: Yeah. At BU, I teach environmental law, corporate law, and a seminar on climate risk and financial institutions, which is really the subject of my research. And the seminar invites various people from all different fields to come in and talk to the students and then write their papers. And that's mostly what I'm up to at BU. What's your background? How did you get to where you're at? You've studied at different places, and I think you've worked at a couple of different places, but now you're teaching. Can you give us a little bit of that background?

[1:58] Madison Condon: Yeah, and I think my background is sort of fundamental to the work that I am doing right now. So my undergrad was in environmental engineering at Columbia, and then I went to law school. And then I did something strange, which some people advised me not to do. But then I did a quote unquote postdoc, even though I didn't have a PhD, I had a JD back in the engineering group that I had done my undergrad in with my undergraduate mentor of Manu Lal, who is an expert really in financial risk assessment of weather risk, using weather data and weather analysis to understanding future forecasting of risk, including in insurance for crops. So I worked with him and that was sort of the very first time I had begun to think of asset managers and institutional investors as working on this project that had been funded by the Norwegian Sovereign Wealth Fund, because it had become interested circa 2015 in climate change as a financial risk. And then after that, I did a fellowship that was more law-based where I learned much more about the United States as an administrative state, the US regulatory state, and the various legal rules and requirements that go into making agencies function. And now I'm a law professor, and I think my scholarship sort of combines all of those different things together.

[3:15] Doug Parsons: Well, that's a preview of one of the questions I'm going to ask just in a second here, here, just have the background to do what you do. But that explains a lot of it. Just so and you know, before I forget, I might forget, you are very active on Twitter, and you comment on a lot of things. And you follow a lot of things. And I recommend to my listeners, obviously, I'll have your handle within my show notes. But I highly recommend people follow Madison, just because you're very active. And it's I can't even keep up quite honestly, like, Oh, my god, what's this thread? And so I've been trying to do my homework on it. So let's pivot a little bit here. And I really want this episode.

[3:48] Doug Parsons: To be, you know, the fundamentals about climate modeling and climate risk. And I thought I knew a lot just because of, you know, the conversations that I had, I'm not an academic or anything, but the paper that we're going to get into, but I'm going to we're going to preface that too is an amazing paper, I read the whole thing. I don't always do that when academics send me their papers, but fantastic paper. And it just really cleared up a lot for me on things that I thought I understood. And so I want you just to start us off here, I want us to talk about climate models. And my first question was how did you get to the point where you could even understand these things. And I think you just answered that. And so Let's talk about more broadly, and you do this in the paper, but when people think of climate models, they really have no clue. It's almost like different types of cars and different types of engines within those cards, and that might be a poor metaphor. Can you give us some just foundations of what these models are?

## Understanding the Different Types of Climate Models

[4:37] Madison Condon: Yeah. And the thing is, when people say climate models, they are often speaking about completely different things.

So global climate models, GCMs, those are the big science models that run on supercomputers and roughly try to replicate all of the Earth's systems and see what might happen if you pump it with CO2 in the future.

And it just takes like a lot of computing to run those models.

There are many people who are interested in future climate impacts that are not the type of atmospheric climate scientists that work with those models. And so there's people who.

[5:17] Madison Condon: Are working with maybe near-term questions of how high should we build this wall? I'm an engineer, how high should we build this wall? Or you're an insurer, and you're like, how much should we charge for insuring Miami? And you might use models that incorporate aspects of climate change or your understanding of how you should approach the question of climate risk in those models.

[5:38] Madison Condon: But those are not the same models as the GCMs. And then there's sort of another type of model that's often called a climate model.

I'll roughly call it an integrated assessment model. There's many different kinds of integrated assessment models, but they try to take the outputs of these GCMs, which say a bunch of things about how.

Weather and climate will change all around the globe in the future.

They try to translate those outputs into economic impacts, or social impacts, or crop yield impacts.

Those are impact models and one of the most commonly used version of impact models is an integrated assessment model, which comes from the economics literature, primarily if you're talking about US regulatory discourse.

There's a bunch of different models.

They're all good at a bunch of different things, And in part, the paper is about how some models should not be used for some things that they are being used for.

Doug Parsons: Okay, great. And my understanding as I was reading it, too, is that let's say, and what we're going to be talking about, too, in your paper, I keep jumping ahead to that, but I do have some other questions I want to get before we get to that, that when you have these downscaled models, and let's say you're even a private firm doing climate modeling, a lot of them, they have those global models that are out there that are, you know, have been created and using a supercomputer, that an overlaid part of what they're doing, but they're adding a whole bunch of different things to theirs, right? Is that kind of

how how it's working out there?

[7:00] Madison Condon: I think the best way to understand it is the only people who have global climate models are governments at this point.

They take a ton of funding and a ton of capital maintenance of basically the fastest supercomputers in the world, and they take a bunch of people working together.

So the outputs of those models are dumped. They're publicly available.

They're dumped in this thing called the Coupled Model Intercomparison Project.

It's just CMIP. Everyone calls it CMIP. And every time there's sort of a big meta comparison of these big models, there's a new CMIP. So the latest version is CMIP6. So everybody can go download CMIP6 data. What that means, you have to understand what these GCMs are even able to tell us. So GCMs represent the globe in a big grid.

In these 60 by 60 mile cubes. And that means that they're good at representing some things, but they're very bad at representing other processes that are more granular than 60 by 60 miles, which turns out to be many processes, including cyclones and extreme events and things that we're still figuring out about how the weather system works. For a long time, the most important output from these global climate models was forecasted average future warming, because.

[8:18] Madison Condon: That's what people cared about in the policy context. And in order to get that number, you have to average all the warming from all these different 60 by 60 mile grids together all over the world from all the different model runs to get the basic number that is the average global warming for a given CO2 level. Meaning like you've already really compressed a lot of information to get like three degrees C if you do this much CO2. Meaning like a lot of different things are happening in different parts of the globe, actually, like some places might be drier and some places might be wetter. Some places might even get cooler, probably.

## CMIP database and use of data by private companies

[8:55] Madison Condon: More unlikely, but some places are certainly going to get much hotter than the global average.

All that detailed information is dumped in the CMIP database. That's just like so much data. And so what happens is all these private companies and end users of all different kinds pick and choose how to use the CMIP data in various ways.

And that's sort of where the like wild west aspect of this world comes in.

Meaning like one of the simplest examples is economists, even in the public sphere, taking this like global average number and then using that to forecast effects on the more local scale.

Sort of assuming that impacts in various places will be related in a very simplistic way to global average warming.

