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REALIZING RURAL RESILIENCE AND INCLUSIVE GROWTH BY REDUCING RISK: IS AGRICULTURAL INSURANCE THE KEY?

AUDIO TRANSCRIPT

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PRESENTERS

Richard Choularton, World Food Programme

Lena Heron, USAID Bureau for Food Security

PRESENTATION

Julie MacCartee: All right, good morning everyone. It's great to see so many familiar faces in the audience today. My name is Julie MacCartee, and I'm a knowledge management specialist with the USAID Bureau for Food Security, and I'm very happy to welcome you to today's seminar, which has a bit of a tongue twister title. Realizing Rural Resilience and Inclusive Growth by Reducing Risk: Is Agricultural Insurance the Key?

This seminar is actually a special joint presentation in both the Microlinks seminar series and the Agrilinks Ag Sector Council seminar series. And if you're not aware, Microlinks and Agrilinks are sister sites, sister knowledge management platforms, and they're both managed by the Feed the Future Knowledge-Driven Agricultural Development project, who is also managing the webinar part of the seminar today. And so whether you discovered this seminar through Microlinks or Agrilinks, I highly encourage you to sign up to receive updates via the other site, whether your wheelhouse is food security of ag or inclusive market system, there's a lot of content on those sites that's very – a mutual interest to both sectors.

And so a part of why we wanted to have a joint seminar today, we thought this fit both very well into both of the seminar series, and also just to help bring our two communities together, since there's so much crossover. So to move forward, I'd like to pass the microphone over to Kristin O'Planick.

Kristin O'Planick: Hey, thank you. Thanks for joining us this morning for those of you here in DC, and whatever time of day it is for those of you online. I know we have over 100 people joining us from around the world, so welcome to our virtual participants as well. I'm also excited for this joint seminar. So often, when we think about our programming to promote agricultural market systems, we default to that good old profit incentive.

But more and more, we've learned on the ground that especially for the poor, minimizing risk can be more important to upgrading for competitiveness and for the resilience of the household. So today, we're going to focus on risk management and how an integrated approach to risk management can provide a pathway out of poverty. In particular, we'll examine the role of insurance as a piece of that overall package.

So our speakers today are Richard Choularton, who is chief of the World Food Programme's Climate and Disaster Risk Reduction Programs Unit. In this role, he leads WFP's engagement on climate change and disaster risk reduction. He is also responsible for developing innovative risk management solutions, targeting the most vulnerable in food and secure

population. Richard is an expert on emergency preparedness, risk financing, resilience, food security, and disaster risk reduction.

He also served as the director of humanitarian assistance at a top ten US nonprofit and led early warning and decision support operations at the Famine Early Warning Systems Network. Lena Heron is the senior rural development advisor in the Bureau for Food Security at USAID. She's been with USAID since 2000 and has conducted numerous agricultural sector assessments and design projects to promote agricultural value chain development. She's the USAID project manager for the Assets and Market Access Collaborative Research Support Program, a virtual research facility which aims to improve the economic resiliency of the rural poor through policy relevant research on access to and the function of market. That's a handful, Lena.

She also manages USAID's engagement with the World Bank on agricultural insurance development program and the national agricultural risk assessment. So if you haven't already for those of you in the room, please silence your phones, and we will hand it over to our speaker.

Richard:

You know, many people know the World Food Programme for our humanitarian work. That's the bulk of what we do. But a significant part of our work around the world is focused on helping food insecure people build resilience, reduce the risk they face so that they can become food secure. And in fact, that's our second point in our mandate and our mission around the world and has been for a very long time since our founding 40, 50 years ago. And of the 100 million people a year that we support, anywhere between 15 and 30 million people a year we're helping to try and address the risk that they face to food security.

And 50 percent of our programs and in 75 percent of the countries that we work in, we started working on insurance mechanisms over ten years ago, and we started doing that because we saw a potential to use an instrument that provided predictable response, particularly to droughts when we were seeing delays in response to large-scale droughts. Knowing that we needed to be able to quickly mobilize resources to support action early.

That's led to a whole series of work on sovereign risk financing with governments and safety nets, but it also led to a whole series of work on agricultural micro-insurance to try and help the populations that we ended up responding to support with emergency assistance year-after-year, find a better way to manage the risks that they faced. After a few years of doing that, we realized a couple of things.

