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CLIMATE CHANGE POLICY

THE VIEW FROM EUROPE

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C O N T E N T S

## Moderator:

NIGEL PURVIS  
Vice President, The Nature Conservancy  
Nonresident Fellow, Brookings

## Speakers:

LUCIEN LUX  
Minister of Environment and Transport, Luxembourg;  
President, E.U. Council of Environment Ministers

STAVROS DIMAS  
Environment Commissioner, European Commission

LORD WHITTY OF CAMBERWELL  
Minister for Farming, Food, and Sustainable Energy, United Kingdom

## Discussant:

DAVID SANDALOW  
Environment Scholar, Brookings

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

MR. PURVIS: European leaders agreed last month on several new long-term climate change goals extending out to the period 2020 and beyond. And U.K. Prime Minister Tony Blair has committed to making climate change the centerpiece of July's G8 summit in Scotland.

We are extremely fortunate to have with us today three senior political leaders that are deeply involved in European climate change politics and policy. Each will deliver brief remarks, at which point we shall hear an American reaction followed by a moderated discussion and then questions from the audience.

Before introducing our speakers, let me say that the Brookings Institution gratefully acknowledges the close cooperation of the European Commission's delegation to the United States in preparations for this event. In particular, we would like to express our gratitude to Robert Donkers, counselor for energy, environment, and transport. Robert is a frequent participant in Brookings events, and we are grateful for his steady friendship.

To preserve the maximum time for our discussion, I will introduce all four of our distinguished speakers now and then invite them to the podium in the following order, without further cue from me.

Our first speaker is Lucien Lux, the minister of environment and transport from Luxembourg and the current president of the European Union Council of Environment Ministers. In March 2002, Minister Lux was named secretary general of one of Luxembourg's leading political parties. He has served as Luxembourg's minister of the environment as well as its minister of transport since July of 2004. Minister Lux

has made climate change one of the top priorities for his country's presidency of the European Union.

Our second speaker will be Stavros Dimas, the environment commissioner of the European Commission. Mr. Dimas began his tenure at the commission in November of last year. He studied law and economics in Greece and in the United States, and he worked as a lawyer at the World Bank and at Sullivan & Cromwell in New York, where I too once practiced law. He has been elected to the Greek Parliament 10 consecutive times since 1977.

Lord Whitty of Camberwell, our third speaker, is the United Kingdom's minister for farming, food, and sustainable energy. Previously, he was the parliamentary under secretary of state for the Department of Environment, Transport, and the Regions. Lord Whitty has promoted actively major climate change initiatives in the United Kingdom and abroad relating to energy efficiency and renewable energy.

David Sandalow, Brookings' own environment scholar, will offer an American reaction to these three European perspectives. Before arriving at Brookings, Mr. Sandalow was executive vice president of the World Wildlife Fund of the United States. He directed U.S. climate diplomacy during much of the Clinton administration from several top positions at the Clinton White House and State Department.

As our distinguished speakers have arrived in Washington only recently, please help me by extending a warm welcome to all three of them now as an appreciation of how much we welcome their participation in this event this morning.

[Applause.]

MR. PURVIS: I now invite Minister Lux to the podium.

MR. LUX: Thank you, Mr. Vice President, ladies and gentlemen. I'm very delighted to be here together with Commissioner Dimas and my colleague Lord Whitty from the next incoming presidency of Great Britain after the 1st of July; to be here at the Brookings Institution alongside some very eminent speakers and a very eminent audience of U.S. institutions, industry, think tanks, and NGOs.

Climate change, as it was said now, is and was one of the priorities of the Luxembourg presidency of the European Union. In that context, we came to the view that we had to try to communicate better and more about the issues, the challenges, and the problems of climate change and to exchange views with our partners on our respective positions. Therefore, I want to begin today by saying something about the science and what it means for us. I assume that there are different degrees of familiarity, so I apologize to those who are more than familiar with it.

We all know that the world is warming and that greenhouse gas levels are rising. I don't think that anyone in this audience will dispute that climate change is by far the biggest challenge for sustainable development in the 21st century. I am also aware that there are diverging views of how we shall tackle the problem, but combating climate change is not an option; it is definitely a necessity. But the costs of inaction are very high. Taking assertive action on climate change will not just help to create a more secure world, but one with greater opportunities for investment in an emerging, global, low-carbon economy, and will enhance rather than damage competitiveness.

Climate change is growing faster than expected. Models alert us to the scale of future climate change and point to the need for greenhouse gas emissions to be strongly curbed. The alarming reports from the International Arctic Science Committee show how dramatically changes already occurred in this region. Just one example: In

the last 20 years, the ice coverage in the Arctic has diminished by 15 to 20 percent. Even in Europe and in the United States, the increase of extreme weather events creates high damages to our economies and cost human lives. Scientists warn us that events that once were exceptional, occurring once in a century, will be normal in a few decades if climate change is not contained. Developing countries will face higher damages than industrialized countries, as they are more vulnerable to climate change.

Briefly, climate change is happening. It causes enormous costs worldwide. The 10 warmest years on record have all been after 1990. Over the last century, global mean temperatures have already risen by 0.6 degrees Celsius above preindustrial levels. This is the most drastic temperature rise for over a thousand years in the Northern Hemisphere. In Europe, temperature has even grown by more than 0.9 degrees Celsius. Extreme weather events like floods, storms, and droughts are becoming more frequent and intense, having negative impacts on water resources, on biodiversity and food production. Glaciers are melting, sea ice and snow cover are declining. Sea levels are rising and are forecast to rise another 88 centimeters by 2100, threatening millions of people globally who currently live below this level.

According to the IPCC, global temperatures are predicted to rise by between 1.4 and 5.8 degrees Celsius over this century. We have to avoid these risks at any price, and we can — avoiding these risks. Certainly — climate change has costs, but we have to bear in mind that, according to scientists and even to insurance companies, the costs of climate protection is 10 times lower than the costs of damages to be expected if no action is taken.

The German Institute for Economic Research has estimated the damages to the economy of a global warming of only 1 degree Celsius up to nearly \$2,000 billion

by 2050. These astronomically high figures let appear the frequently advanced costs for the protection of our climate in another light. We pay already for the damages today, and we will have to adapt to the changing climate. As it seems, the last hurricane season in Florida caused damages as high as \$25 billion. That's half of industrialized countries' expenses for developing countries. In many regions of the world, it is now impossible to insure housing against such threats. Compared to potential costs of damage due to climate change, the costs of long-term global action to tackle climate change are likely to be short-term and relatively modest. But these costs will depend on clear long-term signals from governments.

So what can we do? The European Union, like the United States, is already taking action. And with the entry into force of the Kyoto Protocol, we have got, for the first time, a legally binding international instrument with greenhouse gas emissions reduction and limitation targets for industrialized countries. The member states of the European Union and the Commission are working hard to meet their Kyoto commitments to reduce emissions by 80 percent. The E.U. projects being able to reach its targets through the effective implementation of existing and new already planned policies and measures, and by using the protocol's mechanism.