Assuming that like every place will get drier when that's like a very simplistic assumption from like what the global climate models are actually able to tell us. But sometimes the reason they make those simplifying assumptions is just like ability to work with a simplified version of the data.

Doug Parsons: Okay, great. I love the pauses and the sort of size. You're like, okay, I have to explain this to a moron and I'm good. That's kind of the level that I'm going at. And so I can sense your brain working because I quite honestly didn't quite get that. I you keep hearing like, all right, here are the downscaled models that are related to the global models and just like how people are getting that and putting it down at it.

[10:15] Madison Condon: Yeah, yeah, yeah. So where downscaling comes in is like when people try to

pinpoint an impact at a scale less than 60 by 60 miles, which is like all impacts, you know, if you're interested even in a city or an area of the coast, you need downscaling. It's really questionable. You have to be, you know, it's, it takes a lot of scientific background and understanding about what downscaling is and is not able to tell you.

And that I think is also something that's lost when it gets translated to the private sector, meaning like there's debates in the scientific world about uselessness of downscaling altogether.

[10:51] Madison Condon: I'm like not expert enough really to weigh in on those debates, but certainly there's like caution that downscaling is not useful for like the extremes, which in the financial sector and in like the infrastructural world are the things we really care about. The things that are the a one in 200 chance that we'll just break the whole system.

Those are the things that we should at least be preparing around.

So it's fine if the models don't, maybe it's not fine, but we can't make the models better in some cases.

So we need to start thinking about how do you design systems and institutions that are able to approach that uncertainty.

Doug Parsons: I think this is a good example and you mentioned it in your paper, is that the Federal Reserve recently went through their own process.

I don't even know what to describe. it was it just a they were sort of testing like the climate risk out there with I could think some banks in the Northeast, but they got a lot of criticism because I don't think they necessarily even had a climate scientist involved. Can you just quickly summarize what happened there and why it's problematic? Yeah, it's interesting what happened. So the Federal Reserve is definitely.

## Federal Reserve's climate risk pilot scenario and its limitations

[11:57] Madison Condon: And remains a climate laggard when it comes to central banks around the world. So there's this thing called the Network for Greening the Financial System. It was founded several years ago.

Many of the world's central banks are members. Mexico, China, many of the EU member, well, the European Central Bank, the UK, some of the EU member states, they're all on board roughly with like trying to approach climate change as a financial risk. And under Trump, of course, we were, we didn't join, we finally did join. And the NGFS has been rolling out these climate scenarios.

Madison Condon: For how banks and financial regulators should monitor the financial institutions under their purview. There's been criticism of these NGFS scenarios. There's one for transition risk, there's several for transition risk, and there's some for physical risk, which is what we are talking about, sort of like the impacts of climate change. The critiques of the NGFS physical scenarios was sort of exactly what we've been talking about, meaning their economic models that assume that average global warming can be like econometrically related simplistically to impacts around the world. So they'll say like, oh, we can observe that.

[13:15] Madison Condon: I don't know, even sometimes something simple is like, like cooler countries are richer. They'll use like some simple relationship for like that to forecast impacts or, you know, the more advanced ones, even some of the ones that the NGFS uses still assumes that impacts are correlated to average warming, meaning they lose all of that granularity of the 60 by 60 grid, and they don't grapple in any way with the fact that the global climate models on their own are not very good at capturing extremes.

[13:50] Madison Condon: So that's all to say that leading up to the Fed finally considering climate risk, people had really criticized the NGFS physical risk models for not considering what you'd call

catastrophic risk for the extremes, for like not understanding that the things we really care about is not average global warming. It's like a giant hurricane hitting a major transport center, or a drought hitting, you know, one of the major transport rivers in Europe, just drying out for a very long period of time that would cause systemic financial risk.

So the Fed sort of tried to do that, meaning it asked banks to model basically Hurricane Sandy recurring again in 2050 under a scenario in which you have insurance and a scenario in which you don't have insurance.

So that part is sort of all good, except for the fact that we're just, once again, we're really bad at understanding through climate models, the future effects of like complex extreme hazards, hurricanes being like number one. So the Fed asked bankers, which is first of all, like a funny thing to do, meaning like these are science questions. So it's interesting, like how the Federal Reserve envisions Citibank, like going about downscaling, for example.

The question the Fed sort of simply asks is like, under two different emission scenarios.

[15:11] Madison Condon: How would a large and rare hurricane that hits the New York region impact your portfolio? And we do not scientifically know enough about climate change and hurricanes to really know the difference between these two emission scenarios in a precise year 2050 in a precise region of New York. It's just asking a thing that's very scientifically unknowable, which is annoying because there's so many scientific things that we do know about that we can forecast with a lot of certainty through the global climate models. They're very good at capturing various, hydrological effects, like glaciers disappearing is one, and therefore glacial runoff disappearing.

They're very good at forecasting those, and yet the Federal Reserve completely ignored those types of low-hanging fruit effects, what I would say, in their initial pilot climate scenario model.

[16:04] Doug Parsons: Fantastic answer. Walked us through what was probably just a bad run at something, and so a lot of people are looking up to the Federal Reserve to do this right.

So, all right, we're going to pivot just into, we've talked about the paper, but I want to mention that the title of the paper is Climate Services, the Business of Physical Risk. It's available to read now, but it actually hasn't been published yet, right?

Yeah, that's how it works, you know, in many social sciences, I guess, at this point. But yeah, it is forthcoming. It's pretty much in its final form at this point. And you can read it on the Social Science Research Network for free. Okay, yeah. And I'll have links in my show notes.

All right, let's just kick this off by what is the climate industrial complex? That's a big part of what you're talking about in this paper. What is that? What does that term mean?

[16:44] Madison Condon: That's such a good and interesting question. I mean, that comes up in my paper because Hester Peirce, who's one of the Republican commissioners on the Securities and Exchange Commission, she accused the SEC. She said that it's climate risk disclosure rule, which is which is forthcoming, would enable and embolden this like climate industrial complex, because the SEC explicitly says that there's these climate risk consulting firms that will be available to help reporting companies figure out how to tell investors about their climate risk. I guess it it was sort of funny, she said this as I was writing this article. And I was like, Hester, we agree a little bit, but we totally disagree on the outcome, which like I don't think the correct thing is to therefore like not regulate or ask for any information. I would suggest regulating more, but I still share her concern, which I sort of point out in the paper, it should be like a bipartisan concern. One, people doing a good job. And two, like a lot of the concentration and bottlenecks of like where this information is available and to whom and who's making these decisions. The climate industrial complex, I think, is like this shady network that both Hester Peirce and I, I guess, find shady, but we just have different approaches to dealing with the problem.

