



PERMANENT MISSION O
TO THE UNITED NATIONS



IPI POLICY FORUM

International Climate Negotiations: Options for a Way Forward

When:

Monday, June 21, 2010, 1-2:45pm

Where:

Trygve Lie Center for Peace, Security & Development
International Peace Institute
777 United Nations Plaza, 12th Floor
(Corner of 1st Avenue and 44th Street)

TRANSCRIPT

Chair:

Mr. Warren Hoge, Vice President for External Relations, *International Peace Institute*

Speakers:

Professor Robert N. Stavins, *Albert Pratt Professor of Business and Government* and Director, *Harvard Project on International Climate Agreements*

Professor Scott Barrett, *Lenfest-Earth Institute Professor of Natural Resource Economics* at *SIPA and the Earth Institute at Columbia*

Mr. Mohammed Reza Salamat, Senior Program Officer, *Secretary General's Climate Change Support Team in the Executive Office of the Secretary General*

Warren Hoge:

Good afternoon. I'm Warren Hoge, IPI's Vice President for External Relations, and I'm happy to welcome you to this policy forum cohosted by IPI and the permanent missions of Pakistan and Sweden. Our subject today is International Climate Negotiations: Options for a Way Forward. The United Nations and its framework convention on climate change provide the universal platform through which to forge consensus. Indeed one of the first pronouncements of Secretary General Ban Ki-moon on taking office in January, 2007 was that climate change would be a number one priority at the United Nations. Now, in the aftermath of the initially dispiriting outcome of the meeting in Copenhagen and with the Cancun Summit fast approaching important questions are being raised about the

future of climate change negotiations and where, and by whom they ought to be conducted.

Before talking about that, though, I would like to take a moment to cite the work that IPI has been doing in this area through our Coping with Crisis program and Blue Papers series. Today is the third roundtable undertaking. We've organized in collaboration with the Pakistani and Swedish missions and in addition environmental ministers from countries including Australia, France and Norway have come to IPI to unveil their national strategies. And we have showcased a book here about climate change and its profound effects on security around the world.

I'm joined today by a very distinguished and knowledgeable panel whose full biographies are attached to the list of today's guests that you have. Robert Stavins is the Albert Pratt Professor of Business and Government at Harvard's Kennedy School and Director of both the university's environmental economics program and its project on international climate agreements. Scott Barrett is the Lenfest-Earth Institute Professor of Natural Resource Economics at Columbia School of International and Public Affairs and the Earth Institute. And Mohammed Reza Salamat is a Senior Program Officer at the U.N. Secretary General's Climate Change Support Team. They will join me up here after we see the PowerPoint presentation of Professor Stavins.

Now, a moment ago I said that the outcome of the Copenhagen talks was initially dispiriting. I added that qualifying word mindful of the presentation we were about to hear at the outset of today's forum from Professor Stavins. Not so fast, Professor Stavins seems to be saying to those who have argued that Copenhagen showed that the U.N. was not qualified to be entrusted with this massive responsibility. As you will see Professor Stavins counsels a patient re-examination of those initial assumptions and he goes on to portray other multi-lateral initiatives and, in particular, what is going on in the United States. We will then hear some learned reaction from Scott Barrett and Mohammed Reza Salamat, and, finally, from you, the audience, in a question-and-answer period. I will go join the other panellists in the front row. Professor Stavins, the floor and the screen are yours.

Robert Stavins:

Well, thank you very much, Warren and, also, of course, thank you to the International Peace Institute and, in particular, as well, to the permanent missions of both Sweden and of Pakistan for sponsoring and hosting this session. I'm delighted to be here for a variety of reasons, including the fact that this is an exceptionally distinguished group in the room and knowledgeable group and, also, because of the fact that in addition to Warren Hoge, who I've known—we've rediscovered for 20 years. The two panellists who will follow me are people of whom I've also known for many years and for whom I have great respect in both cases. So my topic is Climate Change Policy After Copenhagen. I'm going to base my remarks on some work in which I've been involved as Director of the Harvard Project on International Climate Agreements. The mission of this project is to help the negotiating countries of the world identify the key design elements of a post-2012 international policy architecture that are scientifically sound, by which we mean comport with the

recommendations of the intergovernmental panel on climate change that are economically rational, by which we mean approximately cost effective and are politically pragmatic meaning that if it were an international agreement per say that it would be an agreement that the United States Senate, for example, could indeed ratify and that the key emerging economies of the world, in addition to the European Union and the other industrialized countries could participate in in meaningful ways.

Having said that, however, our focus is not only on a post-Kyoto, if you will, international agreement; or for that matter a second commitment period for the Kyoto Protocol, but rather with the wide range of possible institutional structures that are conceivable that might follow on as I'll make clearer as I go forward. In doing this work, although it is called the Harvard project, it's by no means a Harvard endeavor. This problem, as all of you know, is much too challenging for any institution to claim that it's cornered the market on wisdom. We are involving research and ideas from leading thinkers around the world from academia, from economics, political science, international relations and legal scholarship, from private industry, importantly, from green NGO's and other NGO's and, of course, from governments. We now have over 35 research initiatives that are operating in Europe, the United States, China, India, Japan and Australia and others forthcoming and we engage in a great deal of outreach such as this event today, a two-way street and not simply for us to divulge the results of our research but to sometimes float some ideas and take your ideas back to the various research teams in universities and think tanks around the world. We published very recently—or rather Cambridge University Press published very recently a summary for policymaker, a book that summarizes much of the work that had been done up until that point—this was in 2009. And the complete book with 30 chapters was published in January of this year. Let me mention that if you're interested—I'm not going to say anymore about the Harvard project. I'm going to turn to substance now, but if you are interested in being plugged in to the work of this project, receiving e-mail updates and discussion papers and working papers and the like, if you fill out one of these forms, that I believe was on your chair, or simply give me a business card afterwards we'll be happy to plug you in. We will not inundate you, I promise, with e-mail.

So let me turn to substance. We think of potential global climate policy architectures as falling into three categories. One would be targets and timetables, individual countries, yet targets presumably quantitative targets of the missions caps and timetables for action. The Kyoto Protocol is certainly an example of that. There are some other very interesting ideas; which I was not going to include in my presentation today because I've spoken about them, actually, at the U.N. just across the street not very long ago, and they include some interesting ways of maintaining the important principle of common but differentiated responsibilities but doing so in ways which are more sophisticated and subtle and might be able to advance international negotiations beyond where they seem to be locked up. And I'd be pleased to talk about those if anyone wants afterwards. A second category of international architecture is actually something that we find more commonly in international agreements which is not a purely top down approach but is rather harmonized national policies—different

countries taking on policies within their borders and an agreement being reached to make these commensurate in—by some metric. A third category, which is in one sense most interesting because it seems to be impossible for what is a global commons problem, are independent national policies and I'm going to focus my comments today, unlike in the past, on two examples of independent national policy architectures because I think they turn out to be particularly important given where the countries of the world stand right now in the post-Copenhagen time period. One we label portfolio of domestic commitments and the other is the linkage of domestic and regional cap-and-trade systems and other emission reduction credit systems around the world.

