Private Sector & Smallholder Adaptation: What We Know

Questions and Answers Audio Transcript

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Julie MacCartee: Great. Thank you, Mark. And thanks to everyone who has posted some really great questions in the chat box. We will try to get to as many as we can interested the next half hour or so. If we're not able to get to all of your questions, we will definitely be sharing them with the presenters after the fact and we'll see what we can do to get them answered via Agrilinks. And also, just for those of you, I see a few people had asked if you can download the presentation. It is now available on the left side of your screen in the little file download box there. So please do go ahead and download the PowerPoint.

All right. We've had a bunch of questions come in and I'll run down a few for our presenters. First off were a couple of questions from Albert Marty and his first question, he commented that the model that you shared is very interesting, Mark, but what have been the challenges of working with the public sector with respect to the model and has the model been able to help private organizations deal with these identified risks effectively?

Mark Lundy: Thanks, Albert. That's a great question. Again, I think what we – I tried to get at this a bit with the discussion of the cost of the inaction in Ghana. So what we were – what we – what I think is necessary when we talk about working with both the public sector and the private sector is to understand that the demand for information and perhaps the leverage points with these actors are somewhat different. So the interests of the private sector is fairly, clearly focused on supply, sustainability and being able to source the correct amount and quality of the product they're looking for at a competitive cost.

Now, if we look at the public sector, the interests are slightly different. The interests there are, again, at least on paper, focus more on the example of public goods and welfare for the members of the country, the farming communities and what not. So the interest there is slightly different. So here, what we've tried to do is take the information we developed for the private sector and turn it into the cost of inaction maps to clearly raise the issue for the public sector in terms of number of forming households impacted by climate and also the cost to the Ghanaian GDP from not acting on this kind of information.

And again, the idea here is not necessarily to say that the public sector has to do everything or that the private sector has to do everything but it's helping people understand that the threat that's being faced has implications for both public and private actors and that there's a need to sit down to identify strategies that effectively can begin to bring together or bring to bear blended resources between public funds and private funds to begin to make a difference in building a more resilient system. So I think it's more using this information to drive the establishment or the strengthening of partnerships between public and private rather than a public discussion or a private discussion.

Julie MacCartee: Great. Thank you, Mark. Another question that came in early from Albert that I think is best directed to Stephanie, he said, "Stephanie, as you recommended long term funding of a climate program, would you also agree with the idea that this long term funded program should be a collaboration between governments and private companies?

Stephanie Daniels: Thanks, Julie, and thanks, Albert, for the question. I think the answer would definitely be yes. Obviously, there's lots of different kinds of adaptation programs being tried and being designed but I think this question of better alignment and better putting together the pieces in terms of the roles that the private sector can play, the efficient distribution of input, the better access to markets providing stable and transparent buying relationships. These are areas that the private sector should be leading on but there are other things that without an active public sector role, funding better transitions other cross the policies that help farmers get into other markets.

Even some of the finance solutions to help subsidize some of the higher risk lending, these are things that are better played by – roles better played by the government. So I think we would definitely back that idea and then we could get more into detail as we get specific so I'll leave it there.

Julie MacCartee: Great. Thanks Stephanie. And a bit of a clarifying question came in from Daniel Congogo that I think Lizzy will be able to answer which was, "Does is not make more sense to potentially dive further into resilience as opposed to adaptation?" and perhaps clarifying what you mean by both of those.

Elizabeth Teague: Great, and thank you, Daniel, for the question. So just to put some definitions out there so we're all more or less on the same page. So when I think of resilience, I really like the definition of resilience as a capacity. So capacity to prevent or manage through shocks and that can in some cases, require adaptation, changing the status quo or in some cases, it's more of a mitigating and coping scenario.

And so we certainly think that resilience is very important for smallholder farmers, for farmer enterprises, for supply chains, as we're confronting these issues of whether variability, changing temperatures, et cetera. And so the approach we've taken is kind of if you wanna understand resilience, you need to answer the resilience to what and so that's why we really focused the early days of this project on understanding the risks, understanding the recommended adaptation practices for different value chains and geographies.

And then working back from there to see, okay, if farmers and businesses need to invest in renovation or they need to invest in irrigation or maybe even diversification, how do you build that capacity of farmers to invest in that or businesses to invest in that? And that's a little bit where we are now in the latter stages of project is thinking about what that can look like at the different stages of the value chain and that's where the investment plans that Mark mentioned all the way at the beginning of the presentation would come in. So thank you for that question.