[18:00] Doug Parsons: Interesting. And let's get a lay of the land when it comes to climate modelers. It just seems like they're coming out of the woodwork in some sense that you have these small corporate,

I mean, and I think they're getting bought, as I think that was was a point that you made by bigger corporations.

But what's the lay of the land out there? Are there just dozens of them?

Are there a lot more than that?

[18:18] Madison Condon: Yeah, so you mean like the climate impact modelers, So the people who will like.

[18:23] Doug Parsons: Sell you a data set of your like fire hazard score. You obviously can't do a copyright. But like, for example, I've had on the podcast, and it's been a while, but Jupiter Intel, I've had those guys on. And then I had Climate Check, which I think are both mentioned in your article, I would consider those both of those kind of like climate modeling shops that are for hire. And so I'm just curious, how's that even change? I had, I mean, Jupiter Intel on probably like four years ago.

## Rise of Climate Analytics and Risk Data Providers

[18:47] Madison Condon: Yeah, I would call that climate analytics. Because again, the climate models, the big ones, like only the government has them. So these guys are like doing something different. I guess they are running models, they're doing downscaled modeling. But I think the like the industry term is the climate analytics. So there was this like early set of climate analytics leaders that were smaller startups, like 427. And Jupiter intelligence was in there also. A lot of those early leaders were bought up by some of the bigger, more already existing established financial services providers. Moody's bought 427. Jupiter Intelligence has stayed independent. S&P bought up a bunch of the different early guys. You know, still there's a bunch more popping up like after that article came out. I have emails from firms that I have never heard of. And, you know, on LinkedIn, I have like, there's a bunch of different places that now say that they sell climate risk data or climate analytics or physical risk models. Yeah, it's exploding.

Doug Parsons: Some of the decisions, you were also making the point that you have these really rich equity firms that are making purchases based on the projections that are coming out of these analytic firms, and they actually using language and I was wanting to confirm that they they're kind of telling people that their adaptation focus now they might be buying up land in areas where they think Floridians might go eventually Is that right with the rhetoric that they're even using the language of adaptation? Because we don't really see him at a lot of the adaptation meetings and such. Is that what they're saying?

[20:17] Madison Condon: So that is a really good and interesting question, and I'm glad that you asked it. So what you pointed out about these private equity and asset managers that pitch themselves as adaptation-focused, that is a real thing that is happening. Bloomberg had a piece, I think, last month or the month before about how much of the farmland in California is being bought up, not for the land, but for the water rights underneath. I remember when the Harvard endowment was called out for buying water rights several years ago. But this piece was updated and just was much darker than I had really caught up with. Like, yes, these people, they're adapting is like one word for it. I say that that's an interesting question. Because in theory, we are sort of by wanting firms to disclose their climate risk, we sort of want them to do this, we want them to like respond to the impacts of climate change and like prepare and price it better. So in some ways, you're like, is the whole model broken? Like, should we be intervening more in these things that we clearly think are sort of important in some way that is different, such as the availability of water in the West? So that's why I really like your question.



[21:24] Madison Condon: I'll just say one more thing about it, meaning like a lot of the banking regulators, so both the OCC, which is the federal banking regulator, along with the Fed, but regulators at the state level, including the New York Department of Financial Services, they have ruled out rules and guidance suggesting and mandating that banks consider climate risk and price climate risk in their loan portfolio. So when they give mortgages, they should consider whether or not the home will be flooded, for example. They simultaneously say, by the way, remember your obligations under the Community Reinvestment Acts, the anti-redlining obligations, make sure you're not de-investing.

[22:04] Madison Condon: From minority communities. And there are law firms out there that will say, like, this is impossible.

Like you're asking the inevitability is that like the most exposed people are this are already sort of the most exposed people, the black and brown people. So you're basically like telling banks to like divest from New Orleans. And so the law firms are saying this in a very insidious way to try to get them to like weaken requirements on either end. But again, there's like a bit of truth to to this, meaning like.

[22:35] Madison Condon: I'm not sure we should leave this all to the banks to decide where they do and do not invest.

I'm just like much more interventionist in the face of climate change, because I think we need to adapt and plan. Another point you make, I think, is just really a key point in all this is this notion of maladaptation. So on the one hand, if let's say cities, small cities, large cities are starting to use these climate analytic groups to help them plan ahead, because if they don't, then they're going to be at much bigger risk because they're not doing anything. But then let's say they do something, they're working with these firms. And the point you're trying to make is, are we even sure that these firms are producing accurate information or useful information? And if it leads to decisions where maladaptation happens, and I just used the classic example, all right, well, you need to build X level seawall, and that has all sorts of downstream impacts in that. And so it was a maladaptation if it wasn't done right. So it's really shades of gray in what kind of decisions could be made of here.

[23:33] Doug Parsons: Definitely. And you raised the example of a city hiring, you know, some firm to help them with adaptation. You know, hopefully in that example, they're hiring engineers that have some training on how to work with climate data. That would be ideal. You never know. And my concern is so much focused on the financial world because they just love metrics so much. And they love being, you you know, it's very, it's not city specific or house specific, honestly, it's like, give me the data set of Massachusetts, which like uses some algorithm to figure out the risk of all the houses in Massachusetts. So my concern is, again, like, for example, Fannie Mae and Freddie Mac, which is now like under the conservative ship of the federal government, they have a mandate to consider climate risk in their purchasing of mortgages from the banks, they have no in house capacity to do that. So they've hired a third party sort of metric giver for that information. And.

[24:32] Madison Condon: That's, I think, where the maladaptation part could like really be a problem, meaning like this is going to impact banks giving loans to people's homes and on a nationwide level. And it's like a semi government function. And yet no one's vetting if that data set is any good. And I think that that is pretty problematic.

Doug Parsons: My next question is, tell us a bit about the First Street Foundation, and is that the group that is working with Fannie Mae?

## Quality Control Issues with First Street Foundation's Flood Maps

[24:58] Madison Condon: That is the group that's working with Fannie Mae, First Street Foundation. I mentioned them in the paper. So I'm not a climate scientist. So I don't, you know, in the paper, I'm like very clear about, I don't actually work with or vet these models. I just like have read a lot of science papers, and I have a science background. And I know in general what the limits can and cannot be. I do have a problem with how First Street Foundation really went out of its way to.

[25:24] Madison Condon: Say how bad FEMA's flood maps are and really tried to say, use us instead of FEMA. And I think that that was a bold claim, given the challenges of how hard it is to model some of these flood risks. I guess I want to dig deeper there because they're one of the most prominent players in this, right? And especially what banks like to use them in such. And this This gets to the issue of quality control.