New initiatives, like the E.U. emission trading scheme that started this year, will bring further reductions. The E.U. scheme is a cornerstone of E.U.'s strategy for tackling climate change. It is the world's most ambitious program for environmental management, and will create pollution control assets potentially worth tens of billions of euros. The emission trading scheme applies now to about 12,000 installations in Europe and covers more than 45 percent of our CO<sub>2</sub> emissions. It contains review clauses that foreshadow considering more sectors and gases over time.

But meeting our Kyoto commitments is not enough. We know that the Kyoto Protocol can only be a first step. Many more have to follow. UNFCCC's overall objective is to stabilize greenhouse gases in the atmosphere at levels which avoid dangerous anthropogenic climate change. Well, in Buenos Aires, in December, we took a first small step to looking at what to do after Kyoto. We decided to hold a seminar to exchange information on existing policies and measures as well as future actions.

The next years will be decisive. Therefore, showing that we bring our emissions down within the European Union and the United States now is a condition for our international credibility and continued leadership on climate change. Without this leadership, we will not be able to convince the developing countries to take on additional commitments in the longer term. And we know very well that we can only win the battle against climate change if we act together, at the global level.

Our approach in the E.U. is acknowledged by many—for instance, the International Climate Change Task Force. A global mean temperature increase of more than 2 degrees Celsius must be avoided. The E.U. environment ministers and the European Council in March concluded that recent scientific research and work under the IPCC indicate that keeping this long-term temperature objective within reach will require global greenhouse gas emissions to peak within two decades, followed by substantial reductions on the order of 15 to perhaps 50 percent by 2050 compared to 1990. This objective should guide global efforts to reduce climate change risks in accordance with the precautionary principle.

This objective is global in nature, as it can only be achieved on the basis of global action, not by the E.U. alone. In view of the global emissions reductions required, global joint efforts are needed in the coming decades, including significantly

enhanced aggregated reduction efforts by all economically more advanced countries. The E.U. looks forward to exploring with other countries, as today, possible strategies for achieving necessary emission reductions. In this context, we believe that reduction pathways by the group of developed countries on the order of 15 to 30 percent by 2012 should be considered. At the recent European Spring Council, heads of government — these figures as well as the spirit of the long-term-reduction figures.

We are interested to start promptly the consideration of the post-2012 framework in the context of the U.N. climate change process and to engage with all parties to the convention in a common and open dialogue on further actions. We should explore new approaches for differentiation between parties in a fair and flexible framework, offering opportunities for broadening and deepening parties' contributions to the mitigation of climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities.

Let me conclude by recalling the three key messages I would like to insist on as the president of the Environment Council.

First, everybody agrees that climate change is a very serious problem that requires an urgent and global response.

Second, diverging views among parties obviously still exist when it comes to deciding on how to act and when to act. Guided by increasing scientific evidence, the E.U. endorsed a maximum global temperature increase of 2 degrees Celsius as an overall long-term objective. Science furthermore indicates that such an overall objective can only be reached if global—I insist, "global"—greenhouse gas emissions peak within two decades, followed by substantial reductions. Many technological options for reducing emissions at reasonable cost already exist. For some

others, more work needs to be done to ensure that they become competitive market options. We have to ensure that the right investment choices are being made today in order to assure the transition to a low carbon future tomorrow.

And third, finally, our common challenge in the near future will consist in agreeing on these global joint efforts that are needed according to the principle of common but differentiated responsibilities and respective capabilities. [Inaudible] later this year should be used for an open and constructive dialogue. The European Union is ready to take up its responsibilities.

Thank you for your attention.

[Applause.]

MR. DIMAS: It's really a great pleasure to be participating in this event at the Brookings Institution today and really a great pleasure for me to be back in Washington at this time of the year, when the cherry trees are blossoming and the temperature is really right. So I was surprised when I entered the hotel that it showed that the temperature was at 68 degrees in the room—very cold. I'm not energy efficient, actually.

You know, Washington is such a beautiful city, I really feel—I can tell you, I feel at home here. Although now I see that it has expanded, is much bigger, still it remains beautiful, perhaps more beautiful than before. But the trouble is that I cannot find my way around. I was looking for the Second Story Books store on P Street. It is still there? I didn't remember which street—17th, 16th, 18th, so I couldn't find it yesterday when I went around outside of the hotel. Then I cannot find, of course, People's Drugs. Do you remember them? They are not any more. And Hot Shoppes. Do they exist? I quite a few times had lunch there.

But still, I think Washington is beautiful and you are lucky that you live here, although you have to enter to all these public places with very cold weather inside. I don't know why you still have such temperatures there.

I'm very glad to have the opportunity to inform you about what we in Europe are doing in the field of climate change and our views on what needs to be done in the future by the European Union in cooperation with the United States and the rest of the world to tackle what we see as one of the main challenges that we are facing. And when I say "we," I don't mean only Europeans—everybody. Because entering—my story—entering yesterday my hotel room, I turn on—first of all, turn off the air condition and turn on the television, and I saw first, within about half an hour, a program on CNN regarding what breakthrough technologies are expected, and one of them was about hydrogen and climate change, showing the research here. Then I saw a debate, or rather presentation of, as I told you before, the programs, the manifestos of the election programs of Labor, Conservative, and Liberal parties in England. And each of them, each of the leaders, mentioned climate change on the agenda. Then I opened the Newsweek magazine and I found an advertisement—this one: "We are all for reducing emissions." So really, I fully agree with them. Of course, there are different ways of doing it, but I hope that we shall be able to face this problem all together, because it is a problem that is not only for Europeans or for Africans or for Americans. It is a global problem, and a global problem needs a global answer.

Minister Lux has already told us about the science of climate change. Let me add a concrete example that climate change is happening today. In one month, the managers of the popular Andermatt ski resort in Switzerland are going to cover part of the Gurschen glacier with a giant insulating foil. The glacier has been melting and has

sunk 20 meters below the top cable car station in the last 15 years. Skiers can no longer reach the glacier when there is no snowfall. If a trial is a success, next year the whole glacier will be wrapped up during the summer. This desperate measure to save a glacier is for now unique, as far as I know. What is not unique is that the Gurschen glacier is melting. Nine out of 10 glaciers worldwide are dissolving. Switzerland, renowned for its snow-covered Alps, is likely to lose 75 percent of its glaciers by 2050, and with that some of its lovely charm.

The European Union remains committed to the international fight against climate change. We know the technological options to reduce emissions already exist and that significant reductions and significant savings can be made if a broad portfolio of options is used. This is where we, political decision-makers, can act. It is up to us to take the right decision.

Climate change touches on all aspects of our society. It is a threat not only to the environment, but also to our economies and, in the end, our security. Internationally, the European Union has pushed for a multilateral framework to address the issue, since climate change is, as I said before, a global problem and no country can achieve much on its own. This is why we consider that the United Nations Framework Convention on Climate Change remains the appropriate context for dealing with climate change and why we believe that the Kyoto Protocol, in spite of some weaknesses, has been a step in the right direction.

