# CENTER FOR GLOBAL DEVELOPMENT

## DEVELOPMENT AND CLIMATE CHANGE:
## A STRATEGIC FRAMEWORK FOR THE WORLD BANK GROUP

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**THURSDAY, SEPTEMBER 4, 2008**

*Transcript by*
*Federal News Service*
*Washington, D.C.*

DAVID WHEELER: Good morning. I'm David Wheeler, from the Center for Global Development. Thanks to you all for coming. I know you're busy right now. Vacation's over, everybody's back to it. Your e-mail boxes are full, like mine, I'm sure. We really appreciate your willingness to come and share some time with us here. We're here today to greet our friends from the World Bank, to talk about their strategic framework for climate change, and I thought I would very quickly give you a synopsis of the agenda. We've had to make a few changes because people are busy, so there have been some re-orderings in the agenda. One friend who was going to join us as commentator hasn't come yet, and we hope that he will be able to come.

I really wanted to start this morning by thanking the people who have made this possible. There's been a lot of hard work that's gone into assembling all of you and the logistics in the room. Friends from the World Bank and from the Center for Global Development. So I thought if we could pause for one minute just for an appreciation for Heather Haines. Heather, are you here? (Applause.) She's outside working. Robin Kraft, Joel Mayster (ph), and Jeff Braddis from the World Bank. Jeff, are you here at this point? Jeff, thanks so much for your help with this. (Applause.)

I'm prepared to be fascinated by this today because I have no idea what the commentators are going to say and I have no idea what questions you'll ask, and I don't know how the discussion will evolve. I'm moderator, which simply means that I'll try to be the informal timekeeper here and nudge people a bit if they get too much over time. It would be good, for those who are delegated to speak formally, if you could try to stay on your time because many people will have to leave after some period.

With that short introduction I should say that Jim Greene, who was going to join us as commentator – he works on these issues with Joe Biden – got pulled away suddenly this morning. So he sends his regrets and hopes he'll be able to come later in the morning, and if Jim can come, we'll certainly make room for him so that he can provide his perspective as well. Warren Evans and Michele de Nevers will lead off from the World Bank to give us perspective on this exercise. I think Michele will start, and then Warren will continue. After they have given us fairly brief presentations, we'll have three commentators. Dennis Whittle, Dennis is here, chairman and CEO of Global Giving. Scott Barrett, who's professor, environmental economics and international political economy at Johns Hopkins, who is here, and Chris Flavin, president of the Worldwatch Institute, all coming to this with a lot of experience and different perspectives. So they will offer comments, we'll open it up to discussion, and then colleagues from the World Bank after that, as you can see on the agenda, will be presenting parts of the program again in brief bits, and then we'll have Q&A.

So there should be plenty of time for discussion during the day, and I would ask, if you have a comment or question and you would like us to hear from you, if you could simply do the conventional putting your name thing up vertically like that. And I'm not sure I'm going to be able to read names at the end of the thing, here from this perspective. We'll certainly call on you and then ask you for your thoughts.

So by way of introduction, I said this morning to Warren and Michele, I had only one request as moderator, and that is, one needs perspective, I think, to understand any document of this kind produced by the World Bank. I worked there myself for 17 years, I'm familiar with the environment. The environmental issue in the Bank has recurrently roiled the place ever since 1990, sequentially, and my friends here have lived a good part of that.

I don't think we can understand what this document is intended to say unless we understand the context in which it was produced, and the forces that have gone into the production process. So I was going to ask Michele and Warren if they could try to help orient us so we could understand a little better what this document is trying to say, and for what audience.

So with that as a brief introduction, let me turn the microphone over to Michele de Nevers, who will begin the presentation.

MICHELE DE NEVERS: Thank you, David. I would just like to point out that in addition to full e-mail boxes some of us have full voice-mail boxes, which I think they never empty. If you can't really get ahold of David.

What I'm going to talk about is the consultation process that we've gone through in preparing this paper, and then Warren's going to tell you about the substance of the paper. Can people hear me? Good. And I'll give a little bit of context, as David asked.

This paper is a little bit unusual in that it is a strategic framework. It's not a strategy, and so it's more a sense of guiding principles and action items for how the World Bank will work in this area of climate change. It's not a specific business plan. The paper was requested by the development committee at the annual meeting of the World Bank last fall, in 2007. They wanted a paper that was comprehensive, a strategic framework for the World Bank group engagement to address climate change.

Taking a step back from that, one of the reasons it may seem like we are coming at this a little bit late in the day, to only be starting to think about a strategic framework on climate change in the fall of 2007, and basically that has to do with the politics of the previous administration of the World Bank. We had a president who left at the end of – or the middle of 2007 and a new president came, and under that prior president the vocabulary, the words climate change did not exist in the World Bank. We had tried to do a climate change strategy and were told no, we don't have climate change. We have a clean energy investment framework, which is as far as we got.

The clean energy investment framework outlined the work that the World Bank would do in the area of energy to try to reduce emissions of greenhouse gases, and started to think a little bit about the area of adaptation, which of course is at the center of the development agenda, but it only got that far. Then last fall the board asked us, the development committee said, please put together this framework.

So what we did was we put together a concept-and-issues paper in the spring. In March it went to the board and then it was given to the development committee in the spring, and after that we started on a very intensive period of global consultations on the concept paper in order to get that right, in order to get feedback on what we were doing. The strategic – the World Bank is a development organization, and so the paper is meant to articulate the role that the World Bank will play in this area for a fairly large range of stakeholders. The World Bank probably has more stakeholders than many other organizations. We have our part-one shareholders, we have our part-two shareholders, we have a large range of private sector, civil society, and other groups that articulate their ideas about what the World Bank should be doing. And so we wanted to get the views from as many of those people as possible in shaping this paper. That's actually what this meeting today is about, is we're hoping to get feedback from you because the final paper will be discussed by the World Bank executive board on September 23rd, and then it will be discussed at the development committee on October 12th. So that's kind of where we are.

Between March and July we did a very large set of consultations all around the world with a range of countries, both developed countries, developing countries. We did face-to-face meetings like this, but we also did video conferences with a number of countries. I just came from one this morning. We had a video conference with the government of India before coming over here. And we had the paper available online and had an online space for people to send in their comments.

We ended up meeting with people in 71 countries, more than – this number is actually even bigger now – more than 2,000 different individuals from a range of different groups. This is just the breakdown of who we heard from – large civil society, World Bank staff, which was also a very important audience for us. Outside of the sort of environment energy groups there isn't really a very widespread understanding of the issues of climate change and how those affect the development support work that we do. So reaching World Bank staff was also important.

And who we heard from was almost half developing-country participants. Then we had developed country participants and other multilaterals, including World Bank staff. So those are the shares of how those break down.

And this is what we heard. And what I would say is that when we went out and consulted on the concept paper, we heard – what we heard actually made a significant change in the draft paper that we have now started going through our labyrinthine clearance processes since early July. We made a number of significant changes, and a lot of it was in consultations, including with members of our executive board, and I'm glad to see that we have a couple of representatives from the executive board here today. I hope that we'll hear from them.

What we heard, the main thing we heard is that the core mandate of the World Bank is poverty reduction. We're not an NGO, we're not an environmental organization; we're a development organization. So our strategy is about development in the context of climate change. It's not a climate change strategy per se. Global solutions are necessary, and leadership is required by the developed countries, which has had the result that this strategy has put the World Bank in a somewhat different space than we normally are in. We got a lot of feedback on the paper, about why is it that all of your data and all of your numbers are focused on developing countries? What about the developed countries? What about the role of developed countries? What about the fact that the developed countries are the ones who are responsible for the largest share of the greenhouse gas emissions that are already there? What role are they going to play in terms of leadership in transforming their economies, changing the behavior of their citizens? And we want there to be a perspective on that in the paper.

There were mixed views on funding, very strong views, particularly on the part of the developing countries, that funding for climate change needs to be additional to official development assistance. A lot of discussion about this. Very different views within the donor community, and the OECD DAC is sort of grappling with these definitions and how to deal with this. Some donors say if it doesn't count as ODA, I can't put any money into it. Others say I can't put any money into it if it is ODA, so there's a lot of controversy about the funding. Controversy about whether the funding should be grants versus loans. The developing countries feel that the funding should cover the incremental costs related to climate change and should be highly concessional.

And then there's a relationship to the UNFCCC funding mechanisms, which I think Warren will talk about. Our framework is neutral to the negotiating party positions, while we advocate strongly for the interests of developing countries. So we're not a party to the negotiations. We don't have a stand on what the negotiation outcomes should be. And then there was a lot of feedback that we needed to give more focus to adaptation in developing countries. Overall, the majority of developing countries will be responding to the impacts of climate change. Most of them are not significant contributors to greenhouse gas emissions, but they will be dealing with the impact on their agriculture, on their water, on their forests.

The second set of items that we heard was a big debate in terms of increasing energy access and the use of fossil fuels. As most of you know, renewable energy accounts worldwide for only about 1 percent of total energy, and 1 percent of electricity, and so while it's desirable to expand that, if at the same time we want to expand access to energy for the 50 percent of the population in Africa that doesn't have any access, how can we do that if we rely only on renewable energy resources? So there's a debate about how to, on the one hand, stimulate development through increased energy access, and on the other hand look at the use of fossil fuels.

A lot of messages about incorporating healthy ecosystems as an adaptation tool and a solution for climate change. Somewhat surprisingly to us, many people, most people that we talked to said that there needs to be a lot of emphasis on capacity-building, on awareness raising of government officials, particularly at the local and regional level, and on building institutional capacity to respond to the issues of climate change in the context of the normal development strategy and planning.

We're working closely with other organizations, the MDB's, UNDP, UNF, and the GEF, and I would say in the case of the UN agencies it's almost unprecedented the extent to which we're actually working together and not just talking to each other. And then there are a number of equity issues related to vulnerable groups. Indigenous peoples, when we talk about the red, there are a number of issues that come up there. And then the needs of the private sector.

So this is really what we heard. The next step is to finalize this paper, go to our board, go to the development committee, and we would be grateful to hear whatever reactions you have today. You've seen the draft paper. It's on our web site, and I think Warren's now going to talk about what the paper says.

WARREN EVANS: Thank you, Michele, and thanks, David, for helping to organize this. All those people you gave credit to, we double that, thanks, from the World Bank side.

I'm going to go through this fairly quickly. You have the paper. I assume the PowerPoint is also going to be made available. Let me add a couple of points to the framing that Michele gave. Number one, while we focused on the clean energy investment framework prior to this phase of work in climate change, the reality is the World Bank has many, many years of experience on climate change. We were one of the original implementing agencies of the GEF. We have been beneficiary of GEF funding to support a number of actions, particularly on greenhouse gas abatement, renewable energy, energy efficiency since 1992. We were instrumental, I think, in helping to get a global carbon market established and help shape the Kyoto Protocol, and through the prototype carbon fund that was approved in '99 and became operational in 2000. Since then we have put together a number of initiatives on climate change and the 2001 environment strategy of the World Bank really has a very strong focus on climate change.

So political influence has definitely affected the jargon, but I'm not sure it affected what we actually do all that much. So this climate change strategic framework builds on the lessons that we've learned in the last 15, 16 years, and so I think that's important to note.

The second point that is important to note is that while not a party to the negotiations, we've been at the table with the UNFCCC from really day one. So we have benefited from having the opportunity, unlike the other MDBs, to actually have a seat at the table on an observer basis, and sometimes a fairly loud observer through the negotiation process. This is one of the things that I'd like to come out as we have this discussion, is how important it is that the multilateral development banks actually have a greater role to play in the dialogue over time, if our assumption is correct that the multilateral development banks would play a key role in whatever financing mechanisms there are come out of the negotiations for climate change.

So let me move through this fairly quickly. For us climate change is a development issue. It's not about the World Bank taking a leadership role so much in helping to solve the climate problem, though we do see global public goods, and particularly global environmental issues as being a key mandate for us, but we see climate change as being a real challenge for most of our developing countries, either in terms of moving towards a more sustainable growth path by using cleaner energy sources, cleaner transport, and so on. Or more important in many countries, by becoming more resilient to the impacts of climate change.

So for us, this is a real growth issue. It's an economic growth issue that's a poverty reduction issue, and that's how we've tried to frame the strategy. In that regard, one other point to frame this is this is a strategic framework that is not a strategy any of us would like to have. We're looking at kind of what are we going to do for the next three years, not the next 15 years. Because the negotiations that are going on are really going to frame what the World Bank ought to do in the long term. We're not going to know that for about three years. If we're lucky, we'll know that in three years.

So what we're trying to set the stage for here is how should the World Bank group work over the next three years on climate issues, and then how can we adapt to the negotiated agreements from the UNFCCC processes. So this is going to change fairly quickly. I would rather call it an interim strategy than a – it's certainly not a long-term strategy. It also means that we're not in a consultative process for only six months. I think we're in a consultative process for the next three years, and we need to learn from each other, and I'll come back to that in a moment.

One of the problems that we have is clearly that, obviously the asymmetry of impacts and causes. Our poorest countries that are least able to deal with the impacts of climate change, that have the least to do with causing climate change, are the ones that suffer the most. And that's a fairly well-recognized fact of life today. Michele already talked about the energy access and the importance of reaching the millions of the poor in developing countries that don't have clean energy or modern energy today.

The problems that we face in terms of particularly technology transfer, easy to talk about. We've been working, many of us have been working on technology transfer for many years. And the track record's abysmal. We don't have the solution yet, and certainly to tackle the climate challenge means that we're going to have to figure this out. Technology, finance, capacity-building.

The global cooperation that Michele talked about is key, and I would also say that not only have we seen tremendous improvements in interaction and cooperation with the U.N. system, but also among the multilateral development banks. I have in my experience never seen the MDBs work together the way they are on climate. And that will come out a little bit in the discussion on the climate investment funds. And then the leadership that we think is required to move forward the UNFCCC negotiations is a major challenge, not one that we can do a lot about but maybe you all can.

One of the key things that came out of the recent dialogue for replenishment of IDA, our soft money for the poorest countries, was a recognition of how important climate threats are to the development potentials and poverty reduction efforts of the poorest countries. This chart – and I'm not going to go into very many of these, but this one I think is really important. The yellow are the poorest countries. What we did was we mapped out the 12 countries at greatest risk, and we can argue this for a long time, whether we got it exactly right, but I think that's less important than the message here. The yellow countries are the poorest. So when you look at drought, when you look at flood, when you look at agricultural impacts, the poorest countries are the most vulnerable to this. Again, they're the least able to deal with it, they're the least resilient.

The kind of orange-ish color up there are more middle-income countries, and the white on this table are OECD countries, developed countries. So a grand total of three countries under a coastal sea-level rise of five meters, which we all hope isn't going to be the norm. There's a grand total of three rich countries that are highly vulnerable to climate impacts. It's almost all developing countries. They are the countries that are going to get – that are already being hit hardest by climate impacts, particularly across sub-Saharan Africa, much of South Asia, western China, and so on, low-lying islands. These are the countries that are being affected by climate change today and will be in the future. That means for us, these are our clients, these are the countries that we're intended to support for poverty reduction, economic growth. That means it's a mandate for the World Bank and other MDBs to tackle this issue. And that really is guiding much of our strategic framework.

In most climate discussions, the discussion focuses very much on mitigation. Our view is that we're way behind on adaptation and our strategic framework is really how do we catch up on that agenda, as well as addressing the opportunities for low carbon growth.

The objectives of the strategic framework I think were already pointed out by Michele, and then the second point here is, again, to exploit our capabilities. Given the strengths, the capacity that we have at the World Bank in the private sector, and the public sector, and policy dialogue and capacity development and so on, how can we maximize the benefit globally of bringing our capabilities to the table in addressing climate impacts?

The guiding principles actually evolved from the consultations that Michele talked about. Our priorities are clearly economic growth and poverty reduction, neutrality, and so on. One of the points that maybe didn't come out in the initial comments from Michele is how important it is that this be country-led. Our entire development model is that priority is given to developing countries deciding what they need. They tell us what they need. We don't tell them what they need. And the entire basis for the climate change strategy, the strategic framework, is that it needs to be on a country-led basis, client demand, and so on.

There are six areas for action, and I'm going to go through these fairly quickly because I think these will – some of the subsequent discussion will focus on these. The six areas for action are, first, that we recognize that this is a development issue, so how do we really bring climate actions into the development process. Second is that the World Bank has a key role to play in mobilizing concessional and innovative finance, and I'm going to come back to that in a second, talking about the climate investment funds.

The third is that we need innovative market mechanisms. Carbon finance is one, but there are a lot of other innovations that are required that we can bring our skills to the table to try and innovate new market mechanisms to help finance both mitigation and adaptation to climate change. Private finance, we all recognize, is key to addressing particularly the mitigation agenda. Estimates are that 80 percent of the financing will have to come from the private sector. What can we do to help mobilize that and leverage that.

I mentioned technologies a moment ago. We see this as a major challenge. It's not an issue that's been where we have a consensus in our board of directors, in our executive board, on what the role of the World Bank should be in trying to help bring technologies to developing countries that address the climate impacts and mitigation needs.

And then, finally, there's clearly – we believe there's a clear role for us on stepping up policy research, knowledge, and capacity-building. And on this again I would emphasize the very serious gap between what we know about mitigation, which is actually quite a bit, versus what we know about the impacts of climate change and how to adapt, to become climate resilient to climate change, which is pretty weak. And so that's a key part of our program.

On the first one, this is key for us because it drives all the other action items that I mentioned. So we need to find a balance in climate resilience, adaptation, and the efforts on mitigation, low carbon growth. And we need to really focus on the broad range of benefits that can come from either reducing the GHG impact of development, or becoming more climate resilient. We believe that this idea of co-benefits is a real potential that hasn't been tapped. There are tremendous opportunities for many of our client countries, our developing country partners to actually achieve climate resilient growth while reducing GHG emissions, for example, and forestry is a great example in this regard.

