



Transcript of CleanLaw: Hana Vizcarra Interviews Judge Alice Hill about the Climate Change and Resiliency, February 11, 2020

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Robin Just:

Welcome to Clean Law from the Environmental & Energy Law Program at Harvard Law School. In this episode, our staff attorney, Hana Vizcarra, talks with Alice Hill, senior fellow for climate change policy at the Council on Foreign Relations, and a former judge and federal prosecutor. Judge Hill served as a special assistant to President Barack Obama and senior director for resilience policy on the National Security Council. They discuss her new book, *Building a Resilient Tomorrow*, and her experience developing policy on national security and climate change and incorporating climate resilience considerations into federal decision making. We hope you enjoy this podcast.

Hana:

Judge Hill, thank you for joining us on Clean Law. I'm looking forward to discussing your new book, *Building a Resilient Tomorrow*, but before we get into that, let's tell our listeners a little bit about how you came to work in climate adaptation and resiliency. You're a former federal prosecutor and judge, what brought you to climate change?

Judge Hill:

Well, I have to be honest. It's be nice to the people that you sit next to in law school. I happened to sit next to Janet Napolitano when I was in law school and then when I was a judge on the Los Angeles Superior Court. She knew that I was interested in perhaps leaving the court and when she got her job with President Obama in 2009 as Secretary of Homeland Security, she called me and asked me if I'd like to join her in Washington. So I did end up coming to Washington and when I arrived, or shortly thereafter, President Obama issued an executive order on climate change and really no one at the sprawling large Department of Homeland Security, at least no one in the senior leadership seemed particularly interested at that time in dealing with climate change, so it fell to me. And that was my opportunity to really delve into the many challenges that climate change pose to both Department of Homeland Security, but more broadly the United States and the globe.

Hana:

Was that his 2009 executive order on sustainability goals for the federal agencies?

Judge Hill:

Yes, it was on sustainability, but at the end of the order, it required agencies to engage in adaptation planning. That was the first time, to my knowledge, that that was required. The sustainability at Homeland Security, this agency that's basically a law enforcement agency and has FEMA, the Federal Emergency Management Agency, it has the Coast Guard, TSA, Secret Service, this broad range of agencies. And it was founded in wake of obviously 9/11, so it's got a strong anti-terrorism mission, but



that order had the sustainability, which went to the management side of DHS that was looking at our planes, our fleets of cars, boats, that kind of thing to reduce emissions.

Judge Hill:

But the adaptation was an orphan and I was asked, or as I recall it honestly, I was sitting around a conference table with senior leaders in the department and really the body language, no one wanted to take this thing. So someone says, "Oh, give it to her as she's new." And that's how I got it.

Hana:

Well, it's a beast. So it's quite a large project to take on, especially for such a diverse agency with a whole host of agencies within it.

Judge Hill:

It was a large project, but fortunately the Navy had done some excellent work. Their task force, Navy Climate Change, I probably bungled that title, but they had pulled together scientists, meteorologists, others to look at the issue from a national security perspective, particularly the needs of the Navy. We were able to benefit from their work and then the federal government, I hadn't appreciated it even though I'd been a federal prosecutor, how broad their, these resources are that are available to assist policymakers. We were able to tap into the scientists at NOAA, NASA, the department's own experts, and really look closely at the very basic question of does Department of Homeland Security in 2009 need to worry about climate change impacts?

Judge Hill:

And we really asked ourselves that question in a very honest manner. That probably wasn't the president's intent, but certainly we knew that in order to have people engage in word about climate change, we need to make sure that it would be relevant now given the many other pressures on the department and other missions they needed to fulfill. And honestly, our task force, it was eventually about 30 people made up of senior leaders across the department. We concluded that we needed to care deeply about climate change and this was over a decade ago.

Hana:

It's such a fascinating approach and I imagine that you relied a bit on your experience as a lawyer and as a judge to take a look at a wide range of technical documents and really think through their impacts. You had a different role under the Obama administration as well with the National Security Council or was that connected with your DHS role?

