

## Climate Change Vulnerability Assessment Interview Transcript with Dave Peterson

Edited 12/21/20 by Paris Edwards

Dave ([00:00](#)):

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Paris ([00:23](#)):

Hi everyone. And welcome to These Lands, a quarterly production of the USDA Northwest Climate Hub. I'm Paris Edwards, the voice behind the podcast that shares ideas, lessons learned, and other useful information about how to reduce the negative impacts of climate change on our forests, farms, and rangelands in the Northwest. Whether you're a manager, landowner, scientist, student, or just curious, this is a podcast for you. Today we speak with Dave Peterson, an emeritus research biologist with the US Forest Service Pacific Northwest Research Station and a forest biology professor at the University of Washington. And I found an interesting nugget tucked into his bio that he's also a co-recipient of the Nobel Peace Prize for his contributions to the Intergovernmental Panel on Climate Change, the IPCC, which I have to say, is a pretty big deal.

Good morning Dave, thank you so much for meeting with us. To get us started, can you tell us a little bit about yourself and the history of your involvement in conducting vulnerability analyses?

Dave ([01:27](#)):

My work has mostly been with the US Forest Service during my career, but I've also been a professor at the University of Washington. So I've had a good, broad perspective ranging from pure science to applied science, ranging from experienced forest managers, to new graduate students at the University of Washington. And so kind of heads up perspective that covers the whole range of scientific aspects of climate change. I've been doing that since 1989, so just a little over 30 years now. The thing that has changed tremendously over that period of time is we've gone from conceptual aspects of climate change science, to putting it to work on the ground, actually implementing it in various aspects of resource management in national forests and other public lands. So it's been quite rewarding to see that evolution over time.

Paris ([02:24](#)):

Can you give a bit of a detail on the background of Adaptation Partners as an organization and kind of explain its role in the more recent vulnerability assessment process?

Dave ([02:34](#)):

Adaptation Partners is basically a sort of informal, web-based organization that evolved out of necessity, really. It began in 2007, when we conducted our very first full vulnerability assessment for the Olympic National Forest and Olympic National Park. This was the first one that was conducted on a national forest in the United States. And so we were exploring how to engage on a scientific concept, which at that time wasn't particularly prominent. So what we've found was that it was very helpful to have an organization that was neutral. This is a ".org," a website. It's not a federal website because that was a place where people felt safe to engage about climate change, about science, about applications, you know, whatever it was that was needed by national forest and other public lands to begin to deliver

science into the management application realms. And that concept of Adaptation Partners has persisted through time.

The key here, the one key element is the science management partnership. And we found that that was absolutely necessary if we wanted to ensure that, first of all, we brought high quality science to the table. And second of all, that resource managers and planners in the federal agencies felt comfortable engaging with us about that science and contributing to how we adapt to climate change in the future. That latter part is an absolute key because the resource managers and planners on federal lands have a tremendous amount of experience that goes far beyond what we can bring to the table with science. It's when we match those up-that's really when the magic happens.

Paris ([04:30](#)):

I see in that relationship that you're talking about, that relationship building, this idea of longevity, that partnership is kind of evolving and building over time so that people can continue coming back to the table as new information comes to light and needs to be applied on the ground. Is this something you think is key to manager input?

Dave ([04:50](#)):

Well, I'm glad you mentioned that because we like for these relationships to be enduring. And so far we have found that they are. They take different form with different national forest and other public lands, but they do endure over time. And this is critical because you can't just solve climate change problems in a year or two years or three years. It has to be enduring. Also, science changes over that period of time. People who are working on a national forest and other public lands public lands change over time, so this has to be a dynamic and evolving process. If it's going to work, we have to keep integrating new knowledge as it becomes available and we have to keep eliciting new ideas from resource managers about how to respond to change. The last part in that sequence of events is critical because things do change over time. We want to make sure that we know what works and what doesn't work on public lands, so that information can be shared. We can be more successful moving into the future. I mean, now that's just part of adaptive management, but it's specific to climate change because this is a relatively new undertaking and it hasn't yet been fully integrated into management operations on most national forest and other lands that we're working on.

