THE BROOKINGS INSTITUTION

CONVERSATIONS ABOUT CLIMATE CHANGE ADAPTATION:

DISPLACEMENT, MIGRATION AND PLANNED RELOCATION

Washington, D.C.

Friday, October 7, 2011

PARTICIPANTS:

Introduction and Moderator:

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

Panelists:

CHALOKA BEYANI
UN Special Rapporteur on the Human Rights of IDPs
Co-Director, Brookings-LSE Project on Internal Displacement

SUSAN MARTIN
Director, Institute for the Study of International Migration
School of Foreign Service, Georgetown University

ROBIN MEARNS
Lead Social Development Specialist
The World Bank

* * * * *

P R O C E E D I N G S

MS. FERRIS: Okay, everyone, let's go ahead and get started. Good morning and welcome to Brookings. My name is Beth Ferris. I'm a senior fellow here and co-director of the Brookings-LSE Project on Internal Displacement. And for the first time in a long time my co-director is here, Chaloka Beyani, the UN Special Rapporteur on the Human Rights of IDPs. It's not so often that you're in Washington, although we work very often together, so it's a particular pleasure to have you with us today Chaloka.

MR. BEYANI: Thank you, Beth.

MS. FERRIS: Today we come together to have a conversation about climate change adaptation, particularly looking at the effects on human mobility. Since the very first report of the Intergovernmental Panel on Climate Change there's been recognition that the changes produced by climate change are likely to have an effect on human mobility or movement. The form that movement takes, whether it's migration or displacement, or planned relocation is really the subject for our conversation today.

There's a lot of speculation about how many people might be forced to move, and indeed it seems that the categories we have for understanding population movement may not be adequate to deal with the challenges of the effects of climate change. Traditionally, we have distinguished between voluntary migration, somebody who chooses to move to another country or another place within his or her country for personal reasons: sometimes a better job, an education, family and so forth. At the other end of the spectrum is forced displacement, people who have no choice who flee conflict or disasters. But those are really two ends on a continuum of voluntary and forced. And what we see when we begin to look at the effects of climate change is that those distinctions become quite blurry, and maybe instead of thinking of two categories -- voluntary or forced -- we should be talking about a continuum.

In Cancun, in December 2010, the conference of parties to the UN

Framework Convention on Climate Change for the first time acknowledged that the movement of people may be an adaptation strategy to the effects of climate change, and specifically they called on all parties to undertake “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,” so displacement, migration, planned relocation.

To contribute to the policy debate on some of these issues and hopefully to feed into the coming Conference of the Parties in Durban in December, we decided to organize a series of seminars. This first one will begin by looking at some of the general issues around the movement of people. Perhaps in December we’ll have another one on financing mechanisms of migration, displacement, relocations as adaptation measures. And then in the spring we hope to bring some representatives from governments and others of different countries who are trying to implement adaptation strategies based on this concern with migration, displacement, and planned adaptation.

Today we’ve got a great panel for you. We’ll begin with Susan Martin, who is very knowledgeable on these issues. She’s the director of the Institute for the Study of International Migration at Georgetown, has written a lot books, worked with a refugee policy group, and although she does a lot of work on migration she is certainly very familiar with the literature on forced displacement.

Susan is going to begin and tell us a little bit about the road to Cancun as well as some of the general migration issues. She will be followed by Chaloka Beyani who is a professor of international laws at London School of Economics, and as I said, the Special Rapporteur on the Human Rights of IDPs. He will be focusing primarily on displacement, forced displacement, and climate change. And finally we will have Robin Mearns, who is the lead social development specialist at the World Bank, which has of course pioneered in various aspects of migration, both planned resettlements,

relocations. He is going to talk more generally about the relationship between some of these three and the particular perspective the Bank always brings to these discussions.

So we will begin with Susan and then we will have time for discussions after the three presentations. Please.

MS. MARTIN: Great. Thank you, Beth. I began working on these issues and the interconnections between environmental stressors, climate change, and various forms of human mobility in the early 1990s when the issues were taken up a little bit at the marginal elements at the conference in Rio that was looking at the connections between the environment and development. And at that point and I think for the next couple of decades, the discussions on climate change, environment, and migration were actually quite contentious. For the most part, those of us who came into the issue from the migration point of view and those who came in from the environmental view had very different aims in mind. We didn't speak the same language, and we generally found each other's positions to be quite off-putting.

From the migration side of things I think many of us felt that environmentalists were using migration as a scare tactic. If we don't do something about the environment, we're going to have hoards of movements of people and that's a security threat, that's a problem for government, so therefore address climate change. A lot of us felt that that had the potential for backfiring and that is was likely that governments would build fences as they would be to actually address environmental issues, and that it could become a form of scapegoating of migrants rather than a mechanism by which the problems and vulnerabilities of people would be taken into account.

I think on the environmental side there was a sense that the migration experts were dismissing a phenomenon that held importance and that we were minimizing the potential risk for people as a result of environment change.

I think that tension, although it still exists to some extent in amongst some groups, has really diminished significantly, and that diminishing of the tension is part of the road to Cancun that Beth said that I would be discussing because I think that now we're seeing a much greater collaboration amongst experts in four areas: environmental science, migration, humanitarian issues, and development issues in trying to understand the interconnections amongst environmental factors and human mobility. I think it's come about in part because the discussions over climate change have shifted from an emphasis on mitigation only to one that also focuses on adaptation. And as there has been greater recognition of the need to by no means stop efforts to prevent the worst effects of climate change from occurring. There's also been greater recognition that some of those effects are either already underway or will occur under even the best-case scenarios, and that, therefore, it's necessary to think about the human consequences of climate change and not just think about it in terms of what can be done to try to stop it from happening.

The Copenhagen discussions on the UN Framework for Climate Change convention really marked the way of that dual approach of both mitigation and adaptation, and the Copenhagen Declaration talked about the need for thinking through mechanisms to reduce vulnerability on the one hand and to enhance resilience on the other. So it was framed in a way that was looking at both what was needed in order to address the negative impacts of climate change on human lives, but also to think about ways of increasing the ability of those who may be most affected by climate change to be able to cope and adapt to these unfolding processes.

The donors in Copenhagen, although not going too far down this road, did recognize their need to provide adequate, predictable, and sustainable funds for addressing adaptation, and that opened the door for the continuing discussion in Cancun, which probably Robin will talk about a bit more, but that opened the way for a discussion

of much more precise mechanisms by which the adaptation process could be enhanced, and led to the particular statement that Beth read with regard to where human mobility of its different forms would be placed.

One of the ways of actually looking at how these debates are unfolding is through a careful reading of things like the National Adaptation Plans of Action and the discussions that have taken place on the migration and development side in the context of the global forum on migration and development. And so I want to use some of those discussions to talk about where some of the thinking is going in this area.