Judge Hill:

No, eventually I moved to the White House when Janet Napolitano left the federal government. I was asked to come over to the National Security Council staff where I was eventually a senior director for resilience policy as well as special assistant to president Obama. And in that time I was on the security council for about three years. I had the opportunity to lead the development of nationwide policy to bolster resilience in a number of areas. So that was a very exciting chance in a very early stages of climate adaptation to try to determine what be useful to do now and then as of course, impacts continue to unfold, we'll need to revisit those choices and make sure that they're still the right ones in the face of more knowledge.



Hana:

It sounds like that ushered you into a broader range of areas to consider when you're thinking about what adaptation means for the federal government and really sets up well your book, which is called *Building a Resilient Tomorrow*, and I very much enjoyed reading it. The style struck me as something of a policy briefing for either administration officials or possible staffers in Congress to think about these very technical and difficult areas, but broadly to give them a real good overview of the range of things that are impacted. It covered a lot of grounds and I think gives a really good base of background information for each issue with prompts for action and without getting too bogged down into technicalities. What were your goals for writing this book and how do you hope it will be used?

Judge Hill:

So firstly, thank you for your kind words about the book. I very much appreciate it. When Leo Martinez-Diaz and myself decided to embark on a book project, I think we shared the same concern. We had met each other through our policy work on one particular executive order which required all international investments, the federal government overseas in development work, so that would be contributions to the World Bank, the Millennium Challenge Corporation, USAID, to be screened for climate resilience. So he led that for the Treasury Department and I was leading that effort within the White House.

Judge Hill:

We both through those experiences and our other experiences, concluded that there was not deep appreciation among policy makers within the highest levels of the federal government as to the risk climate change does pose. It rarely was raised in conversations. It would be almost as if people would look a little askance if you started talking about climate change impacts in terms of international relations, in terms of national security interests or our development goals. And as we talked about what we saw, we just realized there was a huge amount of risk that was underappreciated and we thought it would be helpful to policymakers and other interested folks to understand how climate change will affect virtually all the systems that we have in place and that those systems need to be adjusted in the face of growing risk.

Hana:

Now we could dig into any number of topics that you cover in the book and so many of them are as you really well just described, quite interrelated, but I think I want to start since we're a legal shop here at EELP with your Lawyer Up chapter, you cover a wide range of quite disparate legal theories from the climate nuisance litigation and the Juliana case as constitutional claims, to cases attempting to impose liability for the failure to prepare for and manage foreseeable risks and the sometimes seemingly small cases about things like local government maintenance of washed out roads. I'm interested in your perspective as an attorney, how do you see litigation involving climate change issues influencing adaptation policy options and development?

Judge Hill:

So I was very informed by my experience as a judge as 13 years in Los Angeles County dealing with a wide range of cases and then I had been a federal prosecutor doing white collar crimes, so a limited jurisdiction approach and then in a state court, a general jurisdiction approach. I knew that cases would come one by one and that's how our litigation system works. That's how judges receive them, but they could have their lasting impacts, whatever the particular decision is going forward. And that's what we



try to describe in the book is that you may have attempts to do a frontal assault, which would be the Juliana case or some of the litigation that we've seen in various cities and other locations against the fossil fuel giants, the Exxons, the Chevrons, trying to prove tort damages from the emissions.

Judge Hill:

And then what I know will unfold primarily in the state courts is litigation over land use, over decisions whether to prepare for or not prepare for climate impacts, there'll be insurance disputes, there'll be design disputes as these impacts come in and hit an environment that has not been prepared for them. So there'll be buildings, and we've seen it, that burn, that fail in a flood, areas that people believed were safe or buildings that they thought would not collapse and that will happen, and there'll be litigation over the injuries and the damages. The courts will be sorting this out as they go forward case by case. But over time, I am confident that the court system will evolve from where it is now, it can seem to my eye that the legal system is struggling to respond adequately to the changing landscape because it is a slow moving aspect of our society. Law just doesn't typically turn on a dime.

