

THE BROOKINGS INSTITUTION  
CLIMATE CHANGE ADAPTATION IN A POST-DURBAN WORLD

Washington, D.C.  
Friday, January 6, 2012

**PARTICIPANTS:**

**Introduction and Moderator:**

ELIZABETH FERRIS  
Senior Fellow and Co-Director, Brookings-LSE  
Project on Internal Displacement  
The Brookings Institution

**Panelists:**

ANDREW STEER  
Special Envoy for Climate Change  
World Bank

NANCY BIRDSALL  
President  
Center for Global Development

NATHAN HULTMAN  
Nonresident Fellow  
The Brookings Institution

\* \* \* \* \*

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

MS. FERRIS: I'm a senior fellow here at Brookings, and I'd like to welcome you all to this session on Climate Change Adaptation in a Post-Durban World.

We have a very distinguished panel to offer their contributions on this issue.

Incidentally, this is an issue that is only going to become more important in the future. Our little project on internal displacement, an entry point to the issue of climate change, started with people displaced by sudden onset national disasters. Our expertise in displacement we saw was often applicable to people forced to flee their communities because of floods or hurricanes or earthquakes and volcanic eruptions, and so forth. But the more we looked into this issue, and the more we talked with communities on the ground, the specter of climate change and its potential impact on human mobility led us to engage much more with issues of climate change.

But when you come at this from a humanitarian or human rights perspective, you immediately encounter almost walls, if you will, with a lot of the discussion of environmental issues; climate change seems very technical; the jargon is different; the issues are different; sometimes the assumptions are different. Those of us, quite frankly, on the humanitarian side don't know very much about all these climate change structures. And, frankly, a lot of the people negotiating climate change agreements don't know very much about human mobility and the way in which people decide, for one reason or another, to leave their communities and move.

So, we initiated this seminar series trying to bring together people from different disciplines to approach the issue of climate change, mobility, adaptation, mitigation, et cetera, from different disciplinary and organizational perspectives. And looking at mobility as a form of adaptation immediately takes you into the issue of

adaptation funding and financing and who's thinking about migration or displacement or planned relocation as a kind of adaptation tool.

It seems to us -- and we'll be interested to hear from the panel -- that a lot of people talking about adaptation financing and special funds aren't thinking about some of the intricacies of how mobility figures into that, and so we hope to address some of those issues.

From our perspective, there are a lot of questions about adaptation financing and funds as it relates not only to mobility but to broader adaptation measures. One is the adequacy of such funds. Is there enough money? Very ambitious pledges were made in Copenhagen -- about \$30 billion -- and \$100 billion within a certain time frame. Is that enough? Will the money materialize?

There are questions about the funding between a balance of funding, between adaptation and mitigation. You know, for a long time the big focus was on mitigation. Has the tide turned? Is there more serious interest in adaptation and adaptation mechanisms?

And it seems sometimes that we're very much bogged down in political negotiations and bureaucracy. What will this mean to people on the ground who are facing the effects now of climate change?

There are questions about whether or not the funding for adaptation is new and additional or, in the words of the jargon of global negotiations; financial resources should be scaled up, new and additional, predictable and adequate. What does this mean in terms of grants versus loans? What does it mean about the way donors count their contributions? Is there double counting of contributions to adaptation funding and larger development projects?

There are concerns about the sheer complexity of funding systems that

have administrative requirements. A recent count said there are over different climate change adaptation funds at the regional and international level, not counting bilateral programs of government such as Australia and Japan. What does that mean on the ground when, for example, in Tuvalu, one of the countries most likely to be affected to be climate change there, a staff of five working in an environment ministry? What does it mean to be able to access those funds to report on them? How are issues of accountability and donor requirements figured into this system?

To address some of those questions, I hope, we put together this panel to look particularly at adaptation. We have a great, great lineup, and I'll just introduce them briefly. You have their bios in your packets, so I won't go into much detail.

We'll begin with Andrew Steer, who's a special envoy for climate change at the World Bank. He's done a lot of work, was in Durban, has some perspectives on what happened in Durban in terms of adaptation and some of the broader issues, and he'll set the stage for us. Before he came to the World Bank as a special envoy, he served for three years as Director General for Policy and Research at the U.K. Department for International Development, DFID, in London and has worked in this area for more than 30 years.

Coco Warner, who is the head of the Environmental Migration Social Vulnerability and Adaptation Section at the U.N. University in Bonn, had planned to be with us today and unfortunately wasn't able to travel at the last minute. She pre-recorded a video, so we got everything all set up, and then we couldn't download the link last night. (Laughter) So, unfortunately, she's not here even in video form, but we put the transcript of her remarks out, and after Andrew speaks I'll attempt a little five-minute summary of the some of the points she makes drawing the connections between human mobility and adaptation. She's probably one of the leading experts in the world on this issue, and

we're sorry she's not here, and I'm sure she's very sorry that the download didn't work.

Nancy Birdsall, who's president of the Center for Global Development, will speak next, looking particularly at the issue of financial transfers. She is the founding president of the Center. Prior to that she was executive vice president of the Inter-American Development Bank. She also has a record with the World Bank and has written extensively on the Asian broader development issues. Welcome, Nancy.

And, finally, we'll hear from Nathan Hultman, who's a non-resident fellow here at Brookings working in our department on global economy and development. He specializes in international climate policy, carbon markets, et cetera. He's director, also, of an environmental policy program at the School of Public Policy at the University of Maryland; associate director of the Joint Global Change Research Institute for the Pacific Northwest Regional Laboratory; and has participated in U.N. climate processes since Kyoto.

So, a very knowledgeable panel. We'll hear their presentations, and then there'll time for questions and answers. So, thank you very much, and we'll turn it to Andrew.

MR. STEER: Good, thank you very much, Beth. It's a great pleasure to be here on this important subject, and it's great to see such a good turnout. I notice some don't get seats. There are lots of seats up front by the way, so don't be shy, come to the front.

Maybe just sort of setting the stage, first a general word about Durban -- I suspect most of you know a lot about what happened, but maybe I'll just take two minutes on that -- then talking particularly about adaptation, then a word on the migration story, and then sort of a final piece on "so what."

Durban, much greater success than they anticipated. Bottom line: very

good for the long term; not very good for the next nine years. Three building blocks came into place at the last moment at 3 o'clock in the morning. We needed all three at the same time.

Piece number one was a new commitment period under Kyoto without which several in the G-77 said, look, you know, you're not serious unless we do that.

Piece number two was the European Union said okay, we'll go along with a new commitment period under Kyoto, but we insist on a road map toward a legally binding deal to be negotiated by 2015, to be implemented on the ground, working, by 2020. That fell into place at the last moment.

But lots of the G-77 said, hey, those are all very well, but without the Green Fund really coming into existence it doesn't make any sense because there's not much we can do, and so the Green Fund also was launched, if you like; the starting gun was fired; and by April of this year we hope there will be the first board meeting of the new Green Fund.

So, those three pieces, very, very important. Realistically, until 2020 there is no global regulatory environment at all. So, to the extent that we're going to make progress -- and we must make progress, because this is the make-or-break decade -- that has to be done by real leadership throughout the world. Countries are seeing it is in their own interest and because they want to be leaders in finding solutions.

