

The U.S. Department of Defense...to Climate Change_ The Podcast

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SPEAKERS

Katie Retka, Jessica Yllemo, Bruce Stein, Michelle Lovejoy, Marissa McKinnis, Brendan Owens, Tahirih Linz, Rachel Jacobson, Doug Parsons, Josh Sawislak



Doug Parsons 00:00

Hi everyone this is America adapts the climate change podcast Hey adaptors welcome back to a truly exciting episode joining America. daps is the US Department of Defense, you're going to learn how the DoD is adapting to climate change. I had the honor of being invited to a climate resilience workshop DoD hosted in St. Louis, Missouri. The DoD reached out to me and wanted to partner by having me attend an interview experts attending the conference, over 900 people attended the conference, most of these being external partners. In this episode, I interviewed three assistant secretaries and hear how they are driving climate adaptation within the Department of Defense, you'll hear about the unique security challenges climate change poses to our national defense. We'll also hear from companies like ICF. Deloitte in organizations like the Environmental Defense Fund, National Wildlife Federation, among others. It really is a great mix of DOD leaders and the experts partnering with DoD around military installations, you'll hear how different organizations and companies engage with DoD on resilience planning, and how military readiness can be compromised without effective adaptation planning. We'll briefly start this episode talking with Marisa McKinnis. At the Department of Defense than the honorable Brendan Owens, Assistant Secretary of Defense for energy installations in the environment. We'll kick off our conference recordings, he'll be sharing why this conference was needed and highlight the importance of resilient infrastructure within the military. Okay, before we take a journey to St. Louis, Missouri for the DoD climate resilience conference, we're going to set the stage with DoD is Marisa McKinnis, who also joins at the end of the episode to wrap things up post conference. Hey, adapters joining me is Marissa McKinnis. Mercer is the lead climate policy and interagency engagement officer with the Office of the Assistant Secretary of Defense, energy installations and environment. Hi, Marissa. Welcome to the podcast.



Marissa McKinnis 01:58

Hi, Doug. So great to be here.

D

Doug Parsons 01:59

All right. I'm very excited to have you on you. And I go back a little ways. And you're here to walk us through this climate resilience workshop that's upcoming. But first off, what do you do there at DOD?

M

Marissa McKinnis 02:08

Yeah, so one of my roles is really coordinating across the different offices within the Department of Defense on climate policy. And another role is interagency engagement. So thinking about there's a lot of activity across the administration, and a lot of bilateral partnerships that are really focused on climate resilience. And so trying to build those, maybe establish some new ones, and really make sure that the policy that is in place is being implemented across the Department of Defense.

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Doug Parsons 02:37

Now, let's just jump into the workshop. Can you tell us generally the main objectives of what you're trying to do with this workshop in St. Louis?

M

Marissa McKinnis 02:44

Yes, it four separate offices within our larger office where the Assistant Secretary of Defense that that are putting this on together. And it's really focused on climate resilience, both within the installation, and then what we call outside the fence line with our defense communities in with our other partners. And so the point is to really bring together people that normally may not be exposed to working on climate specific work streams, but that are installation planners, maybe there are people that support some of the work happening outside the fence line on an encroachment project, but bringing the men to all both educate and collaborate across the space.

D

Doug Parsons 03:26

All right, can you give us just a little sampling of maybe some of the themes and sessions that we can expect at the workshop?

M

Marissa McKinnis 03:32

Yeah, sure. So I am facilitating two workshops myself, they're focused on climate adaptation planning. But the goal really, for me coming into this was to have people that attend both a deep dive session and a workshop really be able to say, Okay, where do I start? I have been an installation planner, I have been maybe a utilities person. And I know there's a bunch of climate data out there. But what do I do with that, and I know that I need to scope or do something

before I build something either military construction, or started on a big project. But what is that climate adaptation planning activity that I need to do? So I really wanted to bring in the experts from the military services, as well as outside voices, both from tribal governments and local governments, and then cities and have them share best practices, what's worked for them? What's the challenge for them and climate adaptation, and also takeaways, like so people can actually have something to take back home to either start practicing with or new partners to collaborate with.

D Doug Parsons 04:37

And I want a little bit more about the evolution of this workshop because I think you came late in the game you are on detailed CQ and I'm gonna bring that up in a second here. So you guys do Do you have a climate adaptation action plan that was rivaling the desire to do this? Right,

M Marissa McKinnis 04:51

right. Yeah. So we submitted the Department of Defense submitted the climate adaptation plan back in 2021. And the military services and some With the other components within the department developed implementation plans to basically make that plan happen. And so it's really like this conferences showcasing all of that work that's happened to date. So over the past two years, but also trying to strategize and what do we do next? And how do we take it a step further?

D Doug Parsons 05:18

So you and I interacted when you were at on detail at CQ, and so you came back to DOD? Did that inform your work at all, when you were working on the workshop?

M Marissa McKinnis 05:26

Yeah, absolutely. You know, it was at a different kind of vantage point, right? When you're looking across the federal administration, and you're thinking, okay, so many different agencies trying to get towards one common goal, that over being able to see all the different pieces, that opportunity that I had at CPU, was really helpful for me coming back to DOD, and seeing how a lot of the different offices that maybe don't normally interact on climate resilience, are connected, and to really kind of help develop that connectedness and maybe establish some new partnerships, and see what opportunities lie there.

D Doug Parsons 06:01

So I'm just curious, you reached out to me a few months before the actual work. Why did you invite me in the first place? What are you hoping to achieve with that?

M Marissa McKinnis 06:08

M Marissa McKinnis 00:00

Yeah, so I have been an admirer and a fan of your podcast for a few years now. Definitely, you know, listen to it in my last role, as well. And I really like how you bring the different perspective, to adaptation. And I feel like in a lot of different media spots, it's a little bit hard to differentiate between the mitigation and adaptation and the resilience. And your show does a great job of breaking that down. And also, you know, some real life examples, like you bring in someone from the hill, and then you bring in, you know, a chief resilience officer, and someone on economics. So I think you are able to show the different aspects of adaptation that maybe people won't think about?

D Doug Parsons 06:51

Well, I certainly appreciate when I got that email from me. I'm like, This sounds very exciting, because I wasn't even aware it was happening. So I've done a little bit on national security. And I'm just like, alright, we're deep dive into this thing. So definitely, thank you for inviting me. And I'm looking forward to go into St. Louis. And on that note, I'm going to bring Marissa back at the very end, we have all these great voices coming in sharing their stories from the workshop when I'm going to be there and interviewing folks. But Marissa, thanks for coming on. And I'll see you at the end of the episode. And I'll see you at the top of the Arch in St. Louis.

M Marissa McKinnis 07:22

Can't wait. Thanks so much.

D Doug Parsons 07:26

Hi, adaptors. I'm here with honourable Brendan Owens, Assistant Secretary of Defense for energy installations in the environment. Can you tell us a bit about your responsibilities as Assistant Secretary?

B Brendan Owens 07:35

Sure, and thanks for taking the time to join us here during the climate resilience summit. The first one of these that we've had. And I think we're off to a great start lot more work ahead of us. But but this is a really great start for us. The EIA office for the office of Secretary of Defense, we report up through the undersecretary for acquisition and sustainment. And then we operate out of the office of the Secretary of Defense. And our portfolio is pretty much like it sounds energy installation and environment issues. So we deal with energy procurement, we deal with buildings, we deal with environmental cleanup, restoration. And then we also deal with all of the things dealing with resilience of our built and natural infrastructure.

D Doug Parsons 08:15

Can you tell us a little bit of history about the workshop, but what inspired you to have this workshop in the first place?

B**Brendan Owens 08:20**

Well, I'm relatively new to the job. So I started in January of 2023. I think what really kicked this off for our team was the fact that they understood the linkage between what we're doing with programs like rappy, which I'm assuming that your listeners will know about, and the ability to create resilience that supports readiness that supports mission within the context of the Department of Defense. I think that's really where we are driving, everything is all of the work that we are doing is really to make sure that we can accomplish the larger DoD mission. And there is a really foundational understanding that if we don't have resilient infrastructure, and that is built in natural infrastructure, our warfighters cannot do their jobs. The work that we've been doing across all the 800 Plus DoD installations to make sure that the resilient infrastructure that's necessary to support the warfighter is in place has been going back decades, this conference came about because there was an opportunity for us to convene, and create a forum for lessons to be traded, right. There's good things happening in wildfire in the West that now unfortunately, has some crossover into what's happening on the east coast with the wildfires in Canada and how we're dealing with the smoke and the mitigation from those things. So creating this forum for people to come together, convene, trade ideas, learn from each other hear from leaders. We had a great state and local panel this morning that was focused on making sure that our installation representatives understood what and how importantly, their partners on the other side of the fence are thinking about their relationships, we've done a lot of really great feedback on the value of that lessons learned and best practices transfer.

D**Doug Parsons 10:06**

So what is DoD getting right about climate adaptation and resilience?

B**Brendan Owens 10:09**

Well, I think the thing that we're getting right is the focus on our mission. Right. So, again, all of what we are doing is focused on making sure that we can provide our warfighters our operators with the infrastructure, the built and natural infrastructure that is necessary to train like they fight and deploy, if needed, that mission focus, and that ability to really connect our investments that we're making for flood mitigation or erosion control in coastal areas, we are able to work with our warfighters and our combatant commanders to show them sort of the direct connection between what we're doing and how it enables them to be able to do their work. I think that's fundamentally what we're getting right in terms of how DoD is operating. The other piece of this puzzle is that we are creating habitat and diversity and stewarding natural and cultural resources that are actually enhancing the value of what the Department of Defense brings to our defense communities, right. So our installations are interdependent on our defense communities, the communities that are outside the quote, unquote, fence line for our installations. 70% of our people who work on our installations live in the community, there's a physical fence, but there's no actual fence between resilience from an installation standpoint, and resilience from a community standpoint, I think that's the other thing that we're getting right is that we are recognizing and resourcing strategies, technologies, investments that benefit the community in a way that makes them resilient, because that is directly tied to our readiness and mission as well.

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Doug Parsons 11:54

Alright, sounds like you're getting your head around a lot of these issues. But what are some of the remaining challenges for DOD,

B

Brendan Owens 11:59

DOD, big, really, really big, over 100 sites we have, we're the largest land holder in the United States, we have the most number of buildings in the federal portfolio. And there are competing priorities, even within a budget as large as the budget for the Defense Department. So we are in a situation of having to tell compelling stories, even inside the Pentagon inside the garrison inside the installation, to be able to help people understand where we are actually enabling mission. There are a litany of very unfortunate events that we can point to Tyndall that got wiped out by hurricane offit that got flooded wildfires, you know, really curtailing readiness. And because they make it impossible to train outside, we can point to those things. And we can say that we're creating resilience to to respond to those disasters. What I think our challenge is, is getting ahead of that curve. How do we get ahead with the combatant commanders, with installation commanders with the garrison commanders? How do we talk to them about what we should be doing to resource them so that we are actually heading off those disasters that then become the poster child for why we want to do this in the first place. And I think that's a challenge because it's always easy to see the aftermath and the challenges associated with the aftermath. But to put yourself in a position of being prospective, and saying this is going to be a problem, if we don't do something a little bit harder. That is not to use a phrase that's used the Pentagon, the closest alligator to the boat in a lot of instances, that is something that we have to be able to do we have a challenge to be able to tell those stories, make those connections so that we get ahead of the challenge before we have a disaster response.

