Climate Etc.

← Week in review – science edition

Road to Climate Neutrality →

Interview: Climate Change – A Different Perspective with Judith Curry

Posted on January 30, 2021 by curryja | 374 Comments

by Judith Curry

My recent interview on the Strong and Free podcast.

I recently did an interview with Christopher Balkaran on his Strong and Free podcast [link]

While I wasn't previously aware of Balkaran or his podcast, you can see why I agreed to this interview, from these excerpts from the 'About' page:

"I created the Strong and Free Podcast to explore news topics by gathering multiple perspectives together and allowing people and organizations to discuss their opinions with detail. This allows for a nuanced conversation. It also means putting aside my own bias to explore these to the fullest. It means making all guests feel welcomed to share their opinions safely, without fear that the host will paint them into a corner, or make them sound incoherent. I want this place to be truly safe. I believe everyone, even those I disagree with, deserve to be treated with respect and to be on the Podcast to share their perspective. It also

TWITTER

- A transcript of my recent interview with @StrongnFreePod judithcurry.com/2021/12/04/int… https://t.co/gviQGzQRQw 2 days ago

SEARCH

Search

DENIZENS

Denizens Denizens II

RECENT COMMENTS

- daveburton on Solar variations controversy
- daveburton on Solar variations controversy
- climatereason on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- George Sharpe on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Ireneusz Palmowski on Interview: Climate Change – A Different

means having a concrete discussion on issues and determining the best way forward. As long as we restore thoughtful approaches to the biggest issues of our time our conversations will have deep, valuable meaning. And, we enrich our own opinion."

We covered a lot of topics that I think will provide good fodder for discussion and debate here.

Here is a transcript of the interview (quicker to read than to listen to the hour long podcast). I edited the transcript eliminate thousands of 'like', 'you know', 'okay' (I am really a much better writer than speaker). I also edited to increase overall coherency of what was said.

Transcript:

Welcome to the Strong and Free podcast where my goal is to showcase multiple perspectives on the topics and ideas of our time, regardless of your politics and views, you will find a home here because I simply have no agenda to push. My name is Christopher Balkaran and let's start the conversation.

Christopher Balkaran: So I wanted to pose this question to you, even though I know you can't reply because this is a podcast. But how often have you heard from scientists who are respected in their field that have openly questioned and been critical of the findings and the climate modeling put forward by the intergovernmental panel for climate change? I know I haven't, and I know the majority of us probably haven't. So I want to just sit down with professor Judith Curry. Professor Curry has been openly critical of the intergovernmental panel for climate change. Professor Curry openly accepts that climate change is real and it is happening, but the topic is so, so complex. And so determining what governments need to do is also complex.

But so often today we hear about these very simple slogans and solutions to climate change, you know, just to accept the science and provide a rebuttal or to meet these, these lofty targets at a global scale, which is so challenging because

Perspective with Judith Curry: Part II

- jeffnsails850 on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- jim2 on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- jeffnsails850 on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Brian Bishop on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Peter+Kloeppel on Solar variations controversy

RECENT POSTS

- Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Public ClimateBall
- Solar variations controversy
- The Next Environmental Crisis
- Week in review – science edition
- Challenges of the clean energy transition
- Radiative energy flux variations from 2000 – 2020
- IPCC AR6: Breaking the hegemony of global climate models
- Dubious climate science about the Texas cold disaster
- Week in review – science edition
- Cancel culture in climate change
- 15 minutes
- The IPCC's attribution methodology is fundamentally flawed

every country, every region has differentt issues, but getting countries around the world to all agree on common goals, is very, very challenging. So I wanted to sit down with Professor Curry to understand a little bit more about why the climate modeling that has been put forward by the IPCC is flawed y. And also what professor Curry would do if she were in power in terms of what policies should be pursued. I hope we can continue having these conversations with multiple perspectives on climate change.

Judith Curry: My pleasure. Thanks for the invite.

Christopher Balkaran: You are so well known in the climate change and climatology space. But before we get into that, I want to know a little bit more from you about what drew you to this space .

Judith Curry: Okay. I guess it goes back to fifth grade. I was in a little academically talented group that was selected for broader exposure to things, beyond the normal curriculum. And this geologist came to talk to us and I was fascinated. So I really started liking that. When considering majors in college, in the seventies geology was really too qualitative of a field. So I wanted to combine this with physics. And then at the university where I was, there was a program in meteorology, which had the sameconnection to the natural world, but seemed more physically based at least at the time. And then I continued on for my PhD at University of Chicago in the department of geophysical sciences. And this was late seventies, early eighties. My PhD thesis was on the the role of radiative transfer in Arctic weather. I wasn't really thinking in terms of manmade climate change at that point. But understanding the processes in the Arctic atmosphere and sea ice became a pretty important factor as global warming ramped up. And so, I still have my foot in what I would call the weather field, but I also do climate dynamics in the Arctic, but also more broadly at this point.

Christopher Balkaran: And how was the conversation on climate change in the seventies and eighties? Definitely we'll talk a little bit more about what it is today, but what were some of the major issues that climatology and environmental sciences?

- New Confirmation that Climate Models Overstate Atmospheric Warming
- IPCC AR6 WG1 discussion thread

CATEGORIES

Select Category

BLOGROLL

- A chemist in Langley
- AndThenTheresPhysics
- Bill Hooke
- Cliff Mass
- Climate Audit
- Clive Best
- Cultural Cognition
- Ed Hawkins
- HeterodoxAcademy
- Isaac Held
- Nick Stokes
- Paul Homewood
- Pragmatic Environmentalist
- Science of Doom
- SciMed Skeptic
- The Ethical Skeptic
- Watts Up With That?
- WoodForTrees

ARCHIVES

Select Month

EMAIL SUBSCRIPTION

Enter your email address to subscribe to this blog and receive notifications of new

Judith Curry: Climate change wasn't a really big issue at that point. At the time, it was all about geophysical fluid dynamics, trying to understand the circulations of atmosphere and the ocean, tradiative transfer, cloud physics. It was, it was very physics based. I would hear in the media about people talking about, Oh, the ice age is coming , or doom and gloom from CO_2 emissions, but nobody was really paying attention to all that very much in terms of what I would say the mainstream field until the late 1980s, really. There were some very rambunctious people who were talking about this publicly and painting alarming scenarios on both sides, the cold and the warm side, and most people that I knew and where I was, nobody was really paying much attention to all that.

Christopher Balkaran: It's so fascinating that you say that because you know, me being a kid of the nineties watching Captain Planet and other cartoons at a young age, all I heard of, on a much smaller scale was how important the environment is. It's taken over so many, so many spheres of our discourse. But in the late eighties, you start seeing this kind of discussion on climate change. What do you think are, were some of the underpinnings that guided both sides, was kind of this kind of protest towards big oil or capitalism more broadly?