Finance plays a particularly important role in this coming decade. The Green Fund will be dispersing money maybe four years from now, but it'll take the rest of the decade before it scales up to anything close to what is needed.

So, I'd be happy to talk about any of those, and particularly, obviously, because we are the interim trustee of the Green Fund I'd be happy to discuss that as well.

In terms of adaptation, an important decision was made in Durban, as you know. The Adaptation Committee that had been agreed in principle in Cancun last year was really launched. It will meet for the first time this year. They have 16 members, world-class distinguished people operating in their own personal capacity. They'll meet twice a year. Their job is to think strategically about whether or not exactly the questions that Beth was just raising: Are we doing enough on adaptation? Are we learning enough? They will seek to play a role of knowledge synthesis. They will retain a roster of global experts on adaptation. They will ask the question, you know, is there coherence in funding? Lots and lots of different sources of funding for adaptation. And they'll ask the question sort of what is adaptation? How do you define it exactly along the lines of what Beth was talking about?

Now, in addition to that, there were a number of quite important decisions made at Durban relating to technology mechanisms; relating to common market reforms; relating to agriculture as part of the conventions we regard as very, very important, with regard to (inaudible) MRV -- monitoring, reporting, verification. It's a whole range of actually quite important decisions.

But we shouldn't kid ourselves. This is the decade when action needs to be taken, and currently the negotiators, working hard as they are, are not really delivering very much for this decade. They're positioning things very well for the following decade, but we now need to get on with it. This needs to be a decade of action.

So, standing back from adaptation and then sort of segueing into the migration piece, there's a lot of thinking right now, as you're all part of, as to really what adaptation is. I mean, you think of sort of continuums. Continuum number 1 is: Is adaptation trying to reduce the impact of climate change on the one extreme? Is adaptation trying to reduce the vulnerability to shocks on the other end of the spectrum?

Those are different things.

On the first end, reducing impacts, you'll tend to spend more money on physical and hard things. At the other of the spectrum, you'll tend to spend more money on softer things. Now, the worry and so, for example, of -- just to give you an example -- you know, how do you measure what money is being spent on adaptation the moment there are no rules whatsoever?

So, if you ask the question is the Fast Start money being spent, it would depend upon what definition different countries use as defining whether or not they're spending money on climate change -- in this case, on adaptation. So, if you go to the website, the Fast Start website, you will see different countries, donor countries listing what they're doing. You'll see vastly differing numbers, and actually if you probe -- although it's very hard to do it -- you'll find very, very different definitions.

So, some countries will say really, anything we're doing in the water space will count as climate change. Why? Because almost everything we do on water relates one way or the other to climate change. This will take a much, much narrower definition.

Now, the World Bank has just done a great deal of work as to how we are going to hold ourselves accountable so we have here a 20-page piece, and you can't do it less than that, unfortunately, defining each sector, each sort of area we're in, everything ranging from education to energy to agriculture to public administration to social protection. What elements within each of those would count as adaptation? And that's a difficult thing to do, but it's very, very important to do it, because we all need to be accountable, and we need to understand where we're really going.

Coming now onto -- and we can certainly go into that in much more detail if anybody is interested, and as you can imagine it's a very live issue, because



developing countries are rightly saying wait a minute, you guys all promised that you would put a certain amount of money in, and moving forward you committed to do a lot more money; we need to know how we hold your promises to accountability.

Now, coming onto migration, I think everybody here sort of is pretty familiar with the sort of current state of knowledge on the link between climate change and migration, and the answer is the current state of knowledge is not very deep. This is an area in which the ratio of opinion to analysis is very high, and the ratio of headlines and extrapolations to serious research is extremely high.

The best sort of synthesis document, I think you all know, is a Foresight document that came out just a month ago, a very, very expensive, very professional effort led by the Chief Scientist Office in the United Kingdom. They came here, made a presentation. We had a big presentation a month ago at the World Bank, and essentially as I read their conclusions, and other conclusions -- I mean, I think the propositions that we can all agree on are number one, migration or displacement due to environmental climate change reasons is happening today, and it will grow. We do not have robust estimates of how much it will grow, despite all the numbers that we read in the various reports that are coming out. Essentially, according to the Foresight report, there only have ever been two halfway serious efforts to really do serious projections, and even they are rather old and need to be seriously deepened.

So, that's a research agenda for everybody.

Number two, sometimes migration or movement will be obvious and attributable. Last year, for example, 41 million people moved because of extreme weather events. But much more often movement will be gradual and not attributable, quite frankly.

Last month I was in the Baca Valley in Lebanon. Temperatures there

have already risen, on average, by 1.5 percent, sitting there with farmers' groups and scientists who are analyzing it. Yields are already going down, because pests have become a very much more serious problem, because temperatures are not killing the pests.

So, absent some very, very serious investments in new integrated pest management, one will find that yields will continue to decline, and agricultural populations will decline. Now, one won't be able to attribute that directly. That will happen around the world, and so we need to do a lot more analysis and understanding.

So, we don't really know exactly who or how much, but we are very much aware of the fact that it's happening. And of course if you look at the sort of four big ways in which climate change affects people and development -- starting with temperature; moving on to sea level rise; third, extreme weather events; and, fourth, shifts in the hydrological cycle -- each one of those four will have a serious impact, some much more gradual than others. So, temperature sea level rise and shifts in the hydrological cycle will obviously have a much more gradual impact. Those are the subtle changes. Those will be the most important changes that take place.

Third point that I think we now all agree on is pretty obvious. The major drivers of migration, you know, are quite independent of climate change. So, the 300 million people in China who will move to the cities, that's independent of climate change. But what is tending to happen is the people are tending to move to areas that are actually more vulnerable. People are tending to move toward coastal areas. People are tending to move toward cities, some of which are highly vulnerable, and that needs to be -- so the estimate, as you know, is about between 120- and 190 million people between 2000 and 2060 will move to the flood plains of Asia and Africa.

Fourth point that I think we're deepening our understanding of is

migration can be a very effective adaptation strategy, but it needs to be enabled, and we know that the costs will rise very sharply if unsupported and unplanned. Nick Stern looks at this in his report, and he's updating that now.

Fifth, environmental factors themselves, including climate change, can actually make it more difficult to migrate and can take away the resilience and the flexibility that poor citizens have, particularly by taking away assets that will enable poor people to move. So, the Foresight report talks about the dangers of trapped populations where the majority of the better off and the better educated can move, and those who don't have the kind of assets or resources are not able to move and they become trapped.

So, those are sort of some of the things that we know, and obviously we could discuss them in much more detail.

Now, what is sort of happening now, I mean, all around the world? We're just one agency, but, I mean, I think all development agencies are now getting pretty serious about this. We are now supporting about 90 countries on adaptation, and that's because they are realizing this is a very, very, highly important issue.