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Doug Parsons 13:44

So you had mentioned buildings a little bit earlier, and you bring a lot of experience from the sustainable and resilient building space. What are you hoping to accomplish in this space as Assistant Secretary?

B

Brendan Owens 13:53

So I think one of the real interesting opportunities and unique opportunities for DOD is that we have installation based planning actions, our power grid on the installation, our water infrastructure, our wastewater infrastructure, our transportation infrastructure, and our buildings are all within the control of DOD, right. So Army, Navy, Air Force, Marines, Space Force, their installations are kind of cities, right? So they can take a city planner perspective, which is unique, right, because even in a municipality, there are going to be some government owned buildings, but largely, the bulk of the buildings in most places are going to be owned by the private sector, or by the public sector, but not by the municipality. That's not the case for DOD. And that gives you the ability to take a very holistic view of what needs to happen inside the fence line to be able to resource resilience, efficiency, and then the rest of the work that

we're doing. So when you look at that and you create the opportunity to layer in stormwater controls that also let you be able to potentially out cool your buildings. That's the type of integration that DOD has the ability to think about. If we are holistic enough in how we manage these things, I will say that, again, DOD installations are not isolated from the community, more than 99% of our energy comes from off the installation. So when we harden everything within and we make everything within inside the fence line, as resilient as it can be, there are still vulnerabilities outside. So we need to recognize what those are, and resource resilience and adaptation for those outside the fence line issues. I think the biggest opportunities for DOD are connected to the fact that we can be very integrated, very holistic. And that gives us opportunities to think about interconnections that other sort of city manager type people just don't have.

D

Doug Parsons 15:57

So I thought this was really interesting. The keynote speaker was Bob Burke bile and Crick my pronunciation of I got that. I got it. Right. Okay, so what was your goal for having Mr. Brooker bio speak?

B

Brendan Owens 16:07

That's a Bob, he's an early thought leader in what became the green building movement. But over the sort of the back half of his career, what Bob has been doing is understanding that while there are strategies that will take buildings to a certain level of decarbonisation, or health and wellness or resilience, or adaptation, they are still connected into the fabric of the infrastructure that they're plugged into what Bob has been doing over the course of the last several years, primarily in Kansas City, which is where he lives and where he's for years and years has tried to create an integrated way of thinking about resilience and adaptation to climate change, and extreme weather events that is restorative, one of the things that he talked about was the loss of agriculture, as something that actually heals the land, the loss of local economies that are interdependent on one set of shops and are dependent on another set of shops are dependent on another set of shops. And the thing that I wanted Bob, to bring to this audience to our people now is this, understanding that no matter how far you take, resilience and hardening, there is always going to be vulnerability, if you're constraining your thinking below a real holistic systems level, when we were talking about what our goals were with this conference with, with his keynote, and with Don Chang from DLNR. In Hawaii, the goal was to broaden people's viewpoints so that they could basically just have the permission and feel empowered to think creatively and think in a very holistic, consistent level approach. So that they didn't, in trying to fix one piece of the system, screw another piece of the system up inadvertently, right? There's all sorts of hyper specialization that happens within our industries where you optimize one piece and complicate life for everybody else. And when you pull back and make the problem big enough, you can see those interconnections you can see synergies where one plus one equals three. And that type of thing that we're hoping to get to just give people permission to think think like that going forward,

D

Doug Parsons 18:27

was an interesting keynote, I really appreciate it. Okay, so has anything surprised you about the work DoD is doing on climate adaptation, resilience,

B**Brendan Owens 18:34**

I don't know that it is surprising to me. But what I have been encouraged by and I guess maybe surprised a little bit is how ready our military service members are at a senior leader level to lean in on talking about what they can do to make sure that their installations are resilient, they understand as professional warfighters. That piece of the puzzle very, very well, when we put, you know, an artillery commander in charge of a garrison and make them the mayor of a town, there's a level of investment and a level of time to come up to speed on being good at that job, that I'm surprised at how serious most of them take that as a mission. And I'm really encouraged by it. Because it gives us a good partner to work with, when we do come to them and talk to them about stormwater mitigation strategies or rainwater mitigation strategies. And then bring that back around. And this is how it enhances readiness for your for the missions that are on your installation. Encouraged, surprised, sort of two sides of the same coin in that sense.

D**Doug Parsons 19:43**

So this is an area that's really important to me, it's climate literacy. And actually one of the panels that you said on you talked about it, and so people just assume that, okay, people are more climate literate than they really are. But you really have to make the effort to do that. So could you elaborate on what you meant?

B**Brendan Owens 19:57**

Yeah. So this is actually one of the things that is a specific line of effort in the climate working group that is chaired by the chief sustainability officer, but more importantly, directed by both the Secretary and the Deputy Secretary of Defense. So we have a regular monthly meeting of the climate working group where we are working on a series of lines of effort. One of them is climate literacy within the force. And if you look at the DoD Climate Action Plan, climate literate workforce is one of the specific lines of efforts. So we've leveled that up to a Deputy Secretary of Defense, Dr. Hicks quarterly chairs, one of these meetings, and when the Deputy Secretary of Defense does something, it makes people act, right, this climate literacy piece is being run by our personnel and Readiness Group. So there's a Undersecretary of personnel and readiness, they run the climate literacy development, and they have been resourced to be able to create education content that is then pushed down Echelon into both civilian and military education. And there are extraordinary things that are happening and will continue to happen in terms of bringing people up to speed on the value of the investments that we need to make to understand these things, and then respond, there's a tremendous amount of work that's going on. And I'm really pleased to say that it is being driven by the most senior of the senior leadership within the Pentagon.

D**Doug Parsons 21:30**

All right, it might be a bit premature, but any plans for future resilience workshops.

B

Brendan Owens 21:35

So I was really very encouraged by we had a great turnout, right? And numbers are one metric to be able to say, Yep, that was a success when there are, you know, when every room is overflowing, you can point to that. And you can say, yeah, that was worthwhile, because so many people came. It's an incomplete metric. In my opinion, what is remarkable to me about the couple of days that we spent here is the level of energy and the level of enthusiasm for this subject. That was very palpable, right, you could feel how excited people were and how enthusiastic they were to be engaging with their peers on this subject. And that, to me, is a better metric of whether or not we should do this again. So yes, we had a lot of people. But we also had a tremendous amount of very visible and very palpable enthusiasm. And then the technical content was just unbelievably great. We have not, to my knowledge, made a definitive decision to say, Yeah, we're gonna do this again, there, it was gonna have to be a really compelling other thing that we would do instead, to say no to another one of these somewhere down the line.

D

Doug Parsons 22:47

Well, I want to thank you for having me here at the workshop. I appreciate it's been a fascinating for just a meeting all these people. But thank you for coming on the podcast.

B

Brendan Owens 22:54

Yeah. My pleasure. And keep up the great work. Thanks.

D

Doug Parsons 22:59

Hey, adapters, we're back. And I'm with

J

Jessica Yllemo 23:01

Jessica Yllemo. I am the director of climate security programs at the American security project.

D

Doug Parsons 23:07

Okay, that sounds very interesting. Tell me about the American security project. What do you do there?

J

Jessica Yllemo 23:11

ASP is a nonpartisan Think Tank designated and designed to promote dialogue and enhance the conversation around the national security.

D Doug Parsons 23:19

So what's your background that got you in that space?

J Jessica Yllemo 23:22

I have been working in the defense ecosystem in different capacities. For a little over 15 years. I've been operational in EUCOM. And AFRICOM and then I went to work for the think tank for the Navy in the Marine Corps at the Center for naval analysis. So I've done everything from exercises in the Pacific to out with the carrier strike groups off the coast of America and everything here and there. And I got into climate because I began to understand how climate impacts everything that we're doing nationally and strategically.

D Doug Parsons 23:53

So we're here at this DoD workshop. Obviously, you've been following DOD, probably for a long time, give us a bit of that history, because obviously, it ebbs and flows with different administration, what's been going on. I mean, this is obviously a nice development, we have this whole work. It's a huge turnout. Tell us a little bit about that history, though.

J Jessica Yllemo 24:10

Yeah, so I'm a policy person. So I've been looking at this at a policy level for again, about 15 years. And the important thing to stress is that this is not actually a new evolution, the Quadrennial Defense reviews, which are the predecessors to the national defense strategies, they've been classifying climate change as a direct threat to our national security since at least 2008. The Center for naval analysis put out this sort of landmark report that classified climate as a threat multiplier back in 2007. And what that means is not necessarily as obvious as gates, guards and guns, but it's something that is undermining our security and undermining our operations of our security forces, our military and our coasts, both at home and abroad. So this is something that's been conceptualized for a really long time. And it's been sort of turbocharged under the Biden administration with executive order 14 008, which mandated that each federal agency put together a climate plan and really put climate at the forefront and an effort to integrate and institutionalized climate as a security issue and as an issue that every agency and every person should be thinking about throughout the federal government.

D Doug Parsons 25:26

So even on the national security side, it must be evolving to this issue, even though they've thought about climate change for a while, but there's probably a time level sea level rise that has nothing to do with US national security space. But then when you start thinking about it, you really have to worry about readiness and all that how is the national security space evolved with climate change?



J Jessica Yllemo 25:44

Now it's being conceptualized in sort of two ways you can think about it at home, in terms of the readiness issues for installations for personnel, how you train when you can train, and then you think about how it undermines the security environment abroad. So is it fueling terrorism recruitment in Pakistan, or Afghanistan or Boko Haram in Africa, the drought that's increasing because of climate change is opening a door for some of these nefarious actors to recruit. And so it's creating a myriad of problems. And that's why it's called a threat multiplier.

D Doug Parsons 26:20

In being an outsider looking at the National Security scene, people talk a good talk about, okay, this is a national security threat. But is it really kind of penetrating into it? So something like terrorism, there's an urgency, there's a planning, there's funding all that sometimes these threats are just getting a lot of rhetoric? How do you feel like climate change is being addressed?

