

Global Meltdown: Christiana Figueres

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Greg Dalton: Welcome to Climate One, a conversation about America's energy, economy and environment. To understand any of them, you have to understand them all.

In 2009, more than a hundred heads of state gathered in Copenhagen to hammer out an international deal to reduce the carbon pollution that is destabilizing the earth's climate. Many of large corporations lobbied for an agreement and late night negotiations among President Obama and other leaders raised hopes the world might pull a hat trick for the common good. At the end, the talks broke down and there was no binding agreement. Four years later, a grand bargain is nowhere in sight and countries are going their own way. China has surpassed the United States as the largest emitter of greenhouse gases and is experimenting with ways to price carbon pollution. Other countries are promoting clean technologies and taking various measures to decouple greenhouse gases from economic growth. No country is reducing its emissions at a pace scientists say is necessary to avoid catastrophic consequences.

Over the next hour, we will discuss international efforts to fight climate disruption with our live audience here at the Commonwealth Club in San Francisco, and we're pleased to have with us the United Nations top climate negotiator. Christiana Figueres is the executive secretary of the United Nations Climate Convention. Please welcome her to Climate One.

[Applause]

Christiana Figueres: Thank you.

Greg Dalton: Thank you for coming. It's great to have you here.

Christiana Figueres: Thank you for the invitation, Greg.

Greg Dalton: So let's start in Copenhagen, which was the last time a lot of people kind of remember think about real headline news around climate negotiations.

What happened there and what lessons have been learned from that episode four years ago when there was some great expectations about a deal that then were deflated?

Christiana Figueres: Well, the first thing you learn is that you do not get heads of state around the table to actually draft an agreement. That is not the way to proceed. So --

Greg Dalton: There's some amazing photographs of President Obama, you know, Wen Jiabao --

Christiana Figueres: Holding a pen.

Greg Dalton: -- President Singh, around the table like -- wow. Yes.

Christiana Figueres: Yes, this is not the way to solve the climate's problems. But let's see, perhaps, Greg, what is important about Copenhagen -- and I was there as a many of you were, but what have we learned and what is different. What we learned, as I say, is you don't put the heads of state in that situation and we, as a climate convention secretariat, have actually done a very in-depth

analysis of the processes and the procedures that were used in Copenhagen that are not to be repeated.

So since then, we have had three conference of the parties, which we have one every year, and they have not had the same process that we had in Copenhagen because we have learned very clearly, (a) that there is -- transparency is necessary that you can't -- even if they are presidents, you can't put them into a dark room and say, "Okay, you are gonna figure this out," and everybody else is outside of the room. That just doesn't work. But what is different now and I think that's the important part of this. What is different is several things. First, before we went to Copenhagen, the heads of state had actually not agreed that they were going to come to agreement. Everybody else around the table wanted them to come to agreement. Everybody else.

There was the whole U.N., you know, all the family members of the U.N., all the NGOs of the world plus some -- all of the civil society. I mean, we had 25,000 people in Copenhagen plus many more participating electronically, all of whom had decided, on their own, that there was going to be an agreement. Had the governments ever said that they were going to come to an agreement? No. And then we stick the heads of states in there and "You will hammer out an agreement."

Well, what is very different now is that governments have actually agreed that, yes, they will come to a universal agreement in the year 2015. And they have put that in writing and they have reaffirmed that very recently in Doha. They are going to come to an agreement by 2015. So that already puts us in a very different scenario, very different circumstances than Copenhagen.

The second thing that is very different and painfully different, unfortunately, is that we have many more extreme weather events that have hit many countries, starting with the contiguous country of the United States, here the one right next to the country, independent country of California. The United States has been hit over the past 12 months by both Sandy and the devastating droughts that hit the farming belt of the United States. And then you can go through, you know -- all of the effects that China had in the last year. You can go through, there is frankly not one single country that is currently unaffected. That of course means that there is much more self-interest to do something about the climate. So that is also very, very, very different. So we have a confluence of factors that put us into a very different path.

The third thing that I would say that is critically different from Copenhagen is I think in Copenhagen, everybody thought, you know, we're going to have one big, huge, big bang meeting, a big bang agreement that is going to solve climate change by magic. Well, I have news for everybody -- no, there is never going to be one agreement that solves climate. This is incremental, this is progressive. We have to build on the successes that we have. And furthermore, whatever comes down as a top-down measure, which is necessary, cannot occur until there is enough preparation on the ground.

So in Copenhagen, we went with the completely top-down experience and we have learned since then that that cannot be, that we need both the bottom up and the top down. The other way of saying it is nothing can be agreed internationally. Nothing can be legislated internationally until there is enough domestic legislation. In particular, in those countries that are critical.

And that, we already have. We have 30 countries with climate legislation, we have a hundred countries with renewable energy regulation, and we have many, many different collaborative initiatives that are actually addressing climate change from the bottom up. So what we have now is both the need for the top down, but also much more fertile ground upon which to build.

Greg Dalton: One of the central tensions since this climate process started in 1992, which was at

the end of the Cold War -- things looked very different then, China was just opening, China was nowhere near the economic powerhouse than it is today -- was this tension between historic emitters, developed industrialized countries, that essentially created the carbon problem. I interviewed Ed Markey, once congressman, who said most of the carbon up there is red, white and blue, and I thought, "Okay, that's France and Russia and, yes, United States."