On the concessional finance, let me – I'll come to the climate investment funds in a minute, but on climate resilience, there is a lot of discussion, much of it political, on how to provide funding for developing countries to become more climate resilient. Our view is that this isn't about doing projects. It's really about re-thinking the development process. It's about putting poverty reduction strategies under a climate lens and really thinking what the future is for a country to – where do we need to make shifts in priorities and investment plans and so on, and sectors. How do we change a water resource development sector strategy so that it indeed is climate resilient? This is not easy because there's so much uncertainty in understanding what the future impacts are of climate change.

It's also something that's rather hard to sell to politicians who are thinking short term, whereas many of these impacts are long term. But the reality is that when we provide funding for a water-resource project, it's a long-term investment. When we provide funding for a flood-control project, it's a 60-, 80-, 100-year investment. So the timeframe, while politically important, is it relevant to our agenda?

Let me go to the climate investment funds now because I think this is something that's maybe of a high level of interest here. The climate investment funds were approved by the board of directors, by our board on July 1st, after a great deal of discussion and work by a large group of people. We have a $6 billion target for two funds – one a clean technology fund, which is really intended to help demonstrate how to scale up investments that have substantial economic growth benefits in primarily middle income countries, while reducing the carbon emission trajectory of those countries. So it's about moving to scale. It's about how countries can – many of our developing country partners already have their own strategies on energy efficiency, on renewable energy. How can we help them to actually accelerate the implementation of those programs and generate real GHG reduction benefits at the same time?

The strategic climate fund, the second fund, is a fund which provides opportunities to try new things. It provides windows, and there's only one window that's firmly open right now, and that's a pilot program for climate resilience. And that's a fund which will be available to a few countries that are really interested in testing how to change their development trajectory by looking through a climate lens. So poorer countries, highly vulnerable, that are very keen on shifting toward climate resilient growth, can we provide some additional funding for them to really rethink their poverty reduction strategy, sector development strategies, and provide necessary additional funding so that they can actually invest in climate-resilient, climate-proofed investment programs.

A key part of the – and a great deal of the dialogue in designing these funds was about the governance. The result was an equitable governance and decision-making, where we have trust fund committees that will guide these funds, where you have equal representation of developing countries and donor countries. Some of the key operating principles are that we need to really see how we can scale up the impact of the MDBs collectively in helping countries to reach their objectives in terms of using public and private sector: to address climate change; to invest in climate actions; to complement the GEF, the Montreal protocol, the adaptation fund, and other sources of funding that are geared toward addressing climate change; to recognize that once there's an agreement of the UNFCCC negotiations on the future financial architecture that we would withdraw from the game unless asked to continue on, so that there's not a pre-judgment of what the future financial architecture ought to be, and this is extremely important.

And then again, to try and – there's been a lot of discussion about proliferation of funds. Our view is actually these climate investment funds are helping to avoid a proliferation of funds because what we saw were a number of bilateral funds emerging, and by a number, I'm talking 10-plus of bilateral funds emerging which had very similar objectives. And by the donors coming together for these funds, we actually are reducing the proliferation.

Finally, I mentioned the importance of the MDBs in the future on providing financial support, technical support for addressing climate impacts. Other than the World Bank, the regional development banks don't really have a seat at the table, so we've designed the climate investment funds to have a partnership forum which really brings the MDB community, multilateral development Bank community, together with the U.N. community, together with donor community, recipients, NGOs and others, to have a common platform to talk about what is the role of the MDBs, what should it be in the future as the negotiations proceed, and to give guidance to us on how we actually can play a very constructive role. The first partnership forum for the climate investment funds will be in mid-October, after our next annual meeting.

Now, I'm going to skip through these slides for the sake of time. We have short descriptions for each of the pillars, the rest of the pillars, but I thought I'd talk more about the climate investment funds. Let me just – two last slides. Obviously we all are always under pressure to have effective results, frameworks; we know how important it is. But perhaps for climate change actions over the next two to three years it's more important than ever because we have an opportunity to learn lessons from what we do over the next two or three years. And if we don't have an effective way of measuring the results and reporting on those results then we're not going to influence, we're not going to be able to provide a greater knowledge base for the ongoing negotiations. So for us it's extremely important that we have an effective results framework and we put a lot of emphasis on this in the design of the strategic framework for climate change.

Finally, just a few examples of some of the key things that we're working on now related to this. We've been working on screening tools for looking at risks to climate impacts of investments. We're now working on screening tools to look at a broader range of risks and a range of sectors like hydropower, water investments, and so on; but also screening investment programs to see if there are greater energy efficiency opportunities, and obviously starting with the energy sector. So those are two screening tools that are under preparation right now.

We have two carbon finance facilities which were approved last year that we think are extremely important for the future in terms of carbon markets: the Forest Carbon Partnership Facility, which will really be a trial run at whether or not there's a way to link forest and carbon finance; and then the Carbon Partnership Facility, which in many ways is more important because it recognizes that the current carbon market, which supports projects, when you add it all up, it's just not enough to have a real impact on GHG concentrations. So how do we scale up the use of the carbon market to go toward sectoral and programmatic approaches to using carbon finance, to reduce GHGs at scale, at large scale? – and, quite frankly, to generate greater flows of funding from developed countries to developing countries.

The climate investment funds I already talked about. We're doing a lot of work on climate risk insurance products, other approaches to financing, and our own commitment to increase our energy efficiency and renewable energy investments by 30 percent per year, which is up from our earlier 20 percent; and then the whole issue of sustainable forest management, sustainable agriculture, transport, urban development, investments that are really key to sustainable development and have real potential impacts on greenhouse gas emission from many developing countries.

Then the final key point is a point that Michele mentioned, is the importance of really knowing that these are additional funds. The funds that come to climate change are additional to ODA commitments from governments. It's not really our role to monitor this, but we know we're going to be asked, so we're working with OECD dack to see whether we can come up with a system to report back, to demonstrate that the new funds that come into climate change, through the World Bank at least, are additional to the ODA commitments from the donor countries that we work with.

So with that, I'll just say that we're listening, that we're trying to get as much input as we can to finalizing these documents, and we welcome your inputs. Thank you very much.

MR. WHEELER: Thanks very much, Warren. I just had a thought here. I wanted to confer with my two colleagues, Scott and Dennis here. I know Scott has a time conflict at 11:00, if I'm correct about that, and I thought it would be very nice to make sure that we have an opportunity to hear fully from the commentators. Dennis, if it would be okay with you, and, Scott, with you, I think I would then ask Scott Barrett to initiate the comments here, followed by Dennis, and then by Chris Flavin.

Could I ask my colleagues who will comment if, before you begin your comments as such, if you could give our colleagues around the table here a sense of where you're coming from on this, and the work you've done?

Scott?

SCOTT BARRETT: Thank you, David, for organizing this meeting and for bringing climate change to the Center for Global Development, and also for inviting me.

Climate change really is inextricably linked with development. That's the first point. Climate change as a problem has arisen because of development. It's also true that we can only address climate change through new kinds of development policies in terms of mitigation. The impacts of climate change will affect countries depending on their level of development, so it's also important from that perspective. And of course new investment into development has to reflect the prospects of climate change. So the two are connected. You can't disconnect them. And there can be absolutely no question that this has to be essential to the World Bank.

That raises the question, though, of whether the objectives of the World Bank should change. I imagine there probably has been some discussion about that. I know certain world leaders have proposed that. I don't think the objectives of the World Bank should change. I think the objectives of the World Bank should be to alleviate poverty. But I do think that the Bank plays – will play a very important role, especially as an intermediary between rich countries and poor countries, and that in that role it will have to make changes in what it does that to some extent will be outside the objectives that exist now for promoting development, and especially for alleviating poverty.

The key point I want to make here is that the problem does not lie, in my view, with the World Bank. The problem lies in the failure of international cooperation to address these fundamental challenges for raising finance, for transforming development on the mitigation side, and also for easing the burden of climate change on the adaptation side. This is, I think, the central point. The Bank basically, as I read this document – I've read every word – but as I read this document, you really have laid a foundation. But the hardest part of the work is to some extent up to others. I want to actually talk a little bit about the bank's relationship to this broader problem.

Now, first, on the adaptation side, it's clear that the prospects of gradual climate change and abrupt and catastrophic climate change are great enough that all the investments, certainly all the longer-term investments, but all the investments and activities, including promoting improvements in institutions and so on, all of those have to be looked at, as Warren said, through this lens of climate change. I think that goes without question. There are client countries who want it, and the Bank will want it, and the Bank will have the capability to do it, so I think that's pretty clear.

The problem is, though, in some cases – not every case, but in some cases the returns to these investments in terms of development will be lower as compared with a world in which there was no climate change, or no prospect of climate change. That will be a reality. And this raises the question, who is to pay? That's why this issue of incremental and so on comes up. Who is to pay for that?

Now, the rich countries have already acknowledged a responsibility. It's there. It's all over the place. It's in the framework convention, it's in lots of different documents, it's in the Bali roadmap, it's all over the place. They have acknowledged a responsibility. What has not been agreed is, how much money ought to be provided for this, how should the burden of that financing be shared among all the richer countries – I'm not even going to define which countries are rich because that's another issue – and then how should the money be spent, and who decides how the money is spent?

I think the World Bank is the only institution that exists that can play a role as an intermediary in this kind of exchange, if you can put it that way, between richer and poorer countries. I don't know of another organization that has the capability to do that. It's particularly true when it comes to how you spend the money, but even in terms of the financing itself, I think the Bank's role will be very important.

The point I want to make, though, is that this is not the responsibility of the World Bank. This really comes down to the success of international cooperation in addressing climate change. I think the Bank can play a very important role as an advocate – and I'm going to come back to that later – and facilitator in preparing the groundwork, but ultimately the money is going to have to come through this kind of transaction. I think we need to be prepared both for success and for failure.

Okay, on the abatement side, you know, if development fails, we don't have to worry about the Bank's activities in promoting abatement. We haven't had to worry, for example, about – sadly, in my view, we have not had to worry about mitigation so much in sub-Saharan Africa. We're all talking about China because China's been a development success story. Unfortunately, of course, China has added more greenhouse gases – or is now currently – than any other country to climate change, to concentrations, incrementally of course, in terms of adding.

There is no question that the challenge has always been, and will remain, getting the fast-growing larger countries onto a totally different kind of development path. We have absolutely failed to do that, totally failed. It's quite remarkable, in fact, now to the point where we actually have to worry about going back and thinking about, well, can you retrofit all these coal-fired power plants we're building for various things and so on. So I think we've already missed an opportunity, but some costs, we have to look forward, right.

Now, the basics of climate change are very simple. If you want to stabilize concentrations at any level, eventually net emissions have to go to zero. Eventually. So that means the only way you're going to do this with development is you have to transform technology worldwide. There's no other way to do it, and that's the way we have to look at it, is ultimately having to transform technology.

Now, this creates a real problem for the World Bank because if your objective is to alleviate poverty, and the best way to do that is to build a coal-fired power station, what do you do? And it's actually there. I mean, as everything else I'm going to discuss, by the way, it's there in the paper. It's usually expressed more diplomatically than I would, but I'm an academic so I don't have to be diplomatic.

But, you know, what does the World Bank do? Now, if your mission is to alleviate poverty, in many cases you will want to build the plant. If your mission is to address climate change, you won't. That's why the financing is very important on the mitigation side, just as important as it is on the adaptation side. It won't be the responsibility of the World Bank to provide the money. It will be the responsibility of the World Bank to advocate for the need for the money, and to have everything in place so that you can actually play a role in making sure that that money is spent wisely. But the biggest problem I see there is on the cooperation side.

Now, on cooperation, I have worked on this for a very long time. I'm not very optimistic. Unfortunately, my pessimism has been rewarded with the reality that we have made zero – maybe a tiny bit above zero, but very close to zero progress worldwide on climate change over a very long period of time. I am really worried about this because I think there is the prospect for climate change to widen existing inequalities. One way to think about this is that the richer countries are already insulated – that's also mentioned in the report – already insulated to some extent, as in the picture you showed, indirectly – already insulated from the worst effects of climate change, certainly for a gradual climate change. I think everyone should be worried about catastrophic. But to some extent the rich countries are already insulated, and they may decide to invest in their own adaptations or own development as a way to deal with climate change, where the consequence will be that the poorer countries will be left, not high and dry, but low and wet, in a manner of speaking.

I actually think there is a prospect of inequalities widening, and this is why the advocacy role of the World Bank I think is huge. I think the Bank really needs to make it very clear that not only will climate change possibly threaten development but actually could make it much worse.

Now, the only critical comment I was going to make, and actually it turned out not to be critical because Michele I thought put it very well. She said we have a strategic framework; we don't have a strategy. That was my only complaint, is I didn't see a strategy. But maybe it's too early in the process to have a strategy. Where I think you may want to look for a strategy is in the issue that you mention, and I imagine you've had a lot of discussions about that internally, and that has to do with technology, although I would put it a little more broadly, about knowledge, which also has been obviously an important theme in the Bank's history.

On the adaptation side, knowledge is really important when you think about things like agriculture, and you mention in the report the role the CGIR has played in promoting agricultural research and it has had successes. They have not been evenly distributed globally. Some areas like Asia have benefited more than other areas, like sub-Saharan Africa, but there have been successes. In terms of climate resiliency, making investments now in agricultural research to come up with varieties that will perform better under a range of climate futures, I think is a very smart investment, and it's part of something that I've been promoting for some period of time, which is to get the Bank and other development organizations to think much more about problems from a global international, regional perspective as opposed just to the country-based perspective. So I know the CGIR is already looking into this, but I think this really does need to be promoted, and especially with incremental financing, for the reasons I mentioned before.

Also on the energy side, on the mitigation side, if you're going to transform technology worldwide, let's hope there will be development. If there will be development then you do want the poorer countries that are developing – actually that's where our attention should be in terms of mitigation – you want them to go onto a different development path than we did. So we don't want to transfer the technology that we have necessarily. And their local circumstances are quite different from ours. The context is very important. So, for example, the availability of sunshine is a clear example of differences, the lack of an installed base of infrastructure, like transmission lines and so on. That is very important. That means that the kind of energy that poorer countries may need for this broader ambition of transforming technology worldwide may be very different.

Where is this technological development going to take place? Even to the extent there's technology transfer, you just don't take the machine from over here and put it over there. They have to understand what it does and it has to be modified always locally to suit the circumstances that exist locally.

Where is the capability for doing this? And you don't need to have all of this capability residing within each of the over 50 countries in Africa, right? So I think we also need to consider something that's been proposed by the international taskforce of global public goods, of which I was an adviser, the Club of Madrid, which is to create something like a consultative group on international energy research. I think that kind of thing needs to be really thought through very carefully.

I'll just mention one more thing, not necessarily connected to health, but it could be. On the health side, to give you an example of this. If you ask the World Bank, where have you succeeded, one of the things they'll always tell you is river blindness. Now, one of the interesting things about river blindness is one of the techniques for addressing that challenge is a drug. It's called Ivermectin. This drug was developed basically accidentally for humans. It was actually developed for the veterinary market, and then it turned out it was tested, it worked in humans in controlling worms in humans. If something like that – this has helped millions of people. If something like this can arise accidentally, then that's kind of telling us that if we actually tried to do something, we might actually succeed. So I think there is a big issue here for the Bank very broadly about its involvement in promoting innovation that is needed for development, and at the same time for addressing the climate problem.

So I'll just repeat my main point I want to make is that I think success in going forward is going to depend very much on the success of the international negotiations. The Bank can be a part of that as an advocate, it can be prepared. It has to be prepared, in my view, for success in the international negotiations. It also needs to be prepared for failure because either way you're going to have to take climate change into account in promoting development and the objectives you already have. Thank you.

MR. WHEELER: Scott, thanks very much. Very, very interesting presentation. And please feel free if you need to go, at any time to go ahead.

Dennis Whittle will be next. Dennis, I wanted to ask if you could provide the colleagues here with a one-minute synopsis of your own experience with the Bank and what you've done since then, and the green initiative that you've undertaken at Global Giving. I'm sure that will be part of your remarks.

DENNIS WHITTLE: Well, first, let me – when David invited me here it brought back a memory of 10 years ago when I was head of new products at the World Bank. This very hysterical guy came into my office and he said, Dennis, I'm going to start a prototype carbon fund and I need a million dollars from you to do this. I was like, Ken, that's just about the dumbest idea I've ever heard. Calm down, get yourself under control, get the hell out of the office. So given my initial reaction to that, I kind of wonder why I'm qualified to be here speaking at this event. In my own defense, I did eventually provide $2.9 million to Ken to help get the prototype carbon fund off the ground. So I'm happy to hear it referred to.

Like several people here, I'm a recovering World Bank-er. I was there from 1986 to 2000 and worked in various things there. I left in 2000 to create something called Global Giving, which is kind an eBay version of the World Bank that allows groups all around the world to post projects and then anybody in the world to fund them, so it's kind of a market mechanism for development, small-scale development projects. And I'll talk a little bit about what we've done in this space in just a minute.

But first just let me say that I know from experience how hard it is what you guys are doing here, and it is – I've been through some of these consultations before. It is a very tough thing, and my hat's off to you all. At least I can see that they've got some of the Bank's best people working on it, and I know Michele and Gary. I don't know Matt Warren very well, but it's very positive to see who's working on this thing.

The paper itself – you're right – it's a strategic framework, not a strategy. I think it does a very good job of summarizing very complex issues in this field and especially taking into account all the institutional and other stakeholders, which have incredibly divergent interests in this. And I like particularly how you highlighted the interest of staff at the World Bank. And one of the most difficult things in effecting any change is just getting staff to act differently. And again, for those of us who've been there in the trenches, there's nothing worse than a paper like this coming out, just another pain in the ass. Mandate, if you're down in the trenches trying to do projects and you've got to do gender and you've got to do participation and you've got to do this and you've got to do that, and now you've got to do climate change, this could be the straw that broke the camel's back.