We are concerned that there will be a tendency to spend the money on the bricks and mortar, this end of that spectrum I was talking about, and not enough on this end of the spectrum. So, for example -- I should introduce Robin Mearns over there who heads all of our work on the social aspects of climate change, and I think he made a presentation here last month so I won't go into what he talked about -- but we're quite concerned that there won't be adequate recognition of the role of social protection, of the role of enablement more generally on the resilient side.

So, we are campaigning very much in this year in which the Adaptation Committee will be up and running to really demonstrate that dollar for dollar one needs to

look at this end of the spectrum. And the reason that there will be a tendency to come to this end of the spectrum is that both countries within their own political power structures will tend to want to put it toward projects, if you like. Generally, ministers of public works are more powerful than ministers of social protection and mobility, for example, and so there'll tend to be a pressure to go there.

Also, I mean, who doesn't want to build, you know, something that's big, a sea wall, a dike. Now, those are good things. Much more difficult to really get the credit for really grappling with the issue of climate change over this side of the agenda. Also donors would tend to, you know, migrate to this side of things. Why? Because it's much easier to code. It's much easier to sort of say this is a serious amount of money we're putting in. Over on this side, the amounts of money required are much smaller, and they're in lots of different places. Therefore, they're much more difficult to code, if you like.

So, for example, I mean, it sort of sounds -- it sounds sort of almost not trivial. It's actually very, very important. But who would think that in Vietnam today the allocation of unique population identity numbers -- why would you think that's got anything to do with migration? But actually the fact we're working with them on this very subject, the fact that every citizen in Vietnam would have unique identity numbers will enable -- and the reason they're doing it is to enable benefits to be portable.

So, if you're a poor person living in the Mekong Delta, well, remember, one meets a rise in sea level. Can you imagine what's it's going to do to make a filter.

At the moment, Vietnam, as you know, has a very rich social protection system, but if you move to Ho Chi Min City at the moment, how on earth do you carry your ability to your entitlement to get social protection?

So, for example, designing that simple mechanism, which, by the way,

isn't cheap, is probably a better use of money for adaptation -- the building, a sea wall around the Mekong Delta, actually -- dollar for dollar. So, this would illustrate why we've got to be a lot more creative. So, whether it's on information systems, whether it's on Hydromat.

By the way, since I'm on Vietnam, let me say one other thing about it. I lived there for five years. Between 15 and 10 years ago, the average typhoon in those days killed over 300 people. The average typhoon today, which is stronger, kills about 30 people. Why? Because they now have Hydromat systems, early warning systems, and so on, and they have schools that deliberately have second floors and so on. They build in that resilience. That is also a very, very important part of this whole thing.

So, look, let me stop there. The bottom line of what I'm saying is we need to really be creative in getting inside the thinking process, the cultures, the commoners of poor people in vulnerable areas, and we need to ask what's the trajectory here on out? Yes, we absolutely need what the Maldives is doing, which is rightly building a lot of serious concrete to protect their islands.

But we also need to think really creatively about the kinds of things that you're thinking about in this program, Beth, so I think I'll leave it at that.

MS. FERRIS: Well, thank you very much, Andrew, lots of ideas and interesting things to explore in the discussion.

Before I move on, let me just give a very brief summary of Coco Warner's presentation. As I mentioned, she wasn't able to be here and has given a transcript. But Coco begins by tracing the issue of mobility as it's evolved in discussions around climate change. She knows from the early 1990s until the early 2000s emphasis was on mitigation. It was an assumption that migration was bad; human mobility was one of the negative consequences of failing to deal with mitigation efforts. And often you saw

in these delicate political negotiations between north and south, mobility was sometimes the card used by governments and civil society of developing countries, which countries if you don't stop your emissions you're going to have millions and millions of people arriving on your border. So, that was kind of the dominant way that migration mobility was seen.

That began to change, according to Coco, by the mid-2000s and particularly with the publication of the IPCC assessment report in 2007. It had a more nuanced view of mobility and then put more emphasis on the need for adaptation measures. There was a recognition that the mitigation efforts, the emission targets, might not be sufficient to prevent the effects of climate change, and it was time to get serious about adaptation. By 2007, the Conference of Parties meeting in Bali developed an action plan to include adaptation. Two years later in Copenhagen, there was an agreement to put money into adaptation funding. And we'll hear more about those mechanisms from our next two speakers.

It was concurrent, however, in the conference -- the COP16, as it's called -- where the parties decided to adopt a draft text, including a Cancun adaptation framework. And for those of us working on mobility, this paragraph 14.f has become a sinful rallying and organizing point for carrying out work on the relationship between mobility and adaptation. That paragraph invites all parties to undertake, along with a long list of things, "measures to enhance understanding, coordination, and cooperation with regard to climate change-induced displacement, migration, and planned relocation, where appropriate, at national, regional, and international levels." This was the first time that the climate change negotiation machinery, if you will, said that migration mobility is an adaptation strategy and further work is needed.

Coco explains in her presentation there's almost a matrix, if you will, three levels: national, regional, international. Three types of mobility: migration, people

deciding to move. Migration and international law is assumed to be voluntary, although often there's a quite blurred line between voluntary and involuntary movement.

Displacement, a second form of mobility, people are forced to leave. They have no choice. The floodwaters come up, and the world of conflict -- the warring parties attack their village. You have to leave. The line between displacement and migration, particularly in the context of climate change, is somewhat blurred.

The third type of mobility this paragraph on Cancun underscores is the issue of planned relocation. It may be -- it may well be that because of the effects of climate change certain parts of a country become uninhabitable, and the population needs to be moved voluntarily or involuntarily. This is the area where the least work has been done.

The World Bank and the other development banks have done a lot of work on development-induced displacement, what happens when a dam is built and people have to be moved and what kind of social protections and safeguards. But the international community is just beginning to think about does that apply for people displaced by the effects of climate change? Where does the money come from? And development projects for the World Bank -- it's built into the funding for a dam project to pay for resettling people in a way that we saw as their livelihoods, and who will pay for people who have to move because of the effects of climate change? That's an area that calls out for further work.

That paragraph from Cancun also calls for three -- some nice little symmetry here, 3 by 3 by 3 -- but it calls for three types of work on these issues to deepen our understanding:

Research analysis. As Andrew said, we're really quite simplistic in the way we approach climate change and different types of mobility.

Increased coordination. On the humanitarian side, there are already coordination methods to deal with displacement.

Voluntary migration is much more difficult. Will there be agreements between countries to accept those who have to leave their own country for another because of the effects of climate change? Will there be initiatives taken at the national level? The United States, for example, has a temporary protective status for people who suffer from the effects of sudden onset natural disasters. Is that a model that could be used by other countries? Actually, I think there are about eight or nine countries that have some provision in their immigration for dealing with some kinds of migration due to effects of climate change or natural disaster.

And clearly over the longer term, there'll be a need for greater international/regional cooperation to deal with some of this. And that I think is where the question of adaptation funds come in.

In looking at this relationship between migration mobility and climate change, the issue of causality is really difficult. As Andrew pointed out, people move for lots of -- people have moved since the beginning of recorded history because of environmental factors. To what extent is a draught part of a normal cyclical pattern, if you will, and to what extent is it an impact of climate change?