But the historic emitters who really created the problem and then the developing countries who say, "Hey, wait a minute. We didn't cause this problem. We got to play by different set of rules, cut us some slack, we're poor." Where does that stand now that Russia and China have risen so much?

Christiana Figueres: Well, I would say there is no doubt about the historic responsibility. It is red, white and blue up there, and continues to be. And nobody is questioning the historic responsibility and it will continue to be a very, very important principle in the convention along which most of the activity will be lined up, because it is very different what countries have done along the last hundred years when you compare it to what they're going to do in the future. Having said that, what is also very clear is that that cannot be the only organizing principle. If it's the only organizing principle, we're not going to get anywhere. Because the fact is that most of the future emissions are going to come from my part of the world, from the developing countries. And so we cannot remain cemented and tied and anchored in the past without looking at the future.

Now, the concern of developing countries with respect to their future is they don't want their future curtailed in any way. And they're saying, wait a minute, if you guys up there in the north, if you developed on the back of greenhouse gas emissions with fossil fuels and you're now expecting us to develop because the developing world is at the point of takeoff and they will be developing more, if they're being expected to develop with a very different carbon footprint, then we need to change the economic and social structure that we have. And we need to figure out how is this going to be equitable. That is the big challenge -- equity is the big challenge now for the new agreement. And that is going to have to be one of the very, very important organizing principles.

And in equity, what developing countries are saying is, "Give us equitable access to sustainable development. Do not curtail our growth. We need to grow. We are happy to entertain the possibility that our growth has to be different from the one in the north, but we cannot curtail our growth." That I think is a very justified expectation.

Greg Dalton: And do the rich, industrialized northern countries agree on that principle of equity? Is there an agreement on that?

Christiana Figueres: You know, they're getting there. They're getting there. This is not something that happens overnight, right? But yes, they are getting there. The term equitable access to sustainable development has actually been now with us for two years. It was put in to these famous legal documents that we produce in Cancun, so three years ago. But people are really beginning to understand that. People are really beginning to understand that developing countries need the space to grow and they need the economic space. They cannot take up the carbon space that the north took up, but they need the economic space.

Greg Dalton: And this idea of a carbon budget or per person, one way to think about equity is that each person has a carbon quota or budget. Obviously, Americans are 20 or 22 tons per year.

Christiana Figueres: Yes.

Greg Dalton: And China, you know, coming up but most of it, India is down around, I don't know, one or two -- is that a principle that each person sort of has a carbon number that they're, I would

say, entitlement or what are entitled to have?

Christiana Figueres: Well, you know, it's helpful to have, you know, parameters, right? It's helpful to know, okay, so more or less where do we have to be. And more or less where do we have to be is at two tons per capita. So, you know, all of us, and I lived in the United States for 20 years, so we all here in this country, perhaps --

Greg Dalton: Have to go on a carbon diet.

Christiana Figueres: But perhaps California a little bit less, but not much less. We should all be at two tons per capita. Now, the fact is that that is never -- it is not realistic to say, that is going to be a hard and fast rule for every single citizen around the world because that's just not realistic. But it's good to know more or less what is the average going to be. Now, I'm actually hopeful about this, Greg, because my sense is that we are moving toward a tipping point, a technological and economic tipping point that will allow us to even surpass the two tons per capita. That will allow us to move into a completely different future.

So even the United States that thinks of itself, you know, this is completely impossible that we would ever be able to bring down our emissions to two per capita. Well, but what if? What if transportation in this country and in many others were not based on fossil fuels? What if transportation here were actually smart transportation where you have vehicles that are powered through induction? Now, you're no longer just cooking through induction, you're actually powering your vehicle through induction because there is the induction capacity along the road that you are driving.

Well, what if every single façade that we have is turned into a power-generating area? What if every single façade is turned into one place where you are creating algae and that algae is actually producing biofuels. We're talking about the very exciting future. We should not look at climate as being exclusively a burden. Yes, we have to put ourselves on a diet. Yes, we have to be disciplined. But the benefit of actually addressing climate change is we move into a very exciting, cool future.

And isn't that what we want?

[Applause]

Greg Dalton: So you can imagine it. Now, there are some very strong forces who don't want that to happen, and do you feel the presence of those forces in the negotiations?

Christiana Figueres: Yes, of course. Of course. But even those forces, you know, will see that that is the future. And if they want to stay competitive and if they want to continue to be profitable businesses, that's the way they're going to go. So, you know, just -- as my daughter say, "Get with the program."

Greg Dalton: And where do you see the most optimism and the most movement with -- you can envision this future, where do you see it beginning to materialize most in the world? You travel all over the world and talk to people about this. Is it in Europe? Is it in the developing countries that aren't burdened by as much fossil fuels? Where do you see them the most life?

Christiana Figueres: You know, you see it everywhere if those are the lenses that you wear, okay? If you wear the lens of status quo, you will see status quo everywhere. If you wear the lens of "I want to see innovation," you'll see it everywhere.

I just came back from a fascinating trip 10 years in the Pacific, okay? I went to Tonga, Fiji and New

Zealand. I will have you know that the Cook Islands spend currently 30 percent of their GDP importing fossil fuel. Thirty percent of their GDP. Why? A), because fossil fuel is expensive, but on top of that, they have to pay the transportation cost. And it is -- if you've ever been to the Cook Islands, it is very far away. And you have to transport this fossil fuel through three different hubs that change three different times, the size of the barges in order to get down to the Cook Islands. So these Pacific Islands -- Cook Islands, Tonga, Fiji, all of them, well, Fiji actually is one of the hubs so they have a little bit better and better cost. They're spending two to three times. The cost of fossil fuel to those islands is at least two to three times the cost of fossil fuel to any other country.

