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CLIMATE CHANGE: THE NEXT GLOBAL SECURITY THREAT

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**Introduction and Moderator**

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The UK Prime Minister's Special Representative for Deforestation and Clean Energy

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## P R O C E E D I N G S

MR. BENJAMIN: Well, good morning, and welcome to the Brookings Institution for this presentation by the Center on the United States and Europe, and our Energy Security Initiative.

I'm delighted that you could come out this morning to hear Johan Eliasch, Prime Minister Gordon Brown's special representative for deforestation and clean energy.

Johan Eliasch has had a rather extraordinary career. He's been a very successful businessman. He is the CEO of Head NV -- correct? You're incorporated in the Netherlands. And because he's been so successful at Head and in many other ventures, I thought it was appropriate to trot out a well known quotation from Karl Marx, which is that "When the revolution comes and all of our human potentials are fulfilled, then man will no longer be defined by his occupation, but will be able to be a hunter in the morning, a fisherman in the afternoon, and a critical critic after dinner. Everything you want will be possible."

Well, of all the people I know, Johan has probably fulfilled that vision best of all, because he's done so many different things so well.

In addition to his work at Head -- and I should add that he's, I think, found better things to do than be a hunter and a fisherman, but I'm not going to get into debates about priorities -- he has been a producer of

movies. He has been a founder of the Global Strategy Forum, an important think tank in London, of Cool Forests -- is that correct?

MR. ELIASCH: Cool Earth.

MR. BENJAMIN: Cool Earth -- excuse me -- an environmental NGO. And he has also been deeply engaged in the political life of his adopted home, Great Britain. He was born in Sweden and lives in London. He was a member of the Tory Party Shadow foreign office, and eventually was special advisor on European affairs, and then on foreign relations, and rose to become the Deputy Treasurer of the Party. However, he has shown himself to be man who put principle over party and crossed the aisle to become Prime Minister Brown's special representative.

In addition to all of those achievements, he has been a world class skier, and has also put his own resources where his principles are, and is the owner of, I believe, 400,000 acres of the Amazon, which he undertook as his own personal contribution to dealing with the deforestation crisis.

Johan will present his remarks and, afterwards, my colleague David Sandalow, who is Brookings' Senior Director for Climate, Environment and Energy Matters will lead the question and answer.

David, I should add, is uniquely suited to do this, having been Assistant Secretary of State for Oceans and the Environment, and also the author of a book that came out last fall, *Freedom from Oil: How the Next President Can End the United States' Oil Addiction*. So I think we have a lot to look forward to.

And, without further ado, I give you Johan Eliasch.

MR. ELIASCH: Thank you very much. I'll see if I can live up to that introduction.

Ladies and gentlemen, it's a great pleasure to be here. It's a great honor to be asked to come here and speak.

And let me start off by saying when I grew up as a kid in Sweden, I used to be able to ski, more or less, from October through April. And that was just fantastic, because I loved skiing. Nowadays, if you go to Stockholm, which is quite far north, you're lucky if you get a couple of days of skiing around Stockholm. And that is all due to global warming.

Now, I'm going to address climate change today. And the title of my address is "The Next Global Security Threat."

And maybe that sounds a bit desperate. But in a few years to come, if we don't do anything, it is probably true.

And to put it into context, we look at security threats.

The U.S. budget for war on terror since September 11<sup>th</sup> has exceeded \$600 billion. But if you look at the global carbon market, it's just below \$30 billion -- so, about 5 percent.

So you can see -- priorities, this is not a priority.

Now, Bush, he once said -- President Bush once said, "Our time in history will be remembered for new challenges and unprecedented danger."

Now, the good news with climate change is that, unlike terrorism, climate change is a more straightforward challenge, insofar as it's more quantifiable. And we have a much better understanding and a lot of evidence of what is going on.

But the bad news is that if we do nothing, the impact on mankind can be catastrophic. So we must view climate change with much more of a sense of urgency than is being done today.

Now, I think most of you have probably seen this graph before, and it shows how the planet has warmed up over the last 50, 60 years. But the main point here is that if you look at the trajectory, global greenhouse gas emissions have increased 70 percent between 1970 and 2004, but only by 80 percent between 1920 and 2004. So the vast majority of the increase in emission has come in the last 30, 40 years.

And the point here is that it was human activities that put those gases there.

Now if we look at the countries that emit a lot -- obviously the U.S., EU, China, Russia, Japan and India. India is from 1994, so we don't really know what that number is today.

Now, if we look on a per capita basis -- because this is highly relevant to apportionment around the globe, in terms of people -- here in the U.S. we have the highest emissions per capita. EU follows that, and U.K. is on par with the U.K. [sic]. Same for Japan. Whereas China and India are today far less. But that has started to change quite rapidly.