Domestically, the European Union climate policy has matched its words with deeds. In 2000, we launched the European Climate Change Program. Under this umbrella, stakeholders, including industry, have actively participated in the search for smart and innovative measures to reduce greenhouse gas emissions. So far, we have

identified and put in place 42 — cost-effective measures. For example, we are requiring new buildings to meet energy-efficiency standards, since better insulation can reduce energy consumption by about 90 percent. Car makers selling passenger cars in the European Union have voluntarily committed themselves to reducing carbon dioxide emissions [inaudible] between 1995 levels and 2009. We are pushing for combined heat and power generation. We are controlling the fluorinated greenhouse gases used in air conditioning. We have set limits on methane emissions from landfills.

But what our flagship is is the European Union emissions trading scheme, which successfully kicked off on January 1st this year. It is breaking a lot of new ground as the first international trading system and the greatest ever in terms of economic [inaudible]. European Union governments have set limits to how much carbon dioxide some 12,000 energy-intensive plants are allowed to emit each year. This covers about half of our carbon dioxide emissions. The value of the annual allocations that participating companies receive amounts to some 30 billion euros. Factory owners can trade these allowances. Those who can easily reduce emissions can sell the surplus allowances to those for whom reductions would be more expensive. In this way, cuts will be made where it is cheaper.

This scheme will give European business, including United States businesses doing business in Europe, a [inaudible] advantage through the invaluable early experience they will gain. Due to mandatory monitoring and reporting of emissions, companies will establish carbon management systems for the first time. One of the first companies in Europe to do so was [inaudible] Refinery in Rotterdam.

A whole new range of new business is emerging in Europe as a result of the European Union carbon market. Carbon traders, carbon management specialists,

carbon auditors, verifiers. New financial products, such as carbon funds, are entering the market. It is also possible for companies to use credits from Kyoto project-based mechanisms to help them comply with their obligations. This means the system will not only provide a cost-effective means for European Union-based industries to cut their emissions, but it would also create additional incentives for businesses to invest in emission reduction projects abroad, for example, in developing countries or in Russia. In turn, this will spread the transfer of environmentally sound technologies to other industrial countries and developing nations, giving tangible support. European Union companies are already preparing projects worth some 500 to 600 million tons of carbon dioxide for the period 2008-2012.

With the emission trading scheme, the European Union has created a new currency based on tons of carbon dioxide and a new market in emission allowances. Never before has the European Union used a market-based instrument on such a scale to achieve an environmental goal. It is still early days, but the volume of trade in allowances is steadily increasing, and we have already seen trading days with allowances for more than 2 million tons of carbon dioxide changing hands. This scheme will be reviewed around mid-2006 to allow fine-tuning in the light of experience gained. We will also consider extending to other sectors, such as chemicals, aluminum, and transport as well to more greenhouse gases.

That I can present today our emissions trading scheme is to a certain extent thanks to the positive experience of the United States with emissions trading to combat air pollution. When such market-based instruments were discussed in the Kyoto Protocol negotiations and actually proposed by the United States, the European Union had strong reservations. But our views have evolved. Today we recognize the crucial

value of market-based mechanisms to harness the creativity of the business sector, to offer economic incentives to our emissions, and to reduce compliance cost. Our emissions trading scheme will reduce the cost of achieving our Kyoto target by about a third, saving European Union industry millions of euros. We are convinced that such instruments must be at the core of a successful long-term response to climate change.

Let us now look ahead at the future of the climate change regime. This is certainly the most burning issue in the current climate change debate. The Kyoto Protocol has been a first crucial step, as Minister Lux said before, but it is now time to start discussing where we want to go from here; or in other words, what we want to do when our targets expire in 2012. This is also the date when the current United States climate change program ends.

For the European Union, nonaction is not an option. Studies find that the course of unbridled climate change, in terms of the damage and the suffering it will cause, will be far higher than the cost of reducing emissions, if we opt for the right approach. Business is looking at us for clues on what to expect in the future, in particular since many companies need to make long-term investments. So, earlier this year, the Commission put out a paper outlining some basic elements we believe a future climate change regime should include.

Firstly, from what I already said, you won't be surprised to hear that we consider the continued use of market-based instruments very important. Secondly, we think that a determined push for innovation and new technologies is indispensable. Thirdly, we believe that there must be broad participation in the reduction effort by all major emitters, including the United States but also developing countries such as China,

India, and some others. China, for example, already contributes 14 percent of global greenhouse gas emissions, which is the same share as the European Union's.

Our projections show that absolute emissions from the developing world will continue to increase, while emissions from industrialized countries are likely to remain stable. We do not think that developing countries, giving the booming economies in some of them, can or indeed should take on the same commitments as us in the industrialized countries. Their per capita emissions and income levels are still a fraction of ours. But we could design a system with different types of participation. And there are good reasons for developing countries to join the effort. They are very vulnerable to climate change, and many have huge energy needs. They are likely to embrace policies that focus on improving energy efficiency and foster clean technology as well as new energy sources that could at the same time be low-carbon.

With 20 percent of the global share, the world's largest emitter, I call on the United States to recognize the need and the value of an international approach to reducing emissions, in particular if major developing countries would join our efforts. Mobilizing them is a common responsibility for the United States and the European Union, one where we can show international leadership by working together. Moreover, we believe a future climate change regime should cover emissions from more sectors than are covered under Kyoto—notably, aviation, maritime transport, and forestry. That is also an element that the European Union will push for in the upcoming negotiations.

Stakeholders are reflecting about the architecture of a future climate change regime and a wide range of ideas has been produced. We should soon open formal negotiations, since the clock is ticking. The conference of the parties to the United Nations Convention on Climate Change in December in Montreal will bring

together 189 governments and is an opportunity to initiate the process. The European Union is open to hear what its partners have to say and which measures they consider appropriate to master the climate change.

We have no preconceived ideas what the future climate change regime should look like. We only believe it should usefully include the basic elements—keep it flexible, broaden participation, and widen its scope.

The climate change is considerable. The world is in particular looking at the two leading economic powers, the United States and the European Union. In the last one and a half decades, we have identified and carefully looked at many ways and means to address the climate challenge. We have identified pros and cons for every single approach. We can continue doing this omphaloskepsis, or navel gazing, but valuable time will pass by.

I would, however, suggest we should enter a more mature stage. We need to resolve our differences, pull up our sleeves, and find solutions. Together we can rally the rest of the world behind us and drive the process. And that so that our children and our grandchildren can continue to prosper under stable climate conditions.

Thank you very much for your attention.

[Applause.]

LORD WHITTY: Well, thank you, ladies and gentlemen. I will repeat my colleagues' pleasure at being here in Washington and at Brookings, but I won't repeat everything they've said about the science of climate change, except in passing. Just to say that in my area of the southwest of England, spring comes nearly three weeks earlier than it did when I was a child. And I think that it is important that we focus perhaps not so much on the science and on the experience, or even on the instruments for dealing

with climate change, but I'll focus and underline something my colleagues have said in relation to the immediate politics of the situation.