Judith Curry: Well, a lot of it comes from the UN Environmental Program. At the time, there was a push towards world government, socialistic kind of leanings, don't like capitalism and big oil. A lot of it really comes from that kind of thinking. And the UNEP was one of the sponsoring organizations for the IPCC. And so that really engaged more climate scientists and really brought it more into the mainstream. But in the early days, a lot of scientists didn't like this at all, they didn't think that we should be going in this direction. And this was even the World Climate Research program and the World Meteorological Organization, they didn't want to get involved in man-made climate change under the auspices of the IPCC.

They said, this is just a whole political thing. This is not what we do. We seek to understand all the processes and climate dynamics, we don't want to go there. And that was really a pretty strong attitude, through, I would say the mid

nineties, say 1995. We had the UN Framework Convention on Climate Change at that point, they're trying to get a big treaty going. And so defenders of the IPCC started pushing the idea that anybody who doubts us or challenges us, they are in the pay of big oil. After that, it became much more difficult to really challenge all that. And certainly by the turn of the century, anybody who was questioning the hockey stick or any of these other things were slammed as deniers and ostracized. And then after Climategate in 2010, the consensus enforcers became very militant. So it's a combination of politics, and some mediocre scientists trying to protect their careers. And, they saw this whole thing as a way for career advancement, and it gives them a seat at the big table and political power.

All this reinforces pretty shoddy science and overconfidence in their expert judgment, which comprises the IPCC assessment reports. And then at some point you start to get second order belief. I mean, it's such a big, complex problem. Individual scientists only look at a piece of it, and then they start accepting what the consensus says on the other topics. A scientist working on some aspect of the climate problem may know very little about carbon dioxide, the carbon budget, radiative transfer, all that fundamental science, but they will accept the climate consensus because it's easy and good for their career. And so it just becomes a self-fulfilling prophecy. And now we have way too much confidence in some very dubious climate models and inadequate data sets. And we're not really framing the problem broadly enough to really understand what's going on with the climate and to make credible projections about the range of things that we could possibly see in the 21st century.

Christopher Balkaran: Just as a student who is always looking at reports to understand a little bit more about topics, we have Statistics Canada. So always reading stats can reports on different segments of the population and how they're dealing with certain government interventions, whatever they may be. In October, I did a series on abortion in Canada and looking at the statistics behind abortion, and I had this kind of recurring thought about climate change. And that was if I'm a scientist and I want to fully study climate change in a specific way, I'm dependent in some part, perhaps a large part on government funding. And if government is politicized in saying climate change is happening and it's

human caused or, or whatever the case is, if my research doesn't align with that, I can see my research being defunded. And then I think, well, if the public is only seeing the research that government is funding or being a big a big contributor to the funding, It's not really unbiased research.

Judith Curry: Well, it's worse than that because the government funding is not that they just re reject those kinds of proposals. They make it hard for you to even submit them because their announcement of opportunity for proposals already implicitly or explicitly assume this, and they are soliciting proposals on impacts of manmade, global warming, regional impacts on whatever. So there's already either an implicit or explicit assumptions about all this. As a result, it's really the independent scientists, retired people, people in the private sector, independently wealthy people who are doing this work.

Christopher Balkaran: Professor from your experience, what do you think has been some of the major causes for this shift in how we understand climate change, especially given how recent relatively it is and why do you believe it's so politicized.

Judith Curry: Well, there is almost certainly a signal of manmade emissions the earth climate. All other things being equal, it's warmer than it would otherwise be. The real issue is the magnitude of man-made warming relative to the whole host of other things that go on in the natural climate system. And then the bigger issue is really whether this warming is dangerous. You know, a certain amount of warming is generally regarded by people as a good thing. But a whole lot of warming, isn't especially a good thing, especially if it's melting ice sheets and causing sea level rise.

Sea level rise operates on very long timescales. And the manmade warming that we've seen so far, I don't think is really contributing much to the sea level rise that we've observed so far. I mean, that's just a much longer term processes. And even if we stopped emitting carbon dioxide today, the sea level rise would keep rising. So, the climate system is way more complex than just something that you can tune, with a CO_2 control knob. That just isn't how it works.

Christopher Balkaran: And that's exactly what I want to chat with you about because you've been quite skeptical of climate change modeling. For those on the outside, looking in, it's extremely challenging for anyone to be that familiar or, have a good command of the science. A common theme I hear from my friends is I just accept the science when it comes to climate change. Can you explain to me why, first of all, so let's be clear that climate change modeling is very complex. And then why are you skeptical of current climate change modeling, and why am I the only one that feels that there's just not enough skepticism of climate change modeling and there's just blind acceptance sometimes of what we're being told.

Judith Curry: Okay. The climate models originated from weather forecast models, and then they added an ocean then land surface biosphere, and then chemical processes, and now ice sheets. They keep adding all these modules and increasing complexity of the models, but the basic dynamics are driven by the same kind of models that model the weather. We've learned a lot from climate models, by running experiments, turning things off, turning things on adjusting parameters, taking clouds out, taking sea ice out, holding the sea surface temperature constant in the tropical central Pacific and see what happens, you know, we learn how the climate works by using climate models in that way. However, the most consequential applications of climate models are to tell us what caused the 20th century climate change, how much the climate change is going to change in the 21st century and what's causing extreme weather events.

I mean, those are the more consequential applications and climate models aren't fit for any of those purposes. And that's pretty much acknowledged even in the IPCC report. Well, they, they do claim that they can attribute the global warming, but this can't be easily separated from the natural variability associated with large-scale ocean circulations. And the way they've used climate models to do that involves circular reasoning, where they throw out climate simulations that really don't match what was observed. So you, you end up, even if you're not explicitly tuning to the climate record, you're implicitly tuning. And then the thing with extreme events, weather events is beyond silly because these climate models can't resolve the extreme events and they can't simulate the ocean circulation patterns that really determine the locations of these extreme events.

And then when you start talking about 21st century, the only thing they're looking at is the manmade human emissions forcing, they're not predicting solar variability.

They're not not predicting volcanic eruptions. They can't even predict the timing of these multidecadal to millennial ocean oscillation. So all they're looking at is this one little piece. Okay. So, what are you supposed to do with all that? Not sure we know much more than the sign of the change from more CO_2 in the atmosphere, which is more warming. And then there's another thing. The most recent round of global climate model simulations, the so-called CMIP5 for the IPCC 6th assessment report. All of a sudden the sensitivity to CO_2 the range has substantially increased in a lot of the models, way outside the bounds on the high side of what we thought was plausible, even five years ago. So what are we to make of that? And how did that happen? Well, it, it's a, it's a rather arcane issue related to how clouds cloud particles interact with aerosol particles.

By adding some extra degrees of freedom into the model related to clouds, then it becomes all of a sudden way more sensitive to increases in CO_2. What are we supposed to make of that? I mean, we do not have a convergent situation with these climate models. And this is not mention that the 21st century projections from the climate models, don't include solar variations. They don't include volcanoes or the ocean circulation, all of these things that they don't include. So what are we left with? And then there are these precise targets, such as we will exceed our carbon budget in 2038. This is way too much precision that is derived from these very inadequate climate models.

