BEYOND THE HEADLINES

CLIMATE CHANGE AND CONFLICT

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Author of
FORECAST
The Consequences of Climate Change,
from the Amazon to the Arctic, from Darfur to Napa Valley

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Transcript edited by IPI

WARREN HOGE: Welcome to IPI. I'm Warren Hoge, the Vice President and Director of External Relations for IPI. I first became aware of Stephan Faris, our speaker, a year and a half ago when I was *The New York Times* correspondent at the United Nations and I traveled to Sudan, Chad and Libya with Ban Ki-moon. He was out there seeking to persuade the government in Khartoum to hold talks with the rebels in Darfur.

It was the first time that I heard Mr. Ban link climate change to conflict, which is our subject tonight, and an aide told me that he had been influenced in part by an article he had read in the *Atlantic* magazine. The author of that article was Stephan Faris.

To emphasize his concern over climate change, the Secretary-General, and we the reporters who were traveling with him, spent a day on the banks of Lake Chad – it's a body of water in the middle of Central Africa. Forty years ago, it was the size of the state of New Jersey. Today, it is the size of the boroughs of Manhattan and Brooklyn. It is a lake depended upon by four African nations - Niger, Nigeria, Cameroon and Chad itself. Chad, by the way, means "big lake". And it has been decimated by rising temperatures, diminishing rainfall and a rapidly growing population.

Tensions abound. Fishermen want the water to stay in the lake. Herders and farmers want to divert it to their land. Everyone is impoverished by its gradual disappearance.

In Darfur, which adjoins Chad, Stephan Faris argues that the conflict there, which has resulted, as you know, in more than 200,000 deaths and the displacement of 2.5 million people, was partially rooted in the widespread failure of arable land linked to dramatic declines in rainfall and a lengthy drought.

Now, the tensions between herders and farmers existed there long before the land and the water began to dry up. But with climate change, Stephan argued, these tensions erupted into war. Land envy combined with ethnic hatred make a combustible and deadly mix.

Shortly before leaving on that trip in the summer of 2007, Ban Ki-moon ran an op-ed in *The Washington Post* in which he said, quote, "It is no accident that the violence in Darfur erupted during the drought."

Now global warming by itself doesn't launch wars or rebellions or campaigns of ethnic cleansing and genocide, but it makes populations more vulnerable to these kinds of pathologies. The Red Cross says that environmental disasters already displace more people than war. Darfur, Stephan Faris says in his book, might be "a canary in the coal mine, a foretaste of climatically driven political chaos."

This is a book to please an old foreign correspondent's heart because Stephan went to the places he writes about and he did ground level reporting from there. I counted these places: the British Midlands, the Brazilian Amazon, the Florida Keys, the Canadian Arctic, Italy, Nigeria, Uganda, India, Bangladesh, and Kashmir.

This is also a book to please an old journalist's heart because Stephan tells it by telling stories. And these are stories that inform and illuminate the larger picture. So I thought, tonight, to get at that larger picture, I would ask Stephan to begin our conversation - and by the way, later you will have a chance to ask questions of him – to begin the conversation by telling the Darfur-related story with which he actually begins the book. It's the story of Sheik Hilal Abdullah and how his son turned up 20 years later. You're on.

STEPHAN FARIS: Thank you. The story takes place in 1985 when the man who told it to me, a man named Alex de Waal, who some of you may know is one of the leading experts on Darfur, was in the region as a Ph.D. student. And he met with this sheik who is a powerful and imposing man, but one who had been beaten by age. He was nearly blind. He was bedridden. But he was still the head of this nomadic tribe and he invited Alex into his tent.

And Alex told him what he was doing, which was studying the way that people were reacting to the drought. And the sheik had a reaction that was very strong. He said, "Listen, I've seen things I've never seen before, you know, sands are blowing over lands that people once farmed. When the rain does come, it washes away soil. But more importantly, social order has been disrupted."

