
2010 USAID Summer Seminar Series

July 15: Food Security, Climate Change, Water and Health: How can integration better solve complex problems?

Panelists: Geoffrey D. Dabelko, Director of the Environmental Change and Security Program, Woodrow Wilson Center; Warren Evans, Director of Environment Department, World Bank; Loren A. Labovitch, Climate Adaptation Manager, The White House Council on Environmental Quality

Moderator: Tegan Blaine, Climate Change Advisor for Africa Bureau, USAID

Materials: Warren Evans presentation appended

TEGAN BLAINE: Good morning. My name is Tegan Blaine. I'm the climate change advisor in the Bureau of Africa at USAID and I'll be moderating this morning's session on "Food Security, Climate Change, Water and Health: How can integration better solve complex problems". I'm glad to see so many people in the room. I think this is a really timely topic and I hope that everybody's excited to be here and excited to participate in the conversation.

This seminar series plays an important function at USAID. It's a seminar series that we hold only during the summer and it's open to anybody who wants to come. It's our chance to sit back and reflect on some of the major development challenges that we face and really begin to interact with people within the U.S. government, people in the NGO community and the private sector community about problems that we deal with every day but sometimes don't have the time to give the attention that they really deserve.

And so I really appreciate all of you participating in this session today to allow us to talk about one of the challenges that we are facing as development professionals. As all of you have likely heard, USAID has committed to major initiatives in each of the four years mentioned in the title of this presentation: food security, climate change, water and health, all of which are drawing a lot of attention. And yet, it's hard to say where one of them leaves off and the other begins because the interlinkages are so absolutely close between all of these different issues. Integration can be a challenge, both from a programming perspective but also from an organizational perspective. At USAID, we face different flavors of money. We face people with different sets of training, often in specializations.

We face organizational challenges not just in how we're trained but also in how we work and we often find ourselves with a shortage of time, just to have the conversations with our peers that really enable creative thinking and education of each other about some of the interlinkages between these issues.

So we really wanted to use this forum as a way to bring people together to talk about these issues and what we can gain from integration and how to do it successfully. I'm going to go ahead and introduce our three panelists and then each of them will have 15 minutes to talk a little bit and then we'll open the floor to questions and I hope that we'll have a good conversation after their presentations.

But our first speaker is Geoff Dabelko. He's spent 20 years bringing together policymakers, practitioners, journalists and scholars to address the complex links between environment, population, development, conflict and security. He's currently the director of Woodrow Wilson Center on Environmental Change and Security Program and he is also co-author of – or co-editor, sorry, of books such as "Environmental Peacemaking" and "Green Planet Blues". He's a lead author of a chapter in the next IPCC report for working group two and he provides expert input to more environmental and journalistic groups than one can count.

Our second speaker is Warren Evans. He is currently the director of the World Bank environment department, where he oversees implementation of the bank's environmental and climate change strategies; in particular, mainstreaming of these strategies into World Bank operations. He has a long history of working on environment and development issues in Asia, coming most recently from the Asia Development Bank.

And our third speaker is Loren Labovitch. He's a development and environment specialist with over 17 years of experience working with the government, the private sector, donors and civil society. He's currently the climate adaptation manager for the White House Council on Environmental Quality and therefore the one U.S.

government representative on the panel. He's on loan from the Millennium Challenge Corporation currently, where he has worked since 2006 as a director of environmental and social assessment and where he's been involved in compacts in Africa, Latin America, Eastern Europe and the Middle East.

And so for now, I'll hand it over to our first speaker, Geoff, and we'll go through their presentations first and I look forward to the conversation afterwards.

GEOFFREY DABELKO: Thank you very much, Tegan.; Thank you, USAID. Thank you to the Knowledge Service Center. It's a real opportunity for all of us to have a lively exchange with all of you because I see an awful lot of experience in tackling these integration challenges in the audience. At the Wilson Center, we have the opportunity to hear about these programs. We're not a field-based organization. So the insights here are really telling other people's stories and I'll try to do that with three stories to talk about the challenges that really recognize the fact that we all, and in this case of course we're talking about particularly the world's poor, live integrated lives and face integrated and complex challenges. And so it's not unreasonable to think that they would want an integrated and connected set of responses and solutions and so that is much easier said than done, particularly how we often organize ourselves along sectoral or bilateral approaches to, again, complex and integrated problems. But nevertheless, I think this meeting, and certainly the actions here in town in the policy context, are probably better than I can remember in terms of taking this integration challenge seriously and recognizing some of the structural challenges that we have, but really also some of the opportunities in the field. So I'm going to try to use three examples or cases, or if I was a better communicator I'd call them stories, and tell them through a single person, but I'm not quite that talented.

We'll talk about three examples of programs, try to learn some of the lessons from integration and recognize some of the challenges going forward, but understand that it can be done and it's not just saying it and running into barriers to doing it. But we do have people in the field accomplishing some of this integration. So I'm going to start from an example from the Philippines, a talk that is being done by PATH Philippines, go over to Africa and look at DRC and a Mercy Corps program and then finally just in many ways here in town with USAID and one of their efforts to look into the periphery to understand that what's there I not always peripheral to what they're doing. So first, the Philippines, obviously we have, particularly in the coastal communities, a very dense population, real strong health challenges, rapid population growth, a broad set of indicators that prove quite challenging for those folks, particularly on some of the smaller and more remote islands and PATH Philippines, which is an NGO there that has a variety of skills, primarily starting in the health realm but moving into a variety of other ones as we'll see, are talking to those communities. And I think that's perhaps one of the first lessons is if we actually walk the walk of demand-driven development, we'll hear from the folks on the ground that they want integrated programs rather than single sectoral interventions.

So in talking to them, they identified these range of challenges that they had and to make quite a long story short, the integrated program that then resulted was one that had multiple facets and tried to meet these multiple needs in ways just as we talk about from a more analytic sense the connections between climate change, food security, water, energy, health. They're living it. So not surprisingly their list had those elements and so starting around a marine protected area that was monitored by the local community to increase fish stocks where the over-fishing was a big problem and particularly since that was a large source of income and protein that brought in a little bit of tourism money, but most importantly raised stocks, there was a microcredit program to deal with potable water issues, which particularly for some of the remote islands was a very big challenge. There are alternative livelihood programs because even with the marine protected area, over-fishing was still a big problem and so alternative livelihoods around seaweed harvesting and tapping into an international market for that. On the health side, really in raising the availability of the services where it's still quite modest but the availability of nurse midwife and availability of services that were done through local kiosks in such.

So in many ways, it's a laundry list. But it's a list that comes with a vision and an integration that comes from asking the question first, designing programs and finding ways that they can work together, support one another and ultimately, of course, build capacity there so it can be sustainable. Interestingly about this case, they went the extra distance that so infrequently we go and did controlled-comparison studies to have that work then appear in peer-reviewed work to compare the integrated approach versus the single sectoral approach. And of the majority, not all, but the majority of the indicators both on we'll say the environment side and the health side, you had greater achievement through integration rather than sectoral.