Christopher Balkaran: Everything that you said professor makes so much sense, and I can't understand how results from the climate models can totally shift the politics of almost every nation in the world including Canada here. Every single major political party has an entire section in their policy platform about climate change and what their government would do to fight it. That wasn't always the case and routinely political parties were challenged for not doing enough. We need to have a healthy level of skepticism here.

Judith Curry: Well, first off, people are looking for simple problems with simple solutions, and they thought that climate change was a simple problem, sort of like the ozone hole. Stop emitting chloroflourocarbons – stop the ozone hole; stop emitting CO_2 – stop the global warming. There's no way we're going to make progress on CO_2 emissions until we come up with alternatives that are reliable, abundant, secure, economical, et cetera, Wind and solar, aren't the answer. All other things being equal, everybody would prefer clean over dirty energy. That's a no brainer, maybe a few coal companies prefer dirty, but everybody would prefer clean, clean energy, but they're not willing to sacrifice those other things like cost and reliability.

So it just doesn't make sense. All of these targets and promises about energy are just so much hot air, if you will, sound and fury. We don't have solutions and nobody's meeting their targets. I mean, all they do is go to these meetings, make more and more stringent commitments that everyone knows aren't going to be met. And at the same time, we're not dealing with the real problems that might be addressed. For example, water is a big issue, we either have too much or too little. Independent of man-made global warming, let let's sort out our water supply systems and our flood management strategies. How, how do we prepare for droughts? Lets focus on the current problems that we have – food, water, and energy. Those are the three big ones.

And the other thing, while we're trying to make energy cleaner, we're basically sacrificing grid electricity for many parts of Africa and we're inhibiting their development. How does that help human development and human wellbeing? It makes no sense. Even if we were successful, say stopping CO_2 emissions by 2050 we might see a few tenths of a degree reduction in the warming by the end of the 21st century, how does that help us now?

What we should worry more about is our vulnerability to hurricanes and floods and wildfires, and all of these kinds of hazardous events that have happened since time immemorial. Whether or not they get a tiny bit worse over the course of the century is less important than really figuring out how to deal with them now. If we are concerned about reducing our vulnerability, all the money that we

spend thinking we're reducing CO_2 emissions, it could be applied to these other problems, such as better managing water resources, decreasing our vulnerability to extreme weather events and so on. So there are many more sensible things that we could be doing.

It's an opportunity cost – all of this focus on trying to reduce emissions with 20 century technologies distracts from addressing the fact that we need new technologies.

Christopher Balkaran: When you look at ancient societies, they dealt with the immediate needs and immediate concerns. And I think what I want to emphasize too, is we're not saying governments aren't doing this. I'm sure they are, but to the extent in which they can be doing them and making them a priority, as much as they're making, you know, the Paris Accords, climate change targets.

Judith Curry: Actually people are doing a lot less of that than you think, because, you know, especially in the developing world, such as South Asia where they just get hammered with hurricane after flood, after whatever. Each one of these events sets them back a generation in terms of trying to get ahead – they lose all their livestock and seeds and, it sets them back enormously. Then we spend all our money trying to clean up the mess afterwards. Why not help them develop adequate grid electricity so they can develop economically and better protect themselves. Again, the problem is over simplifying the problem and the solution, and then tying this in with some broader political agendas, such as anti-capitalistm and world government. Many people have bought all this largely because they've been scared.

Christopher Balkaran: You know, professor, everything that you've said is very reasonable and, you know, most people they, those familiar with the scientific method would think, Oh, this makes a lot of sense. And yet in January, 2017, you leave academia because of their very poisonous nature on human caused global warming. And I know for a fact that there are so many people that share that this idea of they can't even have a conversation anymore.

Judith Curry: I regard myself as sort of a centrist. I'm politically independent. I don't have any allegiance to one side or the other.. I understand the complexity of the problems, and I don't really advocate for any solutions because I can't think of any that I would want to advocate for that actually makes sense. You know, other than broadly talking about, we need to adapt no matter what, and if you want clean energy, you need to invest in better technologies. You're not gonna get very far in preventing climate change by trying to massively deploy 20th century technologies. These are the kind of general statements that I've been making. But because I wasn't actively advocating with the greens and I was critical of the behavior of some of the scientists involved in the climate gate episode. I got booted over to the denier side. And they tried to cancel me. I don't have any allegiance to the extremes of either side of this, but the alarmists seem to be completely intolerant to disagreement and criticism.

There's crazy people on both sides of the debate. There's a range of credible perspectives that I try to consider. it's a very complex problem and we don't have the answers yet

Christopher Balkaran: And it's fascinating to me that being in the center puts you at odds with academia and that you felt forced out almost because of the very poisonous nature. To me, it's like the there's an extremist view that has taken over academia and has taken over our discourse. I want to learn from you, how can we reverse this? And re-institute a healthy level of skepticism and saying, I don't accept fully the IPCCs modeling because there are gaping holes in it and we should be able to talk and convey that message in a straightforward manner.

Judith Curry: Well, you know, I wish I knew. There's a social contract between policy makers and the scientists, which sort of reinforces all this. I thought maybe that could be broken with president Trump, but a whole lot of other things got broken under president Trump, but not that one in particular. So, I don't know what it would take. At some point we're going to hit another slowdown in warming. And then maybe that will wake people up a little bit more. We just have to wait and see how the climate change actually plays out. We could

be waiting 30 years, which is a long time during which a lot of stupid things can happen in the meantime.

Christopher Balkaran: I just want to quickly mention your blog Climate Etc, which is filled with articles. I had Andy West on, and he's talked a lot about the cultural narrative that's been built. But there was a really interesting quote that I found in one of your articles. You said "we're breeding a generation of climate scientists who analyze climate model outputs, who come up with sexy conclusions and get published in Nature. Like we won't be able to grow grapes for wine in California in 2100, that kind of stuff gets headlines. It gets grants. It feeds our reputation. It's cheap, easy science. But t's fundamentally not useful because it rests on inadequate climate models, especially when you're trying to look at regional climate change. That is where the field is going. We've lost a generation of climate dynamism, and that's what worries me greatly."

Judith Curry: Okay. I call that climate model taxonomy, where you look at the outputs of climate models mostly regionally, and then over interpret them, relating the output to some really bad impact act. But it's scientifically completely meaningless. First, the climate models don't have any skill on regional spatial scales. And second, when climate scientists start making these linkages with wine growing or whatever, they forget a whole lot of other ancillary factors like land use and, all sorts of other things that can contribute to whatever they might be looking at. And it ends up with climate change being the dominant narrative for everything that's going on. And that's just simply not the case. With the over-reliance on climate models, climate dynamics is really becomes sort of a dying field.

You know, I was old school at the university of Chicago with geophysical fluid dynamics and all this really hard stuff. Okay. Now people do statistical analyses on climate model output, and we've lost our sense of understanding of how the atmosphere and the ocean interact to produce our climate. There's very few universities that have good programs in climate dynamics at this point. And you don't see a lot of students in those research groups, they rather do the sexier, easier climate model taxonomy studies. Climate dynamics is still there, but it's

far from dominant. I mean that you geophysical fluid dynamics, clmate dynamics that ruled in the sixties, seventies, eighties, and even into the nineties, but in the 21st century, we've seen that really become like a renascent subfield, with climate model taxonomy ruling the roost.

