

## Agency for Change Podcast: Daniel Lawse, Principle and Chief Century Thinker, Verdis Group

### **Announcer:**

Welcome to Agency for Change, a podcast from KidGlov that brings you the stories of changemakers who are actively working to improve our communities. In every episode, we'll meet with people who are making a lasting impact in the places we call home.

### **Lyn Wineman:**

Hi, everyone. This is Lyn Wineman, president of KidGlov. And welcome to another episode of the Agency for Change podcast. Now, a few weeks ago, the latest IPCC Climate Change report was released. I'm sure many of you heard about it. United Nation's Secretary General António Guterres described the 3,500 page report as a code red for humanity. Yikes. Today's guest, Daniel Lawse, the principle and chief century thinker at Verdis Group is going to break this report down for us. Daniel, how are you today?

### **Daniel Lawse:**

Well, that's a loaded question when we're talking about the climate change report. In this moment, I am wonderful and so happy to be on this podcast with you, Lyn. And then there's that underlying, "Okay, processing the climate change report."

### **Lyn Wineman:**

Yeah, I know right?

### **Daniel Lawse:**

Lots of emotion.

### **Lyn Wineman:**

How do you ... That really wasn't very kind of me to ask how you are after that introduction. And let's start our conversation today with that report. I mean, 3,500 pages, most of us are not going to read the whole thing. I mean, to put it in perspective, can we start with who actually is the IPCC? And what is this report?

### **Daniel Lawse:**

Let's just dive in. So the IPCC is the Intergovernmental Panel on Climate Change. It is a group of scientists and volunteers from around the world who were gathered by over 190 governments. The countries of the world said, "Hey, we hear there's something going on with climate change." This was decades ago. "Why don't you all go get the information and tell us what we need to know?" So the IPCC comes together and they put together this report. This one that just came out is the physical basis of climate change, so really there's nothing in this report that's a surprise to anybody who's paying attention.

### **Daniel Lawse:**

It is documenting everything that the science is telling us, all of the observations we're making. They do climate modeling too, and they get more sophisticated every year to make sure that these models are more and more accurate as we get better with our science. The governments are the ones who say, "Scientists, go tell us what's happening." The scientists come together. Over 200 scientists from 65 countries put this report together, with over 14,000 scientific publications assessed, all compiled into this 3,500 page report. Lucky for us, there's about a 40 page summary for policymakers that does break it down a little bit more.

**Lyn Wineman:**

That's fantastic. Wow, that's a lot of brainpower, 200 scientists from across the world. So Daniel, for those of us who are maybe not even going to read the 40 pages, can you break it down for us a little further? I am not a sustainability expert, but I am a human, and code red for humanity does not sound good. Can you just tell us, give us the high level on what the report says?

**Daniel Lawse:**

Yeah. I love that it's called a code red for humanity because it means there still is an opportunity to change course. Usually, code red means things are going in the wrong direction. But if we act now, we can do something about it. You think about codes in hospitals, everybody mobilizes and then they save the patient's life. You think about codes in military, or in safety and security, means things aren't going well, but we can still change the course.

**Daniel Lawse:**

So that's what it means. I mean, the science now shows that unequivocally, all of the climate change we're experiencing is caused by humans. No more argument about it. And primarily, the burning of fossil fuels, and secondarily, methane emissions from agriculture and other industrial processes. Those two things are warming the planet up. So the code red is we are already locked in to warming until the middle of the century. We're at about 1.1 degree Celsius of warming, and they look at this compared to like 1750 to 1800.

**Daniel Lawse:**

Basically, pre-Industrial Revolution. Because that's when we started burning coal and oil and natural gas in massive quantities over time. And so we're looking at what was the climate before that and what is it now with all of this carbon dioxide and methane in the air? It lingers in the air for awhile, so we are locked in to two to three more decades of warming. Nothing we do today will change it. So you think things are getting bad now with wildfires and droughts and flooding and extreme rainfall events. Honestly, Lyn, it's going to get worse for the next 20 to 30 years. Every decade for the last four decades is warmer than the last one, and that will continue. The good news is because we are so certain that this warming is caused by us, guess who can solve it?

**Lyn Wineman:**

Could it be us?

**Daniel Lawse:**

We can.

**Lyn Wineman:**

Yeah.

**Daniel Lawse:**

Yes. We can. Every action we take today makes the future a little bit better. And every day we don't act makes the future a little bit worse. So I know that maybe people are tired of talking about it, but with the pandemic, we talked about bending the curve of transmission. We're talking about bending the curve of climate change, hitting that point of drawdown, where we stop putting greenhouse gases into the atmosphere, and they start to drop.

**Daniel Lawse:**

And so what will happen is we are on-track to hit 1.5 degrees Celsius by the middle of the century. We might hit two, three, four by the end of the century, but that is up to us today. We could hit 1.5, and I call it kissing it. Let's kiss 1.5 and then come back down from it. And if we act today and drive down emissions rapidly, we can do it. We have about 10 years to be able to say 2050 might be the hottest we'll get, and then we'll start to level off and then cool back down a little bit.