So first with regards to this portfolio of domestic commits approach—so this is very much in a sense a bottom up approach. It would seem from an economic perspective the simple economist like myself would say this would seem to be impossible. After all this is a global commons problem. For any individual nation the benefits of taking action will inevitably—the direct benefits will be less than the direct cost of taking action. Hence, a free rider problem as we economists would say. And so it would seem that this approach is not feasible but it's an approach which has merit, and certainly merits consideration. And it's one where each country agrees within some kind of international arrangement, not necessarily a legal agreement; it could be a political agreement, to abide by their domestic commitments. And this is an approach which has been known as pledge and review in some cases. Also, it was called a schedules approach when it was introduced into international negotiations by the Australian government, as I recall, a summer ago at least. There was support for this approach from a diverse and quite striking set of countries in terms of their diversity going into Copenhagen, and then includes, but is not limited to, Australia, India and the United States. There are questions about it, though, important questions and one question given what I said about the free rider problem could this kind of an approach ever bring about sufficient stringency. I think the answer to that question is no, but I'm not sure it's the right question to ask. I think the right question to ask about such an approach might be is it an effective bridge. Is it an effective step to further steps that might be taken with other architectures? So I'll come back to that.

The other bottom-up architecture on which I will comment is based upon the observation that throughout the industrialized world, and for that matter in parts now of the developing world, cap-and-trade systems have emerged as what appear to be the politically preferred approach to carrying out meaningful reductions of carbon dioxide and sometimes other greenhouse gas emissions. Obviously, the European Union emissions trading scheme stands out in this regard. Everyone in this room is probably aware of the political delays in Australia. Canada will move forward with such a system, I would say, as soon as the United States does. I'll come back to the situation in the U.S. politically in a few moments. Japan also has indicated that they will be moving forward with a cap-and-trade approach. New Zealand already has. Once cap-and-trade systems are either in place or even planned there is tremendous pressure. Whether you like cap-and-trade or not, there is tremendous pressure, both from industry and from governments, to link these systems

together. And by link I mean bilateral recognition of allowances so the permits in one system can be used in another. And the reason there's so much pressure, both from industry and from governments, to carry out such linkage is that linkage has the effect of lowering overall costs for the same reason that a cap-and-trade system lowers costs in the first place. If the allowance prices were different in two countries the allowance prices converge. And also it has the effect of reducing market power and decreasing price volatility because we've enlarged the scope of the market. Although, it also transmits, we should acknowledge, price volatility. But there are some problems with linking and the most striking problem with linkage, or the greatest challenge to it, is that when two programs link together there are particular design elements of one program that automatically propagate to the other, in particular, any kind of cost containment elements, so safety valves, price collars, banking and borrowing. Given, for example, the difference in perspective you may be familiar with between the E.U. and the United States regarding safety valves and price collars, such direct linkage would be presumably a problem for the E.U. because they would then have our price collar or safety valve. That means then that advance harmonization would be required, which seems to put a lie to what I claim, namely this is a bottom up loosely coordinated approach.

However, there is an important reality, and this is where the Kyoto Protocol comes in. And that is that if each and every one of these systems either proposed or in place—all of them, allow some degree of offsets from the common emission reduction credit system in the world known as the clean development mechanism, the CDM, under the Kyoto Protocol. Once that happens if I link my cap-and-trade system to the CDM and I allow offsets and Warren in his country links to the CDM then Warren's cap-and-trade system and mine are indirectly linked. The prices in our two systems converge. We get all the benefits of cost effectiveness and everything else but there is not the same degree, by any means, of this automatic propagation of the design elements from one system to another. So it is to use the American colloquial expression to some degree a situation of having your cake and eating it too. This is, in fact, already evolving and we may see it continue to evolve as part of, and perhaps essential part of, what you could think of as the defacto post Kyoto international policy architecture. What I'm referring to is that even if there is not an international agreement in place post 2012 this may be the emerging architecture from the bottom up. So I'm describing this not in normative terms—I'm not arguing for it but just saying that we might anticipate that this will continue to evolve.

Now, I want to bring us up by commenting on how this relates to the—what took place in Copenhagen. You know there's the cliché that's often used in the American baseball season when a team doesn't do very well at the beginning of the year in April and the players are frequently quoted as saying, "Well, it's a marathon not a sprint." And I think that that cliché applies even more to climate change policy. And I say it for four reasons: One, scientifically it's a stock not a flow environmental problem, unlike all the other environmental problems I've worked on, the only exceptions being stratospheric ozone depletion and climate change. With this it's the stock not the flow that we're concerned with. It's not the rate of water

that's coming out of the faucet into the bathtub. It's the amount of water in the bathtub and it's got a very slow drain. The decay rate of greenhouse gases out of the atmosphere is decades to centuries. So that requires a long-term view.

Secondly, economically, all of the economic analyses that I've seen from either side of either Atlantic or Pacific oceans save one would recommend a gradual—that the cost effective path globally to achieving any degree of target's severity up to, we'll say, 450 parts per million concentration would be one of a gradual ramp up because it's a stock problem and we want to unnecessarily avoid rendering large parts of the capital stock prematurely obsolete.

Third, and also economically, anyone who studied climate change scientifically, technologically or economically seems to agree that technological change on a massive scale will be necessary to address the problem. And that would suggest that in order to achieve it that long term policies, in particular probably long term price signals, would be required.

And then, fourth, and finally, to bring this even closer to the negotiations in the United Nations administratively the creation of durable international institutions is going to be essential. So think of ourselves as sitting in this location in 1945. The U.N. is barely getting off the ground. The international monetary structure is being developed. Post-war Europe is in shambles and being built. What was most important, particularly on reflection, was developing the institutions. And those institutions took decades—decades to develop to the point where they are now. So for all of those reasons I would argue that this is a marathon not a sprint and, therefore, international negotiations should be thought of as an ongoing process. As we think about, for example, trade negotiations not as a single task with a clear end point that in Copenhagen or in Cancun or in South Africa or wherever it is after that, that the problem will be solved with a single agreement.

So the bottom line for me going into Copenhagen, and I said this before it took place, was that a sensible goal was progress on a sound foundation for meaningful long-term action, not necessarily some notion of immediate success. Now, it would have been possible, but actually I would say unfortunate, to have achieved what some people would have defined as great success in Copenhagen which would have been a signed international agreement, glowing press releases and photo opportunities for heads of state. The reason that I say that that would have been unfortunate is that there's only one agreement that conceivably could have been signed there and that would have been what I will refer to as the Kyoto Protocol on steroids. That is precisely the same structure as the Kyoto Protocol but more stringent targets for the annex one countries. That would have resulted—it could have resulted in signature by the United States as we signed Kyoto but, of course, it would never be ratified by the U.S. Senate and so we would repeat the mistake of Kyoto. There would be no real progress on climate change. Global emissions under those circumstances would continue to increase. And I think it's remarkable that some groups, both some advocacy groups and certainly

the international press corps, if I may say so, would have applauded such a step.

So what actually happened in Copenhagen? Well, I suspect many of you were there. You know that there was organizational failure. I was among the people who stood outside in the cold trying to get in and did not. The gentleman next to me, at one point, was from the Peoples Republic of China. I recall that he waited in line for ten hours and eventually got in—not smart for an international negotiations. Forty-seven thousand advance credentials were distributed to many of us for a total capacity of 15,000. There was, of course, a lack of consensus, but quite remarkably at the last minute, in a fashion that I think could some day be a Broadway play or in the south end—in the West End, pardon me, there were direct last minute negotiations among heads of state from a set of key countries, and that was Brazil, China, India, South Africa and the United States. Ethiopia at times, and then a whole set of additional countries at other times up to about 30.

This is, of course, as you all know, virtually unprecedented in international negotiations. Now, the argument could be made that if we have to rely upon heads of state being in the room to write text then the negotiations have failed. But it's also true that those negotiators—those heads of state and their staff saved the conference of the parties from complete collapse. And they produced what I would characterize as a significant political framework, the Copenhagen Accord. The Accord departs from the Kyoto Protocol. It moves beyond it in two important ways which is not to say that it solves all problems by any means. It expands the coalition of meaningful commitments to include all major emitters and it extends the timeframe of action for what is, as I've suggested, a long-term problem.