These islands -- just put this into context, okay? These islands emit 0.00000, I don't know how many zeros to put in there, one, eventually after many zeros, of world emissions. They have no historical responsibility. They have no future responsibility. And what are they doing, they are spending all these money on fossil fuel. So what is the option for them? They're turning to renewable energy.

Because they say, "Wait a minute, we have the sun, we have wind, we have the burgeoning power now of the sea. Let us move to renewable energy." So you already have -- Tokelau has already completely transformed itself to a hundred percent renewable energy. And you have all these Pacific Islands lining up with investment plans that are going to move them to renewable energy.

Well, if that is not an example, right, if that is not an example of what can be done. I was really very, very impressed. But of course, you'll say, "Well, but you know, those are such tiny economies." I mean, there are countries -- there are full countries there where the total population is 1,500 people.

So you'll say, "Well, is that an example?" Yes, it is an example, right, because it shows that every economy, no matter how small or how large, has a contribution to make. And that everybody can really join the program and make a difference. It sends a message. The Pacific Islands are going renewables.

Greg Dalton: A lot of the conversation internationally is about technology and money flows from the north to the south and --

Christiana Figueres: Did you say muddy flows?

Greg Dalton: Money flows or --

Christiana Figueres: Money flows.

Greg Dalton: -- capital, sorry. Capital and technology transfers, saying that the south, developing countries saying, "We want to grow in a cleaner way, but it costs more, the industrialized countries have to help us."

Well, tell us about where that stands in terms of technology and capital flows to help countries develop in a cleaner way.

Christiana Figueres: Well, it --

Greg Dalton: -- because it costs more.

Christiana Figueres: It costs more, and we are not at the point where we should be. We do have now -- we have surpassed \$1 trillion investment in renewable energy around the world, so that's good news. And we do see more and more investment. We do see some of the very large asset-holders like pension funds and sovereign wealth funds already beginning to look at how do they deploy their very large assets, because if anybody is sitting on trillions of dollars, it's those asset holders. So they're beginning to look at how do they deploy their capital into clean technology. So that's very good news.

But it's clearly not where it should be. And in the Climate Convention, what is being attempted there by governments is to actually try to institutionalize this in order to provide a framework for getting this done in a transparent way. So both on the side of financing, there is the construction of the Green Climate Fund that will have -- will be basically -- think of it as a World Bank but only for climate, okay? So it will funnel both private and public funds into developing countries that need that finance for the transformation, and then you have on the other side the equivalent of technology also with the technology dissemination system being created to fast-forward this. But I have to tell you, Greg, it is nowhere at the speed or the scale that it needs to be.

Greg Dalton: There's a resistance because -- that effectively means taxpayers in the United States and other countries donating some of their tax money to go to foreign countries, something Americans are not very fond of.

Christiana Figueres: Yes, but the option is either do that or incur the Sandys and the droughts that we had last year, you choose.

Greg Dalton: And even if the United States went to zero emissions today, more Sandys would still come. So that's where some people say, "Look, if we did went to -- United States went to zero, greenhouse gases would still rise, so why should we go to zero? Let's get richer so we'll have more money to deal with Sandy and the future Sandys."

Christiana Figueres: Yes, happiness can be bought. [Laughter]

Greg Dalton: Or at least some sense of security.

Christiana Figueres: Well, I would like to know what security can be bought against sea level rise, against storms that hit in ways that you cannot predict, against levies that breach in ways that you can't predict. This is not -- you know, you can use money to reconstruct, but you can't use the money to avoid. And yes, the United States, even if the United States went to zero, we would still have climate change. But let us be very frank. The system is already loaded. The system is already loaded. And even if the United States and China went to zero, we are still going to see the impact of climate change.

What we're working on now is trying to minimize the growth and the speed with which those climate changes are going to occur. But the system is already loaded against us and we know who loaded it.

Greg Dalton: And this year, 2013 is the year of another big IPCC report, another big scientific report. Can you tell us anything about the new science that will be coming forward this year? The last one was in 2007. That was -- we've see more severe weather event which you've mentioned. What can you tell us about the sciences forthcoming and what we can expect in the future?

Christiana Figueres: Yes, the IPCC is the Intergovernmental Panel on Climate Change, and it's a very large group of climate scientists around the world that produce the report summarizing all of the peer reviewed literature on climate.

And they are at work right now to produce the Fifth Assessment Report that will come out in tranches starting this year and finalizing next year. So they are looking and it's not surprising.

Every time they come out with the, you know, First, the Second, Third, Fourth -- every time they come out with their assessment report, one of the very clear conclusions is our last report underestimated. And that is going to be, again, one of the main messages of the Fifth Assessment Report that --

Greg Dalton: It's worse than they said before.

Christiana Figueres: That is worse than they said before because, you know, all of these effects feed on each other in a negative way. And so it's very difficult even for climate modelers that look at this in a linear way, it's very difficult to predict the interrelationship among all of these factors. So they will come out and they will say, (a), number one, it is worse than we thought; (b), yes, we do need to peak. We have to go to global peaking. And however --

Greg Dalton: What does that mean global peaking?