And if you look here at the growth rates you can see that the U.S. is on par with the world, but what's driving the increase is China and India. Whereas the U.K., who has taken strong measures to achieve cuts is below the world average.

So, basically where we are today -- we have various options, we have a choice. We can choose to do nothing. And if you look at this graph here you can see that the current trajectory points to doubling greenhouse gases by 2050.

And what that means in terms of temperature increases, if we go as far out as 2100, a hundred years from now, a global increase of 4 degrees, with the polar icecaps, there won't be much left of those.

There are lots of effects of that, if we don't do anything. And we've seen so far increase in frequency of hurricanes. Katrina is one example where you had a very volatile hurricane incident. Mitch is another one, in Honduras.

Other consequences are increases in rainfall at high latitudes, and drying at subtropics. And it's not like, for instance, with global warming -- and it's an important thing to point out -- it's not like it gets warmer everywhere. So if you take some parts, it would actually get a little bit colder. But there are some areas which are particularly exposed, like the Antarctic or Arctic, where we've seen average temperatures rise by as much as 12 to 13 degrees.

So it's important to keep that in mind, to understand how a 2 degree shift has such a big impact.

Another example is the Himalayan glaciers, which is sort of part of the parcel for the food supply for about 1.3 billion people. And if these glaciers melt, a) the cost of providing water is going to be huge. Because imagine all the dams you have to construct to cater to all these people. But also it will destroy soil, the river deltas will be completely flooded -- with huge disruptions to food supply.

Land degradation is another one, with important declines in cereal production and livestock, as examples. Big impact in Africa here. Spread of diseases like malaria.

And what happens here is that diseases travel, and it travels from places where people no longer are resilient against these particular diseases.

Another one is outbreak of Chikungunya fever, which is normally found around the Indian Ocean, and suddenly pops up in Italy.

So, if we do nothing, this could potentially lead to a threat to global peace, and result in conflict.

Water shortages, sea level rises, floods, land degradation -- all this will lead to unemployment, loss of land, lots of land areas. Bangladesh is a particularly exposed place. Maldives is another one, will probably disappear.

We'll have poverty issues. There will be competition between people for resources that are more and more difficult to obtain. And you'll have migration of people that have to move from areas which will no longer be habitable.

So this has potential for violent conflicts. And there are examples already of this in this vein. I mean, Darfur, the Darfur crisis, you have one of the reasons for that crisis is competition for resources

between Darfur's Arab nomads and the Black African farmers, which have contributed to this conflict. We saw already that.

Now, this is a picture of Washington. It will be under water.

But we can act, and we can do something about this. And the other good thing is that if we do something now, it's likely to also not cost so much that it has a big impact on our everyday lives.

It's estimated that if we take action, we stabilize at around 500, 550 ppm of carbon emission -- or CO<sub>2</sub> content in the atmosphere, we can tackle that through not more than a 1 percent impact of global GDP.

If we do nothing, it could -- there are some studies here which suggest that it would cost between 5 and 20 percent of GDP. And that's a huge number, and will have a big impact on our lives.

So what is the way forward? Well, unilateral leadership and multilateral agreements. That's the only way we can go forward. That's the only way to get a consensus amongst all the nations of the world, and get something done.

And the last conference on the subject, which was held in Bali in December of 2007, was a good step forward. We saw the engagement of the Australian and U.S. governments with discussions towards a post-2012 agreement. We also saw global consensus that reducing emissions from deforestation and degradation should be a

priority, with frameworks for countries to start piloting projects, and also a wide agreement that deforestation will contribute to harder proposals in climate impact in 2009.

Now, deforestation -- and let me go forward one slide. If you look at this pie chart here, the biggest single contributor, if you really break down emissions to its single constituents, is deforestation.

The number which is used here comes from the Stone Review, which is 18 percent. It is now even being suggested that this could be even higher, as much as 21 percent.

Now, if we take other areas, like heat -- well, you can't turn off the heat, because then people will freeze to death.

We need food. So you can't just stop one day to the other and not -- or cutting back on food, because then people will starve.

We need electricity. We can save on electricity, but still we need electricity.

We need buildings, we need transport.

But deforestation -- and particularly when you go to the rain forests -- here we're looking at just pure waste. It's like flushing down dollar bills, or throwing perfectly good things away.

So, here we have an opportunity to actually have a head start, a quick fix to a big problem in the beginning of what needs to be down.

So this is, it's actually an opportunity, as well as it's very sad to see that all this forest has been destroyed, when it does not need to be.

So let me talk a bit more about deforestation.

Trees, apart from being very beautiful -- I personally, and that led to my engagement, I love trees. And people ask me, "How can you love trees? What's so special about trees?" I just love the shapes and the green, the colors -- everything. So it's something incredibly beautiful, which is part of nature.