Sometimes it was marginal; sometimes it was dramatic. You had a lower cost – not a dramatically lower, but a lower cost. You had some practicalities of instead of sending multiple delegations on individual sectors out to these remote islands, you had one organization, one person or people with one trip doing it. So in part, we respected the time of those local people to come for the community meeting once to get this basket of services and consultations and we saw some evidence of higher level of female participation in natural resource management, higher level of male participation in health decisions and taking on some of the responsibilities there. Big, big challenges around scale, around sustainability; certainly different time scales in terms of seeing achievement. So health indicators came in and saw progress faster than the environmental ones, not surprisingly, and when we tried to have indicators of success of a single program, that diversity and those different time scales posed challenges.

And then having multiple skill sets within an individual organization or building that is not inconsequential and not something that's terribly common. We tried to capture some of the lessons of this project in other ones. I see Judy Oglethorpe here from WWF. They're a leader on this as well and in fact I think we have some of their Nepal work. But out front hopefully you can pick up some

of these examples. A second case, moving over the DRC and Eastern DRC and Mercy Corps; Mercy Corps, like many of the humanitarian organizations I think has been going through a process of recognizing that they are not just about providing relief in emergency short-term situations, that many of the camps they're working with and populations that they're working with are there for literally decades.

And so that has caused them to reflect on what kind of organization they are, understand it as a wider development mission and not just immediate and short-term relief. And part of the insight I think they got from that was that they needed a different skill set in their organization. And so in this example, as the result of hiring someone like Jim Jarvie, who comes from the environmental side, as a climate change and natural resource advisor, the program ended up different in terms of in this case service refugee populations in Eastern DRC. So one of the challenges that they have, of course, is fuel and of course turns to fuel wood and gathering wood in, as you know, an area that is quite valuable from multiple perspectives in terms of the forest resources in that part of the world.

By providing fuel-efficient cook stoves, they did multiple things. They improved the health of the women and children or anyone around the cooking situation in terms of respiratory perspective. They lowered the opportunity cost for those women and girls who were gathering that wood and spending a lot of time doing it and also subjecting themselves to greater vulnerability around sexual violence. But they also went a step further and this is by bringing in additional expertise, they went the additional step and are capturing the income from the fact that Europeans are willing to buy offsets in carbon and so they work with a local trader and capture the income from those reduced emissions from these more fuel efficient stoves, sold that and then used those resources to finance what is now 20,000 households that are being served with these. And so, having those additional skill sets in, thinking in an integrated fashion, it wasn't, hey, here's our new climate program from an Eastern DRC refugee family where they say, sorry, we have larger priorities. It was let's make this, plug this climate issue into an area, which for me, the lesson is we have no excuse for not going this anywhere in the world and saying some place is too unstable. If we can do it in Eastern DRC, we should be able to do it anywhere.

And so in that respect, it does behoove us to diversify our expertise and try to understand who are appropriate people and staff to have it. Don't assume that we can't do climate change work in some of these settings.

But we do have to respect and understand that the timeframes and the immediate priorities, but if framed and integrated, then both on the mitigation and adaptation side, I think we have real prospects for finding ways to make it part of the larger development enterprise and I think there's a lot of progress and recognition if we look at a range of development organizations and how much they've brought the climate issue on. And then just a final note: If we can't get out of our sectoral lanes, let's at least think about integration and use analysis of it even if we are hamstrung by earmarks and line items and specific items and we can't get out of it. So one experience that we were fortunate to be involved in at the Wilson Center a couple of years ago was that USAID's Asia bureau and particularly the folks who were tasked with spending their biodiversity and their water and sanitation money, recognized that, that was a very specific set of issues, but that there were lots of other issues that they knew were not in their purview, not their topic of expertise and not what they were charged with working on, but they needed to better understand how a wide variety of trends were going to affect their portfolios, in part so that their investments would have a lasting effect and not be overwhelmed or look for opportunities so that it could be extended.

And so through of process of bringing in, again, very different sets of expertise and consultations, both regionally and here in Washington, talked about they're not dramatic – they're not surprising topics but even talking about the kind of climate change and energy and trade and commodity and governance and conflict, brought a number of dynamics that – for example, one of the upshots of this conversation were the folks that were programming food security, biodiversity and water programs in the lower reaches of the Mekong, really had a wakeup call, shall we say, when they spent some time with some of the climate folks and the glacier folks from the Himalayas and then threw in a little Chinese hydro plans on the upper reaches of the Mekong. And suddenly they understood that there were a whole number of energy, climate, both mitigation and adaptation responses that they needed to take account for the long-term understanding of how they were going to do their single-sectoral programming downstream and it made for a wider conversation and some – I'm sure Tegan or others – can tell me about some of the interagency processes that look at this regional – some of these regional issues and ways to bring those things in. So I think I'll end with that. Even if you're stuck in the sectoral, think integrated and improve that sectoral so it can take account of these multiple challenges that we face.

WARREN EVANS: Thanks. This first slide lists some World Bank websites. The reason I put this up first is because I'm going to be referring to some key reports in the next few minutes and I didn't want to haul all those reports over here, and we're trying to go paperless to the extent possible.

The work that the World Bank does on climate change is highlighted on the second website. The "World Development Report" from 2010 was on climate change and I'd encourage you to take a look at that together with the background papers. Another piece of work that I'll refer to is the "Economics of Adaptation," or EACC. Finally, I will talk about the "Climate Investment Funds," or CIF. I'm going to start out by referring first to two pieces of work that have helped us rethink how we look at the development process in the World Bank. First was the a study on climate impacts in the poorest countries prepared about four years ago during the IDA15 replenishment. IDA– the International Development Association – is a soft window of funding for the poorest countries served by the World Bank.

When we started looking seriously at how climate change would impact those poorest countries we looked at the six most common types of impacts of climate change— droughts, floods, storms, coastal sea level rise at one meter, five meters and agriculture. Recognizing the significant uncertainties in making such an assessment, we attempted to map out the 12 most vulnerable countries to each of these impacts. All but three are developing countries- many are IDA countries. Only three developed countries rank in the highest 12 countries in terms of vulnerability, and that's under a coastal sea-level rise of five meters, which we all hope doesn't happen. The point here is that the poorest countries in the world are the most vulnerable. They're the most exposed to the impacts of climate change and least able to deal with those impacts.

What that says to us in the development community is that we've got to focus on addressing those impacts of climate change as a part of the development process in these poorest countries. The 2010 "World Development Report" and the "Economics of Adaptation" study, each conclude that the best way to help countries become climate resilient is through the development process. Help them grow economically. The actual cost of impacts will be much higher in a country like the U.S. because our infrastructure is more developed and it costs more to rebuild that infrastructure. But the resilience of a country like the U.S. is very high. Poor countries can't take the shocks because they have very low resilience.

Further we conclude that the way to address the adaptation agenda is through the development process, by integrating the climate change agenda in to the development process. There is no choice. Adapting cannot be achieved by a parallel process. Unfortunately through many years of negotiations on climate change, what we have seen is a parallel process. Poor countries have developed poverty reduction strategies, which generally is an integrated strategy, for development and then, in parallel, a national adaptation plan of action. The result is that the NAPA rarely has significant impact on the actual poverty reduction strategy. A key challenge is to bring those PRSP and NAPA together thereby looking at the development process through a climate lens.