First, we realized that our core beneficiaries can't afford insurance, and that was a problem. We realized that agricultural insurance could be done,

especially weather index insurance, which is what we were really focused on at the time. You could do it, you could sell it to farmers, it could work, at least at a small scale, but our farmers couldn't afford it. So maybe it was better for someone else to do it. And we also realized that insurance by itself doesn't work. It has to be somehow connected with something else. You need a delivery channel, it needs to be part of a broader risk management package.

And at a time where we were about to close down that work, we learned of a small pilot project in Ethiopia being implemented by Oxfam America called HARITA where they and their partners had been discussing with farmers would you be able to use agricultural insurance. Here is how it works. What do you think? And a farmer in a village in Tigray, a place called Adiha, said, "Well, yeah, that sounds good, but I can't afford it. Can I work for it? I work in the productive safety net program of the government of Ethiopia in exchange for food and cash to help me. Can I work extra days in exchange for an insurance policy?"

And they – Oxfam and their partners REST had said, "Okay, let's try that." The first year, they insured 200 people. The next year, 1,300 people. And we said, "Okay, that could be something interesting for WFP. We had 20 million people more or less every year in food and cash for work or food and cash for assets programs, building assets, working in exchange for food and cash. And quite often, they get hit by a shock, and the gains they've made are eroded, and maybe this is a way to bring together the work on insurance and our work on risk reduction and safety net.

And that's how the R4 Rural Resilience Initiative was born as an equal partnership between Oxfam and WFP with the support of Swiss Re, USAID, and a number of other donors to test whether or not we could bring those things together and scale them out. And so what I want to do for the next few minutes is explain to you a little bit what is R4 and what's the approach, how do we bring these things together, what does it look like, where we are, and then most importantly, what have we learned. We've been at this now for almost five years in a number of countries.

And so I want to try and give you a sense of what we've learned. Okay, so first, I said we're bringing together a number of things. And the idea of R4 was really to bring together risk reduction and safety nets and risk transfer and credit and savings in a more comprehensive package. So rather than explaining that a lot, I'd like to just run through a quick kind of presentation of I guess our attempt to show what it looks like in real life.

So you know, most food insecure farmers, they grow one or two crops a year. They harvest, they have some food and income for a while. When their food and income runs out, they have a deficit. They reduce their

food consumption. They become food insecure during the lean season, and you see seasonal food shortages. And that's a common path we see in many, many places. And safety net programs are usually designed to deal with this seasonal shortage to help people meet their basic food needs during periods of stress, predictably, so they can focus on investing in their livelihoods and maintaining their food security.

In a good year, maybe they make it. But most years, they don't. Now when a shock hits, particularly a major drought, they face a much more serious problem. They have less food and income, a deeper food deficit, and that has a whole range of impacts. You pull your kids out of school, you don't repay loans, you don't invest in season inputs, you reduce consumption, and so on. And you don't recover quickly. Our research in each area shows, for example, that the most food insecure households after a drought take three years to recover basic consumption and stock distress coping.

So it takes some time. And with increase in climate risks, especially from climate change and environmental degradation and other things, what you see is sort of a process of destitution and livelihoods decline, and in many regions of the world, particularly the Horn of Africa or the Sahel, we've seen that problem and pattern for quite a while now. And we have been struggling to try and find a way to try and address that cycle. So R4 really is designed to help turn that downward trend into a positive one and help people build a range of risk management capacities that help them deal with those droughts and shocks.

So first and most importantly in R4 is we really focus on helping implement good, solid disaster risk reduction activities that reduce the impact of droughts and floods. And in many of the areas we work, you see high levels of environmental degradation, so even a small amount of weather variability can translate into a significant shock for households. So things like soil and water conservation, irrigation systems, watershed management have a major impact both on reducing the impact of the shock, but also in increasing easing productivity. So if we do that, then the shock's impact is less, but there's still an impact.

And that's where insurance can play a role. So with insurance for assets or insurance for work, the households that we're working with in the safety net are given the option to work extra days on more community disaster risk reduction in exchange for a drought insurance policy, which pays them if there's a drought. So if there's a drought, that can bring them at least up to the level where they can meet their needs. But that's not really good enough because you don't want to sort of maintain people just above the line.