Now, if you cut down a tree, what happens?

Well, if you do it in the rainforest, you destroy the soil. And that soil destruction is going to lead to, effectively, it will be -- the soil carbon sink is going to be released up into the atmosphere. And these are huge storages. You're looking at between 200 and 400 pounds of carbon for each hectare. So they're huge sinks.

And what is, for me -- well, let me rephrase it. Today, deforestation is not part of any mechanism for carbon credits. There are no economic incentives to preserve rainforests.

Here's another beautiful picture from the rainforest. And this is how it should look like, as opposed to like this.

Here's another picture -- you can see in the edges, the beautiful forest, and then the rest has been cut down. And this has probably been cut down like a year or two before. But if we took this picture five years from when it was cut down, it will be like desert, because the soil gets burnt by the sun, and it doesn't really have an opportunity to - you can't really plant trees there anymore.

Now, avoiding deforestation is a deliverable and affordable way of abatement. And we think here, in all likelihood, that this can be delivered at possibly less than \$5.00 per ton, which is far less than the prevailing carbon credit prices.

It also has other benefits. And you have to look at what drives deforestation.

It's usually poor people, with no other means than cutting down trees to feed themselves and their families, because they live in areas where -- I mean, they're remote, they're isolated. If somebody's sick in the family and they need to go and see a doctor and they don't have any money, what do they do? They cut down some trees, sell them off to some illegal sawmill to get the money to pay their bills.

It's not people that destroy forests for the sake of it. They do it usually as an act of desperation.

So, what any program to combat deforestation will always have to involve, involving the indigenous people that live in these areas. Because if you don't deal with them -- these are big areas -- you can't, it's not like you can send out guards to protect the land. It's just impossible.

So it is an opportunity also to reduce poverty. So that if you have carbon credits from deforestation, it would enable poverty reduction in these areas, which is a great positive.

There is sustainable activities that you can undertake in the forests. There are lots of fruits, and the biodiversity, which is huge in these areas, provides many sources for income.

Now, where we are today is that we've begun the discussion, but we haven't really done anything to implement change. But we are trying to effectively prepare ourselves for what is to come.

And there is -- let me give you a few examples -- there is the World Bank Forest Carbon Partnership Facility, which is a facility that has been set up through the World Bank with the participation of many countries -- the U.K., Germany, Finland, Denmark, to mention a few. It's \$300 million.

And one of the main goals here is to build capacity and pilot projects in the rainforest, so that countries can be ready and sort of get structured to protect their rainforests.

Another project is in the Congo Basin Forest, which is the second largest rainforest in the world, after the Amazonas. And here you're looking at destruction of about 1.5 hectares of forest each year. And the U.K. government has committed 50 million pounds to support proposals by the Central African Forest Commission -- COMIFAC, as it's known -- those countries, to protect the Congo Basin forests for the benefit of the people there.

And the aim here is to slow the rate of deforestation through developing the capacity of local communities and national institutions to manage and conserve their forests.

And the fund will have a strong African-centered approach. Civil society will play a key role in decision-making, and within the steering board. So that is also important.

These things need to be done with local engagement. You need to involve the people -- not only the governments, but also the people in the areas.

Now, another initiative that I wanted to mention is Cool Earth, which is something that I've set up, together with Frank Field, who's a former minister.

And this was before I took on this role as the Prime Minister's Special Representative. And we said, "People talk. But let's do something, and let's get the message out there and engage more people." It's not how much land we can protect but, really, engage as many people as possible.

So we set that up, and what it does it lets people just to, like I did, to buy rainforest. It's quite complicated. It's not easy to manage. It's far away.

So people who want to invest let's say, \$100 or \$50 as a Christmas gift -- whatever -- it's just not feasible. So we said, we'll create a vehicle for this, a charitable vehicle to set up as a charity, to let people participate.

So we did that. And the way we went about it was to identify at-risk forests -- usually where civilization is beginning to make inroads on the forest. We will then, the Cool Earth would then buy land, or lease land, at the same time engage in local community programs, and have some monitoring of the land to see that nothing went wrong.

Now, the formula for success is you have to make the trees more valuable standing than logged. And how do you do that?

Well, when I bought my rainforest, I said, okay we'll send out loads of rangers to guard the forest. But that didn't work at all.

And then, after trying lots of different things, I said to all the locals, "You can harvest the lands for free." "You can go in on the lands, and you can pick fruits, nuts -- whatever you want. You don't have to pay me anything. All I ask of you is that you become the custodians of the land. You protect the land. You protect your own livelihoods."

And that is the formula that worked. Because all the locals, when people try to come in and cut trees -- and, let me tell you, the system to deal with that in remote places is difficult.

They took that into their own hands and they started protecting.

And since we started that, we didn't have any problems with illegal logging. Those who tried to do illegal logging, they had a problem with that.

