

## The Breach 204: Trump's 'Dream Team' of Climate Change Deniers Threatens the Planet

Lindsay B.: Welcome to The Breach, your deep dive into authoritarianism and corruption in the era of Trump. I'm your host, Lindsay Beyerstein. If you're enjoying the show, please take a moment to rate and review us on iTunes, it really helps new people find out about the show.

My guest today is Mike Mann, one of the world's leading experts on the science and the politics of climate change. He's a Distinguished Professor of Atmospheric Science at Penn State University. Over the years, Mike has endured a truly shocking amount of harassment from right wing climate change deniers, but he's still standing strong and speaking truth to power.

He joins us today to talk about the Trump Administration's climate policy. Mike, welcome to the program!

Michael Mann: Thanks, it's great to be here with you.

Lindsay B.: In your book *The Hockey Stick and the Climate Wars*, you introduce us to a rogues' gallery of climate science deniers. How many of them have popped up in the Trump administration?

Michael Mann: Well, it's a veritable who's who in the world of climate change denial. I sometimes describe it as a climate change denial dream team, is what Trump has basically put together. Of course, Trump has relatively little to do with it. He's basically outsourced his entire administration to polluting interests, like the Koch brothers and ExxonMobil, and they've made sure to get their folks into key positions like Scott Pruitt, who's the EPA Administrator, is formerly the Attorney General of Oklahoma. As Attorney General of Oklahoma he ghostwrote papers, government documents, for fossil fuel interests, passing them off as official government documents. He's on record denying the reality of climate change, has connections with the Koch brothers.

Then you've got Ryan Zinke at the Department of Interior, who is another climate change denier. You've got Rex Tillerson, the former CEO of ExxonMobil, who is our Secretary of State, and of course as CEO of ExxonMobil he worked closely with Russia to try to get access to their untapped oil reserves. Of course, the thing that got in the way of that was the sanctions, which the Trump administration has worked hard, as we know, and has potentially conspired with Russia to get rid of those sanctions so that they can tap that oil.

Just today there was an announcement that the new head of the USDA is a climate change denier, and the new Trump spokesman who's replacing Sean Spicer, Anthony Scaramucci, is also on record as a climate change denier. That isn't a coincidence, that isn't a coincidence, because it really is the Koch brothers and polluting interests like ExxonMobil who are running the show. Trump himself is just a puppet.

Lindsay B.: I was amazed that Sam Clovis at the USDA was appointed to be the chief official in charge of responding to climate change vis-a-vis our food supply, so like, no big deal. He was the guy who also brought Carter "I love to talk to Russian spies" Page onto the Trump Team, and I have this feeling that it's kind of like a punishment almost, that he'd be the ambassador to France or something like that for delivering his home state, but he's actually been sent out to the USDA to deny climate change.

Michael Mann: Right, it's like a Siberian outpost. Yeah. That's right, and National Security, another example where climate change, just like food, climate change has a direct connection with national security. Here, we've heard fallacies coming from the Trump administration like, "Oh well, you know, you know, we have more important things to worry about than climate change, like ISIS." Well, in fact, if you understand the origins of ISIS, you realize that climate change probably played a key role in creating this unprecedented drought in Syria that drove rural farmers into the city, creating increased competition and instability, which ultimately created conditions in which a terrorist organization like ISIS could arise and thrive. In fact, all of these other threats and challenges that we face in many cases are actually exacerbated by climate change.

Lindsay B.: Can you give us a thumbnail sketch of the Paris climate agreement, which Trump withdrew us from with great fanfare in June?

Michael Mann: Yeah, and of course the latest news on that front is that he's reconsidering. He's considering reentering the Paris Agreement after the meeting that he had with the French prime minister, French president. The Paris Agreement was a monumental achievement. It committed all of the countries of the world, except for a few holdouts like Syria and now the United States, but nearly 200 countries from around the world committed to making major reductions in carbon emissions, on a voluntary basis but in a way that would be monitored and where they would have to face the peer pressure of maintaining credibility among their colleagues by meeting the commitment that they made in this agreement.

Those collective agreements, there are scientists who have tallied up the net effect if Paris is implemented, it would be enough to cut the warming nearly halfway from where we would be headed under business as usual, burning the fossil fuels, towards a seven to nine degree Fahrenheit warmer planet. It gets us about halfway to the three and a half degree Fahrenheit, two degree Celsius limit, that many of those who studied the impacts of climate change have said that that's really where we enter into dangerous territory. It gets us halfway to where we need to be. It doesn't get us all the way there, but it puts us on a path where we can see, ultimately, reducing carbon emissions enough to avoid catastrophic changes in climate.