**Daniel Lawse:**

So that's what the code red for humanity means. We are headed in the wrong direction. It's going to get harder than it already is. And we can do something about it. We're so certain we're causing it, we are so certain we can do something about it, and the other cool thing is we have all the solutions, Lyn. We have the technical solutions, we have the policy solutions. We need leadership. We need elected officials on the policy side to make statements, to make bold claims, to pass legislation and set policies that will set us in the right direction, and we need businesses and communities and homeowners to make decisions to say, "I'm going to do this thing. I'm going to insulate my home. I'm going to drive less because I can get around in other ways." We have all the tools, we just need to use them.

**Lyn Wineman:**

I love that. Daniel, you know what, I like the picture that you painted there. I mean, that was helpful to me, the idea of a code red in the hospital. I mean, we've all probably been in a hospital where you've heard that come over the PA system, or we've seen it on TV maybe. Heaven forbid, some of us maybe have seen it in person, but everyone mobilizes, goes to that patient, does what needs to be done, and in many cases, the patient recovers to either some level or full level. And I'm glad you put a positive note on the end of that statement too, because it does, the prediction sounds pretty dire and depressing if nothing is done. So you said there's something we can do about it. As concerned humans, once again, who care about the planet, and want to leave it well for future generations, how can we as individuals do our part?

**Daniel Lawse:**

That is a wonderful question that is multifaceted and I'm going to try to boil it down for you. One of the most important things that we can do is change the way we think.

**Lyn Wineman:**

Yeah. Yeah.

**Daniel Lawse:**

We can shift our mindset from short term thinking, instant gratification, to long term thinking. What are the implications of my choices, not just today, but literally my children and grandchildren are going to inherit a world that I have full choice in what kind of world they get. And I was just talking to somebody who said, "I used to not worry about this stuff because I knew it wasn't good, but that's going to be in my grandchildren's lifetime." And then he's like, "And then I realized that my grandchildren's lifetime is partially my lifetime."

**Lyn Wineman:**

Yeah. Wow.

**Daniel Lawse:**

And I mean, two things there, one, A, we need to care about the world we hand over to our grandchildren, and B, it's happening right now. We're witnessing this. We're experiencing this. No matter where you're listening, I'm sure you've experienced an extreme weather event in the last 12 to 18 months, and those are stronger and more powerful than they were before human caused climate change.

**Daniel Lawse:**

So what can we do about it? Change the way we think from short term to long term, from separate to connected. Everything I do is connected to everything else. We are a living system, and we are part of nature. So we can stop thinking humans are separate from nature, we begin to act differently in the system, realizing that hey, we're causing this. We can fix it. We can make choices in our cities, in our communities, in our businesses, at the dinner table. And we can have an impact and fix this.

**Daniel Lawse:**

So as we change the way we think, now I'm going to bring it down to more practical like bullet lists. I talk about how we think because it matters. I could give you a checklist of all the activities for you to do. There are tons of websites with checklists. And I'll share some of those things because they're important. But if all I do is give you a checklist, and you get to the end of that, you'll be like, "Oh, okay, I'm done. I got this."

**Lyn Wineman:**

World saved.

**Daniel Lawse:**

Yeah, but if you change the way you think about it, and understand your relationship to our planet, to our common home, this is really our home that we all share, then when that list is done, you'll come up with the other things that you need to do, because you are an expert of your own location. You are an expert in your family. You are an expert of your business. You know what matters most and how to make changes in those areas. I don't. So these generic checklists are helpful guides, but what's more important is actually beginning to embody this living systems perspective of we're all connected, let's think in long term, and let's do the right thing because we're just showing up knowing that every day I do something helpful is making the world better, not just for me, but for my children and my grandchildren.

**Daniel Lawse:**

So change the way you think. The second thing to think about is mitigation. What are things I can do today that will actually help bend that curve of climate change so we don't go past the 1.5? Because 1.5 gets kind of scary. And beyond that, there's a lot of other things that we can talk in detail about if you'd like. So what can I do to mitigate? I'll point you to a website that I really like. It's called Count Us In. It is [count-us-in.org](http://count-us-in.org).

**Lyn Wineman:**

Right, and for anybody who didn't get that, Daniel, we'll put those in the show notes on the website as well.

**Daniel Lawse:**

Perfect. So they've identified 16 top things that we can do as individuals based on impact and effort. So maybe you don't have a lot of time, or energy, or money. So look at the low effort things, and then you can see what kind of impact. And then there's some things that take more time, energy, and some of them more money, for higher impact. So easy things, what I was just talking about. Speak up at work. Ask your colleagues, "Have you read any summaries of the climate change report? Did you know that we're locked in for warming for the next two decades? What impact is this going to have on our business? What impact is this going to have on your homes? Have you noticed?"