Yes, here you can see some pictures from the type of things -  
- nuts, fruits. And you can see more fruits. And there are lots of fruits here which are very unique, like antioxidants, like acai.

Now, here's a picture of a road. Roads is one of the big problems in this area. Because the moment you put in roads, that opens up the way for illegal loggers to come in, cut trees and take them out.

And here you have the problem driving development versus preserving the rainforest.

That's a picture of me -- silly smile.

That's me again. Here is a picture -- just very beautiful. This is in the middle of the rainy season, and it looks like a blur. But if you think of a line in the middle of the picture, that is actually where the land -- or the water ends. It's actually not land, it's treetops, because here the water is up about somewhere 10, 15 meters about the ground level.

We also reforested, replanted, about 200,000 trees in these areas to take care of places nearby that have been deforested. And it grows incredibly quickly.

To Cool Earth -- what Cool Earth has achieved so far is protected 35,000 acres of rainforest. Over 9 million tons of CO<sub>2</sub> has been kept out of the atmosphere.

We contribute to building two schools, six warehouses, one clinic.

We have now 11,000 members, and over 200 schools signed up. And we're also seeing quite a lot of funding from the private sector.

So it shows it can be done. It doesn't have to only be governments, but NGOs can play a role here.

Now, to recap, the key principles for successful projects on the ground -- you need to get the local communities involved. You need to make sustainable forest management adaptable and responsive to the specific requirements of individual projects. The more clear land titles are, the better it is. It lessens the risk of land invasions.

But you also need strict monitoring and verification to maintain the credibility of the carbon assets, and that is another area which is important when we build capacities in these areas. And that is through satellite monitoring, real time, to be able to see that no one is cutting down trees.

Now, moving over to another part of the presentation, which is global emissions trading, which I'd like to say a few words about.

I say here that today the ETS works, but there are some improvements that we can make to it.

We will need an international agreement on the next commitment period, which is very important for its credibility.

We need linking to a global emissions trading scheme, joint implementation and clean development mechanism -- EU emission trading schemes and schemes in the U.S. and Australia and other places -- to have a fungible and transparent market, I think will be important.

Enhanced participation by developing countries would be needed. And deeper developed-country targets is also going to be important.

Now, if we look at this as a step-by-step approach, I think today consensus has more or less been reached when it comes to the science. There are still people out there who don't believe in climate change, but at least the people that believe in it are more or less on the same page when it comes to the science.

What we haven't got today is consensus on the allocation of emissions allowances and targets, and that is a very important part of what is to come in the conference discussions.

We will need a credible and robust governance framework, which is transparent, consistent and legally secure. And if we have that, we have good prospects of having a liquid trading platform which can attract global capital -- which is needed to drive investment into clean technologies.

And a credible governance framework -- that means that projects can be audited as a way of verifying that targets have been met, so that you don't pay out -- people don't get money for nothing, in essence, so that no cheating can take place.

And, now, a final point on that.

If you think about 25 billion tons at \$10 a ton, that is \$250 billion. Now, \$250 billion, let's put that into perspective. It's less than the market cap of Microsoft -- quite a few companies on the New York Stock Exchange.

So, to achieve a global carbon market, from a capital markets perspective, is at least something which should not be impossible.

So, just to sum up here. Climate change is not simply an environmental problem, but it is a threat to -- it can be a threat to our existence.

We need international participants. Without that, everybody joining up and working together, this is going to be a very difficult task.

To achieve emissions targets, that may not be possible without halting deforestation. That's another important point.

And reducing deforestation is highly cost effective. And large-scale projects can be implemented already now. And as you saw in

the pie chart I showed you earlier, it is a big chunk of the emissions. So here we can have immediate impact if we do something.

And the last point is, it would be important that we will have an effective global governance.

And, with that -- thank you.

(Applause)

MR. BENJAMIN: Thank you.

MR. SANDALOW: Thank you very much for a terrific presentation.

I wanted to start by asking you about the business community, because you're a very successful businessman. And here in the United States we've had a debate, historically, in our business community, with some parts of the business community expressing lots of concern about efforts to control global warming, saying that it would be costly, and slow down economic growth.

In the past couple of years we've seen more large members of the business community -- companies like General Electric and Wal-Mart -- take the opposite point of view, and say there are big economic opportunities here in the effort to address global warming.

And, as a highly successful business person, I wondered if you have any reflections on that whole discussion?

MR. ELIASCH: Well, I think today more and more of the business community over here is very open to the discussion, first of all. They're not saying, well, climate change doesn't exist, like you could hear a few years ago. And, to the contrary, people take it very seriously. They want to be involved in the process, take initiatives, to reduce emissions, invest in clean technologies.

I think that's -- I see positive signs there.