Christopher Balkaran: And that taxonomy captivates on the emotional level and allows us to override our ability to be rational and be able to say, let me be okay with being challenged on this. And my followup to that is if you're president of a university, how do you make sure that climate dynamics is part of your environmental science bachelor's degrees and master's,

Judith Curry: Well, it's so low on the totem pole of what people high in higher university administration worry about. I mean, you still have like meteorology undergraduates learn about atmospheric dynamics. There aren't too many oceanography undergraduate programs, but when you go to graduate school in oceanography, you get a lot of fluid dynamics. But there are all these new degree programs spinning up in climate, that are far away from the geo-physical roots. These new programs combine policy with a little bit of science and economics and whatever. And then the science part of it basically gets minimized. And that's where all the students are running to these environmental science, climate policy kinds of programs, leaving a talent dearth of people with the good mathematical physical mindset and wanting to enter into the more challenging fields. So, these more difficult fields are not especially thriving.

I mean, they don't bring in the big bucks in terms of research centers and whatever. It's hard to maintain them. A couple of years ago, I visited University of Chicago, my old Alma mater, and they still maintained their very strong focus on the dynamics. There was nobody there running climate models and doing this silly stuff, and they didn't have a lot of students and they didn't have hardly any funding, but they were carrying the torch and doing fantastic work. Unfortunately, that's not where the that's not where the center of mass is – its in these new climate policy degree programs or environmental studies kind of programs. As a result we've lost a lot of our infusion from physics. There, there still is an infusion from chemistry, more on the atmospheric chemistry. Part of

this seems to be thriving, relatively relating to air quality and complex chemical reactions in the atmosphere. That seems to be thriving. But I would say the more physics based side of all this is really dwindling.

Christopher Balkaran: And that's my worry. As someone whose parents are first-generation immigrants to Canada, education is number one priority. That's why so many people from around the world come to North America for education. And if something as important as climatology is becoming politicized and politically motivated, I worry about that. We're training the next set of leaders that are not solidly versed in atmospheric sciences to be briefing the government . And that should worry more Americans Canadians as well.

Judith Curry: Yeah. you know, people have said Trump is anti-science. I don't think he's anti-science, he just doesn't pay attention to it. What he pays attention to is energy policy. This doesn't necessarily make you anti-science it makes you ignoring science, so it's different. So that's what we've seen in the U.S. under the Trump administration. And then we have on the other side of the aisle, politicians say "I believe in science" and they don't understand anything about it. They say they believe in it. It's like they they're believing in Santa Claus. it's really a political and cultural signifier rather than any real understanding. So it's just become so politicized, you know, how do you get around that? How do you get past that? I don't know.

Christopher Balkaran: Can you talk about what the Obama administration got wrong in the eight years while they were in power? When it comes to climate change?

Judith Curry: Okay. Well, the first four years, Obama saw that climate change was a political tar baby, and so he pretty much ignored it and went on and tried to do other things where he thought he could be more successful. I think that was a good choice. He picked up on climate change in his second term, but he politicized it. John Holdren, his science advisor really politicized it. President Obama was tweeting about deniers and stuff like that. And on the White House web page, there was stuff about calling out the climate deniers, and it was very

polarizing. I think a lot of the polarization that happened in the U S, really accelerated during Obama's second term. Then you get whiplash with the Trump administration who, doesn't care about climate change. He does care about energy policies, you know, he was on a completely different tangent.

Christopher Balkaran: So that's fascinating. What I try to do is put the guests in the driver's seat. If you were president of the United States what would you say would lead to effective climate policy knowing what you know. I wanted to ask you what you saw as effective climate policy and what parties should pursue.

Judith Curry: Well, first is reduced vulnerability to extreme weather events. Second is like clean up the real pollution, like air and water pollution, dirty stuff. You know, I don't see any way to make coal clean. I mean, this whole thing about all fossil fuels are terrible. Some are much worse than others. Coal does so much damage to the environment, strip mining and coal ash and all this other kind of stuff, apart from CO_2 emissions. Get rid of coal and acknowledge that we need natural gas, at least for awhile. And then focus on research and development for new energy technologies: next generation nuclear power, a 21st century transmission grid, etc.. The other thing is managing our water: too little, or too much. If you do these things, you're going to improve human wellbeing, regardless of what the climate is doing.

Judith Curry: The climate is going to change independent of what we do with emissions. People think climate change equals the CO_2 control knob. With that kind of thinking, we're bound to be surprised by what happens with the 21st century climate. I won't even hazard a guess as to whether something really crazy will happen, or whether it could be relatively benign. A lot of people are talking about a solar minimum in the mid to late 21st century that could very well happen and have a significant impact. We just don't know. Thinking that we can control the climate is misguided hubris.

And we need to electrify Africa and we need to help people in South Asia and central America so they're not so vulnerable to these extreme weather events,

help them develop economically help them become less vulnerable to these events. These are things I would focus on. This makes much more sense than setting emissions targets and then trying to enforce them. These targets aren't going to change the climate on a meaningful time scale. It's just going to screw up the economy. And at the end of the day, it's an opportunity loss when we could have spent all that effort doing these other things that would have made a real difference.

Christopher Balkaran: Yeah. just on coal, I know that there are there are places like in Canada which I'm sure it's the same in the United States. You know, wind and solar are much easier. Hydro is much easier. But coal seems the cheapest solution. You can get energy the quickest and perhaps the fastest over large amounts of distance. And it might be harder for those regions to switch over to something more renewable or less damaging to the environment. And a lot of people talk about that switch and how costly that can be.

Judith Curry: Well, I think natural gas can do anything that coal is doing. So natural gas is a much cleaner transitional option. You need one or the other in the near term. When the wind isn't blowing and the sun isn't shining, you can't fire up a nuclear power plant, turn it on and off. Having wind and solar in the mix really means you do need coal or natural gas because you can switch it on or off. So the more wind and solar you add, the more reliant you're going to be on gas. Regarding battery storage, until we get new storage technology, there isn't enough lithium in the world for all that storage. Rethinking and re-engineering the grid could also better redistribute wind and solar generated energy.

Apart from the storage issue, wind and solar use so much land space. It's the land use that is bad. A nuclear reactor uses tiny fraction of the land space. I mean, there's environmental issues related to mining and storage for nuclear power, but those seem to me a lot easier to address than the issues related to wind and solar. So I think on balance, you know, nuclear is probably the best solution based on our current on the near horizon technologies that will be available.

Christopher Balkaran:

It's fascinating. You mentioned that land use, because I have another professor from the university of British Columbia coming on the podcast. And there's an article recently about indigenous communities in Mexico, worried about solar farms near their traditional lands that take up the majority of the land. And the same is true with biofuels and ethanol production. The amount of agriculture that's necessary for trucks to be powered by biofuels is, you know, the amount of land that's needed is, is quite a bit. So if there's negative externalities with this switch, as you just mentioned these are really fascinating thoughts, professor. You know, I love the idea of, you know, helping the developing world. I know Pakistan is going to suffer from severe water shortages over the next 20 to 30 years.