These are particularly difficult issues when it comes to financing, and I'm impressed with your 20-page document with indicators of the relationship between adaptation measures and how you know whether a water program is a water program for development or for adaptation.

Those are some of the issues that Coco spells out much more articulately in her presentation, and I encourage you to read the transcript.

We're now going to move to the more adaptation side with two experts in



adaptation, and we'll begin with you, Nancy, and then we'll hear from Nathan. Thank you.

MS. BIRDSALL: Thank you very much, Beth.

Let me start by saying I am not an expert in adaptation. I came, in part, to listen and learn to Andrew and others, and I must say I've already learned a lot.

I'm going to talk a little about a paper that I'm in the process of writing with a colleague, Michele De Nevers, who used to work at the World Bank with Andrew, who some of you might know, and the paper is going to be titled something like "Adaptation Transfers: How to Get From Out Between a Rock and a Hard Place," and in a few moments I'll tell you what the rock and the hard place is about. But first let me say it's a paper addressed to the climate community from those of us who have worked for many years on foreign aid and on aid issues or official development assistance, or ODA, issues. And the idea of the paper is to try to bring some lessons from the problems of the aid system to the climate community.

We had a draft of this paper some time ago, and we sent it to maybe a dozen people divided equally between the foreign aid folks and the climate change folks. And I think the volume of comments we got exceeded the number of words in the paper itself.

This is really -- we are talking about two different cultures. Beth referred to a third subculture, so we have three subcultures going on -- at least, yes. And I hope you'll forgive me, I can see that many of you are climate change folks, because I don't recognize that many of you (laughter), and if I'm in a room talking about development and aid I will recognize a lot of the people.

So, let me -- so, we have five ideas or principles or points that we make, and I'll just go quickly through each of them. And I'll try to refer a little bit to some of what

I've already heard in the context of this rather naïve but I think principled approach that we're trying to bring as a kind of crude guidance to the climate community in how to avoid all the pitfalls and the problems, which Beth referred to a little bit, that have accumulated over many decades in the official aid system and that, believe me, despite the great goodwill of most participants really are quite impervious to fundamental reforms -- not completely, but quite impervious.

And to give you a sense of that, let me say that the official donors put out, from time to time, a report on their own adherence to commitments that they've made in the last 10 years since what was called -- or 8 years since the Paris Declaration. In the most recent report they look at 13 different measures or commitments, and only one of them have they made progress on. And that is, ironically, the one about talking to each other called donor coordination. (Laughter)

In the same period, the recipient countries which also made commitments have shown real progress in improving their own country systems, their fiduciary management, and their efforts to reduce corruption and improve governance.

Okay, so I'll go quickly through the principles.

The first is that adaptation finance is not like foreign aid in the sense that it is not at all charity. It is an obligation based on causal responsibility, not just the responsibility that's inherent to the rich, providing help to the poor, but causal responsibility related to the reality that the rich have sometimes without -- you know, not purposefully, but the rich have created higher costs for the poor in the world. And that's rich people and poor people. This causal responsibility creates an obligation that would ideally be embedded in a treaty-like or a treaty document. That is not going to happen, as is already obvious. Even if it were to happen on mitigation, I don't think it would happen on anything like an obligation for transfers to deal from rich to poor for

adaptation.

But the concept, the principle, should be embedded somehow in whatever approach is taken, whatever system approach is taken by folks at the World Bank and in the donor countries and in the recipient countries as well. And that's really about changing a mindset. What we suggest is that there at least be created, perhaps by this new group, the Adaptation Fund of the Green Climate -- of the Green Fund or whatever -- some sort of a formula-based clarity about who is obligated to transfer, okay? And that should be based on some combination, some weighted average or weighted formula, some algorithm that takes into account past and current flows of emissions and per capita income.

There would be a big argument about that formula just like the argument in 1946 over the formula for quotas at the IMF, for example, and there would be continuous discussion of that formula. But the idea of having in place a formula would be very interesting. We don't say in the paper what the total amount should be. I'm talking about whatever the amount is, how in principle should that burden be distributed.

Second principle is the entitlement side -- the entitlement of low-emission, low-income countries. Again, there is a now a formula. My colleague at the Center for Global Development, David Wheeler, has a very good paper, and there are other papers that define scientifically, you know, based on science, physical vulnerability.

Andrew mentioned Lebanon. There's also -- in that formula would be per capita income: the lower your income, the lower your resilience as a starting point. We say that formula would clearly -- the outcome of the formula would change over time, and the inputs might change, but the concept that it's fundamentally about physical vulnerability for all the reasons that Andrew referred to and per capita income in terms of its -- as a proxy for poor resilience -- the lower your per capita income, the less resilient

you are likely to be -- that formula would not include anything about governance or implementation capacity. That's the way we think of the entitlement as independent of whether a country is well run/not well run; capable/incapable; run by the military/run by a democracy. Where it stands in the CPIA of the World Bank and so forth is a different issue.

Third point -- and here is where we come to the rock in the hard place. The entitlement is in principle. What are the rules for access by countries, poor countries, to their entitlements? And here's the rock in the hard place. The rock is that the formula-based arrangement at both ends is obviously completely contrary to the mindset that has developed over 60 years about transfers to help poor countries. And the formula-based arrangement is built around the principles in part of the Paris Declaration -- ownership, use of country systems, transparency and clarity, about obligations. So, that's the rock. And, in fact, the donors, even when it's not about adaptation, are committed to country systems transparency in principle to multilateral pooled funding, which can be separated politically, at least insulated a little bit from the unpredictability, the volatility of bilateral transfers.

What's the hard place? The hard place is that all of this is politically kind of dreamy, right? And that, moreover, it is quite legitimate, in a sense, for taxpayers in the rich countries to want to ensure that whatever money is put on the table for adaptation is reasonably well used.

So, we have a kind of real fundamental dilemma here. That's the rock and the hard place.

Andrew referred to donors will prefer infrastructure. Finance ministers, by the way, will prefer deficit reduction if they were to get transfers without reporting, without -- right? And the social ministers will prefer building up resilience through

education, social transfers. The one thing that I sort of felt concerned about in the way Andrew formulated this all in his push for reminding us that it's about resilience and fundamentally about development, right -- not just about infrastructure and building seawalls -- is the constant reference to we will have to be creative. Who has to be creative?

So, the idea on access is the following. There's this group of countries that have adequate fiduciary standards. That's a growing number of developing countries that receive transfers. One approach is to say it's up to them. Let's not try to figure it all out in Washington or in London or wherever the Green Climate Fund is put. Those countries are responsible for their own development. They can have their debate in their own country about does it goes into the seawall or into educating girls?

A second group of countries -- and it may be a large group, and it will include a lot of the most needy, lowest income, fragile economies -- do not have adequate fiduciary standards. Somebody has to make a judgment about which is what, and I'll come to that in a few moments. For that group, it seems fundamentally more important to have some third-party judgment about what their plan is and perhaps third-party implementation.

And what we suggest is that the principle here should be about third parties. Say, the Congo submits a plan. The U.N. FCC has a technical committee or this new Fund has a technical committee that says the -- they could have the plan produced, in fact, with an up-front small grant by McKenzie, by the World Bank, By DFID, by Oxfam -- I don't know, right? The idea could be that they have to have implementation managed by an eligible third party. So, you just third party this whole issue of access.