**Daniel Lawse:**

Oh, I had a great conversation with executives at one our clients. And we kicked it off with the question, "What interesting or odd weather events have you experienced in the last 12 months?" Every single one of them shared a story about drought, or extreme rainfall. And it was fascinating to hear. And then I followed that up with, "Well, and here's the science of the climate in your region, so what you're experiencing isn't just anecdotal. You are personally experiencing the impacts of climate change."

**Daniel Lawse:**

So talk about it. Don't be afraid to ask questions. If you don't know, ask. There are a ton of people who know about this stuff and they're happy to help. Maybe some of your friends would love to talk about this, and we have to be able to process our emotions. So you'll find that I don't approach things just from a rational perspective. I understand the whole person, mind, body, spirit, emotions. And so we need to engage and make space for our emotions. This can be heavy stuff.

**Daniel Lawse:**

Another easy thing to do is just tweak your thermostat at home. If it's summertime, bump it up a degree so the air conditioner's not running quite as much, and just take a layer off, or wear shorter sleeves or tank tops or whatever. If it's wintertime, bump the thermostat down a degree and put on an extra layer, a sweatshirt, or a sweater, or a shawl, or a scarf, or all of these great accessories that we have that just help us stay a little bit warmer. Fans in the summertime.

**Lyn Wineman:**

Daniel, you're starting to hit us where it hurts, right? We're all so into our climate control and the exact temperature for sleeping and working. And you're right, just one degree on your thermostat. If we all do one degree, one degree, that's got to make a big difference.

**Daniel Lawse:**

Huge difference. And here's the thing. I know that this hurts, but it doesn't have to. Turn on a fan in the summertime because the air temperature can be one to two degrees warmer, but if you have air moving over your skin, you feel one to two degrees cooler.

**Lyn Wineman:**

Great advice.

**Daniel Lawse:**

And fans are far more energy efficient than an air conditioner is that's cooling off your whole house.

**Lyn Wineman:**

Great advice.

**Daniel Lawse:**

Ceiling fans are amazing. They can run when you're sleeping, keep you comfortable in the living room. A couple other things, I mean, these are ... I don't know, some of these are pretty easy. Eat more plants. The agricultural industry of meat, you might hear about cow farts. But actually, that's not true, it's cow burps. It's the burps, not the farts.

**Lyn Wineman:**

I don't think we've ever talked about farts and burps on this podcast, so this a first. I'm sorry.

**Daniel Lawse:**

Well, Agency for Change.

**Lyn Wineman:**

There you go.

**Daniel Lawse:**

We have to identify the sources so that we know what to change, Lyn.

**Lyn Wineman:**

Yeah, okay.

**Daniel Lawse:**

Either way, if you eat more plants and eat less meat, you will help reduce the demand and the need for raising as much cattle that are burping methane into the atmosphere, that are helping heat up our planet. And sometimes that's an unpopular opinion. In Nebraska, we're a meat state. And notice how this doesn't say, "Stop eating meat." There are plenty of opinionated people on both side of that

spectrum. I'm going to walk the middle line and say whatever you're doing today, eat more plants, eat a little less meat.

**Lyn Wineman:**

I like that. Incremental change.

**Daniel Lawse:**

Right. And this is exactly what we're talking about. Every day that I do something, I'm literally making the future better. Because every piece of greenhouse gas that doesn't go into the atmosphere helps bend that curve. It helps make it so we're not going to overshoot 1.5 as much, or it helps us take things down. Because there's several decades that the CO2 I emit today lingers in the atmosphere.

**Daniel Lawse:**

Here's one, make your home more energy efficient. Make sure you have good insulation, make sure you have LED light bulbs. Make sure your refrigerator door is closed and has a good seal on it. There are entire websites on how to be more energy efficient at home. And I've done this in my current home, and in my last home, and it saves you money. And that way, I have more disposable income to do things, or to save, or to put into retirement. So it actually can enhance your quality of life. It doesn't have to feel like it's a sacrifice.

**Daniel Lawse:**

This one is an interesting one. So many of these are behaviors that some people are all about and other people don't think they're popular, so I'm just going to say them. Fly less. As a human, as an individual, one of the biggest things we can do to reduce our emissions is fly less. I did a greenhouse gas, personal greenhouse gas inventory years ago, after I had a super efficient home. I walk, and bike, and bus a lot of places. I eat local a lot. And then my wife and I flew to Hawaii for a trip. And it blew my entire carbon budget, that one trip. It was a really great vacation and I loved it, and there's some real asking questions about do I need to fly? Especially now with video conferencing.

**Daniel Lawse:**

And I know too that the airline industries are moving towards new technologies that will emit fewer emissions. Because flying is a great invention. I'm not against flying. Let's get flying to the point where it doesn't emit any negative impacts. Birds don't pollute when they fly. They're not heating the planet up. So the other kind of theme that I think about is how can we be more like nature? Nature has figured out how to live in a symbiotic relationship and not throw things out of whack. I don't know, you want me to keep going on personal actions, or you want something else?

**Lyn Wineman:**

Yeah, Daniel, great advice. I'm loving all of this. I feel like I'm hanging on every word. Give me a few more. Give me a few more, and then we'll switch to corporations.