Hana:

You have the potential for inconsistent outcomes in similar situations, at least early on and some of these types of cases.

Judge Hill:

Yeah, I think what's happening in New Jersey is just fascinating and particularly with that regard in terms of dune protection, whether you should compensate a homeowner for the loss of their view when dunes are built on their property to protect the entire beach. And the New Jersey courts have really struggled with this so far and there isn't a clear answer, but as the impacts accelerate, I think our views on this may change as to what's reasonable

Hana:

And as I can certainly attest to from my own experience, environmental law itself is really no longer exclusively a practice of interpretation of the big environmental statutes or environmental regulations and compliance with the Administrative Procedure Act. Those do remain incredibly important parts of the picture, of course, but when it comes to climate, it's encroaching on almost any area of the law you can think of. Whether contracts are securities, law, insurance, and some of these cases that you just brought up. What should lawyers do to prepare to address this in whatever area of practice they're in? What should we be doing as a profession to incorporate this into our daily work?

Judge Hill:

Well, first of all, I think it's imperative that the law and that would be main law schools, do a better job educating people, lawyers, potential lawyers, about climate change. I think that there has been insufficient interest in this topic given the nature of the risks and how pervasive the challenges have already proven to be, but we'll be going forward in coming decades. So surprisingly, I think much of the focus, perhaps rightfully so, has been on sustainability and on cutting emissions. Anyone who works in resilience knows that's critical, but we also need for lawyers in particular, to understand the issues that underpin adaptation and resilience choices so that they can better handle litigation, but also importantly help guide decision making across the gamut. And so that would include risk disclosures, it would



include advice to those, as you've said, and contract work. Really any major endeavor should have some kind of climate review to make sure that there aren't implications.

Judge Hill:

If something's going to last for more than several years, there could well be significant climate implications. And if it's something in a buffer zone, it could change tomorrow, or a flood zone. So we don't have that kind of thinking going on. And it's not just the lawyers, by the way, it's public health officials, it's the training at medical schools, it's the training in engineering schools, it's the training in architecture schools. Climate change is viewed as an add on. There's a lack of understanding that climate affects everything because once you start talking about changing your fundamental assumption that the climate doesn't change much, it will have severe ramifications for many, many decisions. And lawyers can help improve decision making in that regard.

Hana:

And one of the areas you talk about in the book is buildings, not just buildings themselves, but building infrastructure and incorporating climate into that decision making process. Can you talk a little bit about some of the levers available to make building in a more resilient manner a reality that you guys discuss in the book?

Judge Hill:

Sure, I think we should start with the understanding that we don't build resiliently right now. And I think a lot of people may assume that when we put up a bridge, we are planning for the flooding that can be anticipated in the next 20, 50, 100 years, the service life for that bridge or that tunnel or that culvert, but we're not doing that in any kind of systematic way yet. So what we need is first of all, resilient building codes. Those do not exist yet. Most of our building codes are designed only to have buildings withstand the extremes of the past. And by the way, in the United States just taking disaster prone areas, only 30% of the jurisdictions that are disaster prone according to FEMA have building codes that prepare them for disasters. So that means about 70% of our building stock, if it were built to the existing building code and much of it's built for then would withstand a disaster.

Judge Hill:

That's a lot of potential economic loss that we just have already put into our environment. And of course it's changes. And then similarly land use choices are based on historical risk. How much flooding a particular area has experienced in the past, and with climate change, those assumptions are poor. And it turns out we get the one in 100 year flood every few years. If you look at Houston, a lot of areas are getting pounded with massive amounts precipitation and consequent flooding because they have built in a way that assumed that climate wouldn't be changing. That's not to fault past building decisions, those made sense, but going forward it certainly doesn't make sense for us in these very expensive investments not to be doing a much better job of making sure that they'll withstand what we can project for the foreseeable future.