This is further supported by the results of the "Economics of Adaptation" study. at the EACC has two components- top down global study and bottom up country studies. The global study is a sectoral study. It doesn't take into account social impacts. The cost to the developing world of dealing with the impacts of climate change somewhere between \$80 to \$100 billion a year on average between now and 2050. This is by far the most detailed study of its type, supported by the Netherlands, Switzerland and U.K. The EACC includes a series of country studies and I just want to point out a few of the issues here. Ethiopia's 10-year average GDP, in the last decade of the study, would be 9 percent lower than the baseline, mainly due to impacts on agriculture. Bangladesh, clearly the coastal zone but also inland – will suffer huge impacts to the economy. In Vietnam, rice yields will go down. Mozambique is one of the most interesting cases because virtually every sector there – coastal, agriculture, infrastructure, urban – is highly vulnerable to the impacts of climate change. There are huge uncertainties in making these estimates because the models that we have today are often contradictory, particularly on rainfall.

A serious challenge for developing countries will be deciding whether or not to invest in adaptive development, given the uncertainties. Thus it is really important that we continue to improve our knowledge, while at the same time helping countries move towards climate resilient development. Pioneering support for this is being provided through a program called the Pilot Program for Climate Resilience (PPCR) a CIF program being implanted by the World Bank and Regional Development Banks. PPCR will provide about \$900 million, mainly as grants, to a number of the poorest, most vulnerable countries to explore how undertake the development process through a climate lens.

How do you take your poverty reduction strategy, rethink that, see whether first off are you focused on the right sectors, are you focused on the right geographic areas of the country in terms of priority areas for putting your development finance? Are your sector strategies adaptive? So in the water resources sector, is that sector development plan the right plan? Will it achieve the economic and social development objectives if viewed through a climate lens? How do you adjust the plan so it's more resilient to climate change, given the uncertainties? And then how do you actually determine what you're investing in today since it is likely to be an investment that's going to last 40, 50, maybe 100 years depending on the sector? How do you make adjustments in planning today so that 40 years from now an investment has a better chance of succeeding in delivering the development impacts you're looking for. These are the kinds of questions that finance ministers and agriculture ministers and others have to deal with in developing countries. We are in the analytical phase of PPCR. The analytical work in these countries is generating a number of interesting challenges. We're in the learning stage. We can't wait to learn before we act, so we all must be in a learning-while-doing mode, and I think that the entire global community has to get onboard and really push in the same direction on this.

BLAINE: Thank you, Warren, and our final speaker, Loren Labovitch.

LOREN LABOVITCH: Good morning everyone. My name's Loren Labovitch. I'm the climate adaptation manager at the White House Council on Environmental Quality and I want to thank Tegan and Linda and USAID for inviting me to participate in a very timely – I think as you said – and important discussion and the attendance seems to reflect the interest and importance of the topic. So thank you very much for attending.

I thought I'd focus my remarks on integrated solutions as a pathway to environmentally sustainable and climate resilient development and do my best to build upon some of the things that have already been said. I'm going to talk about three things. One, I thought I'd provide an overview of the government's Interagency Climate Change Adaptation Taskforce and the work they're doing to integrate adaptation, climate change adaptation into federal government operations and programs. I can't say a lot

with regard to the details because the taskforce is still doing its work. But I thought this was a good opportunity to provide an update to everyone on the progress there. Secondly, I'll talk about some specific efforts being undertaken within the U.S. government to integrate water, climate and food security into our development assistance programs, specifically talking about the administration's food security program, Feed the Future. And I'll talk about a couple projects that my home agency, MCC, is undertaking. And then lastly, I'll provide a couple thoughts on the challenges and constraints to integration that I see and I've observed in my work over the years.

So starting with just setting the mindset and the stage from which we work and from which I've looked at things, the impacts of climate change are being felt across the United States and the world and we know that climate change affects nearly every aspect of society, from our ecosystems to our infrastructure and to the health of our people and the health of our economy. Internationally, climate change poses particularly challenging risks and opportunities that are important to a range of development, security and diplomatic endeavors. Addressing these challenges – and the reason we're here today – demands integrated solutions driven by strong leadership, innovative ideas in technology and participatory planning and implementation. It is important to think about climate risks and to think about how we respond to these complex problems and threats posed by climate change in an integrative way for several reasons, many of which have already been stated. But obviously, climate change requires the ability to be responsive to shifting and unpredictable circumstances and uncertainty.

It requires flexibility at an individual, organizational and systemic level. It requires multifaceted strategies around preparation, emergency response and long-term recovery. It requires multilevel approaches around local, state, regional, national, multinational and it requires us to think, of course, multisectorally along the lines of agriculture, water, transportation, energy, security, so on and so forth. And additionally, as has been stated, climate change is one risk among many different risks and stressors that affects the human, physical and natural environment. So it's really virtually impossible to think through the challenges around climate change, water, food security and health without understanding and appreciating the range of social, economic and environmental dimensions that it affects. So let me talk real quick about the Interagency Climate Change Adaptation Taskforce, which I'm sure some of you are familiar with. As Tegan mentioned, I've had the opportunity to support the interagency taskforce for the last nine months.

So a quick overview: Last year, the White House Council on Environmental Quality, the Office of Science and Technology Policy and the National Oceanic and Atmospheric Administration formed the Interagency Climate Change Adaptation Taskforce, which includes representatives from over 20 agencies across the federal government. The taskforce was convened in response to an executive order signed by President Obama in October 2009 that focuses on federal leadership in environmental, energy and economic performance. That executive order is 13514 if you're interested in looking it up. Among its objectives, the executive order called on a taskforce to report to the president within one year on what federal agencies are doing to support a national climate change adaptation strategy and what more the federal government can be doing both domestically and internationally to respond to risks posed by a changing climate. In March, the taskforce released an interim progress report that outlines the work to date and identifies key components, to include in a national strategy. That report is up on the Council on Environment Quality website if you're interested in seeing it.

In particular, the taskforce, as articulated in their report, recognizes that national strategy should, one, use a set of best practices derived from the best available science and the experience and knowledge of a wide range of government and stakeholder groups. Two, that it's important to integrate climate change resilience and adaptive capacity into federal government operations and programs – again, both domestically and internationally. Three, ensure interagency adaptation planning is coordinated with domestic and international activities. And four, promote a broader understanding among communities about their vulnerability to climate impacts, equip communities with information to use in local adaptation planning and policies and to learn from communities, especially those who have already undertaken steps to adapt to climate.

And internationally, this includes further collaboration with international partners to promote knowledge sharing and harmonization of efforts. The taskforce, as I said, will issue a final report to the president in October that outlines what the federal government is doing to adapt to climate change at home and abroad and recommends specific actions that should be taken to move toward a comprehensive national adaptation strategy. Several interagency workgroups have been formed to support the work of the taskforce looking at all sorts of different aspects around public health and oceans and water resource management and a work group was also formed to look specifically at the international dimensions of climate change adaptation. Tegan and myself and many others within USAID and other parts of the government have participated in that workgroup and I think it's important to say too that the workgroup not only consists of our core development agencies – State, USAID, MCC, Treasury – but also includes the participation of many of our technical support agencies like USEPA, USDA, DOD, NOAA and others. So I guess the final thing I would say on that is if you – we had the report open for public comment and that comment has passed. But it is available and you should take a look at it. But the real work and I think the real details will be coming out in the fall.