And he sketched in the sand a chessboard as kind of an illustration of what de Waal later called the moral geography of the region, not the real geography -

but the way that things kind of worked. And he said that in the dark squares you had the farmers working their farms and in the white squares the nomads would pass through kind of like chessboard bishops, interacting but not interfering, and the two groups were able to coexist.

And all that was changing. The farmers that once hosted the nomads were now fencing off their lands; they were burning fields even if they weren't using them. The sheik was deeply shaken by this because, for him the way that God had intended it to work was no longer working.

So that made a big impression on Alex when it happened, and I think it made an even bigger impression 20 years later when he was, as we all were, or many of us were, looking at the conflict in Darfur in 2003 that had broken out.

You had militias - the janjaweed laying waste to the region. They were targeting the region's blacks. They were killing men, raping women; they were burning houses and just depopulating huge swaths of this area.

And at their head was another tall commanding figure. This was a conflict the US State Department would soon call genocide - and he was number three on their list of suspected war criminals.

When de Waal saw this man, he recognized the name and he recognized the man as Musa Hilal, the sheik's son. And the reason I started with this story in the book was because for me it's kind of a powerful evocation of the father and the son, the father that sees the degradation and then worries about it - and then the son that kind of carries out his father's worries.

HOGE: It shows how clearly climatic conditions can produce hostile action and lead to conflict. Now even on that trip with Mr. Ban who, for the first time, was focusing on climate change and climatic conditions as a cause for what at that point was and still is maybe the world's worst conflict, there were people who were saying, isn't he exaggerating it and going too far? Don't we run the risk if we focus on *this* aspect of it, of not focusing enough on the atrocities and the people who committed those atrocities? How do you answer that?

FARIS: Right. Well his statements in the article that I wrote got quite a lot of pushback, I think, from people who were worried that blaming climate change meant not blaming Khartoum or blaming climate change meant not looking at some of the other causes.

I thought about this quite a bit after writing the article and before writing the book, and the analogy I came up with is that if we think about climate change on a country and then hunger in a person and you have a person who's starving to death and he succumbs to tuberculosis or he tries to steal some food and gets shot, well you wouldn't necessarily say that he's died of hunger, but you would also not be right not to look at the hunger as part of what caused his death.

HOGE: We're speaking tonight across the street from the United Nations. A lot of the people in the audience are people with connections to the United Nations. The United Nations spends a lot of time thinking about these kinds of conflicts, how to prevent them, and there's a lot of focus these days on what we call early warning, on prevention, on how do we see the signs ahead of time of this sort of thing happening.

You talk about this a bit in the book. If somebody wants to ward off the effects of what, after all, is climatic and hard to control, what should they be looking for? What kinds of places should they have their eye on where climate change could come in and turn a terrible situation into a real conflict?

FARIS: Sure. There's a Canadian academic named Thomas Homer-Dixon who's been studying the links between environmental issues and conflict for a long time, so I'm indebted to him for some of this. Basically, the short answer is that the places that are more vulnerable for a variety of reasons, places that are over populated, where there's lots of competition over scarce resources, where maybe education levels are limited, or where governments are corrupt are going to be the places that are going to be less able to withstand. If you think of climate change as kind of putting pressure on a country, a country that's more robust is going to be able to shrug that off or at least deal with it or cope with it in a way that it doesn't lead to collapse. But a country that's already torn by issues - like for instance Darfur that's been already torn by this issue of drought - when you add that competition for land, when you add that climate change, all of the sudden it's no longer able to bear the burden and it can snap.

HOGE: What happens in rich countries versus poor countries? You have a good example in the book of two low lying nations: the Netherlands and Bangladesh, both threatened by rising sea levels. How does the Netherlands cope and what happens in Bangladesh when the waters rise?

FARIS: Sure. What I was trying to do with that example was show how, both of them face this common problem that their lands are either at or slightly above or below sea level. But the Dutch have centuries of experience in building dikes and have the capital to keep on doing it. There are even houses built on pontoons and they're made so that if the water floods they actually rise up and become houseboats and then when it recedes it goes back down. And the Dutch have the capital and the ability to do that.