Hana:

I'm actually from Houston and it's been quite interesting to watch the development of discussion in a place like Houston where for one, are very proud of their lack of zoning and for other reasons, and two, are also having real discussions around how do they need to be improving their building codes. But



building codes and the concerns around where they've been permitting and approving new development, which is fascinating to me in a place that really has, despite being at the center of so much risk, for many years it's not new there, but it's accelerating and it is changing that these conversations have not gotten to the point where they've really made a significant change in the approaches because there's so much ingrained culture around what city development looks like there.

Hana:

But I think there is a real conversation happening now and there are some changes, but they're difficult and there are a lot of impacts of individual communities that have to be considered, but it is a challenge that really involves all levels of governments. And I think you talk some in the book about different ways that both the federal government can support these efforts, particularly with requiring climate considerations in wherever they're putting money into infrastructure development, but also state and local governments have to be part of that conversation.

Judge Hill:

Oh, absolutely because the zoning and the building codes decisions in our constitutional form of government really rest at the local and state level. So they're going to be making the choices, but the federal government has an important role to encourage better choices. And in a last say 20 to 30 years, we have gotten into a very difficult pattern that has essentially created a moral hazard for these state and local jurisdictions in that the bad event will happen, some terrible disaster, and the federal government comes in and provides assistance. And then often if it's a really bad event, Congress comes through with supplemental appropriations. So we have communities like Houston who can know we don't have to require a stronger building code, which will increase the price of housing typically. Not a great deal, but it costs typically more to build resiliently. Not in all instances, but that would be often the case.

Judge Hill:

And so the community says, "We don't want that. We want to, as Houston did, we want to have as much affordable housing as possible so we're going to build in a cheaper manner." And then you get terrible flooding and the federal government comes in and gives money. So that reward system perversely encourages more risky behavior at the state and local level. And in my analysis, I think that's not where the federal government must be. It has to drive better decision making at least with regard to the money that the federal government is collecting from taxpayers, that it should require any federal dollars be spent in a manner that's going to protect them from the next big storm. And during the Obama administration, there were certainly attempts to get to that. We did better, as I mentioned, on the international side than we've been able to achieve yet domestically. There's a whole host of reasons for that but we are still now giving out money for through the National Flood Insurance Program and other programs, to support development in known areas at risk.

Hana:

I don't think we can really talk about smarter building without also having a discussion about whether we should build and how to address potential need to move away from already built areas. What do you think about the likelihood of needing some form of relocation, whether following a disaster event or managed retreats? Could you talk a little bit about what you've learned from your experience in the administration about the challenges around trying to encourage smarter decision making in addressing areas that are already built but are quite vulnerable to risks?



Judge Hill:

Well, this issue of relocation will be a hot button issue for many, many years to come. All of us are emotionally tied to our homes, understandably so. All of us tend to value loss more than we do gains, so we're reluctant to leave our homes. And if we haven't experienced the event, we tend to discount that our house will burn in a wildfire or be flooded if we don't have any recent memory of that. So there are a lot of obstacles to getting people to move before an event out of harm's way. There are ways that the federal government can encourage that and it's important that we give a lot of thought about how to accomplish relocation in a way that's not so disruptive. If we don't think about it and don't plan for it, what we'll get are sudden diasporas of people leaving communities.

Judge Hill:

I think one of the most recent ones was after the Camp Fire where 88 people died in the Camp Fire, the deadliest of fire in California's history, and within hours, the town of Chico, California, which is a college town, it has a population about a hundred thousand, it had almost no vacancy rates, it was full up, had 20,000 people arrive within hours because they were homeless. And subsequently many of those people have left and some of them have gone on to other areas at risk because they're cheaper areas, but it's also caused a strain within Chico itself to try to deal with the jump in the number of kindergarteners overnight because Paradise had burned.