Lindsay B.: What would life look like having gotten half of the way there, versus not having gotten half of the way there? What would it mean for our day to day experience of the climate?

Michael Mann: Yeah, that's a great question. Too often, the issue of climate change is framed as if it's some sort of cliff that we go off. You're at two degrees Celsius, three and a half Fahrenheit is often described as the dangerous limit, so people think that somehow that's a cliff that we go off at two degrees Celsius warming, and there's nothing that can be done if we exceed that. That's just not the case. It's much more like an ever down-sloping highway where the further down that highway we go, the worse danger we get into, and we want to take the earliest exit that we can get off on. If we can't get off on the two degrees Celsius exit, then we want to get off on the two point five, and if not the two point five, then three.

Things get worse and worse the more warming that we allow to happen, and already by some measure, dangerous climate change has already arrived. If you're a low-lying island nation, if you're a farmer in California, or Oklahoma or Texas, which faced the worst drought on record in 2011, agriculture and livestock were devastated, if you live along the coast of Florida and you face now perpetual flooding because of global sea level rise, already beginning to inundate Miami Beach, and on and on. Any of the locations that have experienced thousand-year flooding events, and we've heard that term used over and over during the past two years, floods that shouldn't happen more often than once in a thousand years by chance and they're happening regularly now in the US. We are seeing dangerous climate change already, and it's simply a matter of how much more dangerous are we going to allow it to get, how much more damage are we willing to commit to?

Whether or not we can meet any one particular threshold, whether we can keep warming below one and a half degrees Celsius, as some have argued we need to do, or two degrees Celsius, which Paris is more or less guided by that target, that two degrees Celsius target, regardless, the key here is to minimize the warming, is to act as fast as we can to prevent any additional warming.

Lindsay B.: Trump tried to frame this as an assault on American jobs in almost conspiracy-theory-like terms. What his argument for why this would cost us jobs, and what do you think of that argument?

Michael Mann: Yeah, well, in Trump's case it's dangerous to attribute malice to what can better be explained as ignorance. But those who are advising him, and those who are really guiding the policies, who are crafting the policies of the administration, which again are really associates of the Koch brothers and polluting interests, have used that cynical argument that it's supposedly about jobs when in fact it's plainly evident that the opposite is true. The rest of the world -- China, India now, the European nations -- recognize that renewable energy is the great economic revolution of this century. They're getting on board, and those countries that are getting on board, in the renewable energy revolution, are going to be the countries who lead economically this century. Instead, the Trump administration, the fossil fuel lobbyists who run the Trump administration, have instead done everything they can to block progress on renewable energy, to keep us locked into this fossil energy source, fossil fuels, to the detriment of our economy, to the detriment of the American people. There's a good chance that if the Trump

administration is making an argument for doing something, just the opposite is likely true.

Lindsay B.: The president keeps fuming about how China's allowed to build all these coal plants and the United States is not because of the Paris Accord. What is he talking about?

Michael Mann: Yeah, so again, if Trump and the Trump administration is saying something, then there's a good chance the opposite is true. In the case of China, that is five-year-old rhetoric, outdated rhetoric. It's erroneous, it's false, it's an untruth. China is actually decommissioning coal-fired power plants now, and they are actually well ahead of the commitment that they made to the US in the bilateral agreement between the Obama administration and China a couple years ago. Ironically, China's doing much more than us. They are investing far more in renewable energy. In fact, they have flooded the global marketplace with inexpensive solar panels. They've brought down prices for solar panels around the world. That's a ruse. It's untruthful, and it's a talking point that's repeated because, simply, an untruth that's repeated often enough, too often, becomes accepted as the truth, and that's what's going on here. What Trump is saying, and what others who point to China to claim to that they're not holding up their end of the bargain, it's just not truthful. The opposite is actually true. We're the ones now who are not holding up our end of the bargain.

Lindsay B.: If Trump is really going to come back into the Paris Agreement, what would that look like? It seems unlikely that he would simply re-sign up without some concessions from the other side. Is there any feasible path back in that would be acceptable to the other signatories?

Michael Mann: That's a good question. Yeah, it's a really good question. In principle, actually, because it's a voluntary agreement, being back in the Paris Agreement simply amounts to saying, "We're back in it." There's a good chance that we will meet our obligations under Paris, even in the absence of leadership by the White House or by congressional Republicans, because there's so much progress being made at the state level, at the municipal level. States like California, the entire West Coast, the New England states, are ramping up renewable energy, introducing incentives for clean energy, and in the case of the West Coast states putting in a cap and trade system to limit carbon emissions. There is enough progress taking place that we may well meet our obligations under Paris, regardless of what Trump says.