In Bangladesh, however, which is, I think, somehow even more threatened by climate change than the Netherlands, they don't have the capital for that and thus don't have the ability to adapt. All they can really do is prepare to flee.

HOGE: And when they flee, where do they go? I guess what I'm getting at is, is it a threat to other countries in the same region? I mean will they end up in Pakistan or China or someplace like that?

FARIS: In the book I traveled to Assam which is, if you think of India, I used to kind of think of it as a triangle shape, but it actually has an arm that reaches over Bangladesh. It's that area there that already has many insurgencies and over the last 20 or 30 years, has experienced a lot of immigration from Bangladesh. And it's causing huge amounts of political tension. Some people say that the insurgencies in Assam were caused by issues with migration. So if those issues increase, we're going to keep on seeing more tensions in the areas where these people arrive.

HOGE: Another area that you mentioned in the book and I wanted to ask you to explain is why climate change as such can affect Kashmir, one of the longest running conflicts, perplexing conflicts, insoluble conflicts in the world – is climate change an issue there too?

FARIS: It's probably not yet but what I was trying to do with Kashmir was -- I had looked at Darfur and that was kind of where I first started looking at climate change and I wanted to kind of see if there's another part of the world where we could predict it would have an effect that might be similar, and so I looked at Kashmir. And the issue there is – I mean the conflict in Kashmir is usually thought of as one of identity: whether Kashmir belongs to Muslim Pakistan or is part of greater secular India.

But there's another underlying issue and that's water. Pakistan relies on the waters that flow through Kashmir for about 90% of its agricultural irrigation and that water right now, it falls in the winter time and it lands in the glaciers and it freezes and in the summer time, as the temperatures warm up, it melts and flows into Pakistan in time for the harvest.

By 2035, according to the Intergovernmental Panel on Climate Change, the glaciers will not be there anymore. And they're already, according to people in Kashmir, starting to see more runoff in the winter, floods in the winter and less in the summer, with decreasing amounts in the summer.

So the problem is all of the sudden these rivers are going to be flowing at the wrong time. They're going to be flowing in the winter when it's not needed.

Now India and Pakistan have a treaty that divides the rivers and it's lasted 50 years, through four wars, it's often talked about as an example of how scarcity leads to cooperation rather than conflict. But what I look at in the book and what I think is true is that that treaty depends on the status quo, it depends on the rivers flowing at the right time because if the rivers are no longer flowing, you have to do something about it.

And so Pakistan has three choices: it can either do nothing and then in that case let the people starve; it can cooperate with building dams. The best place to build dams and water retention is in Kashmir, which is controlled by India, and in a sense hand over control of its water to the country it regards as its enemy; or it can escalate the issue with Kashmir trying to somehow push the issue.

And of course we have to remember that the people who are doing this are in charge of a country that's already unstable, already under stress with all sorts of different reasons, both political and economic and demographic, and so they're going to be making these decisions at a time when they're already having so many other troubles.

HOGE: Stephan, in Sudan and in other parts of the Sahel it was often thought that the degradation was caused by the inhabitants. I mean the deforestation, the land they turned over to grazing, that it was, in effect, Africans doing damage to themselves. That thinking has changed now, and you talk about in the book. Would you explain how that has changed? It's actually a reverse cycle, isn't it?

FARIS: Right. Instead of the deforestation over-grazing affecting the rain cycle, some scientists, climate scientists, looked at climate models, which are these very complex models of the atmosphere and the way it interacts with the earth and land use and everything else, and plugged in historic temperatures, and what they found was that the pattern of warming in the southern and tropical oceans, combined with cooling in the Atlantic, which is very similar to the type of patterns that some are also saying could be causing stronger hurricanes, could also be disrupting the African monsoons and, therefore, leading to the drought in Darfur.

To me it's a fascinating way of how climate change works because you've got these two vastly different effects caused by the same phenomenon, this warming water, perhaps causing stronger hurricanes, causing drought, and in a sense points to the way that I think one of the biggest challenges of climate change, which is the way it's going to be – it's so unpredictable, how it's going to play out exactly. It's not simple warming of the earth, it's a disrupting of the earth's climate, and so in some places it will get hotter, in some places it will get colder, some places will have droughts, others will have floods.