Judge Hill:

One of the things we advocate is that there be much more thought put into both helping prepare communities that could be the receiver communities and building programs that help those who are migrating or displaced, to more easily be able to be absorbed in the community. I believe that governments going forward, will be spending a great deal of time on this because we are going to see massive dislocations within the United States, particularly in the coastal areas. We have 40% of Americans living in coastal counties now. All of them aren't at risk of flooding, but people who are at risk of flooding will be moving inland and that will be causing property values to change and other disruptions to those locations, similarly with wildfire. And then of course we're going to have international migration occurring. It's predicted on an unprecedented scale.

Hana:

Your description of the Camp Fire dislocation just gave me flashbacks to after Katrina and Houston and Dallas, also Baton Rouge. I was down in Baton Rouge just a few weeks after dealing with massive influxes of people who didn't know where to go or have a lot of help in figuring out how to do that. And some of those communities really stepped up and tried to create an orderly process to help provide direct aid and support and get them set up with housing that was comfortable and not dangerous and that wasn't adding to the problems they are already dealing with and getting them integrated into school systems. But it's a huge undertaking and if you're not prepared for it, if you don't have planning mechanisms in place that you can just turn on at the time as a receiver community, it just becomes overwhelming. And it's the kind of thing that I think a lot of these smaller communities don't necessarily have a lot of background in developing and will need the support of the state or the federal government to help them do that.



Judge Hill:

I couldn't agree more. This is, to me, an area where the federal government could be a real asset because you don't know... If it's a sudden event, you're not going to know where it's going to occur necessarily. You have some idea it will be in the coast, wildfires, other things, but similar with an earthquake, you're not 100% sure where it will be. But we do know these things will happen and to have surge workforces that are ready and programs that are easily accessible, understandable, not confusing to those who need them in a moment of crisis is really important.

Judge Hill:

And the federal government is not there yet. Right now, FEMA is very stressed with deploying, even though this last quarter of 2019 we haven't had as many big events here in the United States, but they're just stretched. I believe they're in 50 locations right now deployed, and then if you have another big event, we would need to make sure that we had sufficient personnel. So that requires some planning ahead. What does that workforce look like? What kind of tools do they need to be of the greatest assistance in a time of crisis to communities? And I think that should be a fundamental role for the federal government to help out wherever it can. It has greater resources, greater capacity, and a lot of wealth that it can bring to help out those who are hit at a particular moment.

Hana:

One of the other ideas that you had in this segment of the book was about incentivizing no-build zones. That seems particularly challenging to me right now for some of the reasons that you've already discussed about people's connections to places. Even in cities like Boston where there's a serious effort I think to consider climate resiliency and create a master plan. And there remains a tremendous amount of pressure to develop. And it's in at risk waterfront areas and perhaps the buildings may be a bit more resilient than prior development, but they are increasing density and development in places that are threatened. And it also brings up some equity issues. Talk a little bit more about what you and Leo were thinking around the idea of incentivizing no build zones and would that come from the state or city level? What kind of mechanisms of approaching that are there?

Judge Hill:

Well, you've put your finger on it. You've got a lot of pressure locally to develop certain areas and then you've got on the other hand though, a demand from the federal government when things don't go well to pay for it. So the idea is if Boston chooses to allow development in risky areas, the federal government shouldn't interfere with that but it should be very clear we will not give you a dime of federal money either through federal flood insurance, through small business loans, through other disaster assistance programs, post event to help bail you out. That was your choice and you should be clear. I think restricting that would restrict development because it will be difficult for anyone to get flood insurance, for example, in an area that's a known flood risk at a rate that will be useful to them.

Judge Hill:

What's happening right now is federal government subsidizing a lot of this. So then we subsidize it and it occurs and then the bad thing happens and the federal government pays for it on the backend as well. So we do have an example of this in a Coastal Barriers Act where in the '70s and '80s, the federal government just decided on these coastal barriers islands that are shifting and changing. It just didn't make sense to keep pouring federal money into that. So they essentially said, "You may develop it, but



you're not going to get federal financial assistance to do so or to recover from disasters." And that's meant the people who want to live there are doing so at their own expense and not asking for a handout to live in a place that's risky.