Julie MacCartee: Great. Thanks, Lizzy. And actually, I'm gonna toss a couple of questions out to Laronse. And so Laronse –

[Crosstalk]

Queue these us and –

[Crosstalk]

Ask can you share examples of the small packages created for farmers? I think this could be very valuable as most of the private sector is –

[Crosstalk]

Gap if the farmers could afford it if it was their priority. And then also a question from Safon Zirca, which of the lessons and approaches are transferrable to common smallholder crops maze and being aren't typically part of global supply chain.

Laurence Jassogne: Okay. So two questions?

Julie MacCartee: Yes. Did you get both of those?

Laurence Jassogne: Okay. Yes, perfect. So about the small packages. So the way we did it is we took the – so I'll apply it on coffee. So we put the extension manual for Ghana and so of course, you have weeding, you have pruning, you have all these different practices, and also fertilizer applications applying manure and all of that. And so we went and introduced experts in production of coffee and we asked them, "Okay. Can you prioritize practices?" For example, we know that if farmer's should not put fertilizer on coffee if he's not pruning or if he's not weeding so we asked experts to rank those practices and then to make packages.

So for example, the first package would be weeding the for coffee. So we know that if a farmer doesn't do that first, then he shouldn't even think about putting pesticides or fertilizer. He first needs to invest. He first needs to do pruning. So this is the type of packages that you have to think about. And of course, what we do in all these learning sites, we prioritize practices.

For example, if you're in the East, erosion can be a big problem and I don't know if you know, it's from people in Uganda but you can have landslides problems so there, of course, understanding and doing erosion control is very important. If you're in the central learning site for example, you have huge problems of pests, which is a pest on the Robusta. So there, you're gonna prioritize control of that pest. So there's a prioritization process that goes on within those packages.

So in a way, you have general packages that are based only on the good agriculture practices but then you have, based on where you are in the country, you're going to have a prioritization process based on the site specific constraints. So that's what we doing on step wide and that's a type of small packages that you have to think of.

Now, about the smallholders and the other crops. So and this again, I apply it on the African countries I'm working in but for example, in Uganda, any crop can become a cash crop as long as you have a market. So even if maze is a food crop and it's in the diet of a lot of farmers, if you have a market for it, it will become a cash crop and so what's more important than if you understand the balance between cash and food crops in a system and because I was talking about that with Mark last week.

But it’s true that if you’re talking about value chains like coffee and cocoa and that’s value chains that we work on, do you have a formal value chain with formal traded to what we see that they only reach probably 20 to 30 percent of the population. So even in such a sector like a more formal sector, you have a whole informal market that’s playing a role that we need to understand. The link of farmers with that informal market. And then, when you go into food crops, even food crops that became cash crops because of a market, there again, there’s a lot of questions around informal market systems that we need to answer.

So yes, we definitely think about it. Yes, some of the lessons can be translated but depending on the crops but the more you’re getting in the food crops, you’re gonna have to take into consideration that informal sector that we don’t understand very well. Mark Over to you.

Adam Shreckengost: Check one, check two. Okay. So Mark, why don’t you come here and … there you go.

Mark Lundy: Okay, so I’m back on? Okay. So let me just answer again. I was trying to answer Ana Maria’s question about the cross learning. So yes, the short answer is yes. We are working in about ten countries on these topics. About four in Latin America and six in Africa. And so we are in the process of pulling out sort of cross learning across the different geographies and we’ll be publishing a short overview paper towards the end of the year on this in a C Caps book. So it would be great to share that with anyone who’s interested.

So yes, it’s clearly important to identify what can we learn across commodity systems, across geographies and across different contexts. Thanks for the question, Ana Maria.

Julie MacCartee: Great, Thank you, Mark. And thanks to all of the attendees for sticking with us through a bit of an audio snafu there but we’ll keep going with as many questions as we can get through in the next ten minutes or so. All right. A good question came in from Christina Manfree who asked to speak to any examples where these partnerships have been successful in addressing the different needs of men and women farmers in responding to climate change. And so I'm gonna pass this over to

Kurt to start but then I think Laronse, if you're still online, you might be interested in answering this one as well.