I mean, it sounds almost like the federal government is just kind of looking the other way when it comes to, they're ready to do this, so we can hire.

I mean, I certainly support when the federal government hires private consultants to do certain things that they just aren't ready to do, but is this a situation where it's so important that they're really not, was there ever a quality control check when they're dealing with the First Street Foundation?

You know, I've been thinking about this question a lot, and there was this reporting that Lee Harris did in The Prospect, which I think you might've read, which, you know, she went out and did the due diligence of interviewing a bunch of climate scientists who were all willing to go on the record saying, like, I don't really understand, or I am very skeptical of what First Street Foundation claims it is able to say about future risks.

So I believe those climate scientists, and I've talked to some of them, like, in my own research as well. And you can get many, many, many climate scientists. I mean, one of the things I found so puzzling in the broader interdisciplinary breakdown.

[26:42] Madison Condon: Was how like in my corner of Twitter, which as you say, I use a lot, you could just find like so many legitimate climate scientists who were just laughing at what, for example, the Federal Reserve produced, or you can find a bunch of climate scientists if you search, if you know where to search that like are dunking on the First Street Foundation and climate models and like pointing out the very like specific methodological problems with them.

You can even find the climate scientists like commenting when First Street Foundation's Twitter feed does a push.

And so I just sort of trust all of them a little bit, or just certainly think that all of these 10-year people who engage in peer review must have a point because I found really no one who's willing to go to bat to defend First Street on the other side.

So your question is how did this happen? I think there's just huge disciplinary breakdowns.

I think that you learn a different set of statistics and methods and like approaches to data when you work with weather data and work with climate science, then you learn when you.

Are a finance person and work with mortgage data and bank risk. And so I think there's a ton of learning that needs to happen and institutional change, and it's very easy to pick someone.

And everyone engaged in this, I would say, a lot of newspapers reported.

## Issues with Private Sector Climate Data

[28:06] Madison Condon: Repeated First Street Foundation's own claim that they were democratizing climate data, et cetera, et cetera, and didn't necessarily do a ton of digging into whether or not scientists

thought the science was right. I don't think this was one of your specific recommendations. But again, there's these top-notch people at NOAA, there's top-notch people at NASA, and why we spend one federal dollar for First Street. And I'm not here to badmouth First Street Foundation. It's more about how things are evolving in the private sector side. And so we have some hotshot team of our public servants who are allowed to go look and show exactly what they're doing with their model, even though they've got the capacity to actually run it.

I can't believe we're not just demanding that. They can't make these statements that, oh, well, it's going to do this and that. Let our guys, because there are, like you said, there's amazing scientists who work for the federal government. They're just not coordinated very well, maybe, to deliver these things. Yeah. And I've thought so much about this.

And I do think that there's a few things to be said. So one, Trump really did try to do damage to the federal government's science capacity, and he was successful in doing that. And so.

[29:14] Madison Condon: Some people left federal government. Two, climate impacts have been politicized for a while, Meaning like...

There's a long history of NOAA saying, we get so many requests for climate impact information and people don't know where to ask. And like, it would be amazing if we were either able to reorganize existing funding or maybe, wow, even amazing, get more funding in order to do this. And like, it's always been too political to allow it to happen. So that's part of why these websites are chaos is because climate is just always just turned into something too dicey to even have Congress deal with. One, again, there's all of these sorts of recommendations, or at least just it was sometimes it was just speculating, would this be helpful that what you were doing with.

[29:56] Doug Parsons: The paper was just a great thought experiment in that respect. And so this notion of a national climate service and the idea that so much of the information is generated by the public sector and maybe organize it, what I think we were just talking about, maybe organizing on the federal side, that they're providing these services in a much more coherent way that's going to be useful for people out there. So it doesn't try to elbow out the private sector in all this, but you just have some baseline and I think you're calling it the National Climate Service or maybe someone else kind of coined that phrase, but give us a little bit of information on that.

Yeah. The thing that blew me away the most is when I discovered that this idea of a National Climate Service had first been floated in the late seventies. And I found this out like kind of late in researching the project. And I just was even like, it was like a record scratch because I think about climate change all the time. I sort of roughly understand like when we knew about certain things. And so I was just, what? And so there's this bill also, the National Climate Policy Act from the late 70s. I'm a law professor. I've been in law and studying environmental law, like for more than a decade plus or whatever. Never heard of this law before. It's the first climate law. It's never spoken of for some reason. And there's like this magical time where people like we're very interested in climate and maybe even climate change.

[31:13] Madison Condon: They weren't super wedded to the idea that it was even caused by humans, but they like really wanted more research on the science, not of the causation, but on the impacts to state farming and state water. And so there was this like alliance, bipartisan alliance, for like Sunbelt Republicans and Democrats to try to get like more funding for state atmospheric and climate science. And so that passed, it sort of happened, it was sort of, it didn't ever really like live the the dream that it wanted and that the congressman had envisioned.

So this idea that we should provide people similar to the National Weather Service, people about longer term or medium term climate changes, and increasingly these two questions are intersecting because we live in a world of climate change.

## Improving User Interface for Climate Data Tools

[32:02] Madison Condon: We really need to start knowing various things about how our own environments might change.

[32:08] Madison Condon: And we really don't have a lot of tools for that. So yes, what you're saying my idea was, I think you described it actually really well, which is like not to block out the private sector, but to be really clear about like where their utility ad may be.

It's true, the government up until now has not done a very good job of creating user friendly apps or marketing itself.

I don't think that should be abandoned. I think we should actually give funding to NOAA to like make their websites prettier.

I think that would be good.

But the private sector is welcome to take NOAA's data and like create usability and such like that. But I think we need to really think about the ways in which private sector using the data creates blockades in various ways and how it's unfair given that all the information in the first place was generated by these huge government supercomputers.

[32:55] Doug Parsons: The language you use in that section is you talk about the public option and made me think about health care and you know the US we don't necessarily we have a hodge podge of medical care but a lot of countries you know they have a universal system and they'll say it's not that good the private systems better but at least it's there it's that baseline is there and it makes me think is that what's gonna happen let's say we do do a national climate service it's like it's basically there but it's doesn't most people don't like it, but it's a kind of a last resort or sort of something maybe even to ground truth the other things with and I could see that happening. And I just want to mention that I went to a conference Patel put on a couple months ago, and I got to meet a lot of people from the national labs. I don't know if you've ever interacted with those guys. And I didn't really know much about them, but Patel actually runs a lot of those labs. And they have created these tools. There was a, you know, it was a resilience conference. And we exactly what we're talking about here. And I actually got to have some conversations with those folks who actually put these together. And they would admit too, is that they were giving a presentation and they're like, okay, this is a small town can use this information and I'll do this, this and that.