J Jessica Yllemo 26:39

Well, we're at the very early stages of this, at least from my perspective, I am a think tank. So we're looking at all of the chatter and all of the policies that are coming out right now. And over the past couple of years since the President took office, obviously, it didn't disappear, it just sort of shape shifts. So the language that we use changes, right now the focus is a lot on things like energy security, and resilience. Whereas you know, five years ago, we may have talked more specifically about the the actual hazards. So you may have been hearing more language about sea level rise or coastal erosion. So how we talk about it is different. I think the biggest challenge right now, for those of us working in this national security arena is the manpower issue. And that is, we still don't have enough people that can connect the dots and understand how climate is impacting their job. Because whether or not you're an engineer, or you are someone at a policy level climate is going to impact what you're doing it just you need to understand how it's doing that and how it's going to impact everything from your budget to how you get to work every day. So I think that's a big challenge for the community writ large.

D Doug Parsons 27:45

And again, the issue of taking climate change seriously, are we really serious about this issue? And this is always a tough question for people that I've asked is, at what point is climate skepticism become a national security issue?

J Jessica Yllemo 27:57

I think it absolutely is a national security issue. And that's part of the mission of our organization is to educate and inform the American public about the changing nature of national security. So we don't argue the science, we're just telling you what actually is happening. So the fact that there have been multiple billion dollar wildfires and billion dollar disasters that's happening that's irrefutable. You can argue why I suppose if you want to do but it is absolutely a national security threat.

D Doug Parsons 28:23

So let's talk about some highlights and some observations here at the workshop, what stood out,

J Jessica Yllemo 28:28

There's so much work being done. And I've actually been really surprised, you know, the Department of Defense is the largest energy consumer and the federal government, and obviously one of if not the largest greenhouse gas emitter in the world. But it's also important to remember that the DoD mission is to kill and break things. Right. They are doing this because the Biden administration has made a policy but it's also an operational necessity. And that's really important to understand that this is part of their mission writ large is because they believe that they're going to be a more effective and lethal force. By doing these things like decarbonizing buildings or using electric vehicles, it's really surprised me to see how much money is already going into doing these things. Again, this sort of has suit been supercharged in the conversation for the past, like five years or so. But this has been going on for a really long time. You know, the Sentinel landscapes program has been going on for 10 years, and they just announced new programs. So they're already doing all of these things that have already seen massive amounts of benefits that even I didn't know about it. I'm somebody whose career you know, is in this space. So I'm really pleasantly surprised to see how much money is going to these programs and to these positive efforts to either decarbonize or transition from fossil fuels and make the mission more impactful.

D Doug Parsons 29:48

It was news to me that most of the facilities in the United States like they get something like 99% of their power from external sources, and so that makes them completely susceptible to extreme weather events.

J Jessica Yllemo 29:59

Yeah, one of the things that we've been following particularly closely are the conversation around increased electricity transmission. And that's particularly important for installations because they're not able to Island, right. So most people don't think about it. But installations plug into the power grid around them. So if you do something in the community impacts what happens at the base. So the upcoming discussions on the Hill about how to reform either the NEPA process, or how to expedite transmission siting is really, really important. And it is important for national security. And it's because our installations rely on that, and not just the installations. But you know, our soldiers, airmen and seamen, they have families, and it impacts their families, and they're not going to be able to work if their wife and kids or husbands and daughters are at home without power. So making sure that these things flow evenly and actually occur are really, really important. And right now, there's sort of widespread agreement that without reform in the current electricity, transmission, siting and approvals, only

something like 20% of the benefits of the inflation Reduction Act are going to be able to see the light of day, because it just takes so long. And so that's just one little microcosm of the big discussion about all of these climate efforts.

D Doug Parsons 31:21

Do you want to learn more about what you're up to? Where should they go?

J Jessica Yllemo 31:23

American security project.org

D Doug Parsons 31:25

Thanks for coming on the podcast. Thank you. Hey adapters, I'm here with

B Bruce Stein 31:32

Bruce Stein. I'm chief scientist with the National Wildlife Federation.

D Doug Parsons 31:35

All right, Bruce, and I actually go way back in my days working in Florida. So this is a treat to see him here. What brings you to this DoD conference, Bruce,

B Bruce Stein 31:43

I've actually been working with the Department of Defense for more than 25 years initially on biodiversity conservation and endangered species, but since about 2010 2011, working on what climate change means for species and ecosystems on DoD installations and how they should adapt to those changes.

D Doug Parsons 32:04

I saw you present today, but can you give us some of the main points that what you were trying to share there?

B Bruce Stein 32:09

Sure. A couple of years ago, I was privileged to publish for the Department of Defense, a climate adaptation guide, specifically focused on their natural resource managers. And we really drew from both the what we know about biodiversity and ecosystems on DoD

installations and the guidance for the management of those installations, as well as what we now know about how to do climate adaptation to support species and ecosystems more broadly. And there's a couple of key principles that we've identified as part of that climate adaptation guidance, or what we tend to refer to as climate smart conservation. First is that we need to be very intentional about how we plan for climate adaptation. And by that, I mean, we need to specifically link climate actions and strategies to the climate vulnerabilities and risks, we can't just kind of wave our arms and talk about enhancing resilience, we need to be very clear about what impacts we're adapting to, and how those strategies are designed to reduce those vulnerabilities. The second thing is that we need to understand that we're in an era of continual climate change. So we need to be increasingly managing for change, not just managing for persistence. Historically, the conservation community has focused on trying to keep ecosystems and species the way they are now or restore back to the way they historically were. That's really not feasible any longer. In some instances it is, but increasingly, we're going to be focused on how to manage ecosystem transformations, and how to help species and ecosystems adapt to those transformations.

D

Doug Parsons 34:03

Maybe we should have done a little context at first, though, is that a lot of people probably don't realize that these bases actually are quite large. And they hold a lot of biodiversity. So yeah, why is the conservation organization interested in working with them in the first place?

B

Bruce Stein 34:15

Yeah, great question. And, you know, the Department of Defense owns or manages between 25 and 30 million acres across the United States. And some of these areas are incredibly important from a biological standpoint. In fact, some of my earlier research showed that Department of Defense lands have a higher density of imperiled and endangered species than any other federal land management agency more than fish and wildlife refuges more than Forest Service lands, and it's not because DoD is doing a bad job. It's in part because a lot of these installations are in places that are ecologically important and also where the surrounding landscape has been severely degraded. So think of Camp Pendleton. In Southern California Camp Pendleton has a number of rare and endangered species that have been lost from the surrounding coastal sage scrub. But so working with DoD on biodiversity conservation has been both rewarding but also an incredibly important part of our national biodiversity strategy. And so making sure that they're managing the species in ways that are consistent with meeting their the military mission, the training and testing that those installations are supposed to provide, but in ways that also provides realistic training scenarios. And that depends on healthy biodiversity and healthy ecosystems.

D

Doug Parsons 35:44

Can you describe just a little bit of the partnering literally the logistics, have they been a good partner? How does that dynamic work?

B

Bruce Stein 35:50

Bruce Stein 35:30

Yeah, DOD understands that they can't do this sort of thing alone. And so I actually began partnering with them back in the mid 90s. I was at The Nature Conservancy at the time. And the Department of Defense really leaned into that partnership that at that time, they were coming to realize that they needed a broader biodiversity strategy. And so DoD began working closely with Nature Conservancy and other nonprofits as part of their building out their biodiversity strategy. Fact back in the 90s, they actually asked us to work with them on developing a biodiversity conservation handbook. That's, I think, one of the first times that I got involved. So that partnership has been core to DOD as approach. What I would also say is that over the last few decades, they came to realize that it wasn't enough just to manage the natural resources and species on their installations as large as those are, because in many areas, the installations are part of a regional landscape. And so in the 2000s, DOD really began focusing on more regional and landscape scale efforts, and specifically focusing on conservation beyond their fence line. In fact, there's something called the Wrap Up program that they specifically developed to partner with organizations outside the fence line, because the idea being that if you can prevent incursions on the installation through development and conversion of lands outside the fence line, it takes pressure off the species and ecosystems that are on the installation.

D

Doug Parsons 37:30

So Bruce, this area of climate adaptation is this emerging area? I mean, we think it's been around for a while, but it's actually just emerging in the US Army. There's this notion of Do people even understand what it is sometimes people use sustainability and adaptation interchangeably. Do you sense that the DoD really understands what this climate resilient space is all about?

B

Bruce Stein 37:50

Yeah, great question. Because as you know, adaptation has not always been something that the climate community has been comfortable talking about early on, there was actually a sense that if he even talked about adaptation, it was somehow taking the pressure off of impetus to mitigate for climate change, reduce the underlying causes and the carbon emissions. I think we now understand that, you know, these two things are not dueling approaches, mitigation and adaptation. They are complementary, and they are both essential. In fact, now, as climate impacts have ramped up, you know, there's no way of getting around the need to adapt. I do think it's interesting, though, the change in terminology. You know, resilience has obviously become a very popular word to use. And it's used in so many different ways that it's sometimes difficult to understand what people mean by resilience. In fact, here at the conference, I note that DOD seems to be using climate resilience as the broad term to include both what I think of as adaptation, as well as what I think of and most of the community thinks of is climate mitigation. So climate resilience in this frame, being kind of the whole ball of climate action, but that's out. I think that it's encouraging that there is this workshop, it shows that climate resilience and climate adaptation are finally receiving the broader recognition that they're due. And that the Department of Defense from the top to the bottom levels is really beginning to take it much more seriously.

D

Doug Parsons 39:22

D Doug Parsons 39:23

It's a great I use my podcast to talk about I think adaptation is the broader term of resilience is sort of this. And I've been guilty of using resilience a lot more frequently. And I've actually heard from someone here at the conflict, Doug, you've been using resilience, a lot more on the podcast, and so they they'd like me focusing on adaptation. So that's interesting. All right. Last question. If people want to learn more about the work that you're doing, what would you recommend they do?

B Bruce Stein 39:46

Well, I would direct them to a climate adaptation guide that we published with and for the Department of Defense. It's called climate adaptation for DOD natural resource managers. It was signed out by the Pentagon for use by all Our military services back in June of 2019. And that really lays out the case for adaptation, the impact that climate change is having on DoD installations here in the US, compromising training, testing, military readiness, and that provides a stepwise process for going through an adaptation planning process to incorporate climate considerations into DoD natural resource management, plans and planning.

D Doug Parsons 40:29

Okay, I'll have links to these reports in the show notes for this episode when it comes out. Thanks, Bruce. Great seeing you again.

B Bruce Stein 40:35

Great to see you Doug and keep up the good work on America adapts.

D Doug Parsons 40:41

Hey, adapters, I'm here with

M Michelle Lovejoy 40:42

Michelle Lovejoy, Senior Manager on the climate resilient coast and watersheds team at Environmental Defense Fund.