So let me talk – let me talk now about some of the specific programs within the U.S. government that are already moving forward on integrating adaptation in foreign assistance endeavors. First, let me talk about the global hunger and food security initiative, which is known as "Feed the Future." At the G-8 summit in Italy in July 2009, President Obama pledged at least \$3.5 billion for agricultural development and food security over three years. This helped leverage and align more than \$18 billion from other donors in support of a common approach to reducing global hunger and food security. The Feed the Future initiative, which is being spearheaded by the Department of State and USAID, aims to reduce the root causes of hunger that limit the potential millions of people and establish a lasting foundation for change by aligning resources with country-owned processes and sustained multi-stakeholder partnerships. The primary goal of the initiative is to advance global prosperity and stability by ensuring

that families and individuals have a reliable source of quality food and sufficient resources to access and purchase it. Environmental degradation, as I think you are all aware, and climate change are critical crosscutting issues that can affect the sustainability of investments in agricultural development and food security and impede long-term economic growth and thereby adversely affect the livelihoods and wellbeing of the people we're trying to help.

Tegan and myself – we've worked – those of us in the international adaptation workgroup that I referred to worked closely with the food security initiative for a couple months to help them integrate climate change and environmental considerations into their public guidance document, which was released in May and is up on the State Department website. I think it's www.feedthefuture.gov. So that guidance document sets forth a set of core principles that are intended to guide how climate change and other environmental considerations are looked at in the context of the food security initiative. And it emphasizes the importance of looking at climate and environment in a way that compliments but does not displace the underlying objectives of what they're trying to achieve in the food security initiative, which I think is important. Specifically, as the guidance document states, these guiding principles recognize that people's livelihoods and wellbeing depend on reliable and equitable access to natural resources and it emphasizes the importance of helping partner countries strengthen their capacity to preserve and enhance natural ecosystems that are vital to achieving long-term agricultural development. And then secondly, it talks about fostering a shared commitment to the fundamental principles of sustainable development through early consistent and constructive engagement with country counterparts and other stakeholders.

So I'm going to talk – because of the time I'm going to keep rolling into some things that MCC is doing real quickly before we move on to the question and answer. My home agency, Millennium Challenge Corporation, is – hopefully some of you know, one distinct feature is it provides long-term grants, five-year grants that affords the opportunity to work on large scale projects, many of which are in the agriculture, transportation, energy, health and water sectors. It's signed compacts to date with 20 countries totaling over \$7 billion in assistance. Just a couple projects that it's working on that demonstrate the integrated approach and an emphasis on integrated solutions are two, one in Moldova that I worked on over the last couple of years and one in Mozambique. In Moldova, the MCC is supporting large investment in the agricultural sector and it's doing four things. One, it's rehabilitating central irrigation systems. Two, it's promoting sector reform by helping the Moldovans update their water policy and create water users associations. Three, it's addressing finance – access to finance issues and helping farmers get credit that they didn't otherwise have and, four, it's providing on-farm technical assistance and training and that training is actually being done in partnership with USAID and I think actually USAID is administering that project.

So that's an example of where MCC has gone in with the main goal of increasing agricultural incomes but has worked with the government to bring a lot of people in government that don't normally talk to each other and work together in the financial, environmental infrastructure and other parts of the government to look at it in a very integrated way and deal with the infrastructure, deal with the policy environment to create a good environment for future investment, deal with access to credit and then work with farmers on the ground. And then lastly I'll talk about Mozambique. Mozambique is another place where MCC is looking at agricultural investments in an integrated way. There, they're investing money to help the country deal with the spread of coconut leaf yellowing disease and so they're helping farmers adopt new cropping systems and improve farming and irrigation practices that conserve soil and water resources. So the main thrust of the program is to help replant trees that are of more disease resistant varieties but at the same time help farmers adopt new farming practices using other staple crops that mature more quickly so that they bridge the income gap while the new coconut trees mature and then working with them, again, to conserve soil and conserve water so that they can do things more efficiently and more sustainably into the future.

So those are just a couple examples of what the government's doing and I think, you know, there's many more where that comes from but I think it's important to recognize that even though you've got this large interagency process that's looking at climate change adaptation, at the same time, the federal government and particularly the international development community is already doing a whole lot of stuff to try to advance the ball on this issue.

So lastly, I'll just close, maybe a setup for the Q&A session, but just four things, kind of my personal observations around some of the challenges in pursuing integrated solutions. One, it's already been said, but technical capacity and accountability for this is critical and working in an integrated fashion requires this mix of technical specialists that are very specialized in what they do in a particular sector or topic. But we need to combine that capacity with strategic thinkers that can think across sectors and issues. Secondly, it's really important that we work together to define what adaptation and resilience means in the context of international development and there's a whole lot of value there that maybe we can talk about in more detail in the Q&A.

Third, I'll say that I think it's vital we work together to set up measureable goals and performance metrics so that we can guide and focus our efforts with respect to building resilience and adaptive capacity but then measure how effective we are at achieving those goals. And then lastly, I think it's really important to look at risk and vulnerability assessment because that really kicks off the process of trying to incorporate climate change adaptation into development interventions.

And right now I think we need more consistency and stronger methodologies for how we do that and we need methodologies that help frame these issues in economic terms for both the development partners and donors and the key decision-makers that we're working with in government. So I'll stop there and go on to Q&A.

Questions and Answers

BLAINE: Thank you very much all of you. I really appreciate some of the observations coming from case studies and also the impacts of the – or the economic impacts of climate change and how that's being fed into planning of different programs and the surprising results coming out. We should have a couple of roving microphones. If you have questions or issues that you'd like to raise, please raise your hand. Nobody wants to start it off? Well, let me start with a question then. Loren, you just talked right now a little bit about the need for indicators and measuring the kinds of positive development impacts that integrating climate change can have. How do we go about doing that and that's probably a question for everybody here. What kinds of indicators should we be tracking and how do we actually measure the gains from integrating many of these issues together in a development perspective, if any of you would like to take that?

LABOVITCH: Well, I guess I can start. Well, as you're going to see, this is something we haven't – we need to do more thinking about. But I think the confluence of agriculture, water and climate change presents opportunities for establishing indicators that would be effective. I can't point to a place where we're actually doing this. But for instance, we know that fluctuations in the climate, whether it's acute kind of extreme events or long-term shifts in climatic patterns, have real effects on the productivity and yields and thereby the incomes of farmers. We do measure and we have data on the impacts of floods and droughts and how that reduces yields and productivity.