Let me not go into too much detail here, because it could go on for awhile. But you could imagine a country that has adequate fiduciary standards saying

we're going to use those resources in our plan for cash transfers unless we change our mind. And they bring in the experts to do the biometric work and develop the system for cash transfers. That gets quite close to the ideal of adaptation transfers having to do from rich to poor. Okay, so that's three.

Number four is management, and I think I've already sort of mused into what I should have put under number four, which is third-party arrangements. So, if the World Bank does the plan, the World Bank can't implement the plan for Malawi, for Mali. Actually, Mali might meet adequate fiduciary standards, but I'm not sure. So, the whole management approach is about certification of third parties.

And then the fifth point is on governance and transparency, and here comes to the issue that Beth raised on double counting. Transparency on the part of the donors -- well, I don't want to call them donors -- those who are obligated to make transfers. Instead of 20 pages on what is adaptation -- I'm sure it's a very good report -- the idea that we try to propose in our naiveté is those who are making transfers are fully transparent, and they list them, this is for adaptation; this is foreign aid, ODA. End of story. So, if it's for adaptation, it may be for resilience, and a donor, a traditional donor, might put it in the ODA column or the other column, but you've got to have full transparency as in the IATI -- the International Aid Transparency Initiative -- so the third parties in civil society and in the academic and scholarly communities can actually see what's going on and where the money is going. That is the way to prevent double counting, in my view, not to have for every country a long, complicated set of ideas and rules about what is adaptation versus what is aid for development.

Let me say one last word, if I haven't taken too long, on the hundred billion dollars, because I think the first question that everyone wants to know is of this \$100 billion that's been outlined as an annual transfer -- by 2020, is it? -- how much for

mitigation, how much for adaptation, how much will be actually generated in the markets and will take the form of private transfers, and how much will be public transfers?

The only thing I want to say about adaptation is that we can dream about some of it coming through the clean development mechanism or, you know, small or private money for infrastructure that is triggered a little bit by leverage, by small amounts of public money. But the bottom line for adaptation is it's going to be mostly public money. It has to be. And it is going to be mostly -- it has to be grant-based, because most of it is going to go in the end, you know, by any sensible formula, to countries that are entitled, as I said, by a causal responsibility to grant-like transfers. It doesn't mean some of it couldn't be in the form of highly concessional loans and so on. But the bottom line is that somewhere in that 100 billion is an amount that the rich world will minimize, that is, fundamentally paid for by taxpayers in rich countries.

So, I just want to take you back to the beginning of what are the obligations of the rich to the poor? Over time, who are the rich and who are the poor will change. Ideally, this would be people-based; to be practical, it has to be country-based. But most of that money for adaptation, you know, I think it would be a miracle if we get to 40 billion. There are a lot of good ideas about where the money could come from. The G-20 discussed the Bill Gates report. There are many other possibilities. A lot of what we're saying requires, in a sense, that it be recognized, though, as grant-based public money that taxpayers provide. I think that that requires beginning very quickly to educate better taxpayers in the rich world about what this is, where it comes from, and how it's going to be implemented, because, believe me, at least Americans are not going to put their tax dollars onto the table -- the hard place part -- until it's clear that the money is going to be spent in the right places reasonably well.

Thank you very much.

MS. FERRIS: Thank you. Another set of important issues that we'll discuss in a few minutes.

We'll turn now to Nathan to tell us anything that hasn't been said and should have been.

MR. HULTMAN: Right. Well, as a member formally of one of the subcultures and the climate change community, that is, the natural science and technical community, I did want to say thanks to the other panelists for, again, illuminating a lot of the issues in a very subtle way: Andrew Steer for sort of talking about not only the outcomes from Durban but also linking that to the research priorities, which I'd like to return to in couple of minutes in my comments; to Coco Warner for kind of identifying the links to migration, many of which I hadn't grasped completely before I read her comments; and Nancy for I think reminding us of some of the sort of obligations that are placed on the historically polluting countries to assist with the adaptation in places that by some arguments didn't have much to do with the problem. So, I thank you for that, and I will try to situate my comments with respect to those, and I can cut out quite a bit of what I was going to say, because it's already been said.

What I'd like to do in my comments is to talk briefly about Durban and what we did actually accomplish there -- I'm going to build off Andrew Steer's comments -- and then think about how to bridge from what we have in hand now to building a set of institutions via a research agenda I hope that will sort of ensure that those institutions end up being the institutions close to the ones we want them to be. And I think what right now Andrew mentioned is that that this is the decade that matters in climate change on both the mitigation and adaptation sides.

So, I do this as an imperative opportunity for us to tackle the new institutions that are being created. We all know that institutions are relatively rigid once



they are set up, and so we have an opportunity as just from several weeks ago a lot of these new institutions are being ramped up. We're concerned about adaptation. This is the time that they are establishing procedures, establishing modalities, and establishing the principles upon which they will allocate adaptation funding. And so now is the time for us all to be involved in this conversation, and I'm very grateful that this panel has been digging so deeply into it.

So, the specific outcomes to highlight. I'm just going to remind you of what Andrew mentioned. So, first of all, there's the Green Climate Fund or the Green Fund -- the GCF. That has a number of what are called funding windows in the allocations. Nancy mentioned between it's still quite vague. It's not clear how much is going to each of them. That's an area where people can continue to weigh in. The priorities now are adaptation, mitigation, and sort of a tail which is both -- I mean to sort of say that there will be one that coordinates between the two. There's a little bit on technology development and transfer, and then intriguingly, as some people here at Brookings have been working on and other people in the community, something called a private sector facility that's intended to leverage private sector capital for adaptation and mitigation, the details of which, however, remain disturbingly or sort of dishearteningly vague, let's put it that way. So, again, looking at that to have full weigh, there is still an opportunity to weigh in, to sort of think about creatively what the private sector might do in -- if we look at this problem we know from our own experience from the comments that were just made there's not going to be enough money in the international sort of development aid world to get the job done. So, we do need to think about how other procedures, other institutions, domestic policies, private sector can add into that. So, I think that's an area that is still nebulous that can be addressed with continued conversations like the one we're having.

The second big outcome, again just repeating, Adaptation Committee. Now, a committee, what's that going to do? Well, one of the key elements that I have seen sort of looking at the international negotiations, there are certain elements that I'm very skeptical about, for example, the ability of the COP to regulate emissions across the world. I'm just not yet seeing how that's going to happen.

There are other things, though, that I think are very strong opportunities in the international negotiations. It's norm creation; it's peer marketing; and it's development of expertise. And the Adaptation Committee has the ability to leverage new ideas in all three of those categories, okay?

So, if you are, as Andrew mentioned, getting in 16 of the world's experts, you know, on a rotating basis, they are going to be helping create some of the templates by which people answer these questions: How do we deploy capital? How do we deploy finance to make a difference, to make specific projects? How do we measure those outcomes?