Christiana Figueres: Global peaking means, we have to get to the point -- we are still, unfortunately, we are still on a trajectory of increasing greenhouse gas emissions globally, okay? Some countries are coming down individually, but, globally, we're still increasing our greenhouse gases. So we're still on an upwards trajectory. And we have to get to the point where the global emissions reach their maximum and begin to come down.

Now, there are many different paths to that, right? There are many different paths that lead to Rome, there are many paths that lead to peaking. So you can get to peaking at year X and then follow one path or at year X plus two or plus three or plus ten and follow a different path.

What is undeniable is that the longer we wait to get to peaking, the more costly it's going to be for two reasons: (a), because we will already have committed ourselves to a certain lifetime of technology. We are investing in infrastructure technology every single day, every single day around the world. And the more we continue to invest in carbon-intensive technology, that technology will continue to operate for 10, 20, 30 years. So that is the lock-in effect that we are having by delaying the change in technology. So to change that technology is going to be more expensive. And the other reason why it's going to be more expensive is because the longer we delay the decrease of emissions, the more we're going to have to pay in the other chapter of climate change, which is adaptation, which is what do we do to protect cities against this?

What do we do to protect rural communities? What do we do to protect our infrastructure? All of these needs to be protected against the onslaught of climate change, and adaptation becomes more and more expensive, the less -- the longer we delay on bringing emissions down.

Greg Dalton: If you're just joining us on the radio, our guest today at Climate One is Christiana Figueres, executive secretary of the United Nations Framework Convention on Climate Change. I'm Greg Dalton.

Let's talk about the role of women around the world both as engines of the economy and often on the frontlines of climate impacts and also in terms of water and food stress, that's a result of climate, both in terms of the challenges as well as the solutions.

Christiana Figueres: Very interesting that you asked that, Greg. I've often said climate has the face of a woman. And the reason for that is women in developing countries are absolutely at the nexus in between food, water, and energy.

They are basically responsible for this, okay? They need to produce the food. They need to gather the firewood or whatever else they need for energy. And they need to go somewhere and get their water. And they're the ones that keep the families alive because of their responsibilities on these three. And if there are any three factors that are directly affected by climate, it's food, water and energy.

And so women, particularly in developing countries, are really at the forefront of negative climate impacts. They are the ones that bear the brunt. In some African countries, the food is 85 percent

produced by women. Eighty-five percent produced by women. At the same time, what is very interesting is that women, if given the necessary tools, can really be little ants of change, okay.

Think of women in developing countries as a huge network, a huge ant colony that can really bring about the necessary change. Because these are the women that will make the decision about "How am I gonna cook? Am I gonna continue to cook?"

I'll give you a very scary fact. Fifty percent of women around the world -- 50 percent -- still cook on open fires. You know what an open fire is? It is three stones, three pieces of wood and a pot on top.

Fifty percent of women around the world. That is immoral. That is immoral in the year 2013, because what it means is women have to walk long distances to go -- and everyday longer distances to go and get the firewood. Along the path, they are raped, robbed or something else. Then they have to put up with all the fire because they are the ones that cook with their children.

So the fire produces all of the smoke and the women are the ones that have respiratory problems and their children because of the cooking like this. And then the men still complain about the recipe, right?

So they are the ones that can actually be the agents of change, because they're the ones that can say, "Okay. Yes, we have been cooking like this for years. But given the technology -- and here's where technology dissemination needs to come in -- I could move to an efficient stove. I could do something very, very different."

Greg Dalton: And there's some very successful clean cook stove projects out there.

Christiana Figueres: Many out there. Many, many projects and everyday more, thank heavens, replacing open fires with efficient stoves. There are many projects that are replacing kerosene lamp, which is currently the light of choice in developing countries, with solar cells. And again, it's the women who are doing this. So the women can be very important agents of change.

And today, we were just out with a very exciting new initiative called the Women's Carbon Standard, which is a new initiative that is going to go out there and at these mitigation projects, they're going to overlay a filter to see are women actually being benefited by these projects? Are women being involved in the technology production and the technology dissemination? Are they being involved in the income? Are they being benefited by extra education? I think we will see, particularly in developing countries, that women really will -- are starting already but will continue to take the lead in change.

Greg Dalton: A related issue is fertility rates and population. A lot of people in energy and environmental circles don't want to go near that because it's politically charged, it's not their issue, but isn't it true that stopping the rise in population would be one of the biggest levers in driving the rise in greenhouse gases. Is that --

Christiana Figueres: Well, I mean, we all know, we expect nine billion, right, by 2050. So yes, obviously less people would exert less pressure on the natural resources, and that is math.

Greg Dalton: So is nine billion the foregone conclusion, that's like baked and done, not going to -- no way to change that?

Christiana Figueres: Well, there again, there's pressure in the system to go toward that. We can definitely change those, right? We can definitely change those numbers and we really should make every effort to change the numbers because we are already -- today -- already exceeding the planetary carrying capacity. Today. To say nothing of adding more population, that is going to

really overextend our capacity. So yes, we should do everything possible, but we cannot fall into the very simplistic opinion of saying just by curtailing population, then we've solved the problem. It is not an either-or, it is and-also.

Greg Dalton: Let's talk about the Amazon. Forests are big part of efforts to both capture carbon, prevent deforestation. There's lots of cultural issues around that around the world. So, are you optimistic about the Amazon, what Brazil has done and some others to try to protect that, to absorb carbon and prevent more release into the atmosphere?