D Doug Parsons 40:49

Tell us a little bit about that. What do you do there at EDF,

M Michelle Lovejoy 40:52

so the coastal watersheds team has been focusing over 30 years on recovery response, sea

level rise and land use changes we're seeing at the coastline of our nation in North Carolina after the hurricanes that hit in 2016 and 18. We started looking at Inland riverine flooding and opportunities to use nature based solutions at a landscape scale to help lessen peak flow downstream during storm events.

D

Doug Parsons 41:20

We're here at this department of fence workshop. Why are you here?

M

Michelle Lovejoy 41:24

I'm here for a variety of reasons. One, I did grow up within a military family so I have a passion and support the military efforts. Starting in 2011, North Carolina formed a partnership called the Sentinel landscape partnership. And I was part of that process and some of my former employment roles not when I was with EDF. And so I've been partnering with the rappi office ever since then trying to find ways that work for communities and our defense installations within the state.

D

Doug Parsons 41:55

Okay, you just sort of acronym there. We don't need to go into too much detail there. But what is rappi?

M

Michelle Lovejoy 41:59

Readiness and environmental protection integration?

D

Doug Parsons 42:02

Okay, and rappi is just one of the environmental programs. We're seeing that a lot here. Right?

M

Michelle Lovejoy 42:06

Correct. And so military installations for many, many years, just focused on issues within the fence line. But as you have neighborhoods develop outside the fence line, it's important to look at land use changes, you don't want the firing range to be next to a school right outside the fence line. And so some of the things they fund traditionally is land protection. So you have compatible uses adjacent to the base. But within the Sentinel landscapes partnership, we look out broader across the landscape, what's happening under their flight patterns where they fly, how can we limit tall structures? How can we keep it in dark skies as well as source water protection because they are also using the same drinking sources as the local town? And so where's that land protection measure that can help with those kinds of environmental assets?

D

Doug Parsons 42:55

Let's talk more specifically about the senator landscape program. And so this is the military looking at management around the bases and they're trying to be good neighbors. Give us an example of that. And guess you're based in North Carolina. How does that manifest itself in real application?

M

Michelle Lovejoy 43:10

So effort that started many years ago, before I was even part of any of these partnerships revolved around a threatened and endangered species the red cockade woodpecker and Fort Liberty the largest army base that was formerly known as Fort Bragg was limited in their training areas on the base because of red Caqueta woodpecker habitat. They were through a series of partnership efforts across many years, they were able to work with landowners on private lands, to reestablish the bird habitat off the base so that they could then expand their training areas on the base and keep the population of the birds the same. The reason why it's a success story is it led to an interesting partnership with the US Fish and Wildlife Service called the safe harbor agreement. And the bird has been delisted from endangered threatened, which is a huge success. We very rarely, until like, within the last five years that we started to see species be able to be delisted.

D

Doug Parsons 44:04

Okay, so I know you're not working in other areas, but the Sentinel landscapes are all over the US and their goal is to work on agricultural landscapes conservation lands, can you tell us a little bit more about I guess those goals?

M

Michelle Lovejoy 44:16

So it's really unique to wherever the base is located. So you've got camp, Ripley is in the headwaters of the Mississippi River up in Minnesota, so they focus a lot on Source Water Protection. So how can they look within that watershed on the farmland and the practices that farmers are implementing and limit erosion so less sediment ends up in the creek? So you would do things like cover crops or no till drilling? And so how can you incentivize farmers to look at different management practices? And then also, how can you work together to find new management practices that help to lower the farmers input costs, we as a community get the environmental return, but the farmer also gets an economic return to being a good steward of the land.

D

Doug Parsons 44:58

Can you give me examples of DoD is a partner in all this, but on a sort of day to day, what's the interface for you? How are you interacting with DOD and in your work.

M

Michelle Lovejoy 45:06

So within North Carolina, we're doing a lot of work around flood mitigation. So Seymour Johnson Air Force Base is one of our partners. And we had a series of conversations with bass partners in the community, and a couple of critical aspects we identified as they rely on the town of gold's burrows, water treatment facilities and wastewater facilities, and they're located in the floodplains. So moving forward with climate change and changes in storm intensities, there's a need to elevate those critical assets out of the potential flood zones. And so it led to a cross pollination of ideas for one, and also the town of Goldsboro, becoming educated on different funding sources that they could access through a military partnership that they wouldn't have known about otherwise,

D

Doug Parsons 45:53

do you have a sense that, let's say, the local communities in these areas, because these are large landscapes that they're hoping to work on? Does the notion of climate adaptation resilience come up much? Or do people just kind of sense, okay, they're just doing some environmental programs there? Does it come up as part of a communication strategy or anything?

M

Michelle Lovejoy 46:10

It can, I think what we saw in North Carolina is a lot of people had questions of what causes climate change? How does it start? What's my role to play as an individual, but after you live through multiple natural disasters, within a handful of years, the conversation changes, people have quit talking about what causes climate change to how are we going to survive these more frequent storm events that we're seeing happening today. And so it's finding the right messaging for the right stakeholder group and figuring out where those leverage points are that you can pull so that more people are in alignment across a variety of climate change goals.

D

Doug Parsons 46:48

Were at this workshop, what are you getting out of it? What is stood out for you?

M

Michelle Lovejoy 46:52

Well, one, I ran into some very interests, special force, members of the army, they just had an idea about regenerative agriculture, and how can you do grazing management on DoD lands, and they had no idea there's a whole other underlying conversation occurring at the leadership level. And so what's really interesting about pointing them to the right people to talk to is what I've seen with resilience is you can have this upper meta process and dialogue that occurs within leadership. But then you've got these local community solutions that are bubbling up. And where those two meet in the middle is where the true resilience actions happen. There was a series of DOD reports that came out before the Biden administration came in pointing to Sentinel landscapes as an opportunity to do carbon sequestration on DoD lands. And these

army guys come up with that idea on their own, and they're talking to their bases about doing it. So something that was conceptualized will now actually on the ground likely start to happen. And it took a conference like this to bring all those people together.

D Doug Parsons 47:54

So if there's communities out there that are interested in doing a senator landscape, I know they're just not popping up everywhere. But if they want to learn more about this process, what would you recommend?

M Michelle Lovejoy 48:03

So obviously, there's the online information, people could go and explore that. But really, with local community interaction with their bases, it starts with the elected leadership. So there's likely meetings that are already occurring between those county commissioners and town managers in their bases, and having a discussion with them about hey, these are important issues as well, these resilience concepts, can we start to have that dialogue with the bases, and you'll be surprised they're probably already talking about it. But if they're not, it brings it to their attention that, oh, my local constituents are actually interested in these things. Maybe I should dialogue with the military about it as well.

D Doug Parsons 48:38

Okay. Thanks for joining the podcast.

M Michelle Lovejoy 48:40

Thank you so much, Doug. It's been great to meet you and I look forward to listening.

D Doug Parsons 48:45

Hey, adapters joining me is the honorable Rachel Jacobson, Assistant Secretary of the Army for energy installations in the environment. Hi, Rachel. Welcome to the podcast.

R Rachel Jacobson 48:53

Hi, Doug. Thanks for having me.

D Doug Parsons 48:55

Can you tell us what your responsibilities are as Assistant Secretary,

R

Rachel Jacobson 48:58

of course. So my responsibilities broadly speaking, is to oversee policy, specifically policy but also implementation of some many programs pertaining to all of our installations worldwide energy, meaning all of our energy both on base and off base operationally, as well as the energy we use on base and environment. So everything having to do with the environment, ranging from our environmental compliance with federal and state laws, and our multiple permits, our cleanup actions, but also, importantly, our natural resource management and what we're doing to address climate change.

D

Doug Parsons 49:41

Okay, so on that note, what are some of the initiatives your office is doing to address climate change?

R

Rachel Jacobson 49:46

Well, we were the first of the three services to publish a climate strategy. We did that back in February of 2022. And it laid out very broadly what we're going to do instead of three lines of effort, what we're going to do on our installation shins to both mitigate and adapt to climate change on installations. What we're going to do in our acquisitions, so meaning, you know, what kind of vehicles are we going to purchase meaning electric vehicles, but also just in our acquisitions of the basically the equipment that we use to train, how are we going to start looking for sustainable practices in the manufacture of that equipment, and other of our acquisitions. And then finally, training, we have to train our soldiers how to fight and win in a changed atmosphere changed environment. But I have to say at the outset, everything we are doing on climate change, whether it's mitigation or adaptation, acquisition training, is for national security purposes, it is because climate change is the national security threat. And our addressing climate change is important to maintain our strength as an army. So we do this to maintain our strength as an army.

D

Doug Parsons 51:01

Okay, so I'm curious about the the installations and these resilience plans, because you have a lot of installations and all of them are in very different environments. And how do you create that consistency? And I guess, giving them the resources to do it, because you want them all to have some sort of baseline abilities?

R

Rachel Jacobson 51:15

Yeah, very good question. By definition, they're not going to be consistent, because what's going to happen in Alaska, to recognize the effect of melting ice, melting permafrost, and other conditions in Alaska, that we all have to respond to a near changing Arctic environment, it's gonna be very different than what we're doing in Hawaii, or what we're doing in the southeast. So one of the things we're doing is each installation is going to have an installation climate resilience plan. And what that means is look at the conditions of that, of the environmental

conditions of where that installation is located. And what are the regional issues that we can expect from climate change? What kinds of storms? What's going to be the severity? How frequently what are the partners in the region doing to address climate change? How can we be a part of those efforts, what climate science is available from that region, so that can inform our planning. So each installation is going to look very specifically at the types of conditions that are going to affect that installation, and then the planning for that installation, which every installation has master plans, anyway, is going to be informed by what's the changing climate for that region.

D

Doug Parsons 52:35

So one of the things that's come out at this workshop is that there's all these external partners and external communities with these installations. So is that a big push for the army that you think about the communities around you, you want them to be resilient to some of these impacts to not just your installation?

R

Rachel Jacobson 52:50

Absolutely, by way of example, if we're completely reliant, let's say on the commercial grid for our electricity, and the commercial grid goes down because of a severe storm, then we lose power. And if we lose power, we lose training. And that's unacceptable. So a couple of things we're doing, for example, by installing a micro grid on every single installation by 2030 is so that at least portions of our installations where we can't afford to lose power, we know that we'll have some capacity. Our goal is 14 days of continuous power through a micro grid, ideally want that micro grid to be powered with renewable energy. And we want an associated battery storage capacity. So we can even increase that capacity. But by the same token, we want to partner with our communities to help bolster their infrastructure, so that we can all benefit from the kind of resilience that we're using on our installations.

D

Doug Parsons 53:48

Let's talk about extreme weather events and how they've impacted your installations. And are they informing your future plans there?