So, that Adaptation Committee, while, yes, it is a committee, it still is an opportunity. It's an opportunity to kind of think about creating not as a -- it is top-down; it's a sort of super national entity. But it's not forcing anybody to do anything. It's just setting a template for what we value in this area.

So, what we value in adaptation will be refracted through this Adaptation Committee. Therefore, let us pay attention to what they're doing and, you know, consider pushing research products up into that, helping them with their job, a difficult job no doubt that they will have.

The final, which is related, is a longer process that's been bubbling up through the U.N. meetings for a number of years now, which is to assist or to encourage countries to develop adaptation plans. And this is where we can see a very strong link

between the international discussions, the international institutions, and what we know does matter very strongly, which is domestic policies, domestic allocations, and domestic plans about their adaptation policies.

And, again, the link to the Adaptation Committee is clear, but one of the outcomes from Durban is to link -- if not explicitly in terms of money amounts, at least institutionally -- link the support for developing adaptation plans into an international process that ties into GEF. It ties into the Adaptation Committee.

And, again, if we go back to my assertion about what the international process is good for -- and, again, it's the creation of norms, like, what do we value, that can go down, then, to individual country levels, telegraphing to the people who are making decisions about their own policies at the domestic level what they need to be considering, what they need to be focusing on, whether it's a broad adaptation or the migration question.

So, those are the three touch points in Durban that I think, again, like I said, in some ways are disheartening because they were too vague but in some ways that actually for us here at Brookings or people in the kind of research community, very strong opportunity. People in institutions right now who are working on it. That means that there are opportunities in the next couple of years to really help define what we've all acknowledged is still too vague in many ways, like how do we understand this problem?

Let me just -- since I've already used up most of the time I wanted, I'm going to highlight, based on those principles that I've just outlined, three areas that I think I could see as a kind of research agenda that kind of focuses on this next few years. And I'm in some ways just coalescing or condensing some of the comments that were already made. These are not independent but are complementary to what's already been said.

First of all, as I said, I'm from this other subculture, and one of the things

that I've noticed and no doubt other people have and they've mentioned even is that it's like a different world, right? Like, there's different cultures, and we have to think about it as different cultures -- the social scientists, the humanitarian community, trying to figure from the natural scientists what is climate change and what is not, and then of course linking that not only in these sort of three modes but also, you know, across borders into other priorities in national governments.

One of the -- everybody knows that's a challenge. What we don't understand well is necessarily what are the best institutional ways to get people to co-produce their adaptation decisions, right? That's the big sort of idea in the adaptation community right now.

How do we bring in expertise from the outside but still embed the adaptation decision-making in the place where it matters, which is in the local regional context, right, primarily. And I think that, again, this is a research agenda item.

How do we -- this is for social scientists, now. So how do we understand the processes by which we can bridge those cultures and actually embed the decisions better? Now, I know it depends on the domestic governance context, and it won't always happen in the way we might wish, but nevertheless research on how that practice is best, not just allocating resources, but how do you actually communicate about climate change adaptation priorities? Because it's a vague concept for most people, right? I mean, even for us, right? It's hard to kind of -- and even natural science will tell you that you can't actually distinguish climate change from regular, natural hazards. I mean, it's a probabilistic question. It's not a kind of absolute one or the other. So, even that is kind of a vaguely defined concept. So, how do we therefore base real financial capital allocation decisions on what is acknowledged to be a somewhat uncertain scientific principle? So, I think that's an important process question, sort of institutional research we can do.

The second gets back to a comment that was made earlier but thinking about measuring not only the money that's going in, sort of the counting of specific dollars or euros or whatever you'd like going into adaptation but, rather, thinking about the outcome, right? Like, I mean, this is not a new principle in the aid community by any stretch. But when we think about measuring outcomes for adaptation, what does it mean to have helped somebody adapt, right? And I know that's a principle that we can all fairly easily agree on, but what we don't understand still very well is what -- again, if you're thinking about the Adaptation Committee -- what should they be basing decisions on, right? Like, how do they think about whether their investments are working in this location and what can we learn about in applying those lessons to another place? So, measurement monitoring, right? That's a key element that often gets ignored because we're thinking about big ideas, but as just kind of almost an outsider to the aid organizations, thinking from my policy school perspective, it's about measurements and policy effectiveness. So, how do you sort of set up strategies that will measure the effectiveness of adaptation? So, that's a second research agenda that we need to focus on.

And third, I think the point was made earlier about the difference between sort of the -- a couple of times -- between investments and infrastructure and investments in what was called the softer side or what I will -- let's call it institutional preparedness and response. So that covers a lot of areas. It covers sort of specific institutions, but it also covers things like how well you set up your zoning laws in a country to accommodate what will be a generally much bigger flux of migrants that are just moving that might have a small climate component to it. How do you make sure that in that huge transition that's happening over the next 10 years that the cities are ready to accommodate in a way that is not maladaptive, right, that they don't all move to the

floodplain and they don't all move to the coast necessarily, that there are regulations in place that will ensure that the new migrants, whether they're primarily economic opportunity migrants, are going there and then situating themselves, embedding themselves in a quasi-permanent way in sort of healthier places, places that will be sort of -- not create new problems for the country, the city, and maybe the international community to deal with in the event of increasing natural hazards.

So, that's my comments, and I'll hand it back to the Chair.

MS. FERRIS: Thank you very much. I'm really struck by the different perspective and how complex it is to kind of sort your way through this.

And I have questions for each of you, but in interest of time, I think we'll just open it up for discussion. We have a couple of mics. I think we've got a couple of mics. Yes, we'll start. Maybe we'll take several and then give you a chance to respond. I have one, two, three? If you could identify yourself, please, as you stand up.

MR. BEARY: Brian Beary, Washington correspondent for *Europolitics*. I'm just wondering, on the funding side, have we any ballpark figure for where we are now on adaptation funds, and if anyone knows anything about the U.S. and how much has the U.S. set aside and on what types of projects is the U.S. focusing?

MS. FERRIS: Okay, thank you. And we have right over here -- yes, this gentleman on the --

MR. TIPPS: Thanks. Fred Tipps, and I'm a short-term fellow at the Institute of Peace.

Aren't we in danger of looking at this too much in an old-fashioned national-to-national sense? If we're really looking at the impact of climate change, shouldn't it be on a global basis and deciding where to put our investments in adaptation where it's going to have the biggest impact on people? If we allocate nation by nation,

we're likely to get haphazard and suboptimal outcome, not to mention that the politics of these issues, it seems to me, are becoming much more ungenerous, shall we say?, in nation after nation. The idea that there's a pot of money available to either pay for my guilt or my prior offenses is going to have political support to transfer to less developed nations without very, very tight controls on how that money is going to be spent well beyond what the fiduciary systems of these nations, even some of the best of them, currently provide.

So, isn't this discussion a little bit quaint in the sense of the way the aid community has worked in the past, even beyond Nancy's clarifications of how difficult it is to get that system to function rationally?

MS. FERRIS: And can we have right here?

MS. FRIEDMAN: Thanks. Lisa Friedman from *ClimateWire*.