HOGE: While we're on this idea of climate change sometimes causing unexpected effects or having unexpected effects, the book is not all gloom and doom. You've actually got a portion in which you say that some people are drinking better wine in the Sonoma Valley these days because of climate change. Why don't you give two minutes to that just – and then we'll go back to the gloom and doom.

FARIS: Sure. Well, there's a scientist in Oregon who's kind of studied wine and he's tracked temperatures and compared them to ratings in the Sotheby's, the auction house's, quality scale. And he's actually found that the 1950-1990s, temperatures have risen in a lot of these regions and that the wine has gotten better, the ratings have gotten up. And so he basically said one degree Celsius which is about 1.8 degrees Fahrenheit, was enough to raise ratings by about 13 points on a 100-point scale.

The downside for wine drinkers is that he's also plotted quality versus temperature and he's found that in the 1950s most regions were a little bit too cool for optimal wine growing and now they've all gotten up to be just about the peak, or maybe even past the peak, that's why as temperatures continue to rise, the doom and gloom is going to kick back in.

HOGE: You say at one point, and this is a quote, you say in a sense, this book is an exercise in optimism. Now explain that one to me.

FARIS: Right. There's a lot of doom and gloom, but what I was trying to do was look at impacts of climate change that are happening now or ones that will be happening soon, ones I can kind of point to and look where the scientists were saying and explore how those might play out on the ground.

Later on I tried to look at what we can do about it and I looked around and I saw that almost nobody is talking about stopping climate change. What we're talking about is limiting the extent of climate change. None of the proposals in Washington or in Brussels or in the negotiations that are leading up to Copenhagen to replace the Kyoto Protocol are really talking about capping climate change at anything less than two degrees Celsius.

Throughout human civilization we've never, in the last 10,000 years, have really experienced a climate shift of more than about half a degree Celsius. So we're talking about four times more than what we've experienced as civilization, in the best-case scenario. And I think in that best-case scenario a lot of the things that are happening in my book could very well come about.

HOGE: We have a new government in Washington, we all know, and that new president is focused on green technology, on the environment, that sort of thing. Mr. Ban, when I'm asked sometimes by people who know that I've been hanging around the United Nations - the last four and a half years I spent at *The New York Times* I was covering the UN - and so they would always say how is Mr. Ban doing? I would always find that one positive thing I could say was he really has placed the United Nations in the forefront of the climate change argument.

I mean the United Nations is not supposed to be neutral, but it's supposed to be impartial and it doesn't really, obviously take sides. It's taken sides on that one. I mean the argument is over and I think we would probably agree with that conclusion but it was a pretty bold thing for him to do.

In all these kinds of statements by a UN Secretary General or plans you read about by a new government in Washington that is focused on climate change as essential, do you see that ameliorating this situation? Do you see things you like? Do you think it's enough?

FARIS: I think it seems that we're on track to reach an ambitious target of limiting warming at the level that will still bring about many of the things that I'm talking about in the book.

HOGE: You mean the best we can hope for is this will continue this way or is there a way …?

FARIS: I mean this is the best that we're talking about striving for. Two degrees warming is also a number that a lot of people think might be the point at which the earth starts to kick in processes that will continue the warming, so you have melting of the permafrost releasing methane, which is a very powerful global warming greenhouse gas. Some things are already happening – you have the melting of the Arctic, in which you have a reflective white surface on top of the world and sunlight's hitting that and bouncing back into space largely. As that melts, now the sunlight's hitting a dark surface and it's absorbing and so a lot of people worry that as we pass this point, this two degrees of warming we're going to kick in processes that are going to continue the warming to four degrees or six degrees.

And just to give an idea of what six degrees Celsius means, that's the difference between where we are now and where we were during the last ice age. That's the difference between our climate now and ice caps over our heads, and we're talking about very possibly going into a situation that's as extreme in the other direction.