So when I was thinking through those issues, it just made me wonder at kind of more of a meta level, what can the Bank do to cut through some of this complexity, and these six issues and everything we saw in Warren's presentation? What can the Bank do to cut through that and really take some leadership in this space? I could not agree more that, far from there being a tension between poverty alleviation or development and climate change, the two are the same. If we don't come to grips with climate change, there's not going to be any development. So what can the Bank do to take real leadership in this space? And I think it's both a moral and institutional imperative.

So I just think about this, and I wondered if we could come up collectively with something that's simple and voluntary, and it's got to be voluntary to get at the staff incentive thing. You can't ram things down staff's throat at the World Bank, or an institution's throat at the World Bank. So I started thinking about other analogous things, and the first thing that came to mind was this extremely simple thing – I was talking to Darius about it – that was done in Indonesia, which is one of the hotbeds of corruption around the world. The World Bank has had a long-term community development program there and poured a lot of money into the villages, and it's always getting siphoned off to improper uses. So a guy came up with a very simple idea of just putting up billboards in the town square that says, here's where your money's going. This year we're going to spend 90 million rupiah on a bridge going there, and then we're going to do the roads here and we're going to do the water systems there.

The cost of the sign is probably $100. The catalytic effect on the transparency of the use of the funds was dramatic. Villagers would suddenly start coming out and saying to the chief, hey, we're supposed to have a bridge over there. It says right here on the sign. Where's the bridge? Or that road, it says you're spending 90 million rupiah on the road? That's ridiculous. That road can be built for 30 million rupiah. Very low tech, very simple intervention that had a catalytic effect on the way people acted at the village level.

Another example is various initiatives that have just ranked polluters, and I know David's done some work on this, where you don't do anything, you just have a billboard on the Internet that says who's releasing what effluents into what rivers. Just simply making this knowledge available can have a catalytic effect on behavior. Companies that do it, suddenly, they're worried about their reputation. Citizen groups rise up and put pressure on people to change behaviors.

At Global Giving we launched something earlier this year, which is a little bit analogous to that. We just decided to create kind of a voluntary green standard for community development projects, and we created a very simple way that they could be rated on additionality – do they have additionality with respect to greenhouse gas emissions, are they sustainable, do they have other environmental benefits, and do they have adaptation benefits. This is entirely voluntary for projects and it's very simple. Right after we put it up we saw projects writing in asking, how we can score better on these things, what can we do to learn from other projects, to do better on all of these different dimensions. Very low cost, very low tech. Just starting, but it's already having a catalytic effect within the Global Giving marketplace.

So I just wondered what is analogous in this space. The thing that obviously comes to my mind as an economist is a shadow price for carbon, and maybe some range of shadow prices for carbon. Don't require project officers to change their investment behaviors. Just say you can do whatever you want, but you've got to calculate the shadow price for carbon. Or we will do it. Gary's unit or Michele's unit, somebody will do this, and just all projects will be – this will just be included in all the project analysis. This alone will change behavior radically. It will change behavior of the project officers because it will just make them conscious of the things. They'll start having discussions with government and implementers – what can we do to do better on this thing?

And I assume it will elicit financing from these various multitude of proliferation of financing arms you're talking about. People will come in and say, hey, I want to finance the delta cost between the solar project and the coal power project. Danes will come up, the Swiss – everybody will come up and do this and a market will develop in financing that delta between those things. Maybe the Millennium Challenge Corporation changes its name to the Millennium Climate Corporation, I don't know. They've got a lot of money. (Laughter.)

So I don't know if that is the solution or not. I'm not – that's not – I don't know enough to know if that is the particular catalytic, simple, voluntary thing that can make a difference. But something just tells me, having been there, if you can find something like that to crystallize the strategic framework around, it'll have a much bigger effect.

And I'll just close by saying that I don't think you need to be a climate expert to read the evidence and realize that we're really facing a global emergency here. I'm not a climate expert and you don't have to be a brain surgeon. You don't have to be climate expert to realize we are in a global emergency.

And I think that – as I look around the room here – and I've talked to a lot of people before – really this group here, not just the World Bank, but this group here collectively holds, in many ways, the future of the world in its hands and it has to be a collective thing. It's not just the World Bank's got to do this and we criticize the World Bank. It's got to be World Bank, WorldWatch, Millennium Challenge Corporation, National Resources Defense Council, WRI, EPA, Department of Interior, et cetera, et cetera, et cetera, et cetera.

And so thanks for giving me the opportunity and I hope that's useful.

MR. WHEELER: Okay, Dennis, thanks very much. That was great.

Chris?

CHRISTOPHER FLAVIN: Thanks a lot, David, and thanks for including us. I think probably most of the folks in the room are aware broadly of the work that WorldWatch is doing on the issue of climate change and in its range of both environmental and development implications. One thing I might let everyone know is that we are currently working on the next edition of our annual State of the World Report, which will be focused for the first time specifically on climate change, and really doing it from a very broad perspective, looking at certainly the adaptation resilient side, as well as mitigation, reflecting a range of both Northern and Southern perspectives.

Bob Engelman, who's the project director on this particular project, is sitting down at the other end of the table, and I'm sure both he and I would be – would love to get any thoughts and input, and we'll certainly be looking forward to working with many of you in getting out the messages from the book early next year, and also hopefully, using it as an opportunity to continue the kind of dialogue that's underway here today.

Congratulations to Michele and Warren for, I think, a very comprehensive, very interesting, useful overview of some of the range of issues that the World Bank and, indeed, the development community generally confronts on climate change. It's great to see this level of engagement and the rather spectacular turnaround between the two most recent presidencies at the World Bank. I'm sure it's heartening to all of you.

I'm going to make just – I think it's four main points and try to be fairly brief in terms of recommendations for evolving this draft and probably some of it for working on subsequent documents that will likely flow from the process that you describe.

First, I just have to respond to this concern you heard, I guess, from some of your – some of the folks you consulted with in terms of poverty being the emphasis at the World Bank and obviously, a bit of a defensiveness about climate change becoming a high-profile issue. I think you could do an even stronger job than you've done, and I think it's your role and responsibility to very firmly rebut those who still think that climate change is somehow marginal to poverty and to development. You've done that certainly to a degree, but I think you could be more forceful, more clear, more specific.

And again, I think it's your role, particularly in terms of being part of the environment department, to do that. I think it's eminently clear now that climate change ranks right up there with health, with education, as being an issue that is core to the prospects for reducing poverty and in some cases, preventing it from increasing as it otherwise might. The difference, of course, mainly is one of timeframe, but where you might argue that in terms of poverty reduction, you could have more immediate impact in terms of investing in health and education, you can also turn that around and argue that if you don't invest in slowing and ultimately stopping climate change, there's a long-term impact on development that is much greater, and on poverty, than failure to invest in health.

We can catch up from that. Now, I'm not arguing against investing in health care but potentially, you can catch up from an immediate failure; whereas on climate, decisions made over the next decade are going to be so critical in terms of where the world ends up, in terms of the condition of its climate and the whole biosphere, that I think it has to – for anybody who's interested in taking a long-term perspective, that considers not just the people that happen to be alive today, but even just the next few decades, you have to think of climate, again, as a fundamental issue when it comes to poverty.

You've described this is as a strategic framework. And I think it would actually be more useful as a slightly different document. I think it could incorporate a lot of the material, but I think, given the stage you're at now – and this is sort of an interim document – I think it would be better as a bit more of a discussion paper, where you were frankly and clearly laying out the differences in perspectives and recommendations that you're getting from this stakeholder process that you're involved in.

You've done a very good job of sort of knitting together, sort of bridging, covering up the dramatic differences in advice that I can sense – both – just listening to you, Michele, but also one can read between the lines of some of this document, that you're getting these widely divergent perspectives and views. And now you've sort of homogenized it all into this very diplomatically written document. I don't think that that is doing the world community a great service.

I think you need to show a little bit of the dirty laundry here. You have to be – and we're all grown ups. Everyone reading this document understands that the perspectives on this issue are evolving rapidly in virtually every country around the world. And there are a lot of folks that are firmly convinced that the only way to move forward on development is to stick with the conventional energy agenda, that we have to build up a fossil-fuel capability of a substantial magnitude in most developing countries, that that's the only economical way forward. And there are others that are arguing that this is the time and there's an opportunity to do things very differently.

I think you should reflect those differences. You don't obviously need to quote people or name countries; but I think you can reflect those differences and allow the various stakeholders of the Bank to move forward in what has to be a very vigorous dialogue over the next few years.

I just think that that would be an awful lot more helpful. And I think one aspect of doing that would be to be much clearer and more detailed in terms of describing the current World Bank lending portfolio, including things like GEF projects and the actual impact they're having, both positive and negative, in terms of greenhouse gas emissions and also in terms of helping countries to adapt.

You do have some numbers here, but I must say that – I don't know if it's deliberate or it's hard to find the right information, but it's just not clear. If you look on pages 32 and 33, where you describe some of the goals in terms of we're going to ramp up renewable energy lending and you have a 30-percent per year number, you have like a base – what is the World Bank lending in the energy sector overall? What is the proportion of total lending that this represents today? What will it represent three or five years from now if you take that – you just need some very simple tables.

And again, I think that this really is important in terms of your role as an environment department at the Bank. I think that you need to be out there publishing the data proactively, not necessarily saying that you're going to advocate a particular number within this, but I think we're – as was just recommended in putting these signs up, I think that if the World Bank were be very, very clear about where is our lending going today, what is the impact that it's having on greenhouse gas emissions, how are we now proposing that that would change?

And then, coming back, I think there needs to be some kind of an annual review where you're actually looking at these numbers and what their impact is. I think to be tremendously useful, and presumably fairly straightforward, since it's just making available data which is presumably available somewhere in the World Bank.

My final recommendation is that – and this is, I think, almost certainly beyond the scope of where you're going to be able to get with this particular document – but this is where I'd like to see the World Bank be two or three years from now and I'm going to refer specifically to the mitigation side. I'm sure that someone else who's more informed on adaptation than I am can come up with other recommendations for that area.

But in terms of mitigation, I think that the development community needs a much more focused, much clearer, specific strategy in terms of shifting the energy markets in developing countries, not just talking about incremental scale of lending, not just talking about we're going to do some more efficiency projects, we're going to do some more wind projects, but really looking at this in terms of the potential to reach a tipping point in the energy markets.

I think one of the things that is not sufficiently addressed in this paper is the degree to which – while it's true that certainly in terms of current emissions, and even more so in terms of historical emissions – the vast majority have come from industrial countries. But if you look going forward, the biggest leverage, in terms of emissions trajectory, are the decisions in developing countries because those, of course, are the countries that are actually building new infrastructure. You have more latitude.

And I think the question that the world faces is will developing countries continue to sort of lag 20 behind and only make a particular transition 20 years after major industrial countries do, or can we have a virtual simultaneous revolution in the nature of the energy sector investments in moving to the low-carbon and the zero-carbon technologies? And I think what you would ideally develop over the next few years is a set of goals and action plans that would be focused on particular technologies that are seen to have an enormous potential and which could move forward with the right kind of action plans.

Right now it's – you talk about low-carbon technology. It's not even clear what you mean – what is defined? Presumably, we're talking about a very broad range of things, but I think that there's a need to be very clear and specific about those things. Some of the options that I think are likely to be available, because of this enormous transformation in global energy technology markets that is underway now literally on a global basis, green buildings, for example, just transforming the nature of what's being constructed. And as with a number of the technologies, it's a very good example where, because of the shift in energy markets, the much higher energy prices being paid today as opposed to a few years ago, that really shifting to a dramatic increase in investment in efficiency in buildings would likely, if it were done in a smart way, end up paying for itself in just pure economic terms. You probably wouldn't even necessarily have to justify the climate advantages.

But getting into – okay, are there incremental costs or we're going to have the GEF – that's just nonsense, to be frank. What we need to do is have a strategic approach to transforming the building sector in developing countries. And that is probably the best example of any area you could name where there are going to be substantial economic benefits as well as, of course, the benefits in terms of climate change.

I think wind technology could very well be on that list; hybrid electric and electric vehicles could well be on that list. Solar technologies, perhaps geothermal, but that all needs to be evaluated, but it needs to be evaluated within the context of very clearly understanding that the energy technology markets are dramatically changing around the world. What is going to be available in terms of being economical to deploy a few years from now is very, very different from what is the case now.

And I think that that overall context of an energy market that is going – and again on a global basis – going through a historical transformation and these dramatically higher prices not just for oil, but in many cases for coal and natural gas are going to change the economics and generally make it more economical to invest in the low-carbon and zero-carbon technologies.

I think the World Bank and the development community more broadly really – and I understand this is difficult for you politically in terms of working with member countries, et cetera – but I really would like to see more of a leadership role. Clearly, there are a lot of folks that are involved in senior government positions in many countries that are simply not aware of many of these changes underway, the kinds of both risks that they face from climate change and the opportunities that they have before them in terms of embarking on a new trajectory.

And I think that someone has to stand up forcefully and present the fact that we're in a new situation, that unless we change dramatically in terms of both what we're doing policy-wise and certainly, lots of reforms are required at the national level, but also in terms of investment, we're simply not going to meet the poverty reduction and development goals that we all hold so dear. Thanks again.

MR. WHEELER: Chris, thanks very much. This is actually opportune. As you can see from the agenda, we've slipped a bit, although it's not catastrophic at this point, but I thought that given Chris' last point, which is really on the question of energy technologies, I thought I would slide the open discussion a bit and ask Gary if he could give us his short presentation on energy access and energy technology. So that would be, in a sense, a follow-up to Chris' propositions. And then we'll throw it open after Gary's presentation.

Well, we'll improvise here for a few minutes, but while we're doing that, I had one further thought, which I wanted to offer to Warren and Michele about how we can dialogue here. We've got fantastic representation from the World Bank today. We have Gary here, Dana. We have Philippe, Maria. We have Alan – a lot of people here who know a hell of a lot about these topics who are here, and other colleagues in the Bank as well.

I was going to recommend that in the dialogue as we discuss, if you could simply – you don't necessarily have to take on the entire burden of responding to these questions. If you could simply either respond yourselves or ask colleagues who you know are experts in that domain to respond or offer thoughts, that that might be the most useful. Okay.

GARY STUGGINS: I just want to make sure I get today's presentation and not the one for tomorrow.

MS. : (Off mike) – the opposites.

(Laughter.)

MR. STUGGINS: Okay, thanks very much, David. And a lot of the comments that I've heard so far really resonate with us, that it sounds like a lot of the thinking that we've already put in place. It's a commonality to it. And I think also one of the points that Dennis made early on brought to mind how important the subject was because when the G8 asked the World Bank to take on the Clean Energy Investment Framework, we were engaged in that early on.

And I went home and my kids asked, what are you doing? So I explained to them what's at stake and the timeframe and the kinds of changes that need to take place. And there was this pregnant pause at the dinner table, when my kids looked up at me and said, don't screw up, Dad. (Laughter.)

So in the interests of not screwing up, I want to put the context of the developing context and the need to be able to deal with the economic growth challenge, as well as the climate change challenge. Now, there is – I took this curve from a book from Jeff Sacks that was fairly interesting and revealing, in showing that per capita income in the world was just about dead flat for the past 2000 years. It wasn't until around 1850, when the Industrial Revolution took place, where you saw some turn up, and then it was around 1900. And in fact, that big change was around the time of World War II. And so a lot of the change that has taken place in economic growth has taken place in that past 150 years.

And that's not terribly interesting, except for if you then relate it to what's happened with greenhouse gas concentrations. If you look at the similar kind of timeframe and where the global warming has taken off, it's about exactly the same time.

And as everybody has said, the two are very inextricably linked. And the challenge that we've got is, as everybody said, is to move from the paradigm that we've got now on the development and the developmental context and going to a different trajectory than we've had in the past.

We've also got the challenge of what has happened over the past – since 1990. In some respects, the world has had it kind of easy for a while there and people forgot what happened around – I guess the fall of the Berlin Wall, the break-up of the former Soviet Union. The total global emissions were relatively flat for quite some time, and it was largely due to the economic collapse that took place in Eastern Europe and the former Soviet Union. That's this blue line down at the bottom. So we had some respite that took place there – fortunate for the world insofar as greenhouse gas emissions were concerned, but not so fortunate for the former Soviet Union and Eastern European countries.

Now, what's happened since then, you can see at the tail end of this, they're starting to turn up and have a similar trajectory to what the rest of world's heading, so it's just making the problem that we're seeing even more important. That's the context of the former Soviet Union, Eastern Europe.

It also takes a look at the emissions and what has happened. We've got Western Europe, this yellow line. It's been going fairly steady. The light blue line shows that reaction I was telling you about the Eastern Europe and the former Soviet Union. We're not trying to tell our – we need to be careful to make sure that we tell our clients that while it seems like the answer to decreasing greenhouse gas emissions is to have an economic collapse, it's not what we're trying to say.

What we're trying to say is how difficult is going to be with it to be able to have the kind of growth and poverty alleviation that our clients want and still have a low greenhouse gas emissions. The problem that we've got – the top two there are North America, basically the United States and Canada. They've been growing rather – their greenhouse gas emission has been growing fairly rapidly and of course, the big growth there is China, but the usual place.

And it's important to say where the emissions have come from. Everybody knows emissions have come from OECD countries and – but it's important to point out the fact that our client countries, over and over again, tell us that we're expecting that OECD countries are going to be able to take a leadership role in this, not only the financing. Everybody knows that there's a commitment to put the financing there, but they also want to see them take a leadership role in putting the policies in place, making the changes, making the behavioral changes. It hasn't been a particularly good story so far and it's important to make sure that OECD countries are going to take on that challenge really quickly.

This is about the technologies. How are you going to move to that new paradigm? And it's really about moving to a whole new different set of technologies than we have in the past. It's moving away from the fossil fuel agenda, or it's moving to take the fossil fuels and be able to remove the carbon dioxide emissions from the atmosphere and putting them someplace else.