R

Rachel Jacobson 53:55

Absolutely. No question about it, particularly in the southeast where we could predict certain kinds of storm events, we're going to increasingly use engineering but with nature, for example, so that our installation, landscaping, if you will, is better able to absorb the effects of a severe storm, so that we're not going to have severe flooding and so forth. We're going to build culverts and other sorts of again, engineering with nature so that we can move and control water. Just last week, there was 1000 year storm event in New York, and West Point was flooded. So now as we rethink building at West Point now, we also have to think there, for example, about how we want to mitigate against that kind of flooding. So all of our practices are going to be really geared with an eye towards how do we ensure longevity, durability, and particularly on our installations. For us also, Army has the most installations of all of the

services. We are I also have more buildings than all of the services and meaning military services. And we have more buildings than the entire federal government. I mean that collectively, but we have all agencies in the federal government army has the most buildings. And our biggest source of greenhouse gas emissions is our buildings. So we also have to think about how are we building however we renovating? What are we doing with our buildings, to make sure that they are sustainable, energy efficient, and also anticipate these kinds of weather events?

D Doug Parsons 55:33

I'll just give a little plug. I don't know if you realize that the folks at Army Corps they have their engineering with nature podcast, I don't know if you've ever had the chance to listen to it. But they've started the podcast good for them.

R Rachel Jacobson 55:42

Yes, good for them. And you know, the Army Corps of Engineers, they were some of the kind of pioneers with engineering with nature, for good reason, because especially on the civil work side, where they manage these enormous water projects, with their navigational authority, and so forth, that they have, they learned maybe the hard way, that it's better to engineer with nature, because if you're going to try to control water too much, it's, it's not going to go where you want it to go. Right. So it's probably better to sort of let water start to move more naturally, and avoid this severe kind of flooding, and so forth. I am not an engineer, I am now with the Army Corps of Engineers. But they were some of the pioneers with engineering with nature.

D Doug Parsons 56:27

Well, they're communicating nicely in area. And I'd mentioned this with honorable Owens to is that climate literacy is an important area. It's something I did in previous life doing climate education programs. And you spoke of that, how important is climate literacy for the army?

R Rachel Jacobson 56:41

When I think of climate literacy for the army, I think the most important part of that, again, is maybe this doesn't fall within the traditional definition of climate literacy, is to remind everybody, both within army and outside army, that we do this, because climate change is a national security threat can't be stated enough. That is well accepted. Now, it's been recognized even since the early 1990s, that climate change poses a national security threat. And I think what's different about now, is that even though we've been identifying the problem, we've been studying the problem, we've been gearing up to be ready to address the problem. Now we're actually going into action. So it's even more important now, to remind folks why we're doing it. And then also to remind them of what are the effects of climate change? And what can we do both to adapt and mitigate?

D Doug Parsons 57:39

Doug Parsons 07:55

So there's a unique climate literacy program at West Point, can you talk about that?

R

Rachel Jacobson 57:44

West Point, we have worked with the academy to establish a climate sustainability program. And it's going to involve all aspects of climate change. The students, a lot of them are engineers. And so they're already coming up with solutions to address climate change. But both at West Point and at the Army War College at Carlisle that also has a climate literacy program, believe it or not, there's also a part of that overall curriculum is to make sure that the cadets are very well informed about what is climate change? What are the effects? How are we measuring those effects? What do they mean in terms of army readiness? And what are the vulnerabilities that we face because of climate change, not just at our installations, but also operationally because we can't rely anymore on transporting fuel in the battlefield. It's not workable for those really smart cadets at West Point. And for those very smart colonels, who are 15 years out attending the War College and also focusing on this in their curriculum, they're really helping us think about what is the future look like? We can adapt using the best technology and keeping in mind, our military needs for readiness. How do we adapt to make sure we're addressing the climate change challenges?

D

Doug Parsons 59:17

Alright, so we're at this workshop, I think they had double the number of people that they originally thought we're going to come to this any standout moments for you here?

R

Rachel Jacobson 59:25

Well, first of all, the whole workshop was standout for me, the fact that we have so many partners who want to work on these issues with us. And mostly the focus here was on conservation practices. But for us those conservation practices, whether we're doing them to prevent encroachment, because I can have a Walmart parking lot right next to, you know, missile testing, right, or whether it's for mitigation purposes, because we have endangered species on base, but we have to protect enough habitat off base to be able to come continue our mission. And now because it's a recognition that climate change is not going to stop at the fence line. Either direction, we have to address these challenges together. And the kinds of nature based solutions, the kinds of conservation efforts that were the subject of this workshop are very exciting to me, particularly the rappi program where Congress has authorized us to engage in partnerships, conservation partnerships, to protect military readiness, I think it's a fantastic program. And Congress has extended that authority recently, to allow us to invest in conservation protection to also address climate change. So its readiness comes back to readiness, but also to address climate change, because we recognize that it's a component of resilience and readiness.

D

Doug Parsons 1:00:51

Okay, last question. And I spoke to Assistant Secretary shutter eight, and he was bragging a lot about the Air Force over the army in the football game, and I want to give you a chance to kind

of set the record straight and being an army brat myself. I don't know if you have anything to add to that because he just was nonstop about Air Force. Well,

R

Rachel Jacobson 1:01:08

I guess he can brag all in words about the Air Force, but we all know the critical game that everybody watches is Army Navy. Okay, and we all know who won the last Army Navy game. And we I think we can probably predict who's gonna win the next one. So Go army.

D

Doug Parsons 1:01:28

Great answer. Okay. Thank you so much for coming on the podcast.

R

Rachel Jacobson 1:01:31

Absolutely. My pleasure. Thank you.

D

Doug Parsons 1:01:35

Hey, adapters, I'm with

T

Tahirih Linz 1:01:37

Tahirih Linz ICF, international climate energy and transportation business development.

D

Doug Parsons 1:01:42

So tell us a bit more about that. What do you do there and tell us more generally about ICF? What do you guys do? Sure. So

T

Tahirih Linz 1:01:47

ICF is the largest and most likely longest serving us climate consultancy. We were one of the first ones to adapt and develop the greenhouse gas inventory for the US with the EPA back in the 80s. We started with sea level rise, and we've been moving on to electric vehicle implementation and the electrification of us.

D

Doug Parsons 1:02:09

So in a previous conversation, you guys have said that you guys have been working on this forever. But let's talk a bit more about resilience. I mean, I know you have to know a lot of things there. But what are some of the resilience and adaptation things that you do there?

T Tahirih Linz 1:02:21

Well, specifically with DOD, we've been working with syrup and es TCP for probably about the last 10 to 15 years analyzing installations and the communities around them for resilience to climate issues coming up with ways to adjust and adapt those regional infrastructures to the coming changes from climate change

D Doug Parsons 1:02:43

duty. They're still figuring out what they're going to do. But they work with a lot of external partners. Why do you think they're working with you? I mean, you have a certain expertise, right?

T Tahirih Linz 1:02:50

Yes, we do have probably about 2000 climate scientists. And like I said, we've been doing this since the 80s. So the depth of knowledge of our data scientists and climate scientists definitely is more robust than any other consultancy in the US at this point.

D Doug Parsons 1:03:04

Talk about this workshop, what stood out for you?

T Tahirih Linz 1:03:06

Well, I loved that they brought in regional partners, you know, I do have experience working as a civilian contractor and a civilian and a contractor for the Navy. And they can they tend to be pretty insular. And I love that DOD has actually brought in, you know, county governments, local governments, you know, departments of environmental quality, that are state run, and they're really talking about the regional decisions they're making. And they're farther ahead than I actually anticipated.

D Doug Parsons 1:03:32

You're on the business development side of things. So you all right, I get what you're looking for. And so you go around to these different presentations. And you have to kind of project out in the future, like, what are some of the needs that we can provide? What stood out in that respect?

T Tahirih Linz 1:03:44

Well, that's interesting. A colleague and I were just speaking after this last panel that we were

trying to focus on DOD, and especially I live in San Diego. So we're thinking about in effect Southwest, and we're thinking maybe we're going to target Santa, which is the San Diego Association of Governments. So it San Diego county region is very diverse. It has an international border, it has a border with the Pacific Ocean, then we have Camp Pendleton and the LA basin, and then the environment to the east is like desert and mountains. So the regional issues that climate change brings to San Diego is very unique. And I think there's a lot more players that we could be focusing on than just the military installations, even though I tend to be familiar with NAVFAC. It seems that the city of San Diego would be a great partner. Also someone like San Diego Gas and Electric, which obviously has all the infrastructure in the region would be a great focus for us as well.

D

Doug Parsons 1:04:38

So there are a ton of people here. Give me some highlights of some of them. Even if you don't remember names, what kind of people are you meeting? Where are they coming from that stood out for you?

T

Tahirih Linz 1:04:46

I've met a couple people from old CC, which we do have contracts with old CC which is so I've met them and they are again, they're the partners they have the grants to the communities that surround the military installations. And then we work on data analysis for the resiliency of the whole area. I've met those people, I've met Public Land Trust groups, I've met the someone from the Secretary of the Air Force who works in their research arm, which is similar to like the cert at es TCP. And apparently, the Army Research Division is actually a lot bigger than the Navy one. So that's an interesting avenue for us. I don't think we do any projects with them. And I think they could really benefit from our expertise. Few people from Norfolk southwest, which is always good to see. And then there is x with the expeditionary warfare Center, which is the research arm of for the Navy up in Portland, navy, California. And they're doing a lot of really interesting stuff with climate resilience. And we definitely want to get more projects with them.

D

Doug Parsons 1:05:46

So revealing anything top secret, what are you going to take back to ICF? You obviously were, you're here now you need to go back. And I guess talk to people, what what are you going to take away when you go back?

T

Tahirih Linz 1:05:55

I guess it's similar to what I stated before is that perhaps rather than focusing on a single stakeholder looking at getting involved in the regional projects, targeting maybe the working group, and he was talking about the fact that they have a big conglomeration working group, and I'd love to know who all those people are, and to be part of that conversation, as opposed

to just hyper focusing on like, you know, what can we do for the military? Or what can we do for the city of San Diego, maybe bring our expertise as part of like a think group think tank would be really helpful.

D Doug Parsons 1:06:26

So I don't know the extent of who you actually work with. But I have a lot of local government listeners, state government listeners, are those groups that ICF works with?

T Tahirih Linz 1:06:34

Oh, absolutely, yeah, we work with most of the state governments and the department's of Environmental Quality, environmental protection, whatever each of those states happens to call it. We also work for regional like transportation companies like Caltrans, and also the investor owned utilities in California, I tend to be more California focus just because that's where I sit. But we work for the Pennsylvania Department of Environmental Protection, lot of New York, and we work for the federal government to EPA, DOE, HUD, Department of Homeland Security, FEMA, we have USA ID contracts overseas, so yeah, we do it all.

D Doug Parsons 1:07:11

Okay, any particular highlights here in St. Louis, for you? Well, the

T Tahirih Linz 1:07:14

arch is really impressive. I, we're gonna buy our tickets at lunchtime and take the tram to the top. So yeah, that's been my highlight. Thanks for coming on the podcast. Thank you.