MR. SANDALOW: And a political question -- a slightly different topic. I was curious, your reflections on the politics of this deforestation issue in Europe.

Historically, there's been some skepticism from European negotiators at the Climate Treaty about providing credits for avoided deforestation within the Kyoto Protocol and other types of mechanisms. And the argument that's been offered is that if we pay attention to avoided deforestation, that will lead us to pay less attention to coal plants, and oil and that type of thing.

I wondered -- you must hear that. What do you say in response? And do you think the politics of this issue is changing in governments in Europe?

MR. ELIASCH: Well, if you try to tell the Chinese leadership that they have to have clean coal technology in all their power plants, I don't think you'll get very far.

So -- sure, there are arguments -- there are actually other arguments which are, "Why should you pay people to do something they shouldn't do in the first place?" But, at the end, I believe you have to look at the economics, or an economic model. And each carbon emission source has to have a seat at the table on the same basis just like any other source of emissions, because they have the same value.

MR. SANDALOW: Let me ask one other question, and then take questions from the audience which I know it would like to ask -- would like to ask questions.

I'm very interested in a few more words about your experience in Brazil. Because we know that the issue of -- quote -- "foreign ownership of the Amazon" has been inflammatory politically in Brazil. And what you're doing is a very interesting experiment.

And I'm curious what type of political dialogue you've had with leaders there, and whether you would describe your project as popular on the ground in Brazil or not, at this point?

MR. ELIASCH: Well, obviously, this project is something that I've done in a totally private capacity.

First of all, when it comes to sovereignty, that is an issue in many rainforest countries. Some countries have different perspectives on it. If you've read what's come out from Guyana, where they would very much welcome raising money from their rainforest, whereas in Brazil, there has been a debate about, "We don't want foreigners coming in here and sort of buying up our Amazonian rainforest."

And I don't think anybody has ever suggested that. And carbon credits should not be -- will never be a means for that.

First of all, 70 percent of the Amazonian rainforest belongs to either the federal government or the individual states. And the other 30 percent -- a huge proportion of that -- is, again, with the indigenous Indian communities.

So you're only looking at a few percent that will potentially be available to acquire. And, again, here you have issues with land titles. So you're looking at, when you get down to it, a minuscule proportion of the Amazonas.

So I think, from that perspective, it would never be the case in any event.

The second part of the question -- has this been popular, or what has been the feedback on the ground?

It depends on, I guess, who you talk to. If you talk to the people that harvest my lands, they think it's great. They think this is wonderful, because it's created livelihoods.

If you speak to the people that I laid off at the sawmill, they'll say this is terrible. This is a guy who loves trees more than he likes people. He's a horrible guy.

But the reality is, you have to make a choice. And I didn't do that choice sort of to participate in a popularity contest but, rather, do what I thought was right.

MR. SANDALOW: Just to ask a follow-up question -- this is prompted by what you said -- are there more people laid off at the sawmill, or more people benefiting from the products that are remaining in the rainforest, in your view?

MR. ELIASCH: Well, the sawmill had 1,100 people. But we have created 1,500 livelihoods. So we had a net gain of 400 jobs -- which I think is fantastic.

MR. SANDALOW: I saw hands start to go up already.  
In the front row -- yes, Tom?

MR. CALINA: Tom Calina, 20-20 Vision. I want to thank you for two things. One is for making Head tennis rackets, one of which I have, and they're great. So, thank you very much.

MR. ELIASCH: Thank you.

MR. CALINA: The other is for titling this talk, "The Next Global Security Threat," because I'm embarrassed to say if it hadn't been called that, I probably wouldn't have come. But I'm glad I did.

And it kind of makes my point that in this town, and probably many others, calling something a "security issues," as opposed to an "environmental" or "deforestation" issue gets you a different kind of attention.

So I'm wondering -- and certainly some of us in the town think if we can somehow frame climate change as a security issue we'll gain traction with different communities that wouldn't otherwise be interesting in environmentalism.

So I'm wondering if you could talk more about how we can expand that understanding of the security implications of climate change so we can reach different audiences.

Thanks.

MR. ELIASCH: Well, I think -- I mean, that's why I chose the title.

If you talk about "the environment," unfortunately people sort of -- "that's the green people." But it's not. This is a serious issue, and it needs serious attention.

And, unfortunately, you have to put pictures of disasters in front of people to realize that, you know, this could be reality where you live, and where you are.

And it is -- I think, compared to where we were a couple of years ago, we've made enormous headway in persuading politicians that this is a very important subject. And I can say, in my case, when I was asked to do this job for Gordon Brown, you know, I saw somebody here who is truly -- has a lot of conviction in this subject, who really wants to make a difference, and who is pushing this subject very, very hard.