You should be in no doubt here in America that the E.U. both regards climate change as one of the major priorities facing us and is very united on that issue. I would also, since we've got an election on in the U.K.—which doesn't bother members of the House of Lords, but nevertheless it is an issue—I'll underline what the commissioner said, that all three political parties in the U.K. also put a very strong priority on climate change and measures to tackle it. And you will know that Tony Blair in particular is attempting to use his presidency of the G8 and the U.K. presidency of the E.U., which follows the Luxembourg presidency, to emphasize the way in which we are tackling climate change.

In the U.K. itself, we have set out a policy not only for meeting our Kyoto target, which we will definitely do, but also a more stretching target for the U.K., which we are well on the course for meeting, and also why two years ago we set in our energy policy a long-term goal of an absolute cut in carbon emissions by 2050, of 60 percent. Now, that is the kind and order and scale that we are talking about if we are to attain the targets referred to by Minister Lux in terms of restricting growth in temperature increase to 2 percent.

The U.K. and the E.U. will of course continue to put in place policies and measures to address our contribution to climate change, but this is of course a global problem. And we need, and Prime Minister Blair is particularly insistent that we need, the re-engagement of the United States in this process—a process with the U.S. alongside underdeveloped countries takes the lead in the way which we were envisaging when we signed up to the U.N. Framework Convention on Climate Change and which

we have lost with the U.S. withdrawal from Kyoto. Now, nobody is arguing that the United States is likely to sign up to the first phase of the Kyoto Protocol. We understand that. Those who have ratified Kyoto will go on and deliver what Kyoto commitments require and also set up, I hope, ground-breaking mechanisms such as the trading, which we've already successfully launched in Europe.

But the issue now is not Kyoto as normally understood—that's happening anyway, notwithstanding the U.S. nonparticipation. The issue on which we now require the U.S.'s constructive and creative engagement is the huge challenge beyond Kyoto, beyond 2012. That we want to begin to address now and to address in meetings such as the bilateral between the E.U. and the U.S. in June and, in particular, the G8 summit in Scotland in July, under our presidency.

On the science side, under the G8 auspices we ran a conference at Exeter which underlined more clearly than ever the urgency of the issue and the gravity of predicted impact changes arising from climate change, of not only natural systems but also economic and social systems. There is a clearer consensus on the science and a greater immediacy on what the conclusion scientists are presenting us with. And our purpose in prioritizing climate change in our presidency is precisely to react to what the science is telling us. It's an issue, frankly, which cries out for the attention of all world leaders, in developing as well as the developed world. And if we fluff it, then future generations will not forgive us. The United States is, of course, a key here, and we do need to reengage at the federal government level, but also at the corporate and local and state levels within the United States, where I do believe some very positive things are going on.

We don't envisage, of course, that these upcoming meetings are likely to set targets or frameworks or precise mechanisms for the post-2012 process. That, indeed, will have to come under the auspices of the U.N. and involve other more vulnerable economies than the developed countries. But we do need to ensure that we face up to the urgency of the problem, the scale of the problem, and speed up the means of tackling that problem. And that does require a recognition that absolute reductions, substantial absolute reductions in emissions of greenhouse gases are going to be necessary.

Technology is, of course, vitally important. The United States leads the world on the technology in these areas. And I commend the United States investment, both government and corporate, in technologies such as clean coal, methane, hydrogen, carbon capture, range of renewables, and indeed on the various aspects of energy efficiency. And it's vitally important that that technology is seen as one of the delivery mechanisms. But technology only comes to the market and becomes a generalized solution when the framework and context in which that technology is available pushes it in that direction, where we have government policies and consumer and citizen attitudes which favor those technologies.

Now, we all need to make sure that both the existing technologies and those technologies which are over the horizon are mobilized effectively to tackle climate change. But to do that, there is a big obligation on governments to provide the framework in which they do so. And it also means that we need to involve the emerging economies, in particular China and other economies such as India and Brazil, which will have an increasing role in emissions, but which, of course, per head, are very much lower level of emissions than in the United States or in Europe.

Both during our G8 presidency and our E.U. presidency we hope not only to be talking very constructively with the United States but also to the developing countries, China and India in particular, and find ways to ensure that they can meet their growing energy needs more sustainably, which means a transfer of cutting-edge technology at its most energy-efficient into supplying the growth ability of those economies.

I do believe, contrary to what is sometimes said, that there is quite an appetite in the developing world for working with us on that. Last month we brought together in London ministers with responsibility not only for energy and environment, but also for financial and economic — from 20 developed and developing countries. So they faced up together to the challenges and opportunities for investment in lower carbon energy systems and in policies which will bring that about. And it was striking that, despite the very different national situations, those ministers were all very focused on that outcome and the need to deliver and find a common solution.

So we all need to work together and to find fresh and creative ways to address the long-term challenge. But we shouldn't run away from the fact that the challenge is immense and that it does require political courage and political commitment for us to meet that challenge. The E.U., I believe, wants and intends to do that. The E.U. heads of government last month, as has been said, set the ball rolling in terms of focusing on the post-2012 position. We want in the upcoming meetings to which I've referred and in ongoing dialogue with the United States at the national government level, but at all other levels as well, to ensure that the United States plays a proper role in this process and helps us to tackle what I believe and my government believes is the most pressing and most serious problem facing the world today.

Thank you very much.

[Applause.]

MR. SANDALOW: Well, thank you. I just want to start with a very warm thank you to all of our guests. Thank you very much for all the leadership that you and your government are showing on global warming most importantly. Thank you for your visit to the United States, and thank you in particular for your visit to this room. I think you will find, when the question period starts, that we have in this room some of the leading experts in this city, indeed in this country, on the topic of global warming. And I know you've come not just to talk, but also to listen. So partly for that reason, I will be brief.

But I will use the chance, since I'm at the podium, to say a few words and to offer, first, a few observations about the United States and global warming and our position today in this country on this important issue. And I will just make two observations.

My first observation is that there is more consensus than meets the eye on this topic. Broadly in the United States today, the press is focused on polarization in our political system and the red state/blue state divide gets the attention. And that's very much true on global warming as well. In general, this dialogue has seemingly all the civility of a heated exchange on our television program "Crossfire," which is a show where people allegedly discuss issues, but in fact throw insults back and forth at each other. I think that beneath that level of discord there is a consensus bubbling up, and I would point to four signals that that's the case.

The first is the actions of Republican governors on the topic of global warming around the country. It's striking that the Republican governors of our two

largest states, California and New York, of course, are both taking very significant steps to address the problem of global warming. Governor Schwarzenegger is in litigation with the Bush administration now over California's ability to maintain greenhouse gas limits on tailpipes. And Governor Pataki of New York has taken the lead in a regional initiative on greenhouse gas trading. And they're not the only Republican governors that are acting on global warming today. And of course there are Democratic governors doing the same thing.