In reviewing the NAPAs, the Adaptation Programmes of Action, which is certainly not the only way of thinking about adaptation, but it's an indication of where some of the thinking is going, there's clearly been a recognition within the plans of action that climate change is already and likely in the future to involve increasing loss of habitat, which will undermine livelihoods, and that process will likely result in some level of displacement or of voluntary migration. You see it in things like the Bangladesh and Cambodia and a few others talking about increased crop loss, food shortages resulting from that, and migration particularly from rural to urban areas as a response mechanism to that unfolding process, or Cape Verde talking about recurrent famines and torrential rains. Cape Verde is one of the countries with the highest percentage of its population as international migrants, and so linking it not just to internal movements but also into cross-border movements. Eritrea and Ethiopia, their plans both discuss the history of migration as being part of a coping strategy for dealing with recurrent droughts and pressures on land and on agricultural activities. Gambia, talking about unpredictable rainy seasons producing movements of people, Mozambique, recurrent flooding. So it comes out very much in the NAPAs.

As a migration expert, as I read these I am struck by how simplistic the analyses are and the extent to which they are not really building on a body of knowledge

about what are the multiple factors that intersect to create the circumstances in which migration takes place. There tends to be a very simple cause and effect. Climate change, a very linear process -- climate change, crop loss, migration -- without looking at all of the economic, social, human capital, political, legal frameworks that intersect with that interaction to determine how many people will move, how far they're going to move, whether it will be internal or international, whether it will be spontaneous or planned, whether it will be through legal channels or without authorization of receiving areas, whether it will be 1 mile inland or 4,000 miles to another country.

There's a tendency within this analysis to conflate all of these factors and, therefore, all of the different forms of mobility that might arise and assuming that the same impacts will occur whether it's 1 mile, 1 kilometer on one hand or 4,000 miles away on the other. So one of the clear lessons as the issues of human mobility are entering the adaptation discussions is a need for a much more sophisticated framework in which to analyze what the actual factors will be that will cause much more nuanced and defined versions or scenarios linking climate change to migration.

I think some of the work that I've done and others do posit that there are probably going to be various different pathways through which climate change affects movements of people, that rising sea levels or glacier melt will have a very different impact than drought, although both of those may result in very gradual movement, slow onset processes leading to long-term migration over an extensive period of time, and looking, frankly, very much like labor migration -- people moving for what ultimately becomes the economic opportunities that are lacking at home but perhaps can be found internally or internationally.

And that versus the other scenarios that have been looked at where we may see an increase in the number and intensity of acute natural hazards, like hurricanes, cyclones, flooding as a result of these processes, that may very well lead to

much more rapid onset events and more in the way of emergency movements and taking on quite different forms. The quite controversial issue is the extent to which there may be increased conflict over scarce resources resulting from climate change to the extent that those processes happen then the movements may look very much like current refugee movements, and the fact that there's an environmental aspect to it will be one amongst a number of other factors that need to be taken into account.

Having said that, though, the thinking on adaptation is still at a very, very early stage. I think it is clear that thinking about the connections between adaptation and migration -- or climate change and adaptation and migration through an adaptation lens does fit very well with prevailing theories that are attempting to explain why people move. Things like the new economics of labor migration, which posits that people move as part of risk management strategies where they're moving in order to be able to have, or parts of a household or a community migrate in order to be able to increase resilience of themselves and those who are left behind, and migration becoming a part of the strategy that wealthier countries may have crop insurance; less wealthy communities have migration as very similar way of dealing with the potential for massive crop loss, just giving one example of the way in which this process unfolds.

And so what we're seeing in the very beginnings of the thinking on adaptation in the context of mobility are two different ways of cutting into the migration issues, and I think both are necessary. It's not an either/or situation. The first is thinking about adaptation as a mechanism to reduce immigration pressures by in effect finding other ways to reduce risk for households, and whether it's in terms of new agricultural practices, drought resistant seeds, desalinization processes that will allow people to stay in agricultural for longer periods, rural development which will allow people to have alternative economic opportunities in areas that are no longer as fit for agriculture as they may or not have been in the future, new mechanisms for managing pastoral lands,

development of infrastructures, dikes, things of that sort to allow people to address rising sea levels, new forms of crop insurance so that migration is not as necessary for dealing with variations in climate. So issues of that type are one part of the equation in terms of the role of adaptation.

But the other, for at me at least is a little bit more exciting, is that there is starting to be thinking that migration itself is an adaptation tool, and therefore the adaptation planning needs to think about migration not as a failure of adaptation but a mechanism by which adaptation occurs. In shifting the dialogue from where it was 20 years ago, which is migration is terrible, it's bad, we have to stop it, to rather talking about what role can it play in a positive sense to help people adapt to climate change. And that right now is a very, very tricky area because it means thinking about how do we think about spontaneous movements of people whether internal or cross-border.

We know that the cross-border mechanisms, or laws, policies for dealing with international migration, are extremely weak. The institutional frameworks are even weaker. We don't have a very strong normative system for determining how to deal with the complexity in migration. We certainly don't have mechanisms to deal with the intersection between a voluntary labor type of migration and more of a forced type of displacement. And I think any analysis of the impact of climate change will show that it's going to have combinations of both, and thinking of it in one framework versus the other means missing some of the element in particularly the gradual movements versus the more immediate movements.

We also know that there are very, very negative lessons of efforts in the development field to resettle people, and a lot of work done by Michael Cernea and the others to try to think about what are the guidelines and the means by which to make planned resettlement or involuntary resettlement work more effectively to the extent that this becomes a much more prevalent feature of life as a result of climate change

adaptation. Then the pressure will be even greater. And I can tell you reading the NAPAs there is zero understanding or communication between those who are preparing the NAPAs who talk glibly about resettlement and the reality of what we know about the dangers of the resettlement process. And so linking those two elements, which is started, I think is extremely important as we move forward.

So let me just sort of conclude with that, that we are in a very, very different place today than we were 20 years ago. There is much greater scope for collaboration amongst those who are concerned about environmental issues as their starting point, those who are concerned about migration, displacement, planned relocation as their starting point, and I think it's only by forging those tighter connections, drawing on the lessons learned and the best practices coming out of both communities, drawing in humanitarian development, factors into the dialog that were likely to get passed what has been an impasse, and thinking about much more effective mechanisms by which we can reduce vulnerability amongst those who will be most affected by climate change and think about where migration fits as a way of building resilience.

MS. FERRIS: Thank you very much, Susan. Lots of things to think about.

Now turn to Chaloka Beyani.

MR. BEYANI: Well, thank you very much, Beth, and I'm very pleased to be here and to participate in this discussion on climate change and displacement.