And I'm seeing more and more politicians like that. And I'm very happy that in the U.K. we spend a lot of time, a lot of resources, on this particular area.

MR. PEARLMAN: I'm Lou Pearlman. I'm a consultant here in Washington to the Public Entity Risk Institute and other organizations.

Large swaths of rainforest are now being cleared in Brazil and Indonesia to grow ethanol and bio-diesel fuels to fight global warming.

Are you for that or against it?

MR. ELIASCH: Well, if you look at the economics, if you look at the abatement cost -- and this is a private view, I want to point out -- it makes much more sense to save rainforest than spend subsidies on doing biofuels.

MR. HOLLY: I'm Chris Holly. I'm a reporter for the *Energy Daily* here in Washington.

I want to follow up on David's question about the EU politics of deforestation.

When the Commission a few days ago put out its legislative proposals for the next decade it reiterated its opposition to allowing emission credits earned from avoided deforestation in the EU ETS. And one of the reasons it cited was the lack of maturity in monitoring and compliance techniques. There's no assurance, for example, of the permanence of avoided emissions from deforestation.

How do we get to the point -- if indeed this is the best approach for saving rainforests -- to reassuring people who hold these concerns, so that there can be an expansion of the universal credits and enhancement of preserving forests?

MR. ELIASCH: Well, that's a good question.

What is needed in the rainforest nations is capacity to audit - you need, in practical terms, you need to see that the trees that are supposed to be protected are still standing for the period that credits are given out.

These are a lot of issues that need to be addressed in a future framework for integrating deforestation into a trading scheme.

MR. HOLLY: Can I -- just a follow-up -- is it just a matter of having lots of boots on the ground, if you will?

MR. ELIASCH: I think it's —

Mr. HOLLY: Watching trees?

MR. ELIASCH: -- I think it's people, and it's technology. You can monitor with satellites. There are lots of things you can do with trees. You can put in chips, so you can actually monitor where the trees are.

There are programs in the Amazonas already where trees are marked.

MR. SANDALOW: You mentioned Guyana a moment ago, too. I wondered -- any reflections on different countries around the world that are -- the forest, rainforest nations -- where there's particular openness and interest in this agenda?

MR. ELIASCH: I think all rainforests have an interest -- obviously a vest interest -- in this area, which is very positive.

Yes?

MS. CLONES: Julia Clones, economist, consulting on sustainable development.

Could you please comment specifically on the case of Ecuador? I understand there was a direct request by the state for direct

financial support -- international support -- to more or less compensate for lost income by avoiding oil exploration?

I understand this is a specific request for international direct financial support.

Thank you.

MR. ELIASCH: I can't comment on this specific request, but -- yes, there are going to be, again, choices between -- that you have to make, between cutting down trees and other economic activity, whether it's natural gas, oil. Because, theoretically, the rainforest could have a lot of oil underneath it.

So there are areas where you have to take a view. Sometimes it might be such an important thing to extract energy -- other forms of energy -- that that is a better way of dealing with the global climate change problem.

MR. SANDALOW: This is for those in the audience not familiar with this, this is a very interesting and innovative proposal out of Ecuador, which has substantial oil and gas reserves sitting on top of a rainforest, and is now looking to the international community for help to finance the lost revenues from not drilling in that rainforest.

We'll go to the back of the room and then come up. Way in the back, there. Not way in the back, two-thirds of the way back.

MR. CAMERON: Thank you, my name is Edward Cameron. I'm the special representative on climate change for the Maldives, who you actually mentioned in your presentation.

I'd like to make a brief comment as a prelude to a question. And the comment is that it's very important, I think, that we bear in mind that this is not a "scientific" issue, an "economic" issue, an "environmental" issue, or a "forestry" issue. This is fundamentally a human tragedy. And I think that's often lost in this debate, and has been for 20 years.

In the case of the Maldives, we are already seeing the effects of climate change. It is already undermining and compromising human homes, prosperity, jobs, violating human right and, ultimately, costing human lives.

A child born today in the Maldives who begins his life today is unlikely to be able to end his life in the Maldives, because of the current projections. And that's very important.

The question I'd like to ask is that if we look at the current debate on climate change, we will see that we're having the same arguments today that we've had for the past 20 years. So, in addition to being a human tragedy, climate change is also a political tragedy.

We are still talking today about "common but differentiated responsibilities." We're still talking about "new and additional finances."

And we're still having the same trouble getting the major emitters to engage in a comprehensive global consensus.

So my question to you is: why do you think our politics has failed us? And how do you think we can improve our politics over the coming years? Because it's important to bear in mind that the science is not "more" or "less" settled. The science is settled. It is unequivocal. It is beyond a reasonable doubt. And yet we still continue to prevaricate and to avoid the necessary urgency and ambition.

Thank you.