If you take a lot at a lot of – this looks at the kind of technologies that we're looking at. In fact, I think somebody had asked early on, on the Clean Energy Investment Framework, in the first six months, we identified 52 different technologies that we could focus on, that the Bank would focus on, our client countries as well, to try to decrease carbon emissions, and then looking at the costs associated with each and where they're being developed.

There's a big problem in between the time lag in R&D and commercialization. Looking at some of the technologies that we could be working on, here's some of the low-cost ones: hydropower, biomass. Wind power now looks particularly good. The difficult one for us, of course, is nuclear power because the Bank doesn't invest in nuclear power, but if you just simply look at the costs associated with nuclear power, it's certainly a technology that's on the table to be considered for a low-carbon agenda.

The problem that we have for many of these technologies is that they're at the demonstration stage. Some of them are in a scale-up stage. We had hoped that some of these were going to be moving a lot faster than they are. And there what we're trying to deal – we're working with a number of people on what's been termed as the "Valley of Death," the time that it takes you to go from the R&D period to commercialization. The energy industry is particularly bad in that regard. They generally take about 20 years from the time they go from R&D to commercialization.

We're trying to find ways of taking lessons learned. This actually turns to a comment that Scott had made, to be able to take this timeline, the "Valley of Death," and shrinking it from 20 years down to 10 years or so because 10 years is the kind of timeframe we need to be able to resolve the problems if we're going to try to have any hope at all meeting not even a two-degree global warming target because I think the two-degree targets are best seen in your rearview mirror. It's probably a two-and-a-half degree target is what we're realistically shooting for.

And one of the models that we're looking at is the CGIAR, how we can be able to use that for information dissemination, but we think there are some other models and we had to go outside the energy industry to be able to see whether or not there can be lessons learned there.

We looked at Internet, software development; we looked at biotechnology. We're also looking at what has happened in the human genome project. It was an interesting scenario whereby the public and the private sector went separately. They went out in the public domain and managed to accelerate a knowledge base really quickly. And I'm wondering whether or not some of the lessons learned from that can also be applied to carbon technologies.

What's the Bank going to be doing? The energy access agenda for us is still very important. As was mentioned, there's about 1.6 billion people who don't have access to electricity. About 600 million are in South Asia, about 550 – but that's decreasing fairly quickly. India's handling that fairly aggressively.

The big problem is in Sub-Saharan Africa. We've been asked, well, how are you going to achieve the agenda in Sub-Saharan Africa while you still have a high technology, increasing access, increasing the economic growth, and do it in a clean manner? There are some very simple answers. You don't have to go to sophisticated technologies to be able to have a green approach to Sub-Saharan Africa. If you take the hydro potential that's available – unmet hydro potential – it meets about half of the needs that they can meet in the next year. And if the other half can be met simply by taking the natural gas that's being flared in Nigeria, it meets about half the potential needs in Sub-Saharan Africa. So between those two, you can go an awful long way.

If we take – we've been working closely with the IPCC modelers on what technologies are really going to be needed to be able to achieve the kind of 450, 550 parts per million target. We work with them and IEA. And generally speaking, in the energy sector, there are four technologies that they have focused on.

Renewable energy, as everybody knows, but all of the models that they've got, it's a relatively modest component in the energy cocktail in achieving the kind of the total energy supply. Right now, it's on the order of about 3 percent. The optimistic scenarios have many about 20 percent of the energy cocktail. We find that some countries like Denmark, where they are up to 20, 25 percent using wind, they're starting to get into some system stability problems. So unless that technology gap has been met, we're going to be running into some problems.

Energy efficiency is a big part of our moving forward, and as Dennis knows, this is one of the areas that we have been working on for about the past 10 or 15 years in the former Soviet Union and even there, we can only go so far. And Chris also had mentioned that building efficiencies, it was – because of building efficiencies in the former Soviet Union were about a third of what we had seen in Scandinavian countries, it was an area that we focused on early on.

It's been – it was a high priority for us, but movement we found to be very slow. And the interesting thing, looking backwards on this, is that what happens in most of the communities is that they didn't invest in energy efficiency unless it would increase the value of their house. Energy efficiency for investments for energy efficiency's sake, just didn't happen.

So we're trying to find ways of dealing with that and a big part of the problem is transaction costs. In fact, there's an awful lot of the literature out there that identifies energy efficiency as a negative cost, and have been identifying as a negative cost for the past 10 or 15 years. And of course, everybody's kind of got to ask themselves, well, if it's a negative cost, why isn't that happening? The reason it's not happening is because of huge transaction costs. We've got a couple of studies that we've done on that and we're trying to find ways of reducing that. So it's an important part of our agenda moving forward.

The other two technologies that have been identified by IPCC are nuclear. We don't do nuclear, so that's not on our agenda. And the last one is clean coal, fossil fuels with carbon capture and storage. This is one – to put it in context, I think it was the scientific advisor in the U.K. – David King, I believe it is – who has said, if we don't solve the problem with carbon capture and storage, we're sunk. And the EU has made a commitment to try to put 12 pilot plants in place by 2020. We feel as though we need to probably increase that to about 20 pilot plants and two phases with OECD countries taking a leadership role.

And to be honest, we've been somewhat disappointed with that for the past two or three years. We turn to FutureGen in the United States, which we're all expecting to take an important role in leading what the world was going to expect to see as a low-carbon, coal-fired option. As we waited and waited, FutureGen in the kind of parallel circles was referred to as NeverGen and in fact, NeverGen is now NeverGen because it's been canceled.

However, the good news is that there is about half a dozen new projects that are coming up. The first coal-fired plant with carbon capture and storage is scheduled to be commissioned next week in Germany. It's however only five megawatts. It's a pilot project, relatively small, but we need a lot more of them so that we can find out how are we going to successfully store carbon in either existing oil reservoirs, existing gas reservoirs, or saline aquifers?

The other place that looks fairly interesting is in existing coal beds, and that's – we're working with one of our countries on moving that agenda also. The reason it's interesting is because the geology is stable. There's some concern about the long-term stability of saline aquifers.

And the last thing I put on here land use and land use change in forestry. It's not an energy issue, but the reason that I put it on there is that it's important for us not to forget that, particularly for our client countries, because it's a huge – potentially a huge component in decreasing the greenhouse gas emissions.

What's the role of the Bank? Of the four technologies that I've identified, the Bank doesn't do nuclear power. Carbon capture and storage isn't ready yet. That leaves renewable energy and energy efficiency. And as you know, we, in Bonn in 2004, made a commitment to increase our lending for renewable energy and energy efficiency by 20 percent per annum over five years and review that commitment at that time. We've exceeded it every year. It's – as far as we're concerned, it's been a big success, but from a low base.

We have reviewed that commitment, as we said we would after five years, and have upped it to 30 percent largely due to what's happened under the Clean Energy Investment Framework and the strategic framework that's been put in place, where we have said, here's the size of the problem. Here's the kind of funding that needs to take place. Here are the financial instruments that exist now and woefully inadequate. What are going to do to try to get past the 2012 problem?

And the climate investments funds that Warren talked about earlier, we see as kind of bridge funding. Hopefully that bridge funding will enable us to get to 2012 and hopefully, with our finger crossed, the world's going to realize that they've got to get the commitment in place, put the financial vehicles in place, to enable us to move past the 2012 in their clean investment framework, and as well as those funds will enable us to do that in-house – also ramp up our renewable energy efficiency as we've done. We're also working with the other MDBs to be able to ramp theirs up as well.

The interesting problem that we have with that – how can we ramp it up even further? A lot of times when we go into our countries and ask what sort of technologies are – what sort of projects are available, we've got the coal projects. We've got the standard hydro projects, but nobody's coming to the table with renewable energy projects. So we've gone back to the donor community and said, get the money on the table so that we can get not only the strategies done, but also the preparation of renewable energy projects because if those feasibility studies aren't on the table, they're not going to be financed. So that's an important part of the Clean Energy Investment Framework moving forward.

What about coal? As I said, David King says, it's the only hope for mankind is to get carbon capture and storage accelerated. We need to – it may not be the only hope for mankind, but it's bloody important. What we're trying to do meanwhile on the coal side, there's an awful lot that can be done. If we take a look at the coal mix in some of our client countries, the efficiencies are in the order of 25 percent. The emissions that you get from that are absolutely huge. So what we're trying to do as a three-part program there is upgrading the existing stock to be able to decrease those efficiencies. They're not going to take these power plants out of service in most of our countries because they're not able to meet demand.

If you take a look at the economic cost of taking these power plants out to look at, it's as if we have two heads, where if we say, no, what you've got to do is put another plant in this place. So yes, we're going to do that and increase our load shedding. It's just not going to happen. So what we're trying to do is upgrade that existing stock, replace the older plants, and implement state of the art – now the interesting thing that we've got there is because of the condition of many of these utilities, and because they're falling further behind in being able to meet demand, what happens is those really crummy, old coal-fired plants are operating flat out.

They should be operating somewhere in an operating cycle of maybe two to three hours, instead of 24 hours a day. And so what we're trying to do is to be able to accelerate the investments to make sure that we can get those crappy old coal-fired plants up to the top of the low duration curve and out of the low duration curve, so that we can decrease the emissions from that existing capital stock.

Just – I guess Chris had asked – we've been doing a lot of talking the talk. We want to also demonstrate is that we're walking the walk, since we made the Bonn commitment. We have made a commitment also to try to increase our low-carbon investments as part of the CEIF. You would ask how we define low-carbon investments – footnote one on table two – (laughter) – in our Clean Energy Investment Framework. Every six months we go to the board. We say what we've done in an update to the board. It's out there in the public domain. It's on our website. We define what we've done; we say how we're doing it. We think that we're meeting that challenge so far and what we need to do is try to accelerate that and we hope that the clean investment funds will enable us to do that.

The other important point is I think somebody mentioned earlier, the World Bank can't shove this down the throats of our borrowers. If they're not convinced it needs to be done, it's just simply not going to happen. We've been working on these low-carbon growth strategies in six countries now. We've been very, very careful to make sure that they're client-owned. These are not World Bank strategies. These are client-countries strategies. What we're doing is supplying them with the information, the experts to enable them to do it. A couple of them are coming out soon. Some of them look really interesting. Mexico is probably going to be one of the first ones to come out and we – as far as we're concerned, it's looking so good. It's like a poster child for us.

They're going to come out with marginal carbon abatement curves and I think this is the question that Chris had alluded to earlier. What do you do with – there's not enough money out there to be able to decrease the carbon emissions that we've got now. So how do you try to effectively use those limited resources to maximize the bang for the buck? We're doing that with the marginal carbon abatement curves that are coming up in each one of our client countries.

So we identify how to maximize the decrease in carbon emissions with the investments that are available. And so given that we've got that very limited pie, we can not only optimize within the countries that we have been looking at, by putting these low-carbon growth strategies together, but as the – we get an increased number of these marginal-carbon abatement curves across a number of countries, we can do it globally as well. So it's an interesting agenda moving forward that we expect to see hit the ground by the end of this year.

The first one, as I say, is coming from Mexico probably in the next month. It not only identifies investments projects – it identifies programs as well. And the interesting problem is it's not just investments, not just identifying these projects, but it's also changing behaviors, and that's the difficult part, changing them through their policies, making sure they're going to be implemented and following up with that. We've got a lot of countries with really good laws and good intentions, but the implementation stinks. And being able to be able to take it that last extra yard is really what we get paid to do.

Preparing the projects, using the new resources, is going to be an important component of what we're doing moving forward, and also exploring ways in which we can use research development and deployment of new technologies to be able to accelerate the agenda in our client countries.

China – China's been a really interesting example for us in that we started this kind of a low-carbon green agenda with them about 10 years ago. We had carbon abatement curves with them about 10 years. Alan Miller, I think, was involved in some of those. It's been a huge success and it's been such a big success – you talk about a huge success. Meanwhile, you see the emissions growing dramatically. However, it would be much worse if we didn't have the kind of – the renewable energy program in place, the energy efficiency program.

China, in their five-year plan, has only two numeric targets. One is economic growth. The other one is energy efficiency. It's an important part of their program moving forward. Insofar as being able to move new technologies, again, China's a poster child. We moved there on putting super critical coal-fired plant technology in place about seven, eight years ago. The first one that was ever done in China was a World Bank-financed project. It decreases emissions in the order of about 15 percent. We need to go an awful lot further than that, but the model's an interesting one.

It was an absolutely huge success. Put it in context. Right now, China is building about 60 to 80 percent of their new coal-fired plants are super-critical technology. The United States, new power projects that are being built in the United States, only about 10 percent – huge difference between those two. How – why did it succeed? It was competitive. It was done with three different manufacturers coming to China with their technology, working with local counterparts.

The market was big enough. Competition took place. They respected the intellectual property rights associated with the new technology that was brought there. It scaled up hugely. Now, that – we did that in one technology in China. We're now looking at trying to use that model to be able to go to the even greener technologies moving on – IGCC, carbon capture and storage, the other – the CSP, concentrated solar power, to move those technologies in a dramatic way as well. It's a model that's worked once. Hopefully we can use it again.

Thanks.

MR. WHEELER: Thanks very much, Gary. I think we'll probably try to stay on the schedule here for lunch, since I know that may be an important thing for a lot of people in the room who may have breakfasted rather sparsely. So – and we can continue the discussion during lunch.

But I thought before we break, there is time for discussion. I thought I would invoke moderator's privilege here for a moment because my colleague and the president of the Center for Global Development, Nancy Birdsall, has joined us. And I think Nancy's comments might be of particular interest because in the last week, she's been engaged in very intensive climate research. Earlier, she was investigating the climate in Denver and more recently in Minneapolis and St. Paul, so given her perspective on the Bank and her perspective on at least the regional climate and its fluctuations, I thought perhaps it would be useful to hear from Nancy.

NANCY BIRDSALL: Well, thank you, David. That's very nice. I hesitate to say anything since I missed so much of the discussion this morning, but I will say about St. Paul and Denver that, as any of you know who've watched the speeches on TV, climate change is finally seriously on the agenda. Well, it's kind of coming in the back door, through some confused ideas about energy independence, but at least it is coming in the back door.

And in the side events, not the official convention events, that I participated in on global development issues and global poverty, climate change did come up over and over again. So I think that's probably a very marked change from what was happening a decade ago. It may be too little too late, but at least the trend is correct.

I do have some questions, but I'll hold off on them until the real – the questions for our World Bank colleagues, but I'll wait to see if other people raise them instead of jumping in when I wasn't here to hear what they said. (Laughter.)

Thank you, David.

MR. WHEELER: Okay, thanks very much, Nancy. We have about 10 minutes right now and then let's – we'll just bring lunch to the table at that point and continue the discussion, but for now, I'm sure there are some thoughts or questions that people would like to pose. And once again, we have – certainly Gary's just given us a great presentation on one component of the Bank's program. And we have Michele and Warren here to serve as sort of officiators, so that there may be experts in various areas who could respond most usefully. So if you have questions or comments from the floor, please feel free at this point.

Yes? Could you introduce yourself as well, please?

INDUR GOKLANY: Indur Goklany. I'm with the U.S. Department of Interior. This was – I was looking at your strategic framework and I think there's one point that it doesn't emphasize sufficiently. I think Professor Barrett kind of touched on it, but not sufficiently. And this is that the relationship between development and climate change works both ways.

Development, in fact, is what builds adaptive capacity and I don't think that is broadened sufficiently in your strategic framework because I think when you take a look at the time spans, as was mentioned by Mr. Flavin – (audio break) – so I think that's something that needs to be considered and factored in.

And I don't think, in my reading of your strategic framework, there seems to be enough emphasis on the fact that development itself builds adaptive capacity and there are offshoots to this also, which actually bleed into the rest of the document. And this is that when people have been doing the studies of the impacts of climate change, quite often, they don't build into it adaptive capacity – not today's adaptive capacity, but adaptive capacity in the future because if you take a look at the IPCC's emission scenarios, they all assume a level of economic development and they also have – (audio break) – but those things are not factored in the impact assessments.

Therefore, what happens is that you end up overestimating the negative impacts, underestimating the positive impacts, and in fact, everything that you build off that is going to be skewed because of that, whether you are doing a benefit-cost assessment or whether you are doing an assessment as to how much money might be required – additional monies might be required to deal with adaptation and so on, so forth. I think that's a little bit of a problem and I think there ought to be some discussion of those factors.

MR. WHEELER: Let me propose that we take two or three comments from the floor or questions, and if we could keep track of those, and then you folks would know who could address those.

Yes, please.

ADAM SIEMINSKI: Sure. Adam Sieminski from Deutsche Bank. I follow the energy area very closely and I'm beginning to follow the climate area in North America for Deutsche Bank. And I wanted to take – literally, I think I can do this in a minute. I wanted to summarize the four presentations and then ask a question.

Gary said that, at the very end, what we really need to move these things along is some donors. Chris said he really wants the World Bank to take a position and advocate that eliminating poverty is truly linked to energy and climate change. Dennis said he would really like some kind of a simple scoring plan to make a lot of this happen and a shallow price for carbon might really help that practical solution. And Scott – I guess Scott's left, but I would summarize his as Scott's choice – you need to build a coal plant to help eliminate poverty in a country and can you really do that with climate change? It's a terrible choice to face.

So what I don't see too much of in the strategy is something that we believe at Deutsche Bank addresses many of these questions, and that's the clean development mechanism and offset programs. If you want donors, you can find them all over the developed world, people who want to reduce carbon, but find that it's just a lot easier to reduce it somewhere else, rather than in the developed world. So that's what you're looking for. And so if we come back to Chris' point, is if you want to advocate something, why don't you advocate international offset programs, have an international void? I know it's controversial a bit. Look, let the engineers figure out how to monitor it and make sure that it is additional and so on.