I have to say at the outset that climate change and displacement is one of the thematic areas of the mandate on internally displaced persons largely because of the obviousness of the issue. And I would like to reflect fairly briefly before I get into my main discussion that I did undertake a mission to the Maldives to look at climate change in particular and its impact, and the impact is very visible. It's quite clear that we will have to replant the locations of individuals from those islands elsewhere, and from island to

island, and though the government of the Maldives has a national policy, probably one of the few on climate change, that policy is not linked to displacement as such. So I think it's highly important to reflect the point that Susan made at the very beginning, that as we look at climate change and the discourse between climate change, human rights, and displacement is an important one to bring together.

My presentation will focus more on the human rights dimensions, but one of the major reflections in this regard is that the climate change discourse has developed separately from that of migration and human rights, and I think it's only in more recent times, beginning from the 1990s and more especially in the context of the Cancun agreements, that we see displacement coming into the centrality of the scheme of climate change discussions, which means that at once, there is an issue about how we harmonize the principles of climate change and those of human rights and displacement. Insofar as we look at intergenerational equity, precaution in terms of the use of environment and climate change as well as common and differentiated responsibilities, those aspects must also relate to the language used by humanitarians in relation to migration and displacement over time. And then of course we speak of disaster risk reduction. We also speak of mitigation, and we see displacement as a measure of adaptation.

So what I want to do in the following ten minutes or so is to kind of sketch out an outline which places the issue of displacement as a measure of adaptation in the context of climate change and bringing the two strands together to some extent.

As Susan indicated, I think this story largely begins in the 1990s when the discussion and the discourse between climate change and migration began to take hold. And I think it's important to recall that the international Intergovernmental Panel on Climate Change in 1990 actually did warn that the greatest single impact of climate change might be on human migration, and in its report it indicated that by 2050 at least

150 million people could be displaced by climate change-related phenomenon. That prediction I think seems to be correct because at present the UN estimates that of 80 million persons that are internally displaced in the world, about 50 million of them are estimated to be internally displaced due to natural disasters each year, and in 2010 alone at least 42.3 million people were newly displaced by sudden-onset natural disasters, and that gives us the scope of the problem.

So in this regard, the Cancun agreements themselves recognize the need to strengthen international cooperation as well as national capacities and expertise in order to understand and identify appropriate approaches to reduce loss and damage associated with the effects of climate change in cases of both sudden disasters as well as slow-onset events. And importantly, the elements that come out of that framework relates to, as I indicated, risk reduction, resilience building, which was part of the discussion yesterday, micro-insurance for the reasons that again Susan mentioned, risk-sharing as well as economic diversification in order to address measures of rehabilitation that are associated with displacement and climate change.

What then are the patterns associated with this? Some are fairly well known, but I think it's climate changes likely to result or be exacerbated by a number of different changes in the physical environment as well as in relation to individuals. The projection is that there will be increased droughts, environmental deterioration, and slow-onset disasters such as desertification which undermine agricultural livelihoods and reduce food security, and this we have seen in the horn of Africa over the past few months around Eritrea, Ethiopia, Kenya, and Somalia where millions of individuals have actually been forced to move as a result of harsh climatic conditions resulting in famine.

There's also contraction of snow-covered areas and melting of sea ice leading amongst others to rising sea levels and higher water temperatures affecting the habitability of coastal areas and low-lying island states, and this is where the plight of the

Maldives and others comes into the picture. It's also estimated that there will be increased frequency and intensity of weather-related natural hazards such as tropical cyclones ---I'm sure you experienced one in Washington not so long ago -- hurricanes, mud slides, and flooding, which will threaten the physical safety of affected populations. There may also be conflict and upheaval because the resources will become scarce, and in that regard the competition for natural resources will clearly intensify, and there will be changing livelihood patterns, increased social tensions, and vulnerable populations will then move from places where such intensity occurs.

A larger picture was painted by a workshop held by UNHCR in Bellagio earlier this year, which recognizes that there would be multiple factors which interact with global, regional, as well as national dynamics in this regard, and that the impact of climate change will interact with a global -- with global megatrends such as population growth, rapid urbanization, increased human mobility, food, water, and energy security.

What then does human rights have to say about this? And I think here it's important again to reiterate the centrality of the Guiding Principles on Internal Displacement, which govern all phases of displacement and which also relate to durable solutions and the applicability to issues of climate change induced displacement. Those guiding principles have also been supplemented by the IASC Framework for Durable Solutions, which relates to the way in which durable solutions apply, and especially in the context of natural disasters.

We also have regional frameworks. And the Kampala Convention in Africa I think is quite important in this regard, having clear, explicit language on climate change induced displacement and also containing a framework of measures to take with displacement, including climate change.

I now want to sketch out the elements of adaptation from the point of view of human rights and building on the Cancun agreements and what sort of measures

are necessary to incorporate from a human rights point of view. The starting point, as I tried to indicate, would be disaster risk reduction and disaster preparedness. That is to identify those areas that are clearly prone to intense climatic change variations and to take measures of preparedness in that particular regard, and this is an obligation which human rights stresses, and it's also an obligation which has been emphasized by international courts and human rights. There is a case before the European Court of Human Rights against Russia and against Cyprus on this particular issue of the failure to take disaster risk preparedness measures in the face of the fact that events causing mud slides were clearly known and predictable, but there was a failure to take measures in that particular regard.

The second element is preventing and minimizing displacement and its adverse effects, which again is an important aspect of human rights here. The Cancun agreements clearly, in the context of adaptation, see as a possible solution the obligation to prevent and minimize displacement, which is the first obligation of states in the context of forced displacement, and relocation and displacement being exceptional measures of last resort, everything else standing equal. I won't go into details as to what the Guiding Principles say in this regard, but I think it's important for those of us that work with the Guiding Principles to actually appreciate the fact that they do have something to say in that regard.

The third element is that of relocation, and it's feasible as a measure of adaptation that populations may have to be relocated. The Maldives gives us one such case. In certain cases, planned relocations would be necessary, taking into account environmental risk assessments and also making sure that the sites of relocation are clearly suitable for human habitation. There may be situations where such locations are internal within states. There may be situations where the relocations are actually cross-border across states, and I think this is an important aspect also to look at. The

Maldives, for example, say that they have potential agreements and understandings with both Australia and India that they may have to relocated certain sections of their populations to those continents in the event that some of the islands begin to get submerged completely. So this particular aspect, not just as a national but also as a regional dynamic, is of great importance to take into account.

The second aspect of adaptation is what was discussed yesterday, the urban migration dimension, that most of what we've always characterize sometimes as rural-urban migration might actually be due to certain climatic changes over a period of time, and that rather than simply look at individuals as squatters, there may actually be appropriate measures of response in relation to them, and to do with urbanization and rural-urban migration in particular as a measure of adaptation in those circumstances where the movement can clearly be identified and pressed to a causal climatic factor. IDPs are involved in this regard, and it's also quite clear that many IDPs are outside camp settlements, and I think that studies have indicated, in the context of Colombia and places like Kenya, that the recent urban phenomenon in relation to IDPsrequires tackling and that also requires a more structured approach. And I know that Brookings is working very closely in the context of my mandate and of course the core project to look at this particular phenomenon and prepare a report at some particular point to the General Assembly to look at these dynamics and relationships.