**Daniel Lawse:**

Okay, okay.

**Lyn Wineman:**

All right.

**Daniel Lawse:**

If you can, put some solar on your house. Or some places, some utilities have where you can buy into community solar where you're literally getting kind of like a share of a solar farm that's already built.

**Lyn Wineman:**

That's a fascinating idea.

**Daniel Lawse:**

Yeah. I'm part of a community solar program, so they've got, I don't know how many megawatts at this farm that I'm buying from through OPPD. But I'm buying more than I use in electricity for my house. So I can say that my electricity is zero carbon electricity. I still have natural gas for my water heater and furnace at the moment. But here's a tip, you want to think long term. The future is electric. If you are going to replace your furnace, get an all-electric heat pump. If you are going to replace your water heater, get an electric water heater.

**Daniel Lawse:**

There are pros and cons. I understand that. But the future is absolutely electric. We cannot continue to burn natural gas. Also somewhat unpopular, but we're seeing cities across the country considering legislation that says no more natural gas. All new homes, all electric. All new buildings, all electric, because ... So nature has this amazing thing called photosynthesis. It takes sunlight that falls on our planet every single day and converts it to energy to support life.

**Lyn Wineman:**

Amazing.

**Daniel Lawse:**

We are getting closer and closer, our solar panels are getting more efficient. We're developing storage technologies. Again, nature solved this already. We don't have to burn ancient sunlight, which is really what coal and natural gas and fossil fuels are, oil, it's ancient sunlight. It's like burning up the endowment. Let's live off of the interest that falls on our planet every single day. So anyway, let's switch to solar where you can. Natural gas is an ancient sunlight. It's not going to be the wave of the future. And even the people in natural gas industry talk about as a bridge fuel.

**Daniel Lawse:**

It's helping right now because it's lower emissions than coal and oil, but it still is an emissions generating technology. We're working with a client in Seattle, and they are building a new facility, commercial size facility, lots of pumps, motors, fairly energy intensive. They're going all electric.

**Lyn Wineman:**

Wow, that's a big commitment, right? Because there's some money involved in that right? It'd be easier, yeah.

**Daniel Lawse:**

Sometimes. Yeah, sometimes there is. And with electric, sometimes it's a little more expensive to operate for like a furnace. But if you're doing a heat pump, it's actually more efficient. I'm a nerd. I can't help it. The physics. The physics of a natural gas furnace, you're like piping gas in and starting a fire in your house in the furnace. And it heats up air that flows over it.

**Lyn Wineman:**

That sounds terrible.

**Daniel Lawse:**

A heat pump is actually moving heat from the air. Or if it's a ground source heat pump, it's moving heat from the earth. So in physics, cool air doesn't move, heat moves. So an air conditioner's actually sucking heat out of your house and then sending it outside and blowing it out into the air. A heat pump works in the opposite in the wintertime. It's sucking heat out of the outside air, because there's always a little bit of heat unless it's like sub-zero. And it's bringing that heat into your house and then helping heat your house that way. So instead of creating heat by burning something, very energy intensive, you're just moving heat from one spot to another. It's much more energy efficient.

**Lyn Wineman:**

That's a great explanation. And Daniel, so many good things we could do, some that feel really easy, some that feel a little bit painful. Yes, definitely some controversial things in there as well. But all things that we should be aware of, educated on, and figure out what we each can do. Now, you brought up your client, and I have to admit, right or wrong, sometimes when I think about climate change, I think about these big corporations, and the things that they're doing that impact climate change. I mean, what can a big corporation do to help and not further harm the situation?

**Daniel Lawse:**

Well, the same thing as individuals. They can change the way they think.

**Lyn Wineman:**

I like that.

**Daniel Lawse:**

That is the consistent thing here. When they shift from short term to long term, when they shift from a separate worldview to a connected worldview, from thinking that everything is kind of a static machine, our business is a machine, to actually we're a living system, we're more like an ecosystem filled with plants and organisms because we're human, and we're messy, and things are changing all the time, that will single-handedly, automatically make them think differently about their environmental impact.

**Daniel Lawse:**

So that's kind of the philosophical worldview framing, because here's how change happens. Change can happen in the physical world of like, "Here's the list of things to do. Go do it." Actions. But fundamental, lasting change happens when we shift our worldview. So that's why I didn't want this conversation to just be like, "Oh, here's the checklist, and here's the process." Because fundamentally, when we change our minds, we change the way we think, we actually can transform the world around us in such beautiful ways.

**Lyn Wineman:**

I love that so much.

**Daniel Lawse:**

And you don't need to have a checklist. But everybody loves a checklist, so I'll give you one.

**Lyn Wineman:**

Okay. All right.

**Daniel Lawse:**

So the other two things that businesses can do is this mitigation, which I talked about with personal. I'll go into that in a minute. But the thing I didn't talk about personally, it's more for business, but adaptation. We know the planet's going to get hotter for the next 20, 30 years, so what are we going to do to make sure that we can still function in a hotter climate, with more extreme events?