I'm not even sure that the additionality clauses – why don't we just do it? It's like – then it meets all your goals. And to not spend some time thinking about whether that's a good idea, it's certainly a way – it's going to be a lot easier, in my view – and I'll stop – to convince people in places like the United States to agree to transferring money to the undeveloped countries, or developing countries, through something like the clean development mechanism, rather than through the idea of they're just going to pay a one percent sales tax to transfer money and technology to the developing countries. Thank you.

MR. WHEELER: Thanks very much. Let's see, we have Jill here. Have a question, comment?

JILL BLOCKHAUS: Hi, Jill Blockhaus (sp) from the Nature Conservancy. Just a couple of questions building on some of the comments that were made earlier this morning. Just curious what wasn't discussed in the SIFs review is that there is a strong commitment from a number of donors to help on the clean technology side and the bulk of the funding of the SIF is going to middle-income countries. There are also the two funds that were mentioned by Gary and Michele and Warren earlier this morning, the Strategic Climate Fund, which includes a pilot on climate resilience and is for the most vulnerable developing countries, as well as the Energy Access funds.

I'm just curious if there's more scope now to add additional funding to that or is there scope for additional resources from other funds to address that because right now, the commitment seems to be about a half of billion for each of those, and given the necessity of also reaching out to developing countries and helping them because they are very vulnerable, and back to Warren's point of the main countries that need to be targeted.

The second short question is just in thinking about the training that was proposed for upwards of 80,000 – I'm sorry – 8,000 of the World Bank's staff to try and get them up to speed with what the challenges are that they're facing in development with climate change, would it – I know it's hard, without the negotiation process being finalized, but would there be some scope for measuring maybe through the quality assurance group project portfolio performance on that? Certainly, there was good discussion of some key sectors – energy, infrastructure, forestry, some of the pilots that were to be attempted – and a good discussion as how far the sector's strategies could take you, but just wondering what other additional incentives within the World Bank could take that a bit further. Thanks.

MR. WHEELER: Okay, thanks very much, Jill. I think we have time for one more question and then we'll break and bring lunch to the table and continue. Loren, do you want to propose –

LOREN LABOVITCH: Thank you, Loren Labovitch with Millennium Challenge Corporation. Just a quick observation, and just to get some comment from you guys, recognizing that this is the framework, it's high level – it's not a strategy; it's not an operating plan. But that said, the framework seems to be curiously silent on linkage of climate change with the Bank's safeguard policies. And that could open up a big discussion, but specifically, it would seem to me that at the project level, it's important to apply the climate lens through processes like the Environmental and Social Impact Assessment process in order to more explicitly incorporate and integrate climate issues into the standard or traditional project development and implementation process.

I think – one observation in reading through the framework – and I have to admit, I haven't read it word for word per securities – but it does seem very clear that this is intended to be kind of a separate initiative, if you will. And in deference to some of the comments, I think, that Dennis made and others that putting another additional mandate on top of those in the trenches that are – have so many other mandates to look after already, it would seem that integrating this within the traditional project development and implementation processes would be something to look at. I don't think the intent is to completely separate them, but on the other hand, the linkage at the project level doesn't seem to be too close and specifically, with regard to safeguard standards in which you could more closely look at mitigation and adaptation, those kind of things, I'm wondering why there's no mention to the safeguard policies.

MR. WHEELER: Thanks, Loren. Unfortunately, Warren has some other commitments this afternoon and he'll have to leave pretty soon and it would be great if he could offer a few thoughts before he has to go.

MR. EVANS: Thanks, David. I just wanted to – and I apologize, but I do have to go, but we've got lots of really good people from the Bank around the table here and including from IFC, and we're going to need to hear from IFC soon, I think, to get a little bit of their take on things.

Just a couple of points I wanted to make as maybe clarifiers, not excuses, so please don't listen to them as excuses because they're not. But I think it's really important to recognize that our ownership is essentially the same group of countries that are negotiating the future of the Climate Agreement.

So all of the issues that are – that were in Accra two weeks ago and in Bangkok a few months ago, and in Bali, all of those issues are either right on the surface in our discussions on how the Bank deals with climate change or certainly, just bellow the surface. And Eduardo is here from one of our major developing country partners and might want to talk a little bit about this.

But I think it's important to recognize that we have to take into account all of our owners' views when we advocate, when we invest the money that we're provided in analytical work and so on. And so it is – there are many of us who would like to play a greater advocacy role on some of the issues and in fact, we have a president now who believes we should play a greater advocacy role. The World Bank has a lot of knowledge to bring to the table to strengthen the level of information that goes into the negotiations and so on.

A good example of that actually is the issue of the CDM. The World Bank has – I can't remember how many countries and private companies that have invested are participants. We don't call them investors for some weird U.S. law that would get us in trouble, but we call them participants in our – in the nine carbon funds and now three facilities that we manage, which is way over $2 billion worth of carbon finance.

The problems that we've run into in carbon finance are two. Number one is if you add up all the project level stuff that's coming through the CDM – and I'm a big advocate of the CDM – it isn't going to solve the climate problem. So how do – let's focus on the climate problem and then design a carbon mechanism that actually will help solve the problem. And that's where some of our new facilities are very important, just like the PCF was. I would argue that the Forest Carbon Partnership Facility and the Carbon Partnership Facility are equally important on trying to pave the way for scaling up and really using a market to have the impact.

But the point is that we are being advocates through those new facilities that are approved by our board of directors, and that's very, very important. So on those kinds of things, we have ownership.

The – but when it comes to issues like how we link this with safeguard policies and so on, I think it's very important to recognize that the ongoing negotiations do come into our building. The reality that there are some countries that have not made – some developed countries that have not made commitments to reducing GHG emissions. I'm not going to mention any of them, but there are some major developed countries that have made no commitments and haven't demonstrated any real leadership globally on reducing their own carbon footprint. So for us to turn around in the World Bank and say to our developing country partners, you've got to reduce your carbon footprint, when they don't have an obligation under the international agreement, it doesn't fly.

So we really do have to turn this all around to talk about good development, effective development, whether it's climate resilience or low-carbon growth. It's about the interests of the developing countries, their long-term sustainable development, and we believe there's a great connection there, that it is good business sense. The trick now is to really use the – technology is key – to use a lot of the new innovations in technology, figure out how to get those to developing countries, and we do find over and over again that the investment capital is the constraining issue, that it is about getting funding that reduces the costs of an investment so that the incremental cost can be covered. So it really is key. And so I think it's important to recognize this linkage.

The last point I'll make is that, yes, this is a strategic framework, but don't misunderstand that we don't – each of our regions has a strategy, which is being implemented today, that's based on their clients' demands. So, you know, obviously what Sub-Saharan Africa needs is very different from what China needs from the World Bank.

So each of our regions has its own strategy that's under implementation. The strategic and IFC has its own strategy. The strategic framework we're talking about today is trying to make sure that that all adds up to something bigger than the individual actions at the regional level, and that's really what we're striving for through this.

Let me say thank you very, very much, again, for organizing this, and I'm going to turn at least our side over to Michele to coordinate. Thanks.

MR. WHEELER: Okay, Warren, thanks very much. And if I interpreted correctly, Nancy, I think you'd like to add a word here before we break.

MS. BIRDSALL: Yes, I apologize for coming late, and I have to go to another seminar at the center so I thought before you go to lunch I would just read the six questions I wrote down. And I ask all of your tolerance since I didn't actually hear what the World Bank's strategy is, except in some bits and pieces. But let me leave these questions for anyone to pick up afterwards, after lunch.

First, could the – and as some background to this, let me say that I appreciate the point that the World Bank is a member organization, and so it is the staff and management are, to some extent, in a position of reflecting the views of all the members, which are difficult to reflect since their views tend to be different from each other. At the same time, I do think that history suggests that the management and staff can have tremendous influence through the technical work they do and the positions they take – that they bring to the board for discussion.

So with that as background, first, would the World Bank consider – would World Bank management consider talking about sponsoring a price-like mechanism that would speed up private investment in innovative – particularly in renewables, along the lines of the advance market commitment on which we and many others at the World Bank now have worked for new health technologies?

Second, would the World Bank please finally announce a set of shadow prices it would use in economic analysis of projects? I think that would really capture – if Dennis raised the point earlier – well, I won't elaborate. That's the question. Could you do that as part of the strategy, or are you doing it?

Third, is the World Bank including in the policy dialogue with countries the old issue where countries have perverse policies on subsidies for gasoline and so on, which offset their ability to do the kinds of adaptation as well as reduce their contribution to mitigation?

Fourth, could the World Bank management and technical staff push for something like an offset program along the lines that Adam Sieminski mentioned – you know, advocate more on that, but with some sort of double of the bonus for renewables versus other approaches like supercritical coal so that a bigger incentive was created at a higher marginal rate somehow for those technologies that we saw are close or not close enough yet, where it's important to scale up faster?

Fifth, is the Bank – are Bank staff developing some thinking on the intellectual property issue, how to manage it as new technologies are developed?

And, finally, are Bank staff and management starting to do whatever benign lobbying, or not, is appropriate for gearing up toward what should be the Bank's role post-Copenhagen, post-Kyoto II, post-whatever agreement is come to in the next year or two, what should be the Bank's role in monitoring and compliance, as well as participation? The tradeoff between participation and compliance is a tough one for getting all countries, or the key countries, involved in an agreement.

Sorry for a long set of questions, but I hope that somebody will tell me later they've all been answered, or they'll come up again this afternoon. Thank you very much, David, and thank you to all of our guests who came to think with the World Bank on how we can better link climate change to the development challenge.

MR. WHEELER: Thank you, Nancy. And we have other colleagues who have interventions or questions – Eduardo, Jake, Al. I would propose the following: Why don't we fill our plates and come back, and then you will be first up on the agenda with your interventions, and then we'll open it up to a round of discussion. You know, when I lived in Indonesia for two years, the Indonesians have many wonderful traditions and they have many wonderful phrases, and one of them, which is the key to sort of operational effectiveness in midday is Indonesian is makan dulu, which means eat first – (laughter) – generally a sound prescription, so why don't we move to that and then back to the table.

(Break.)

MR. WHEELER: Please feel free to go ahead and eat but, colleagues who are currently chatting and eating, if you could rejoin us at the table and we could continue the discussion here.

Let's see, I wanted to continue – and we certainly have a lot of questions already, and I'm hoping that Michele and our colleagues from the Bank will be able to route their responses appropriately, but before we go to a round of discussion, two points here. First, Ian Noble has joined us. Ian was supposed to give, I think, the first presentation this afternoon, and Ian has graciously agreed to put that off for 25, 30 minutes so we could continue our dialogue here.

We had three colleagues who had interventions that they had proposed before we broke for lunch – Eduardo, Jake, and Al – so I would ask Eduardo first if we could have your thoughts, and let's continue.

EDUARDO SABOIA: Thank you. Well, thanks for the invitation, and I found the presentations very interesting and the comments that were made. Actually, when – I'm from Brazil and I worked at the board of the Bank, and together with other colleagues like Judy and also colleagues from developing countries, we've been discussing this issue for several months, and so far we think that – at least the developing countries that are represented on the board – the impression I have is that we've been able to have a very good dialogue with the Bank on this framework and we were able to sort of provide our perspective on this important issue, which is somehow reflected in a paper that I think is available to you.

Instead of commenting on this paper, which I think – I mean, it's well-known; the positions are well-known – I'd like to just emphasize on thing that Warren mentioned, that this is a strategic framework and not a strategy, and I would like to try to expand on this idea. And I think there are two reasons why this is not a strategy for the Bank, with a big S, and not a strategy for climate change with a big S. It's not a strategy for the Bank, first, because the Bank has a broader mandate. Its mandate is development, and that has to be emphasized because the concern of most developing countries is that, depending on how you introduce this issue in the World Bank operations, you will not – you will divert attention to what are the basic concerns of these countries in development? So that's one reason. And the second reason that it's not a strategy with a big S is that, first, the Bank itself does not have – we can't say we have a strategy, a big plan for development because development actually is something that emerges from experiences which are different.

So basically what we have is a dialogue and country-based model. So that must be emphasized, too, that the Bank – the World Bank operates on a country-based model and on a demand-driven basis. And if we don't know, if we don't have a plan for development, we have – we know less about what should be a low carbon development sort of plan. So that's why we have the strategic framework, but I think that the Bank has been working with developing countries, with its clients on these issues, and we all have a long-term objective of having a low-carbon growth, but the convention itself recognizes that developing countries will have to increase their emissions to meet their needs.

Now, the other reason why – so I referred to why this is not a strategy for the Bank, and now I'd like to mention why I think this is also not the solution for climate change. I mean, if we look at the role the World Bank can play in this issue, it can play catalytic role, it can play an advocacy role, but it's not going to solve everything. I mean, if you look at the amount of resources that are required to address this, I mean, even with the innovations that the Bank proposes to introduce, it will be very difficult to mobilize these resources. So, on the climate change perspective, the Bank is one actor – important, but it's not the fundamental. I think that the fundamental actor now is the

UNFCCC, is the sort of the global bargaining that we are trying to develop and to implement, where we have all countries, developed and developing, engaged.

Now I'd like to comment on the fact that climate change is seen as sort of a global emergency. I have that in mind conceptually, but, frankly, when I – I've lived in different countries and developed countries, I don't see that – when I walk in the streets I don't see people – I don't see a change in lifestyles that is required to really classify this as a global emergency. And I'm not saying that it's only in developed countries; I see it in developing countries too.

So, I think – if I would make a suggestion on the Bank's advocacy rule, much has been said here about, no, we have to be – emphasize more that, you know, climate change – if you don't address climate change, you can't get to development, and I agree with that because we will be ineffectual in all interactions to achieve that. But the global nature of development will not be sort of understood unless you also advocate that if, in a world with poverty, life will be like hell also for developed countries; you will not be able to solve the climate issue without solving the development issue. You will not be able to transfer the changes in lifestyles, the sort of radical things that are needed in terms of – well, amount of resources in a magical way. There's going to be pain. And so the Bank has to advocate along those lines, and I think so, and I would expect to do it.

You know, when we talk about technologies and – there are technologies that are protected by intellectual property rights, and if it's a global emergency, then you know it's like the same flexibilities that you see for trips and health could be applied to the climate change. Besides, there are some technologies that are also available in developing countries that the Bank should look into.

If you turn to carbon footprinting, how can we expect countries to accept carbon footprinting measurement if this is going to be done only in the developing world, and if the carbon footprint is not going to be – of investment is not going to take into account sort of the historic footprint that some investments in the developed world carry?

So those are some of the comments I'd like to make, and I think that we are very – we are rather satisfied with this dialogue we've been having, and we think that it's going to be as sort of – as a framework that will evolve and that we'll have to look very carefully into what is happening at the UNFCCC. Thank you.

MR. WHEELER: Thank you very much, Eduardo. Let's see, let me propose that we conclude this round with two additional questions or comments from colleagues who had asked before we broke for lunch. Other colleagues now have issues they'd like to raise as well. What I'd like to propose is that we ask Jake – Jake, you still here?

MS. : (Off mike.)

MR. WHEELER: Hi, Sonny (ph). You can go ahead, Smita, and pose the question, the proxy question, and then Al. And then Michele and I will do our best then to go back down through the set and you can play traffic cop and route to the appropriate people for quick responses. And then we'll turn to Ian, get his remarks; then we'll go back to Q&A at that point for colleagues who now have – please keep your signs up there; we'll get to you. Smita?

SMITA NAKHOODA: I think one of the questions that reading through the strategic framework really raises – and I think that this has been echoed by many of the comments that have been made through this morning, is how will we know that the strategic framework, even if it's a little bit less than a strategy, has had impact? I think that many of the ideas that have been raised around carbon shadow pricing, around, you know, setting targets, around renewable energy, around laying a clearer way forward for how it is that we see – the ways in which we think about investment choices evolving speak to the need for a little bit more of the sense of where all of this is headed. And while the strategic framework does in fact acknowledge that a results framework needs to be developed and is forthcoming, it does seem like that is where a lot of these issues that seek more substance as to how it is that things will begin to evolve in practice would really give us a little bit more a basis for knowing the direction in which these things are headed. So I think that was one point that I sought to raise, and seek some feedback on how you see that process evolving.

Picking up on the comments made by my colleague, Eduardo, about greenhouse gas accounting and carbon shadow pricing, which of course is an issue that many of us at WRI have been quite – quite enthusiastic about the possibility of greenhouse gas accounting and carbon shadow pricing as not a way to try and impose new conditionalities or new restrictions on what it is that developing countries should be able to pursue as development objectives, but rather to be something that in fact prompts a different way in thinking about what the options that are available might be, and in fact lays the groundwork for going to the developed countries who do in fact have the responsibility of meeting those different – the additional costs of taking a lower carbon approach.

By doing that analysis you begin to lay the groundwork for making that case much more compellingly, and that isn't done in a terribly systematic fashion at present. There are so many examples in the World Bank's portfolio of really innovative practices – people who are out there trying to do things really differently. And to my mind, those aren't represented adequately enough when you look at the portfolio of the World Bank, and so the question that we ask then is, how do you begin to make those examples and nuggets of really innovative and creative practice, working in tandem with developing countries, to find win-win solutions that maximize co-benefits? How do you find those nuggets of good practice and make them universal practice at an institution that is as diverse and as large and has such a large mandate as the World Bank does? And that's one of – that is where this idea of carbon shadow pricing and greenhouse gas accounting to our mind comes, as a way of beginning to think through the options and a way of systematizing thinking through those options and making that part of the standard project appraisal process in a way that it isn't always, and in a way that there are so many growing opportunities to make it that way.