D Doug Parsons 1:07:27

Hey, doctors, I'm here with Josh Sawislak.

J Josh Sawislak 1:07:30

I'm a managing director at Deloitte Consulting. Okay, tell me just a little bit about Deloitte. What do you guys do? We're a big professional services firm. It was founded about 180 years ago, and we've been supporting clients in the US for more than 130 years. Now, a lot of people have probably heard of Deloitte, but maybe as accountants or consultants in technology, strategy, data science and risk. So why am I on an adaptation podcast? Well, thanks for having me here, Doug. And climate, both adaptation and mitigation touches on all of our work both in private sector clients, as well as public sector clients, like DOD, who's sponsoring this conference today. And nearly all of our work for, you know, the largest companies in the world. So I sit in Deloitte Consulting business, and I work across all of our offerings and sectors to help

our clients plan for and address the risks of climate impacts and climate change. It's at the basic level, it's adaptation, managing risk of climate change, but physical risk and transition risk.

D Doug Parsons 1:08:27

Tell me a little bit about maybe some project work or policy work that you're doing related to climate adaptation, resilience.

J Josh Sawislak 1:08:33

So we're working with our clients in the public sector to figure out how they implement the programs to protect their assets. And in DOD case, their missions, right. So how they think about what they do protecting the nation and adaptation is how do we ensure that we can meet those mission requirements in the face of a changing climate?

D Doug Parsons 1:08:53

Why are you here specifically at duty? I know Deloitte works with DOD. But why did you decide to come to the workshop?

J Josh Sawislak 1:08:59

Well, the workshop is a great opportunity to hear about some of the amazing things that different parts of DOD are doing the services as well as the office of Secretary of Defense, but also to hear from the partners in the States and in some of the NGOs and others who are here to talk about how they interact with the Defense Department.

D Doug Parsons 1:09:18

I've heard this in other places, too. And I still think there's a lot of confusion between resilience, adaptation, mitigation, Sustainability, and a not a lot of people actually, I guess, understand adaptation is its own emerging sector, and you have quite a history and all this. I know you can appreciate this. Are you hearing that? Are you having this conversations and even other work that you're doing?

J Josh Sawislak 1:09:36

Yeah, it is really confusing. And, you know, when we talk about climate adaptation, we focus on how we're preparing for and recovering from the impacts caused by climate change. You know, we saw extreme rainfall and flooding in New York and Vermont this week, and the new normal is not the old normal, and we have to be able to adapt to these new realities. 20 years ago, we used to talk about disaster recovery, and most people just assumed as asters would happen and we'd need to recover from them. But there were people focused on preparing for and

reducing disaster risk. There was a UN conference in 1994, in Yokohama, Japan, but climate change wasn't really part of the discussion. Now, the most recent version of that convening happened in 2015, and something called the Sendai framework. So Sendai, Japan was adopted, and that actually recognized climate change as a major driver of risk. And when we talk about resilience, when we talk about climate adaptation, we talk about disaster mitigation, which is different than climate mitigation. It's a little confusing. What we're talking about is the same thing, which is adapting to preparing for and recovering from the impacts of climate change both physical impacts, and that transition from a carbon economy to a carbon free economy. So that's really the adaptation. We're adapting to those changes.

D

Doug Parsons 1:10:54

You and I both have a history of doing adaptation in the federal government going back into the Obama years, you were at CQ, and maybe you can talk a little bit about that. But what are your some of your observations fits and starts related to resilience in the federal government? Where are we at right now? Are you encouraged based on comparing it to your time? You know, it's probably been 10 years, right?

J

Josh Sawislak 1:11:11

Yeah, I am encouraged because agencies are starting to actually implement these programs, because they understand that it affects their mission. And in the case of the Defense Department, they have a mission to protect the nation, which means they've got to get soldiers moved, they've got to get ships maintained, they've got to get airplanes off the ground and where they need to go. And so they have to look at what impacts their ability to deliver on that mission. And if the base is underwater, if the supply chain is interrupted, to be able to sustain their equipment and their personnel, that's a problem. And so they are looking at these things very seriously, not just defense, but in the civilian agencies as well, both ones that have physical assets, and also ones that have missions to support communities, whether that's housing, transportation, communications, agriculture, no matter what the issue is that the agency will no matter what their mission is, whatever the mission of that agency is, they are looking at how climate change will impact that mission, and how they ensure that they can continue to deliver that for the American people

D

Doug Parsons 1:12:24

Are you meeting a lot of folks here at this workshop? Any surprises anybody that's sort of stood out for you that you it's it's been good for you to know that they're here.

J

Josh Sawislak 1:12:31

Not really surprises. But it's been great to see a whole lot of people who've been working in this space for a long time. You know, you do this, as long as I haven't you keep running into the same people. But there's a lot of new people here, there's a lot of leadership from the Defense Department here, we've seen a lot of the very senior defense appointees, and both on the civilian side, as well as on the military side. So I think we're getting very good visibility, and

we're getting very good engagement. And now we actually have to implement these programs, we need to protect these facilities, these installations, and we need to protect these missions. And they're going to do that in partnership with the communities in which they are situated.

D

Doug Parsons 1:13:09

What's on the Deloitte horizon for you in the resilience space?

J

Josh Sawislak 1:13:12

Well, we're going to continue to work with our clients, both in the public sector and the private sector, to help them plan for and implement these strategies, some of that data analytics, some of that is learning and development, climate literacy. And when I talk about climate literacy, it's not making climate experts out of every federal employee, it's helping people understand how climate affects their job, and what they need to do about it. And really empowering people in the federal government to be part of this. Now, I know this has gotten the word climate has gotten very political in the United States. And that's really a shame because when we talk about climate adaptation, what we're really talking about is protecting our people and our economy and our ability to deliver on the job of government. And that should be something that everybody supports. Thanks for coming on the podcast. It's great to be here and thanks for having me.

D

Doug Parsons 1:14:06

Hey, Doug, I'm here with Dr. Ravi Chaudhary, Assistant Secretary of the Air Force for energy installations in the environment. Hi there. Welcome to the podcast. Hey, thanks a lot. I really appreciate everything you're doing. Super proud to be here. And first of all, please call me Ravi. Okay, Robert, you're my first Air Force person I've ever had on the podcast. I'm very excited about this. But first off for my listeners, what are your responsibilities as Assistant Secretary? My job as Assistant Secretary is to make sure that the United States Air Force has ready installations, installations that can execute the airforce mission of providing air and space dominance. Ultimately, it comes down to one thing you've probably heard it before. It's called Fly, fight and win an air space and cyber and there's no other way to say that more simply than how I've just stated it but my role is in installations, energy and the environment is make sure we do that in an efficient manner. For example, to make sure that when it comes to energy, we are collecting, managing and discharging energy in a manner that we are decisive when it comes to any sort of crisis or conflict on behalf of the nations and the environment, making sure that our operating environment is one that is safe, healthy, and one that ensures that our airmen and guardians are able to execute their mission safely. And that includes the family and surrounding communities in those environments. So issues like strategic basing installation infrastructure, how we position our bases in order to be successful, how we mobilize for our national security mission is all within my bailiwick, and one in which I we work at very, very hard every single day. So we're here at this resilience workshop. Why is the Air Force concerned about adapting to climate change? It's very simple. And it comes down to my background as an Air Force pilot, I flew C 17, which is a large transport aircraft that moves cargo men, women equipment all throughout the world essentially enables our US military to maneuver on a global scale. Every time an Airforce pilot goes off to fly the mission, every time

they step to an aircraft, picture me walk into my aircraft, there's only one thing that I check first. And that's the weather and making sure that my environment in which I fly in is conducive to executing my mission, it is absolutely critical that we make sure that the environment that we operate in is safe and conducive to our mission. Ultimately, that's why how we look at weather, how we look at climate, and its impacts on our mission is extremely critical if we're going to be successful in executing our mission. Okay, let's talk specifics here. So what are the goals of the climate action and climate campaign plans that you guys have? Yeah, absolutely. So we launched a Climate Action Plan in October last year, and now we're launching a climate campaign plan in the coming days to go out and really get after some of the challenges when it relates to climate change. Quite simply put, it's critical that we ensure air dominance in the faces of the changes in our environment caused by climate change, we also need to make sure that we have a climate ready for us, it's able to make the right decisions in this environment. And then the third point is to make sure that our installations are resilient, and able to execute their mission. I describe it more than resiliency, though, I call it a strategy to make sure our bases are ruggedized and ready to execute our assigned missions. So those three areas are things that we're staying laser focused on, because we know that the climate that we're in, is changing. And we've got to make sure we adapt to that environment. Can you share some of the innovations that are happening with the Air Force that are really getting you excited? Yeah. First of all, we know that when it comes to use of petroleum, then and for us, it's a jet fuel, because we have a large fleet of aircraft that executes our global mission. So making sure that we reduce the demand on our jet fuel, because we're the largest consumer of petroleum in the federal government, which is pretty amazing for one agency to be the largest consumer. And so we're staying focused on finding ways in which we can reduce demand one through the aircraft that we fly. One, we're looking at drag reduction, and there's a lot of different ways in which you can reduce drag on an aircraft you've seen airliners that have these wingtips that kind of fold up at the end. They're called winglets, and those reduce drag on the aircraft and increase the efficiency of the engines. We're doing all kinds of innovations when it comes to understand the aerodynamics of aircraft. I'm an aerospace engineer by vocation. And so we're looking at putting what are called micro veins, these little tiny tabs on the side of C 17 aircraft that actually reduce the amount of fuel that we consume on a given mission by doing a variety of things improving engine washing, by coating our engine blades, we can get huge savings and we're talking about on the order of 10s of millions of gallons of fuel. Now that reduces the amount of greenhouse gases that we produce, but it also increases our agility on the battlefield in places like the Pacific where there's vast vast areas of water that we need to cover to make sure that we can execute like for example, flying from Alaska to Guam, fine from Travis Air Force Base in California to Hawaii and Guam. These are huge distances and consume a lot of fuel. So every bit that we can do to reduce drag, reduce fuel consumption is agility For the United States military, I always say that climate action is mission action. And that's one of the most vibrant examples that I can provide. So let's talk about some of the bases though, because you've got adaptation planning that doing there. And you and I, in a previous conversation, we talked about some really exciting things happening at Tyndall Air Force Base. What is adaptation planning at Tyndall Air Force Base? Yep. That's a great question, Doug. And I'm glad you asked because it leads into the second aspect of how we do our job in United States Air Force. Every Air Force mission starts and ends at a installation runways bases where we launch our missions and recover our missions from we actually call our bases power projection platforms. It's a platform for us to execute our mission naturally making sure that our installations are safe, making sure that they are resistant to hazardous weather events like hurricanes, like coastal erosion, melting of permafrost, all these things increase the wear and tear in our bases. So we've got to make sure that we ruggedized and build resiliency in these installations, one by using natural methodologies of preventing things like coastal regions from affecting them. For example, at Tyndall, we've I'm sorry, at Eglin Air Force Base, we've