So if we're building more resilient agricultural societies and we're helping farmers cope with these things in a more resilient way, then theoretically over time the impact on their incomes and on productivity should decline relative to the severity of the event in which those declines were produced. I myself don't know of where you can point to those correlations. I think in MCC there's a couple different projects where we're really trying to align the monitoring and evaluation component of these compacts with some of the environmental stressors that we're trying to incorporate into project design and implementation. MCC's focus is incomes and economic development and largely that's what we're all after in development to being with. So it measures and has data sources that it uses to look at income over time. That's easy. But to correlate that with certain events around climate or other environmental stressors is not something we're doing yet. But I think that's one place in the agricultural sector that I see an opportunity anyway to develop indicators that might help us understand whether we are truly building more resilient societies. So that's one idea and I'll let –

EVANS: Just two points on this; one is there's one easy measure and that's something that's being reasonably well-adopted with a lot of inconsistency in methodologies but it's still reasonably well-adopted across the international community and that's are we climate proofing what we actually support at the project level. That's not hard to do. You may not do it right but it's not hard to measure whether or not you've taken a look at the risks of a project succeeding or failing to do climate impacts and then building in some measures to try and reduce those risks. But on the macro level, there's one thing that concerns me a lot because we're under the gun all the time to demonstrate that the money that we manage and push out the door is well-used and so on, including on climate. The risk is this, that with the uncertainties in projecting climate impacts and with the time lag that we're looking at, we're being expected today to describe in three years whether or not this money is being used effectively. The reality is we won't know for a long time and so there is a high level of uncertainty there and there's also a high risk that we help governments – and I'll give you a specific example here.

World Bank working with the Asia Development Bank and the Japanese government did a study on climate risks for metro Manila and the adaptation needs there and it's a valid study. It's peer-reviewed and so on and it made recommendations to the government on how they needed to change an ongoing program, a huge investment in flood control in metro Manila. Well guess what, if they would have built what was recommended – I don't know if you all remember the terrible, terrible floods that they had 18 months ago or so. The flood control system that we were talking about – or management system – wouldn't have worked. It would have failed miserably because that was what would now be a one-in-500-year flood and you don't design to that. Well, the credibility of the whole climate change adaptation community would have gone down the tubes overnight because we failed them. And so I think there's a real need to be practical, pragmatic in recognizing the uncertainties, recognizing that a lot of what we're talking about are major changes in storm, storm surges and so on and you don't plan for those.

And so we've got to be really careful as we move forward in setting up indicators and setting up monitoring systems to make sure that we're realistic in this and sorry – I apologize – but the bean counters that look at me and whether the money that I handle is being used effectively don't take that into account.

DABELKO: I would second Loren's point about time scale and it's just – I mean it's true when the government context, as Loren said, that a five-year program is a long-term program. But given the scope of these challenges, we should really be pushing ourselves to extend that out when in fact it usually goes the other direction, that show me this is working in a year, two years, three years. Otherwise, it's a failure and so in that sense, the timeframe for these is critical. I think the other point that I would add is we need to reverse what has been a dominant frame – I think this is changing – but a dominant frame of an individual program having a very small number of indicators of success and then only one office or one sector can take credit for it. So it can't be a project that you can show success along a water, a health, a development. So, many of these interventions have multiple benefits. We need multiple indicators and see it differently and not set up a situation where different offices are competing to take credit for a project because only one office can take credit and I think that trend is changing but it strikes me as having been a crazy direction to only see one way to count success on some of these projects.

BLAINE: Yes?

Question 1: I was wondering from Loren or others who might want to comment – my name is Laura Henderson with the World Wildlife Fund and I was just wondering given all the discussion that's going on, on Capitol Hill and beyond, about the reform of the Foreign Assistance Act, if the interagency climate group has been engaging in some discussions with those on the Hill and others who are looking at reform in the Foreign Assistance Act as to whether or not new legislation might be more friendly towards climate work, towards integrated work, long-term sorts of issues that we're talking about today. And then a second question was if you could comment about discussions that maybe the interagency climate group is having about how to raise the understanding of climate adaptation, issues of our staff – U.S. government staff from these many agencies in the field. Thank you.

LABOVITCH: Hi Laura, it's good to see you. You're probably going to be a little disappointed because I'm not going to be able to talk in too much detail about what the interagency taskforce process is doing. I think suffice it to say that the recognition and the importance of legislation is there. I don't want to get into details about what conversations we may or may not be having. On the communications side, there is definitely recognition around the importance of that. The workgroup has reached out to many, many different stakeholder groups over the last nine months or so – the NGO community, private sector, then local and state government officials, tribal officials. There was a national climate change adaptation summit recently that brought the science community together and it's pretty clear that communication and how we talk about these issues in the context of both domestic and international development is important and I think we recognize that how we frame the issue is going to be vital to how we move forward and what kind of momentum and support we get. But as far as the specific recommendations that are going to be made on that, I'm going to let – we'll let the taskforce do that in their report in the fall.

BLAINE: Question up in front; if you would go ahead and introduce yourself when you start as well, so – oh, you already have the microphone. I'll get to you at the next.

Question 2: Good morning everyone. I have a question. Since we all know that emissions have many sources for the climate change, I want to know what kind of policy or incentives will be made to the market to work so that the market will offset the emissions made by some agents that produce these emissions. So that's my question.

BLAINE: So you're talking about U.S. government facilities overseas?

Question 2 a: No, I mean the world.

BLAINE: Oh, just generally?

Question 2 b: Generally in the world, yeah, I mean, for example I know about a program in Ecuador has been funded by Deutsche Bank in order to install bulbs that reduce emissions and are more efficient. So there are these kinds of programs for developing countries to help them in development. So I mean we are an economy based on the market. So is there not a direct incentive or a clear policy how this is going to work? So is there some ideas or something that is going on for that to work?

BLAINE: So you're talking about basically engaging the private sector in mitigation activities, in low-carbon development, correct?

EVANS: It's a little bit different than what we're talking about here, but basically the carbon markets we have now – in the World Bank we have 10 years of experience working on this. The Kyoto Protocol has been in effect for five. As you know, the U.S. government did not sign on to the Kyoto Protocol.

The reality is that the carbon markets worked in some ways. They have failed in other ways. The carbon price has never gotten high enough to offset the real differences in cost between conventional energy, for example, and use of most renewables. About the only place where it's had a major effect, in terms of really offsetting cost, has been in methane capture and solid waste management or waste management.

But what's coming in the future is very unclear because the ongoing negotiations have not been able to really tackle this issue and so that hope is that we'll see a vibrant market emerge in the next couple of years that would go beyond projects, that would look at sectors, that would look at programs, go to scale which would end up really transferring a lot more money to developing countries from developed countries. But there's a great deal of uncertainty around that.

It's political and it's not a lack of knowledge about the issues. It's purely political and I'm about the last person that can give an answer on politics. So that's where we are right now. But there is another – the current clean development mechanism and many of the voluntary markets that are ongoing – that exist in the European trading scheme do continue to work. But they're not very vibrant right now.

Question 3: I'm a doctoral student at the University of Miami and I study environmental systems modeling and simulation. And my question is, how can scientists and those in academia translate our research, which I think is very applicable to this area, how can we use that to take it beyond the laboratory and start engaging in widespread sort of world impact? What is the method for volunteering our ideas and services to organizations and discussions like this?