To some extent, when he said he was backing out of Paris, that was a hollow statement because in fact he doesn't really have much control over that, especially because it's a voluntary agreement. It was simply a matter of symbolism, and it conveyed to many of us here in the US, and it conveyed to the rest of the world, the notion that the Trump administration was going to do everything they could do block progress and to double down on fossil fuels and to eradicate incentives for renewable energy, and they are doing those things. They are trying to put that in place, but they just don't have enough influence over our economy, over the economic machinery of our economy today, to really make

that much of a difference

The flip side of that is, it's very easy for him to say that we're back in Paris. It's a matter of him simply stating so. But you have something else which is important. He has also said he wants to renegotiate. Well that's ridiculous, right? This is a treaty that was signed by nearly 200 countries after years of negotiation. The idea that he could just somehow renegotiate unilaterally this treaty with the remaining nearly 200 nations around the world that have signed onto it is silly.

Lindsay B.: How many years did it take us to get the existing Paris Accord?

Michael Mann: These things are rolling in a sense, because we've had a series of conferences at the party. There was Copenhagen and then there was Doha and then there was Rio, Cancun I think, I'm forgetting. There have been an ongoing series of conferences at the party, meetings under the United Nations Framework Convention on Climate Change, and the progress has been incremental until Paris, that was the major achievement, but it was the result of ongoing sort of negotiations for years, arguably ever since the first meeting of the United Nations Framework Convention, I believe in Rio back in the early 1990s.

Lindsay B.: Where does public opinion stand on climate change right now? Where's the general public, compared to the scientific consensus?

Michael Mann: Yeah, so there's been some interesting polling on that. The acceptance by the public of the science of climate change right now is close to an all-time high. One can attribute that, in part, to the fact that people are seeing the impacts of climate change. They understand they're seeing unprecedented events, that something is wrong, something is different, and they understand that. No amount of climate change denial propaganda can convince people not to see with their own two eyes. Impacts of climate change are no longer subtle. We're seeing them play out in the 24 hour news cycle on our television screens, newspaper headlines, and in our everyday lives. As a result, the most recent polling that I've seen shows somewhere upwards of 70%, I think, now of the public at least recognize that climate change is real, that it's happening. Perhaps somewhat lower percentage if you start asking more nuanced questions like, "How much of it is due to human activity?", et cetera, but basically people know that something is changing.

They also, if you poll, for example, on whether they support among the American public for transitioning toward renewable energy and incentives for renewable energy, there's overwhelming support for that. Upwards of 80% of the public says, "Yeah, we ought to be moving away from fossil fuels." Almost implicit, whether or not they realize it, in the answer to that question is the recognition that there is a cost in our continued reliance on dirty energy. So, depends on the framing of the question.

That having been said, as you allude to, there is still this gulf between the public acceptance of the science, even if it's now as high as 70%, and what actual scientists understand, where there's upwards, anywhere from 97 to 99% of

scientists who have published on the issue or who work in this area, depending again on the polling, recognize that climate change is real and human-caused. There's an overwhelming scientific consensus there, about as strong as the consensus on gravity. I mean, you just don't get stronger consensus – “consensi” -- then you have with climate change in the scientific community.

So there is this gulf between 70% or so the public, 97, 98, 99% of the scientific community, and the reason for this gulf is this massive disinformation campaign that has been waged by fossil fuel interests and the Koch brothers and other bad faith actors who have sought to pollute the public discourse, to confuse the public and confuse the policy makers. Through tens of millions of dollars of investment in a massive PR campaign, and what that campaign has bought is that gulf between where the scientific community is on this issue, near unanimity, and the public, which is not nearly as high, although now pretty clearly at least a majority.

Lindsay B.: I see a lot of false equivalence going on. It feels like scientists who are actually doing real, valid scientific inquiry are kind of being forced to compete on a playing field with a bunch of Fox News opinion.