Judith Curry: The population of Pakistan is exploding. Right after the big floods in 2010 my company got involved trying to help Pakistan with flood forecasting and, and water management and whatever. And my colleague, Peter Webster even went to Pakistan with a delegation from the World Bank, but the whole issue was so politicized as to even who would be allowed to help. And at the end of the day, I don't think anybody helped. We have a solution, but getting it through the political process and implementing it, was a hopeless situation. So, part of the problems is governance within country. And this is apart from the issue of financial and somebody coming up with a real solution, but in country governance can be a real impediment in many of these places. So a lot of tough problems out there.

Christopher Balkaran: And again, if there's anywhere we can coalesce around common goals and hopefully get governments of all different stripes to commit to. I mean, that's always the ideal. But I think about what we're doing on climate change and the Paris accord and do that in the reverse, but on critical real issues

Judith Curry: There's one example from today in the U.S, they're passing the new budget and wanting to get a rider included related to clean energy. And what

they agreed on was an R & D program for nuclear, carbon capture and all that kind of stuff. And the people on the left really objected to it because they don't like nuclear just because they don't like it. And they don't like carbon capture and storage because that lets the oil companies off the hook. So, so the hard core green activists don't like either one of those. Here you have a bipartisan agreement to do something that is fundamentally pretty sensible. Then you've got the people on the far left objecting to it over silly biases and things that just make no sense

Christopher Balkaran: Politically, economically or for the environment. So, these, aren't the deniers, these are our people on the other side who are putting up the road blocks. How do you break free from that? I have no idea. And that's something that I definitely want to explore with more people. It's how did all of a sudden, it seems to me, these groups on the extremes have so much political power dominating the conversation, determining whose research gets funded, determine what books make the New York Times Bestseller List. I mean, if you really go down the list and you look at all the ways in which media touches us, it's largely affected by extremist views more so now than ever before. And I always wonder, where is that space for rational discourse, which is why I created this podcast, which is to get back to that we need this mind.

Christopher Balkaran : Thank you so much Professor for your time. I know this is probably the first of many podcasts because I want to definitely talk to you more about many of the things we've discussed today. And thank you for, for, for being reasonable, standing up for what you believe in and, you know, trying to spark so many peoples you know, what a lot of people are thinking when it comes to climate change, which is we need more rational discussion on this.

Climate Etc.

← Public ClimateBall

Interview: Climate Change – A Different Perspective with Judith Curry: Part II

Posted on December 4, 2021 by curryja | 87 Comments

by Judith Curry

My follow up interview on the Strong And Free podcast [link].

My previous interview with Christopher Balkaran was discussed in this post. I also very much enjoyed our 2nd conversation.

At this point, the only interviews I've been giving are long-form discussions (order one hour). I have no interest in scoring sound-bite points, and I'm not very good at it anyways. I also like talking with interviewers from other countries.

A transcript of the interview is provided below. I have heavily edited this to make it more coherent and something that people hopefully want to read, while preserving the content of interview. I am really a much better writer than speaker, especially with off-the-cuff responses to questions.

We covered a lot of range, I hope this interview will stimulate some interesting

TWITTER

- A transcript of my recent interview with @StrongnFreePod judithcurry.com/2021/12/04/int… https://t.co/gviQGzQRQw 2 days ago

SEARCH

Search

DENIZENS

Denizens Denizens II

RECENT COMMENTS

- daveburton on Solar variations controversy
- climatereason on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- George Sharpe on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Ireneusz Palmowski on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- jeffnsails850 on Interview: Climate

discussion.

Christopher Balkaran

So, there's been a lot of feedback from our first conversation and I wanted to dive right in, because I think that's what a lot of people want to know more about. Now I will say the vast majority of people who reached out were very positive. But the folks that were very critical raised some very compelling arguments that I'd love for you to discuss. And the first was about climate modelling when it comes to climate change. And I know in the past, people have asked you about why you're so critical about of climate change modelling in particular. And some of your critics say, well, there's so much robust data out there. It's been tested time and time again, and it kind of flies in the face of being critical of climate change modelling. What are your thoughts about that?

Judith Curry

The IPCC AR 6 published a report last August, and I have to say they joined me in a lot of the criticisms of global climate models. In fact, for the first time, for their projections to 2100, while they show all the models, they constrained the projections, picking the ones that they like, which happened to be on the lower end. There's also a growing movement not to use these big global climate models for policy purposes, but just to use simple climate emulators, that input some very basic things like which emissions scenario, which value of climate sensitivity, and off you go. The other thing that the IPCC had to say, which joins me, is that these climate models do not simulate extreme weather events. Their resolution is too coarse.

So any projections about future hurricanes, rainfall rates, whatever, are semi empirically based on observations, they're not directly spit out by the climate models. And then the third factor is with regards to regional climate change. The IPCC AR6 thoroughly acknowledges that global climate models cannot simulate regional climate variability with any kind of skill because they don't get the

Change – A Different Perspective with Judith Curry: Part II

- jim2 on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- jeffnsails850 on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Brian Bishop on Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Peter+Kloeppel on Solar variations controversy
- jeffnsails850 on Public ClimateBall

RECENT POSTS

- Interview: Climate Change – A Different Perspective with Judith Curry: Part II
- Public ClimateBall
- Solar variations controversy
- The Next Environmental Crisis
- Week in review – science edition
- Challenges of the clean energy transition
- Radiative energy flux variations from 2000 – 2020
- IPCC AR6: Breaking the hegemony of global climate models
- Dubious climate science about the Texas cold disaster
- Week in review – science edition
- Cancel culture in climate change
- 15 minutes
- The IPCC's attribution methodology is fundamentally flawed
- New Confirmation that Climate Models

magnitude and the timing of the major modes natural internal climate variability, which have a dominant role in regional climates. In fact, the IPCC spent three chapters devoted to regional climate change. And at first I was really excited. Do they have a recipe for how we should do this? But they didn't, you have to distill multiple lines of evidence – models, historical data, paleo climate data, process models, physical reasoning. There's no simple answer, but you sure as heck can't just use what the global climate models spit out.

A model that simulates the warming since 1970 based on CO_2 emissions does not constitute proof that CO_2 has caused the warming. The latest post on my blogs cites some papers that show that solar variability can explain pretty much all of the recent warming. So you can have models that get the right answer or something close to the right answer for the wrong reasons.

Christopher Balkaran

That's very fascinating. Two follow-up questions on that. Judith. What were some of the reasons why the IPCC kind of walked back from alarmist reports from the past, which, mentioned high levels of global warming that would happen in the very near future if drastic action hadn't been done?