So the Copenhagen Accord has good news and bad news associated with it. The good news is, again, that it provides for real cuts by all major emitters. Secondly, it establishes a transparent framework for evaluating countries' performance against their commitments. And, as you know, that was a very controversial issue that was negotiated. It initiates a flow of resources to help the poor, vulnerable countries, and we're thinking here of sub-Saharan Africa, small island states and other countries, to carry out both mitigation and adaptation. It was left up to the countries of the world then to submit, if they wanted to, their domestic commitments. This is, after all, the type of approach I described earlier, a portfolio of domestic commitments, and by the end of January and, particularly, now we have over 130 parties together accounting for over 80 percent of global emissions that have submitted their targets, or in the case of developed non-annex one countries their actions.

Now, there's also bad news. Obviously it's not on track for the frequently discussed target of two degrees centigrade let alone the newly discussed target in Bonn of one point five degrees centigrade maximum warming but I've suggested to you that this is something we should look at as a bridge not a destination. Also, the distinction between annex one and non-annex one countries remains in words.

On the other hand, it is very much blurred in action. There is a significant departure here, as I've already suggested. And the future of the UNFCCC many people say was threatened because this was negotiated outside of the plenary—outside of the normal UNFCCC process. Personally, I don't think, as Warren suggested—I don't think; I agree with him that it threatens the UNFCCC process. We don't need to look at it that way at all. But another outcome of Copenhagen, which is undeniable, it's not only in the press it's at every think tank that you talk with. If you talk with academics; did you talk with negotiators is thinking about institutions for climate governance and asking critically; stepping back and asking do we have the critical set of institutions for the path forward.

For some people, Copenhagen illustrated -- for the first time; for others that had been thinking about this for a long time -- that there were some concerns about the process under the United Nations framework convention on climate change. One is the sheer size in reaching agreement among 194 countries when 20 countries and regions, the E.U. taken as a region, account for 85 to 90 percent of global emissions that seems like a daunting, and perhaps unnecessarily daunting, task. The U.N. culture and process for reasons that I completely do not understand seems to all too often polarize debate between the developing countries versus the developed countries. And then linked with those is the voting rule, the defacto voting rule in the UNFCCC, which is consensus, that is unanimity is required and, as you know, it was a lack of consensus for the Copenhagen Accord because of the objections from six out of 194 countries, none of whom are major emitters, that the Copenhagen Accord was noted, not adopted.

Now, because of this, people are beginning to think and consider some alternative institutions. And when I use the word alternative this doesn't necessarily mean as a substitute. It could well be as a compliment to the UNFCCC. One is, of course, the major economies forum it covers about 27 countries and regions, about 80 percent of global emissions—there's the list. It has a problem, however. It was initiated and it is still led by a single nation—the United States. And that's a problem in terms of credibility not only because it is the U.S. and we obviously have not signed—not ratified the Kyoto nor do we have a domestic binding policy in place but because it's a single country doing it. So another possibility, which is actually quite similar to the [indiscernible], is the G20. Now, this is, of course, a group of finance ministers and sometimes heads of state, been around since 1999, and they actually have already met on climate change and they probably will continue to meet on climate change to various degrees. That group of countries is very similar. Now, remember when I said that these could be approaches that might—or venues that might compliment and not necessarily substitute for the UNFCCC; one way to think about that is that these might be effective venues for discussion, not necessarily for official negotiation. Indeed, in the case of the major economies forum, that is the official policy position. This is not a venue for negotiation. It is for us to have candid discussions. But there are other multi-lateral; certainly the C30 would be important; The C30 being the G20 but including some of the poorest countries of the world who would actually suffer the worst. After all, if you focus only on the major emitters you're not necessarily including the negotiations of the

countries who would have the worst damages. So that's another possibility. And then there's a long list of potential other multi-lateral and, for that matter, bi-lateral venues that are possible, prominently, of course, China and the United States, since those are the two largest emitters.

However, I certainly do not want to be taken to suggest that one should be looking beyond the UNFCCC as if it is going to suffer a fate of death and depart from the scene. It is too soon for obituaries. The Kyoto Protocol, as we know, will continue through at least 2012. The clean development mechanism is a creature of the Kyoto Protocol and, importantly, in world political terms it has a very large constituency behind it. Also, beyond that political constituency is just the issue of international legitimacy. There doesn't seem to be any other institution that's obvious that has the same legitimacy the G20 nor the major economies forum do not bring that the same. And if we're looking beyond the discussion—the negotiation and thinking about implementation -- then it looks like it might be absolutely key.

So in any event, what should be recognized is that appropriate international venues for different institutions that these could vary depending upon whether we're looking at adaptation or mitigation or negotiation versus implementation. And I'll mention before going further this is actually the area in which we're doing a lot of research now in the Harvard project is looking at from the perspective of political scientists, economists, legal scholars looking at these supplementary venues and how they could compliment, if they could, the work going on of the UNFCCC. In the meantime, action by two countries is absolutely critical, the U.S. and China, since I am a citizen of one of those countries, I think I'm obligated to say a few words about what is happening, or is not happening, within the United States, so I'm going to finish up with that. I spent a lot of time working on domestic climate policy, and I would say that the core of anticipated U.S. action, which doesn't mean 2010 necessarily, is going to be what I would call cap-and-trade plus and minus. The plus is that it won't only be cap-and-trade and the minus is that it's unlikely to be an economy wide cap-and-trade system but something much closer to actually the European Union emissions trading scheme, which is electricity sector and large industrial sources only, at least at present. The action has now moved to the upper House, the U.S. Senate. There is a proposal from Senators Kerry and Lieberman that we can talk about and the previous legislation in the House of Representatives which was passed is the Waxman-Markey Bill which is in the figure. The politics in the Senate are exceptionally difficult, because 60 votes are required and there are not 60 votes for this climate legislation. That's not just because of Republicans. It is because there is bi-partisan opposition to climate policy action in the U.S. in the Senate from what you could call the coal states, which are the states either which have large coal resources or depend upon coal for a large part of their electricity generation. And there are some states like Indiana that fall into both of those categories.

There are many substantive issues remaining—I won't go into them—on a domestic cap-and-trade system in the U.S. Rather what I want to mention is what you might not realize and that is that there are some other very important U.S. climate policy developments outside of that action in the

U.S. Congress. There is, I should mention as an economist; I'm obligated to mention that is interest in a carbon tax. I would say the real interest comes from academics; hence, it's basically irrelevant. And there is some artificial or phoney interest from some parts of the private industry in the United States, who strategically and correctly recognize that if the discussion turns out to be about a carbon tax rather than some other policy, that we either wind up with no action whatsoever or extremely unambitious goals. And so it's a strategic position that they have, in my humble opinion, as they say on the internet.

There is also—we shouldn't forget about the fact —there is an 80 billion dollar package of subsidies within the Obama—passed by the House and Senate—stimulus package. And this is for renewables and energy efficiency. The major problem there is that they haven't been able to spend the money fast enough. There are also new efficiency standards on automobiles and appliances. These have a dramatic effect. I didn't bring with graphs in these slides, but if you look at what the efficiency standards do to the trajectory of business as usual U.S. emissions without Congressional action -- it's quite dramatic, what these do.