Michael Mann: You're right. Yeah, and I mean in part that is a manifestation of sort of our modern corporate media environment. I think there's a problem when media organizations are corporate entities and they advertise for fossil fuel interests. I think there's a conflict of interest there, and I think that conflict of interest is, in part, why our media has too often treated the science as if it is a debate between two equal sides when, if you're familiar with the famous John Oliver sketch where he invites ... He's got two people on the stage, a climate change denier off the internet and my good friend Bill Nye the Science Guy. Then John Oliver says, "Wait, hold on," and brings 96 white-lab-coat-wearing scientists onto the studio floor to convey exactly what we were just talking about, that if you're going to have a real discussion, then it's more like 97% to 3%, or 99% to 1%.

We do a disservice to the public discourse when we pretend that there's a legitimate debate. It would be like us entertaining mainstream media organizations regularly entertaining the notion that there's a debate about whether the earth is flat or not, and hosting debates between a NASA official and the president of the Flat Earth Society. That is a way to litigate overwhelming consensus science.

Lindsay B.: What does it say about Scott Pruitt's approach that he's advocating for televised debates of climate change?

Michael Mann: It conveys that he's just a shill for polluting interests. It's not clear he's a terribly intelligent man, but he certainly is intelligent and learned enough to know that there is a strong scientific consensus about climate change. It's simply Pruitt, and the polluting interests who installed him in that position, going by the trusted playbook of creating this false balance, this notion that there's a debate, because they know, in the focus groups they've conducted, in the polling they've done, they understand that as ... First of all, they understand they can't win the

argument because they're on the wrong side on the science. But they understand that, from the PR standpoint, as long as they can maintain the notion that there is a debate within the scientific community, that's all they need basically to continue an agenda of inaction. As long as the public thinks that there's a debate, they won't demand that action be taken, and the polluting interests understand that and so this is all-

Lindsay B.: It's human nature, because if there's something disagreeable that you don't want to do, and you can convince some tiny portion of your brain that-

Michael Mann: Exactly. That's right.

Lindsay B.: ... Maybe they won't have this test anyway, so I don't have to study.

Michael Mann: Exactly, you're absolutely right. Even those who are not necessarily led to deny the science at least are led to entertain the notion that there is some debate, and there is the possibility that it's wrong, and there's so many other things on their agenda, putting food on the table, that if you think that this is an overblown problem or might not be the problem that scientists have said it is, it's easy to sort of demote that in your sort of hierarchy of needs and wants. That's part of why they maintain this fake debate, so that they can get people to, again, to demote climate change as an issue, a priority for them.

Lindsay B.: And they manage to take advantage of the good impulses of journalists as well as the bad impulses, like sensationalism and laziness, that journalists, we don't want to be wrong, and so if it's even possible that we might be wrong, conscientious journalists will want to include both sides as long as that's even possible, because we don't want to be biased. It seems like they've hacked both the good and the bad side of this.

Michael Mann: Yeah, yeah, that's a very good point. It's almost as if they have done research on sort of the journalistic psychology and they know where the weak points are, just like they've done in their efforts to undermine science. They've done focus groups, they've done polling, they've research to try to figure out what arguments are most effective in confusing people. Doubt Is Our Product is the title of a book that described the tobacco industry's campaign, which is very analogous to what the fossil fuel industry is doing today.

You're right. I talk with a lot of journalists, I've gotten to know the journalistic community, especially environmental journalists and science journalists, quite well, and I have a very high opinion of them as a group. But we all have vulnerabilities, and just as you say, journalists, they don't want to be wrong and they don't want to be accused of bias, so sometimes ... This is sort of what I call working the refs, it's a sports term, but we see that happening in journalism where the other side, sort of the right wing, and in this case the sort of climate change denial machine, is constantly badgering journalists whenever they write articles about climate change, and exerting so much pressure that journalists have tended to move towards that direction of false balance almost as a protection

mechanism. "Hey, don't criticize me, I express both views."

I think the journalistic community, like the science community to some extent, has been cowed by this sort of pressure campaign by polluting interests, climate change deniers. You see it in the scientific community. There's even a term that has been introduced in the lexicon called seepage, where scientists, when they're asked about the science, will tend often to understate the implications, just because of, out of fear of being attacked. And all the attacks are coming from one direction, from the climate change deniers, and so all the pressure is in that direction, and it moves the scientific community in this direction of reticence, and it moves the journalistic community in this direction of reticence.

Lindsay B.: Does the community of science communicators need to diversify or change its tactics to compete better with the deniers?

Michael Mann: I think they have to understand the rules of the game and the tactics that are being deployed against them. I can tell you, as a scientist, that you come into this very naïve. As a scientist, you're not trained in the world of rhetoric and communication. You're trained in math and science, and you sort of have to learn the other stuff through trial by fire. If you find yourself in the fray and you become active in communication, you have to learn this on your own because it isn't part of our formal training. Some have argued that maybe this needs to be part of the formal training.