There's then climate change mitigation measures, which would be aimed to reduce the impact on displacement and on IDPs, and these are rooted again in the Guiding Principles in the context of making sure that only in those circumstances where there's justification, there's compelling and overriding public interest would there actually be displacement. And the Cancun agreements also say something in this regard. They acknowledge the negative economic and social consequences of some response and mitigation measures, particularly in developing countries, and highlight the need to avoid

the adverse effects on vulnerable groups as well as the need to support such countries through financial resources, transfer of technology, composite building, etc. This relates to common but differentiated responsibilities, which also has implications I think for the adaptation fund and its humanitarian aspects. I think mostly the adaptation fund has been dealing with scientific aspects of climate change, but now it's important to recognize that there are certain humanitarian attributes that that fund would have to address as well.

Finally, I would just like to underscore the point that the last element in terms of adaptation would deal with the durable solutions themselves, but these durable solutions clearly must be conceptualized in application in the light of certain humanitarian consequences related to climate change induced displacement, and this provides an adaptation challenge. There may be circumstances where people may not be returned because the places of origin are inhabitable due to climate change, and that may have to be recognized. There may be circumstances where local integration may be a sustainable solution, either on a temporary or a permanent basis, because of the fact that once people have moved as a measure of adaptation, then integrating into local receiving host communities becomes a measure of adaptation, but a measure which is also linked to a durable solution.

And finally, of course, there may also be resettlements or relocations which have implications for land, livelihood, resources, but also environmental risk assessment in making those resettlements and planning them.

I had a mission to Kenya two weeks ago where we found that in places where IDPs are being resettled, no such environmental assessment has actually taken place. The facilities and access to services and water are not there, so the consequence is that there's further environmental damage caused by resettled IDPs by virtue of the fact that the areas of location themselves have not been properly structured as a

measure of adaptation.

Thank you very much.

MS. FERRIS: Thank you very much, Chaloka. And I should note that you're presenting to the General Assembly in a couple of weeks on the theme of climate change and displacement.

We turn now to Robin to wrap things up and tell us what the Bank thinks about all this, or what you think.

MR. MEARNS: Okay. Thank you very much. The way I come at this issue is from a perspective of having been leading work in the World Bank over the last few years on the social dimensions of climate change, and in this sort of broad area of work, essentially what we're trying to do is ensure that measures that are put in place in developing countries to mitigate climate change, to reduce greenhouse gas emissions, do so in a way that don't adversely affect the interests of those who are most vulnerable to climate change, and that we do our utmost to try to promote measures to build resilience of those who are most vulnerable to climate change. So we're working on both sides of this equation, on the mitigation side and the adaptation side. And necessarily as part of this work we've taken a close interest in trying to understand the emerging body of work and changing views that Susan has described very eloquently on the issues around displacement, migration, and planned relocation.

What I'd like to do -- much has already been said, so it makes it easier for me. I just have to cover a few remaining issues. I want to make three propositions, and I'm going to try and be a little bit provocative in this. The first is that the notion of environmental migrants, and still less, climate refugees, is highly misleading.

The second is that development policy needs to accommodate and facilitate migration as an adaptation strategy. We've heard quite a bit about that, and I want to give some examples from some World Bank supported work of how we're trying

to do that.

And then the third is that the more relocation and migration can be proactively planned and facilitated the less disruptive and costly future displacement is likely to be. So there's a sort of a relationship, a tradeoff if you like, between the two. You know, more planned relocation, you know, work towards building in migration as part of an adaptation strategy that is likely to offset the likelihood of future very costly and disruptive displacement.

Let me take each of these in turn. So Susan's already elaborated the history of how the issue of climate change and migration has come into the climate change negotiations. Going back to the first IPCC report -- not the first, but the 1990 first assessment report -- as Chaloka mentioned, there was a lot of sort of almost alarmism around the likely scale of climate-induced migration. But there's been a lot of work since then, and the truth is that the estimates are highly, highly uncertain, and causality is almost always attenuated. There are no reliable global statistics on how much migration you can attribute to environmental change, and there's no major UN agency that actually gathers data that do attribute patterns of migration to climate change.

A lot of the alarmism came from, you know, a set of articles, Norman Myers and others, who were sort of suggesting that displacement was the primary migration issue and that it was a result of rapid-onset and also slow-onset events, sea level rise and the like, that was likely to sort of hundreds of millions of people being displaced. These were the sort of estimates that were being bandied around. What we know now, though, is that those displaced by extreme events tend to return as quickly as possible to places of origin where it's possible for them to do that. And even in those cases, migration may or may not be the dominant response.

So much of this early work was essentially rather deterministic. It tended to sort of predict, you know, the areas which were judged to be vulnerable to the various

impacts of a climate change, and then in a slightly deterministic fashion, assume that all those living in those areas would necessarily be displaced, that that would be the dominant response. This is inconsistent with a lot of work that's been done more recently on the multi-causal nature of migration in which human agency plays a very key role. People make positive decisions to move or not to move, and we need to be able to factor that in and take account of that.

Much of the work -- I mean Susan is a migration specialist. I am not. But migration specialists will tell you that it's past migration patterns that are the best predictor of future trends rather than the sort of presumptions that come from projecting impacts of climate change itself. So then climate change tends to amplify existing patterns rather than provoke entirely new flows of people. We know that migration related to climate change is likely to be predominantly from rural areas to towns and cities within developing countries and that most of the world's migrants, including in response to the climate change, are likely to move within their own borders rather than across international borders.

Just on this first point I would just like to make a comment on methodology. I don't want to get sort of too bogged down in this. But one of the reasons you get major discrepancies or sort of divergence between literature that tries to project future flows and those that are based on observational evidence, household surveys, in depth qualitative work and the like today, is that there are varied -- there are big differences in the number of other factors that are taken into account, so that typically the models that -- or scenarios that try to project on the basis of estimated environmental change, typically we don't know whether those relationships will hold true in the future, and there tends to be a much greater sensitivity to climate change impact as a result. Whereas observational evidence tends to capture the social and cultural factors, the role of networks and identity and migration flows, for example, and as a result tend to

downplay the significance of the environmental factors themselves.

Interestingly, you look at the range of numbers of people estimated to be displaced and they're enormous. On the one hand, a recent article by Nichols and colleagues on the philosophical transactions and the role of society, estimated population displacement based on a projected sea level rise at the end of this current century based on an assumption of, on the one hand, half a meter of sea level rise and, the other hand, two meters of sea level rise. Now, the key question is what you assume in terms of the kinds of adaptation responses that might be made at the same time. But if you assume no adaptation response in the sense of trying to build coastal protection, coastal defenses, then the estimates come out to sort of 72- to 187 million people displaced by sea level rise according to that range of half a meter to 2 meters of sea level rise. But if you assume that there are investments likely to be made in coastal defenses, coastal protection, those numbers fall very dramatically to something in the order of just 41,000 to about 300,000. That's still a lot of people, but it is dramatically different.