The point of resilience is so people can build thriving livelihoods and improve their lives. And so then we really try to focus on helping people take risks, take prudent risk. And that could mean access to credit. It could mean diversifying livelihoods, especially diversifying livelihoods out of climate sensitive sources of livelihoods so that they're not as affected by a shock and more resilient.

And also so that they can build up savings which they can use as a buffer. Insurance is expensive. You don't want to use it all the time, otherwise it's prohibitively expensive, so having other mechanisms to manage smaller shocks is important. So the kind of model for R4 is that you keep working on risk reduction, you help people build up their own reserves, you put in place insurance so they can protect investments in their livelihoods, and next time a shock occurs, it's not as bad, they have protection, and they can keep maintaining their development processes, and that's the idea we have essentially tried to implement in R4 in four countries' different context.

And now we have quite a lot of learning. In Ethiopia, we've been operating together with Oxfam now for five years. In Senegal, we've had two full cycles with insurance, but three years of programming, and we've just started in Malawi and Zambia, and was really interesting from an insurance perspective is we've had payouts, including the largest agricultural micro insurance payout ever in Ethiopia in 2012 where we had 12,000 households out of our 20,000 households receive about \$320,000.00.

That's \$25.00 a head. That's 25 percent of the annual income of the safety net beneficiaries, so that's a significant payout. So what do we see? We just completed the first impact evaluation of Ethiopia, and the results are very interesting. There's a significant difference between the results we see for households with insurance and households without insurance. Insured households have 123 percent more savings, 25 percent more plow oxen. They invest 25 percent more in agricultural labor.

In one cluster of villages, they had 254 percent more household cereal stocks. And you're seeing particularly good impacts on women headed households. Many report that they stopped share cropping out their land and are farming it themselves. You're seeing increased investment in farming, and better use of improved seeds and composting for those households. You're seeing when you talk to people that they're more willing to take risk because they feel protected.

They're happy to pay insurance premiums, especially in labor because they get something else out of it, an asset like an irrigation canal or an improved terrace. And they see that it's working. In Senegal, we're now

on the third year of insurance. We're starting to scale up. And I wanted to just talk about lessons in three areas, and then I'll pass over to Lena. What are we learning on insurance, what are we learning on gender, and what are we learning on financial access? So on insurance, we're learning that it's hard.

Insurance is a hard business, especially in the places we're talking about. And one of the hardest things is to really help foster a sustainable market where local insurers are willing to develop products, offer products, and really build a private sector infrastructure rather than relying on us to provide those things. And one of the key things that we're seeing in Senegal is trying to develop distribution channels for multiple products increases the interest of local insurers in the market.

If they know that they can sell crop, livestock, assets, other kinds of insurance to those communities, then they see a more viable business model than just a single product in a single place. And so for example, we have been working to link our crop insurance distribution with the sale of livestock insurance commercially to farmers in the same areas so they have access to that as well. So hoping to expand the network and crowd in more products. Especially with index insurance both in Senegal and Ethiopia, one thing that has been really, really important is the index design process itself, and a process of continuous improvement.

It's not easy, but you can go to a community, you can look at crop yield data, you can look at weather data, you can come up with an index, you can write a product. But what we've tried to do is have a community based design process where the product itself is really tailored to the specific livelihoods and cropping strategies of the farmers we're targeting. So if you plant a long cycle crop, but then there's a late start to the season and you switch to a short cycle crop, we tried to design the product with farmers so that it covers the early window so they can replant if it fails and cover the late window in case they have a total crop failure.

So you can integrate the product into their actual farming practices. But even when you do that, every year is important to go back and validate did it work, how do you adjust it to keep fine tuning it because there's lots of room for error in there, and we just don't know yet how to get it right the first time. I'm not sure if we will.

Delivery channels are key. This is a common thing we keep saying over and over again in our discussions about insurance. You can have the product, but if you don't have a way to get it to people, you don't have a sustainable delivery channel. That's a major constraint. So in Ethiopia, we've used the productive safety net program as the distribution channel. So you have a large infrastructure in place.