DABELKO: I can go first, from a practical standpoint of somebody who sits kind of between those worlds, trying to facilitate the dialogue between research and policy. Woodrow Wilson was our only president to have a Ph.D. and then go on to be president. So Congress thought that there should be this institution that bridges these worlds. So in that role, we have learned some lessons. First is that we commonly hear about the science-to-policy kind of one-way-street notion. It's got to be a two-way street or it won't work, in part because if you want the policy consumers in on the landings, you've got to bring them in on the takeoffs. You have to talk to them at the beginning, understand what the pressing issues are, the inbox – not let that set your science and research agenda, but you have to be cognizant of what is it they're doing because that's where they need the help and that's where they will pay attention to the help that you might offer. Second, also because the policy community is an expert community itself and can be part of improving the question, improving the inputs and such, and then it is on the backend and through that process of dialogue on the science, it is understating that it is going to be complex but that there are additional steps that don't kind of do injustice to that complexity and that scientific language and that the specialties.

But honestly, for it to be used it has to be written in that peer-reviewed form and then written in a less jargonistic and have dialogue that both brings up the scientific knowledge of the practitioner but meets them in the middle because the kind of – (inaudible) – figure out the policy lessons. It just doesn't work, particularly when it's in exclusive language. So it's an absolutely critical need for greater integration and partnership. There are some real practical things that both the policy community and the science communities have to do so that they can understand each other and not talk past each other and be mutually supportive of each other's endeavors without pretending to drive each other's endeavors.

LABOVITCH: And I might add just to reiterate a point I think I made earlier, that if you look at the interim report that the climate change adaptation taskforce put out in March, it does talk about the importance of translating science for policy and decision-makers and to reiterate the point that Geoff made, that the two-way dialogue is vital. And this was a big topic of the National Adaptation Summit a couple – a month or so ago – around bringing the science and the policymaking or government stakeholders together to talk about how to have that two-way dialogue and bridge gaps between the producers and consumers of information so that the producers know what makes information actionable and what kind of information decision-makers need. And then the decision-makers can help provide information and input around developing a more consistent platform from which to get this information. So quality, accessibility and consistency of information and the importance of translating it in a way that's actionable and usable are things that the taskforce is working on and I think look for some more specifics on that in the report in the fall.

EVANS: Can I add I agree with both of those? And I'm just going to add one point. There's nothing – there's no greater opportunity than what we've got in front of us today on adaptation to do exactly that because it's going to be learning by doing for a long, long time and that's where science has to continue to feed into decisions that can't wait until we have answers and that's a great opportunity for anybody that's on the scientific or the policy side.

Question 4: I'm curious. I've been struggling with a lot of these ideas a fair bit and I think everything that you've given – the examples are excellent. The little takeaways are excellent.

I think my question is about scaling all of this up, how you actually build some of these, the particular little lessons that you have and actually the examples of how you've brought people together and gotten people to actually talk with different sets of expertise. That's all very much on an individual basis and I think I'm wondering when you talk about how you prioritize for initiatives broadly, USG-wide, interagency as well as within our agencies, how do we actually – what are I guess your three takeaway points for how we can actually build this in on a bigger level.

EVANS: If it's U.S. government, I don't know the U.S. government. I can speak internationally but not –

LABOVITCH: Okay, three points. One, I mean, just talking on my own kind of personal behalf and my own observations, is that I think with respect to integrating climate and in particular climate adaptation, I'm not – I mean, the scale of the problem is huge. The response needs to be commensurate with that. But I think initially I'm just trying to focus on some early wins and demonstrating where you can have success and doing it in a way that, again, like I said is measurable and I think that's the challenge we have right now. We've spoken a little bit about the challenge around the time scale and the fact that the stakeholders that we all kind of are accountable to want to see results now. The success that we're going to have in doing this will only materialize and be proven out over time, really. I mean, I think there are some – there's some things that you can do immediately to show that you're climate proofed infrastructure or things but eventually if we're really building more resilient, healthier, productive societies, that's going to play out over time. But I think to scale it up, we need to look for early wins and we need to make sure those are measurable and that we can learn from those before we scale things up or at least as we do that. So I think that's really important. So I'm going to stick with one main answer. Maybe you can get two more out of these –

EVANS: I'm going to add – I'm just going to say that the pilot program for climate resilience I talked about, it's a pilot program. But you're talking about \$30 to \$60 million of grant money going into a country to – so it is about scale. But it's about a limited number of countries to demonstrate that you can go to scale, you can transition from today's business processes in terms of development planning and implementation to one that takes into account climate change. But we're going to learn as we go and there's going to be a lot of mistakes. I think there are a few areas where we really focus on scale in our work as a party because there's a lot of

really good work being done by others that we think can be scaled up. You talked about ecosystems, ecologies and so on. In my view, in my career, we've been fiddling around with valuing ecosystems and ecosystems services and green accounting for – and indicators – for longer than I want to admit I've been working in this area and with nothing at scale yet. So that's another area where it's time to take all the work that's been done and get into some countries and demonstrate that you can move from the interesting case study and pilot work to actually impact on country decision-making processes.

So I think there's a few things we need to look at and that's one of our priorities. There are a few areas we can look at what's been done, bring it together. It's going to take partnerships. No individual institution can do this. No individual government agency can do this and partnerships are not easy. We all know that. But that's what it's going to take, and so I think it is time for a real shift in how we look at a lot of what we do in the international environmental community to take a lot of the success stories and put them together and move to scale. But I think you've got to pick a few. I agree, though. You've got to pick a few winners. What you don't want to do is do a bunch of stuff at scale that lands on – like a lead balloon. So I think that's a – you've got to be selective when you do this as well.

DABELKO: I'll add one more so that we'll have three among us. I guess in terms of internally, especially given where you're sitting, I think setting the tone and the mindset for integration is kind of easy to say and not so easy to do but I think is the kind of longer term view towards doing it. So making it okay to innovate rather than having professional penalties against innovation and so in reflected in how you define success and how you move up. Spending greater time teaching folks to think and get outside that box – I mean, we've had other processes that tried to replicate this and you'd come up with, okay, here's a trend that really matters that we haven't been thinking about. Oh, well we don't have any money to program on that. So let's take that off the list of priorities. Well, it's still – whether you have money for it or not, it's still going to impact your portfolio. You have to take account of it. And so in that sense, flexible funding and asset sustainability and then, again, this is a wish list, perhaps an unrealistic one, but even within USG, if you look at the model of long-term education of the U.S. government workers in the military versus the civilian, military invests so much more time for their people to take time out of the immediate press to learn a broader array of skills and be exposed to broader set of perspectives. The Foreign Service and the broader USG would do well to get even a piece of that investment in kind of a human capacity development from our workers because I think it would allow them to develop these exact skills that we're talking about.

BLAINE: Thank you.; There are just too many hands all at once. We'll go here and then perhaps here. Yes, thank you.