A second sign I would point to is activity within the evangelical community on this topic. And this has gotten some press coverage. Here at Brookings, when we had an event with Senator Kerry and Senator Hagel in February, the leader of this movement came and asked some very interesting questions to both men. And there has been a lot of action within the evangelical community by people moved by their faith toward caring about our protection of the Earth. Obviously, the community is a core part of the political base of the current administration, and this promises some trips. There may be people in the room from that community today.

A third sign I would point to is what's happening with utilities around the country. Recently one of our major utilities called for a carbon tax to address the global warming issue, something that took a number of observers by surprise. Portions of the utility have over the last decade relied upon what I would describe as a four-year blocking strategy, hoping that every four years they could elect a president — who would block mandatory limits on global warming, on carbon dioxide emissions. I think there are portions of the utility industry right now that see that as not in their best long-term interest. Their investments have 20-, 30-, 40-year timeframes and they're looking at a framework that will allow them to do planning over that timeframe.

And fourth, very interestingly, I would point to what some think tanks in this town that take a free-market or national sovereignty perspective—colloquially known as right-wing think tanks—what these right-wing think tanks are saying on the topic of oil dependence. I sat in an interesting—last month discussing with a man I've debated for the past decade on a variety of topics and I found myself agreeing with everything he was saying, which at first I found worrying and then I found encouraging as I reflected on it. But he was making the point that the oil revenues that we are paying in this country are going to the Middle East, where they are funding the people who our military is in battle against. And a number of the so-called think tanks have not taken positions in favor of automotive fuel efficiency standards driven by this line of analysis.

So I think there is actually more consensus than meets the eye on the topic of global warming in the United States today. That's my first observation.

My second observation is that, in the United States, treaty commitments do not necessarily lead to domestic action. I'll say that again. In the United States, treaty commitments do not necessarily lead to domestic action. I think this is an important difference in the political cultures in Europe and the United States. So perhaps if there's one message that I hope that our guests remember when they go back to Europe, it's that. It doesn't lead to any easy answers to how to best engage the United States. But if you look at our history, particularly on environmental issues, what you find is a number of successful environmental treaties, like CITES, which deals with endangered species issues; Montreal Protocol, which deals with ozone issues; and some others. They have all been preceded by a significant domestic political consensus on the topic they were addressing, and often statutory authorization to address the topic. We

had our Endangered Species Act; we had statutory authorization to deal with ozone depletion issues.

In contrast, the vision of some of the strategy on the Kyoto Protocol, which is that we would get a treaty commitment and that would pull a domestic political consensus along on this topic, has not worked. And it is, I think, partly because of the integration of the European Union over the course of the past generation or two becoming a major difference between our political cultures. And I think it's worth thinking about in terms of engaging the United States.

So two observations about the U.S.—more consensus than meets the eye on global warming, and treaty commitments don't necessarily lead to domestic action in the United States.

Let me make one comment on the Kyoto negotiations and one comment on the G8. On the Kyoto negotiations, I would say that the measure of success is engaging others. And I recall a quote from Sir Winston Churchill, who said courage is what it takes to stand up and speak; courage is also what it takes to sit down and listen. And in that regard, this is a global problem, and Commissioner Dimas's elements of the framework which he laid out, I thought, speaking personally, were extremely encouraging in terms of engaging others. And in fact, some of the formulations that Commissioner Dimas used were strikingly close to language that is actually in the Byrd-Hagel Resolution—not identical by any means, but I think there is substantial movement of consensus between the European Union and portions of the United States Senate on the framework.

I would say that success is not proposing a reduction target with a large number associated with it. I think many that care about global warming in the United

States applaud the ambition of the 15 to 30 percent reduction target by 2020 that the European Union has offered, but it also worries us because it risks repeating some of the less helpful dynamics in the Kyoto negotiations, where there was a lot of attention on the specific reduction target itself. Success is not being able to say that you're for a strong emissions reduction target, in my view; success is putting forward ideas that bring others to the table. And I applaud again what Commissioner Dimas said about the framework in that regard.

On the G8, let me just offer two quick thoughts. First, I think all those who care about global warming greatly welcome the priority that Prime Minister has focused on this topic with his G8 leadership, and there's great promise going forward. I would offer a cautionary note that at this juncture there may be as much risk as opportunity associated with the G8 agenda on global warming. In particular, the risk I would identify is that little gets done, but it is celebrated by those who attend. This as a veteran of government offices, let me tell you. It's been known to happen. And there is a natural tendency in that direction.

I recall, actually in contrast, I was in government as White House staff at the time of the 1997 G8 summit in Denver, where the issue of global warming blew up. And the American government was deeply, heatedly criticized by leaders who came to Denver for not doing enough on global warming. I had been working at the White House for a number of years at the time, and for the first time got a call to the chief of staff's office to explain why it is that we were being criticized so strongly. And I think the public nature of that dialogue helped to move along the issue in some countries.

I think there is opportunity in the G8 dialogue both to arrive at agreements that are helpful. There's opportunity in the G8 dialogue for disagreements of

a public nature to be helpful in moving along this issue. There is risk, alas, if we reach an agreement that doesn't do much that is celebrated.

I'll close with another quote from Sir Winston Churchill, who said however beautiful the strategy, you should occasionally look at the results.

[Laughter.]

MR. SANDALOW: I think all of us who pay attention to global warming ought to keep that in mind. The fight against global warming is going to be a multi-generational struggle. We're going to need to keep looking back, look at our success, look at our failures, accept that some of the steps we've taken have not been as successful as others, and adjust our course accordingly.

Thank you very much.

[Applause.]

MR. PURVIS: Thank you very much to all of our speakers for being so clear and so brief, which leaves us plenty of time for discussion. I'm going to take the moderator's prerogative and ask the first few questions, but there will be microphones circulating in the back. If you would like to ask a question, I ask that you raise your hand and, when the microphone arrives, please identify yourself by name and affiliation so that our speakers have some sense of the context.

I have three brief questions, and I'd like to pose the first one to our representatives of the European Commission and the European Union. It has to do with the 2020 goal that has been set by the Environment Council and by the leaders of the European Union and the elements of the future dialogue that Commissioner Dimas outlined, which, like David, I found very encouraging. I welcome the commissioner's leadership in putting those forward today.

My question, really, is whether there isn't an unstated element, which is that some kind of regulation will be needed to establish a price on carbon in order for the market mechanisms, which was your first element, Commissioner, to work. There needs to be a price on carbon so that those markets can work. If carbon has no price, then there's not so much interest in buying and selling carbon emissions. And so if that is an unstated assumption, then I would ask that you comment on the prospects of convincing the United States to support a market price on carbon anytime in the near future, and on the prospects of getting China and India to do so as well.