MR. ELIASCH: Well, I guess the difference is -- or rather, it's not like it's an asteroid, a huge asteroid, about to hit the planet that we can see coming towards us in the sky -- even though it is almost like that, but over a longer period of time. It's something that's happening slowly.

And I guess that is why people -- the sense of urgency is not as big as we would hope it would be. And sometimes it takes disasters to get people to wake up.

Hopefully, in this case -- and we are quite far along. There is a global effort in coming to an agreement, which will replace the Kyoto protocol.

So I think we can be optimistic, but we also have to -- I think it's up to everybody to make sure, whatever way he can, or she can, that something does happen.

MR. SANDALOW: And we have an interesting development here in U.S. politics. We have, I think, an emerging favorite in the Republican nomination contest, John McCain -- he certainly doesn't have it locked up by any means, but I think most people now consider him to be the favorite -- and he is the sponsor of one of our leading pieces to fight global warming in the U.S. Senate.

And on the Democratic side, it appears to be down to Senator Clinton and Senator Obama, both of whom are strongly in favor of the Cap on Trade Program. And then there's waiting in the wings, Michael Bloomberg who, should he enter the race, he's also in favor of the Cap on Trade Program.

So, I think, yes, if either Senator McCain or Senator Clinton or Senator Obama or Mayor Bloomberg becomes President -- I don't know what the odds for those four is in Vegas, but they're probably pretty high that one of those four will become President -- if any of those people become President, we will have a President strongly in favor of aggressive action against global warming.

And I wondered, from your European perspective, in terms of the view of the United States in the world, what role do you think that the United States' behavior on global warming in the past years has had on the view of the United States in the world? And do you think that more aggressive Federal action to take on global warming would improve the perception of the U.S. around the world?

MR. ELIASCH: Well, I'd say this, that without U.S. direct participation and co-leadership, it's going to be very difficult to get to a post-2012 agreement. So that's essential.

The perception is that, certainly, the favorites in the Presidential race all are very much pro-action. I saw Mayor Bloomberg yesterday and we discussed his programs that he's implementing for the City of New York. And I can tell you, personally, he's somebody who feels very strongly about the environment. And so if he became the President, I'm sure we'd have very strong action.

And he said something to me which was quite interesting. He said, "I'm 65 years old. I'm very rich. I don't care what people -- if they criticize me. I do what's right. And this is not about politics, it's beyond politics. It's something that needs doing -- whatever, where you're from, what political affiliation you have, it just needs doing."

MR. SANDALOW: Right here in the front.

MR. KEFER: Jennifer Kefer, I'm the Climate and Energy Coordinator for the Coalition on Environment and Jewish Life.

And I had a question about using, I guess, halt to deforestation as a way to offset emissions from other sources. Putting aside the problems of monitoring that were talked about earlier, I know that in order to be a legitimate offset, you'd need to have permanent and verifiable reductions.

Even if there aren't problems with folks coming in and cutting down the trees illegally, aren't there still problems with the trees' dying at the end of their lives and releasing carbon then?

And so my concern, or my question to you is: how, then, can that be a permanent offset to emissions coming from other sources, like coal-fired power plants?

MR. ELIASCH: Well, if you take dying trees as a proportion of the overall trees, the release of carbon there is still a very small proportion. And there are things you can do through forest management where you basically -- techniques to open up so you can prolong the life of trees.

The drawback with that is that a lot of the time that requires roads. And with roads, then you get back to illegal cutting of trees because you give people access. And that's the problem with that.

So -- but, overall, I think that is a very small proportion.

How to deal with that? I guess in the future, when you have capacity in rainforest areas, it will be easier to do sustainable forest management schemes with the infrastructure, because the longer we get into that, the less likely it will be to get illegal cutting.

MR. SANDALOW: Yes?

SPEAKER: I'm Malcolm (inaudible), George Washington University.

I don't know whether this is true or not, but I presume that global warming would have some positive effects somewhere. I'm just thinking of northern Canada and Siberia, and other areas of the world.

And has any thought been given to what we could do to take advantage of a favorable climate change for those areas?

MR. ELIASCH: Well, if we don't do anything, buy some beach property in Siberia.

(Laughter)

Certainly, Canada and Russia, to them it's great with global warming, because it makes huge land areas more useful. And that is also a consideration for the discussions post-Kyoto.

If there are any benefits? I don't know of any. Well, the obvious benefits are the fact that more land becomes more usable. But it is still fairly remote areas.

MR. SANDALOW: If you'll permit me, we also have -- there are northern forests in both Alaska and Canada that have been devastated by the bark beetle over the course of the past several years, and the bark beetle used to be killed by frost at night. But, as a result of the warming of the climate up there it no longer is killed, and that's led to massive, both ecosystem loss and economic damage.

So, even if there's some benefit, there's also some pretty big offsetting losses in boreal forest.