employed these natural oyster beds that reduce the wear and tear on the coast. But at Tyndall, as you know, it was affected by Hurricane Michael, which nearly destroyed the entire base. I mean, this is not an exaggeration by saying that that base was nearly destroyed by this hurricane. So we're rebuilding Tyndall in a manner that makes it more resistant to future severe weather events like hurricanes, for example. We're raising our codes, building codes and how we manufacture buildings. We're also using digital twinning to make the positions and locations of the buildings more resistant to the impacts of a severe weather event. So we actually are going to name it the installation of the future. By making and collecting the lessons learned from bases like Tyndall, we can replicate that at other installations to make sure that we're adapting as a service to the impacts of climate change on our mission. Again, I always come back to Mission and with that it really has become over the past few years a hotbed of innovation. I mean, we're doing so many leading edge things at Tyndall and more broadly across the airforce, that I'm just really excited about how we're addressing the challenges faced to us by climate change. Okay, we can't go over every impact. But can you briefly describe how extreme heat is impacting mission readiness? Yeah, I could probably talk to you for hours and hours about this stuff, being a former aircraft engineer, but it comes down to this, we've got to execute missions from our installations. And from our bases. We do everything from training missions to real world response to humanitarian crisis events. And so the ability to launch missions and train for these missions is critical as rising temperatures, impact installations in say, the Southwest US where the temperatures are very, very hot, it can reduce the amount of training days we have to execute our mission. So for example, say we're going to fly 200 sorties out of a particular base to execute our training mission. If the weather gets too hot. At some point during the day one, our air crews shouldn't be out in that weather because heat stress will start affecting them to our aircraft need longer runways to actually take off in hotter weather. So all those things impact the amount of risk you take in a given mission. And especially if you're working say our defenders who are security forces professionals have to patrol outside the wire outside the base to ensure at the deployed location that the base stay safe. Well, heat stress can be a real real mission to detractor. And so we've got to make sure that our airmen and guardians stay safe going forward. And so climate impacts that almost on a daily basis. All right, so I focused generally on adaptation. But you told me some thing that's happening in the Air Force that I think is really cool. I'd like to share with my listeners, that Space Force is doing something up with energy that's going to be pointing at the Earth. Can you tell us what that's all about? The Air Force has been innovating for over 75 years. If you think about the incredible leaps and bounds and technology that the Air Force has piloted in its history, it's truly unbelievable, for example, breaking the speed of sound innovations like Global Positioning System, which we're all familiar with, but that was all championed by Air Force members who wanted to push a vision that will advance our nation. I want to tell you about an innovation on the energy front that I think is really exciting. I think that the next big technological breakthrough will be in the energy environment. And I think the Air Force is on the cusp of something really, really important. So, we are currently scheduled to fly a technology called Spider, which ultimately harnesses the energy put out by the sun, converts it into microwave energy and beams it back to Earth. And we're gonna think about that. I mean, that is incredible, incredible innovation. And that's being piloted by your United States Air Force and Space Force. The program is called Spider it's championed by the Air Force Research Laboratory. And what this does is takes a ultimately a pizza box size solar array, puts it on orbit, this array collects energy from the sun converts it into microwave technology, microwave beam technology, and beams it back to the earth. Now, we're at the very front end of this technology. But I'm telling you, this is how things move United States Air Force, this is how innovation works in the United States Air Force. And I would always use the adage that there is no oak tree that doesn't begin first from an acorn. So this is the acorn that the United States Air Force is planting in the hopes that we could literally shape the future of energy. In this century,

big long term goals have always started small. If you think back to GPS, we never knew what global positioning was going to be like for the effort. But that actually occurred in the 60s and championed in the United States Air Force. So we're really excited about that we've got a number of great moonshots that I call are coming up in the future. One by one, we're going to change the shape of the next century with innovations that will just literally blow your mind makes me a little nervous. But it's also super cool. So I'm looking forward to as that unfolds. All right. Last question. My dad is a veteran and he served 20 years in the US Army. So is it true that army has a much much better football team than Air Force? Well, first of all, thank you to your dad for his almondy serve about 20 years. Thank you to your dad for his commitment to the nation commitment to serving but I will say this, the traditional Army Navy game as we know it in the Air Force, and we prove this year is that the Army Navy game as Harold Drik, as it is truly a second place game. So we know that this year that your United States Air Force hoisted the trophy, and we'll be doing that for the years to come. I got a good feeling about this upcoming year. We'll see. Let's see. Okay, thank you so much. It's been a treat chatting with you first time, like I said, having someone from the air force on the podcast, and thanks for sharing what you guys are up to, I think the public is going to be really informed with what you're doing. Doug, thank you for having me. I look forward to spending time with you more in the future and coming out and visit us at the Pentagon. And we've got more to share. Hey, adapters, I'm back.

K

Katie Retka 1:27:39

And I'm with Katie Recca. I'm a Natural Resources Specialist at Camp Ripley Training Center in Minnesota. It's a National Army Guard training site.

D

Doug Parsons 1:27:48

Okay, so you're working on installation. So what are some of your duties there,

K

Katie Retka 1:27:51

some of the roles that I take on our natural resources planning, we have a very robust prescribed fire program. And also I work primarily with the Army compatible use Buffer program coordinating with our local and state partners and the National Guard Bureau to execute conservation easements within the perimeter of the exterior of our training installation.

D

Doug Parsons 1:28:12

So you actually work for DOD though, right?

K

Katie Retka 1:28:15

I'm technically a state employee, and then our salaries are federally reimbursed. Little complex.

D

Doug Parsons 1:28:20

Give us a little bit more context of the location, you know, what, what's the landscape like, I guess population in the area and, you know, is the base and is it a popular spot for other interactions,

K

Katie Retka 1:28:32

Camp Ripley is located about 200 miles just north of the Twin Cities metro area, we are mostly a rural area. And I would say that we're kind of the in this gateway from the Twin Cities urban metro area where 70% of Minnesota's population lives into the northern lakes region, which is a really popular recreation area. So there's a lot of transient, you know, seasonal summer, folks that come through a lot of outdoor recreation opportunities there. We're also uniquely situated ecologically within the state. We're actually at the transition from the northern conifer forests into the Mississippi floodplain, and part of the prairie grassland ecosystem. So we really have a high diversity of different eco types that exist in our landscape.

D

Doug Parsons 1:29:18

Talk a little bit about this workshop. How did you find out about it? Why did you decide to come?

K

Katie Retka 1:29:23

So Camp Ripley is a designated setting the landscape so that plays a big role in participating in this workshop, I've been working at Camp Ripley. It'll be eight years and since I first started, resiliency was kind of this brand new buzzword that everybody was talking about, but really didn't understand maybe the definitions or the technical application of how you do a resiliency project in your landscape. So things have really evolved quite a bit since 2015. When I first started, this workshop is helping me get connected with not only experts but also new tools that have been developed to help us with our planning efforts and how we can implement those projects.

D

Doug Parsons 1:30:06

Tell me a little bit about that. Because the idea of resilience and adaptation, a lot of folks still don't quite understand that there's these separate areas and separate disciplines. How does it work there at the installation? I mean, is there an understanding by people at the base that resilience is different? You're resilient, you make yourself resilient to climate change? How does that kind of play out?

K

Katie Retka 1:30:26

So I think the benefit of being a sentinel landscape is that this messaging has been very socialized, we have a really robust partnership through that Sentinel landscape that helps us

socialized, we have a really robust partnership through that sentinel landscape that helps us, you know, do the work that we're doing. So we have about 30 miles of undeveloped Mississippi River frontage, that creates our eastern and northern borders. And so I think people are very aware of the water resource that we have, we're about 50% forested, there is a great appreciation of natural resources for our location, I would say that, you know, aside from outdoor recreation hunting is another kind of heritage Minnesotan thing. And so people are seeing the changes in the landscape from being an interacting in it and being a part of it. When I first started, we actually there's so like I mentioned those, those great partnerships that we have, they bring a lot of information back to our installation. And in 2016, we invited the climatology, the state senior climatologist to come and speak with our leadership, and really talk about the local trends that we're seeing in our landscape. I'm so you know, you hear big national stories about it's hotter, it's drier, but what are we seeing here for trends? And how will that project and so that was extremely beneficial for our leadership to hear from a trusted resource. And to actually get into some of the nitty gritty graphs and you know, technical things. I think we're really well supported not only our leadership at the installation, but also our state agencies, and government and local partners.

D

Doug Parsons 1:32:01

Okay, so we're here at this workshop. And there's a lot of great presentations, and it's probably enlightening for you, but you're out there in the field. And are there particular tools and resources? You're like, Gosh, I wish we had a bit more of this. Do you do climate modeling those kinds of things? And how do you tap into the DoD network to do your job effectively,

K

Katie Retka 1:32:18

Department of Defense recently created this decat tool, right department climate adaptation tool, and it takes the latest information from the National Climate Assessment. And it kind of brings it down to the installation level. And to me, that's, that's a pretty high level data source. And then you can there's more nuanced and local information. I mentioned, our state climatology office, you know, when things were just kicking off, I think it was 2016, we hosted a climate adaptation workshop that was the National Guard Bureau environmental advisory committee that coordinated it, they brought in USDA nayaks. It's I can't remember the North American Institute of climate science. All right. And so they presented really great detailed information of so for example, for forestry, you know, that we're starting to look at the species that already occur on our landscape. And how that is projected to change which species will decline, which will increase with either the increased drought or more precipitation, different times of the timing of the precipitation. And so they actually have this awesome tool that's online, it's called the tree Atlas. And you can plug in a tree species, and it will give you for your it's regional, but it will show you you know, whether that's projected to increase or decrease and so you can start applying that to your forestry practices for the future.

D

Doug Parsons 1:33:43

So there's a lot of interest out there because not a lot of people have done adaptation planning for too long. It sounds like you've you have quite a record there. Do you have any metrics of success? What are you guys looking at in that respect? How do we even measure that you're doing successful adaptation planning?

K

Katie Retka 1:33:59

That is a great question. Well, I think what's maybe applicable with that setting the landscape, we have a strategic plan that goes with that the toolbox that they have varies from like, you know, conservation easements with landowners into more of the application of practices and restoration. That's all outside of our boundary. And so that's the beauty of the Sentinel landscape is really all of those practices, whatever we can do outside of our installation makes the installation more resilient itself inside our installation, we will do projects and we will report on them. It's not necessarily that we're tracking any specific metrics that I know of for that,

D

Doug Parsons 1:34:41

but I guess the long term goal is like, okay, we're adapting this land to a future climate and I guess a lot of installations are still trying to figure that out.