It's regular, it's sustained, helps you with targeting, distribution of payouts, collection of premiums, and so on. In Senegal, we've used WFP's program in country, but that's not quite as stable, and at some point, we hope that that's replaced by a government productive safety net, and the government in Senegal is focused on that at the moment.

But it's not there yet. So that's how we think about building the distribution channels and integrating is really important. We're also finding that farmers understand the importance of the integrated approach, that you need risk reduction, that you need risk transfer, that you need better access to credit and inputs and so on. So that's reassuring that we haven't just cooked up a nice diagram and tried to implement it and nobody understands it. People really I think seem to appreciate that.

On gender, we've seen increased access to land seas and water for irrigation and drinking. That has an impact on the amount of time especially women and girls spend collecting water, and that gives them more time for other things. In Senegal, we have a major component on savings groups. We have as a core part of the program women's and men's savings groups.

So that's resulted in better numeracy, literacy, and business skills for women. And in general, we're seeing more confidence from women on their ability to meet their basic needs, care for their children, pay school fees, and so on. In Ethiopia, one of the main things that families use payouts for is paying school fees. So that's an interesting finding as well. On financial access, our risk reserve, our savings component, and our prudent risk-taking, our credit livelihoods, diversification component see a lot of demand.

So we see – even though there's quite a lot of micro-finance institutions operating in Senegal, we see a huge demand especially for informal financial services. And once you have informal savings groups established, you see a lot of demand for a connection to formal microfinance services. We see really the importance of good quality training so that peoples' financial literacy is improved, and that not only helps with the savings and credit access, it also helps with the insurance and fitting those pieces of the puzzle together.

We see also the savings being used really as a vehicle for investment for risk-taking itself, which is what we hope for. So people are using it, especially men, to buy ag inputs, and then particularly women for investment in petty trade activities. Okay, I'll stop there. There's so much more to talk about, but I hope we can get into some of the issues during questions, and I'll pass over to Lena. Thanks very much.

Lena Heron:

Was such a nice presentation, thank you, Richard. Hello everyone. I think we're going to do questions and discussion at the end, so I'll just go along. I'm Lena Heron from BFS, the Bureau for Food Security at USAID. When I first heard about the R4, I got into a discussion about the R4 model with people, it was like 10, 12 years ago anyway, I think. A few less? I've been working on this topic for about 10 to 12 years now. Coming into it from an agricultural development, value chain development angle and trying to figure out how to make finance work for ag development and work on – and poverty in that context. I remember the first time I met with some of the folks on R4, and I felt like I had met my people. I felt like what they were saying about the integration of risk reduction and risk transfer along with the risk – improving peoples' ability to manage their own risk to cope through savings, and then prudent risk taking, it resonated with me.

I realized I had been talking about that very thing. So when we – this is my objective. I should say the portfolio I work on in the Bureau for Food Security, I work a lot on insurance and trying to make specifically index insurance products available and effective instruments, tools that we can use in our agricultural development programming. Why indexed insurance particularly? I mean I think many people have heard a lot of presentations on indexed insurance. We need lots of different kinds of insurance and other kinds of risk management tools.

I work particularly on indexed insurance because it's one of the harder ones to make work because of the capacity needs in host countries. But really, we need a wide range of mechanisms, but we need them as tools for the kinds of things they can add to our programming. Specifically, we're looking at it within the Feed the Future kind of strategic framework. You know, we're looking at it both on what it can do for ag sector growth, but also on resilience.

And I think Richard just spoke very compellingly about those kind of things and the kinds of things they're seeing in their programming. We're looking at it in terms of what it can do to increase access to finance, what it can do in terms of increasing technology adoption, and peoples' just own incentive to invest in their own production. On the resilient side, again, Richard gave us some examples, and I'll give some others that we're seeing in terms of some of the work that we're doing. But looking at changing the coping strategies that people are using, and we're really seeing improvements in the types of coping strategies in terms of people consuming – not consuming less meals.

So not using that kind of potentially very negative coping strategy of cutting back on meals. Also, it just – I mean the fact that you can change

the response time and so that people don't deplete their assets is a really important thing because once people deplete assets, it's very hard to climb back out. I think you're – I love your graphics on that. That downward spiral, it's very hard for people to climb back out of that poverty trap once they start falling in.