And then, importantly -- if you don't know about this, you should -- is that there is going to be climate policy in the United States. It started a month ago and it's going to accelerate tremendously on January 1, 2011. It's a result of a decision by the U.S. Supreme Court in a case, Massachusetts VEPA, and a subsequent regulatory decision by the Obama administration EPA called an endangerment finding which meant that in the judgment of the administration and on a scientific basis carbon dioxide and other greenhouse gases endanger public health and the environment. Therefore, motor vehicle CO2 emissions standards were promulgated. The moment that happened that automatically under the Clean Air Act starts a regulatory process which will really commence on January 1 of this coming year. For a whole set of technology and performance standards under the existing Clean Air Act a statute which was not designed for global commons problem or even a transboundary problem but was designed for localized air pollution problems, NOx, SO2, carbon monoxide and lead. The result is, in my judgment, that that regulation will be both relatively and effective. It'll do something, but it'll be very ineffective compared to what a cap-and-trade system would be. And it will be very costly for what is achieved.

Now, the people in the White House are very, very smart. Indeed, many of my former students are there in key positions. So it's a very smart group. Everyone in the White House is aware of this; that it's not going to have much effect and it's going to be very costly. So why would they go forward with it anyway. Well, because their view is that it will force the hand of Congress. In other words, Congress is you don't do something smart, we're going to do something that's not so smart that's going to be even more costly. My concern about that is that that's like my saying to Scott Barrett, Scott, if you don't do what I say I'm going to shoot myself in the foot. And the reason I say that is that this is going to come back, in my opinion, to haunt the U.S. government, because as soon as we begin to see regulation of small sources, which there will be, of small business and small sources it will become the poster child of silly climate regulation

which will play into the hands of climate skeptics and opposition on the far right. And I think we might see even a tremendous loss of public support—the little that there is even now in the United States for climate policy. So I worry about that.

But something else that is going to happen are subnational climate policies. In California under Assembly Bill 32, there is a very important and very ambitious climate policy. It's going to be a cap-and-trade system more or less upstream, more or less economy wide in California. It's more stringent than what the Waxman-Markey or the Lieberman-Kerry bills would have in the Congress. There is also in the Northeast, including in New York state, the Regional Greenhouse Gas Initiative, a somewhat less ambitious cap-and-trade system only among electricity generators. There's good news about these. There are others. There are other systems that are being proposed in different parts of the country. The good news is that they can be linked just like you can link systems internationally you can link state and regional systems. The bad news is that they will still be grossly inferior to a national approach.

So finally, the real challenge to link together—I've talked about in terms of the U.S. action and U.S. politics with the international negotiation scene, which is so important, is that U.S. political timing is, alas, a tremendous challenge for the international process. There are a series of very unfortunate independent coincidences. First, of course, is the recession, even if we're moving out of the recession as we are even if we've had positive economic growth in the United States since the third quarter of 2009 that doesn't matter. The politically salient number is not change in GDP per quarter. It is the unemployment statistics. And unemployment is lagging and in some parts of the United States it's vastly over 10 percent. It's 17 percent in California. I am embarrassed because I know some of the countries represented here have unemployment rates vastly exceeding that but politically for the U.S., this is traumatizing to have unemployment rates in the modern era since the Great Depression that high. There have also been some other domestic priorities in the Congress. There was the economic stimulus first of all. There was then health care policy. There is now financial regulation, i.e., regulatory reform. And now, of course, there is the Gulf oil spill which has essentially paralyzed all other policy thinking, it would seem, within some parts of the government.

Public perceptions that should be recognized in the United States are not what they are in Europe. You'll see lots of polling results that vary because they're from advocacy groups, but I'll quote a poll which is not from either side of the political spectrum, it's the Gallop Poll, which is quite reliable. And they pose 22 alternatives for Americans in a representative poll to rank their priorities of policy actions, 22 different issues ranging from local poverty, environmental problems of various kinds and on 22 climate change came out number 22 where number one was first. Also, as I've emphasized, the Congressional deliberation and the politics are very difficult. The Senate numbers are exceptionally challenging. And we're coming towards mid-term elections in November of this year. And as we come closer that actually works against bi-partisanship. And, furthermore, not just for Republicans but for Democrats as well it will

become increasingly difficult as we come close to the elections for anyone to vote for an action which will have the effect of increasing energy prices. And any meaningful climate policy will increase energy prices or at least the cost of energy to consumers. So, to conclude then, putting together the optimism and the pessimism both the 16th conference of the parties that'll take place in Cancun in December, I'm sure, will be more enjoyable than the time we spent in Copenhagen, particularly if we have to stand outside in line. But I don't want to make any bets that it'll necessarily be more productive. I'll stop there. I went through a lot of material. If you want more information give me the business card or here are some websites for you. Thank you very much.

Warren Hoge: Rob, as we get settled here, could I just ask you one quick question based on that last slide about public perceptions in this country” Do you have any theories as to what the current oil spill—what effect it will have on those perceptions?

Robert Stavins: So the current oil spill is certainly—there's an attempt, I would say, by political forces on either end of the spectrum to use the Gulf oil spill in order to argue for more stringent and rapid action on climate policy or to argue against more stringent action on climate policy. And, in fact, there are a number of linkages that I could make both of those arguments for you. I think on net it probably is going to be helpful. It is unlikely, in my judgment, that public sentiment about the oil spill will push a climate initiative over the numbers that are needed but it probably will help to get a comprehensive non-climate energy bill out of the Senate, such as Senator Bingaman's bill.

Warren Hoge: Well, Rob, thank you. And thank you for that very provocative and interesting presentation. As I said earlier, we have two excellent people as discussants and I'm going to ask Scott Barrett to speak first and then after him Mohammed Reza Salamat. Scott?

Scott Barrett: It's always risky to ask an academic to talk without firm limits. Well, it's a real pleasure to be here. Thank you for the invitation. I'm particularly pleased to be here with Rob, who is a friend and a co-author and a colleague and whose presentations, as you've now seen, are always clear and informative and enlightening and of great practical relevance. And sometimes he says things that you would like to hear. Sometimes he says things you don't like to hear but you know are true. And I think that's what I heard today.

Let me give a perspective that will be a little different. And basically what I'm trying to do is provoke discussion so let's see where it goes. Copenhagen: success or failure? Well, these things always, you know, depend on how you look at them—what your perspective is and what your expectations were, for example, and, I guess, if there's a success/failure barometer and there's a—kind of a gauge here, you know, maybe we're talking those kind of fine lines. If you want to address the climate problem, which is really basically all I'm interested in, it's a massive failure. Why? Well, if you want to stabilize atmospheric concentrations of greenhouse gases at any level, it really doesn't even matter the particular number you like or the temperature target you'd like to reach. You

basically have to bring relatively quickly net emissions worldwide towards zero. I pause there because that's actually quite an amazing thing to contemplate. You really need to do nothing short of transforming technology worldwide and we're going to have to do it when the market won't do it all by itself. So the ambition, I think, we're asking for climate policy is huge, and where we've gotten to so far is nowhere near it.

There are some aspects of the Copenhagen Accord that are interesting. There is an acknowledgment that is mentioned of the two degrees C target. There's no commitment to get there but even if there were, that's a collective obligation. No individual country could get there or assure that we would get there directly. The agreement, of course, is not legally binding. Now, in a way, that doesn't matter, because Kyoto was not legally binding and Kyoto didn't make much of a difference either. So I'm not sure I'm terribly worried about that but it's somewhat worrying because our international institutions we should take them seriously and the ones that work well often work well because there is backed up by the words in a treaty the obligations that we know through international law for countries to fulfill their obligations.