[34:01] But, oh my goodness, some of them were just so clunky. And they just, you know, the fundamental science behind the model is just, it's going to be top notch, right? Because they have those supercomputers, they have all those things, but it's just awful presentation of it. And I, you you know, I was sort of mentioning it to him. It's like the private sector can actually make this more relevant. It's sort of the interface is means so much to people when they want to engage on something. And I think you just made that point, though, they just need to have some more resources. I don't know if they'll ever be able to do that. Well, though, I think federal government when they put a lot of tools together, it's like Frankenstein, no matter how hard they try the nature of what they do. And I'm a big federal regulation guy.

Madison Condon: Come on, I just want to say but in and say, like, you know, have you interacted with the USGS StreamGauge website recently? Because it is like beautiful and very fun and like very user-friendly. But I will say I am on Twitter, once again, to mention. And so when I wake up in the morning, I see like a lot of British Twitter and their healthcare system is like sort of dying right now, like because they did the cutbacks, like from the more publicly funded version that everyone was like really, really into the National health service. So I just do think that within a company, you would never ask the climate data wonk.

[35:16] To also design the user interface for the website. Absolutely.

You would have a different team of people. So I think we could do that too.

Doug Parsons: No, I have not poked around the USGS tool. And I'm not trying to make a blanket tip. So many tools are great out there. And I worked for the National Park Service. A lot of times the problem was like, let's say a great tool was created. It just never got the promotion that it needed to get out there. And that's a point I've made on the podcast. It's like you spend \$100 million making something, you spend \$50,000 trying to market it. And I would argue you need to spend another \$100 million marketing it and we just the federal government doesn't they'll get accused of wasting money when they do things like that. And I want to go on record to I'm all about universal public health care. I don't want to be like dogs again. It's just you know what I'm saying? In some countries, it doesn't get the attention doesn't get the funding it deserves. And it's considered like a last resort thing. And that's not good. Hit actors will be right back with.

## Podcast financial support pitch

[36:09] Doug Parsons: Part two of my conversation with Madison Condon. First, I want to thank you for being a dedicated listener to the podcast. Most of you probably aren't familiar with what it takes to produce and maintain America Adapts. It's been a while, but I'm making a pitch for financial support for the podcast. If you weren't aware, America Adapts is a tiny nonprofit organization, obviously organized around the podcast. I get sponsored by groups for whole episodes, so thank the Trinidad and Tobago episode or the mangrove episode sponsored by World Wildlife Fund, but I also get individual donations. It's It's an area that I haven't pursued a lot lately, but I'm revisiting it because I need your support. I have a small amount of donors who contribute \$10 on a recurring monthly basis through the Social Good Fund, which allows me to be designated a 501c3.

So that makes your donation tax deductible.

And thanks to those donors who have been with me for a long time, but I need more of you.

You've probably heard these pitches on other podcasts that rely on support from their listeners.

I have shared with previous sponsors what a terrible salesman I am.

It's not my strong suit making these pitches, but I've been doing this long enough to know that many of you get tremendous benefit from this podcast.

People have shared how they binge on the podcast to catch up on the fundamentals of climate adaptation. So yes, you get professional value from it, but also consider donating because you are helping promote awareness around adaptation.

[37:24] We're all passionate about this issue. I created this podcast because I was passionate about communicating how important adaptation needs to be.

I have some of the most influential people in the world listening and gaining value from this podcast. By supporting the podcast, understand that you are contributing to that. Many of us get these \$5 lattes at the coffee shop and don't bat an eye doing it. So think about a recurring donation of a similar amount to support America Adapts. The reality is I won't be able to continue to publish the podcast unless I get sponsorships and support directly for my listeners.

I think a lot of people believe I have these invisible funders behind the scenes.

[37:58] Doug Parsons: That is not the case. I have tried exploring foundation support, but I haven't had much success. They tend to be more conservative and funding an adaptation podcast long-term usually doesn't align with what they're doing. So I need to get episode sponsorships and support from individual donors. Let me be clear again. I really don't enjoy making these pitches. I'm generally terrible at it, but I've heard from enough of you that you get real value from the podcast. You have changed careers. You have done adaptation work differently because of your exposure to the amazing experts that have been

on the show over the years. There really isn't a platform like AmericaDAPT where thousands of adaptation professionals come together and learn like they do here. This podcast is my passion, as is adaptation. Let's keep doing this.

We all know climate adaptation will only grow in importance in the years ahead. You see, climate adaptation is still in its early stages and the stories we can tell are endless. So I invite you to join our community of changemakers and shape the future of climate adaptation by helping me share these stories. Okay, that is my pitch.

You can donate through a link in my show notes. Visit the website too at [americadaps.org](http://americadaps.org) to find a link to how you can donate. All right, let's get back to Madison and climate modeling.

## Liability and Accountability for Climate Analytic Groups

[39:06] Doug Parsons: I like to do hypotheticals on the podcast and I'm thinking about these climate analytic groups and they make a projection and you know, what's part of the problem here is It's like, okay, in 2040 or 2070, when can you ground truth these guys if they're making these projections so far out? They can almost say any, they might not even need a climate model. They just, they sound like they know what they're talking about. And of course, that's probably not going to happen. But what if we get to a point where you have a model that making a prediction for local community and it makes a bad prediction about a flooding event that just goes against everything that it's projections and the information that it shared and that were integrated in adaptation planning and they were completely off. Can you speculate what would that mean to a private firm? Should there be accountability? Should the federal government be involved with saying, okay, well, you're way off. So you're not a legitimate firm. I just I'm trying to project how the industry will unfold once they start getting tested by time.

Madison Condon: All right. You raise a very good point about how there's something different about this type of data that might suggest we might want to regulate it differently than we're regulating it now. And actually, my friend, James Dasgolen, has made this point very well also on social media, but he's an engineer that I worked with sort of in my postdoc days.

[40:27] And he's made a lot of really good points about how impacts really far in the future, 2040, it's really hard to, as you said, sort of ground-truth them or like see if they're correct because who knows if they're correct? They're in 2048 and they're based on these fundamentally just their models that we're trying our best on but they're all gonna be a little bit wrong. That's like a science question how right is right enough and so he you know in science world, you deal with that with peer review and you deal with that with transparency of the model and you deal with that through debates of the.