I note that, at least my reading of the recent global warming conference in Buenos Aires in December of last year was that it was only the European Union that had an interest in seeing the target and timetable approach, which is really at the heart of the Kyoto process, continue beyond 2012 and that the United States declined to endorse that as an objective. Japan, facing some difficulty in meeting its Kyoto goal and being concerned about having too much of a competitiveness disadvantage vis-à-vis the United States, one of its major trading partners, also declined to endorse the continuation of Kyoto. And of course China and India and Brazil and the other developing countries continued their longstanding position of not wanting to have targets that would apply to them.

So — out to 2020, that would be based on targets and timetables. And if that's the case, then what are the prospects for this new round of negotiations that we're entering into?

MR. DIMAS: About the elements of future dialogue, I think we need at least two minimum agreements. One, that the problem is a global one, so we need a global approach and we should engage not only the developed countries, and especially

the United States and the European Union, but also the big developing countries in South Asia and South America who are becoming bigger and bigger [inaudible]. And the second—and I mention only two of the elements—is discussion options for the future. After 2012, these are the two minimum that we should discuss and we should agree on.

Now, regarding the targets, I don't know if he is the man who insisted on achievable targets.

[Laughter.]

MR. DIMAS: Now, as a commission we had published a paper on the future of climate change and we had not proposed targets. But what we said is we believe in targets and we think that they were useful, especially in the past, and they resulted in having certain achievements, at least in reducing carbon dioxide or in formulating our policies. But we thought that at this time of the negotiations perhaps it could be better not to have concrete targets, because this could scare off certain countries from entering into negotiations. And the Council and Minister Lux here—with whom I agree, by the way—in the European Council and also in the Environment Council, succeeded in having a formula saying that we indicate what could be explored as a possible strategy of policy for reducing emissions. So it's not exactly a target, it's a possibility to discuss. It's something that we put it on the table in order to start discussing and indicating to which direction we should go. So it's not exactly targets. It's not targets as it was in the Kyoto or the other agreements for other environmental policies.

Regarding price, we have a price. Right now in the trading in Europe, it's about 15 euros, 16 per ton. And it started in the beginning of January at around 7, 8 euros per ton, now it's about 15 [inaudible]. It was a good part of why this is going—

gas going up and down. You know better about them. You taught us, actually, about emissions trading. You taught us, you insisted on it, and then you pulled out of Kyoto. Anyway, we shall learn before you join again in emissions trading, so we shall be on an equal level at that time.

Now, I know that there is much discussion about price on carbon, and I've seen certain plans here. But at least they have a top selling price for carbon. And — only \$7 or something like that was suggested. But we expect that by creating scarcity of the rights for emission of carbon dioxide or for other greenhouse gases, we shall create the conditions for the trading necessary and for the economic incentives to go and reduce emissions where it is most economical to do so.

MR. LUX: I'm very honored to be pointed as the responsible for targets. And I was not alone. This opinion with my 24 colleagues in March and at the Supreme Council three weeks later in March, too, I think convention was that we had to show determination and not give the sign, neither to the United States nor to the rest of the world, that we being to diminish our determination. The United States and the actual administration showed us on other occasions that before negotiation you have to show force and be strong. And so our aim was to give this clear determination. And I must say that in the conclusions the March council put, it was not only written about targets. There were a lot of other elements. The press didn't speak about this. It only speaks about the two last sentences. But the other proposals for a flexible discussion on other sectors—transport sectors, energy efficiency, on forest, on the developing—were not mentioned.

So I think we gave a broad proposal to the United States discussion with the administration in Buenos Aires at the G8 meeting. The meeting with Mr. Bush

together with Mr. Barroso and our Prime Minister Juncker in February in Brussels showed us that there is a beginning of possible discussion about that. I looked at a newspaper at some polls, that 56 percent of United States population looks at this problem as a very important problem. We look at a lot of initiatives in the federal states, in Senate and so on, and so we think that the next steps, discussion we have to deal are the G8 meeting under British presidency. The summit E.U.-U.S. here in June in Washington gives us other proposal, and I think at the seminar in Bonn, the seminar we discussed two weeks in Buenos Aires upon. And then we have [inaudible] just before the United States for their — in Canada, in Montreal. And from then, I think we can go on in a discussion and have some results on all the matters, all the sectors, all the flexible mechanisms we post on [inaudible].

MR. PURVIS: Thank you. My second question is for Lord Whitty. I'd like for you to comment on the risk that David Sandalow identified, that the G8 under U.K. leadership, with the best possible intentions, might end up creating agreement around some rather small matters, thereby creating the impression that the issue has been largely tackled, and lose an opportunity to highlight the importance of establishing the kind of strong and rigorous domestic market base and regulatory approach that I believe all three of our European speakers believe is necessary for the United States to establish.

Would it be better, to put it bluntly, to have a little bit of a row at the G8 than it would be to agree on some rather modest measures?

LORD WHITTY: Well, I think it's definitely clear both in advance of the G8 and probably post-G8 in Gleneagle that there are some quite severe differences between the administration and the European countries represented there and the U.S. at home. I don't think anybody's getting the impression that the Gleneagle meeting is going

to resolve all those difficulties. What Prime Minister Blair has referred to is direction of travel, that at the moment the impression in the rest of the world is that the Americans are not on the direction of travel at all, and that although the scientific community and a number of different developments below the federal level have been very positive and creative, actually federal policy is not on the same direction of travel as the rest of the world in this respect.

Any signal that the Americans were in the same direction of travel would be highly desirable. In concrete terms, that may mean fairly limited agreements. But it may also require agreements that the size of the problem and the scale of the problem and the time span of the problem are so substantial that we will have to return to those issues, and that the post-2012 period in particular needs to start to be addressed now by the United States as well as by Europe and the rest of the world, including the developing countries.

So in detailed terms, it may well be that the protocol from this G8 meeting and indeed the E.U. bilateral will have relatively narrow, specific, immediate commitments. But it will have changed and shifted, we would hope—Prime Minister Blair would hope—shifted in a general sense of direction and brought the Americans back on board, if I can put it that way without being too patronizing. We Brits are always a bit patronizing.

[Laughter.]

LORD WHITTY: Into a process which engages at all, rather than one where there has been the dialogue of [inaudible] to some extent over the last four or five years.

MR. PURVIS: My last question before opening it up the floor, so I hope you're all readying yourselves to grab the microphone, is about the evolution that has occurred in the European Union on the issues that were so important to the United States in the Kyoto negotiations. You both mentioned the evolution on emissions trading. And I would like to ask about another issue where the United States pushed in 1997 and where European Union was quite adamantly opposed, and that's carbon sequestration. Now, this was on the list of elements that could be included for discussion and I found that very encouraging.

But I wonder whether you could speak to any short-term measures that the European Union or European Commission might take to send an appropriate signal to the market that carbon sequestration will be a part of future discussions. Would the European Commission, for example, consider opening the European emissions trading system to allow for carbon sequestration-based projects, or would there be a proposal from the European Union, from the ministers, that would give developing countries credit for reducing their rate of deforestation. Because, as you know, land use practices and deforestation in particular is one of the largest sources emissions in the developing world, in countries like Brazil and Indonesia.