Lindsay B.: Is that something that you're inculcating your graduate students with now?

Michael Mann: Well, I think that there's no way that they can not ... I almost don't have to, just because they're aware of my outreach efforts. They're aware of my prominence in the sort of larger public sphere when it comes to climate change. I think, even without necessarily having to explicitly talk with them, they sort of absorb a lot of that, and some of them do become quite passionate about doing outreach. I actually am the faculty advisor for a graduate student organization here called the Science Policy Society. It's a part of a national network, and these are scientists, graduate students, who are very passionate about policy, about communication, about outreach. I've worked with that organization. My feeling is that there's a potential backfire effect if we were to require all science graduate students to have some whole new set of course requirements. "Oh, and by the way, in addition you have to take this communication course."

Lindsay B.: "You have to go on public access TV."

Michael Mann: Right, right, and that could backfire. Let me tell you, there's some scientists who should never be on television, who should not be speaking to the public, and some of them are great scientists and that's what they should be doing. But there are a lot of, especially among younger folks coming into the field, a lot of really talented, really good communicators. I'm terribly impressed, actually, by this younger generation of scientists, and I think in part we're seeing that because they've been drawn to the field, in part, out of their interest in science

communication. They understand that climate change is an area where science communication has become really important, and we're getting students coming into this field who have quite a bit of interest in the communication side of things, and we have to make sure there are opportunities for them. We have to make sure that that potential is realized, that if they're interested and they have a proclivity for doing outreach, for doing communication, let's make sure that we make available the tools to them that they need and the training that they need.

What you're seeing is more coursework now that's offered, elective courses that you can take if you're interested in that area. At the scientific meetings like the AAAS meeting, American Association for the Advancement of Science, or the American Geophysical Union, most of the meetings I go to now, there are literally dozens of sessions now on science communication and public outreach. Ironically, the attacks against the science have actually spawned a far greater interest within the scientific community for outreach and communication. Truly a silver lining.

Lindsay B.: That's all the time we have for today. Thank you so much for coming on the program.

Michael Mann: Thank you. It was my pleasure.

Lindsay B.: And now it's time for recommended reading. This week's handpicked selection to help you make sense of our bewildering political moment. This week's reading is from Phil Carter of Slate. It's called "A Tweet is a Direct Order. Carter argues that military leaders who say the President's social media posts aren't policy are playing a dangerous game. Carter argues that Trump's tweets, like the abrupt announcement that transgender people can no longer serve in the military, should be taken as binding orders. He criticizes the military brass for saying that they are awaiting further instructions through official channels before kicking trans people out of the service.

I disagree.

The military is wise to draw a bright line between Trump's tweets and formal orders. We didn't have that norm before, but establishing it now could be a matter of life and death. We joke about the President stumbling into a nuclear war with a tweet, but that's not a theoretical fear. Trump tweeted, "After consultation with my generals and military experts, please be advised that the United States government will not accept or allow..." In the nine minute gap that followed, Pentagon leaders worried that Trump was going to announce some kind of military strike.

There was a time when every presidential utterance could be taken as a statement of policy because presidents knew that norm and measured their words accordingly. Trump doesn't do that. If Trump won't normalize the flow of information from the White House, the military is going to have to impose its own norms to stem the chaos.

Twitter is a medium known for boasts, jokes, taunts and games. It's also notorious for elliptical statements, misunderstandings, and the utter collapse of nuance. A tweet is also much less secure than other methods of presidential communications, so it's foolhardy for other decision-makers to assume that what's coming over Twitter is really the president without double-checking.

Carter's worried that the military might usurp the president's authority by dragging its feet on tweets it doesn't like, but there's the opposite risk, too. The military could find excuses to pursue its own agenda based on the president's ambiguous and often contradictory Twitter stream. We don't want the military scouring Trump's Twitter stream, attempting to implement whatever fleeting sentiments find their way into his stream of consciousness.

If Trump tweets "Build the Wall," the army corp of engineers should not go out and do it.

That's it's for recommended reading.

The Breach is produced by Nora Hurley for Rewire Radio. Our executive producer is Marc Faletti. Our theme music is "Dark Alliance," performed by Darcy James Argue's Secret Society, and I'm your host, Lindsay Beyerstein. Tweet your suggestions, comments, and questions to @beyerstein, B-E-Y-E-R-S-T-E-I-N, on Twitter. See you next week.