**Daniel Lawse:**

Hurricane Ida and the impacts of flooding in the Northeast, awful. Unfortunately, we're going to see more of that, and maybe worse over the next 20 to 30 years. So how does a company mitigate? One of the easiest things they can do that shouldn't take too long is just measure their greenhouse gases. It's called GHG, greenhouse gas inventory. Understand where your impact is, because every business has limited resources, time, energy, and money. So are most of your emissions coming from electricity? Are most of them coming from the burning of natural gas and some industrial process? Or heating your buildings? Or heating water?

**Daniel Lawse:**

Are most of your emissions coming from your fleet? Maybe you have a ton of vehicles that are diesel or gasoline powered, and if they're coming from your fleet, then the strategy is migrate your fleet to all electric and make sure your electricity is coming from a clean, renewable source, whether that's onsite solar, or sometimes wind if you're a large industrial site, or partner with your utility and say, "Look, I'm going to an all electric fleet. I want you to move to renewable energy and decarbonize." And utilities are doing this. But the more customers who ask for it, the faster the utilities will do it.

**Lyn Wineman:**

Absolutely. Absolutely.

**Daniel Lawse:**

So really, step one is know where you are, because it will help you focus your time, energy, and resources on having the biggest impact. And remember, every action we take today is going to make our future better. And every day that we delay action is going to make it a little bit worse.

**Lyn Wineman:**

Daniel, that's amazing. I want you to save that thought for a question I'm going to ask you later as well, because that was really a great statement there. So let's talk a little bit more about companies that want

to create a climate action plan, or to do their part with mitigation. What resources do you recommend for them, and does Verdis Group offer any support for this?

**Daniel Lawse:**

Oh, Lyn, I'm so glad you asked. This is what we do every single day that we wake up and leap out of bed to go help make the world a better place.

**Lyn Wineman:**

I love that.

**Daniel Lawse:**

Our team is honed to help companies create climate action plans and act on them. So I'll start first with one of my favorite resources is Project Drawdown. That's [projectdrawdown.org](http://projectdrawdown.org). Actually, [drawdown.org](http://drawdown.org). And they look at all of the ways that we can reduce emission, whether it's transportation, or industrial, or food, or agriculture, or geologic. All of these things. And they look at technology that exists today, and they say, "We can do this." Gives you all the solutions.

**Daniel Lawse:**

And some of them will apply to some businesses, and others will apply to others. So Project Drawdown is a phenomenal resource for what types of strategies you can do once you identify what your inventory is. And do a climate action plan. So step one is measure where you are. Once you know where you are, then you can start to identify what the strategies are. You can set goals too. So it's important to have a vision and goals.

**Daniel Lawse:**

So actually, I could short circuit this whole thing and say on our website we have how to create a climate action plan that you can download for free and it will give you these high level steps. But like this discovery phase is where are your emissions coming from? What's your water use? All of these things of where are you today, and then paint the vision of where do you want to go? And part of that should be informed by the science-based targets in this IPCC report of, "We need to get to the lowest possible emissions that your company can drive to, as fast as possible."

**Daniel Lawse:**

And a vulnerability assessment, there's something called a climate vulnerability assessment, that that gets into the adaptation. As the planet warms up and continues to for the next 20, 30 years, what are your risks? What are the risks to your customers, to your business model, to your logistics and supply chains? And to begin to assess those because that will inform if you need to pivot. Or maybe you don't need to pivot yet, but in five years you should. Are you in the right physical location for things as the planet changes?

**Daniel Lawse:**

Lyn, I had to read this so many times to let it sink in. I'm going to pull it up so that I don't misinterpret this. The IPCC report, and this is based on the best science, unequivocal, high confidence.

**Lyn Wineman:**

200 scientists in the room, yeah. Lots of brains.

**Daniel Lawse:**

We are going to see in the next 80 years, by 2100, one to two feet of sea level rise.

**Lyn Wineman:**

That's quite a lot, isn't it? That's quite a lot.

**Daniel Lawse:**

And that's the best-case scenario, Lyn.

**Lyn Wineman:**

Wow.

**Daniel Lawse:**

If we don't do anything, if people don't take action and we keep pumping CO<sub>2</sub> into the atmosphere like we are, we are talking three feet or more of sea level rise, just by 2100. And I'm like, I'm doing the math from meters to inches, because this is written for meters for international audience. So we're going to see several inches, six inches maybe of sea level rise, guaranteed in the next 30 years. And because of the way ice and warm water expands, we're actually locked in ... This was interesting, they're like, "In the next 2,000 years," because they had to expand it out.

**Lyn Wineman:**

That's hard to visualize the next 2,000 years.

**Daniel Lawse:**

I know. I know.

**Lyn Wineman:**

But the next 80 years, that sounds fairly serious.