Christiana Figueres: I'm actually pretty impressed with what Brazil has done over the past few years. It's not an easy task to protect the Amazon, but they have really taken that very much to heart and they are using both the financial vehicles that are available to them internationally as well as their national capacity to really bring down the rate of deforestation in the Amazon. It is not a solved problem, but it's certainly progressing in the right direction, thanks to Brazilian leadership.

Greg Dalton: And speaking of leadership, who are some other leaders and individuals or countries that you think are out front right now going in the right direction at the pace that the science would say is necessary?

Christiana Figueres: Nobody is going at the pace that science says is necessary, right? Nobody. That is very unfortunate. But who is demonstrating true commitment? Let's start with China, because I know that is a hot topic.

China, as you know, organizes itself in five-year plans, and they're currently into the 12th five-year plan. The 11th five-year plan that they had before already had very aggressive targets on construction. If there's anywhere where construction is occurring, it's in China. They already had very aggressive targets on the efficiency of construction, on energy renewable and energy -- renewable energy and energy efficiency. The 11th five-year plan concluded and they not only met their targets, they exceeded.

They're now into their 12th five-year plan and they will do the same. The new leadership in China has already been very clear that they are not only committed to those targets that they are actually needing to improve on those targets for the very simple reason that it is only in their economic benefit. The quality of air in Beijing is absolutely unsustainable, not just from a health perspective, but from a social perspective. People are just not putting up with it anymore. And if there's anything that China is really concerned about is what is going to happen when people start expressing their opinion about the air that they breathe. Well, that's why they're doing something about it. So what is heartening is that so many countries are addressing climate change out of their own need because it is in their national interest. There is no more powerful motive than protecting your own national interest.

Greg Dalton: How would you grade United States?

Christiana Figueres: You mean California or you mean the United States? [Laughter]

Greg Dalton: You pick.

Christiana Figueres: Well, you know, God bless California, honestly. The leadership that California has demonstrated already out in 2006 to come up with their ABS32, I mean, it really is quite impressive. When you think about where we were in 2006 and the fact that our cap and trade has been launched this year, the fact that we have two successful auctions already out and counting really demonstrates the leadership of California, not just from a government perspective, but more

importantly I think from the perspective of public pressure because it is the citizens of California that are really demanding this, okay.

I arrived two days ago from Germany and I quickly went to a store to buy something that I needed. And I was so delighted because I took my, whatever it was that I was buying, and the woman says, "Now, do you want a bag?" And I said, "No, I don't need a bag." She's just, "Well, thank God, because otherwise I'd have to charge you for it." She says "This is California," you know. [Laughter]

And I'm like, well, God bless California. It is a completely different attitude, right? It's a completely different attitude. So it's very important that California continues taking the lead. Now, the United States, the contiguous country. I do believe that President Obama is personally very committed to this issue. He had a few traumatic issues that he had to deal within his first term, and he's now taking difficult issues like immigration and gun control under his wing.

It is my sense that President Obama will use his second term to make a very clear statement on what the United States can do on climate and then he will do it, because he personally is committed and because he knows that this is the most important legacy that he can possibly leave to future generations. But I think he will also do it because there is enough enterprise in the United States that understands that they cannot allow the leadership of the new technologies to go to China.

Who is the number one country in solar today? China. Who is the number two in wind technology today? China. Now, I ask you, is the United States going to stand back fully well knowing that we are moving toward a low carbon society? There is no doubt about that. We're moving too slowly, but we are moving toward a low carbon society. Is the United States just going to stand back and let China take over the technologies of the future? I can't imagine that they're going to. And there is going to be mounting pressure in the United States to move forward and actually take advantage of the opportunities of a low-carbon society.

Greg Dalton: But since Copenhagen, the science has become more clear and the American political process has become more doubtful, polarized, entrenched on the question of whether it's happening, humans are causing climate disruption and whether the solutions are affordable. So part of the U.S. is going in a different direction on what you just said mounting pressure.

Christiana Figueres: I don't think so. The polls that I see tell me that more than 70 percent of the United States population now understands that climate is occurring, that it does have a man-made cause, and that something needs to be done about it. Where I think there's a difference of opinion is who is going to do it or who's going to do what about it. So it's not --

Greg Dalton: And the cost.

Christiana Figueres: And the cost and who's going to pay for it.

Greg Dalton: Right.

Christiana Figueres: That is the difference of opinion. It's no longer about the science. It's no longer about the effects on countries even like the United States. It's about who's going to pay for it and what are we going to do about it. There, I will agree that there is a difference of opinion.

Greg Dalton: Christiana Figueres is executive secretary of the U.N. Climate Convention. I'm Greg Dalton. Programs of this and other Climate One programs are available in the iTunes Store for free. You can follow us on Twitter at @climateone.

One last question, then we'll go to audience questions. Could China and the U.S., which account for

about 40 percent of global emissions, could they cut a deal and get something really significant done to reduce carbon pollution?

Christiana Figueres: Let me put it this way. There is no solution without the United States and China agreeing with each other on what they're going to do. So it is an absolutely critical but not sufficient condition. But I do take heart in the fact that just two to three days ago, I lose track of time, but two or three, four days ago maybe not more, the United States and China announced their joint working group in climate. Why did they announce? Because both of them are individually separately fully aware of the negative impacts on their countries, and they understand that their economies are actually threatened by that and that they need to come together to solve this.