Over here.

MR. CHAKLADER: Hi, I'm Johny Chaklader, a student at the Howard University School of Law.

I was -- I actually wanted to take the opportunity to commend you on your private initiative. I think the more successful you are, the less deforestation there will be.

However, to follow up on David's point, the more successful you are -- even if it is a small percentage -- the less local ownership and control of ancestral lands.

And I think one solution to resolving the inflammatory nature of this is to bring in more of the locals during the participation -- in the decision-making process for these private initiatives. And I think that may well be a balanced approach.

I was wondering what degree of participation of the local community was involved in your experiences?

MR. ELIASCH: Ahhh. Well, I involved lots of people.

But, let me put it this way. First of all, you can't satisfy everybody. But if you can satisfy the majority, or perhaps 80 percent, then you've done a good job.

It's -- these are areas where, you know, it's a bit like the Wild West. It's not like doing something, you do a project in the suburbs of Washington, and you know exactly who to speak to and so forth. In the middle of the Amazonas, you can go, you can speak to the governor, you can speak to the major, you can speak to sort of local enterprises -- whatever -- and you'll get one view one day -- not the -- the governor will give you a view and will stick to that. But the views, they tend to change, depending on what is good that particular day.

So, it's not always easy.

But I would like to add that, in my case, I really did take the trouble of talking to people, explaining what I was doing, why, and so forth.

MR. SANDALOW: In the middle here.

MS. LEWIS: Hi, I'm Courtenay Lewis from the League of Conservation Voters. This might be a naive question, but I'll just ask it anyway.

I'm wondering how much you've been targeting celebrities for your conversation of rainforest? Because there are people like Angelina Jolie, who seem very interested in doing -- you know, giving something back, but who will equally spend \$20 million for a house in Los Angeles.

So, I suppose -- I wonder if you are considering, you know, targeting celebrities to buy several thousand acres, hire the locals to construct -- quote-unquote -- "eco-friendly homes." There they could pick fruit, and celebrities could go there when they need to escape, except they wouldn't -- you know, on the condition that they wouldn't make any changes to the land and, of course, there wouldn't be the problem of paparazzi there.

(Laughter)

So I was just wondering what you think about that?

MR. ELIASCH: Well, it sounds like an excellent idea.

(Laughter)

It's perhaps a project you should undertake.

MR. SANDALOW: Time for a couple more.

Right here.

MS. CIFUENTES: Ines Cifuentes from the American Geophysical Union. And, actually, as a daughter of an Ecuadorean, thank you.

But my question is, you know, we have -- we're the organization that has all the earth and space scientists. So, you know, every year, in December, we have 15,000 scientists from all over the world flying in. And, as far as I can tell, very few of us are willing to give up flying, which is actually a big source of CO<sub>2</sub> emissions.

Is there a way to connect that to your Cool Earth, so that we offset the CO<sub>2</sub> emissions from flying with, you know, purchasing the rain forest so it stays -- so the trees stay?

MR. ELIASCH: That's a very good question.

I think one of the things we can all do is to offset our own carbon footprint -- because that's a start.

I mean, Head, which a company that I have, what I made Head do was to offset 10 times its carbon footprint. And in the scope of, I mean, Head's activities, it's not a lot of money. And that's something all corporations can do, and that's an area where Cool Earth are assisting

companies so they do exactly that. And that's a source of funding for Cool Earth.

Now, aviation -- we all need to go from places. We need to have face-to-face contact. I think videoconferencing is great, but it's still not the same as seeing somebody in person. So you need that.

Now, if we look at the aviation sector, there are lots of improvements to that sector that are relatively easy. One is air traffic control systems -- and I'll give you some examples.

In Europe we have a system where you fly zig-zag, because you have (inaudible) points that you fly between. So if you go London-Rome, which is about 750 nautical miles, you actually fly about 900 nautical miles. And 150 nautical miles, that's an extra 20 minutes in the air.

Twenty minutes in the air, that's 1,000 pounds of fuel -- maybe 2,000 pounds of fuel if it's a bigger aircraft. And that's a lot of CO<sub>2</sub> that is just wasted.

And I don't like waste. And that's something that could easily be improved by investing in technology and letting people fly straight.

The airlines would also be very happy, because it means they'll burn less fuel. And they can pass their savings off to the consumers. We can have lower airfares.

Another example is runways. Over here, the Washington and New York area is very, very congested. So if you come on a flight, wherever you come in on, you have to go down to, let's say, 18,000 feet I think is the incoming pattern -- 18,000 feet, about just before Boston. So you fly at low altitude all the way into Washington and New York.

When you fly at low altitude, you have to reduce speed, plus you burn much more fuel. So that's just pure waste. And that is because of air traffic control systems that are not efficient enough.

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