**Daniel Lawse:**

Yeah. But listen to this, because the 2,000 year, the chief century thinker wants to go there and say, "Well, what could this become?" It is likely that we will have 5 to 10 meters of sea level rise in the next 2,000 years. So we've already set the course of the planet on multiple feet of sea level rise. Like that's 15 to 30 feet of sea level rise. And they're basing this on the last time the planet was 1.5 degrees hotter. We had sea levels that were 5 to 10 meters higher.

**Lyn Wineman:**

Wow. Wow.

**Daniel Lawse:**

So that's kind of big and scary, but let's zoom back. 80 years, we're going to see several inches. And going back to physical location, we're in the Midwest, but some of your listeners might be on the coast. If you

are on the coast, your city is either going to invest billions of dollars to fight the ocean, or you're going to remove some of the oceanfront property, because we are, in this century, in the next 80 years, we're going to see one to two feet of sea level rise, which means every hurricane that comes and the storm surges are going to be that much higher. Are your levees ready for that? Are your sea walls ready for that?

**Daniel Lawse:**

When it rains, this is connected to the warmer air. Warmer air holds more moisture, so when it does rain, it rains more. They've tied it to every degree Celsius of increase in planetary temperature we get 7% more rainfall. They've been able to hone down that much. Dryness, so hot air absorbs water, makes the land drier. So drier conditions and hotter temperatures, not if, but when there's an ignition source, we're going to have more fires. We're already experiencing this.

**Lyn Wineman:**

We are really seeing that, yeah.

**Daniel Lawse:**

So are you vulnerable to fires? So that's what this climate vulnerability assessment is. It's looking at your region and the climate modeling that's projected for your region, because the earth is a complex system. Some places are going to get wetter, some places are going to get drier. What are your vulnerabilities for your business? And maybe you'll realize you're relatively fine. Maybe you just need to know you're going to have more air conditioning in the future because it's going to get hotter, but you personally, or your building, or your employees aren't going to have flooding or drought, but maybe they will. And then it becomes a question about your employees. People don't think this level. What happens if your employees are distracted because they're getting flooded basements?

**Lyn Wineman:**

Yes, right?

**Daniel Lawse:**

Or their houses are going to burn down in a wildfire. The stress that that puts on them. Another thing in this vulnerability assessment, sorry I'm kind of going deep in this one.

**Lyn Wineman:**

No, it's good. This is how we change mindset, right? Like you're telling the stories that change people's minds. And I know you know what you're doing here, but you're changing my mind. Not that I wasn't already on the cusp. I mean, this is going deep. It's good stuff, Daniel.

**Daniel Lawse:**

Yeah. These are the questions I feel like we need to ask. Like what about climate refugees? There will be mass migrations across this planet of people moving from the coasts. Maybe they'll just move a few miles inland, stay in the same city. Maybe they'll move to Omaha, Nebraska.

**Lyn Wineman:**

Right.

**Daniel Lawse:**

Maybe people along the equator and the warmer tropical areas, it's going to get so hot and intolerable that they're going to want to become an immigrant into the United States. So we're not just talking about global population migration into the US, and how do we deal with that influx of immigrants? What about even within the US? The Southwest and California right now, I've heard some people say, "We shouldn't be calling this a drought because it's been drought after drought after drought." This is aridification. This is almost like desertification. It is not going to get wetter again in some of these areas.

**Daniel Lawse:**

So anyway, what are you vulnerable to. You need to know that so that you can build strategies around that. And then something so critical if you're going to do a climate action plan is engagement. Diverse and equitable engagement. Here's a secret, Lyn. People participate in what they help create.

**Lyn Wineman:**

Oh, yeah.

**Daniel Lawse:**

So at your company, don't just hire a consultant who's going to write up a plan that's all based on this great science and great recommendations and strategies. It goes back to the way people think. Work with a group or do it internally in such a way that you're engaging people up and down and across the organization.

**Lyn Wineman:**

That's good.

**Daniel Lawse:**

Because they know how your business works from where they sit, and they will have such great ideas that you cannot come up with. And so creating a diverse, equitable engagement process, whether you're a municipality and you're talking about a community, or whether you're a business and you're talking about your employees and customers. Engage the stakeholders. Help them co-create the climate action plan.

**Daniel Lawse:**

And part of that then goes into this visioning. So you know where you are. You've assessed your vulnerabilities. You've assessed your emissions, your greenhouse gas inventory. Where do you want to go? Take into account all the best science coming out saying that you need to drive emissions down as rapidly as possible. Fine, set a long term goal, maybe 20 years out, of zero emissions, or get to zero as close as you can. Every organization's going to use energy. But then set a shorter term goal. You were talking 2,000 years is mind-boggling. Can't even think of it. But 80 years is more reasonable.

**Daniel Lawse:**

When you're a business, maybe set a 10 year target, and maybe even a 5 year milestone. 2030, right now, is a really great target to say 80% emissions reductions or more. I'm going to help you cheat a little bit. If you don't want to look at all the science, 80% emission reduction or more is generally a good target

over the next nine years. But again, the faster you get there the better off we're going to be. Once you have your vision, you set those targets, those goals, so that businesses are great to get traction when they know what they're aiming for. People can rally around something.