Curt Reintsma: Hi. This is Curt. I wanted to just quickly address the gender differentiation question that came in from Christina. Just I think there are others including Laronse address some of what's going on on the ground at the broad level. I wanted to mention that gender analysis, gender differentiation, and targeting very much strong part of what we do across the Feed The Future initiative. Things like tailoring extension messages, paying particular attention to credit and loan needs, doing data analysis up front before we fund any project is a fully and completely integrated through our strong gender team and the feed the future initiative. So it's something that we do thoughtfully and thoroughly throughout all of our programs.

Laronse, I don't know if you are available to speak further to this in terms of your work in Uganda?

Laurence Jassogne: Yes. Sure. So maybe an example of what we're doing in Uganda, of course if you're looking at coffee, it's a male dominated crop and it has to do with marketing, with having control over the money coming from coffee. It's very often the men of the household to a point where when women need money, they take some of that coffee to sell it on an informal market. But then when you talk to the man, they say that their wife steal their coffee.

So that's the type of stories that we're getting on the ground. So there's a couple of things we can do about gender. There's that food versus cash balance that has a very big gender impact and, let's say, gender context and where you can work. We have also worked very nicely. Actually, the system, they had a very nice program on gender in Uganda where they were training couples on joint decision making.

And we actually aligned with that program. We aligned on understanding the impacts that joint decision making had on productivity of coffee and so on. And what we saw, what that we actually had, more adoption of best practices in households where men and women were deciding together as opposed to when they made decisions separately or when the man made decisions alone. So that's something that was very interesting.

So we're working on it. Now, how that engagement actually with the private sector, not yet. We talk about it. Our partners are asking about it about what they can do, especially the groups with the private sector partners that are working on sustainability and so on. But this core business, I haven't spoken yet and I haven't engaged with them on gender yet on the ground but it's something that we need to understand still. So there's no clear interest at the moment.

Julie MacCartee: Great. Thank you, Laronse. And we are back in action with our old audio so thanks all for your patience. Great. Okay. We have a question come in from Jerry Brown, which I will direct to Stephanie. The types of interventions along the value chain are impressive and certainly a great improvement of how the private sector, local farmer support services, research, and farmer organizations work together. Question: how are the interventions along the value chains coordinated to allow the value chain participants to better receive the intervention?

Stephanie Daniels: Thanks, Julie, and thanks, Jerry, for that great question. So this is really at the heart of a lot of what we're trying to do as well as what's happening in the Alliance for Resilient Coffee and the Climate for Cocoa work is to find different ways of coordination and alignment to get information quickly to different actors. And I just wanna mention a couple different ways. So at the beginning, for each country we're working in, we've held stakeholder forums and participated in national platforms.

There's a couple of countries that have very active national platforms that do bring together the private and public sector, the Uganda coffee platform is an example of one. There are a number of them that are working to bring – to create a space where different actors can look at similar data like the crop suitability maps, like some of the cost of inaction data, and I think those spaces at the national level are really critical.

I would also say in individual value chains, having information exchanged throughout between the farmers, the direct service providers up and don't the chain is still a challenge particularly on what particular challenges, the different kinds of weather impacts that different kinds of farmers are facing. So Laronse talked a little bit about this. So how do you get any information from farmers and deliver analytics back to farmers having a feedback system?

So that still is really important. I'd also say one last coordination vehicle we see at the global level is for the private sector and public sector to work together, there are multi stakeholder platforms. We, very quickly, in this initiative linked with a number of those and I'll just mention one being the world business council for sustainable development, created a road map to climate smart agriculture. One part of that is smallholder adaptation and resilience.

That's accessible online. We can share the links to that but that's a global coordination to try to leverage private sector resources and direct them to the areas of greatest need. They chose in coordination with us, Ghana as a road test country and are trying to get different companies that work in different sectors, the input sector, the basic green sector, and of course, in cocoa high value crops to better coordinate. So I think we need coordination at different levels but no question it's a critical piece of the puzzle.

Julie MacCartee: Thank you, Stephanie. I think we have time for one or two more questions and actually, I think I'll shuffle two very quickly to Lizzy. One from Ana Maria Loboguerro. If one of the main challenges is adoption because of lack of resources, could the private sector or the financial sector play a role in this maybe through microcredits? And then if you also might just mention a question by Fernando Lopez, if you could say how we can find out a bit more about the co-opportunity assessment tool that was mentioned.

Elizabeth Teague: Great. Thank you. This is Lizzy again from Root Capital. So to answer Ana Maria's question, certainly, we think that there is a role that the financial sector can play in supporting adaptation. That's one of the reasons as part of the learning community and the associated initiatives, we had this focus on identifying what are the adaptation practices, what might these investments look like and what is the cost and benefit of those investments.