Judge Hill:

So it will be difficult for these communities, but longer term, if you look at coastal communities who allow this type of building in risky zones, I question what their credit worthiness will be because that property at some point will lose value and they're going to lose their tax base and how are they going to pay back the debt that they've already issued. So it's a matter of the timeframe. Mark Carney, the Governor of the Bank of England called it the tragedy of the horizon, and because the climate impacts occur decades out and we're making decisions that are short term, we're not including that longterm risk, but we're getting to a point where that's going to match up. And I believe that in the not too distant future, we're going to see that some of these cities are going to have a hard time getting good credit ratings because the reality is their land will not be there.

Hana:

Well, we're already seeing movement in that area, I would argue, from a number of different financial entities, whether you're looking at banks, considering their investments or the investment shareholder communities pressure and people like Moody's and S&P is starting to consider what credit ratings look like. They're starting to, well, on the one hand, look for more data, look for more information and demand that have a wide variety of actors, and this is a nice transition because you actually have a chapter in here about data and a chapter about making markets work for resilience.

Hana:

And one of the difficulties here is getting the appropriate data, making it usable and how that fits with what kind of support that maybe the federal government can have to do that, how cities and states in their local decision making on adaptation and resiliency efforts can access and utilize that data, and then of course the explosion of private climate data providers that we're seeing. Maybe if we could talk a little bit about some of the suggestions you all have in the book around data, both where it comes from and how it should be used and control. I think one of the big items you focus on is if I remember correctly on the maintenance of public data and the importance of that.

Judge Hill:

Yes, we are just awash in data. It's not that we lack data. We have tremendous amount of data. It's how's it packaged? Is it usable and how do we make sure that we have access? We also have a separate issue that with climate change it's not just historical data that's relevant. That of course is relevant climate change, but it's also the modeling of future risk and how do we make those models successful and understandable so that people can plan accordingly? We do see pressures to privatize the data. There's been recent reporting of that just in the last several weeks of debates over some of the, I guess the 5G will interfere with some of the collection of data and what does that mean for public ability to have good weather forecast. Very complex issues, very important issues, and there's certainly a role for the private sector in my opinion, in this area, but there's also a keen role for the public sector to make sure that those who can't afford to get the most detailed analysis still have a basic analysis available to help them make decisions.



Judge Hill:

But these systems, if they're working, are not working in a highly visible manner yet. I don't think we've seen the kinds of analysis publicly from companies as to their true risk. And one of the things we talk out is that there is a first mover disadvantage that may be holding back some companies from truly disclosing their risks. They may well have a good understanding behind closed doors, but it's certainly not something that is easily obtainable and it varies greatly in its quality as to the type of disclosures that are being made, the task force on climate, financial risks disclosures, I think I got that right. A survey that just 4% of the 1,100 companies that responded actually reported in accordance with all of the requirements or the recommendations of the task force. So we're not there yet. We have some great ideas but because we're not there, it is leaving us in a position right now that I think there's some disruptions that haven't yet occurred in our markets and other areas as a result of climate change.

Hana:

Yeah, that's actually an area that I've been spending quite a bit of time in particularly as it relates to US securities law and how companies make their determinations on what's material for disclosure purposes and how that's changing with one, the understanding of the impacts of climate and the concern around it and the increased interest from investors. And I do think it's one of those things where you feel like this has been an ongoing discussion for quite a while. They feel like maybe these things should be further along, but really they're complicated and they are difficult. They do impact for certain indices in particular, they can be quite disruptive. And so there's the getting over that hump to how you do this? How do you disclose without running into legal liabilities?

Hana:

And without any actual mandatory requirements at the moment that are specific to this, what did they really have to do? And I would argue that actually under our existing requirements, that we're getting to a place where some things should be disclosed in existing law now, but it's still early days and we don't have a lot of court cases to rely on and to really guide us. So I think we will see quite a bit of change in that in the near future.