So could we see some leadership on sequestration and some evolution of a European opinion now, even before we enter into the new negotiations?

MR. DIMAS: I would like to add something regarding the minimum of agreement. It will be really satisfactory and I think it will be not a success if we agree only, as we have done quite a few times before, on investing more in the research and developing new technologies. Because I'm a politician for quite a few years, and it's always easy to find, when it is a soft issue, when it is an easy one, and agree so you

make public relations and appear that, you know, I did my job, even personally. And I think that there's always a tendency regarding climate change to agree on technology, research—okay? Yes, we agree on this. But we need something more, and this is where the, I don't know, disagreement, perhaps different approaches are right now.

Now, about what you said about the carbon capture and storage, what we are doing. First of all, we are also investing in research. And according to the research program that we approved last week, we doubled the money that we are going to invest for research [inaudible], which is a considerable amount of money—still behind what you are investing in research, I have to admit, but still is considerable for the European Union. And this is for the European Union, not for its member states, because we have other research programs. And the climate science is in the program. And of course one of [inaudible] —

Now, including the trading system, this technology in this endeavor or project somewhere or other similar projects is a good idea. And we are going to review the emissions trading system in 2006, next year, and we are going to consider whether to include other sectors which are not covered right now, such as aviation [inaudible], maritime transport and forestation, deforestation, forestation projects. And even we could consider giving credit or permitting companies in developing countries to participate in our emissions trading, so being able to get the credit for any reductions of emissions in their countries, in their factories, plants, which they can exploit it financially, selling the credits to other companies in the—trading in the emissions trading system.

So we do consider that this, among other technologies, is important for dealing with the carbon dioxide and of course — greenhouse gases. Because right now,

the European emissions trading system covers only carbon dioxide. We can in the future cover other greenhouse gases, as the United States and certain states. And at a certain moment, we expect that we shall link our system with your system. And I hope that this will not be very far in the future because I think that, more than anybody else, people in countries like the United States, Europe, other developed countries have to worry about climate change. Because no matter where the emission is taking place, in Africa, in Asia, in Washington, or in Athens, the problem is the same for everybody, is the same for the people living in Central Africa, South Asia, or here in Washington. It's exactly the same.

And I'm sure that after a few years, and it will be much more difficult, the United States, European Union will put a lot of pressure to developing countries—I don't know if they are going to be "developing" by that time—like China, India—already India is refusing to discuss climate change. Refusing. And all of them are hiding behind the United States. And the argument is very easy. The United States is having a per capita income which is one of the highest in the world and has per capita emissions which is the highest in the world, 10 times more than what the Chinese have, double what Europeans have. We also are very high up.

So they say if you don't try harder—and they are not persuaded by the argument on investing in research, which actually the United States is investing \$2 million in research, plus \$3 million, which is more than 5 actually—5 million euros, \$5.8 million with yesterday's exchange rate. And they are hiding behind that. So we have to face the problem. We should start finding the ways to deal with it after 2012 for everyone. So they will come on board.

Of course, we are not going to ask them to have the same commitments as us. They are developing; they need to develop. But we should encourage using more energy efficient technologies that can save energy. They can use other technologies which are going to reduce the emissions without hindering their economic development.

And I have to tell you, on top of it we have to look at the very, very poor countries which are not emitting, I mean which do not contribute to the creation of this problem. In Africa, in Sub-Saharan Africa, where they are going to suffer more. They are already suffering. Look at the destruction that Hurricane Gene had Haiti and in Florida. They had a lot of destruction in Florida, but the destruction in Haiti was 2,000 dead. And really incredible destruction this hurricane [inaudible] one of the consequences of climate change.

So we have a moral duty to look and to agree on adaptation measures for these countries which are not able to face the problems by themselves. We have a duty towards these countries. They are very poor. They are suffering a lot. And they will suffer more as the global warming is going up. So we have to take action soon, as soon as possible.

MR. LUX: I'm very glad, before the meetings of this afternoon, to see the commissioner in very good form.

MR. DIMAS: This means that a lot of times I'm not.

[Laughter.]

MR. LUX: In Brussels, you always have the shadow from other commissioners.

I think we spoke in February, in Europe, when President Bush came to visit E.U.; we spoke for a new climate between the E.U. and the U.S. And we think that

the best opportunity is to begin by climate change, to demonstrate that this is not only a problem of climate psychologically, but before concrete actions. And I think that if in the United States a lot of politicians have difficulties to deal with this subject in front of the problem of climate change, perhaps they think on the independence from the United States in front of the OPEC countries, that could be another issue to deal with this problem. And I think in front of your question, that the seminar in Bonn gives us a good opportunity to put new initiatives, new ideas on the table, as Commissioner Dimas told now, and then begin to become concrete.

MR. PURVIS: Thank you. I'm told we do not have microphones, so I'd like to ask individuals with questions to raise their hands and then identify themselves both by name and affiliation. The first hand I saw, actually prior to my last question, was Bill Cline in the front row.

QUESTION: Bill Cline from the Institute for International Economics.

It will come as no surprise to you that you may face some tough sledding — the 2 degrees Celsius — There are some agricultural folks like Mendelson who would think that would be actually an improvement if we had 2 degrees Celsius. I think the real smoking gun with 2 degrees Celsius is 7 meters of sea level rise a thousand years from now, but I'm not sure the politicians have put it in those terms.

But that aside, my more important question is this. It seems to me that you all have an opportunity for reform in the U.S. [inaudible] on your side still, from the principle of the law of [inaudible] in international trade. You're setting a price on carbon domestically. And it seems to me that if you can integrate the price that carbon bears in Europe with the price that carbon bears in the United States, basically make it an

internationally traded [inaudible], you will accomplish by the market what the politicians here are unprepared to accept in politics.

Query: Can you, instead of focusing so much about developing countries, can you move fairly aggressively to allow the same price to affect the market here? As you know, [inaudible] Chicago Exchange on this. It's a very limited operation with certain corporations which — fetch a much lower price. The price you already have is about six times the price that people like [inaudible] — might disagree with him —. But I think that anything that you can do to think about the specifics of your mechanism, what you allow to be counted, that can essentially [inaudible] a world price of carbon would be [inaudible].

MR. DIMAS: I agree with you. This is a good way to deal with emissions. It's not enough, but it is a very good way because we have an international emissions trading system. And by having created scarcity and having some constraints, of course, then, because this is a cap and trade scheme, we could make reductions of emissions, right. And also developing countries will be able to sell using the [inaudible], but — flexible mechanisms, the clean development mechanism and the joint implementation. And so we could have reductions where it will be most efficient economically.

Now, I would like to also say something about Mr. Mendelson. Because you know, I'm sure that Mr. Mendelson has not said anything like that, but the Russian economic advisor to President Putin, Mr. Illarionov, has said and he has written [inaudible] what is bad about the weather improving in Siberia? And he was claiming that perhaps after a few decades, people instead of going to the Mediterranean or to the Caribbean will go to Siberia for vacation on the beaches of the Pacific Ocean, because

the temperatures will go up. But of course this was not seriously taken by anybody because we do not know where the climate impacts will be, in which areas and in which regions we shall have impacts [inaudible].