We're also seeing shifts in peoples' aspirations, whether people – once you fall down into that poverty trap, not only is it hard to climb out, it's hard to even imagine climbing out for a lot of the people that we work with, and I think that can be devastating. So shifting those aspirations. We're seeing the similar kinds of findings that the R4 people are producing. Very consistent. On the investment side, this is on the ag growth side, that when you take some of that risk out of the system, we're also finding anywhere between 20 to 30 percent improvements in say adoption of technologies and use of improved seeds or fertilizer or labor. We saw that in Mali, with a project in Ghana, similar findings.

In Kenya, the livestock insurance product there led to people investing more in the quality of animals within their herds, so improving veterinary services for their herds and resulting in higher incomes from milk sales. On the coping side, again, these are examples of the kind of findings I think are very consistent with the kind of stuff they're seeing in R4. The people are 25 percent less likely to reduce the number of meals per day in the face of a drought. Twenty-five percent, that's pretty significant, and it was much higher for poorer households.

Forty-three percent less likely to cut back a little bit or a lot on the food that they're eating a day. And why is that important? The people who work on humanitarian assistance know that mom and dad cutting back on a meal, maybe they can withstand that. Where this becomes incredibly important is for kids. Right? When kids are cutting back consistently on meals, you're basically transferring that shock into the next generation because that has cognitive impact and other kinds of developmental impacts.

Also, this is the asset part of it. We're less likely to see people sell off their assets in the face of some crisis. So less likely to see distressed sales of animals or other kinds of assets. Again, that's the poverty trap that's – you know, these are both kind of poverty traps that are very hard to climb back out of. So BFS has an increasingly broad portfolio to try to expand access to these kinds of tools and improve the quality of these tools. We started mostly in R&D kind of project. It was mentioned this collaborative research support program that I managed. I've been for almost 10, 12 years now putting – directing funds towards doing research on these types of activities, and that's where some of those numbers came from, different activities.

We've had probably a dozen pilots and different activities in as many countries or nearly as many countries over the last dozen years. As Richard said, this is hard stuff to do. This is stuff that is not easy, and especially at this retail level where we're working. It's very – it's hard, and there's a need for tremendous capacity building, work on every angle. It's kind of like the early days of microfinance, figuring out how to make it work. And we're still learning a lot, but that's what that insurance initiative – index insurance initiative is mostly an R&D effort to try to build the evidence and build the knowhow and contribute.

We've also started something called the Global Action Network on Index Insurance, and we pull in these folks, the academics involved in this group. But also, people like the R4, private sector, multilaterals, people like the IFC, the Global Index Insurance Fund over at the IFC are all part of this kind of network that we're trying to come together at that global level to figure out what are the constraints to really developing this stuff as an effective tool for development professionals and private sector to use in these developing country contexts. So that's what that one is about.

I'm going to talk a few more – next couple slides a little bit more detail about these two things just to show you an example. But this is a scaling effort by the bank that USAID is supporting, and then an example of kind of a research linked scaling activity that I want to talk about with a climate resistance maize. But I want to point out this African risk capacity as well. We're starting to engage with another part of what was originally a WFP activity, African Union now, to develop a sovereign risk management facility that uses indexed insurance.

And so one of the things I want to point out about that is that these insurance and risk management is something that operates at many levels. We are – R4 and a lot of the work I'm doing with I4, which is kind of the joke among us that there are many letters left with 4 that you could get involved with. But work on this retail level, right, work at the kind of insurance for households, farmers, producers, and so on. But these products can be used at the mezzo level for portfolio, for value chain actors, financial portfolios of MFIs and banks.

They are obviously can be used at the more sovereign level for sovereign risk at the macro level and so on. And we need to, again, develop more mechanisms and more of an understanding at the country level how to use these mechanisms. Just a little bit of detail on a couple of these activities. This is a newer activity for USAID to get involved with with World Bank is the partner on this. It's really about developing public private partnerships at the country level where the public is not – the public is not – I just realized I had gotten tethered with your tape, Adam.