Judith Curry

Two things they've backed off quite a bit. The first is the really high emissions scenario. It used to be called business as usual. It's not business as usual. It's some crazy extreme scenario that is highly implausible, if not impossible. So they backed off on that one. The other thing is that the latest generation of climate models in the so-called CMIP6 simulation series, about a half of them were running way too hot, with equilibrium climate sensitivities of over five degrees. And they don't do a good job of reproducing 20th century temperature history. So, what happened? Those models included some new cloud feedback processes, sort of arcane details about how clouds interact with aerosols. On one level, it's improving the physics, but on another level they didn't include countervailing negative feedbacks that were needed to really make this work in the model. As a

Overstate Atmospheric Warming
- IPCC AR6 WG1 discussion thread

CATEGORIES

Select Category

BLOGROLL

- A chemist in Langley
- AndThenTheresPhysics
- Bill Hooke
- Cliff Mass
- Climate Audit
- Clive Best
- Cultural Cognition
- Ed Hawkins
- HeterodoxAcademy
- Isaac Held
- Nick Stokes
- Paul Homewood
- Pragmatic Environmentalist
- Science of Doom
- SciMed Skeptic
- The Ethical Skeptic
- Watts Up With That?
- WoodForTrees

ARCHIVES

Select Month

EMAIL SUBSCRIPTION

Enter your email address to subscribe to this blog and receive notifications of new posts by email.

result, the models were just running way too hot. And so the IPCC sort of danced around it and then did a constrained selection of the climate model simulations, resulting in much more moderate temperature projections than prediced by the CMIP6 models.

Christopher Balkaran

The second follow-up to that – the comments I received back from our first conversation was Judith Curry is basing this on her own modeling and discounting the vast data that's out there.

Judith Curry

I don't run a climate model. I don't have my own climate model. I interpret the results from other climate models. I rely much more heavily on observations, including a longer historical record. And I also look at paleo climate observations in my analysis. I do not have my own climate model.

Christopher Balkaran

There are many individuals who have reached out with very detailed data and are very passionate about this topic. And it seems like if you're not "on the right side" you're lambasted instead of having a nuanced conversation, it's definitely you're either an unbeliever. You're a believer. And I'd love to know from your perspective, being someone who's been in that space and has been in many ways, accosted for your views. What do you believe are some of the underpinning reasons for that to be, which is specific to the climate change space?

Judith Curry

First of all, this whole issue has become a big part of tribal political identity. Somebody who's in the right tribe can publish something that's moderately critical or skeptical and they get away with it. Somebody who's not in the right tribe, who says the same thing can't get away with it – it either gets ignored or

people in the other tribe try to squash it, and this is asymmetrical since one side has the political power. The other thing is there are certain aspects of climate science that are fairly basic, there's a lot of data out there and much of climate science is based on basic physics and thermodynamics. And so a lot of people who understand statistics or basic physics say, I can look at that problem or I can try to analyze this. And so there's a lot of passionate armchair scientists out there cranking through numerous aspects of climate science. Some if it is crankology. But some people have genuinely made really good contributions who are not PhD educated climate scientists.

My colleague, Nic Lewis is a case in point he's, he's a financier. He has degrees in physics and math from Oxford, but not a PhD. He's very good at statistics and he's taken on the climate sensitivity problem and has published maybe a dozen papers, in reputable journals and even co-authored with a number of distinguished mainstream scientists. Nic is an example of somebody who started off in this armchair mode, but actually ended up taking it to the next level and making contributions that are recognized by the mainstream and even cited in IPCC reports.

So the challenge is to separate the wheat from the chaff, but it's really good for the populace to be engaged and thinking about the problem and looking at the data and so on. Alot of interesting research is having difficulty getting published in what I would call mainstream climate journals, but the minute they go a little farther afield and publish in astronomy and space physics or environmental engineering journals or something like that, where it's not quite so religious, then they can get it published. So, it's not a good situation, this whole tribalism thing has polluted the science. A lot of the 'big' journals and editors do gate-keeping that seems politically motivated. That's very unfortunate for promoting reasoned, scientific debate and dialogue which is what the journals are supposed to do.

Christopher Balkaran

Yeah. I think that warrants a separate discussion on what journal articles are

getting approved and funded and, and how that shapes public opinion. I wanted to talk to you because people said, “Christopher, you agreed too much with Judith Curry on your podcast!” So you need to challenge her.

One thing that some mentioned was that in your articles, you talk a lot about food security, water and energy. And it kind of is divorced from the emissions discussion. And so I wanted to know from you, because here in Canada, we’re experiencing really severe weather patterns in the west coast and British Columbia right now. And as I was reading those, I was thinking exactly about what you said, which is why don’t we focus on our wastewater management. It seems that when we talk about climate change, that’s muddled into the emissions discussion. And reducing emissions seems to be the number one priority. Why do you think it’s important that we separate the two and respond to each kind of differently?

Judith Curry

The whole issue of climate change adaptation has taken second or third seat behind emissions. Even if we do manage to fix the emissions problem, you’re still going to get crazy floods and storms in British Columbia. I mean, they’re not going to go away. You can say, well global warming makes it 3% worse – maybe it does, but it’s not like these storms still aren’t going to occur. So the whole issue of reducing vulnerability and adapting to weather extremes and sea level rise should transcend the global warming debate.

We need to reduce our vulnerability to these weather and climate extremes. Many places have too much water or too little water, even in the same region during different seasons. So, the challenge is to better manage the reservoirs and sewage systems. You need to figure out how to manage your water so you can buffer against the extreme wet and the extreme dry. And building in floodplains and right on the coast just causes problems. These issues are soluble and the big driver here is not that they might be impacted at a few percent level by man-made global warming. Even if we fix man-made global warming, these problems won’t go away.

That's why I emphasize solutions that support human wellbeing, minimize losses and so forth and so on. And food is another issue. We produce enough food globally, the challenge is getting it distributed in the right places. Helping places produce their own food in developing world, making better decisions about their agriculture, would substantially support human well-being.

My company just got funded for a new project to develop an agricultural forecast system for one of the states in Pakistan. We're working with an NGO and agronomists who are on the ground in Pakistan. We provide the forecast information so they can make better choices about which seeds they plant for a given season. They can time their planting based on monsoon onsets. And they can maximize irrigation based on understanding when the monsoon break periods will come along. They can use information about severe convective storms and wind gusts to make sure they pick their crops before they all get flattened by the wind and on and on. So there's a lot of little things like that that do not cost a heck of a lot of money where you can use information to optimize your yield to the extent that countries can grow their own food. This really makes the global food supply much more secure. A lot of little things like that that you can do, and that's not to mention all the new hybrids and GMOs and whatever that improve the hardiness and the nutrition of the crops.

And then if you go to energy security, I mean, what is the point of all this? If we destroy the energy security of the planet, by having electricity that's intermittent, unreliable and too expensive, that's not helpful to anyone. We're headed towards a real reckoning here, you can't run industrial economies on wind and solar. People are starting to realize this.