[41:02] Madison Condon: Methodology. That is not allowed to happen in the private sector because they are very like proprietary about their models. So you raised the question of liability. Great question. I think that that is around the corner and I think that a lot of firms don't even realize that. So now I'll give like one very particular example. When I was doing this postdoc that I mentioned at Columbia, there was mostly focused on water risk in the mining industry. And that year, there was a huge dam disaster, a tailings dam disaster at a mine in Brazil that was owned by the mining company Vale. A lot of people died. It was a total mess. At the time, this was like seven years ago, I was like, I wonder if this could be a securities fraud claim and the sense that they like told all of their investors that this dam was safe. And I like wonder if under climate change, if they continue to tell their investors that this dam was safe, but the climate changed around it, could they be lying? Because like the stock like totally crashed after they had caused all this devastation and there were damage penalties against it. And lo and behold, two months ago, the Securities and Exchange Commission's new ESG task force announced its like first

settlement. And it was against this mining company for lying about the safety of its tailing dams in this disaster like back in the day about Brazil.

## Liability and Legal Questions About Climate Impacts

[42:26] Madison Condon: We are really, really entering a phase very soon in which concepts like downscaling are going to start to matter in civil suits pretty soon.

[42:36] Madison Condon: There's a set of cases that are inching up that I would call a failure to adapt case against companies for whom there was a climate impact that.

[42:46] The plaintiffs are arguing was foreseeable, and they failed to adapt in the light of this foreseeable risk. So there's going to be a whole set of legal questions at some point in the nearest future, near-ish future, about what was modelable enough that you should have known. Really interesting question.

Doug Parsons: Yes, the liability. I've done some legal episodes, and yeah, it's just fascinating. And the lawyers, I think, at some point will drive a lot of adaptation decisions based on just liability and such. I want to read a quote from your articles. I want to make sure I capture all the same points. And so you say, financial institutions own climate risk models will inform the risk management and loss education strategies, short investment horizons and higher discount rates in real estate finance will combine with higher insurance premiums or withdrawal of coverage to depress property values long before rising seas permanently breach property lines. So I think the point here is long before we have eight feet of sea level rise in South Florida. The insurance market will just destroy real estate there. There'll be a whole bunch of other things happening. And so I guess my question, maybe it is happening, but it's just like, why isn't this happening yet? Florida is still growing. Florida is still, even though insurance is going up, you look at South Florida and they are just growing like crazy.

[44:01] Madison Condon: Yeah. But I mean, Florida is a really interesting example where it's become political very quickly. DeSantis has threatened to like try to prevent bond rating agencies from using climate risk information in their ratings of individual like municipalities. He's used a lot of bullying tactics against insurers. When one ratings company tried to lower the rating of a few Florida insurers because they were undercapitalized.

[44:30] There was like a huge political attack that the situation was to sort of politically help, I forget how, the insurers rather than like solve the problem in some way, which was that a lot of risk is building up that is related to housing and climate. So I think it's just.

[44:47] Madison Condon: Simmering there, I think. Well, insurance has gone up. And I think one of the things they did that responsibly, but I don't know enough about is that if you, I think if you get, You're on the FEMA flood map, but if you're on Citizens, you now have to get flood insurance, which is probably surprising to a lot of people that you didn't have to have it before.

[45:07] Madison Condon: And it's just going to exponentially. Miami Herald had this zip code calculator, and I'm from Florida originally. You can go to your zip code, and it'll show you how much you're likely to rise over the next year. My zip code in Sarasota, Florida went up 125%. I guess that's answering my question, though, that is something that's happening that hopefully will discourage people from moving to Florida. And it sounds like people like DeSantis, and I think if it was a Democrat, they would probably behave in not quite an obnoxious way. But you just got to keep that money train flowing of

new people coming to the state. Yeah, yeah. And I think, you know, I do wonder, I really do understand the outrage of not wanting your insurance premium to go up 125%. And I do sort of encourage thinking about like, how could we solve this differently rather than assuming individual consumer price spikes will systemically solve the problem of adaptation?

Because especially in a society in which is very unequal, assuming that everyone is just going to sort of rationally react to the price spike is wrong. You're going to have people who are really very buffered to that effect who are not going to move and you're going to have a lot of lower going to come people who are going to be forced out.

[46:21] Madison Condon: And then they're going to have a bunch more rich people who are not particularly sensitive move in. And then that also creates this self-fulfilling political economy where the state becomes very invested in saving these rich areas, maybe to the point where they pass the point where they may be strategically should be abandoned. I mean, I think that long term places are going to, we're going to have to prioritize saving certain places and not saving certain, certain like localized areas, you know, like certain streets we should no longer build on, for example. And those decisions are not happening. We're just exposing rich people to more and more risk and having poor people have to move farther and farther away from their original home.

Doug Parsons: Florida is just a petri dish of insanity. And it's my home state and I am just low simmering, well not low, high simmering anger toward it. All right, let's pivot a little bit here. Let's talk about the Biden administration's approach. And I think you've mentioned the article too, is that it seems pretty clear that they're focusing on emissions reductions and transition risk. And there's just a lot less attention on adaptation and physical risk. Could you explain that you wrote that? So basically, they're not emphasizing adaptation.

## **The Biden Administration's Approach to Climate Change Adaptation**

[47:29] Yeah. Although I was like super pleasantly surprised. Let's see, was it even just a couple of weeks ago, the White House, let's see, the Presidential Council on Science and Technology.

[47:41] Madison Condon: Actually had a special climate impact group and they released their findings and it cites my paper in the main intro and says like a lot of the same arguments actually. So it's like a White House advisory group that says basically the same stuff. We need to explore and get better climate data. We need to put more effort into analyzing climate impacts and having those like more accessible to a broader group of people. We need to have a national adaptation plan was one of the the recommendations. There was three, three recommendations and one was having a national adaptation plan. So things are beginning, I do wish that it wasn't the middle of 2023. And that the national adaptation plan was a proposal from an advisory group. You know, there was once again, I'll mention Twitter, there's a guy who I've become friends with from the internet, who's very just got a new job high up in the UK national adaptation strategy. And he was who does the US national adaptation plan now? Who would it move to? You guys have one, right? It is sort of a joke that we don't, there's not really a big, there's not a plan really for what is already unfolding. It seems like we're just sort of ignoring that different parts of different cities are underwater at various times. But so cool. We'll have a plan soon, Maybe.

Doug Parsons: Well, I guess I didn't follow that. But there was a Senate bill to do a national adaptation plan, and it was bipartisan, which these days means like two or three people signed on to it. And I had the author of the bill come on. And so it was my impression that, you know, the White House.



[49:09] Madison Condon: The executive branch would prefer that it's Congress. And I agree to, you know, a new.