And so I think that that – you know, that is a – in the new versions of the strategic framework on climate change and development we actually, in many ways, see a softer approach being taken, I think, to the ways in which it is that carbon shadow pricing and greenhouse gas accounting can be integrated into the operations of the Bank than we have done in past versions. And I'm very sympathetic to many of the reasons why many developing countries are nervous about this, but I do think that the key here is to begin to lay the groundwork for having a more informed conversation about how it is that we pick better choices, how we make better choices. And there I think the Bank, with its enormous technical expertise, should be playing a more active role in helping us think creatively about development choices because, as you say, it's not a science, but we do need to have new tools by which we try and point the science – you know get ourselves to better decisions and outcomes.

MR. WHEELER: Thanks very much. And let's see – Al, you had a question. And, sorry, could you identify yourself please?

AL MCGARTLAND: My name is Al McGartland. I'm the economist for the Environmental Protection Agency. In fact, I'm going to stick with a sort of economics theme here. I'm wondering, in the strategy, where is the role for sort of three levels of economics, if you will? The first level is more macro, in effect, thanks largely in part to the secretary of treasury dragging lots of the government over to China. We started doing some economic and environmental modeling with the Chinese. And some of you might be familiar with the phrase double dividend where you invoke climate change policies at a macro level and you truly get a double dividend where not only do you get reductions in climate change, you get improvements in social welfare and other fronts. In the Chinese modeling we did we got a true double dividend. It's not true in the United States but it's less true there. So I'm wondering where that economic overlay of sort of macro policies would fit into the strategy, for example getting rid of subsides and gasoline, which I guess the Chinese are doing.

But the second thing is more a micro level, sort of power plant economics, if you will. You might want to invoke, say, an option value – and the Chinese are adding, I think, a power plant a week, the statistics show, and in these new power plants, I'm told, they're not leaving the real estate, so when carbon capture sequestration and storage comes online, you'd like to have that land available to retrofit these power plants since power plants are so long-lived. So is there a place, then – that might actually be good economics because if you look in the long-term future, leaving that land now, it might be relatively cheap for the Chinese, then, if they're going to undertake investments.

And then lastly I had a question on – well, I have lots of questions, but there was a mention on the technology funds that these demonstrations were largely in moderate-income countries, and I'm just wondering why that is and not in poorer countries or other places.

MR. WHEELER: Okay. Thank you, Al. I have a proposal here that we want to go back – and certainly starting with Indur's intervention we will go through them all. I thought this might be an opportune moment to capture the thrust of four or five interventions here, which have been on the issue of footprinting, carbon accounting. Dennis started the dialogue, Smita has referred to that, Eduardo referred to it, Nancy referred to it, and some others as well, and it's certainly on my mind. I thought we have two colleagues here who could give us a quick synopsis of thinking about where that's going, both in the Bank and the IFC, and that is Gary and Alan. And specifically if you could address the question that Dennis poses and the issues that Eduardo poses.

How do we – Smita made a good point here, which is that – and this came up in a discussion with the EDs of the Bank that I had myself three or four weeks ago with colleagues in WRI. There is an argument which would say carbon accounting is a way of advertising a need. If you select projects, at least tentatively on the basis of an accounting which includes a carbon price, this doesn't mean that the organization is forcing any clients to adopt those projects, because of course it's in no position to that, but in so doing, it finds attractive projects; it advertises those projects and the incremental costs of implementing them, which then has to be presented to the donors as a bill. It's actually a form or put up or shut up, which puts the Bank in the role of an intermediary, and a hard-nose intermediary. There's a lot of righteous talk around the world about who should do what. It seems to me that there would be an argument for carbon accounting strictly on those grounds alone as a way of highlighting the need for financing if this is going to happen.

So these are some ideas and thoughts that have been around. If I could turn the floor over – Michele, with your permission –

MS. DE NEVERS: Yes.

MR. WHEELER: To Gary and then Alan for a little follow-on and some thoughts here about the evolution of these ideas and your prognosis.

MR. STUGGINS: Sure. Thanks, David. Yeah, it's been not only controversial outside of the Bank; it's also been controversial within the Bank as well, not only at the Bank staff level, who, in operations, have got to meet with our clients and actually get results, but also with those of us who are trying to achieve the agenda of getting a lower carbon impact.

We have looked at what's – let me first go to Smita's comment about how are we going to know that we're going in the right direction to start off – that we're getting results. And in fact, at one point in time we were talking about putting in place results framework that talked at the country level and looked – because, you know, if we don't get kind of the global level impact, then we're really not achieving what we want to. To be honest, we said, well, doesn't WRI already have that out there with Kate? And so why should we reproduce what Kate has already got out there? And so, you know, we hope that you keep Kate out there, and that will enable us to make sure that things are happening at the macro level.  We'll be doing it also at the micro level on our projects, which gets us to the carbon footprinting, carbon accounting, and there it's not easy.

Carbon shadow price:  We haven't come close to being able to agree what a carbon shadow price is.  And just to put it in context, to get one simple number of what discount rate that you use for this, it's all over the map.  We brought in two Nobel Prize-winning economists to try to break this knot, and they couldn't agree.  We were looking at another alternative – or, actually, a set of alternatives to this because, you know, all of the – a number of the best minds in the world, from Stern to Nordhaus, the carbon shadow price is really quite dissimilar.  So we're looking at knowing that we're not going to come to a solution on that.  What we want to do is to look at what are going to be switching prices for investments that are taking place.  What are hurdle prices?  Compare that to what the market is telling us insofar as carbon prices available, what the prices in the funds out there, and that will give us an opportunity to say, well, let's get the match.  You know, here are the investment opportunities out there, here's where the funds are available; let's at least get those things moving.  So it's not carbon – it's not a carbon shadow price, but I think it will enable us to get the kind of investments that we want to see take place.

Carbon footprinting – it was interesting because we started our work on carbon footprinting and we felt, yeah, you know, it was nice, it's going to get some information out there, but it's not going to drive the decisions.  We can put that information out there but what we really want is to make sure that there's going to be incentives for Bank staff or investors, for our clients, to make sure that the right decisions and investments are being made, in knowing where the financing is going to be available, not only in terms of – oh, there's a laundry list of financing that's available for low-carbon investments as well as the standard commercial investments, and what we want to be able to do is to take – well, try to have a centralized group that will be able to take these pool of resources that are available to try to make sure that we maximize the impact that we've got with the limited resources that are available.

So it's going beyond carbon – well, we like to think it's going beyond carbon footprinting, but the problems that we are grappling with – and we're hoping to be able to come up with some solutions by the end of this year – is where do you draw the project boundaries?  I'm going to give you a simple example.  One was if you go into a transport sector and you want to bring in new cars to – hybrid cars to be able to decrease the emissions from cars, what about the cost associated with producing those new cars?  What of the carbon footprint of the production of those cars?  And you've got to make sure that that's going to be into the framework as well.

So defining where the project boundaries are is not easy – not only cars, but bridges, all of our investments.  In the power sector, it's not only going to be the impact of the gross emissions of a power plant, but what the impact is going to be on the power sector in total, because there's a lot of times – there's a couple good cases where you could build a big coal-fired power project and actually decrease emissions by taking your existing really crummy coal fired plants and push them out of operation.  So it's making sure that we know what the appropriate boundaries are and make sure that we focus them on the kind of results that we're trying to treat. So make sure that we're focusing on a proper end result.

MR. WHEELER: Okay, thanks very much, Gary. Alan, there's a lot going on at IFC in these sphere; I thought it would be useful to hear from you.

ALAN MILLER: Well, the context for IFC is somewhat different than the Bank because of several things. One is our performance standards were revised several years ago and already required accounting and reporting of emissions on projects of 100,000 tons or more for what would be, in terms of Gary's reference to boundaries, tier one and tier two. So we don't get into the whole value chain question but we do include electricity, direct and indirect.

So we've already been reporting about – well, it's between eight and 12 percent of our projects meet that 100,000-ton threshold. Secondly, we already had a requirement to consider alternatives, again, where there were large greenhouse gas emissions with potentially significant alternatives. And, third, we have a lot of comparison in terms of private sector best practice. So the Bank is kind of sometimes more out there in terms of its policy analysis. We always at least have some reference point because we talk to the private banks and we also can look at current practice in the private sector. And we've already been seeing, because of the Carbon Disclosure Project and other such initiatives that private-sector compliance with greenhouse gas calculation reporting and the like has been growing very rapidly. So at least in terms of private sector practice, it seemed to us that it was fairly timely.

We didn't get, as I say, stuck in the mire about the value chain because, as Gary said, you can get into some pretty sticky issues. We also have yet to figure out a good approach to the financial sector – in other words, when we invest in banking, which is about 40 percent of IFC's portfolio in recent years. There's a real question, as Smita knows since WRI has been working on this as well, about how to do that. But we thought that it was a reasonable thing to propose that we do at IFC. We actually had very little controversy about this several years ago when it came up in our performance standards. When it came up again this time in the SFCCD, as Eduardo's comments reflect, the convention context had changed considerably. And so because of the Bali Action Plan language and the reference to – what is it? – measurable, verifiable, reportable, anything that touches at all in the realm of reporting immediately takes on the perception that you're getting into convention issues. So we're a bit on hold right now pending the decision on the SFCCD, what more specific guidance, if any, were given by the board.

And on shadow pricing, really, analytically, the key question is to have the carbon footprint, because if you agree on doing the carbon footprint, the shadow price, as David knows from his work, it's pretty trivial. You just – I mean, there are the issues of discounting and the like, but in a private sector project we don't have, again, some of the complexities that Gary does. So we are interested in the switch price and the hurdle price, et cetera.  And I would just note, actually, that in the project for which we've gotten the most grief the last few months, which is the Tata Mundra power plant, that already triggered our 100,000 tons requirement, and we did a shadow price analysis internally.  And, actually, it tends to show that the project is pretty robust.  So it doesn't necessarily – I think this is part of what Gary was implying as well, and I think, Smita, your comment as well – it is, we think, a very useful piece of information that can – it doesn't necessarily dictate any particular use of that information.  And so we would like to have a clear endorsement for going forward with that analysis, but right now we're a bit on hold pending the resolution of the SFCCD.

MR. WHEELER:  Okay, thank you, Alan.  I'm going to try to play the role of bundler here and suggest that – we had several people who asked questions about the CDM and potential expansions.  We had Adam; we had Nancy.  There were some other issues raised there, but we do have our colleague, Phillipe Ambrosí, who, a bit later, is going to say a few words about financial instruments.  I thought, therefore, we could perhaps defer a response to those questions until we've heard from Phillipe, who's going to cover some of that terrain.

We had – let's go back to the beginning here.  We had Indur's intervention on issues related to development and the sort of estimation of cost and so forth.  And, Indur, could you restate, just for everyone's recall, in 20 seconds your point, and then we'll go for a response?

MR. GOKLANY:  I made two points.  One had to do with the fact that development is actually a method of helping adapt because it builds adaptive capacity, and the strategic framework doesn't seem to recognize that sufficiently.  The other point that I made was that many of the impacts of climate change do not fully consider future adaptive capacity, which will be different from current adaptive capacity.  And I think that has a tendency to skew all the analytical stuff in terms of benefits and costs, et cetera, as well as the costs that would be needed to deal with adaptation.

MR. WHEELER:  Thanks very much.  Michele, do you want to organize a response for that one?

MS. DE NEVERS:  Sure.  Actually I'll just respond.  It's true that development builds adaptive capacity and that's why our focus is on development, and it's true that there is the potential for that adaptive capacity to be greater in the future rather than less, in which case what you're is true, the negative impacts would be overestimated and the positive impacts underestimated.  But one of the things that we pointed out earlier was that one of the strongest feedback that we got in consulting this framework was the real problems in the availability of that capacity, in the availability of capacity now.  There is a strong dearth of institutional analytical capacity, basic awareness, and the ability to implement any kind of programs to take into account climate change at the central government level, at the local government level, at the community level.

So it's true that in an ideal world there will be huge increases in adaptive capacity, but at the moment, that is one of the constraints in dealing with climate change. So we would rather err on the side of estimating what the costs of adaptation will be and dealing with them, rather than assuming that they will be lower than we currently anticipate because there will be better capacity in the future. There is a lot of effort to try to build that capacity, but it doesn't exist now. So, I mean, it's a good point; we can be optimistic.

MR. WHEELER: Thanks. There were a number of people who raised issues that had to do with internal incentives and the World Bank and the IFC, and also the issue of training. Jill had raised that issue: the question of staffing, the question of capacity. Michele, again, could you address –

MS. DE NEVERS: Yeah. A couple of things that we're doing: We are developing an internal training program called Climate Change for Development Professionals that we are planning to roll out very widely across the Bank. We're also developing some e-learning courses – basic literacy of even just the terminology. So we have a plan to do a lot of training and awareness raising for our staff. We also have recently put in place a leadership development program called – I think it's called Sustainable Development Leadership Program, and that – we had the first cohort of that in June. And there's a very large focus on climate change in that.

The good news about that is that it's bringing in staff from across the Bank, so outside of just the environment and sustainable development family, but it did serve, I think, to illustrate the challenge of this work because we had been talking about climate change for most of the week, and on the last night before we ended, I was having a drink in the bar with one of our very senior economists in the World Bank who comes from the economics practice, and he leaned over and – did I tell you this? – and he leaned over and said, you know, there is one question I wanted to ask all week but I just didn't really know how to ask it, and that is, what is carbon? (Laughter.) True story – Chatham House Rules – (laughter) – but it made me realize that, you know, we had been talking about a lot of the esoterics about carbon accounting and, you know, the work that we're doing on our own carbon footprint of our physical operations. And I had gone through a complicated explanation of, you know, how we buy offsets and whatnot, and to have this very senior, lifetime professional economist ask this question made us realize part of the challenge that we understand.

I think Dennis raised the point, that was very good, that if we just add this, if we take the safeguards approach and make this a requirement – okay, now you have to do something about climate change on top of everything else, we'll get nowhere. What has struck me about working on climate change at this point in the World Bank is how different it is than working on environment in the early days in the World Bank. And the difference is the client countries are asking for it. The client countries are saying, we're worried about our agriculture, we're worried about our energy, we're worried about our water; we want to know what to do with it. And what I'm finding today is that – you know, I would never have worked with somebody like Gary Stuggins 15 years ago when we were working on environment because those were the infrastructure energy guys and we were the environment guys and it wasn't like that. But now we're working very closely with IFC, we're working very closely with our infrastructure colleagues because the demand to think about climate change is already there.

So, you know, are we going to have a box that we kick in the CAS on climate change? That's not the approach that we're taking, and that's good because there are some country directors who don't – particularly in Africa, they don't see what the relevance of climate change is. You know, they're saying, I'm dealing with HIV/AIDS, I'm dealing with malaria, I'm dealing with TB; you know, why do I even need to think about climate change? So it's an awareness issue, but it's, I think, much more – there's much more of a client demand-led approach and country-based approach that makes this very different.

MR. WHEELER: Thanks. Can we move to Al's three-tier question there? And, Michele, see if you have any – or have other colleagues here who would like to respond, or do you think in some –

MS. DE NEVERS: This is on the macro –

MR. WHEELER: Right.

MS. DE NEVERS: Yeah, I think Gary addressed some of these questions. Certainly on the option value of land for carbon capture and storage, not only are we looking at that, but one of the things that we're trying to do – this carbon capture and storage, it also relates to Nancy's question on intellectual property rights. I mean, this is one of the big technology areas that one hopes – you know, Gary's friend in the U.K. hopes will be a big part of the solution. But the only way it'll be a big part of the solution is if developing countries are involved in the early stages of the R&D and the demonstration projects and the development and the scaling up to commercialization. And this is something that we're working with the Europeans, who are really in the lead on this, to try to broker some partnerships with the big developing countries because if the route that they go is they invest in their 12 demonstration projects and they spend 10 years getting it up to speed, and then they take it and want to go sell it – and I think that is the approach that the industry has in mind.

The industry is going to the EU saying, you need to give us these billions of dollars of subsidies so that we can develop this technology, which at this point is very, very expensive. Without a carbon price, there's no way you would ever use this technology. And they're using as the justification to the EU the fact that this technology will be useful in India and China, but they're not taking the approach at the moment of involving India and China in the process so that it will actually be incorporated, and this is something that we're trying to broker.

Why is the Clean Technology Fund only in middle-income countries? The Clean Technology Fund is focusing – because the emphasis of these climate investment funds is on scale, we're focusing on countries both on the vulnerability side for the Pilot Program for Climate Resilience and on the mitigation side on the Clean Technology Fund where there is scale. And it just happens to be that the countries with the largest emissions where there's scale are middle-income countries.

MR. WHEELER: Okay, thanks, Michele. And at this point I'd like to hear from Ian. Ian, if you could give us some thoughts. I think you had a little presentation prepared. And then we'll go back to Q&A. And Ian's going to talk about adaptation and natural resource management issues.

(Off-side conversation.)

IAN NOBLE: Okay, I'm going to go through a few brief comments and I'm going to cover how adaptation and also natural resource management are dealt with in the strategic framework. So firstly, just a very quick summary of the main points that are in the framework.

The first one is that adaptation is – in the actual words of the framework – equally if not more important than mitigation to many developing countries. Now, it also recognizes that the distinct needs and priorities, et cetera, will vary from country to country, and in fact also within country. And this is reflected right across the world – developed, developing, et cetera – that there is always this heterogeneity of this debate about the relative importance of both adaptation, mitigation, and, in the context of developing countries of course, the whole development agenda.

It also recognizes – I think which is something that's essential; it's often stated by less often acted upon – the important link to disaster risk reduction. We've often made the point within the Bank that there's a lot to learn between these two areas of activity. They are not identical, of course, because we deal with different types of climate risks, with different types of risk in general, and of course some of the basic procedures and principles are somewhat different, but there is a huge amount to be learnt there, and they effectively come together because we know that, as now, in the future we will not be able to reduce all risk, and therefore we will be suffering, quite likely, more disasters, but certainly what we're seeing at the moment.