Judge Hill:

Oh, I agree. I think there's going to be a ripe area for litigation and for the failure to disclose at some point, but we're in this odd position where in the United States in particular, there's a discounting of the risks still occurring, which the science tells us is not an accurate discount. So at some point it will cross the line into liability. We don't know yet when it will. Unfortunately, the sluggishness of getting to this has real consequences in our ability to be prepared. If we had better disclosures and better focused on what the true climate risks are, presumably, companies would be taking action to better prepare themselves.

Hana:

I couldn't agree more. So much of this is tied into decision making in other areas that we've already discussed. I don't think I can possibly end without asking you for some comments around the National Security chapter, especially given your experience and background. We talked a little bit already about dislocation both internally in the US and internationally. You also highlight how the military has to somewhat rethink its role to include national security threats related to climate change rather than just defending a location or responding to a defined human-based enemy, but you also pointed to some of



the positive... The Navy has also been very proactive on addressing these types of risks and our defense apparatus has some of the best capabilities when it comes to responding quickly and dealing with difficult logistical problems and far flung areas. What are some of the keys to getting our military national security apparatus to seriously incorporate planning around climate change risks?

Judge Hill:

Well, I think in a hierarchal organization, and the military by definition is hierarchical, leadership matters. So we need both our leaders in uniform as well as our civilian leaders to recognize the risks from climate change to our national security and take the appropriate action. You do see some military leaders voicing concerns about climate change, you see some reports that come out and have quite dire predictions. One came out from the army this summer that if you read it, it's highly alarming what they foresee ahead. But then you also have a national security strategy and a national defense strategy that stripped out any mention of climate change. And those are defining documents for the nation right now. All of this is of great concern because we know that climate change will be and has been a threat multiplier, that it can be highly destabilizing to governments, including our allies and other governments of interest to us.

Judge Hill:

It also has implications for our own military readiness, our operational effectiveness and our ability to keep ourselves safe as well as respond to other humanitarian issues and conflicts around the world. We have an interesting interplay going on between Congress and Department of Defense. Congress is actually leading the issue right now through the National Defense Authorization Act, telling the Department of Defense they need to do a much better job at examining the risks to their own facilities installations and understanding water shortages, which will occur, coastal erosion risks, wildfire risks, heat training days, and they have continually come back to the Department of Defense to ask them to do better analysis. So there is a lot of work and a lot of money that needs to be spent.

Judge Hill:

We've had dramatic instances that have shown that the Department of Defense is not fully on top of this, including at Tyndall Air Force Base where we see flooding, we see storms come through and assets are unprotected, to building a radar detection system for space junk, that's the things flying around space that we need to protect satellites from running into those things, that the Air Force just failed to consider sea level rise and now the island that this billion dollar defense system is built on is facing sea level rise and lack of fresh water. So it will take a concerted effort. It needs to be top down in my opinion, to get people to care within the military sufficiently to make sure that we are protecting. No question we can do it. It's just a matter of making sure that it gets done.

Hana:

Is this an area that you were able to see some progress on when you were in the administration? I know it's different picture now, but if you bring these issues into the discussion you would think that this is an area ripe for implementation through a system that could make it happen relatively quickly, at least in some narrow pieces of it. What kind of progress did you see or not?



Judge Hill:

Oh, I definitely think that there is progress that can be made and my own experience informs that. When I was on the National Security Council, I did become concerned that whenever we were talking about a particular conflict or area of concern, climate change was simply not part of the discussion, including the fact that Syria was experiencing the worst drought in 1,200 years, which had caused a million and a half, mostly young men, to move when the agriculture sector began to fail. And that obviously added to pressures within the country and then there was massive out migration, which was very difficult for our allies in Europe. And that simply was not part of the discussion. So realizing that with leadership, you can help direct focus on these issues.