So if there is already a working group and if there is already a very well-established conversation between Washington and Beijing, I am very hopeful that they actually will build on that to come to some agreement with each other and then all of the other countries around the world also have to join that agreement. It's not just a bilateral deal.

Greg Dalton: But you could start there. If you think about the Cold War, what five or six countries had nuclear weapons, but there were several agreements from the '70s onward where the U.S. and Russia negotiated reductions in nuclear weapons and showed leadership, and then other countries may or may not have followed, but could that model follow with carbon where U.S. and China say, "We're going to do this now. Now, all right. Get in line, we're showing the way."

Christiana Figueres: Yes, and that is occurring. I mean, this bilateral conversation with them is -- or the decision to play -- to establish a joint working group is actually the effect of a conversation that they were having for quite a few years. But it's not the only thing that is occurring, right? There is also -- the conversation is also in the G20. It's in the G8, it's in the G7. It is also in something that the United States created called the MEF, which is the Major Economies Forum, which is 17, 18 countries -- largest countries that make up 80 to 85 percent of the climate emissions. And they are also working to see how they as a group can come and can accelerate their activities on the climate. And at the same time -- so those are all very, very helpful and at the same time -- that is never going to be the final solution. Because the Tokelaus of the world also have to have an opinion about something that directly affects them.

So it is not, you know -- we who were educated in the West, and I count myself to that, we think about solutions being either this or that because that's the way we were educated. But that's not the way climate is going to be solved. It's not an either-or. We have to be able to harness the contributions that everybody can make. You can have and you have to have small groups of countries aligned around their common interest and optimizing their particular solutions that they can offer, but that is not the full answer -- everybody else needs to come on board as well.

Greg Dalton: But it seems -- what's lacking is someone to go first. Everyone's waiting for someone else to do more, to take the first step. "No, you go first, no, you go first, no --" and everyone's waiting for someone to step forward and no one wants to take that first step or unilaterally harm their economy or unilaterally take costly action.

Christiana Figueres: That's true. And that is perhaps the greatest challenge that is there right now, right, because everybody is functioning at their minimum. Nobody is really at their maximum yet, and what is needed is to change this you first mentality to a mentality of how are we all going to move together, so that we can all benefit. But I tell you one thing, Greg. That is not unique to climate change.

The fact that we're now so interconnected, the fact that we are such globalized economies means

that we can no longer afford to approach global problems with solutions that are put on the table by individual countries. It is a very, very different approach that we need. We need approach that is more collaborative than competitive, and that is the only way to that we're going to be able to move forward. If we do that on climate, we will be able to do it on many other issues that we're facing. Climate, let's call it a training ground.

Greg Dalton: One that has to be trained quickly. Christiana Figueres is executive secretary of the United Nations Climate Convention. I'm Greg Dalton. You're listening to Climate One.

Christiana Figueres: I honestly don't know what else the United States is waiting for. Brazil is moving forward. Mexico is moving forward -- Mexico has the most comprehensive climate legislation of any country in the world. South Africa has a price on carbon. Australia has a price on carbon. China is moving forward with all of it. What else do we need? What we need, I think, in the United States is a more orchestrated voice of, in particular, the private sector on the one hand and civil society.

The private sector because they need to understand and more clearly voice that it is in their interest to move forward. And civil society because civil society needs to understand that there is no other option, there is no plan B. We have to move here. We are under pressure to move, but it is actually a fantastic transformation that we are looking in the face of.

So why do we not want to do that? Here's my question -- cell phones -- everybody has a cell phone here, right? How big are they? About this big? Thirty years ago, the first cell phone came on the market -- it was called the brick. Do you remember the brick? It weighed three pounds. It only functioned for 30 minutes and then discharged and it took 10 hours to load it. And the only thing that it can transmit was voice, okay? Today, you're all sitting there with your cell phones that are this big, this thin, weigh, I don't know, milligrams, are, you know, charged in milliseconds and operate for hours and do everything but cook your tonight's dinner.

Well, that is the kind of transformation. That transformation that we had in telecom industry is the kind of transformation that we're going to see in the energy sector. Is that not exciting or are we so enamored of the darn brick that we all really want to walk around with our bricks? I mean, this thing that we have to produce energy and transmit it with wires, if that is not so five minutes ago, I don't know. [Laughter]. We've got to move to another technology.

Greg Dalton: Let's have our next audience question for Christiana Figueres.

Female Participant: Thank you so much. This has been absolutely fascinating. Could you say a few words about Canada and how the U.S. might work with Canada to do something better than the Keystone pipeline?

Christiana Figueres: Well, the good news there is that, as you know, the governor has actually given green light for California to link with Quebec. And they are going to be linking their trading systems, and that is a start, okay? It's a start at the sub-national level because we're fortunate enough to have it at sub-national level, a very different approach to what is currently at the national levels. But it's a start. It's a start. So how do you use that to then move beyond that and get to the same approach and the same recognition of opportunities at the national level? That's the challenge that both countries have with each other. But I have no doubt that eventually the United States and Canada will realize, just like everybody else that, (a), there is no option, that this is too painful to continue to be completely anchored to our brick, and that there is huge opportunity here to be harness, so let's move forward.

Greg Dalton: Let's have our next audience question right here for Christiana Figueres.