Question 5: I work for USAID. I've appreciated the discussion of integration. The one area where I think there perhaps is a need for a bit more integration, thinking for example of the Feed the Future initiative, is really between adaptation and mitigation. And what do I mean by that? There is a lot of agricultural systems in developing countries which have a potential to sequester carbon, and by sequestering carbon they would qualify for payments for environmental services which could have the ability to finance many of the adoption of carbon-sequestering technologies such as agroforestry, conservation agriculture, terracing. But in the discourse on climate change and agriculture, I often feel there's an over-focus on adaptation, things such as early warning systems, drought resistant crops, but not really looking at small-holder farmers and developing countries as potential entrepreneurs receiving payments for environmental services that could actually finance the movement towards more resilient systems. Do you see the potential for these developing country agricultural systems to sequester carbon and perhaps qualify for payment for environment systems and what are some of the challenges involved in that?

EVANS: Can I just comment on that, because I think that there's – there are two things here. One is, I agree 100 percent but I don't think it's an either-or. I don't think either you forego the early warning systems and so on. You've got to have both. But one interesting thing is that when the climate convention was agreed upon, and particularly in discussions on Kyoto and the CDM, the developed countries can actually get credit for soil carbon sequestration; the developing countries can't, which is bizarre. And so I think there is a push to flip that around – or not to flip it around but at least to enable developing countries to benefit from this and so it's beyond the – people talk about methodologies and so on. I think it's beyond that now. I think it's purely political and hopefully that will be one of the outcomes of the continuing negotiations, that this will become a part of a market-based mechanism for under the climate agreement.

LABOVITCH: And I might add to that, actually it's a great question and it actually allows me maybe to say a couple things that I didn't have time to say in my presentation. I was getting kicked under the table. Two things, one, I think from the standpoint of the taskforce, again referring to the interim report, we recognize the importance of looking at mitigation and adaptation in a coordinated and strategic way and I think it's pretty clear that the administration is doing things to try to advance both sides of the equation. Specific to the Feed the Future initiative, actually it allows me to point out that, again, if you look at the guidance document and there's a section on environment and climate in there, it talks about working with partner countries to look at four environmental elements in particular.

One is adaptation, looking at climate risk and vulnerabilities and trying to do that in a way that informs decision-making around the composition of the programs; two is looking at natural resource management and understanding what the key resources are and ecosystems that need to be preserved. Then three, it specifically mentions promoting carbon sequestering or low carbon development pathways, low carbon agricultural practices. So it's in there. I think – again, getting back to the point that I made around complimenting but not displacing core objectives – I think there's a real challenge when you look at reducing carbon and promoting low carbon development that you've got to stay focused on food security and so I think the food security initiative has a little bit of a challenge there. But they've acknowledged that where they can help promote low carbon pathways and carbon

sequestering soil practices, that they'll aim to do that. So it's an important point and I think it's recognized and it's very clear in the food security initiative, so.

BLAINE: We had a question up here.

Question 6: Yes, hi, thanks, I'm a new USAID foreign services environment officer and I appreciate the focus on integration and innovation. I'm interested in your perspectives. Given the limited resources that we all bring to the table within and outside the USG, innovative ways that we can be more integrated in how we all work together? And maybe particularly for Warren, just given your view from the World Bank but also Loren and Geoff, whether it's the U.S. government or World Wildlife or the private sector, do you have examples of how you've seen all of us who are in this together working together in new ways that are more effective or helping us leverage our resources better? That would be helpful. Thanks.

EVANS: I think there are some – let me first say that, again, under the climate change mandate that we all have now, I've seen better coordination and cooperation than on any other issue in my years of experience. And I think that the climate investment funds are a great example where all the multilateral development banks are working together with most of the major donor organizations. It may not be USAID from the U.S. government as the Treasury, but the government are all there both developing in developed countries and many, many civil society organizations. I've never seen those groups come together the way they have here and of course when you've got \$6-point-some billion on the table, that really helps to bring folks together. But I think we've got – and then you've got pockets of great examples of cooperation and collaboration.

Where I worry, and I'm glad you asked this because it's one of my favorite things to talk about now, I worry very much about the fast-start mechanism that was part of the Copenhagen Accord and of course the U.S. is very much a part of that. I worry because this is an opportunity for all this community to come together at the country level. But the reality is that bilateral programs are politically driven and bilateral programs often have their favorite technologies, for example. So I see a risk of \$30 billion of new money – not additional, but new money coming into the climate arena and where donor country A who happens to like wind power comes in and pushes that in Botswana and country B, donor country B, that really likes solar comes in and so you lose the ability to bring together the policy dialogue, the development directions that you can take. And I haven't seen a great deal of coordination among the donor community on the fast-start commitments. In fact, I've seen just the opposite. So I think that there's a tremendous opportunity. But I think there's a huge risk right now and so it's a good question and it's a good time to really put the donor community on the spot of really acting the way they say we're all supposed to act and my experience is that I'm not a great optimist on this particular issue.

DABELKO: I just would have one example and one kind of broader point. I used that example of Mercy Corps bringing new capacities inside and I think that is terrific. I would say there's also the model on some of these integrated population health-environment programs to have pairing organizations and organizations that don't typically work with one another, conservation ones and population health ones and so we have multiple examples of that. Another category of nontraditional partnerships, there's now currently a USAID global developmental alliance that WWF – I mentioned Judy Oglethorpe – is doing with Johnson & Johnson for some of these integrated field-based programs and so it's not your first thought in terms of a partner on this but it is possible and I'm sure Judy would be happy to talk to folks after about how that works.

BLAINE: I think we have time for at most two more questions. Judy, since you were just mentioned?

Question 7: Thanks very much. We learned a lot of lessons over the last, I guess, seven years on our population health and environment work and it's tough and it's messy working out there with partners from other sectors. But the benefits really, really – if you can make it work, it really, really is worthwhile doing. We're now expanding beyond those sectors and working really on climate adaptation, really, really trying to help to bring together the conservation and development sectors and it's more needed than ever before. We have had experiences, very mixed in the past. Some have worked. Some haven't. But it is incredibly important. It's incredibly urgent.

One of the things that we're doing actually is working in partnership with IUCN and we're about to bring in development partners in an initiative called the Ecosystems and Livelihood Adaptation Network, hoping to collaborate with the World Bank on this and others, which is going to be a big network, making the science accessible, recognizing the uncertainties, the risks, the impacts, what's going to happen to ecosystems but also working sort of bottom-up.

What are the experiences in the field? What's working in, say, the Mekong or East Africa and what can be shared across the world and how can we bring together committees to practice around this, so some specialized committee to practice, for example, on fresh water, food security, regional nodes?

How can we bring together the people within regions and then make sure that those regions are documenting their results, things that work but also things that don't work, and sharing those across regions, sharing them up, sharing them down? So we're really sort of trying to work at that interface of the development sector and the conservation sector because there is so much to offer to each other working at different scales. So I just wanted to mention this, but incredibly important. It's messy. It's huge transaction costs but we've really got to do it. Thank you.

BLAINE: I think we have time for one last question. Yes? Could we get a microphone to the woman sitting next to the camera here?

Question 8: Thank you. We spoke very briefly about times when these different sectors are in conflict. But I want to make sure that we do speak explicitly about biofuels, because that seems to be an issue where an integrated approach, it would really benefit from an integrated consideration, as it's becoming increasingly – research has shown that biofuels do compromise food security, and yet the environmental standpoint and the food security world definitely could be more integrated. So I would love to hear your comments on that.