Paris ([06:18](#)):

And it's such a broad scale. I think it's, I mean, a massive undertaking and a very critical one for this to be happening across the Nation and for a federal agency to be, in a lot of ways, leading the fore on this. So I commend your work and also just find it, I don't know, humbling and really, I think hopeful that we're seeing so much progress happening in so many different places. I have sort of a thought exercise and I was just curious if you have a thought on an ideal scenario that describes how a vulnerability assessment might be put into action on the ground, and maybe you can dip into some of the previous work you've done or even hypothetical scenario if it hasn't really been carried out this way yet. But I'm curious about sort of, not just the process of how they're built, but sort of in the long run, how a vulnerability assessment might be put into action and really ideally used to inform management?

Dave ([07:19](#)):

Ideal scenarios are difficult to play out in the real world, but I will try to give you my version of one. And this goes back again to when we started this process in 2007, and we're kind of feeling around in the dark to determine what a good pathway was to put science on the ground. And I think where we're at a

much higher level at this point in time because there's a much higher awareness of climate change. But the thing that we really need to focus on in terms of making this work in the future is to have a full mainstreaming of climate change into the organizations that are managing lands across the United States. So we don't want to continue to treat climate change as an extra topic or a special topic, but something that's integrated into all aspects of the business operations, of on the ground operations, of development, planning documents, it's integrated in wildlife management, vegetation management, recreation management, infrastructure management in a national forest. And well beyond that, the other ideal part of it is that we're always thinking in kind of an "all lands" perspective. So not just a national forest and not just the national park, not just tribal lands, but all those lands which are juxtaposed with one another, working together with relatively consistent approaches to identifying science, putting it into action. And then also having a consistent approach to adapting to climate change over time. Now, all of this is still like it has been from the very beginning, it still needs to be developed based on good relationships between people working together in the scientific community and the management planning community. That communication has to be excellent. There also has to be a consensus that this is a good thing to do, that we have enough time that we can spend on this, and work together. But I think we're at a much better place now than we were about 15 years ago when we started this journey simply because we have a much more engaged agency in the US Forest Service and other federal agencies are more engaged as well. And as younger employees become involved in the process, they already have a good grounding in climate change science based on their college education and other work. So this is a progressive sort of dynamic process that continues to get better over time. But I think, again, it goes back to the relationships developed among the people working together on this and their willingness to work on it over a period of several years.

Paris ([10:16](#)):

Excellent. Well, thanks for that. And I have two final questions that are purely fun. One is, you know, is there anything that really excites you about the potential of these vulnerability analyses? I know you've talked about you know, relationship building and what that can do for sort of building longevity. And I think what I'm hearing in this is this idea of just trust and, you know, working well together over time, building that relationship and trusting one another's expertise, though different, very valuable and important to the overall process. But I'm wondering if there's a point of value that you would really want other folks to know about or understand that is maybe unique to vulnerability analyses themselves?

Dave ([11:00](#)):

I'm glad you brought up that, that concept of trust because in most cases, when vulnerability assessments are conducted with national forests, for example, you have a whole bunch of people who are meeting each other for the first time that I think is kind of unusual. And so there's a little bit of a mating dance if you will, as people get to know each other. And so I think there's this social dynamic that is really quite interesting to see evolve. And of course, each national forest, each region, each location has different personalities in the organization. And I think this is something that doesn't happen very often in federal agencies, where people get to meet each other for the first time and then they end up working together for a couple of years and they come up with this really cool product at the end that everybody's happy with. Everybody has ownership in that product, not just on the day that publication comes out that contains your assessments, but over the next several years, as they continue to use the information and implement it in their work. I mean, it's really quite a rewarding process. And I know after we have done one of these assessments everybody sometimes kind of sits at the table and looks at each other and says, "wow, this is really quite an accomplishment." And so again, and this is not unique to this organization, but I think it's relatively unique within a federal agency to be able to do this kind of

work over time. The other thing that is very interesting, I think now of course, people move around organizations a lot. And so when an individual who was working hard on an assessment at one national forest moves to another national forest, they take that knowledge and experience with them, okay. And that's kind of like a seed germinating in a new location where those ideas then can be incorporated into a different organization, and over time, over decades this base and this experience-base permeates. And so climate change becomes more established as something that's considered in resource management planning. It has been fun and very rewarding to watch that happen over the years.