HOGE: Because I'm thinking about countries you hear about, particularly if you hang out at the UN, places like Kiribati, which basically is completely at sea level, or the Maldive Islands. In the tsunami, pretty much the entire place was flooded; the Netherlands, Bangladesh. Those kinds of numbers really doom those places, don't they? And you're saying there's no way to stop that?

FARIS: I'm not saying there's no way to stop that; I'm saying we don't seem to be proposing any type of warming below two degrees. That may not cause the automatic destruction of places like the Netherlands, but Kiribati is good example. They've actually petitioned to be relocated. They've asked countries to take them back in. The Maldives are shopping for land. They've talked to, apparently, to India and Sri Lanka and to Australia and saying hey, we're looking for a territory that we can move our population to in case …

HOGE: Abandon their islands …

FARIS: Our islands are going to be under water and we need a place to live and since we have this money from tourism, we want to try to find a place now that we can move to.

HOGE: I know your book is not a prescription for what we should do, but we're here at the UN right now and you're describing a situation which is kind of out of our hands, but let me ask you – I mean you must have thought about it– what should we be doing? This is a big international organization here, there are a lot of organizations it represents, many of them focused on the environment. There are offices of the UN. What should they be doing to do more than just hold this thing at the level it's at right now?

FARIS: Right, or hold it at the level that it will be. I don't want to say it's out of our hands; we still have to make a big effort to avoid the worst-case scenario. If your choice is between a pretty bad scenario and an even worse scenario, it's very well worth fighting to make sure that you can limit the damage as much as possible.

It's hard for me to speak for an organization like the United Nations. What I try to do in my book is try to make the examples of what could happen more concrete and try to spell out what can happen, because climate change has a pretty long lag period. It takes decades between the time we make gases to really feel the effects. So the effects we're feeling now, which are still hard to detect and maybe not being talked about very much, are the result of emissions that were released during the Kennedy administration.

What we're emitting now is going to be felt strongest 40 to 50 years from now and it's going to be too late to say, 40 or 50 years from now, we don't like this maybe we should have done something before. And so what I've tried to do is try to make those ideas, those potential outcomes a little bit more concrete to show that it's neither simply Florida under water and there's nothing we can do about it, and it's not something that's kind of far away and abstract like melting ice caps. It's changing the taste of wine, it's causing conflict.

One thing we haven't talked about tonight is, if it's going to be disproportionately felt in poor countries, then it's going to raise immigration pressures.

HOGE: That was a question I wanted to ask you. One of the things about the book that's so impressive is the far reaching effects of what you talk about.

I was based in Britain for eight years so I was particularly fascinated by your talking about the British National Party, an anti-immigration party, and how you actually can sort of track back to the beginning and climate change is there. Talk about that.

FARIS: Right. Well, anti-immigration has been around for a long time but if immigration pressures increase, and I think England is kind of in the far north and is somewhat more insulated. I live in Italy most of the time and there you have, I mean during the last elections the *Lega Nord*, which is almost the Italian equivalent of the British National Party, a very xenophobic, anti-immigrant party, is an important member of the coalition, so important that the interior minister is a member of an anti-immigrant party, and that's largely driven by immigration that's coming in and is, let's say, not being addressed in a positive way, and so, therefore, it's opening up doors for people who want to address it in a negative way.

And I think that climate change, to look at second or let's say third or fourth order effects, if it has an impact in the poorer parts of the world and that's going to cause more immigration. In the developed part of the world more immigration is going to cause, if handled improperly, more xenophobia. And so it's going to give an opportunity or could give an opportunity for parties like the British National Party, like the *Lega Nord*, like the party in Switzerland that's recently had gains.

And then as kind of a secondary thought, a lot of these parties are starting to try to recast themselves saying we know that nobody likes to be anti-immigrant, nobody likes to be called racist, so let's try to look at other ways we can sell ourselves, and one way they're starting to try to sell themselves – Jean Marie Le Pen in France during his last campaign in France spoke more about the environment than about immigration. Joerg Haider, who recently died, his new party had organic farming and a green tax on products as part of their platform.