I really appreciate the discussion about climate migration. I was in Bangladesh a couple of years ago working on a series, and, you know, I ran into this all the time, this issue that you're talking about where people who study climate change were not the people who study how people move, why people move, and so it's been interesting to see this evolution in thinking about it. I'm curious, over the past year or two, you know, taking what you've learned from or what has the World Bank or development -- folks in the development world learned from what's happened in Pakistan and Sudan? You know, I mean, recognizing that it's harder to tease out climate, you know, the climate causality in the floods or other issues, but it always will be, what have you learned from disasters in those countries and others over the past few years about what you'll need to do on adaptation?

And realistically, I guess, the other part of that question is what -- you know, I mean, I imagine it's the most sensitive kind of adaptation funding there will be.

What -- you know, when you talk about migration as an adaptation strategy, what are you talking about? What kinds of things would you like to see funded?

MS. FERRIS: Good. Maybe we'll take one more, this woman in the back, and then give the panelists a chance to respond. Then we should have time for another round or two.

MS. SOLOMON: Thank you very much. I'm Ilana Solomon with ActionAid.

I just want to say, first, I really appreciated, Nancy, your comments about the obligation of rich companies based on causal responsibility and the need for public finance, in particular for adaptation, and ActionAid has been extremely concerned that over the last couple of years it seems that so much emphasis has been placed on how to leverage private finance really at the expense of how to generate significant public finance and how that deep concern -- that that's going to mean that the poorest countries and communities are simply blocked out of receiving adaptation funding. I think many of you are aware there are numerous ways that we could actually generate well over a hundred million dollars in public funding, and the U.S. Government has yet to support any of those mechanisms. But carbon charges and shipping in aviation, use of IMF special drawing rates or financial transactions tax are all possible mechanisms, and we'd just love to get your thoughts on some of these and other ways to meet some of these kinds of financial obligations of public money.

MS. FERRIS: Thank you, and great questions.

Maybe we'll start with you, Andrew, to pick and choose which of those you'd like to address and -- okay.

MR. STEER: First, Brian asked do we have ballpark estimates. Very broad ballpark estimates, yes, probably a couple of billion a year. But we really don't



know. Interesting piece done recently by the Climate Policy Institute based in Venice. They look at the total flows from rich to poor to countries for climate change overall, and they come up with a number of, I think, 97 billion. So, it's a very different number, by the way, to a hundred billion. It's defined differently.

MS. FERRIS: Ninety-seven million?

MR. STEER: Billion. Billion. Billion.

MS. FERRIS: Oh, well, it's not that different from a hundred billion.

MR. STEER: It's a very different definition.

MS. FERRIS: Oh, yes.

MR. STEER: It's a very different definition.

MS. FERRIS: It's everything.

MR. STEER: But of the 97 billion, only 3 of those billion are worth 4 for adaptation. And of that probably in terms of subsidized money for adaptation probably about two-thirds or something. But these are not numbers you should be quoting. I mean, we just don't know. And Nancy thinks we shouldn't even try to measure them. You don't think we should have 20 pages of definitions of -- no; I'm pulling your leg. But, actually, you do --

MS. BIRDSALL: I'm not pulling yours. (Laughter)

MR. STEER: I mean, the question is, if people do want to know how much money is going -- I mean is politically very important, and we need to sort of learn as we go. Now, we should have a discussion about -- I mean, by the way, I love Nancy's principles. I mean, they're great. But I think number 3 I wasn't entirely sure about the rock in a hard place, because that's where really the rubber meets the road, and that is quite difficult. So, that -- on the first one.

On the second one, do we have an old-fashioned approach? Well, yes, I

actually think we should be thinking about where we get the biggest bang for the buck. And that's what we did with the pilot program for climate resilience. I mean, that was a billion dollar program that we in the regional development banks were entrusted with, and what we looked at is, as Nancy said, where are the needs. So, we looked at the -- and then we also looked at where is there the kind of leadership that you would actually then see. So, we picked actually only nine countries and then two regions: the Caribbean and the Pacific Islands. And the idea was to allocate these billion dollars to a few countries, which was not fair because after all, I mean, the whole point is this was a pilot program to show the at-scale in a few countries that were willing to lead and had big needs, were you able to get the impact. And, I mean, one of the nice things that we did. The other one was to bring together all these countries to share experience. And, I mean, very, very positive experience but of course it's very early days yet.

But, I mean, I think the other speakers are right, but at the same time there is an entitlement notion. So, we can't have it both ways. I mean, we've got to get what we do -- we've got to try and have both ways. In other words, we've got to get the balance between on the one hand and the entitlement of countries on the other hand. The fact that you want to -- you do want to have a sort of results-based approach, because if you don't have a results-based approach, you're just not going to be able to raise the money that --

Well, I'd love to answer all the questions. I would, actually, at some stage -- Robin, I think it would be great if you would take a shot at Lisa's really, really important question on that.

Just on Ilana's question, I think you probably read our paper that we wrote for the G-20 finance ministers, and I hope you liked it. I went to the G-20 finance ministers in October laying out some of these ideas, some of the ones that the Ilana had

mentioned, and really asking the question how does one -- what would be the implications of various kinds of charges?

MS. FERRIS: Great, thank you.

Nancy?

MS. FERRIS: What were two of the ideas in that -- in your paper?

MR. STEER: Well, one of them was, for example, in -- we talk a lot about energy subsidies in developing countries, which amount to between 300- and \$500 billion a year, but we don't often talk about energy subsidies in rich countries. And if you look at the OECD countries, energy subsidies are between 40- and \$70 billion a year for fossil fuels. So, that would be one example. And then we look at the bunker fuels and the aviation fuels, and we look at some of the implications of those but more generally switching, you know, a system of revenues toward carbon, carbon-based taxation, generally, and sort of looking at the issue of carbon pricing.

MS. FERRIS: Any other comments on any of the questions?

MS. BIRDSALL: Yes. I wanted to say a word about Nathan's point on the need for research, and Andrew repeated it -- the need to measure outcomes. This is part of, you know, where the rubber meets the road on the one hand, but, on the other hand, it's just -- to the extent that a lot of adaptation boils down to development, human development, growth, all the things that the development community has been talking about for decades that are captured in the human development index, you know. The idea that as soon as we put too much emphasis on attribution, of adaptation money, to some specific outcome, then we -- that is, the givers, the rich, the bureaucracies that the World Bank, et cetera, that have been doing foreign aid for aid transfers for decades, will fall into the trap that we know what to do everywhere and that it will be easier to do bricks and mortar. So, you know, even in the things that Andrew and Nathan have said, I just

struggle with this rock in a hard place. It's true. If we don't -- if we can't explain to taxpayers in Iowa and New Hampshire what's going on with this so-called money that's in the column that I've defined where the United States would say this was for adaptation, it's going to be very hard to generate the resources.

This is a serious -- I think to the extent that the climate community and the development community at least recognize how tough this is, it's an important start, because it implies to me far more emphasis on sharing experience of what is working in certain places and why -- being transparent about what didn't work, the failures, and learning from them, and making sure that the parties in local areas have the opportunity to share experience and learn from them. They are the "not we" that ultimately will matter. So, I like that part of it more than -- that's research, systematic, careful research, the \$1 billion, how, what was done with it. That I feel more comfortable with as a development person than with research on measuring outcomes.