Paris ([13:15](#)):

Well, what I hear in your response too, is that, you know, this idea of planting these seeds kind of circles back to the point you made about this hope, this wish that the climate change vulnerability assessments or that climate change generally is something that becomes really steeped in the fabric of federal agencies that are managing natural resources. And I can't, you know, help but hear that the more folks who are involved in this process, the closer maybe we get to that outcome. I want to follow up with one last question was is really just about, you know, we've talked about vulnerability analyses in a very positive light, but are there any concerns, are there any sort of doubts about their value or anything to caution about how they could be used that that users should know about?

Dave ([14:09](#)):

I don't think we've encountered anything particularly negative in the development of vulnerability assessments over time. Now, clearly different people from different organizations may have perspectives that are, are you know, in contrast or might not come together particularly well in terms of putting management on the ground. This was something that we were more aware of, I think in the earlier days of doing assessments, but in a more recent I'd say five, six years, there's been an increasing emphasis on involving collaborative organizations in the conduct of these assessments. So each of the national forests tend to have organizations that are located near those national forest, that when your people have interest in the management of recreation, or wildlife, or a forest or any of these different interests, and sometimes these interest may clash to a certain extent with the core mission of national forest. But by involving a variety of different groups, you get a variety of different perspectives and you tend to have much better support for the assessment when it's completed. And so the national forests that make an effort on promoting those collaboratives and involving their members tend to have the best outcomes, not just in the assessments, but with their management planning programs in general. So we see this as a very positive thing moving forward. Whereas in the past it might've been a negative.

Paris ([15:52](#)):

One thing I would be interested in understanding, and I think our listeners might be interested in knowing about, is just a little more about the science that you have worked on in the past. And if there was sort of a moment or a situation, a project, I don't know, an "aha moment" in the shower where you just felt like your career and your focus needed to shift from one thing to another?

Dave ([16:18](#)):

So I think everyone probably questions the trajectory of their career at some point. I've been very fortunate to have a good, long period of time with the US Forest Service to conduct research, and then to actually change the direction of that research a couple of times. About 15 years ago, I realized we

have a lot of science on climate change. At that time we'd been doing formal research in the US Government since 1988, 89. So we had, you know, a good long period of 15 or more years of research available already. And it was clear that things are going to start changing rather quickly. So at that time, I did have that little lightbulb that went off in my head and said, you know, "we can't afford to wait another 15, 20 years to take action, we have enough information to start doing things." First of all, we have to pull that information together, but then we need to put it on the ground. And I still feel that way today. I'm glad that I was able to, to make that shift and had support from various people to do so because we can continue to do research on the potential effects of climate change for the next 20, 30, 40 years. And we probably won't do that, but we don't need that additional research to start taking action, especially with resource management. You know, anything we do today will have effects for decades to come. If we don't start taking action today, we might preclude some good options that would help make things better in the future. So I, I think it was a general evolution during the course of my career, but it also was a realization at that one point in time that this was where I needed to go take that knowledge, put it on the ground. That would be the best use of my time and I've never looked back.

Paris ([18:17](#)):

That's fascinating and I think I just have to say "thank you" for having the visionary sort of, I dunno the forethought to see the writing on the wall, because I think we owe a lot to people like you, who started making early action, and we wouldn't know where we would be today without you.

Dave ([18:35](#)):

Appreciate that. And I've also been fortunate to work with a lot of good people over the years who've had similar perspectives and it has been rewarding to work with those different people of different backgrounds, you know, vegetation, wildlife, science, water, all kinds of different things. And I feel really lucky to have learned a lot from all of them. So it's been a group effort for sure.

Paris ([19:12](#)):

Building relationships and trust between scientists and managers, sharing climate related concerns and adaptation strategies, and increasing knowledge about climate change risks within and between organizations, are all considered key and lasting benefits of the vulnerability assessment process, according to Dave. I want to thank my guest and remind listeners that several links with more information about today's speaker, and details about where you can find vulnerability studies and related information, are available on our podcast website. From our makeshift sound room that doubles as a blanket fort, the Northwest Climate Hub sends thanks for tuning in. Join us next time for the next episode in our series on climate change vulnerability assessments. This podcast is sponsored by the US Department of Agriculture Forest Service. The USDA is an equal opportunity provider, employer, and lender.