So there are some things—I'm not going to go into a lot of detail about Copenhagen. There are some things that we might smile upon somewhat, but basically, Copenhagen is not going to transform technologies worldwide and I don't even believe it provides a basis—a foundation for further development. Now, there's a question about what's gone wrong. This is probably what Rob was addressing. Is it the process? And I wasn't in Copenhagen. I didn't stand outside in the cold. There's clearly something wrong with that process, yes, I mean, that's clear. On the other hand I think that the problem is not really with the process. The requirement for consensus basically as I've understood, and I've learned this from Dan Bodansky, apparently the requirement for consensus basically stems from a failure of the conference of the parties very early on after the Rio Earth Summit to come to a decision about a voting rule for making decisions. And the default was consensus. And consensus means if someone raises their hand and says I disagree and the chairman can't get that person to sit down then you basically don't make progress.

But if you look back on Copenhagen there are actually a multiple of negotiations going on at the same time. It wasn't there was one; there were five, actually. There was a Danish text. There was AOSIS had their own version. The basic group had their version. The UNCCC had their version. The Kyoto Protocol parties had their versions. Maybe there were more, but there's nothing to stop countries from developing their own approaches. What has not happened, though, is there has not been agreement among the countries that really matter about how you can go forward in a really meaningful way. In my opinion, the problem is not the process. Actually the process will fall into line as you change the approach. I think the problem has been the approach. And I think that problem has been the problem since 1988 when the first meeting was held to discuss what to do about climate change in Toronto. That approach has been to focus on the setting of targets and timetables and along with that comes a number of other things a treaty would have to do

to be effective; most importantly a requirement that it have effective enforcement. And the inability to address the problem of enforcement, I believe, is central. There are other issues: comparability, particularly negotiating around targets and timetables. That's a serious problem. But I would say enforcement is central. Now, Rob said there in his project with Rob Stowe that there were three kinds of proposals out there for how we might move forward. One was targets and timetables which, as you've heard, I don't think has been successful. I think, actually, that is our problem. We need to think about things differently. The second were the harmonized national policies and the third were the independent national policies.

The independent -- let me just say a word about that. It's not really clear to me that what we have is at all independent. For example, if you look at Waxman-Markey -- I would urge, it's 1,428 pages -- I wouldn't urge you to read the whole thing necessarily, although, but I would urge you to look at... read the first paragraph, because it turns out that if you flip to the first paragraph after the definitions and the table of contents, etc., the first paragraph is not about the United States. It's all about China and India. And this, I think, is very important that the United States policy is not independent of what other countries are doing. The United States policy is actually contingent on what it expects other countries to do and, by the way, should those other countries not do what the United States expects it should do or thinks it should do then there will be ramifications. And this, I think, is provocative and possibly dangerous. That's the reason for needing to have international negotiations. Countries need to agree what they do and not have those actions imposed upon them. So the need for a multi-lateral agreement, I think, is very important.

I probably don't have time to discuss linkage, I know. I would only say on the issue of linkage, I think what you will get, if there were to be, is bubbling up of actions in different countries you would get informal linkage. I'm pretty sure you will not get a formal kind of linkage. Maybe we could discuss that later.

And, now, in terms of moving forward, something has happened that I think is very interesting. The United States, Canada and Mexico have jointly made a proposal to the Montreal Protocol, which is the treaty that governs the ozone layer, that that treaty should be amended to reduce the emissions of HFC's. HFC's, hydrofluorocarbons, are not an ozone destroying gas. They are a greenhouse gas. They're included under the Kyoto Protocol, and I think this is an important move, because if the HFC's are addressed under the Montreal Protocol and we can have every confidence that they will be. If this goes to Montreal we can have every confidence that this will go through and that this system will work, because there is effective enforcement within the Montreal Protocol. Then we will have taken out a piece of this larger puzzle and we will have shown that we can address it taking that one piece out.

Now, the United States Senate is always on our minds, well, not always, but sometimes on our minds, particularly when we think about treaties and U.S. leadership and you might wonder would the United States Senate sign—ratify an amendment of that kind. Well, the answer is yes,

absolutely they would. The original Montreal Protocol was ratified by the United States Senate during the Reagan Administration by a vote of 83 to zero. So the approach, really, in that treaty is fundamentally different than in the approaches we've taken so far and I think that's a sign of how we can make progress.

The last thing I'll say about moving forward from here is that in terms of the venue—the process there are really two that are important. Rob mentioned them. I'm just going to state them again just to sort of re-emphasize them. The first is the G1. I'm just going to pause again. I mean that's clear. And the second is the G2. If you can get the G1 and the G2 you're a big part of the way there. So that's the challenge ahead. Thank you.

Warren Hoge: Thank you, Scott. Mohammed Reza.

Mohammed Reza: Thank you. And I would like to thank the IPI and the missions of Sweden and Pakistan for sponsoring this event which I think is very important. Particularly I benefited from the presentation made by Stavins and also the remarks made by my colleague. I would not look at Copenhagen. I think it was addressed sufficiently, at least in this event today. But I would try to provide a very quick update on what happened in Bonn two weeks ago and then to Cancun how that could help, in fact build some groundwork for a possible outcome. I don't want to describe it in any way as a success or whatever, but I will try to address some of the aspects that are relevant to its success or failure. But, first of all, that was the first round of discussion made after Copenhagen. It seemed to me that all delegations—all negotiators were really willing and ready to leave behind the bitter memories of Copenhagen and to recover trust. I think that's the good news.

So let me begin with the good news. First of all, Bonn, and this was manifested by the very interesting and frank discussions that were made on all the issues, both in KP and LCA, particularly LCA where there are more complex issues to be resolved. However, on the last day as is, in fact, normal in a multi-lateral setting the positive mood was changed a little bit to some controversial and a bitter atmosphere when the new negotiating texts of the chair was tabled. That was not well received by all delegations but [indiscernible] developing countries described it as very imbalanced, not reflecting many proposals put forth by G7 and China as they described it. So that was the end of the Bonn meeting but, of course, I hope that will not be repeated in Cancun. However, I think we should look at the overall process and see how it fits into the big picture. I think, as I said, there is a political willingness to move forward from all parties that is important. And that nobody likes to repeat the same experience that was, in fact, faced by everybody in Copenhagen.

However, the issues are complex. Those who have been involved in climate negotiations for a long time say every global issue is easy except climate change. It is very difficult -- the issues associated with the topic are extremely complex -- and they affect all economic activities and, in fact, the whole social and economic system. Therefore, one should not expect that the outstanding issues are resolved overnight. So this is why I

agree with what Stavins said in his presentation that climate change is a marathon and not a sprint. So I think that will help us set our expectations right not only for Cancun but also for the whole climate in process so that we are not frustrated if we do not see our hoped for, in fact, agreement is not achieved.

Now, as far as the issues are concerned, of course, there is no resolution yet on various outstanding issues, beginning with mitigation targets. Mitigation—the aggregate global mitigation, particularly [indiscernible] is the key issue and remains unresolved, of course. The concern is that many negotiators are saying that the level of ambition announced so far voluntarily by [indiscernible] parties are not enough to respond to the scientific requirements for the midterm targets. That is between 25 and 40 percent. So that is a main big issue that really hinders any further progress on other issues. The other issue is the question of compatibility of actions both between—within [indiscernible] parties. As far as within [indiscernible] parties is the concern—the main issue, as you know, is the U.S. And our colleagues did address sufficiently about where the U.S. stands. So the question is how should we frame the final agreement in terms of the legal form. If you're going to continue the Kyoto Protocol we will not have the U.S. on board. If you're going to have the U.S. on board we have to agree on something under the LCA. And if you're going to agree on the LCA then there will be some changes to the current balance of commitments and obligations and that is what Stavins called the dichotomy. Of course, it's not really that easy to change that dichotomy. He described it as a dichotomy, but it's a differentiation that has been set there since Rio de Janeiro, and it is one of the fundamental principles enshrined in the convention, so it is not really easy to even touch that balance of power, if you will. Therefore, that is one of the key issues that concerns developing countries who are saying that if you are going to move from Kyoto Protocol paradigm towards an LCA paradigm, which is mostly sort of a pledge and review approach—a bottom-up approach whereby governments will internally announce the national targets and then their plans for assuming them without any global centralized framework where first the macro targets are agreed and then it is differentiated among parties. So that is one of the concerns which, in fact, makes it difficult to really agree either way in terms of changing the distinction between [indiscernible] parties.