Judge Hill:

I led on behalf of President Obama, the development of an executive order focusing on national security risks. President Trump has revoked that order, but the interesting thing in developing that is initially in our first interagency meetings, the body language was similar to what I had encountered at DHS where there wasn't a lot of interest in this topic. People thinking, "Oh, we don't really need to do this," but again, asking the very basic questions, should this be a focus, not the sole focus, but a focus of our national security policy?

Judge Hill:

And through that process, we had over 20 agencies involved and by the time the order got to the president's desk, every single one of those agencies had agreed to the order. There was consensus across the board. In fact, my bosses were so surprised that we had a consensus. We went back and did it again to make sure that we had consensus and we did the second time as well. And that tells you that the thoughtful people within our government know this is a risk. They want to find a way that they can work on it and better prepare the United States. So I'm confident that if we have leadership directing and empowering people to think about it, we will have them on board. And as I say, there's plenty that we can do. This is within our capabilities. It's just a matter of focus and determination to get it done.

Hana:

Absolutely. I want to give you a moment here to say any final thoughts you have, but I do want to make sure also too, I think we've mentioned Leo a couple of times. I want to note that Leonardo Martinez-Diaz is your co-author for this book, *Building a Resilient Tomorrow*, and as you mentioned earlier, you were both in the Obama administration and actually I recently got to meet him. He and I were both at the Yale Initiative on Sustainable Finance Symposium as speakers and I didn't put it together because I didn't actually read the book till the next week and realize like, "Hey, I just met the other author of this." And he's now at the World Resources Institute. And he comes more from the trade experience, right? Is that correct?

Judge Hill:

Yes, and he is a brilliant economist. Really, really was good. So he had more of the international perspective and the markets perspective. So he was looking at financing tools. Getting the money to pay for adaptation will be a major challenge and looking at how we could jumpstart that process so that there's more money available for making further resilience investments. And anyway, he was just a real pleasure to write this with him. Very bright guy who understands these issues in a way that's very informative.



Hana:

Well, and I think the two of you bring such complimentary experiences from different aspects of the conversation that it makes for a good rounded perspective. Before we finish off here, are there any final thoughts or areas that we didn't touch on that you want to make sure we discuss?

Judge Hill:

Well, I would just say that the law, as a student of the law and a practitioner and then a judge, the law is such an important lever here. And so for students today going through law school, thinking about what their career may hold or what topics may interest them, I would just share with them what one person who'd been working long in climate change said, which was that if he had to give advice to his own children who indicated an interest in working in climate change, he would say, "Be a lawyer." And I do think legal skills can help us speed up, be more effective, and really make progress tackling this challenge of climate change both on the cutting of emissions, which is no question that needs to get done and we need to do that urgently as well as building resilience to the impacts.

Hana:

Well, I couldn't think of a better way to end a podcast out a research program at a law school. So thank you for that.

Judge Hill:

Well, I believe it. I'm very sincere and I guess I would have added for your audience that I found my legal skills were a huge advantage once I entered the policy making world and I had not appreciated how much value they would bring in the policy realm in that they helped me be more decisive and they helped me also cut through ideas that I knew simply would fly in a legal system so we could quickly or more quickly narrow down to solutions that I thought had a chance of being successful. So it was a welcome surprise to me to know that even though I had officially left the law, the law was still very much informing my career and my day to day work.

Hana:

All right, as someone who only recently left the practice of law myself, it's nice to hear that that is time well spent in my last eight years-

Judge Hill:

Yes.

Hana:

And in addition to my education and I certainly feel the same thing. I don't think I could be doing the work I'm doing now without that experience, at least not the way I'm doing it.

Judge Hill:

Right.

Hana:

Yeah, it's wonderful. So thank you so much, Judge Hill, for joining us.



Judge Hill:

Thank you.

Hana:

And I appreciate your taking all this time to talk to us.

Judge Hill:

Well, thank you. Totally my pleasure and I look forward to reading your work.

Hana:

Oh, thank you.

Judge Hill:

I follow one this issue of disclosure and I'm very excited about possibilities that it could help us move more quickly.

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