[49:14] Doug Parsons: President, a new party that could just squash the national adaptation plan instantly. And so I don't know what's happening with that. It sounded like there was some movement, And it was pretty superficial, and they barely gave it any money. So it's like, why not do this, but I think we're only one of three countries in the world that doesn't have a national adaptation plan. Wow. Yeah, no, because a lot of the other countries is to get access to funding and all that you got to have a nationalized. So in some ways, there's just they're prompted in very institutionalized, bureaucratic ways to do it fine, great, that it encouraged that national adaptation plan, but we are way behind. And that really stinks. And you know, I think there's been some really.

[49:52] Doug Parsons: Good stuff on adaptation coming out of the CQ and the White House about this. But at the same time, it is kind of hard to say, is it prioritized? Who's sort of the leader there? I couldn't tell you that. And I think a lot of the work is embedded within the Office of Sustainability.

## Limitations of Executive Branch for Adaptation

[50:08] Madison Condon: And that in itself, I mean, maybe they're letting them do a lot of great things, but that just sends a message. Sustainability and adaptation are not the same things. And so it's like, how do you prioritize these things? And so hopefully, maybe we'll see some movement on the adaptation side before 2024. Yeah, I mean, they're just so limited by, you know, one of just like the fundamental federalism tenants is that like land use is a state thing. It's not for the federal government. So I think that's always been a big issue in the adaptation space, meaning a lot of the stuff is zoning and local infrastructure.

It's true, the big infrastructure the federal government can have a say on.

[50:46] Doug Parsons: But some of the stuff that I think really matters, it's hard for the federal government to do that much in terms of mandatory authority. But it'd be good to have a plan, have some suggestions of how one might go about adapting. And just my own experience working in the federal government, I did work in DC and they are so limited. The CQ helped coordinate all those federal adaptation action plans for all the federal agency. Great. That's a great thing. And there's a progress report. But unless it's tied to budgets and there's no sort of authority on, okay, now you said this, now you got to do it. I mean, the agencies have a lot of independence and so I think the limitations of the whole executive branch model is that the political appointees have certain limits to what they can actually get done on the ground with the agencies. And my own experience working in the Department of Interior, you saw that all the time, we ran around like crazy. The political appointees said we need to do this and this and then when you're, okay, we wrote that paper, but did it actually manifest itself to something on the ground? Well, no, you didn't tie any money to it. And all these other projects have money allocations that we're supposed to work on. So it's, it makes it very difficult. I just want you, if you can, as best you can, and you do it in the paper, but it's spread over. But if you could do it here's, I have a lot of adaptation practitioners who listen to this podcast, and some of them are probably very interested in engaging with the climate analytics firm. What advice would you give them? Are they literally going on Google and searching. How can they do this in a more strategic, effective way?

[52:13] Madison Condon: What do you mean? Like, how can they vet the climate models better? Or how can they know?

Doug Parsons: I want you to go to the beginning. And maybe you'll say I'm not there to answer that. It's like, they have to develop an adaptation plan for their commission. And part of that is going to require them doing some climate modeling. And so they don't have the in house expertise. How do they literally start that process?

[52:36] Madison Condon: That's such a good question. I mean, so I think that I was in one of the groups that has been thinking about this in really good and interesting ways is Carbon Plan. And the sense that so they're usually focused on transition stuff, but they had one research project that was very focused on this bad bottleneck, which is simply the computing power needed to work with some of this downscaled data that a midsize city even like didn't have a big enough computer to work with. That's even where like some of the private sector has some places to add, meaning there's been some interesting innovation with getting some of these tools in the cloud, getting certain things more automated so that users can get up to speed to use these tools without the fancy computers.

Obviously there's trade-offs with that, right? It's not great if everyone can do the downscaling algorithm if they like have no idea what to select for, if if they know which downscaling algorithm to select.

I mean, so if you're working in adaptation, it depends where you're coming from, you know?

Like some people probably know way more than me about assessing risks on the ground.

I think people just need to ask academic, ask climate scientists more.

It was interesting as I was talking to journalists on this project.

It's amazing how much I get journalistic questions that are just basically climate science questions.

[53:57] Madison Condon: You know, you should ask a climate scientist and they seem to not know who to ask. And I'm like, you can Google the climate science, you know, there's your local climate scientist that works in the atmospheric whatever that you do, there's Lamont, there's Scripps, there's your local weatherman, there's like people you could ask who knows about weather data that and I think more people need to be like asking different communities of people for vetting or like a double check on before they proceed. And a lot of this happens just word of mouth, I'll go to it, you know, you know, in the National Adaptation Forum, you'll see plenty of presentations of this city doing this thing. And so they've tapped into it. And so a lot of it is just word of mouth, you're meeting people. But I just feel there should be a more systematic way of doing that. And it just sounds like there's it's ripe for training 101. And I'm sure some groups out there listening like, we do this kind of training, but large nonprofits that are just they bring in the expertise to really hold your hand. All right, these are they're not going to be able to just assess every climate analytic tool, but they can at least get you started and have some standard that a lot of these communities really need.

So if you're out there, please contact me. I'll share within the site, because a lot of it's just anecdotal happening right now.

Doug Parsons: So final pivot here, I want to talk a little bit about what you're doing there at Boston University and you're a law professor. Are your students interested in getting into the climate space, the adaptation space?

Has that come up much?

[55:17] Madison Condon: Yes, definitely. I mean, they, I love my students so much. They do not need any convincing that taking climate change seriously needs to happen across all the disciplines, including law. So I teach this seminar, which is climate risk and financial institutions.

And they always write these like knock them out of the park papers, usually focusing on a narrow legal issue, but there's so many legal issues about how do we deal.

Madison Condon: With climate change. So some are on the transition side, but many are on the physical

risk side, just thinking about mortgages and ratings agencies and who's in charge of who and like what happens if there's a banking collapse in a certain area. So they're all very creative in thinking through these issues. They also know that land use is a big deal. And I don't know, I'm not a land use person actually, but it's interesting to sort of watch trends in law. And definitely students want to know about zoning, and they want to know about local government law in a way that seems newer. And I think it's really cool.

[56:14] Doug Parsons: Well, I never went to law school, but my impression, maybe there's some hypothetical cases that students have to do.

They're testing out. I don't know if this is something they do, but it would be cool just to go through that process of the liability, that there's some sort of case study that they could find that's, OK, there's some projection that was way off that led to this, and now they're being sued.

And that would be so useful. And I don't know if there's these hypothetical things law students do, but that information just getting out there.

People couldn't even just visualize it, I think would be really useful.

So you're not necessarily doing adaptation full on.