MR. PURVIS: We have 15 minutes. What I'd like to do is collect three questions and then come back to our panelists. And we can do that, I think, a couple of times. Professor Brewer.

QUESTION: I'm Tom Brewer from Georgetown University here in Washington and also the Centre for European Policy Studies in Brussels.

My question could actually be construed as a follow-on question, but my context is what the deal with the U.S. as a free rider —. One possibility is to impose import tariffs on goods coming from essentially free-riding countries. The U.S. [inaudible]. In WTO parlance, these are off-setting border adjustments. The idea is that we will impose a tariff on goods in a lot of carbon-intensive production processes. The idea has been mentioned in some industry circles in Europe, I know. It's been discussed and written about in think tanks and by other people.

My question is do you see any prospects, say in the next two or three or so years, for that being at least on the agenda?

MR. PURVIS: Two other questions. Gary Mitchell.

QUESTION: Gary Mitchell from The Mitchell Report.

I want to ask you a question that will sort of belie my own perspective on this issue, but the whole time I was listening to this presentation this morning — three little letters kept going through my mind, namely WMD. And the point of it is that—the question that I want to raise, which by the way was framed nicely in a New York Time

op-ed piece on Saturday on an entirely different subject — is whether, despite all the evidence that [inaudible] — and it only takes one Michael Crichton or [inaudible].

But the question is a serious one, whether we have incorporated into our ranks the science and policy agreements on this question, people who are willing to challenge us on data points, to challenge what is fast becoming the conventional wisdom. And I cite as an example, Mr. Lux in his remarks made mention of the hurricane in Florida as an example, and at one point questioned whether we want to be building global warming climate change arguments on events like hurricanes in Florida that have been taking place for years.

So the question really is, in our zeal to move ahead on this issue and try to build some stronger domestic political will, are we also being careful about not making the WMD mistake?

MR. PURVIS: Third question in the corner.

QUESTION: [Off microphone, inaudible.]

MR. PURVIS: Do any of our panelists want to respond to the border measures question or the question about whether we are doing a good enough job, or thoughts in terms of putting forward the science in a careful way, or thoughts on how to engage private charities?

MR. LUX: I apologize for my English, but I did not understand the finish of the remark of the second speaker. He said—

MR. PURVIS: The question is whether the European Union would consider imposing border adjustments on goods that were made in countries that did not have a price on carbon. I believe it's a debate that the European Parliament has pursued a few years back, and there's a question that I think a number of American observers

have as to whether that's a serious option in Europe or really something that has had some discussion but not really under consideration.

MR. LUX: I can only speak for the presidency till the 1st of July. Until then, it's not on the agenda. I don't know if the British presidency—I give the ball to Lord Whitty—buy it's not on the agenda for the next two months.

For the question from the second speaker, just as I did not understand the last sentence, I think that science gives us evidence that perhaps the hurricanes happened 10 years ago, 20 years ago, and so on, but the fact that it happens more and more, the fact that the science says that temperature is rising and that some of the warmest years we had, I said 10 of the warmest years we had in the last thousand years were after 1990, shows us that we have to check up — that science and politics have to go ahead and take conclusions out of — when we say that we want to have a temperature limit on 2 degrees Celsius rising from the pre-industrial period, we have as politicians tried to give conclusions to this scientist evidence. And that's what we tried to do in Europe.

LORD WHITTY: On the first question, it's not a proposition from the British presidency either. And I suspect if you refer to the next two or three years, it will not be a proposition there either. In the medium to longer term, if various countries, including the United States, set out any global agreements, then maybe it comes back on the agenda. But don't worry about it for now.

On the second question, I think there is an issue on credibility at times. Far be it from me to comment on the WMD issue. But it is an issue that at times one might over-claim the effects of climate change. But I think the underlying evidence and the consensus in the science and the degree to which science is intensifying their conclusions do behoove us to point very strongly in one direction. Any individual event

may well not be directly ascribable to climate change, but the frequency of extreme events clearly is increasing. Any one part of the world's agriculture might have different effects, and some of them quite benign in the short to medium term, but in total the effect is malign [sic] on agriculture and on the climate as a whole.

The last question seemed to me, in a sense, one of the most interesting because it is one dimension of how we convince public opinion. I mean, the reason at the end of the day that the administration of some other governments are not particularly keen on taking [inaudible] in relation to climate change or even giving a moral lead is just by and large they don't think the population will accept it. Now, there are substantial elements in the American population who are beginning to accept it. We in Europe perhaps tend to take a slightly more top down approach and say the governments have to give the lead, and usually that is right, the government has to give the lead. But the government's lead is not enough, even in the European position. We need to convince consumers, citizens, and bodies like charities and churches and others who have a widespread effect on public opinion. And if we don't do that, governments can go hang themselves out on the limb if they do down the British and European road. They could be called back by failure to engage other mechanisms within society in delivering those same goods and facilitating them — in the way — described the charitable donations could be.

MR. PURVIS: We have time for one last question.

MR. DIMAS: Could I respond? Regarding World Trade Organization, we are not considering any measures because we think that the emissions trading system is taking care of the reductions in the European Union and the companies participating do have minimum [inaudible] actually acceptable. And what we want to do is not to go

to the World Trade Organization, but try to find ways to cooperate in a spirit of knowing that the purpose is common and we like to deal with it together, which is very important.

Now, regarding the science, you are very right. We should listen to all views and opinions that are considering that climate change is not anthropogenic and others that consider that it is due to human activities. And I think if you see what science says, there are — on one hand or two maximum, scientists that do consider that climate change is not due to human activities. It is anthropogenic, and there is a wide consensus on this. And actually, two reports, very recent reports, one by, if I remember — climate change agency that was set up by President Bush came out with a report that says that climate change is due to human activity.

And regarding the hurricanes, you're right. If you read the very famous American writer who has written about the hurricane [inaudible] — and describing hurricanes they were having all the time. But according to the world's largest insurer, Munich Re, since 1960 and in the years 1994 to 2003, we have three times more frequent occurrences of extreme weather events. And the year just ended, without calculating the tsunami destruction, we have three times more, up to 50 billion euros of damages that were paid in insurer losses, which is really quite a lot. So, I mean, perhaps hurricanes were happening in the past, they will happen in the future, I hope with not such frequency, because we are [inaudible].

And about philanthropy and doing good work and feeling well, you are correct. It is necessary and we can do it on a voluntary basis and we can take actions like what you suggested together with commercial or economic endeavors. We should join all our efforts and do whatever we can [inaudible] in order to face this important problem.

MR. PURVIS: Thank you very much. We've held our speakers 15 minutes past the hour, and so I'm afraid we're going to have to bring it to a close.

Please join me in thanking all of our speakers for their wonderful panel.

[Applause.]

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