And so, you know, we have this big black box. What is adaptation and what do we expect would be the likely adaptation responses over the coming decade -- century, other things being equal? We ran into this challenge in a recent study that the World Bank conducted on the economics of adaptation to climate change, and the key point was that you can't compare future adaptation responses to the capacities of economies at the moment to be able to respond and adapt. There is a dynamic development baseline, and it's important to try to take that into account. We know that the cost to economies of not investing in urban land and infrastructure protection, coastal defenses and so on, is likely to be so enormous that we can expect that there will be quite significant investments of that kind. So the alarmist sort of large-scale numbers do fall dramatically.

A second -- and on this first proposition I just want to refer to a study that

colleagues are undertaking in the Middle East and North Africa region. They're trying to understand to what extent climate is factoring in as a driver of migration. We just got some preliminary results from Yemen. One question is, is internal migration in Yemen driven by climate or socioeconomic factors? And I should say that the methodology of this is based on modeling, so other things being equal, you would expect it to be more sensitive to the climate change impacts rather than other factors. But even in that study, whereas some climate variables were statistically significant in influencing patterns of migration, overwhelmingly it was socioeconomic drivers, jobs, education, urbanization, and so on, that tends to be -- is expected to be more dominant in migration patterns.

On this Yemen study, the work has also been trying to understand the role of remittances in helping build resilience to climate change. And one question is do remittances actually reach households that live in areas which are likely to be threatened by climate change, and the findings were that both the likelihood of receiving remittances and the amount of remittances received are lower in districts that are more climate -- that get climatically variable. But the positive impact on human development outcomes is likely to be much greater. So even though there are challenges in flows of remittances, they have very great developmental significance precisely in areas that are most vulnerable to climate change.

Let me speed up a little bit. The second proposition then is that development policy needs to accommodate and facilitate migration as an adaptation strategy. We've heard a lot about some of the pathways by which climate change may influence existing patterns of migration. And this is true for both sending and receiving communities and for migrants themselves, and we need appropriate policy responses for all three of those situations. As Beth mentioned earlier, human mobility in response to climate change will take place along a continuum from voluntary to involuntary, from migration to displacement. We know that mobility is very costly and disruptive, and

particularly for those who are most vulnerable, it is usually a last resort. And they're the ones, though, who are most at risk of potentially being trapped in situations where they would like to move potentially but they don't have the resources to do so. And development responses to cater to their needs are just as important as those dealing with displacement and those who are able to use migration as a strategy.

Let me give three or four examples from recent work that we have been involved with. In Vietnam, some of those ethnic minority groups are among the remaining pockets of those who are most vulnerable also to climate change. They're the poorest. They live in upland areas typically, and for labor mobility, livelihood, diversification reasons, they are -- they would very often like to move either seasonally, temporarily, in a circular fashion to cities in search of work. But they are, as in China with the Hukou household registration system, they're essentially held in place. Access to Social Security benefits and so on is contingent on place of residence. So introducing a Social Security system by which benefits become portable, people have a unified Social Security number and they can access Social Security benefits wherever they may move, is the sort of measure that could dramatically help facilitate migration. It's not done because of the challenge of climate change, but it's a policy measure that could have very important consequences.

A second example I'd like to give is from India. We've been working in Rajasthan with a new rural livelihood support project, and a lot of the work on climate resilience is focused on in situ measures to build resilience through soil and moisture conservation, movements to less water-intensive cropping patterns, a whole host of measures at the on the farm and the landscape level. But in this new project there's recognition that most households in this area have household members who migrate seasonally and have been doing so for decades and decades in search of work, especially during lean seasons, dry seasons, and times of drought. We're recognizing

that that compliments all of these measure to try to build resilience in situ, and so we need to be looking at ways of trying to promote -- reduce the costs and increase the returns to labor mobility as a complimentary strategy for building resilience, which is true both for migrants and for communities in the sending areas.

And then a final example on this point is from a recent study on gender and climate change in Bangladesh. Now, very interestingly, perhaps not surprisingly, migration has come up as an adaptive response on the part of many, many households in Bangladesh. Both men and women, roughly equal proportions of men and women moving according to the results of this particular household survey. In the survey findings, according to respondents, roughly 14 percent of those who moved said that the primary reason for moving had to do with environmental change prompted by climate change. Now, there are issues of methodology. We need to probe further into what those results are actually saying. But the point is 14 percent is not a dominant reason. It is among the factors. It is among some of the drivers of migration.

What I found most interesting from this particular study was the insights into gender dynamics around the role of migration, and depending on the nature of assets, income, social networking of different households, women within those households, the outcomes were very, very different. So potentially migration for women can be a very empowering thing. They can play a greater role in household decision-making, contributing to household wellbeing. They have access to information, access to services, access to information about their own rights. The list goes on and on about some of the potential benefits. But that's only true if you're able to actually avail yourself of the real advantages of migration, and for many of those who are most vulnerable, without assets, without very strong social networks, many of these benefits are very unlikely to be realized. And so you hear equally cases where women are exploited. They may not have skills so they're forced into low-wage labor in urban areas.

Paradoxically perhaps, many of these migrants are moving into areas which are probably more climate at-risk than the areas that they have left. Many low-lying deltaic areas, slums in Dhaka and so on, are highly prone to climate-induced flooding. So there are those threats. Equally, women may not be able to get access to shelter without moving with a male relative. They may be forced to marry purely for the reason of getting access to get protection, security, access to housing. They may be shunned then on returning to their home villages once it emerges that they've married purely for those reasons. So lots of complex gender dynamics. The key point is that it's the structural drivers of vulnerability that influence those outcomes much more than it is about what we assume are the drivers of migration itself.

Finally, my third and final proposition, I'll try and be brief, is that the more relocation and migration can be proactively planned and facilitated, the less disruptive and costly future displacement will be. I've already mentioned that much existing migration ends up placing migrants at potentially greater exposure to climate hazards than some of the areas they have left. So this calls for careful attention in urban planning, for example, to climate-resilient, climate-smart approaches that pay careful attention to reducing some of those vulnerabilities in the destination areas.