EVANS: In my view, in most cases biofuels compromise environmental security too. So I think that it's not something that is easy to generalize on. There are cases where this makes a lot of sense but there are a lot of cases where this perverse policy decisions drive bad actions and I think this is a great example and I'm moving away from the U.S. Look at what's happening in Europe. So in developing countries, absolutely you need to look – I mean, look at the food security part first and then if you can figure out a way to sensibly , economically, financially, environmentally, socially make biofuel development fuel work, then great. But do it on a case-by-case basis.

BLAINE: Do either of you want to jump in?

LABOVITCH: Actually no, I think that this is a topic that I actually am not going to comment on, given the sensitivities around it. So I'm glad Warren did, just to be honest. Given where I'm coming from, I'm going to plead the Fifth for the moment on this one.

BLAINE: Did you?

DABELKO: I guess I would second. I think back to the science question. I think the science was there. I think it's in the realm of the political decisions where the breakdowns occur. I'll leave it at that.

BLAINE: Well, at least we were able to finish this session with a bit of a laugh. Thank you all very much for participating this morning. We really appreciate all this interest and everybody's comments and questions.

Websites for relevant World Bank Climate Change reports

ENV – www.worldbank.org/environment

CC – www.worldbank.org/climatechange

WDR-www.worldbank.org/wdr

EACC- www.worldbank.org/eacc

Climate portal – www.worldbank.org/climateportal

CIFs- www.worldbank.org/cifs

Carbon Finance –www.carbonfinance.org

FCPF -www.forestcarbonpartnership.org/fcp

Climate Change Threatens to Reverse Poverty Reduction and Economic Growth Opportunities Since Developing Countries Are Most at Risk From Climate Threats



<i>Drought</i>	<i>Flood</i>	<i>Storm</i>	<i>Coastal 1m</i>	<i>Coastal 5m</i>	<i>Agriculture</i>
Malawi	Bangladesh	Philippines	All low-lying Island States	All low-lying Island States	Sudan
Ethiopia	China	Bangladesh	Vietnam	Netherlands	Senegal
Zimbabwe	India	Madagascar	Egypt	Japan	Zimbabwe
India	Cambodia	Vietnam	Tunisia	Bangladesh	Mali
Mozambique	Mozambique	Moldova	Indonesia	Philippines	Zambia
Niger	Laos	Mongolia	Mauritania	Egypt	Morocco
Mauritania	Pakistan	Haiti	China	Brazil	Niger
Eritrea	Sri Lanka	Samoa	Mexico	Venezuela	India
Sudan	Thailand	Tonga	Myanmar	Senegal	Malawi
Chad	Vietnam	China	Bangladesh	Fiji	Algeria
Kenya	Benin	Honduras	Senegal	Vietnam	Ethiopia
Iran	Rwanda	Fiji	Libya	Denmark	Pakistan

Knowledge on Climate Impacts and Costs Improving but Still Major Gaps: some Results from EACC

- The **Economics of Adaptation to Climate Change (EACC)** is providing a better understanding of the global costs of adapting to climate change.
- **Ethiopia:** 10-year average GDP for 2040-2050 is 9% lower than in the Baseline. Highlights extreme vulnerability of Ethiopian agriculture and infrastructure to flooding.
- **Bangladesh:** \$5 billion needed to address cost of mitigating impact of storm surge and inland flooding.
- **Vietnam:** Rice yield reductions about 12% in the Mekong Delta, 24% in Red River Delta. Adaptation benefits up to 3 times costs, gains skewed for lower income.
- **Mozambique:** Most vulnerable sectors are agriculture, hydro, transport infra, and coastal areas; without adaptation, the worst scenario results in annual damages of US\$400 million. Investment costs required to restore welfare losses are subject to debate, but likely lower than US\$400 million per year over 40 years.

SCF: Pilot Program for Climate Resilience (PPCR)

CIF

Purpose —

To help highly vulnerable countries pilot and demonstrate ways to integrate climate risk and resilience into core development planning while complementing other ongoing activities.

Scale —

\$945 million in pledges, mainly grants with option to augment with IDA-like resources. The US has pledged \$290 million* in grant financing.

Governance —

Sub-Committee: Australia/UK, Bangladesh, Canada, Denmark/Norway, Germany, Jamaica, Japan, Samoa, Tajikistan, USA, Yemen, Zambia, the Adaptation Fund Board + observers (4 civil society, 2 indigenous peoples, 2 private sector, 1 rep. of community dependent on adaptation approaches), GEF, UNDP, UNEP, UNFCCC

Pilot Countries

Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Yemen, Zambia -- 2 regional programs in Caribbean (Haiti, Jamaica and OECS countries) and South Pacific (Tonga, Samoa, PNG).

Measuring Success

- Increased capacity to integrate climate resilience into development
- Increased awareness of vulnerabilities and potential impacts
- Scaled-up investments for broader interventions and programming
- Improved coordination among stakeholders

*The total pledge made by the US to the CIFs remains \$2 billion; the allocation across the programs is indicative and based on an extrapolation of current U.S. allocations.

SCF: Pilot Program for Climate Resilience (PPCR)

CIF

Phase 1: Development of a Strategic Approach for Climate Resilience —

Key Tasks: Joint missions, analysis, planning, capacity building, knowledge & awareness, review policies/strategies for climate resilience as appropriate (e.g. PRSC, sector policy/strategy ...)

=> formulation of **Strategic Program for Climate Resilience** based on national development plans and programs, including NAPAs

Scope of Funding: Up to \$1.5 million, with an advance grant of up to 25% of the request amount, available for preparation of Strategic Program for Climate Resilience

Phase 2: Implementation of the Strategic Program —

Key Tasks: Implementation of the strategic program

=> **technical assistance** (such as institutional strengthening and policy reform)

=> **investments to support** climate resilient investments in key/priority sectors (such as agriculture, water management, flood protection and infrastructure)

Scope of Funding: For grant financing-

- Country pilots: \$40-60 million
- Regional pilots: \$60-75 million

Highly concessional loans (if a country wishes to access)

SCF: Pilot Program for Climate Resilience (PPCR)

CIF

PPCR Joint Missions and Phase 1 Grants —

<i>Country/Region</i>	<i>Date of First Joint mission</i>	<i>Phase 1 grant funding approved to date</i>
Bangladesh	February 1-14, 2010	Expected Sept/Oct
Bolivia	February 1-12, 2010	\$1.5 million
Cambodia	October 12-22, 2009	\$1.5 million
Mozambique	November 30-December 11, 2009	\$1.5 million
Nepal	September 3-9, 2009	\$225,000*
Niger	June 28, 2010	TBA
Tajikistan	October 12-22, 2009	\$1.5 million
Yemen	November 14-24, 2009	\$1.5 million
Zambia	November 16-27, 2009	\$1.5 million
Caribbean	June-July 2010	Expected Sept/Oct
Pacific	May-June 2010	Expected Sept/Oct

*Advanced Phase 1 preparation grant