Within the last few months alot of people and some governments are suddenly saying nuclear is the answer. Well, yeah, it sort of is, but why are you just realizing this now? The realities of wind power are being realized. In the North Sea, they have all these offshore wind turbines. In 2020 these produced 25% of England's power, which is fabulous. But in the first 10 months of 2021, they produced 7% of the power. So England and the rest of Europe is scrambling,

having to pay too much money for natural gas and then with all the political problems with the natural gas supply from Russia. So, being able to produce your energy from within your country has a lot of appeal.

The one advantage of solar and wind as it gave some local autonomy to the countries, but wind and solar are not enough to run an industrial economy. And nuclear power gives you the best of both worlds. And also if the countries were to frack for natural gas, that's another energy source that could be more local. The most important issue is energy security, so that its abundant and reliable, and you're not held hostage to other countries or crazy price spikes.

I have no problem with going to cleaner energy sources. Everybody would prefer clean over dirty energy. But energy security has to be first and foremost, we have to have reliable, affordable energy. Otherwise, none of this makes sense.

Christopher Balkaran

I'm so glad you raised energy security. Cause that was one thing I wanted to talk to you about. It's so complex and you raise a lot of really important points that are politics being one of them, for sure. Canada, we are a naturally wealthy country and shipping natural gas to China helping them lower their CO_2 emissions is great. But that requires a lot of pipeline development here in Canada. There's a lot of environmental regulations working with Indigenous communities and organizations. So it's very challenging sometimes and often it's people see the short term, the pipeline development and how that'll affect the local ecosystems and not potentially the long term, which is potentially lower CO_2 emissions. And the biggest polluter in the world's emissions will go down and that's a good thing.

But I do think that most people see the real cost with introducing new technologies, like wind and solar to replace entire energy systems because energy security is the critical point here. Why do you think that there's this push specifically for wind and solar for governments to adopt, despite the fact that its inefficiencies are so evident and, and the costs being so high? I see this

consistent narrative that with more investments, those costs will come down. It will be more affordable for developed nations to use as a viable solution. Caveat to that too, is I think if we do use solar on a large scale amount doesn't, it require a lot of land mass?

Judith Curry

Wind power requires a huge amount of land use. There are ecosystem disruptions, raptors being killed by wind turbines. In the old days, the environmental narrative was you couldn't disrupt wildlife habitats, but now it's okay to wholesale kill raptors with wind turbines. What happened to the traditional environmental values and concerns? They've all been thrown out the window because of global warming. The other issue I see is the waste, the end of life, what to do with all this toxic stuff from the solar panels and the wind turbines. For these to make environmental sense, there needs to be a lot of recycling and reuse, the circular economy.

Then there's the issue of mining, all these batteries and the solar panels need cobalt, lithium, copper, on and on it goes. In the seventies and eighties, there were wars in the Middle East because of oil. Now, will there be wars in the countries that are naturally rich in terms of these minerals? This is where the next geopolitical conflicts are going to be. Again, if we go nuclear with Thorium, we bypass all this.

If you go back to like the 80s, when people were first talking about, oh, we need to stop this whole CO_2 thing, there were two groups that jumped on this. It was the petroleum people and the nuclear people, they wanted to squeeze out coal. The oil and gas people ended up being ascendant as anti-nuclear sentiments took over. And then there was the big push for renewables. We've already seen the problems with wind and solar. But what really irks me is burning wood pellets, cutting trees down in North Carolina, making them into wood pellets, and then putting on a ship and having them burnt in the UK to produce electricity. And this is a big part of the UK's claim to be producing renewable energy – does this make any environmental sense?

And so we have given birth to a whole lot of nonsensical policies. Wind and solar are niche solutions. Small modular nuclear reactors seem to be far and away the best solution, at least on the near term horizon. We're just starting to see these plants. But on the time scale of 10 years, they should be very common. There may be other better sources that come down the pike. It takes a certain amount of time to develop prototypes, but scaling up and taking it to market and the infrastructure and whatever all takes time. So I think in the near term, the, the small modular nuclear reactors are the best solution for the next decade, but even going to natural gas, converting from coal to natural gas, I think is, is a fairly significant help.

Christopher Balkaran

When I look at wind and solar if I were an investor or a leader of a country – the value proposition just isn't there yet. And it doesn't mean that it can't get there at some point. But right now, if I'm struggling with energy security, those forms of energy like wind or hydroelectricity, or have good sun exposure – coal makes sense. But I want it to follow up with that because again, and I don't want to say that these folks who emailed me are fringe, but there were individuals who said, "Judith Curry is connected to the fossil fuel industry. And she's a renegade that's been disproven!"

Judith Curry

My company has some clients in the energy sector, here are some examples. We make hurricane forecasts for electricity providers in Florida, so they can figure out when a storm is coming so they can prepare and and do their best to bring electricity back up quickly. My oldest client in the energy sector is a petroleum company. And my involvement with them is for natural gas trading. This began about 15 years to go to help stabilize natural gas prices, following hurricane Katrina and all that mess in the Gulf of Mexico and the natural gas prices skyrocketed. My company also provides temperature forecasts to support natural gas trading, but the biggest, the growing part of the natural gas trading is forecasts of wind power. And to a lesser extent, solar power. Forecasts of wind

and solar power are very important because they're so intermittent. Knowing when the wind is going to blow or the sun isn't going to shine makes a big difference in how much natural gas you need to buy for backup. So all of this supports having adequate natural gas supply in the face of these intermittences and keeping the price stabilized. So how is that evil? I'm not exactly sure.

My climate research is not supported by fossil fuel companies. Some energy companies are customers for my companies weather forecast products (about 25% of the total revenue for my company). So how this puts me in bed with with fossil fuel companies, I don't know. Any weather company or meteorologist in the private sector is dealing with energy companies. They're the biggest single consumer of weather information. So that is my involvement with energy companies.

Christopher Balkaran

And that's the very disgusting part of the climate science space. It's that, that smearing, that divisiveness takes us away from the real, like you said, food security water management issues. And then you see the ramifications of not focusing on that. Not making the connection that somehow governments are looking at this and not thinking about infrastructure development, because I'm sure they are. But if there was as much focus on that than there are on emissions reductions, you just wonder…

Judith Curry

All the money and effort that we've spent on renewables could have been used to improve the electricity transmission grid, and reduce our vulnerability to extreme weather events, which are going to happen anyways.

Christopher Balkaran

Exactly. I also have this idea, I was talking to a friend of mine who's big on electric vehicles. And I said to that person, I said, wouldn't it be kinda neat if we

just kept focusing on making the gas powered engine way more efficient getting a thousand kilometers out of a single tank of gas instead of just jumping into an electric vehicle where we still don't really know all the risks with the technology as yet? Whereas with the gas powered engine, we've got a hundred plus years. Why don't we just make that more efficient? I mean, doesn't it produce more heat than anything else, I don't know.

Judith Curry

Well, I don't know how much more efficient they can be made, but I like hybrid vehicles because the batteries are simpler. So I think the hybrid vehicles are a good intermediate solution. And the other issue too, everybody gets excited about electric vehicles, which are going to double, triple, quadruple, our need for electricity. Wind and solar alone aren't going to cut it. We will need much, much more electricity, Bitcoin and and who knows what else will emerge. Electricity is key to innovation and prosperity, so we want as much of it as we can get.