Now, in the bank there are a number of pieces of work that are relevant to this question of how to proactively plan and facilitate relocation and migration. One program led by my colleague Niels Harild, who is here, is on conflict-induced forced displacement. Now, the focus there is on conflict-induced displacement, and there I think the numbers are much more -- we're on safer ground. Displacement as a result of conflict is much easier to pinpoint. It's much less likely to be multi-causal than displacement as a result of climate change. But what we can say -- Susan mentioned that the conflict migration linkages is a highly uncertain area, and I absolutely agree. But what we can say with some certainty is that where people are displaced as a result of

conflict, they are much more likely to be disadvantaged if they're also facing climate stress. So the Horn of Africa would be the classic sort of example of that at the moment. So the program that Niels leads, there's a multi-donor trust fund, which is really about seeking development interventions to address the barriers to the durable solutions that Chaloka mentioned to protract a displacement, barriers dealing with land, housing, property, livelihood diversification, service delivery, accountable and responsible government.

A second relevant piece of work, and this is very much following on Michael Cernea's pioneering work in the World Bank. Elena Correa and a team have just recently completed a piece of work on planned relocation or resettlement to reduce the likelihood of future natural disaster related displacement. It's assisting populations at risk from natural disasters, and the two books that just came out, one with case studies from Latin America, supported by the Global Facility for Disaster Reduction and Recovery, and it makes for very persuasive reading, I think.

The third example, I mentioned the Rajasthan rural livelihood support project. That's not an isolated case. Increasingly, community-based development programs, rural livelihood support programs and so on are looking at this sort of, this convergence of work on helping facilitate migration with the in situ measures to empower and build resilience for those communities.

And then finally, work on climate-resilient cities and climate-smart urban planning I think is a very important part of the portfolio responses that the World Bank is trying to help respond to.

Let me just in closing give a bit of a plug for an upcoming piece of work. Susan has been involved with this as well. The UK government has a foresight program within its office for science. In a foresight program, it's essentially a horizons scanning program, and they undertake studies on a number of topics likely to be of major

significance either globally or the UK in the future. And a recent one which is just about to be launched in I think two weeks' time, October the 20th in London, is on global environmental migration futures, looking at the relationships between environmental change and climate change. And there's an enormous body of work that's been commissioned for this, and I've been involved a little bit with this as a member of the sort of stakeholder steering group, and I believe it's going to be a very important piece of work and help shape thinking of many, many agencies in the future on this set of issues. I can't say much more than that because I'm sort of bound to secrecy until the report is actually launched, but it will frame these issues very much as development and humanitarian issues, not as the debate sort of began with this sort of concern with, you know, defense responses on the part of northern economies worried about an influx of migrants from the global south. Fortunately, things have moved on very much in the debate. And we will also have a Washington launch of the report on December the 13th in the World Bank, so please make a note of that, and I'll try and steal Beth's mailing list so I can get that invitation out to all of you as well.

Thank you very much.

MS. FERRIS: Thank you very much. And thanks to all three of our panelists for stimulating ideas.

We have time now for questions, comments, and if it's okay with the panelists we'll take several questions at a time and then give you -- and we'll take the two in the back right there. And if you could identify yourself please.

MS. SHAM: My name is Sandra Sham and I work with USAID Asia Bureau, and there was one thing I wanted to ask the panelists about, and particularly our last speaker. We recently conducted a study of adaptation to sea level rise based on what happened five years after the tsunami. We did it onsite in Tamil Nadu and the Maldives. And one of the factors that came out interviewing people in the Maldives was

that the government planning had not taken into account even the long-term planning. Now, there was a reason why they couldn't do this with disaster relief, but they certainly can do it with long-term planning. They had not accounted for the fact that the traditional community layouts and the traditional households were structured in such a way as to accommodate women's labor, processing fish, doing seed selection, coral sands, other things, and when they rebuilt, the houses were built on a grid pattern and with no courtyards, no open spaces. And one thing we heard time after time, every atoll we went to was the women complaining that they no longer had anything to do. They were depressed. It as a major issue. And it's not something people ordinarily think of. They mostly think of the larger issues, you know, finding shelter of course. And I'm wondering if any of you know any particular studies that are really looking at these micro-level issues as far as displacement is concerned.

MS. FERRIS: Thank you very much. And we'll take the gentleman right next to you. Sorry. The young lady.

MS. HALL: Hi. Natasha Hall, Georgetown University. So my question was reverting back to international law, on a lot of these things, things like human rights with regards to livelihoods and sovereignty issues. I'm very much on board with the whole climate change adaptation thing, but I also see that a lot of policies are exacerbating the problems and sort of agricultural in places like Australia and Syria are exacerbating the problem. How do you address that? So in terms of desertification, but also things like shrimp farming in Bangladesh degrades the national buffer zone, and sort of how do you go about addressing those issues with these NAPAs and climate change adaptation? Thank you.

MS. FERRIS: Thank you very much. Let's take this gentleman here and the woman in the black right there. Okay. Would you stand up please and use the microphone?

MR. TADROS: Mahfouz Tadros, former World Bank staff, retired now. My question is to my colleague from the Bank. Is the Bank planning any studies on the conflict dimension or the political dimension of the Arab Springs, particularly in Yemen, Syria, and Libya? Thank you.

MS. FERRIS: Great. Thank you. And this woman here.

MS. MUELLER: Hi. My name is Valerie Mueller, and I work at the International Food Policy Research Institute, and I've done some work on internal migration and climate change in several countries, but mostly East Africa. And I really agree with the opinion of migration as an adaptation strategy, but some of the challenges I think are the policies such as urban registration or, you know, these sorts of policies that try to keep people in rural areas, and I wonder to what extent can we think about talking to the governments to kind of be more flexible in the movement of people so that there's some healthy adaptation going on, or healthier rate of migration going on. Thank you.

MS. FERRIS: Great. Thank you. I think we'll have some short responses now and then we'll have time for another round, and I'll start with you.

Chaloka, do you want to start with the question on international law perhaps?

MR. BEYANI: Yes. Well, thank you very much. I think the question about international law when it comes to human rights and displacement first of all acknowledges the primary responsibility of the state to protect human rights, and also either to prevent, mitigate, or at least deal with displacement. That particular aspect I think is fairly well clear, and the Guiding Principles have looked at the relationship between state sovereignty and the responsibility that governments have towards IDPs. But the specific issues that you mentioned in the context of policies exacerbating the problem, first of all, the policies have to be consistent with international law of human rights and Guiding Principles, and this is something that my mandate is working on to

make sure that there's actually an awareness and sensitization about what sort of policy framework is necessary for states to deal with not just displacement but also climate-related displacement. The second aspect in terms of food security and other aspects of course deal more with human rights, that there is a responsibility on the part of the states to establish an enabling environment in which food security will be assured, and in which agricultural activities, both in terms of land tenure as well as land ownership and other activities do take place. But what climate change I think challenges here is the traditional policies and measures which have been taken to ensure that there's food security. It must clearly be compatible with environmental preservation and sustainable development, both in terms of agricultural, land use and planning, and also in the context of the specific types of food that are actually promoted. So I think there's a huge problem around that, but those are the basics.