It also emphasizes the need to integrate climate risk into national development planning. Now, we understand the critical issues around this. First and foremost, this is fully accepted that there is an obligation on the part of developed countries to finance a significant proportion – I'm not getting into getting into exactly what that is; we'll come to some of that later – of the additional costs associated with adaptation to climate change. That in itself is a very, very difficult quantity to identify. There's not a detailed discussion in the strategic framework, but issues such as the adaptation deficit arise. Very few countries, developed or developing, are fully adapted, fully in line with current climate.

So where does that fit in to this obligation? We don't have a position on that. It's one that has to be decided as part of the international negotiations, but it is always going to be very difficult to come to an estimate of what is truly incremental costs for adaptation and what is part of the broader development process.

Another issue is that many countries fear that by talking about integrating climate risk international development planning – well, one is that this is seeking to transfer all of those costs to the developing countries, which clearly is not our goal, but we do struggle with how to identify the costs. But also, where is the resourcing, where is the activity which will support those urgent and immediate needs which are better funded through smaller project-based adaptation efforts? And, again, we recognize that they are essential and they will continue, but sometimes of course they're not necessarily – the Bank is not necessarily the best agency to be moving on those particular issues.

Now, moving quickly to national resource management, essentially the argument made in the strategic framework is we need to revisit the development paradigm, to look more closely at the interface between intact ecosystems, conservation, and climate change. Now, that is not a very new statement, it's one we've heard before, but I think the point is that we have to give further emphasis to this and continue to give emphasis to this.

There's a suggestion of a series of approaches there. There's a suggestion that better inclusion – continuing to improve the inclusion of NRM in the poverty-response strategies, recognizing the role of ecosystem services in adaptation and what they can contribute to both effective development and resilient development, recognizing that we do need better indicators to track ecosystem health – I won't get in a debate about what ecosystem health is; I've spent some years of my life arguing that one backwards and forwards – and working on further, better methods for evaluating ecosystem services – all of them huge changes that exist with or without climate change, but we still have to continue to work on them; in fact, there's even more incentive to do so – and of course complying with our current safeguards in this particular area.

Now what I want to do is ask some questions: Could we go further in the strategic framework, and why is it we haven't done that, and what and where is it that as the regions within the Bank develop their own business plans, their own implementation plans, whether they can take these things further.

One of the first things we have to recognize – and we've emphasized this again and again – that adaptation is critical to successful sustainable development, but it's not an end in itself. This is the message of the IDA paper, which did argue for the need to increase the IDA replenishment, partially to take into account the additional costs associated with climate change.

We've been seeking in the Bank development that is climate-resilient, but, again, it begs certain questions: How resilient? Now, this has to be a decision for the countries. How far – how much are they prepared to spend to create measures, be it maintaining appropriate water storages, be it appropriate natural ecosystem buffers, be it maintaining mangrove systems as a natural buffer against storm surge, et cetera? How far do countries want to go? There is no simple solution to this. This is something that county by country has to make a decision. Even within a county there will be disagreement over that particular issue. But we also have to ask the question, if we're all making investments in development, how do we maintain appropriate due diligence to ensure that the development goals are going to be met with different countries taking different decisions about resilience? And, again, this is where we come back again into the interaction with disaster risk reduction. They must go hand in hand in this situation.

This debate at the moment is made more difficult by the current debate within the negotiations over what I've labeled here as compensatory funding for adaptation, which developing countries are quite appropriately insisting should be separate from IDA and managed under a UNFCCC arrangements. Now, it is – countries are obviously in the appropriate negotiating positions. Some developing countries are taking a more – I'll say more one side than the other. There is some certain pushback from certain developing countries taking the opposite side on this. At this stage it's a very difficult area to enter because we don't know how much we have resolved by Copenhagen, whether this is essentially a temporary impasse before we can move back to the model that we can operate with, or whether this will go on as a continuing tension within this whole area, but one way or another we have to deal with it. At this stage we're in a particularly uncertain state because of the situation of the negotiations.

One of the other issues is, how can we provide firmer advice on how to integrate adaptation into development? The strategic framework is very – has a very limited treatment of the detail. Obviously we identify certain issues. We are looking to produce and hope to produce more tools for doing assessments for working out what are appropriate risk-management approaches. As Michele mentioned earlier, the need for capacity building – this is essential. In fact, even more important is the need for capacity maintenance. A lot of effort has gone into capacity building but it's often not been maintained. We have to find ways of being more efficient in that area.

Information access and knowledge sharing. Clearly they are things that we do on the strategic level. How they're worked out in detail of course is going to be something for the regions in each country to make their own decisions. The question – and I think I heard mention of it here just recently – can we strengthen our due diligence? And one of the questions often arises of course, should there be safeguards associated with managing climate risk? We are making a first step with major water projects where we're providing suggestions and advice as to how we may look more systematically at climate risk. My own personal view at this stage is we're far too early to even be thinking about approaching this through a safeguards mechanism, and I'm not personally convinced that that is an appropriate way at any stage because it, I don't think necessarily, fits that sort of model.

Natural resource management. Again, can the framework go beyond pointing out that there are additional risks and complications when it comes to managing natural resources? One question that I have often raised and challenged people with is, should we more strongly advocate a proactive approach to managing natural ecosystems under the impacts of climate change? One of the questions I've often asked is, when, looking at how this particular natural resource is to be used, have you thought through what you will do if this area is subject to a sequence of major climate impacts? For example, this area of your forest is subject to those three once-in-a-thousand-years fires in a 20-year period, which fundamentally changes the nature of those forests, and so on. Again, I think this is one area we need to look at very carefully, without being prescriptive about how this is to be done, but to encourage people to think actively – sorry, think directly about how they'll actively manage climate change.

Within the World Development Report – and this is moving away from the strategic framework – we're also tackling some of these issues. Some of you will be aware that the World Development Report for 2010, which will appear next year, is on climate change. And some of the questions – and these are questions in this early formative stage – have dealt with some of these issues. One of them is, is better, faster development sufficient to cope with changing climate risks, or do we need to rethink development paradigms, and what does that mean? It's easy to put a tag on it and talk about smart development, but what does "smart development" really mean?

So essentially the question that I think we're tackling is, is development, the way we've always done it, no longer an option, or do we simply have to improve the effectiveness of the way we're doing it at the moment? And that's one of the questions that the World Development Report will seek to tackle, and of course we have to wait to see what the outcome of that one might be.

So, thank you. That's a quick summary, and I hope it raised some questions.

MR. WHEELER: Thanks, Ian. Very nice – thanks, indeed.

We have three colleagues who have had indicators on the table that they have further questions, and I'm sure others will have it as well. Let's go through a round here. First I'd like to turn to my colleague, Kevin Ummel. Kevin had a question that he wanted to pose, and then we'll go on.

KEVIN UMMEL: I wanted to make just a couple of comments, coming at the issue not as someone who, thankfully, is asked to write framework documents like this, but someone who is asked to do more nitty-gritty work like emissions pathway modeling and emissions and estimation and climate projections. What scares me about this issue – or I should back up and say that I'm struck that one's response to the climate issue in general is always driven primarily by how serious you think the threat is. And that's actually summed up nicely in the very first figure on page two of the framework, which is this graph that's taken – I think it was actually in Stern originally; IPCC picked it up – which shows the temperature projection range and then the impacts that we might expect.

There is two problems with the one that is presented in the framework, though. The first is that it stops at five degrees Celsius. And the second is that it is not reflecting the fact that we are actually dealing with probabilities. So for any amount of emissions that we can think of, or any peak concentration in the atmosphere, what we are actually talking about is a range of probabilities for warming. And we cannot exclude rather significant, but small probabilities of truly catastrophic warming, at which point the idea of developing and adapting, in my opinion, become irrelevant.

And if we are not really – how I read the document is in some sense that we are content with accepting a small probability of catastrophe. And my great fear, really, is that 50 years from now – and I am probably one of the few people in the room, who might actually still be sitting around this table in 50 years – (laughter) – is that we will be sitting around here and having the same discussion. And the only difference will be that we will be saying, in effect, too late. We lost the chance. We are past the tipping point. And at this point, we are just doing adaptation. That is all we can do. So on the question of weighing the adaptation versus the mitigation; I just wanted to make that point about the probabilities.

What we don't know about the climate system, in my sense, is not a cause – is not an argument for delay, but instead, is an argument for really taking drastic action, and specifically, with respect to the framework document. I keep seeing – and I have seen this in a number of proposed legislation – the U.S. often throws us in there, which is this desire to not supersede the U.N. FCCC process. I understand sort of the basic idea behind that. On the other hand, if you look at what might possibly come out of those negotiations, my opinion is that anything that comes out of them will be consistent with a rather significant probability of really catastrophic stuff. And we are talking about a 550 or 450 cap.

In my opinion, the bank of it really wants to be responsible to its client – should be asking how do we go way beyond that? How do we think about blowing past what the international community comes up with in a negotiation? So just my comments – just a quick take on the document.

MR. WHEELER: Thanks, Kevin. Let me follow on just for a second there. I'll put this on the table, and then we can go onto our colleagues who have other questions. And that is back to the issue of put up or shut up, in a sense, I think that is what it boils down to. And in the final analysis, it is true that one sense of the stringency of the implicit shadow cost of carbon. It should be applied in a context relates to the sense of urgency. It has to. And as we all know, there are people like Jim Hanson, who think that we have already gone past the tipping point or are about to do so. And yet, one has struck, as Eduardo said, and he is perfectly correct.

And on the street in many countries, including – particularly this country, one has no sense of such urgency – quite correct. So there is a really important role – issue for the Bank here. How can the Bank provide a megaphone? Of course, a megaphone that is sympathetic to the interests of developed countries to get this thing onto the agenda, not only with a sense of urgency, but a sense of what the bill will be for specific particulars to make it right – had to cut through this rhetoric and actually make it very explicit in the halls of the legislatures of the developed countries in ways that must be responded to. Now, maybe this isn't a role that the Bank has traditionally had. But in my view, having worked there for a long time, it is not clear to me that it should not have that role. And I think in the trade policy dialogue, it has definitely had that role.

The Bank played a huge role in reorienting the trade policy discussion to consonance with the poverty discussion and felt no hesitancy about going into the halls of the powerful in the developed world to make that case. So why not do it in this case, as well? Just a follow on to Kevin's point. And now let's move to other colleagues. Rob, you had a question.

ROBERT SANDOLI: Hi, Rob Sandoli. I cover energy issues at the Office of Management and Budget. And I would like to build off of – go way back to Chris Flavin's comments this morning – and Smita brought it up as well on measuring the impacts and what does success look like for the strategic framework.

I saw in some of the early slides that there is going to be a two-year consultative process for coming up with, you know, kind of performance measures. And what they look like to me was still kind of input measures and how much we are investing in renewable projects versus other projects. And I wonder if maybe we can get to a better outcome if the Bank is able to commit to outcomes. What are the impacts of those investments modeling like IFC does to say, okay, if we do these projects – and I think Gary threw up a slide showing the increase in investments, and it is mentioned in the paper moving from 20 to 30 percent annual increases in renewable energy investment? But then the column next to that that is missing is, what are the impacts of those increased investments? Had they made in fossil projects versus renewable projects, for example?

And then once we know what those impacts could be, can we commit to and measure and hold us accountable, so that – as Gary mentioned, how do we incentivize people to make the right project decisions? Well, if we hold them accountable for reducing emissions related to those investments, maybe you can have more impact. So I guess to phrase that in a form of a question, is there anything that stops the Bank from making a commitment to outcomes instead of just investment inputs?

MR. WHEELER: Okay, thanks very much, Rob. We have one additional question.

TIM WARMAN: Hi, I'm Tim Warman. I'm with the National Wildlife Federation. I lead our global warming program. And I would like to start out by saying just thanks for going through this process and for being so inclusive for comments and having a really large effort to, you know, take in comments from people around the world.

My question really goes more toward the next phase because I think you have done a remarkable job in a short period of time. And you have already talked about, sort of, this ongoing, you know, process for further input and development of the Bank's strategy. But my question has to do with to what extent the World Bank is prepared to step up and really provide leadership for the world in solving this problem. This document is, to my way of thinking, a great stepping-off point for the Bank to use and say, hey, we have recognized that this is a problem, that we can be part of the solution, that it involves, you know, all countries and everyone. And the solutions will be different in different places and what people can do. But the need – and we have talked about it in various different ways, several times today about awareness, understanding, the perception of which problems may be bigger or smaller than other problems.

The opportunity through this document, through this framework and the ongoing strategy, and the ongoing investment of the Bank is really to provide leadership in helping the whole world recognize the opportunities and the need to solve this problem before we go over the tipping point that was mentioned earlier. And so that's my question sort of what's the next phase? What's the willingness of the Bank to provide real leadership on this issue?

MR. WHEELER: Okay, Tim. Thanks very much. Well, we have three questions. Basically, two along the same lines, which is how can the Bank step up and play kind of a leading role both in education and in challenge the international community, and the other has to do with Rob's question on commitment to outcomes. Michele?

MS. DE NEVERS: I think I will take the easier one and find somebody else to take the one on outcome. On this leadership question, a couple of things – you know, David is right. Both on the trade policy and on agricultural subsidies, in particular, the Bank had a very strong advocacy position. And we had a president who was not shy about articulating that position. I think we are in a similar position now. This is actually – what you people are saying here is feedback that we have gotten from all of our consultations, which is why don't you, World Bank, you know, have a stronger leadership role on this?

So that, obviously, requires commitment from the top management of the World Bank, which we have. I mean, the president of the World Bank is committed to this issue and is committed to taking leadership on it. He – one of the things that he is doing is hosting a series of meetings with ministers of finance to educate them on this issue because it is his feeling that the negotiations are involving really ministries of environment or, to some extent, foreign affairs. But for the problem to be solved, it requires money. And the money is in the ministries of finance. And so he is – one of the ways that he is showing leadership is trying to get them engaged on the debate about this issue.

So that is one of the things that he is doing. We are working with his staff to try to build messaging on climate change into every speech that he gives. So if you go back and, you know, Google him and look at the speeches that he has given for the last year, you will find messaging on climate change.

I think that there is a fair amount of agreement – certainly within the staff and management – that part of the messaging is at the developed countries. The messaging is, you know, we are under a lot of pressure to push India and China and Brazil and the other developing countries to do something. And clearly, the future growth path of the emissions will have a lot to do with what those economies do. But at the same time, there is a very strong sentiment in the developing countries that they don't think they should be pushed to go first. They think that there should be a lot more action in the developed countries, particularly some of the large developed countries that have not yet taken on obligations, who shall remain nameless, to do something.

And when you look at those paths, you know, that Gary put up of the emissions trajectories, the developing countries are saying, cheapest course for us for energy expansion is coal. Why should we do a thing if some other large developed countries are not doing anything? If some large developed countries are installing very large amounts of capacity in coal without any kind of abatement technologies in them, why should we be the first?

So we are in this position of we would like – you know, we would love to go up to Capitol Hill and tell them what we think and tell them that, you know, they need to do something if they want the rest of the world to do something and that it is not going to be China first, it is going to be other large developed countries – go first. So in terms of the leadership, we are with you. It is a question of how are we going to be able to do that. And it is – I think in some ways, it is much more sensitive than the agricultural subsidy issue was where we really got very strongly out in front on that.

On the measurement and on the outcomes, it is, again, linked a bit to the convention and the negotiation process. It would be very difficult for us to have emission-reduction targets when most of the countries that we work with don't have emission-reduction targets or limits or anything else like that. So that is why it is going to be a two-year process. That process kind of coincides with the process of getting to the convention. And we are hoping that it will all converge in one place, you know, at the time of the convention that we will be able to agree with our shareholders, particularly the developing countries' shareholders on what kind of outcome targets we would be able to reach with them.

So in the meantime, we focus a lot on the inputs. We are doing a lot of work on forestry issues, on the RED, on the CDM, on expanding carbon markets, on expanding insurance tools, on leveraging the private sector or providing – so we are doing a lot of things that will lead to this kind of situation. But for now, the quantitative targets that we are going to be monitoring are in that area. Now, we have been asked to monitor financial flows to developing countries for climate change. And so we will start to be putting together the methodologies in the database for that. And that same issue of what about developed countries definitely applies to the whole carbon accounting. When you look at the report, we talked about it. We are looking at shadow pricing methodologies. We are looking at greenhouse gas footprint methodologies.

They are generically called in the report “carbon accounting.” So if it doesn’t jump out at you, those words – the word “carbon accounting” is how we are referring to that. And the question that comes up over and over is well, what about the developed countries? Do they use shadow prices? Certainly in some countries where they have – you know, in Europe, where they have the emissions trading scheme, shadow prices are a part of what they do. But in other countries, they are not, nor is the footprinting. So I guess I would leave it like that.

MR. WHEELER: Okay, thanks, Michele. Philippe, I think, is going to talk to us about financial instruments in this context, and of course, the CDM is part of that. In the interim while Philippe is setting up, to go back and pose one question that Nancy posed, which is a quickie, on the issue of the big prize for the big innovation. Alan?

MR. MILLER: Yeah, actually that has been an IFC discussion around something called the Earth Fund, which is just getting off the ground now with an initial commitment of 30 million from GEF with the possibility of larger sums in the future. It evolved a lot from actually work done originally by World Wildlife Fund based on discussions with the X Prize people, famous for developing the commercial space flight prize and the progressive 100-MPG car prize. And we had actually been very specifically focused on a proposal to do a prize on small-scale environmentally friendly biofuels. I think NWF might have even been involved in that discussion, as well.

And in light of some of the pushback on biofuels in the last year, I think everybody has kind of stepped back a bit from that. But we do – people are welcome to get back in touch with IFC if they are specifically interested in that, or I guess Nancy brought it up. But it is in the context of what is now being called the Earth Fund, which Michele, is it specifically mentioned in the – I think it is in the SFCCD, there is a reference to it. At least, your slides make reference to it. I don’t know.

It is, Jeff? Yeah.

MR. WHEELER: Thanks very much, Alan. Philippe?