HOGE: They've all become green parties, these guys?

FARIS: They're all becoming – they're trying to sell their message in any way that they can. The candidate for mayor for the British National Party, who is the lead councilman in London, was speaking to me about immigration and about the area that he was representing in his council. They wanted to build new houses. And he doesn't want those houses there, not because of an environmental reason. Those houses there, I think, because he's worried that more immigrants will move into that region. But he doesn't say that. He says you know, this place is wetlands, we need to preserve the wetlands, we don't want to build houses for that reason. He's using an environmental argument to advance a cause that has more to do with immigration.

And I think that – by the way, I explore it more in the book - but that's one of the interesting possible repercussions.

HOGE: I want to go to the audience in a second. I just want to ask you one last thing. This is actually returning to something we kind of dropped, I mean I dropped it, I went to something else. I was trying to figure out what can be done now. I mean your example of if we don't do something now, 40 years from now nobody can look back. Again, it's a little unfair because you don't set out in writing your book to prescribe these things. But I've got you now on stage and you've cited so effectively the problem, you must have thought about it – if you were asked, you'd become a consultant to a government or an organization and they say what should we be doing? What's the answer?

FARIS: Well, let me try to answer it this way. We have a new president in the White House and I think one thing that he's recognized is that one of the big obstacles to tackling climate change - and finding a solution to lower emissions - is that you have basically two blocks of parties: you have the industrialized world which has caused this problem and is responsible for it and is kind of ready to act, for the most part. But they're also saying hold on a second; it's not fair if we don't act if countries like China and India are not also involved. And China and India are saying hold on, you guys caused this, we don't want anything to do with it if you guys aren't there. And that's been an impasse.

One of the reasons that the Senate didn't ratify the Kyoto Protocol was they said we don't want to do it if China and Mexico, India and other countries like them are not required.

HOGE: That was very much a Bush administration posture, presumably …

FARIS: Even before him, even under Clinton when they turned down the Kyoto Protocol they cited these types of reasons. And what Obama seems to have recognized is that if we're going to find a way forward, India and China are ready to eventually do something, but they're not going to do it as long as we're holding back and so we have to be the first to act. And he seems to be – at least it seems to me, I don't have any special insight as to what he's doing - but he seems to me to be consciously making it a domestic issue first. We should do this because it's going to help our economy, it's going to make us more secure, it's going to make us independent from oil from the Middle East.

And then, once we have a domestic rationale for doing it, then we can say hey, these are the issues we're doing, why don't you guys come on board? And so it's at least my hope that something might be done.

HOGE: Very good. If there are questions out there, would you please wait for the microphone to reach you?

QUESTION: Thank you very much for your presentation and your discussion here. The way this discussion went, it gave the impression that many of these difficult problems sort of hinge on resolving climate change per se. But I'm wondering whether your analysis of drought and its consequences is not really related to the interrelationship among population growth, bad agricultural practices and climate change, rather than just one extrinsic element meaning that ocean temperatures have risen being the one factor.

I mean, I lived in Somalia for a number of years. There were more animals in Somalia than human beings when I was there, between cattle, goats, bison and so on. It had just been eaten to the nth degree. So I wonder if you can comment a little more on whether you see an interrelationship among these factors or whether this is just a function of dealing with climate change?

FARIS: No, clearly it's – I think the way to think about it is we have a series of problems, the ones that you mentioned being very much part of it. And the climate change is then an added burden.

I guess one way to look at Darfur, for instance. What I'm saying is not so much blame it on climate change and blame it on climate change, but let's not forget that that may have been part of it.

If you have a situation like Darfur where people have been displaced from their homes and one of the ways we're talking about fixing that is to allow them to go back to their homes. Well, if the previous status quo is no longer one we can go back to because the climate has changed, or because populations have risen and the climate has changed, then we need to start thinking about those type of terms as well when we're trying to craft a solution to the issue.

So it's not that climate change is exclusive but the climate change does have a role to play and solutions are going to be harder to find if we don't acknowledge that and don't think about that.