Christopher Balkaran

What are your thoughts on COP26 and is the outcome what you anticipated? So for me, looking at it, making a global climate change agreement is exceptionally challenging and it lends itself to nothing too specific. What are your thoughts about just global climate change agreements all together? Do you think that they're kind of they're that they're, I wouldn't say pointless. But that it just shows a commitment from the global community towards climate change?

Judith Curry

Well, I think Greta nailed it with her blah, blah, blah. There've been a lot of these COPs. It's mostly hot air. And the thing that really irks me is all these 'important people' flying in on their private jets and driving around intheir gas-powered big limos and whatever. Excuse me, can you please walk the talk at least in some superficial way? COP26 looked like this big opulent blow out, and and here they're telling all these developing countries, we're not going to let you develop

grid electricity and fossil fuel power plants. It was hypocrisy, at its finest. But all of these promises are really political games. At the end of the day, very few countries are going to sacrifice their own economic wellbeing over this issue.

A few European countries seem inclined to, but most of the others don't no matter what they say. The US is an interesting microcosm because in the absence of a very stringent federal policy, you have the different states going in different directions. On one hand you have California. They're going full force to wind and solar and shutting down their last nuclear power plant. And, the electricity prices are sky high with outages and on and on it goes, there's no end of problems. And people are leaving California in droves. We're seeing a few states that are in the Northeast that want to follow in California's footsteps. And then you have other states that want to keep burning coal.And then in Northern Minnesota where they do all the iron ore smelting and all the really big, big, heavy industry stuff, I mean, coal is really the best fuel for that. So it's hard to get them off coal also. At the end of the day, it's wrong for the UN to ask countries to stop, burning fossil fuels when there aren't any obvious alternatives for them, or if they don't have enough electricity already, it's just, it's just not right.

Also, the actual level of alarm over global warming has dropped a lot. We used to hear five degrees centigrade, four degrees, crazy, horrible, scary stuff. Okay. Now with the AR6, with the medium emissions scenario, they said their best estimate was 2.9 degrees centigrade. And this is 2.9 degrees since pre-industrial times. So it's really, we've already warmed 1.2. So we're already halfway there with no particularly dire results. And then actually according to the International Energy Agencies, our emissions are coming in lower than the IPCC medium emission scenario. The estimates are now like maybe 2.6 degrees is the business as usual. And then if you put in everybody's promises, that goes down to 2.2 and then net zero for the more developed countries, then it's down to 1.8 degrees. Not meeting the made up target of 1.5 degrees is deemed to be code red for humanity, but how meaningful are these targets?

These timelines totally ignore natural climate variability. It looks like all the modes of natural climate variability are tilted towards cooling over the next three

decades. It looks like we're heading towards a solar minimum. Any volcanic eruptions by definition are negative. And we expect the Atlantic multidecadal oscillation to shift to the cold phase on the timescale of about a decade. So all of these modes of natural variability point to cooling in the coming decades, which would push these off by decades. This buys us decades to figure out what we should do. So we're talking about less than one degree of additional warming, it doesn't sound so scary when you put it that way.

Christopher Balkaran

What are your thoughts on environment and corporate social governance? If ESG is this new term that's floating out there especially in the financial circles about companies and individuals directing their investments to companies that already have some type of environment or social governance policy or platform to their line of work. Now just as an individual, I'm concerned about that because I always think, well, there's no real way to audit a company on their environment or environmental, social governance. And I worry that a lot of money is going into this space now, similar to sole sourcing windmill development to one company and signing up large government contracts. And what I saw at COP26 was there's a lot of money on the table that's dedicated to this. And again, as a layman investor, I would say, well, show me your assets, show me your liabilities. And I can tell you if you're profitable or not, I'm concerned about this. Cause it could kind of in a way, inflate an entire sector without really looking at its profitability?

Judith Curry

Those people might very well end up losing money because those might not necessarily be the smartest decisions on the timescale of a decade. There's a lot of greenwashing going on. People who are voting with their politics and their green conscience are becoming people who are voting with their wallet, we'll see who wins financially. The same thing is going on with property along the coast in the US. Every one is alarmed about sea level rise, and then President Obama just bought a big mansion at Martha's Vineyard, right on the coast. Like, how

worried are you about sea level rise? At some point, there'll be Republican and Democrat neighborhoods, the Democrats won't buy houses on the coast and the Republicans or the climate deniers will. And who's going to make money out of these deals, and will there be net benefits or disasters to living on the coast? We'll see.

Many people have overinflated the financial risk of all this. The scientists who prepared the socioeconomic pathways and the emission scenarios have stated that by 2100, everyone will be better off than they are now, at least on average, even for the highest emissions scenarios. So why are we, doing all this now – our grandchildren who will be better off than we are. We have a fairly naive understanding of the risks we're actually facing in the 21st century. Climate policy could end up being like treating a head cold with chemotherapy, while when the real medical problem is something very different. And by putting so much resources into an ineffective solution for climate change, we use up the insurance money that we have for all our threats, and we could overall end up more vulnerable as a result of this exercise.

Christopher Balkaran

And I think about everything that we've talked about, and I think about elections in the United States and around the world and this Canada went through its own election here in September. And it seems like there's this blind adoption of, we must do something for climate change. And we're going to sign on to every international agreement and we're going to commit Canada and the United States to these record low emissions levels, but it's less sexier to talk about, well, guess what, we also built up our water waste management in, Northern Alberta, or other parts of Canada and the United States. And so I wonder, is all this too far gone? Can we elect politicians now and leaders of countries that want to revert back to evidence-based discussions and less on the political platitudes?

Judith Curry

Oh, but the science is 'settled' everyone knows that. They've been so brainwashed

about global warming that there's only one thing that's going to change it. if I'm right about natural variability having sort of a cooling effect in the coming decades, this will be the one piece of evidence that people will have to pay attention to. If that transpires, I would say that would be the single most effective thing at bringing this dialogue back to some level of rationality, but how much confidence do I have in that prediction? How much money am I going to bet on that? I don't know, but it's a very plausible scenario that natural variability will lead to cooling in the coming decades, or at least slow down the warming. So we'll see if that transpires. If it does, that would be the single most effective thing at bringing the dialogue back to normal in some sensible way, so people look at this problem more broadly. On the current path, we are not managing this risk in a sensible way that would leave our countries stronger and less vulnerable to whatever my transpire in the future.

Christopher Balkaran

And I think voices like yourself and those that are advocating for more sensibility when it comes to energy security too, it's, it's very, very appealing to talk about wind and solar. It's less appealing to say coal is not a choice. It's a necessity for some countries in some regions and it's not that these regions don't want cleaner energy. It's just, we haven't gotten to that point yet for that area. And so I think that's why I'm so thankful that you've agreed to come back on here and talk for a second time.

This entry was posted in Uncategorized. Bookmark the permalink.

87 RESPONSES TO "INTERVIEW: CLIMATE CHANGE – A DIFFERENT