It's so much relevance to the space, but do you feel you're connected to the adaptation universe?

Do you feel there's colleagues and such? Cause I am always trying to promote the adaptation industry and sector, but do you feel you're actually part of that? Are you just, you know, you're, you're teaching some law that's relevant to it.

Are you connected?

[57:01] Madison Condon: No, I don't feel that connected to the adaptation world, but you know, Twitter is a great convening space and definitely there are adaptation people on there that I cross paths with that I think is great. In terms of more on the ground work, no, I don't. I mean, law actually asked this of a law professor recently, which was who's doing really great work on adaptation in law? And I'm sure I'm very rudely ignoring a bunch of people, but I would say it's not a huge subject of interest. So there's that aspect of isolation.

I do have this like engineering background. So I am connected to people who are thinking about.

## Financial Sector and Climate Change

[57:36] Doug Parsons: Systemic risk and how the financial sector is quote unquote adapting. But what's so funny is as you watch all these financial institutions more or less adapting, they are not using the language of adaptation. You know, like that is a very different world from the adaptation world, even though the decisions the financial people make will really impact our ability to adapt.

I didn't ask the question, but one of the quotes that you had in the paper, which I think was a quote of someone else, was a lot of adaptation planners don't even know they need these climate risk tools. And so I just encourage you, I mean, you do a lot of speaking and you're writing and you're very busy, but the National Adaptation Forum happens every two years and they restarted after COVID. You doing a seminar or whatever, I think there'd just be a lot of interest in you just kind of getting up there and the paper could be a big driver in what you talk about, but it would be great to see you really connecting with those people in that space because a lot of adaptation people are not thinking about this and they need to think about it.

Madison Condon: Yeah, really good point.

Doug Parsons: All right, last question. If you could recommend one person to come on this podcast, who would it be?

[58:39] Madison Condon: Oh, such a good question. Well, you already have Kelly, who I'm the biggest fan of.

Let me think in the adaptation space. Have you had Nicola Ranger at all?

She's another cat-risk person, but she's works...

No.

[58:52] She's just so impressive. She's worked way back on the original Stern report, which to me seems way back in the day, but it was only 2007. But Stern Review is discounting.

But she just writes the coolest stuff now. She has a climate science background, but she could give a really good talk about just like what is going on with the central banks and stuff. She knows way more than me about similar to the stuff that I talked about, but mine is so quality control and private sector. She could talk much more. She works actually like a lot on the big adaptation fund international questions that are really linked to this loss and damage stuff and cat models. I think she could be a really cool guest. Could you repeat her name and where she's based at?

She's based at Oxford. It's Nicola, oh, it's America, Adapts, maybe you don't want to talk to her, but all of it is being adopted by the Fed.

That's what I'm saying. It's all, she works slightly with the group of people that defined the way all of these financial regulators in the US are thinking about climate change.

So her name is Nicola, N-I-C-O-L-A, Ranger, R-A-N-G-E-R.

Doug Parsons: Okay, I will definitely look her up and just, yeah. And I do international stories.

I just published an episode that was called Trinidad and Tobago, Keeping History Above Water.

Cool. In the Americas, right?

[1:00:10] And I've gone to Africa and Australia. I tell these stories.

But yeah, America definitely is the domestic focus.

But I go elsewhere. So great, great recommendation. Madison, this lived up to my expectation with this conversation. I just loved it. We got wonky, but I think in a very informative way.

And I appreciate you coming on the podcast.

[1:00:30] Madison Condon: Thanks so much for having me. It was really fun.

## Housekeeping: Sponsorship and Keynote Speaking Opportunities

[1:00:36] Doug Parsons: Okay, Adapts, that is a wrap. Thanks to Madison for coming on the podcast.

I've covered climate modeling a bit before, but it's such an important part of adaptation.

[1:00:43] Planning that I'll continue to cover it. Madison has done everyone a big service by looking at this issue. I think the topic of companies being liable for making wildly wrong projections needs to be discussed further. I think it's inevitable that federal and state governments will come in in a big way to regulate this industry. Although I think giant insurance companies that need accurate data will also help with quality control with these models. We are on the cusp of many more small, medium, and large cities getting into adaptation planning in a big way, and one of the first things they'll do is find tools to do projections for the regions. The federal government, through various agencies like NOAA, USGS, and others, have already created extensive modeling tools. Sometimes it's just a matter of knowing where to look. I'll definitely keep on this issue in the years ahead. I've included links to the article Madison referenced and other materials she has written. I highly recommend, if you're getting into adaptation planning, you take the time to read her essay.

Everyone in the adaptation space should have at least a basic understanding of what's going on in the climate modeling universe, a universe that is quickly expanding.

All right, some housekeeping.

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[1:02:08] Doug Parsons: Don't limit your communication toolkit to just webinars and white papers. They can be dry and forgettable. You'll get to work with me personally to identify the experts that represent the amazing work you're doing. Give your organization a dynamic and engaging way to communicate with members, board members, and funders. Make a lasting impact by using the power of podcast storytelling to captivate your audience and bring your message to life.

[1:02:28] Some of my previous partners include Battelle, Natural Resources Defense Council, World Wildlife Fund, University of Pennsylvania, UCLA, Harvard, many, many prestigious organizations. Discover the enduring value of podcasts as they continue to promote your story long after its initial release. You can learn more by emailing me at [americadapts@gmail.com](mailto:americadapts@gmail.com). And are you seeking a keynote speaker for your conference that can seamlessly incorporate leadership, humor, expertise, storytelling, and charisma into a presentation on climate adaptation?

[1:02:56] Doug Parsons: Looking for a speaker who can inspire your audience with real-life stories of climate adaptation? Look no further. I offer keynote presentations that weave together engaging stories from the America Adapts podcast and my own extensive experiences as a leader in this exciting field that will only grow in importance. My talks are sure to motivate and inspire your audience. Whether you're planning a public or corporate event, I'm available to speak and share my expertise. Don't miss out on this opportunity to learn about climate adaptation in a fun and informative way.

Book me as a speaker, check out the website, [americadapts.org](http://americadapts.org), and get in touch.

And as host, I'm always eager to connect with my listeners to hear their feedback on the show.

Whether you want to share your thoughts or suggest a guest you'd like to hear, I'm open to it all. Your input not only helps me improve the show, but also can lead to exciting opportunities. I love hearing what you guys are doing out there. That is so useful to me.

So please don't hesitate to get in touch at [americadapts@gmail.com](mailto:americadapts@gmail.com).

I'll look forward to hearing from you! Okay, Adapts, keep up the great work.

I'll see you next time.

[1:03:52] Music.