HOGE: But that question does suggest there are agricultural practices which could be encouraged which would diminish this effect, building practices – that, in answer to the earlier question about what can we do now, those are areas where things could be done, right? Could you bring the microphone down to Ann Phillips please?

QUESTION: Thank you. That was fascinating. Thank you very much. I look forward to reading your book. My question is twofold. I'm interested in the political aspect of this. Now you mentioned several countries that were not doing anything, that have been immobilized in a sense, and if we take the lead then you think they'll follow. In your travels, and apparently you do travel extensively for your writing and for this subject that you're focused on, do you find that there are many nations who are committed to doing something about this, that believe in it and who want to do something about it? That's the first half of my question.

The second half of my question is: in our country there's a very strong anti-green movement. I mean if you listen to a lot of these – I think they're awful – talk shows, and a lot of the – many of the very, very emotional conservatives, and not so emotional conservatives, but there is a very, very strong movement which is anti-green, incredulous. They don't believe it; they feel it's un-American and so forth and so on. Do you find that kind of political resistance to the subject of climate change?

FARIS: I guess to answer the first part, I think most countries understand that there's a problem. But the problem is that there's no benefit of being the first one to do something about it. It's a problem that we all share but it's also one that if you act alone everybody shares the benefit of you acting alone and so nobody wants to be the first one to step forward. And so I think most countries recognize it's a problem and would be happy, hopefully, to move forward if we can address it, if they don't feel it places an unfair burden on them.

The second question, yes, there is a strong anti-environmental movement. I think it's probably more of a very vocal minority than a very big political force. I mean very conservative institutions are talking about environmentalism and green movements. And it's also very clear that there's been a lot of muddy water poured in the climate change debate.

The two things I don't touch on in this book are the solutions, which I'm being forced to touch on today, and the debate about whether climate change is happening, which amazes me that so many people still feel so strongly about that issue on the other side. I can understand why people would want to be skeptical about science or worried about stuff, but the kind of vehemence that that sometimes engenders has been surprising to me.

QUESTION: Do you find that in many of the countries that you travel in?

FARIS: I think I find, especially among the elite, much more willingness to question the science still, but I think most people are onboard.

HOGE: I think actually we tend to say here at the United Nations, when we talk about American foreign policy, that the Bush administration's second four years are much different from the first four, particularly their attitude towards the United Nations, their willingness to work with it. The same thing applies, I think, to climate change. I mean Bush was pretty much a denier in the first four years. There's still one US senator from Oklahoma who believes the whole thing is a hoax. But in the second four years the Bush people were coming around, evangelical Christians as a group in America …

QUESTION: Some of them.

HOGE: Some of them, but still, it's making inroads. And you notice in the Obama inaugural address he mentioned respecting science, that's what that's about. I meant the Bush people were really anti-science in so many ways, particularly in the environmental way. It was already easing.

I tend to think – and you didn't ask me the question – I think those people are now on the run. I think there are very few people now, at least here …

QUESTION: Do you listen to talk radio?

HOGE: But with talk radio you're talking probably about Rush Limbaugh and people like that. I don't think they really govern people's attitudes. I think the fact that climate change is manmade, which was the argument that the Bush people did not accept when they came into office, I think they came to accept it, and I think now that's at least established. Now the question is what to do about it.

Anyhow, do I have any more questions?

QUESTION: This year world leaders are going to gather in Copenhagen to discuss the successor to the Kyoto Protocol. Would you care to share perhaps three or a couple of recommendations for those representatives?

FARIS: Sure. Again, this is the area I don't focus on but what I alluded to before, the big roadblocks are going to be with these trying to find eye to eye and making sure to find a way to all step together. I'd say the rich countries have a point that if we act by ourselves, it's not going to be enough. By 2015 the developing world is going to be emitting more greenhouse gasses than the developed world.