I am totally a results-based, you know, nut when it comes to what countries should be doing, and donors could be paying for each additional child who goes to school, that sort of thing. But for adaptation finance, I don't see it. So, that is in part the answer to Fred's question in an indirect way. You know, I think what would happen in what I laid out as access is that some countries would not get the money, you know, in the first -- say this was a rolling three-year thing, that the most fragile, poorly governed countries -- they wouldn't have the plan and they wouldn't have the procedures, and therefore they wouldn't get the money.

And so in the end, Fred, I think that reality says that there would be probably money, whatever this envelope is, spent in the places that are most likely to be able to spend it reasonably well. So, that's a little bit, maybe, how we reconcile the dilemma that I defined. But I think in terms of adaptation compared to mitigation, it's

probably better not to think of where it will be most efficient to spend scarce money. It's better to recognize that there's an obligation and also to recognize that that obligation is tempered by the reality that the money won't be raised unless it's spent in places where it's spent efficiently. But I wouldn't like to see, you know, people in kind of East Africa, the Horn, Ethiopia that are having to move lose out because somebody in Washington or in Copenhagen thinks that it's more efficient to build the seawall, you know, because the Himalayan glaciers are collapsing just doesn't feel right to me. So, that's why I want to take us back a little bit more to principles. I don't think it's quaint at all, although I understand your point about the global basis.

I think, Andrew answered Ilana's question, but thank you for your support, Ilana. It's going to be tough to meet these obligations.

The only thing I would say about the total envelope of money is I'm very much in favor of global resources being better allocated to deal with global challenges, and adaptation is -- in that sense, Fred's right -- a global challenge. So, you know, I think there should be far more emphasis on what about the goal at the IMF? Why do we use that goal to have central bankers in the world sleep better at night instead of to meet the millennium development goals or deal with adaptation? What about rethinking SDRs? You know, what about other kinds of currency transactions tax that would be centrally collected? There is a way to do that that already exists. And then the money is automatically pooled, whereas with the financial transactions tax, were any of it or even the bunker fuel stuff -- it doesn't get centrally collected. It will be collected within rich countries, and the finance ministers and the politician will want to use it to reduce deficits or deal with their own tax problems.

So, I think that the global development community needs to be pushing far more on being practical about raising money for global problems in a global way that

doesn't sort of offend people's nervousness about, you know, world taxes. It's a trick, but it's a trick to cope with all of that. It's another dilemma, but I think that's where more emphasis should be put, including by the World Bank, please.

MS. FERRIS: Nathan.

MR. HULTMAN: So, just very quickly, on the data side, I can also recommend that a colleague of mine at Brown has been working on a compilation called InData.org, and you can go there and try to find out where the various climate finance promises are coming from and how well they've been kept. So, that's one reference of possible use.

On this other question, this is either a disagreement or it's just a cultural difference in how we define measuring outcomes. And I want to believe it's the latter one. I think in some ways what I hope we can do through this sort of process of thinking about refining how we do adaptation projects or adaptation funding, how we want to think about it, is there is no shortage of good ideas, as we've seen, like, with our readings and even ideas today in the room.

One of the questions is how do we identify what are the approaches that seem to be working the best, and in that spirit, we have to measure some -- we have to make some kind of assessment. And what I don't want people to get from my comments is that an outcome is a seawall and that kind of education is not an outcome or something that's not measurable, because I would absolutely agree with the earlier statement that a lot of -- probably our highest leverage is going to come from institutional improvements of various kinds but things that unfortunately are not as visible, are not something that the mayor can put his name on and say, you know, I built this bridge or whatever they like to do. That's a problem. It's an obstacle. It's not an insurmountable obstacle. But it's the kind of thing that, again, we've seen even in rich countries. When institutions fail, we can

have poor responses to natural disasters. And so in that same spirit of thinking about institutions, we need to think about how to evaluate different programs -- if we can use that word -- what's going well and what's not going well and actually to make an -- to have an ability to compare on an empirical basis.

And so with that, I mean, I think that's kind of where my assertion would end, and I certainly wouldn't disagree with the central proposition that we need to also at the same time ensure that funding is flowing to those places that need it most.

MS. FERRIS: Thank you. Robin, I wonder if you would like to respond to Lisa's question. Maybe we could have a microphone here. And then I think we'll have to wrap up.

MR. MEARNS: Thank you very much. I just wanted to -- stand up?  
(Laughter) Nathan, I thought that was an excellent response on that last point, because I think -- I mean, the point that Nate made earlier about the need to be able to -- why it's so difficult to measure resilience outcomes is that we're dealing with a situation where there are shifting baselines, but there are also great uncertainties about the extent to which those baselines are shifting.

But I still -- but I couldn't agree more that it's essential. You know, the rock and a hard place for me is we need to be able to separate, you know, heuristically a discussion around what is adaptation. What are opportunity costs in the use of any types of funding? And so we need to know what's the best sort of way of using these funds relative to need. And so we need to understand the needs part but also the outcomes part, recognizing the shifting baseline kind of issue. So, we're -- but we've got to be able to separate that from the very thorny contentious issues around the flows of money, how you raise it. The amount that you raise is precisely tied up with the sorts of issues that Nancy is raising, so I'm very sympathetic to this, but what you actually finance we need to

be able to have that discussion in a way that isn't sort of entirely clouded by sort of the politics of the resource mobilization question. But anyway, sorry, that was just a comment on that.

I think on, Lisa, it's a great question. You asked what, you know, what would you actually finance in terms of migration as adaptation? We know that migration is costly. There are many obstacles to migration. And so some of the programs that are already doing this are essentially trying to reduce the costs for migrants of forms of migration. I don't mean the physical costs of transporting such -- I mean, once they arrive, for example, in urban areas if they've come from a rural area, how can they get access to housing, job placement opportunities, health insurance, social security, you know, education for their children if they brought their children with them -- all these kinds of things. You know, there -- we can do something about that from the policy perspective. So, you can plan for that. You can provide job placement opportunities, ID cards. There are various things that you can do to protect the security of the person.

And also things like, you know, remittance services -- you know, how payment flows are made using mobile phone technology, for example, to be able to send remittances back to families in sending areas. So, you know, there's -- and we've got examples from Bangladesh, from India, from Vietnam. There are a lot of things that are already happening. Some of that is happening -- I mean, a lot of it's happening, you know, with no reference whatsoever to climate change. But increasingly there are programs which are being put in place that include references to climate change and these sorts of measures as helping to build resilience to climate change. But we can talk more if you want, more examples. Thank you.

MS. FERRIS: Thank you very much, Robin, and thanks to all of our panelists for this illuminating discussion on a complex issue. It seems to me that we're



just on the verge of looking at some of these interconnections between, you know, the development community and the science community and the economics community and the humanitarian community, and breaking down some of those walls and just being able to talk about these issues together is important. We'll be having more seminars on these issues in the spring. Thank you very much for coming, and stay warm outside.

MR. STEER: Good. (Applause)

\* \* \* \* \*

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012