And the other issue is the question of how—these are all related, by the way, how these two processes, the KP process and the LCA process, can come together at some point. With any one, the Kyoto Protocol or otherwise, there are common issues that one needs to address, including the question of aggregate mitigation and also market-based mechanisms. How are we going to address them? So there are many countries now increasingly, in fact, in number who are saying that we need some common space where we can address issues of mutual interest between the two groups. But still the group as a whole resists to any attempt to establish a contact group or whatever to address the issues of the common states. But I think at some point this will be done, and I don't know whether it will be at the next meeting in early August or in Cancun but at some point this needs to be addressed. There are issues of mutual concern between the negotiating groups that need to be addressed jointly.

The other question is the threshold for the maximum temperature increase. Again, the question of one point five degrees Celsius has been [indiscernible] as one of the options basically by AOSIS countries and those who are most vulnerable and which makes it a bit difficult to agree given that in the Copenhagen Accord the two degrees Celsius, in fact, was mentioned as the reference. Now, very quickly in one and a half minutes I will try to just—oh, you still have one minute, OK. About Cancun, first of all, it depends on, as I said, how you set your expectations. If you think a conference of the parties is a meeting where you can agree on full fledged outcome whereby the committance by all parties are clear, the implementation mechanisms are all clear, set; that's not going to happen but that is one scenario. But if you have that expectation in mind and if you don't reach it, then you will be frustrated. Therefore, I think you need to also consider other alternative options whereby you can set realistic expectations for which you can really set benchmarks to achieve. I think what is important is that climate change—action on climate change not be delayed. I think that's one important factor. At the same time as I said climate change is too complex to be resolved in one cup, even in 16 cups, I would say, so what should be done? I think it is important as Stavins again said, to lay the ground for some long term sound institutions that could really guide action by governments and by the stakeholders. So having said that, I think as far as Cancun is concerned, we need to try to move towards some sort of agreement on the implementation architecture whereby we can, in fact, lay the groundwork for further action on the commitments, etc. For instance, we need to agree on financial architecture. The good news about Bonn is that there was some good progress on the finance issues and to the extent that the U.S. agreed to the establishment of a new fund. Of course, there are many, in fact, lacks of clarity in terms of how that new fund is going to be established but there is some good movement. There's also a movement on the long term finance as well as on the short term fast track finance. On the long term, as you know, [indiscernible] has already established an advisory group of high level people who are working on the source of funding and they will present a report to Cancun so that could hopefully constitute a good component for some good outcome in Cancun. But on the fast track finance, there is also some good movement. The umbrella group and the EU presented some good updated report on their activities to provide 2010 as well as '11 and '12 of the commitments for fast track finance. That could constitute another good, in fact, component of financial architecture in Cancun, so this is another good news. I think as far as the Secretary General is concerned for him, of course, climate change is one of the big—one of the top priorities. However, he also looks at the big picture. For him the development is also a key concern. The MDG Summit is coming and energy access is another key concern so he positions climate change in the broader [indiscernible] development context whereby all development concerns, in particular of the most vulnerable, will be, in fact, taking it into account. For him, while it is important to advance on negotiations it is also important not to delay further action. Having said that we hope Cancun will not only be enjoyable but also more productive.

Warren Hoge: Thank you very much. Rob, I'm going to give you a chance to respond to those responses but first of all I'd like to go to the audience to get some questions. And we have 25 minutes and if you would raise your hand and wait for the microphone. We know who Kio Akasaka is in the front row here, the third row and then after that Patrick Heyford. We'll take both questions and then answer them after two.

Kiyotaka Akasaka: Thank you very much, fascinating presentation of all the pictures on climate change. I would like to thank all the panellists. The study done by the OACD has clearly showed that voluntary action—national actions would not be effective because they would come up with the business as usual—the proposals. That is why the United Nations, we believe, with legally binding agreement is absolutely necessary. What legally binding agreement—the proposal—the big proposals are on the table from Japan, European Union, but the key is the United States. If the United States is prepared to come forward agreement among at least developed countries will be possible. And, of course, China and India emerging economies the commitment would be necessary. A recent U.N. foundations opinion poll show that skeptics among the Americans about science of climate change have grown, and so political support to the government to do something may be waning. I wonder—so my question is, how can we encourage the American public and the American government to come up with the meaningful commitment proposal so that the negotiation can be put back on the track. I don't believe the institutions will be the problem because if the substance is agreeable institutional issues can be solved easily.

Warren Hoge: Thank Kio. Patrick if you would give your question then we'll answer them both.

Patrick Heyford: Thank you very much. My question is this to Dr. Stavins, in particular, from your prospective, what did Africa in a sense get out of Copenhagen—get out of Copenhagen and for the upcoming negotiations in Mexico, etc., where does Africa figure in the whole picture? Thank you.

Warren Hoge: Rob, would you take those two questions first, and then if you want to join in, we can.

Robert Stavins: First your question of how can the United States—what can you do or what can be done to encourage the United States to come up with a meaningful proposal. The answer is to encourage China to agree to participate in a meaningful way. I don't say that flippantly. That's really true. There's nothing as important. It is inconceivable that the U.S. politically would move forward without China. Now saying China there are some other countries, too. They're the emerging—frequently referred to emerging economies but China is the key one. The concerns regarding China, whether they're real or not, they are politically real in the United States. The U.S. Congress, which is becoming, in my view, increasingly protectionist, has an excessive fear of competition from China. So that's going to be very important.

In terms of what did Africa—a great question. What did Africa get out of Copenhagen? I think two things: Africa standing up and recognizing that it's interests are not necessarily precisely aligned with those of China,

Brazil and some of the emerging, rapidly growing, large developing countries. That Africa, I'm thinking sub-Saharan Africa in particular, has interests of its own and is going to suffer tremendous damages potentially from climate change and the corollary from that are the potential for very significant funding to the most vulnerable countries. And that funding would come not only from the currently industrialized world, but from the emerging economies. It requires, however, in order to fulfil that it requires domestic action by those countries. In the U.S. it would not be—it's not sufficient for the Obama Administration to say it wants to send the money. It's going to have to have Congressional appropriations to have the money so it's necessary but it's not sufficient.

Warren Hoge: Mohammed Reza do you have any—also, what did Africa get in Bonn?

Mohammed Reza: While I'm not the right person that has to address the first question about how the American public would be encouraged but I think—I don't think it is enough to just focus on the science. No matter how much IPCC produced reports or other scientific bodies there still—there might remain some skeptics to challenge because once somebody who doesn't want to really listen no matter how much you provide scientific evidence it's not going to change his or her views. So while I think it's important to highlight the science but at the same time perhaps we need to promote some value-based message to the American people. That look you need to care for your own children. You need to care for others and the most vulnerable and so on and so forth. Therefore, I think it's important to have a package for messaging.