I will just reflect that in terms of challenges on policies and registration, I think the core aspect there is for states to make sure that their populations are actually registered, and that there's a duty to know the population because in knowing the population there is also a responsibility to identify vulnerable populations or areas of vulnerability. Those are the populations that are likely to move. And when those populations move, their identity at least should be ascertained wherever they move. And I think human rights now requires that restrictions on internal movement of this sort that you perhaps alluded to are clearly unlawful other than in circumstances where national security and other aspects are involved. But even there, there should be a proportionate relationship between the restrictions and the measures for which those restrictions are imposed. And I must say that I spent some three or four years trying to study freedom of movement and restrictions of that movement within states. Thank you.

MS. FERRIS: Thank you. Susan.

MS. MARTIN: Yeah. I think there's a common thread to all three

questions, and that really gets at issues of unsustainable development that I think some of the work that we've done, and Joel Charny was a member of the study team that co-chaired. And we did a number of site visits, not trying to do a household survey or anything very structured, but rather trying to get an understanding of what was happening with people coming from these different academic communities and practitioners, policymakers.

And in almost every case -- we went to Bangladesh, Senegal, and Mexico -- prior to arriving and when we were in the capital, we heard about the effects of climate change. Once we dug more deeply into what were they -- was purported to be the effects of climate change, but we found that it was the effects of really, really bad development planning that would have had bad effects regardless of whether the climate change issues were prevalent, were sometimes exacerbated by climate change, but not necessarily related to them. And one of the real complications in trying to think about the nexus between climate change and migration is that we also don't have very good frameworks yet for thinking about where migration fits into development or what the impact -- either what the impact of development is on migration or migration on development. It's another area where there's been a lot of progress in trying to tease out the issues. Not enough yet in the way of micro -- you know, household surveys, ways that we can actually reconstruct some of the interconnections. But to the extent that we're not closing the loop and thinking about these as development issues, I think we're going to continue to have policies put in place that really just don't make sense if you think about it over a longer term process. Which is why I think the Bank's involvement in these issues is so important, that they've gotten into trying to look at these human dimensions and not just thinking in terms of some economic aspect.

MS. FERRIS: Robin, we had the question from the Maldives on relocation and the Arab Spring in particular.

MR. MEARNS: Yeah. Well, just following on from Susan's point, I mean I fully agree that one of the challenges in this whole area is sort of the separation of the humanitarian community from the development community. And this isn't the only area of work where I think the, you know, recent work is pointing toward the need for much more of a convergence between the two. We do quite a bit of work on the role of social protection in helping promote disaster -- resilience to natural disasters and to longer term climate changes. And there again, you know, the biggest view that comes out is the need for convergence, the need for people from the humanitarian development communities to speak to one another.

We had a conference earlier this year in Addis Ababa on exactly the nexus of these three issues, social protection, disaster risk reduction, and climate change adaptation. Migration is one of these issues that bubbles up in that discussion quite a lot, not surprisingly because in the context of migration responses and planned relocation it's very often social protection programs and instruments that people look to among the possible range of policy responses. So I fully agree that, you know, there very often are these failures in long-term planning. And even, you know, frankly, even a lot of things which are being done in the name of climate change adaptation might in fact be promoting maladaptation unless you take a sufficiently long-term perspective.

Earlier this year I was part of -- there's a big international set of conferences around community-based adaptation, very much dominated by international NGOs. And there's some really good work being done in that setting. But there's also quite a lot of -- you mentioned shrimp farming. You know, there are quite a lot of things which are being done, for example, to diversify livelihoods of people living in mangrove areas, which you know, several decades down the line may well not be inhabitable at all. So I think this distinction between adaptive responses and maladaptive responsive needs to be made with a sort of a longer term eye on projected climate changes. So I think the

need for convergence is very great.

On the Arab Spring question, I mean short answer is yes. My colleague Alexander Mark and his team are leading. In fact, there's a flagship study that's just about to come out in the next couple of months on fragility in societal cohesion globally. It was done as a sort of a companion piece to the last world development report on fragility and violence prevention. And quite a lot of the ongoing work under the auspices of this program is indeed in Middle East and North Africa, some particularly interesting work in Tunisia. So do look out for that or get in touch with Alexander Mark.

And then I just -- on the point about policy challenges in helping facilitate migration, I mean I absolutely agree. I was very impressed in the Indian context by the work of an NGO called the Aajeevika Bureau. It means the livelihood's bureau. And really, that's what's inspired a lot of our work in trying to sort of mainstream an approach to facilitating migration as a compliment to other resilience-building measures within rural livelihoods' support programs.

And a lot of this sort of, you know, rests on the kind of work that groups like the Aajeevika Bureau are doing. You know, when we came to talk to them, they said, well, why are you talking to us? We don't work on climate change. And we said, well, but a lot of the things that you are doing actually could have a very dramatic impact. And it's very simple things, actually, things like issuing ID cards to migrants so that when they're in urban areas they're less likely to be exploited by potential employers because they have some sort of institutional backing. It goes a long way. Facilitating access to shelter, to health insurance, you know, just physical security measures, all of these things are the kinds of things they're doing, which help improve the security and safety of migrants in urban areas themselves and also the possibility then of sending back remittances to sending communities. And much of this migration is seasonal and circular. It's not a permanent flow.

So I think those are the kinds of policy challenges which are -- I mean, the example I gave from Vietnam, that is something that's being worked on. But that takes a lot of preparation, many, many years of sort of dialog around the need to change. And you can imagine, you know, how long it would take in dialog with China to get, you know, to reform the Hukou registration system. But some of these other measures could actually in many contexts have a quite dramatic impact.

MS. FERRIS: Thank you. We'll take a few more, start with here, one, two, and then three in the back, and then we'll wrap up. And again, if you could be brief we'll have time for more questions. This gentleman here in the blue.

MR. HASKELL: Hugh Haskell from the Institute for Energy and Environmental Research. My question is I think primarily for Dr. Mearns. Much of the climate-induced migration involves really economic migration, people going somewhere else because the local disruptions have taken their jobs away. And I'm wondering how much of the time that that happens is it the man in the family who migrates, leaving a wife and the rest of the family behind, and if so, at what additional risk are the women left behind put at because of that effect? Is there any data that can tell us something about those factors?

MS. FERRIS: Thank you. And we'll have this gentleman here.

MR. DAGEE: Richard Dagee from John's Hopkins SAIS. There will be secondary demographic effects from these kinds of mobility-based adaptations. What do we know about birth and death rates as they are affected by these kinds of adaptations? Thank you.

MS. FERRIS: Thank you very much. And the gentleman in the red sweater. Yes.