PHILIPPE AMBROSI: Thank you, David. Good afternoon. I have been asked to present quickly the financing instruments and financing mechanisms that have been developed, applied, and as a strategy framework – all that in 10 minutes. So I tried to just keep to one of the main examples. I apologize for my colleague, who would not see the work – (inaudible) – working on presented here, and to you if you have questions. And these slides are full of information. I will just pick some information, so we can keep that for discussion if you want.

This one – this slide is just what I think could be the subtitle for this presentation on what is, again, of keywords to have in mind when you read about financing instruments in the document. But that is a – (inaudible) – waiting for his big – I mean, hopefully – waiting for his big policy and financing infrastructure to be there hoping that this infrastructure will be able to get the private sector. There is a big stakeholder there able to send kind of stable and durable signal to trigger the financing for climate action. So I think that is one of the strong messages that we have in this strategy about financing.

So let's skip this one now. And now let's go through the three action areas, formally known as pillars, so if you hear me talking about pillars, they are exactly the same. And let's start with the two, which is mostly mobilize concessional finance and innovative finance. Just to start as a kind of reminder, on this chart, you have a lot of bubbles that are supposed to be the available resources for developing countries for climate action. So far, just remove – because they are not yet fully available – the climate investment funds and the adaptation funds, so climate investment is a big one here. Adaptation funds is a small one over there. And you will have what is available so far. And you can see that mostly for – you have a lot of resources on mitigation, not that much for adaptation. Mostly, resources for mitigation are coming from the carbon market. And actually that is one of the only leverage for private financing so far.

Here I have put – that is an estimate. Don't quote this number. That is 8 billion in value for the transactions – CDM and GEF in 2009. If you look at what is the average leverage of this kind of transaction, you may multiply by four or six, so it may go up to almost 50 billion leverage for the carbon market for low-carbon investment.

On the adaptation side – so there is much less funding. And there you can see that the GEF, who has been present for a long time, is a very good pilot to get information and what is an adaptation project, and how can I use my financing for this project. And what kind of lessons we can then disseminate to other sources of funding. And if you had all these circles in the end, you will have incredibly low amount. So I think there are two big questions. First, how can we try to have the most effective use of all the sources? I mean, can we try to combine them to increase the leverage? And second point, how can we use all these sources to get lessons and lessons in particular are about leveraging private sector money.

So now if you look at what the Bank has in mind together with other partners, you have many options and the action area, too. The first one is about the climate investment funds. I mean, Warren has presented the fund this morning, so maybe I won't go once again through them. I will just mention the target, which is $6 billion. Most of it is for the Clean Technology Fund with $5 billion. And, well, the rest is for the Strategic Climate Fund. We mentioned this morning the pilot program for climate resilience. Next on the list is forestry. Maybe Rohit can give you more precision about the status of all these programs and SCF.

There are two ideas with the CIF – that first, it is not here to compete with other sources of funding. It is more here to complement them, attract them, and try to be more efficient. And the idea would be, like, to use either GEF money or adaptation fund money within the CIF. And the other point is that it is, of course, here to get some experience and lessons on how to use this money – I mean, all this capital for climate action.

If we go back now to other actions and area two, there is one that is extremely important about – (inaudible) – strong – (inaudible) – and replenishment of – (inaudible). First, to be sure that we will be able to achieve or at least to go to – (inaudible) – meeting the NDTs, even if the cost of doing so is increased by climate change. And second point is that IDA could be a good platform for adaptation. You remember that there is not that much money, much capital for adaptation. It could be a good way to leverage more funding and combine it with adaptation fund or CIF funding.

Then the list of further actions, that may look less glamorous than launching a 6 billion fund. However, I think these actions are extremely critical if we want to have a big and strong impact on a project. Like when we have – (inaudible) – being able train to dictate where we could have within the same envelope or with a few extra funding some opportunities to go to a lower-carbon path or to increase climate resilience, and then increase awareness as well about all the sources of funding that are available for World Bank staff and World Bank clients, and also working with all departments. So I think this will be very important, so that people can really understand what kind of instruments we have – the kind of one-stop shop for all these sources of funding.

And the last point, which has been mentioned already by Michele, by – (inaudible) – and is about monitoring. Once again, it might look a little bit like boring. That is extremely important to people to be, both to develop – (off mike) – methodologies to track exactly are we using all these sources of funding. There is a – (inaudible) – additionalities are another issue behind monitoring that are important to solve. And the first meeting with OECD and U.N. FCC on that is like next week. So we are already starting to work on that. So, now, if we move to what is my favorite part in all these financing pillars, that innovative market mechanism, or at least try to do something with market mechanism for climate change.

So there are three directions – one about carbon finance; the other is about risk management products – I mean, climate risk management products. The last one is where there is this huge appetite for the financial markets to invest in clean energy, low carbon, and, well, could we find some ways at the Bank and with other MGBs to find some product that could interest these huge sources of capital like the P-8 (ph) and others.

So for carbon finance, you may know that the Bank has been extremely involved, engaged in carbon markets. I mean, it can be considered like one of the catalysts of the carbon market when it started to pilot and experiment some project-based transactions in the early 2000. So the idea was that first, it was able to show the credibility of project-based transactions because it was also able to bring some information to people that were still defining the rules of CDM and – (inaudible). It was extremely important. Only the way – the piloting of – and there is a CIF, et cetera, with exactly the same idea that we can bring some lessons.

So the carbon market has been growing. Last year, in 2007, I mean, we estimated it to $64 billion. Most of it is under the EUGS. Part of it is for the CM. We can consider this quite a success. However, there are still a lot of barriers to really use carbon finance to go to a lower carbon emissions pathway.

One of them is the lack of continuity of the carbon market beyond 2012. On these ones, the Bank cannot do a lot. What we can do is when we sign contracts with project is to go beyond 2012. And currently we don't need a lot. The second point is that we have all these projects and for instance, if you go at the – (inaudible) – projects, you have more than 3,000 projects. And in the end, when you sum all their emissions predictions, you see that they don't make a lot of difference in the kind of sector orientations and trends that country – developing countries are having.

So the first idea is to say, well, we should be able to use carbon finance to really be able to curb on emissions, and again, on strategy – (inaudible) – like having sector programs at a city level that would be able to really influence the investment pattern in these places. And one of the recourse to do that is a carbon partnership facility. So it has been approved last July – in September, sorry, 2007 – compared to all the funds that are managed at the Bank. The first point is that it is a partnership, so you have on the same level the sellers that could be government or companies that are really willing to implement something to reduce emissions and you have buyer at the same level. There is an addition to the standard model of the funds at the World Bank is that we have carbon – (inaudible) – development fund, which is like a capacity-building fund, whose mission is to really help build these programs of emission reductions meaning trying to identify the potential, trying to identify what is needed to get this potential off the ground, also trying to send which kind of methodologies could be used to measure credibly all the reemission reductions. And classically, the other part of the fund is, of course, a carbon fund, where you have the transaction between buyers and seller.

It is still under development. I mean, the information memorandum is going out very soon. There is one target like – (inaudible) – fiscal year 2007, which means June 2007. The CPF plans to have something like between 12 and 16 emissions-reductions programs. And it is difficult – I mean, I asked them yesterday do you want to give a size for this fund. For them, it is difficult to give a size. So what they have in mind is they have several trenches. And a trench could be a maximum of 700 to 800 million euros, which is relatively sizable compared to the size of carbon funds today.

So there is a big direction for carbon finance at the Bank. I used to say, well, look at the carbon market today. So that is already a good sign. We see that CDM is now doing a lot to clean energy like renewable energy and energy efficiency, so that is good. However, we see that – (inaudible) – is absolutely not going to everything linked to forestry and agriculture. There are many reasons for that. The first one is, of course, that EUGS – I mean, EU emission – (inaudible) – doesn't allow – (inaudible) – credit from forestation and reforestation project. So of course the biggest part of demand is not there for this kind of project.

The second – so the idea would be, well, can we try and find new ways to really involve forestry in the carbon market and have carbon finance add to reach more sustainable land practice, forestry practice, and increase – improve the livelihood of communities. So one of the channels to do that would be the forest-carbon partnership facility. It is the forest-carbon partnership facility, also approved in September 2007. This one is operational since July. And we have, like, 14 countries on the seller side. That has been eligible to start working on – (inaudible) – forestation. Basically, the idea is to say, we need – there is a lot of interest for having a market for reducing emissions from the – (inaudible) – forestation and land degradation. A lot of support was had, but we still need methodologies. We still need to think what can a country do for that meaning identifying what are the drivers for the forestation, what kind of governance this country has to put in place to really improve forest management. How to measure that, do we use remote sensing, do we use onsite surveys? So all of these have to be developed.

So that is the idea of these funds – to pilot these kinds of transactions. So we have what we call a readiness fund, one of the million that is here to give grants to these countries, so that they are ready – so that they can develop methodologies until – (inaudible). And then we have a second part of the fund, exactly like for the CPF, which is a 200-million fund, where you could have transaction involving – (inaudible). And then the idea would be to pilot that and eventually bring good reasons if there is a strong market and a strong interest for – (inaudible) – future carbon market.

Here you have the 1 billion written. I think if you stick to the target to reduce the forestation by 50 percent – if you decide to use a carbon market to do so, then you would have an annual carbon market with RED. That would be like $50 billion. So that is a huge amount of money for these countries and to help them to really reach more sustainable practice in forestry. Then the next one for carbon market is building on what we have. We have a lot of – you know that part of the carbon market is going to developing countries identify projects and transact emission reduction from this project.

And fortunately, a lot of buyers or a lot of investors may not be comfortable with the type of project because it is a new technology or the type of countries, where the projects are. So there are two products that have been developed by the World Bank Group. One is the IFC – (inaudible), which basically enhance the credit of a project meaning that the buyer will feel more comfortable in buying carbon credits from this project. And the other product is the – (inaudible) – insurance that will basically make an investor in a project more comfortable in going to this project. And the idea is to be able to use more systematically these kinds of products to increase – (inaudible) – confidence of investors, helping to raise more money from the private sector, or the confidence of buyers in the projects, so meaning – helping potential projects to reach a carbon market.

And the last one, of course, is still doing a lot on building – (inaudible) – and capacity building. For instance, in the low-carbon growth – (inaudible) – there are a lot of sections that are devoted to carbon finance and how we could do more with carbon finance in these countries. Then, I will go quickly – my time is up –

MR. WHEELER: (Cross talk.)

MR. AMBROSI: It's over – so insurance mostly. A lot has been done about developing index-based insurance for agriculture. What is interesting and in some case – (inaudible) – to cover the premium and your action going forward – there are efforts to develop some – (inaudible). If we go to this one, it is also extremely important how to meet the appetite of financial investors. Of investors, one example we had recently was – (inaudible) – where basically, I think it was one of the first bonds to link returns to performance of projects and carbon prices. So that is that you purchase these bonds – part of the capital – (inaudible) – will go to a project depending on the performance of this project, you will get eventually high return or relatively low return.

But if you take the risk, his idea was to find people willing to task these risks and use – part of the capital to invest for the – (inaudible) – project. So this one is one of the first ones of its kind. And then you have other initiatives as a – (inaudible) – exactly the same idea, except that we do not stick to carbon project, but we go even to reach adaptation project. That is under development. And we could have some news by 4:00 with the launch of the first bonds sometime this fall. And a much longer – (inaudible) – versus idea of facility to frontload commitment by donors to get some money for mitigation and adaptation. I will just close with that.

This is my leverage private sector resources working and improving generally investment climate in the countries – developing countries. Most specific actions towards climate actions like finding ways to subsidize in climate, of course, the fact of mitigation, for instance, with some kind of frontloading packages using carbon finance. I understand that IFC starting to develop that, and also try to target underserved clients like municipalities and (SMEs?) that may have difficulties to – (off mike). I will close on that. Sorry for the long –

MR. WHEELER: No, no, it's fine. It was a short presentation. Sorry we have to be so compact here. Thank you very much, Philippe. It is obviously a very broad topic, and there is a huge amount going on. You know, let's guarantee that we will close by 2:15. One or two other items here, and then we will be prepared to be on our way.

Michele may have some concluding thoughts. I would like to pose just a couple of quick questions following from Philippe's presentation, particularly on the supply-side investment. Not to put you on the spot, but I wonder if you could give us – because there is – on the supply side, there is certainly a potential big donor that remains potential, which is the USA. And it certainly was part of the genesis of the Clean Technology Fund. It is a very important initiative. It has not gone away. It is under active discussion, and Beth certainly could give us a very quick briefing about the status of the CTF insofar as the United States is concerned. Beth, if you could introduce yourself, please.

BETH URBANAS: My name is Beth Urbanas. I work for the United States Treasury, and I am currently the director of the newly created Office of Environment and Energy. So on the status of funding for the CTF, this is largely a Hill update, I think, that you are asking for. And right now we have legislation that has been introduced on the authorizing side on the Senate. We have report language that has come out on the Senate side for appropriations. We also have on the House side language that we hope to finish up and get out on the authorizing side that we have been working very closely with Mr. Frank's committee staff and with Chairman Pelosi's staff.

And hopefully, we are in our last round of back and forth on that. And we are hoping to see that legislation introduced hopefully shortly. We are pushing very hard for that. But we do feel very positive that we would be able to come to the first – the pledging meeting that will be happening on September 26th, and subsequently to the first trust fund committee meeting with very strong legislation, both on the authorizing and appropriator side, you know, legislation that is sponsored by one of the potential vice presidential candidates, Mr. Biden, on the authorizing side in the Senate, and then by the speaker, herself, on the House side.

So we are very optimistic that we will be able to meet our commitment. And things actually look pretty good right now. We have been pleasantly surprised this summer. (Chuckles.)

MR. WHEELER: Thank you.

MS. URBANAS: And you know, the president remains committed to this. The secretary, himself, is particularly committed to this. This is one of the key things he wants to accomplish, you know, by the end of his tenure. And I think he feels it is very unfortunate we have had this housing market crisis to interrupt his work on climate and environment. But it has been a very large priority for the secretary. And as part of that – he was here earlier – but we have created a new office at Treasury and brought in a very serious person in a career position, Billy Pizer, who is going to be our deputy assistant secretary. And he will be with us as we staff up and build capacity to deal with the climate change, both on the domestic and the international side going forward.

So – and there is a strong commitment at Treasury to continue to work on this issue, both in the international context and in the context of our responsibilities toward the MDBs, which were here today. But also, on the domestic side and how that links up with the international side, and how it links up with our negotiations internationally, particularly on the financing issue, which, I think, we all expect is going to be very much center stage as we move forward to Copenhagen and probably beyond. (Chuckles.)

MR. WHEELER: Okay. Thank you very much, Beth. Per Philippe's suggestion, Rohit, perhaps will have a thought or two on the general issues that Philippe raised or other issues that might seem pertinent.

ROHIT KHANNA:  Well, I can answer any specific questions, if you want, David.  I think Philippe just made a reference to the timeline for various programs under the strategic climate funds, so maybe I can just refer to that – elaborate on that.

As you know, the first program that has been designed is the pilot program in climate resilience.  Through the fall, we will be having a series of design meetings on the forest investment program, which will be the second program under that trust fund with the plan that hopefully the discussions will conclude by December or January.  And we would have that program operational in the spring.

A little bit further behind in the line – in the design phase – really early in the design phase is a possible program for scaling up renewable energy in low-income, low-access countries.  That is still very much on the drawing boards and we haven't moved to the next phase of scheduling design meetings.  But those are sort of the things in the pipeline under the planned investment funds.  Thanks.

MR. WHEELER:  Thanks very much.  Michele, you may have some concluding thoughts or comments.

MS. DE NEVERS:  Well, I was actually going to try and summarize this, but I won't.  I think you should all be grateful.  What I would like to say is that it has been very, very helpful for us, very interesting.  We really appreciate all of the comments that we have gotten.  We appreciate people taking the time to read the document and give us your perspectives on them.  What we would plan to do is to summarize the conversation that we had today and to post it on our website.  When we do that, if you think there are any important points that we have missed or not captured correctly, please let us know and we can change that.

And then we will do the best that we can to incorporate the comments that we have received today and the perspectives that we have heard into the final document, which will go to the development committee in October.  So thank you very much.  I appreciate it.

And also, I would like to point out that there are some documents over on the table there, including one that I would just bring to your attention on the views of World Bank board members representing 60 countries on the strategic framework.  These comments refer to a previous version of the framework.  But I think that you will find them very interesting.  And Mr. Savoy (ph) and his colleagues have put these together.  And thank you to the Center for Global Development and to David for organizing this for us.  We appreciate it.  Thank you.

MR. WHEELER:  Thanks, Michele.  This came, I suppose, originally from one of many coffees that we have – some months ago.  I am glad we had a chance to get together for this.  Before closing, I would like to say a big thanks to Ben Edwards, who has been very patiently videotaping this entire exercise in the back of the room.  We certainly appreciate your efforts, Ben.  And Ben is very active in our communications team and web development team, and will play a big role for us in publicizing the results of us. And if I might also ask our colleague in the back, who has been assisting us – if you could please introduce yourself.

MR. : (Off mike.)

MR. WHEELER: Aaron, thank you very much. We certainly appreciate your help with putting this on today. So with that, I thought I might just close with one thought. This comes from my old friend, Sandy Davis, who is sort of one of the deans of development anthropology in the Bank for many years. He used to categorize, you know, sessions like this, which were quite common in the life of the Bank with a somewhat Zen-like phrase. "Development is a conversation," he used to say. And you know, that is, I think, more than a trivial statement because as it turns out, an awful lot of the forward progress that we make comes from conclaves like this, where people simply meet together, exchange ideas, and have their perceptions and their actions changed by those conversations.

And certainly, the World Bank for decades has been involved in development as conversation, among other things all over the world. Thanks to Michele and the Bank team for taking so much of your valuable time to come share your thoughts with us today. And thanks very much to all the people who came to participate in this. We hope that it has been useful for you. Thank you.

(END)