Now, as far as the second question about Africa is concerned, as you know, the most vulnerable countries have been grouped under different categories. First of all, of course, apart from [indiscernible], which is more political, we have a list of countries. We have smaller land countries and we have the other [indiscernible] countries and the fast start finance is one of the main and most immediate, in fact, things that will hopefully benefit the most vulnerable including the African countries and in some part these developed countries, in fact, have already pledged their commitments for the three-year approaching \$50 million for 2010 and 2012. As I said, the umbrella group also provided a very detailed report in Bonn about how they are going to implement their commitments so that's one thing. And the other thing is adaptation. I hope adaptation will be one of the key building blocks on which agreement could be reached in Cancun because delegations are very close to an agreement on an adaptation framework or any other mechanism they call it but they're very close to an agreement on adaptation. That's another thing and which comes to my mind for now.

Scott Barrett: This is an interesting time. I'd like to make one response to the first question, even though I'm also interested in the second question. But on the first question, I'm sure, like me, you must have been encouraged to hear from Rob that climate change is one of top 22 priorities for the United States. I think this really is deeply worrying. Now, there has been also polls showing lack of confidence in the population with the science of climate change, which I also find worrying. On the other hand I don't think scientists are going to convince—I don't think anymore—I agree with Mr. Salamat that anymore—I don't think there's a better, more persuasive way

to communicate the science. The science is uncertainty, and it's—but, of course, what we're talking about is profoundly important and what we do or don't do about climate change will have impacts that will last for generations and be global in scale. I think actually what's actually held back progress is not the uncertainty about the science. I think that's a bit like saying that the problem has been with process. I don't think that really has been the problem. I think what's actually holding back progress is that what we haven't done is put before the public, and I think it's true the American public, but I think it's a mistake to think that America is totally unique. It's clearly important, and it's the biggest log in the jam right now, but it's not the only country that has had problems like this. I think what we haven't done is shown as a matter of policy something that can be done and people can say, yes, I can see that if we do this it'll have an impact even if that impact is uncertain and I'm willing to pay for this because it's worth doing. I don't think we've really done that yet. And I think the reason I gave that example and I meant it almost as a metaphor—that example of the HFC's. I think that would be accepted by the United States Senate. I think that would be accepted by the American people. Now, it's a very small thing for this very big problem so please I know I do understand that. On the other hand it's true that climate is immensely complex, I mean just amazingly complex. But it's also true that we've made it more complex as a policy problem because we've thrown everything together so you can't ever take things apart. Once you've allowed things to take—once you pull things apart all of a sudden each individual part is not quite as complex as when they're all thrown together. So I think if we take a different approach even that aspect of moving forward will improve somewhat.

Warren Hoge: Thank you. Joseph Chamie in the back, and then this gentleman here on the aisle. We'll take both—again, take two questions at once.

Joseph Chamie: Thank you very much, Warren. Professor Stavins, you mentioned a number of things: environment technology, economic costs, but one thing you didn't mention was demographic concerns, population. It's not even noted or prominently mentioned in the architecture for climate change. So my question is, why are the demographic concerns not noted in the architecture for climate change policies and, since climate change is basically a policy at the national level, let's take an example of a country. We could take Sweden or Pakistan, Brazil, India or China, but for the case, since you're an American and I'm an American, let's take the U.S. The U.S. has had so many presidential commissions and congressional commissions look at the issue of population, and every one of them that I'm aware of has recommended a gradual stabilization of the U.S. population. Now, the population is 300 million or so. By the end of the century projections say it could reach 600 million, so in addition to trying to head mitigation, adaptation and cutting down on the carbon, why don't they look at the demand—the numbers coming in for these countries, especially in some of those countries in Africa, Asia, Latin America that we know we want them to develop. If we can keep the base smaller in the next 100 years in the marathon then the demand side may be reduced.

Stéphane Crouzat: Hi, Stéphane Crouzat from the French mission to the U.N. I have a question on governance. President Nicholas Sarkozy has been quite

vocal in recent months on the need to overall the framework and particularly on the need to create a world environmental organization. Do you think—I mean, is this discussed in your circles at all? Do you think it's relevant or, indeed, realistic?

Robert Stavins: Sure. So the first question was since there's so much discussion about mitigating emissions, why don't the countries of the world, including the United States, recognize that arithmetically one of the ways to think about it that's true mathematically is that emissions are on a per capita basis and by limiting populations you have less demand for energy and that's absolutely true. Given the demographic transition that takes place with economic growth and that we've known about for about 150 years now if one were to try to make—begin to make forceful policies domestically and, certainly, in international agreements that address the population component those policies and pronouncements would not be addressed to industrialized countries. They would be addressed to developing countries, and if you think it's controversial the nature of the proposals that are being introduced now I can't think of anything that would be more divisive within the United Nations than for the industrialized world to suggest that we ought to start controlling the growth of populations in the developing world. So that's why it's not in the political cards even if the arithmetic might add up. In terms of the question about governance of a world environmental organization I mean we already have one world environmental organization under the United Nations so I guess you mean another one or one with a broader mandate. In the work we're doing on the Harvard Project on international climate agreements everything is on the table at this point in terms of looking at alternatives for governance going forward and so that's part of the scope. So thank you.

Warren Hoge: Is there another question because I can take two. Mr. Gonzalez, you're in the front.

Yuvan A. Beejadhur: Thank you. A quick question for Professor Stavins and perhaps the panellists what do you think is the latest thinking that you could share with us from Harvard and from the leading commissions on multi-lateralism because you mentioned that you don't quite think it's the funeral yet, but it would be interesting to know what is the latest thinking from those experts from Harvard. But also importantly from leading experts in the developing world, what are they saying, and what are the consultations you're having in terms of the perils of multi-lateralism, if I can call it this way. Thank you.

Noel González: Thank you. My name is Noel González and I work for the Mexican mission in the U.N. so I guess my question is not completely unbiased as we have a special interest in Cancun and we certainly hope that it's going to be a pleasant stay, although we do hope, as well, that it's going to be productive. And in that regard I would like, of course, to have Professor Stavins' views. There are several issues raised. I just recall those that are very near or where agreement could be reached. Of course, there is the issue of level of expectations and we know that for the Copenhagen conference we were very much in the mood of having one single agreement that would basically take—result everything and take everything forward and basically we would have one single moment for the future. Now, I guess that for Cancun at least us, the Mexican

organizers of the conference, are thinking a little bit broader terms and our assessment of what can be a success and what is productive is a bit different. We moved a little bit from the logic of having one single binding agreement and then moving not unambitiously, but getting as far as possible and seeing the UNFCCC as an ongoing process. Of course, we do believe that if we are not able to reach a full and complete agreement here it's neither the end of the world but we need—definitely we do believe that we need to make very clear advances, because otherwise nothing guarantees that in one year the national legislation in any particular country are going to be there for us to work upon, etc., so perhaps a little bit my question in that sense could be to Professor Stavins to Professor Barrett or Reza, what do you think the elements of success in the current context would be? What is it that you would consider productive as the outcome of the meeting in Cancun, and what would be perhaps your advice as to how to get those elements that are actually reachable? Thank you.

Warren Hoge: Thank you very much. We have five minutes and what I'm going to do is ask Rob Stavins to reply to the World Bank question and then ask the three of you to reply to that very broad question about Cancun at the end.

Robert Stavins: So very briefly on the World Bank question on multi-lateralism. So it is something we're very much looking at in the Harvard Project. Actually the way we're looking at it right now is to try to get insights from other policy areas outside of the climate, outside of environment, everything from human rights to national defense and looking at what are the characteristics of agreement that have resulted in particularly sizes of coalitions effectively operating. So it's something we're engaged in. We've had a little participation in the past on the Harvard Project from China and India. They are by no means representative of the developing world. We are deficient and if there are any particularly—if you know of scholars and other parts of the developing world who would be interested in working with us then we would be extremely eager to do that.