And so for Root Capital, for example, as a lender, we would then be able to understand what types of investments might be financed by debt, which is something that provide. Micro financing institutions would be able to take this information and do similar analysis based on their type of finance that they provide. And so that's certainly part of this work. I do want to just add a note that as we look at investments at the cope versus the adaptation versus the diversification risk gradient, we see that the risk in uncertainty increases with the risk of changing weather variability and other impacts.

And so there will probably be some investments at the cope level that will be able to be financed through a pure private sector, debt, finance, or other instruments but as we look at adaptation, as we look at diversification, that's again where we see more opportunity to look at blending private capital with public support or with grant support in other forms to help cover that risk in uncertainty rather than having farmers bear the cost of the increased risk in uncertainty.

So, thank you, Ana Maria for that question and then onto Fernando's question briefly. So when we talk about the co-opportunity assessment tool or the enterprise level assessment tool, essentially, we're looking at two things. One, a field assessment to understand what is the level of need in terms of adaptation at the farm level for that particular enterprise and so that would be a fairly simple field survey that could be deployed paper or mobile using mobile tablet. And then we're also looking at a business level diagnostic that would be completed in partnership with the business management and looking at everything ranging from just overall financial health of the business, how stable is that business, its management capacity to provide effective farmer services, namely extension and credit, and the technical alignment of those services to adaptation objectives for that particular crop and geography.

So that's essentially what we're looking at but again, it's very much in the works and we would obviously welcome input, feedback, thoughts, so if that's a particular interest area for you, please contact us after the webinar. Thank you.

Julie MacCartee: Wonderful. Thank you, Lizzy. Well, we are officially at our end time and so I'm gonna go ahead and wrap the webinar. Thank you so much to our excellent presenters for sharing your experiences and especially thank you to our participants. You are the reason that we continue to hold these Agrilinks Webinars and we're so grateful for your questions, your comments, the resources you shared, and just the fact that you continue to tune in.

So thank you very much for your participation. As I mentioned, we will send you the recording in about a week's time and we'll be sure to include any additional suggestive resources. And we're sorry we couldn't get to every question but we will do our best to continue to follow up with those questions via Agrilinks. So thank you so much and we'll see you at future events. Signing off.

[End of Audio]

Then in south you have another, too. That's another of those sites with the sister project, and that is together with the Ankole Coffee Producers' Cooperative Union. Then we have in the east another big circle. That is a learning site, and Arabica learning site. There we are engaging with Olum. Then you have a think circle in the west. That is a learning site – like we're just starting conversations there, and that is with Great Lakes Coffee, who's very interested in our extension approaches as well.

So what's interesting, I'm naming all these different private sector departments because what's interesting is that they all have another typology, if I may say; _____ International, Great Lakes Coffee. It's based in Uganda and Congo for example. Sorry, sourcing from Uganda and Congo for example. You have Ankole Coffee Producers. They're a union, so they are an umbrella of cooperative. The system is really linking us with the sister project on the Alliance for Resilient Coffee, so that's why we selected those partners as well.

So now I'm going to dive into them just to give you examples of learning. So I'm going to dive into the learning site of Olum in the east, the Arabica site. What we see it's called the learning site in Mount Elgon in the east of Uganda. What we see in our engagement is that the current need to help the farmers, we need simple uniform messages, so that's what we're trying to do in the program. We need specific practices to address specific problems. We also need to address currently observed climate change impacts. We need to move away from best practice to affordable practice. So that's what we're trying to do with Stepwise when it comes to farmers.

Now when we engage through Stepwise with the private sector actors, what we see that there always needs to be a business case. It's not only about the farmers, it's also about business. What Olum is very interested in is the link from extension with monitoring. So we give information, and we give recommendations to farmers, but how can we at the same time get information back from farmers? By getting that information back from farmers, maybe we can refine the recommendations that we give to them.

Then we need to focus more on the short term, but still need to keep up about the long term implications of climate change without scare. Now this is the learning in the sites of Olum. Now back to you Mark.

Elizabeth Teague: Great. Thank you Laurence.

Laurence Jassogne: Oh sorry, Lizzy.

Elizabeth Teague: Thanks Laurence. Good to hear your voice. So hello everyone. My name is Elizabeth Teague, and I work with Group Capital, a business lender and trainer working in smallholder agricultural value chains. So far today we've largely spoken about working with global private sector actors, like International Traders, Olum for example who Laurence just discussed, to support adaptation through direct engagement with farmers. I'm going to add another layer to the discussion, supporting farmer adaption through local private sector players, specifically local Farmer Enterprises.