But the countries like China and India do have a point as well. China, the per capita carbon emission is something about one quarter of what it is in the US. So if we just say let's all cap at 1990 levels, well, that's going to mean that they're going to agree. We're in a society where energy equals carbon and energy equals wealth. And they're going to be essentially saying, okay, fine, we agree to drive our car kind of forever, one fourth as much as you do, use one fourth as many light bulbs, and consume one fourth as many manufactured goods. And they have, I think, a very strong case that that's not fair and so it's – whatever the way forward is, I don't know what the way forward is - it's going to mean to try to reconcile those two views.

I mean there are some ideas called cap and convergence where you would cap carbon dioxide where it is now and then slowly make the changes so that the two would eventually match up over time, and maybe that's a way forward. But that, at least to me, rather than pointing the way forward, I'll try to point to what I think are one of the bigger obstacles and say that's one that we really need to be thinking about.

HOGE: Stephan, we have a number of people here from the Nordic countries. I wanted to ask you – can I ask you one question myself – you wrote a piece for *The New York Times Magazine* in August and that was about Greenland. Just, in a minute, what did you find up there? How does that affect the world?

FARIS: That was an interesting story, that Greenland is a colony of Denmark and it wants to be independent. And the problem is that they rely on, I can't remember the exact figure but I think it's 40% of their GDP comes from a subsidy from Denmark, which is a big obstacle to independence. And their independence movement has essentially tied their fortunes to climate change. The ice is melting there, oil is becoming more available, minerals are becoming more available, and they're saying, they just made an agreement with Denmark saying we're going to take the revenues as the stuff develops and we're going to, you know, share it 50-50 and once your share equals what you're giving us, well, let's revisit this because at this point we're going to be making enough money to be independent and that's what we really want.

And so it for me was interesting because it's the first time that time climate change might redraw political boundaries if it does indeed come about.

I do want to say that it does sound like a positive development, but it's a positive development for 56,000 people while that same melting ice goes down and floods a lot of other people.

HOGE: There's a question here.

QUESTION: Thank you very much for your lecture. In my country, Nigeria, I'm glad you've been there; you have seen a lot of things both in the north and in the south. We know that before we were colonized, we had our empires and we had a way of dealing with the environment. Even as, when I was younger I know that the European, you know, ways of life had not completely swallowed our way of life as it is today. And so we had a way of drying our things, of preserving, but then mechanization came. Things changed. Civil war came. I just want you to also look at the idea of flipping the argument the other way around, that conflicts have also affected the environment because during the war nobody's going to care about the environment. They don't care about your survival. And we saw this graphically during our own civil war. Plantations were set ablaze, animals were butchered and this is happening all over the world now. We thank God we put the war behind us.

But I just want to also let us look at the aspects of education. Human beings are the same all over the world. I've always said from my nursery rhymes in the early '60s, that will give you an idea of how old I am. We learned that *early to bed, early to rise makes a man healthy, wealthy and wise.* I think all human beings want to be healthy, wealthy and wise. But the challenge is how to, how do you do it? Some of these people that are wallowing in abject penury and poverty, they're doing so not because they want to, but because they don't know the way out. If they are told how to do it, of course they will do it. I think what is happening now, all our leaders have come here to talk. Yes, they have spoken, they talked, but how do we get out of this? It shows we are one, what we do in the south will eventually affect you in the north. What you do in the north will eventually affect the people in the south. What are we doing for, all of us, to know that we share this common humanity?

HOGE: I actually agree. A lot of what we've been talking about is what we in the UN community call the north-south argument about the effects – the south suffers the most from actions in the north and the reforms have to begin probably in the north. Do you have any comment or thoughts?

FARIS: No. It is a big issue of these poor people you're talking about are not contributing very much to climate change because they don't have the means to do so. They're not using a lot of, they're not driving a lot of cars or consuming a lot of factory-made goods, but yet they're among the most vulnerable to its effects and that's, in some sense a reflection or a fun house mirror reflection of that same divide. In a sense we need to recognize that we’re all in this boat together and address it together.

HOGE: Do I have any more questions? If not, I want to thank you all for coming and thank you Stephan for a good exposition. Thanks very much.

FARIS: Thank you.

[APPLAUSE]