**Daniel Lawse:**

If they know that we're going to drive emissions down, then I'm going to say, "Oh, why do we leave these lights on? How come we're using this inefficient piece of equipment? What about employee commutes? Maybe we should commute differently to work." Transportation demand management, support active commuting. Walk, and bike, and ride transit. Those are all healthier for your people. So there's also something that you'll discover when you dig into this, it's not just scary. There's co-benefits.

**Daniel Lawse:**

When I reduce my emissions by walking, and riding the bus, and biking to work, I get healthier. When I eat more plants, in general, Americans eat more meat than they need to. When I eat more plants, I'm going to be healthier because I'm lowering my meat intake a little bit, and I'm adding to my leafy greens and the vitamins and minerals that nature provides in the vegetables.

**Daniel Lawse:**

And really, once you have your visions and your goals, it becomes how do we get there? And we've talked about some of these strategies. It's emissions reductions. It's water conservation, because water, we don't think about it, but water is really heavy. Have you ever tried to walk up three flights of stairs with five-gallon buckets of water? It's heavy, which means when we're pumping water across cities, up and down hills, we're using a ton of energy to drive those pumps. So even saving water is not just good for the rivers, lakes, and streams that it's coming from. It also helps us reduce the emissions from the energy used to move water around.

**Daniel Lawse:**

And once you have this list of strategies, and again, that co-creative process, people participate in what they help create, we bring the subject matter experts and kind of one layer out from that to talk about, "Okay, we want to drive down emissions 80%. How are we going to do it? We've got our data of what we're doing today, which areas are we going to target. Jack, what do you have? Sarah, what do you think? Lyn, what do you see from where you sit?"

**Daniel Lawse:**

And we create these strategies and prioritize them, usually about 12 to 18 months at a time because people are action oriented. And then you come back and you kind of do this ongoing, cyclical strategy identification prioritization. It's about having enough structure, but also leaving enough space for that creativity and the unknowns that might come up. You might find a grant that could fund a project that wasn't on your top list, but all the sudden it's available and you can do it.

**Daniel Lawse:**

Or you might find a partner in business who's going to come along, be like, "Hey, I've got this great opportunity for you." You're like, "No, this plan says we can't do that till next year." We can talk about these plans as a living document, and that goes back to the mindset shift too. It's not a strategic plan, it's strategic thinking.

**Lyn Wineman:**

Yeah, wow. Daniel, I love that you broke that down, because I think one of the worst things someone could probably do is invest the time and resources to create the plan. We've all seen plans that come in these lovely notebooks, they're 140 pages. They have tabs, and charts, and graphics. And then you put them on the shelf and a year later, somebody's like, "How, about that plan?" And you just feel bad. You just feel bad about it because nothing's happened. But breaking it down, making it happen, making sure you've got the co-creation and the flexibility and the thinking change, all of that is very good. Very good.

**Lyn Wineman:**

So this next question is it's hard to believe, but people come from all different places. And I know you deal with people who question the general theory of climate change. And I've actually heard you in person answer these questions before. But can you share with us, what do you say to people who don't believe this is real?

**Daniel Lawse:**

Well, this IPCC report puts any argument of that to bed. Unequivocally caused by humans. And if you don't want to believe it, then you truly are creating a made up belief system. So I say to you, do you fly in an airplane? Because the same physics that makes that airplane fly, and you trust that, are the same physics that scientists are using to prove that climate change is caused by humans. Do you benefit from gravity every day?

**Daniel Lawse:**

I mean, you don't have to believe in gravity, but it's still happening. So whether or not you believe in climate change or not, the case is closed. It's caused by humans. It's going to happen whether or not you believe in it. And this might sound a little harsh. At this point in my career, there are enough people who care and want to do something about it, if somebody doesn't believe in it, I'm honestly not going to waste my breath trying to convince them, because they've got some things going on that there's no way I can un-package and convince them otherwise.

**Lyn Wineman:**

That's a good point.

**Daniel Lawse:**

I'd rather spend my time and energy helping people help themselves and help the planet and be solutions focused.

**Lyn Wineman:**

Fantastic. So I hear the passion in your voice. I can see you because we're on Zoom. The people who are listening to the podcast can't see you. But Daniel, I'm just ... I'm inspired by your passion. And I'd really like to know more about your story. How did you get into this line of work?

**Daniel Lawse:**

I wanted to make the world a better place.

**Lyn Wineman:**

I love that.

**Daniel Lawse:**

I had a little bit of a savior complex. Like in retrospect, coming out of college, I was all gung-ho, I'm going to save the world. I studied social justice frameworks. I studied theology and world religions and what drives people and their belief systems. And I thought, "Man, the world needs some healing. And I'm going to help save it all." I quickly realized there's a lot of issues to tackle. And then, I kind of still cheated. I did some mental gymnastics, and I did realize though, there's truth in this, that underneath famine, underneath healthcare, underneath war, underneath poverty, we all live on this planet.