Male Participant: Hi. Great talk. You made lots of cogent points. I really appreciate that. My question is about the various global talks that we have every two years and how they often fail to produce an agreement. And I was wondering if there's any way to create a rule change where global talks are tied much like an emergency session of the Security Council to extreme climate events, where negotiators have --

Christiana Figueres: Then we would have to have them every week. [Laughter]

Male Participant: Major extreme climate events. [Laughter]

Greg Dalton: Every month where -- [Laughter]

Christiana Figueres: Every month.

Male Participant: Where negotiators have to come into a rule just when the need for some agreement is highest, both in terms of public opinion, in terms of economics and obviously the social issues.

Christiana Figueres: Well, just to assume my responsibility here in public, (a), it is my responsibility to organize these global talks once a year. It's not even once, once every two years would be, you know, wonderful, but that's not in the cards. It's very rare that we put on these very, very daunting conversations because you have to understand, there are 193 countries that come together to figure out -- 193 countries that have at least 196 different interests. Go ahead.

Male Participant: But the Security Council is just 79 countries, whereas the top 10 emitters or the top 10 countries with its population that represents 67 percent of emissions.

Christiana Figueres: And the top countries in the case of our climate, it's about 17 to 18 countries that do represent the majority of emissions. And they do come together and they are in a very constructive conversation, okay, and they actually get together about once a month, once every two months. But the global talks that you're talking about, I have to disagree with you, because it is not true that they do not come to agreements. I've had the honor of leading the last three, and every single one of those came to the agreement that was on the agenda. You have to differentiate in these multilateral processes. You cannot expect any country or any participant to actually work on something that is not on the agenda so to speak. So you came here today because there is a particular agenda. Nobody would expect all of us to work on something completely different, because we've all agreed to come here around something.

And the last three conferences had very, very clear deliverables, had very clear targets, expectations, and every single one of those three were met. And we can go into the details if you want. The point is that everyone was met because we have learned from Copenhagen, we've learned how to plan these better, we've learned how to orchestrate them better, and because countries are much more determined to solve this problem. Now, the next big thing that we're going to see is the 2015 agreement, that has to be preceded by a draft agreement that needs to be put in place by next year, by 2014.

I want to really impress upon you the daunting task that governments have impressed upon themselves, because to come to an agreement about a climate is nothing less -- nothing less -- than the foundation of an economic and social transformation, the likes of which none of us have ever seen. It is the most daunting challenge that humanity has ever imposed upon itself. And this is done by governments and it is done because they understand that they don't have any other options. So

these yearly global talks needs to be understood, each of them as being progressive steps along the way of a transformation that you will see and you will be able to look back and go "And do you remember when we used to drive cars with fossil fuels?" and you will laugh. But that transformation needs a structure, a global structure that will support that transformation.

And that is what they're doing. It is no small potatoes what they're doing.

Greg Dalton: Our guest today at Climate One is Christiana Figueres, the top U.N. climate negotiator. Let's have our next audience question. Yes, sir. And you need to use a microphone.

Male Participant: An investment adviser in San Francisco wrote this brief email two days ago, "With the overweight in oil, I got massacred yesterday." And then he wrote to my friend, his client, "I believe the market sell-off was overdone yesterday. Hard to believe that a small miss in China's GNP caused such activity. Nobody seems to trust the Chinese numbers anyway. It doesn't matter. I got whacked in my oil-related holdings yesterday. Morgan Stanley and City Research suggest oil prices will come back in the coming months, suggesting we maintain our holdings." And my friend wrote, "My upstream oil and gas, Master Limited Partnerships, got killed yesterday, but I took the opportunity to buy some more Exxon. These were preaching to the fire, we're aware of this."

Greg Dalton: There's still money to be made in fossil fuels and even some people who -- look, John Kerry owned oil holdings before he became Secretary of State.

Christiana Figueres: Yes, there's still money to be made in fossil fuel, and let's be realistic, okay. Even the most successful addressing of climate change does not mean that we are going to be completely free of hydrocarbons and the fossil fuels. And there are those, you know, who live in la-la land and think, "Okay, we're going to go solar," you know, everything is going to be solar. Well, that would be wonderful, but it's not going to happen. And the demand of energy is such that we do have to produce energy that is reliable, dependable at all times of the day and under all conditions for all people on the planet.

So what that means is we will have to rely on fossil fuels for a certain segment of the energy production, and we will have to complement those in increasing fashion with renewable energy and with energy efficiency. So there is still money to be made on hydrocarbons. Would I put my money on hydrocarbons? No.

Greg Dalton: Let's have our next audience question for Christiana Figueres. Yes, ma'am.

Female Participant: Hi. Laura Bisha. Just kind of a follow-up in the same spirit of the conversation is that you were mentioning that the issue is the cost is going to be in the infrastructure investment that we make on high-carbon technologies, for example, Keystone, right. We're not investing this now to bridge a gap, like once we invest in building that infrastructure, the companies involved are going to want the life of that investment to go on for another 50 years. And the amount of carbon in those tar sands just speaks to the future problems it could create by us investing in that technology, right? So I understand that, yes, we can't get rid of fossil fuels overnight, but to continue to invest in something that we might not need to and then be married to it and locked into it, you know, what about that?

Greg Dalton: Thank you for that.