Warren Hoge: Now, somebody did raise a hand over here and I hate to cut—sir, if you would ask a question we'll fit that in and then we'll go to the whole panel for the answer to the question from Mexico.

Jimena Leiva: Thank you very much. I'm Jimena from the mission of Guatemala to the U.N. and also follow up climate change negotiations. My comment is that sometimes we're forgetting that we're living in one world and usually in our negotiations in climate change we often focus only on our national interests so my first question is how, from your perspective, we can change that culture and think more of a global commons in a broader perspective into negotiations? And then my second question is what in speaking of architecture of climate change regime what is in it for oil producing countries? What would be the value for these countries to join in an ambitious global target for emissions reductions? Thank you.

Warren Hoge: So, I think what I'll do is ask you to answer as much of those two as you can then, Scott, and then finally, as promised, I will give Rob Stavins the last word.

Mohammed Reza:

First, on the question on governance it's a relevant issue but I'm not sure if this could be addressed as such under the UNFCCC negotiations. As I said, there are already enough sufficiently complex issues to deal with. However, governance, in fact, prominent figures here and there including on the question of how the financial architecture should be governed and how adaptations should be managed there is the suggestion, for instance, to establish an adaptation committee, a finance board, etc., etc. So all those are governance issues but they are limited to the UNFCCC and to climate change. However, there are other processes more relevant to address the question of global governance at the macro level. [indiscernible] is one good example but also the intended high level panel by the Secretary-General on global sustainability that the hope will be launched soon and that is perhaps which is going to address climate change in the broader context of development and governance will be one of the key issues so that could be another forum for addressing the question of governance including climate governance.

Now, what could be elements of success in Cancun? Of course, this is very difficult to answer at this point but I think at least in my remarks I did mention some of the potential elements. In my view I think agreement on implementation architecture, as I said, on adaptation, on finance and on [indiscernible] as well as some good progress on the question of MRV's for mitigation action both by developed countries and developing countries, of course, taking into account the differentiated responsibilities but some real good progress. What I think we need to bear in mind is to make real progress in each meeting so that we come closer to an effective implementation.

The other question was about—that I wanted to address—yeah, the question that you raised is exactly what I had in mind when I was answering to the question raised by Mr. Akasaka about how we can change. In fact, the attitude of the U.S. public I thought science is not enough. In my view, we need to promote some value-based messages so that we can encourage American people and other nations to care for their children, for the planet and for the next generation and articulating the fact that we are all living, as you rightly said, in one planet and we are—we will sink together if we are going to sink. So how this can be done I don't know. Those who are specialists in communication and messaging could tell us, particularly for the American people, how we can help change that attitude. It's not going to be easy, but I think it is worth it.

Scott Barrett:

Well, I will just comment on Cancun. I think Mexico is rather fortunate in a sense that expectations are low. People are still recovering from Copenhagen and, most importantly, I think minds are opening up. I think people are willing to embrace new ideas for how we might move forward and I think what you should emphasize would be rethinking how we're approaching this problem, which, by the way, I think is the essence of the project that Rob Stavins and his colleague, Rob Stowe, have been organizing at Harvard, which is to collect different ideas for how we can address this tremendously complex problem. If I can give a couple of specific suggestions, again, my view is that if you take the big problem and look at components of it, you actually can make progress on components, and wouldn't that be something if, at the end of

Copenhagen, we came out with an agreement that was real about one part of the problem. It would be great to address the whole problem, but we've tried that for over 20 years without success.

I'll go back to this idea of the HFC's because what's interesting about HFC's—because I think if it's addressed through the Montreal Protocol, which I'm all in favor of, that's another U.N. approach, by the way. So there isn't a problem in the United Nations. That's not the right diagnosis, but is there a reason why you couldn't do HFC's as a separate protocol under the [indiscernible] convention and negotiate it for Cancun. You actually could structure that agreement in the same way as the Montreal Protocol for that particular gas. Now, you can't do that for every gas. You can't do that for every sector but different gases—different sectors will have their own best approach. We shouldn't be idealistic. I think we have to be practical. What we're basically looking for is something an economist would call a second best approach, and you're basically trading off—and this is something that Rob and I wrote on many years ago. You're trading off in these cases sometimes cost effectiveness with the ability to reduce emissions by more. And I think that's the kind of world we're in. So I think we need to be practical about this. You can pick off other parts of this that were discussed but never really carried through in Copenhagen. Red was mentioned. That is a deeply problematic topic for a variety of reasons but it needs to be addressed and my opinion is much better addressed as a separate agreement as opposed to throwing it in with everything else. What about the trade sensitive industrial sectors? That's always been a problem for the negotiations that countries are reluctant to move forward on these sectors independently because globalization makes it very awkward for countries to do that. Can't we make progress breaking out those particular sectors? There's certain technologies that we have a very good sense will have to be important. Carbon capture and storage is one example of that. There is interest and there are some efforts underway to do some projects on this technology demonstration projects and so on, but this needs to be coordinated, and there needs to be sufficient international financing for moving forward here. So let's—if you were to look—this is an opportunity where, and by the way, what I'm proposing here is not a replacement for the other approach so no one has to be offended or outraged by this suggestion. If you succeed on HFC's there's nothing to stop you. It's not going to hold us back in trying to address all greenhouse gases as a bundle economy-wide, etc., etc. There's nothing to hold us back on that. But I think it is realistic, actually, to expect progress and even agreement on parts of the problem. And other than that I think what you can do is you can lay a foundation for the future that actually needs to be a different foundation than we've had so far. The foundation we've had so far has had 20 years and has not shown success yet. So I think we need to think about things differently.

Rob Stavins:

Well, first of all, with regard to the question from the representative from Mexico, multiple agreements may indeed be the most promising way forward. Scott Barrett was too modest to mention that, at least my judge would be, that he's written the very best paper, the best study and proposal of that approach that's there. He did it for the Harvard Project on international climate agreements and if you don't want to buy the full book,

which I encourage you to do, of course, you can download it for free as a PDF file. His paper from our website or if you give a business card to Rob Stowe or myself afterwards just write on the back you'd like it we'll get it to you. I think red is an excellent example of deforestation and degradation is a great example given the progress there was apparently in Copenhagen on the possibility, indeed, the reasons to pull that out separately. So we may see that happening.

In terms of marks of success in Cancun, I'll offer two of what I would consider to be success, although my global one is, of course, whether there's developing a foundation for the long term. One mark of success would be if we go from these three potential agreements that are on the table now, right, the Kyoto Protocol, the LCA and Copenhagen Accord. If we can get the three down to two -- and it's not by killing one of them, it's by merging two of them -- if we can get three to two, that's a success. If we can get three to two to one in Cancun, that is an incredible success. And then the other would be—another mark of success in Cancun, in my view, would be if the organizers, meaning both the Mexican hosts and the UNFCCC embrace the G20, embrace the METH, take credit for them. They're part of the process. Embrace them rather than viewing them as some form of competition to the process.

And then the question from Guatemala why should oil producing countries join an agreement -- well, they probably shouldn't, and they won't, but it's not a big concern. If you want to have a concern worry about coal producing countries because they face the same kind of economic pressures. But if they're not in, then that means nothing can happen, and that includes, you know, China. That includes the United States. It includes Poland, Australia, Germany, a number of countries for whom coal is a very important domestic resource. So my final word besides thanking you all is to remind you that if you'd like to be plugged into this project in the future, if you give either a business card to me or to my colleague, Rob Stowe, afterwards we'll get you in. Thank you.

Warren Hoge:

I'm sure I speak for my Pakistani and Swedish colleagues when I say this has been a fantastically rich conversation and that is due entirely to the excellence of this panel. So thank you very much.