K

Katie Retka 1:34:48

Yeah. Maybe another example. Our facilities management office recently did a really large stormwater retention basin project because we're on the Mississippi River obviously, you know, we can have over The big impact on water quality there are downrange training areas are all natural landscapes. So we're actually just at the very southern tip of the Mississippi Headwaters. And I'm told that that is the best water quality in the entire United States. So our training Lands Act like a big sponge. They're great for water quality. We have a 2000 acre containment area that's hardened. We've got military vehicles and maintenance facilities for those so these stormwater catchment basins were designed so that if we had a 100 year rainfall event, not a trickle from our containment would reach the Mississippi without being treated before that.

D

Doug Parsons 1:35:38

Okay, thanks for coming on the podcast.

K

Katie Retka 1:35:40

Wonderful. Thank you for having me.

D

Doug Parsons 1:35:44

Hey, adapters, I'm back. Okay, so you heard from people there at the workshop on the ground when I was doing those interviews. And so I've invited Marissa, you heard me at the very beginning of the episode, Marissa is coming back. Marissa McInnes, and this is post workshop, and we're going to just break a few things down. Hey, Marissa, welcome back.

M

Marissa McKinnis 1:36:00

Hey, it was so much fun. I hope you had a great time, too.

D

Doug Parsons 1:36:04

Yes, we didn't meet at the top of the arch. No, I did it myself. And it was fantastic. And I didn't realize how much fun it would be. And it was pretty short. So I highly recommend doing that if people have a chance. So alright, I want to break a few things down before we wrap up this episode. First off, I think when you first reached out to me, you were talking about the sort of numbers that you were expecting. And then it almost doubled it. How many people ultimately showed up at the workshop?

M

Marissa McKinnis 1:36:27

We had, I think over 900 Total people show up, which was amazing.

D

Doug Parsons 1:36:30

Well, just my own observations, like I've gotten the National Adaptation forum and they're doing a great job. But they got something like 800. At their last one, you beat that with just this defense focus one. So that's amazing. I was shocked at how many people are actually doing adaptation out there. So I'm sure you were pretty happy that everyone wanted to participate.

M

Marissa McKinnis 1:36:51

Oh, yeah. I think an overwhelming success. I'm so proud of all the the teams that led it, there are a lot of people across the department who made this happen.

D

Doug Parsons 1:36:59

All right, a bit of a wrap up. What were some take home messages for you. I mean, you obviously led some sessions, but you attended sessions, and what was the feedback from even your team there at DOD? Were they happy with the results?

M

Marissa McKinnis 1:37:12

Yeah, I think overwhelmingly, everyone that I've talked to, and we've done some consolidated feedback sessions, and some lessons learned from the week, you know, some hot washing, I think the overwhelming response was, Well, we did not realize how much interest there was here. And that how much people were ready to partner and implement, whether it be the climate change adaptation handbook from the Navy, or the new playbook from the air force that was just announced, people were ready to really dig in and, and start to think about how to

apply these things to their own work when they got back home into their office. And I think that was everyone chose to go there on their own, no one was mandated, required to go to the conference. So that was a really nice surprise. I think the people My Sessions had, you know, 150 or more people. So even with that, sometimes a little bit hard to manage. But there was so much engagement and eagerness from the participants, and the folks that we had from outside of DOD, I think were so effective in their delivery, whether it's talking about resilience in the City of Jacksonville, or within their tribal nation, that I think was really something that a lot of DOD folks probably haven't been exposed to, and we're really excited about and reflected that in their comments back to me.

D

Doug Parsons 1:38:32

Is there any opportunity for people that weren't there, but they're interested in learning more about what happened there? Are there gonna be any right, I guess there's this podcast, it's, it was 900 people, I didn't do 900 interviews, is there gonna be anything like that? Is it gonna be associated with maybe that, like, follow up with the adaptation action plan? Any thoughts on that?

M

Marissa McKinnis 1:38:51

Yeah, yeah. So there has been a survey that's gone out, and there's some post conference communication that's going to be happening, it was really meant to be fully in person. And I think that's the first time that I've been a part of something that wasn't at least somewhat hybrid, you know. And so that was a little bit different. But I thought it was so valuable to have all of the side conversations and the connections to people that you don't normally connect to in the adaptation, resilience space. So there will be future engagement. I can't say when I don't want to get anyone in trouble saying when the next conference is because I don't know. But yeah, there's definitely a lot more work to come.

D

Doug Parsons 1:39:26

And when I interviewed Assistant Secretary Brendan Owens, I asked the question about a future workshop, and he definitely seemed open to it. Obviously, there was no commitment to something specific, but even from him there was interest in continuing this conversation. So that's encouraging. Alright, just a couple more questions for you here. Now I have listeners working for local government, state government organizations, and some of them are probably near military installations. This isn't your office per se helping but they might be out there thinking all right. They've heard about all these external groups that are partnering with these military installations to do resilience planning, do adaptation planning, can they reach out and I mean, what Would you recommend is sort of a good way to do that?

M

Marissa McKinnis 1:40:02

Yeah, great question. So we have several offices and two of them were at and helped host and make this event happen. That I think would be really good starting points for folks interested in working, or at least partnering or exploring a partnership with defense. And so one of those is

the office of local defense Community in cooperation, oh, LBCC. And it actually just Google that and it'll pop up. But there's a lot of work happening there. In communities surrounding defense installations. There's a new military installation Resilience Program that I think could be really of interest to a lot of coastal communities specifically. And we're going on there, the other office that I think would be really helpful for folks to reach out to is the Rebbi. Office. So it's the readiness and environmental protection and Integration Office. And so you just type in our EPI, Google put type that into Google, and then it'll pop up. And they do a lot of really fantastic work about land focused surrounding installations, and really focusing on like, compatible use issues, encroachment, thinking about, you know, the whole watershed, protecting that whole watershed area around and installation and working with the communities in a partnership form, so that everyone's on the same page in terms of a resilience plan. So those two specifically I think, they have great leadership, and they just did a bang up job presenting this conference last week.

D

Doug Parsons 1:41:24

All right, fantastic. Any final thoughts before I let you go?

M

Marissa McKinnis 1:41:28

I had such a great time, it was so wonderful to have you there. And I really feel like this is a moment where, you know, everyone realizes we've got to keep things moving. I mean, Department of Defense has always seen the threat of climate change to our mission. And I think, you know, continuing to realize how we need to push this work forward for our mission of defending the nation has just been invaluable the last couple of weeks thinking about what's happened at the conference, and then what we do next?

D

Doug Parsons 1:41:56

Well, I want to thank you, it was great for me, I met a ton of people. And I was just really surprised just the diverse work going on out there that these bases and I obviously hope I get some new listeners with these folks out there because I didn't make a point of meeting a bunch of folks and I rarely get nervous interviewing people anymore, but you had three assistant secretaries lined up for me to interview oh my god, don't screw this up. And everyone I think was relatively happy. I don't think you got in trouble after the fact. So that's a victory but just to you, Mercer. Thanks for thanking me. Thanks for inviting America adapts to the workshop and looking forward to sharing your story to everyone.

M

Marissa McKinnis 1:42:30

Thanks so much talk to you soon.

D

Doug Parsons 1:42:38

Okay, adapters, that is a wrap. In conclusion, I want to express my gratitude to the Department of Defense for extending an invitation and facilitating my participation in their resilience

of Defense for extending an invitation and facilitating my participation in their resilience conference experience was truly invaluable and I am humbled by the opportunity to cover such a crucial event. I would also like to extend a special thanks to all the experts I had the privilege of interviewing your dedication to the field of climate adaptation is commendable, and the work you're doing is making a significant impact in this ever evolving landscape. throughout the workshop. I was generally astonished by the sheer number of individuals and organizations actively engaged in climate adaptation. Although many attendees seem to be unaware that their work adaptation constitutes a distinct sector in its own right as my regular listeners will know, I am a strong advocate for fostering the growth of the adaptation sector. It is distinct from the mitigation carbon energy space and stands apart from the sustainability sphere. Its emergence as a unique sector holds immense value. And I believe that connecting with the already existing adaptation ecosystem could prove immensely beneficial for those collaborating with the Department of Defense. The networking opportunities during the workshop were incredible and I've made numerous valuable contacts. Links, contacts and reports from the event can be found in the show notes for this episode. Definitely take a look at those. And for those interested the link to the DoD climate resilience workshop agenda is still active and I encourage you to check it out. It is both exciting and encouraging to witness the rapid progression of the adaptation universe. Notably, the Department of Defense is taking on a lead role in this endeavor, which speaks volumes about the urgency around climate change. Once again, thank you to everyone involved in contributing to this episode. A special thanks to Marissa McInnes for the original invitation. Thanks Mirza. Okay, adapters. Imagine the potential of showcasing your achievements through a widely acclaimed podcast that boasts a large network of climate adaptation professionals. Yes, I'm talking about America adapts and how it offers your company or organization the perfect platform to tell your adaptation story and spread your message to a diverse and highly influential audience of climate professionals. by sponsoring a whole episode you not only have the chance to share your story with the world but also integrate a podcast episode with your organization's long term communication strategy. It's time to expand beyond the confines of webinars and the white papers which can often be dry and forgettable. Let's work together closely to identify the experts who best represent the remarkable work your company or organization is undertaking an adaptation This will not only enable effective communicator issue with your members, board members and funders, but also leave a lasting impact. The value of podcasts lies in their ability to continue promoting your story long after the initial release, ensuring it remains a critical educational resource for years to come. I am humbled to have collaborated with prestigious partners such as Patel NRDC, UPenn Wharton World Wildlife Fund, UCLA, and Harvard University, and many more. So let's add your company or organization to this esteemed list. Yes, we can make a significant difference in the world of climate change adaptation. To learn more about the enduring value podcast and how they can benefit your company organization, email me at America daps@gmail.com. Also, if you're interested in having me speak at a public or corporate event, please reach out I have been doing some keynote presentations. I share stories from the podcast and my own experiences in adaptation. Let me help educate your audience on this emerging adaptation sector and how it differs from carbon mitigation and sustainability. Your companies and organizations and especially your leadership need to understand these differences in the years ahead, you can contact me via the website American apps.org Okay, guys, finally, as those of America adapts, I'm always eager to connect with my listeners and hear their feedback on the show. Whether you want to share your thoughts or suggest a guest you'd like to hear from. I'm open to it all your input not only helps me improve the show, but it can also lead to exciting new opportunities. And it's very helpful for me to know what you guys are doing out there and I can hear the diversity of different professions that are getting benefit from the podcast, so please don't hesitate to get in touch with me at America. daps@gmail.com Okay, adapters Keep up the great work. I'll see you next time.