Christiana Figueres: Stranded assets, right? I mean, it's a huge danger. It's a huge danger. The more we invest in these technologies that are high carbon, the more we incur the risk of stranded assets because we will not be able -- at some point, we will no longer be able to allow those

technologies to live out their lifetime. So, you know, it's a short-term versus long-term thinking. And those who were thinking long-term would reach different decisions.

Female Participant: Just, really quick on that. You would think that even like you said, the poll show that 70 percent of Americans support renewable technology on this, then why is Obama still having trouble making a decision on investing in such a thing?

Christiana Figueres: Yes, well, I certainly would not venture to speak for Obama. But I'm sure there are many, many different factors that he is, you know, weighing as with any important decision. So let's give him time.

Greg Dalton: On stranded assets, Bill McKibben is out there talking about unburnable --

Christiana Figueres: Carbon.

Greg Dalton: --fuel carbon on the balance sheets of fossil fuel companies, it's one thing for an activist to say that. And then HSBC, one of the world's largest banks, also came out with a report saying if the world is serious about staying below two degrees Celsius of warming, a lot of these assets will become stranded assets. So when a bank says it, it has a lot more resonance than an activist for some people. Let's have -- we've got five minutes left. Let's get a couple of questions, and yes, sir. Welcome to Climate One.

Rafael Friedman: Rafael Friedman, we go back many years, I don't know if you remember. I think we're hearing the same thing. Governments are trying, the U.N. is trying, you mentioned the private sector. How are we getting the private sector to see it's in their interest? There's definitely some private companies that have realized they're making a lot of money out of this either by improving the efficiency of their products and their processes, but there's a lot, the ones that like the bricks and want to stay with the bricks, they will oppose it and they will try to get these stranded assets to not be stranded assets.

So how are we working at Davos or places of that nature to get more of the private enterprise to realize, get on with it like your daughter says, because you're not going to be around if society is viable, and that's where we're going?

Greg Dalton: Christiana Figueres.

Christiana Figueres: Yeah, no, it's very true, but I take heart in that every day, I do see more companies that are waking up, and they're waking up first -- and here's the process of the wake-up, okay. The first step of the wake up is where they're just barely opening up their eyes in the morning is they realize they are using an inordinate amount of energy that is unnecessary, and they wake up and they go, "Wait a minute, you know, I could do a heck of a lot of energy efficiency measures that is actually going to affect my bottom line positively." So they start with the non-regrets measures of energy efficiency. And you can, you know, name the companies down -- I mean thousands of companies are actually moving forward with their energy efficiency because it makes such inordinate sense.

Then they move in the second step to go, "Okay, now we have done that. Now, can we actually talk to other companies to do the same?" because it is in everybody's interest to stabilize the grids in view of growth. So then they begin to make that contagious to other companies. And then they begin to look at, "Well, if we're going to move in there, isn't this something that we should actually be investing in?" So not just looking up and down the value chain, because Wal-Mart is a very good example, right? I mean, they did their own energy efficiency there, but they also looked up and

down their value chain and they said, "We will only buy from companies that are being responsible."

And then they took the next step to say "And now we're going to invest ourselves into clean technology." So they go through these three steps. I called them as the wake-up steps, and I fully agree with you that there are not enough companies doing that and that we need to herd the cats quickly. But it's coming. It's coming. It's just, you know, I share your frustration because we're walking in the right direction, but we should be running in that direction, not just walking.

Greg Dalton: Last question, yes, sir. Welcome to Climate One.

Dave Massen: Thank you, and thank you so much, Madam Secretary, for sharing your perspective today. I'm Dave Massen with Citizens Climate Lobby, and we have an idea for bringing down global emissions without having to work quite as hard for international agreement.

Christiana Figueres: Well, good. In that case, I can go home. [Laughter]. I've been wanting to go home for a long time.

Dave Massen: I'd like to know what you think about. The U.S. goes first by Congress passing a carbon tax, which is not really costly to the U.S. in the aggregate because all revenue has returned to citizens. This carbon tax would be accompanied by carbon content-based tariffs at our borders for countries who wanted to import to us who don't have comparable carbon pricing. These countries, when they see their exporters facing these tariffs, decide to enact their own carbon taxes, keeping revenue within their own borders. So U.S. goes first, other countries follow with carbon tax systems, global emissions come down. Does that sound feasible to you providing we can get the Congress to go along?

Greg Dalton: Small little caveat there at the end, okay.

Christiana Figueres: Well, I love the solution in particular because I can go home to Costa Rica, sit at the beach, you know, and just wait for the result, so I would welcome that. I ask you -- do you think it's politically realistic to have a carbon tax in the United States? I wish it were. I come from a country that has had a carbon tax for 20 years. There are other countries that have a carbon tax, but is it realistic in the United States? And what would we -- and since the answer is no, [Laughter] the other question is what would have to change to make that realistic? Or if there's not going to be a carbon tax, at least how do we move to a carbon price?

And I think their California is already taking the lead because there is a mechanism to establish a price and there's a mechanism to establish a price now burgeoning all around the world. And the United States will have to, at some point, join and actually also have a carbon price. Whether it's through a carbon tax or whether it's through anything else, there are many ways of establishing a carbon price. But eventually, we are going to have to move to a carbon price around the world.

Now, if you can figure out how to make a carbon tax in the United States, you know, go through, I am your best fan.

Greg Dalton: We have to end it there. Thanks to Christiana Figueres, executive secretary of the United Nations Climate Convention. I'm Greg Dalton. Thank you for coming to Climate One today.

[Applause]

[END]