**Daniel Lawse:**

And in many cases, the environment, whether it was a lack of resources or too many resources, whether it was ecosystems that had a lot of vector-borne diseases, or those that had mechanisms to prevent that, the environment was this underlying piece. And then, fundamentally, I started to look at it and I'm like, "We are not in a good relationship with our planet, with nature. We're separated. We're instant gratification. We think that we live in this controlled, mechanistic world, that we humans have created, and we've separated ourselves."

**Daniel Lawse:**

So I realized that fundamentally, and this is my core mission, is to heal the relationship between people and the planet. And when can get in right relationship with the planet, guess what? It also helps us be in right relationship with other humans. And we all can begin to thrive. So that's the nutshell story of what led me into this. And then back in the day, there wasn't a career in sustainability. I had to make this up all the way along. And so often, I would get these looks of like, "What are doing? That doesn't make any sense. Why do you even care about this? Climate change isn't real." I've been in this mindset for 20 years now. And in this career pathway for a solid team. And I had to create so much of it on my own. And sometimes it got a little lonely. But now-

**Lyn Wineman:**

It's got to be rewarding now, right?

**Daniel Lawse:**

Yes. There are so many people. Nobody has to do this alone.

**Lyn Wineman:**

Yeah. Daniel, I love hearing that story. So you know, and everybody who listens to the podcast knows that I am inspired by motivational quotes. And you've said so many things today. But could you give us a few of your own, Daniel Lawse, chief century thinker, words of wisdom?

**Daniel Lawse:**

Well, playing on the title, shift from short term to long term thinking.

**Lyn Wineman:**

Yeah.

**Daniel Lawse:**

When you do that, everything changes. If you begin to ask yourself, "What are the impacts of my decisions? Not just on today, but seven generations from now? My great, great, great, great, great, great, great grandchildren?" I'm going to show up differently. I'm going to make different decisions. Another thing that I love, because mindfulness and meditation is so critical in my life because it is so much about how we think and how we show up.

**Daniel Lawse:**

I talk often about let's hold things lightly. When we hold things too tightly, whether it's an idea, or a focus on just one thing, or a relationship, we have to have space. We have to hold things lightly. We don't want to push things away, because that's not a way to engage the world. But we don't have to grasp so tightly to any one thing. And when we leave space, the other thing that I talk about is the spectrum of rigidity to chaos.

**Daniel Lawse:**

And the important thing for me is to swim in the middle. There's something called creative chaos. You need some chaos. You need some space for creativity. And then on the other healthy side of that is healthy structure. We need some structure. We can't just flop around. I mean, we have bones even for structure in our bodies. We need structure in our life as well. So I often look at my life and I say, "Am I being too rigid or way too chaotic? And how do I swim in the space between healthy structure and creative chaos?" And that's the dynamic nature of life. Life is always moving, and when I accept that, I can thrive within it.

**Lyn Wineman:**

Daniel, you have given us so much there. And if you are not, I do think somebody should be recording all of these Daniel-isms. We've gotten a few of them today, but I know there are more. So for our listeners who would like to learn more about your work, how can they find out more about Verdis Group?

**Daniel Lawse:**

The easiest way is [VerdisGroup.com](http://VerdisGroup.com). It's our website. We have case studies. We've got a great blog where we're going into thought leadership and critical thinking about some of these most pressing topics. And then we're on LinkedIn, Twitter, and Facebook, Verdis Group is where you're going to find us on those.

**Lyn Wineman:**

Perfect. We will have that web address in the show notes as well. So Daniel, as we wrap up this great conversation, what is the most important thing you would like our listeners to remember about the work that you're doing?

**Daniel Lawse:**

So much pressure. I think the most important this is that do what you can. And do it as quickly as you can right now. It is a code red. We all need to show up. And when we do, we can revive the patient. We can do this. It's going to be hard, but we can do it together. And what I want everybody to do, whether

you're at ... Maybe you're an owner of a business. Maybe you're an employee. Maybe you stay at home and tend to your home and your family. Whatever you do, you're making decisions every single day. Ask yourself, "Is this going to reduce emissions? Is this going to help heal the planet? Or is this going to make things worse?" And every single ... And you'll never be perfect.

**Daniel Lawse:**

That's that hold things lightly. Don't get all uptight like you have to be perfect. Give yourself grace and hold yourself with compassion. But every decision that you can make that leads us to a healthier, happier, more livable planet, your children, the neighborhood kids, the grandchildren yet to come, we stand on the shoulders of those who come before us, and the view is phenomenal. So what kind of shoulders are we going to leave for those who come after us? And every decision we make will help shape that future. I'm certain of it.

**Lyn Wineman:**

That's well done. Well done. Daniel, I've just got to say, I fully believe the world needs more people like you. I really appreciate you sharing your time and your knowledge and your passion and all of this great advice to save the world today.

**Daniel Lawse:**

It's been a pleasure, Lyn. Thank you.

**Announcer:**

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