MR. CARR: Ed Carr, University of South Carolina, USAID, IPCC, lots of other letters. I wanted to thank the panelists for actually a really nuanced read of what's

going on in terms of migration and climate change. But it does -- I guess I'll ask the meta question for the last one, I guess. This puts us in kind of a bind, right? Big numbers, big terrifying numbers, get a big response to an inappropriate problem. Nuanced readings get us an appropriate problem where people say, oh, but climate change is necessary, but not sufficient to explain everything. What can I do about that? And then they put it down and walk away. So I'd be interested to hear the panel sort of talk about how you can push a nuanced reading through a policy process productively.

MS. FERRIS: Thank you. A good question to wrap up with. Susan, do you want to take a stab at that, or some of the others as well?

MS. MARTIN: Yeah. Let me start on the gender and then think about the last question. In terms of the gender, others may have more to say about it. But there are very, very different gender patterns of migration that we see. So if you look at a place like the Philippines or Indonesia, there have been points at which 70 percent of the international migrants are women, and they're mostly migrating into very gendered positions, domestic workers at the low end, nurses, teachers at the higher end.

On that leaving behind husbands and often children, if you look at Mexico or Central America, initial migrant migration is at 70 percent male, mostly into agricultural or construction. You get family reunification later coming in and it balances the numbers. And so with climate change I think because of the point that Robin made that the best predictors of migration are previous patterns of migration, it's likely to follow those same mechanisms. There are positive and negative implications of migration depending on gender. In turn, there's some positive aspects for women in terms of the empowerment, the ability to control money, things of that sort. There are also some, you know, some very negative impacts and it varies depending on where people are going, whether they're going legally or illegally, how much the receiving community is prepared to receive them on that. So it's a real variation in patterns.

If you look totally at the number of international migrants in the world today it's almost equally divided between men and women, but different regions have very, very different patterns. So if you look at some of the least developed areas it's more male migration. Into Europe or North America it's actually a majority of women migrating.

In terms of the policy framework, I think that we will eventually get more leverage through a collaborative approach that builds on the different sectors that are implicated so that it's not just coming from the environment or from migration, but it also includes the development aspects of environmental aspect. We're seeing it already. I mean the way in which the World Bank address migration today is a world of difference from the way it did 10 years ago, and even more so than it did 20 years ago. You know, I remember being called into the Bank or USAID, you know, sort of at five-year intervals, and said, we really should look at migration. What's going on? How should we do it? And there would be a lot of activity. It would last for about two days and then I wouldn't hear again for five years. And this was a pattern.

But that's not true anymore, and I think it's because we have enough people who are not addressing the issues through the emotional lens that had been the case. Unfortunately, I think there are too many players that still do it through the emotional lens. I won't talk about US immigration reform, but that's an example. But I think now we do have a mindset that's increasingly taking hold that is looking at evidence, is trying to understand very complicated interconnections. We have better metalogical approaches that can address complexity. We have more, you know, more theory that we can use in order to be able to build it. And I think that once that process begins to take hold that the policies held will actually be more straightforward than it may appear at this time today.

MS. FERRIS: Thank you. Robin.

MR. MEARNS: Thank you very much. Excellent questions. I'll take a slightly different tack on your question to -- Susan addressed the gender part of it. But I think what you were driving at was also the vulnerability of those left behind. And it's not only about -- it's not only a gender issue. Age I think is critical in this. And so very often it's children and the elderly who are left behind. And there is actually quite a body -- there's an emerging body of work, I should say, on those dimensions, usually relying on sort of in-depth qualitative case studies rather than household survey based data. But you know, a number of groups help aid internationally. There's a number of groups who have been looking at this, say the Children's Fund, not surprisingly is really quite concerned about that dimension of the problem. So I think there is a growing body of work on that.

The question about secondary demographic response is not my area. I'm afraid I'll have to just totally punt that one.

Ed, your final -- I mean excellent question, and you and I have talked about this sort of thing before, I mean, I -- it sort of reminds me some years ago with colleagues from the University of Sussex where I was before I joined the Bank. I edited a book called *The Lie of the Land*, challenging received wisdom on the African environment. And the way this was covered in the press, you know, what we were saying was, look, exaggerating the scale of the problem doesn't help you find the right solution. Quite the opposite. It often leads you into defining wrong solutions, and those solutions themselves can have all sorts of ancillaries that are counterproductive consequences, and so much better to look for, you know, a sort of a patchwork of appropriate contextually of the appropriate responses. And, of course, the way the press covered this was, you know, University of Sussex researchers say there's no environmental problems in Africa.

So, I mean, there's a lesson there about how you deal with the media,

which I've since hopefully learned a little bit more about. But I think the key point here is -- and I'm a firm believer in this -- there is no silver bullet. And there's no silver bullet on this issue as with any other issue in development or sort of environmental responses. And I think it's simply -- I mean, a nuanced response is necessary, and a nuanced response can help pave the way for a dialogue with many, many governments, many, many stakeholders within developing countries. I mean, I work in a development context around, you know, a sort of a plethora of appropriate kinds of responses. All the things that we've talked about today, whether it's social protection, livelihood support, sort of you know, ID cards for urban migrants, climate-responsive urban planning, planned relocation and resettle, I mean, there's a vast array of things that need to happen and need to be put in place. And I think, you know, the cumulative aggregate effect of lots of contextually appropriate things could be potentially enormous. And I think that's what's needed.

MS. FERRIS: Thank you very much. And Chaloka, co-director, I'll give you the last word.

MR. BEYANI: Well, none of the questions asked actually related so much to my area, but I would like to reflect on the question asked about women in the Maldives since I actually had a mission there. And I think that what the question asks is quite true of one of the two islands that I went to, a small island called Filokoshi where there was a rebuilding reconstruction scheme for IDPs in terms of houses.

I think the most interesting thing, first of all, was that the Red Cross began the reconstruction process. The reconstruction process was such that they're going to build integrated blocks, to which the IDPs themselves objected and said, no, we actually want to go back to where our original houses were. So the Red Cross abandoned that, and there's still monuments of a structure on the island. And new houses were then constructed, but the feature of those houses is such that they're built

on a swampy place and the water keeps seeping up from underneath. It's quite clear that there are no specific related gender activities taken into account in relation to women as you point out, and most of the women that we visited in temporary shelters were actually simply, you know, hanging around with nothing to do. The men had gone fishing. So there was no sense of building into women's livelihood activities that are important to them and in terms of reconstructing their lives.

But when you visit the other islands that were fully rehabilitated and reconstructed, and there you saw women with grinding stones, sewing and doing all sorts of activities that they clearly, you know, engaged into. So I think that's an area that requires some kind of inquiry investigation. And we certainly put to the Maldives authorities that insofar as durable solutions are concerned, the role of women must be specified, and there should be a special protection and assistance in relation to women and their livelihoods, too. Thank you.

MS. FERRIS: Thank you very much. Thanks to all the panelists for a very far-ranging discussion. We'll look forward to seeing all of you at future seminar series. Thank you all very much. (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.

/s/Carleton J. Anderson, III

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012