By Farmer Enterprises, in this discussion, we mean agricultural businesses that are embedded in local communities, and source from and serve smallholder farmers. This could include businesses like farmer cooperatives, or small local traders or processors that are on the frontlines with farmers.

Farmer Enterprises have enormous potential to help drive smallholder adaptation. This is because these enterprises can provide farmers with the information and resources needed to prepare for short term weather variability, and longer term changes. In some supply chains and geographies, local Farmer Enterprises are the primary, or only source of technical assistance and credit for smallholders, or they serve as important lynchpins between farmers and upstream global actors.

In most cases, as with global companies as Mark and Laurence we discussing, local enterprise services currently focus on short term objectives, mainly productivity, or quality improvements, but the service platform is there, and the ongoing relationship with farmers is there. There's enormous potential to work with Farmer Enterprises to tweak their services, to focus more on adaptation.

So recognizing this potential, the learning community and its partner initiatives seek to work with local private sector actors alongside the global actors we've been discussing today. Primarily we seek to help global companies incorporate local Farmer Enterprises in their supply chains, into their adaptation planning. Again, here we're really focusing on providing companies with blueprints and tools to move from the science to actual action with local partners.

So through the learning community we're doing a few things. First, we're piloting all of the adaptation tools Mark and Laurence have discussed, the climate risk maps, the adaptation practice menus, et cetera, directly with local Farmer Enterprises to understand their needs, and how these needs align or differ from those of global companies.

For example, we have four learning sites with coffee cooperatives in Honduras and Uganda, including the one just mentioned by Laurence under the Alliance for Resilient Coffee Initiatives. In these sites we will learn what cooperatives are already doing to support farmer adaptation through extension and credit services, what gaps remain, and how supply chain partners and allies might support cooperatives in introducing a more targeted adaptation approach to their services.

A really important part of these learning sites is understanding the cost of enterprise adaptation services in different supply chains and geographies. Farmer Enterprises may require additional resources to tweak or expand their services. By outlining the cost of specific adaptation activities, Farmer Enterprises can seek investment from supply chain partners interested in the same adaptation objectives, whether this investment comes in the form of technical assistance, credit, grants, price premiums, or long term purchase agreements with buyers.

As these four learning sites run in parallel to our sites with global companies like Olum, we'll be able to directly compare the opportunities and constraints of engagement at these different stages in supply chain, and share this learning with private sector partners.

Second, informed buyer experience in these learning sites. We'll be developing a diagnostic that evaluates the capacity of local Farmer Enterprises to manage these types of targeted adaptation services. This diagnostic will be designed for global companies and other supply chain partners like financial institutions, like group capital, or capacity builders as part of the larger toolkit that Mark introduced earlier.

So the idea is that these companies, or financial institutions, et cetera, will be able to self-diagnose the capacity of local Farmer Enterprises within their own supply chains to support adaptation. This diagnostic is in development, so please stay tuned for details over the coming year.

So to summarize before I hand it off to Mark to close, given the scale and complexity of the adaptation challenge, we see a need to engage all along the supply chain from the global catalyst or collaborator level that Stephanie discussed, to the global direct service provider, to the local Farmer Enterprise. By taking a supply chain approach we see an opportunity to leverage complimentary areas of expertise and influence. Certainly local Farmer Enterprises won't always be part of the picture depending on the supply chain, but in supply chains where farmer coops or local traders are prevalent they can serve as a really powerful platform to build farmer adaptation at scale. With that I'll hand it back to Mark.

Mark Lundy: Thank you Lizzy. So just some concluding thoughts before we open for questions, and I see there are quite a few coming in. I want to thank everyone for participating. There are some very good questions in the chat that we look forward to digging into in just a moment.

Some quick concluding takeaways from what we've seen thus far in this project. The first point I think is clear, but it's worth restating. The corporate partners that we've been engaging with in this process are interested, are doing things, are investing at origin, and they're interested in this topic. So I think there is a clear business case to be made for engaging and working with the private sector on topics related to adaptation with smallholder farmers, particularly in crops where you have a significant smallholder farming base.

The second point is also important, and I think Stephanie alluded to it very, very clearly in her presentation, is that the private sector is not monolithic. The private sector – we're very quick and good about talking about social differentiation among farmers, and gender differentiation among farmers, and households, and lots of other ways of nuancing how farming households are distinct, but the same holds true for the private sector. When you're going to be engaging with the private sector around smallholder adaptation, you need to be very clear about what kind of company you're engaging with, what's their role in the value chain, how are they going to approach adaptation, and how can you effectively work with them, or perhaps work with multiple private sector companies in the same value chain, or in a connected value chains, to lead to promote effective adaptation.

Thirdly, corporate partners, again, while interested, and while willing to make investments and engage directly with farmers, are unable to replace needed public investments. I think that's an important piece to keep in mind. The private sector can get things quite a ways down the road, but they can't necessarily get across the finish line on their own. So this becomes a question of how do we identify the most relevant leverage points where targeted public sector, or public goods investment can effectively catalyze the role that the private sector can play.

Here we're talking not so much about subsidizing private sector companies, but rather incentivizing practices that are more inclusive, and reach, for example, more vulnerable smallholders where the business case may be more difficult to make. So how do we leverage our funding intelligently to achieve development goals while working around, or working with private partners?

Fourth, it's very important to connect these long term climate or weather and temperature shifts – rainfall and temperature shifts with a short term productivity gains. I think from a research perspective, certainly speaking from working at CIAT and with the broader CAP's network on these topics, one of the things that we need to get better at is making the connection between long term projections in terms of what's going to happen with rainfall and temperature with short term weather variability.

This is something that there's been some good advance. Again, under the CAP's umbrella working with Columbia University, for example, in Rwanda and elsewhere, making these connections, but it's something that we need to do more systematically. How do we actually align practices that deliver value in the short term vis-à-vis weather variation, or weather variability, but also build resilience in the long term in farming systems to projected rainfall and temperature shifts?

Finally, adaptation is not only about farm level practices. This is something I think that, again, bears repeating. We think about adaptation to weather – to climate and temperature – or to temperature and rainfall shifts, and we think about it at the farm scale. Clearly that's necessary, but there's also an entire separate piece about changes in incentives, and business models, and buying practices from the private sector that needs to align in order to effectively incentivize and sustain the investments that need to be made at the farm level.

You can't just identify practices and assume that farmers are able to make investments to build resilience, as Laurence explained very clearly with the Stepwise approach. You actually need to build practices into the value chain that provide financial flows, information flows, and clearly incentives and support for those practices to actually be adopted at scale, and not just remain in very extension manuals, but actually to be used. This is an area that I think requires more work. Certainly something that we'll be doing in the learning community, but it's something that we feel requires a bit more thought.

So finally, what are the next steps for this particular project, or private sector engagement? Well, we're continuing the three lines of work that we laid out at the beginning. In terms of engaging the private sector we will be finalizing a documented results from the pilots we discussed in West Africa, and in East Africa. We didn't mention the sorghum case, but there is an additional sorghum case.

We'll be designing pilots in Central America in collaboration bother with the Climate Smart Cocoa Program led by the World Cocoa Foundation, and with the Alliance for Resilient Coffee led by the Hanns R. Neumann Foundation, and we're beginning to explore the last point I mentioned on the previous slide. In addition to practices, how do we align process? I would say its process with the private actors, but also in engagement with more of the enabling environment public sector. How do we begin to get everyone pulling in the same direction and getting the incentives lined up?

On the issue of making science actionable, we're not moving from sort of the generation of knowledge, which I think has been a major focus of the first part of this project, to actually turning this into specific recommendations, and specific investment plans for geographies, cropping systems, and different partners. Again, the key issue here is that how do we better align the long term shifts in temperature and rainfall patterns with the short term variability in climate to develop solutions that both respond to short term needs as well as long term resilience.

As a learning community, and this is where we would certainly be very willing and interested in engaging with those of you who are interested, we'll be continuing to do webinars. There will be a learning journey with key private sector actors, and we'll be convening probably towards the end of 2018, and looking at Curt if that's the right date. Yes. Okay, a global conference on this topic to begin to actually have a more face-to-face and open discussion about what are we actually learning, and we would welcome, of course, input, and ideas, and experiences from all of you. Certainly you have many experiences from the work you're doing, and we would love to include you as we begin to build towards that conference.

We'll also be building out a centralized website that will allow this information to be shared and available to all of you more broadly. So with that I'd just like to say thank you to everybody who's been on the webinar, and will hand over to Julie who I believe will be facilitating the questions and answer session. Thank you.

[End of Audio]