The public is not donors, but the public is the country partnering with its private sector to utilize market mediated instruments to manage risk. Right? And so in some cases, it may be using insurance as part of its safety net for its resilient to meet its resilience objectives. In other cases, it may be that instead of handing out seed and fertilizer, it backs off a little bit and maybe partially subsidizes an insurance program, which changes the risk structure that producers are facing so that they're more likely to buy and invest in fertilizer and seed. Right?

So it's looking at the options for achieving both resilience and agricultural growth objectives with these more market mediated tools. So in – we're not doing this everywhere. This stuff is not ready for primetime everywhere, but in a few key countries, it's really moving forward. So in Kenya, for example, the government has put about a million and a half dollars this year into rolling out both livestock and crop insurance. They – so that's for just this year, but they're also in negotiations to put a program together over the next five years to continue rolling this out.

Private sector will be implementing that. This is a partnership between the government and private sector. And one of the things I loved that Richard mentioned and I want to underscore is that there's huge complementarities between insurance where it's used and kind of subsidized by the public sector and the development of the commercial market. There's huge complementarities there. Bangladesh is another country where this program is working. I think a statistic like that that every year on average, if you take all the up years and down years, that on average, a country like Bangladesh loses 2.4 percent of its ag GDP I think that specifically refers to to crises.

So that means in a bad year, it could be like ten percent or something. That's a big hit for a country to take. And so you get countries like Bangladesh that really need to do something about that risk exposure because it's driving them down anyway and they're paying for it anyway. And I think that's where you get governments understanding that they have an incentive to figure out how to manage this risk, both at the sovereign level and have their country – the people in their country better managing that risk.

So the IDP is focusing on that as well. Climate resilience maize is a new activity that we're putting in place again under this kind of R&D shop. We've mobilized some – the researchers that I work with from US universities in host country institutions to partner with CIMMYT, who develop these dry resistant maize varieties. They're both working with private sector that – the idea is to get these seeds out in and used in the commercial market. Right?

We believe that insurance will improve that uptake. And so we're building a component into this effort to really scale out the availability and uptake of those seeds. We're building in a component that will develop an insurance product that's optimized for those seeds. And what I love about that is that if you think about drought resistant varieties of any crop – so maize in this case – that the drought resistant varieties take care of the moderate drought. Right?

I mean the drought – the seed guys will tell you they don't take care of the severe drought. They don't take care of the really deep hit. And so people still are hesitant to adopt them. They like the idea of having the moderate drought protection, but unless they can get the more severe protection as well, they're still hesitant to adopt those varieties. You have to take a loan for them. And so this activity is trying to combine the complementarity of improved seed to handle the moderate drought with insurance product that picks up just the tail end severe drought and puts those together. It makes the seed more attractive. It makes the insurance a little bit cheaper because you don't worry about the moderate drought with the insurance, and so the whole package together is a lot more attractive to the farmers.

We're doing this in Mozambique and Tanzania. We're just starting that up, so stay tuned to this because we're going to probably bring back a presentation, I don't know, next year or the year after on what happens with that. Has it worked out the way we believe it will based on other kinds of findings? Because of all the I4 activities are with researchers, we build really rigorous impact evaluation into this. So we'll have – and I think what's interesting about the impact evaluation is it's not just on the productivity in incomes, but the kinds of stuff that R4 data was looking at as well. Women's empowerment within the household and the gendered aspects, whether it changes peoples' eating patterns and their – the fact that they're sending their kids to school and such as well.

Just a few last words. I was just out in Senegal. I had the pleasure of traveling with Richard's colleagues to – and Andre Mershon from E3 to visit the R4 site, and also attend an insurance day workshop that the mission hosted out there. You know, a lot of our work in Bureau for Food Security, we have our own portfolio of activities, but we're increasingly working with missions who are integrating this stuff into programming in very exciting ways. Both of the mission's activities, their flagship value chain activity and their resilience – kind of more resilience oriented activity, both of those agricultural development activities integrate insurance into their programming. They're not doing the insurance. They're tapping into insurance that is taking place within the country more broadly.

But they're working to support and develop and enhance and utilize and integrate it into programming in a way that I think is really a model for other countries to look at. I was really impressed by the strength of the agricultural for development, I kind of call it, community out in Senegal. And with the government in the lead – or not the government, but the government has a – the ag insurance company out in Senegal is a co-owned government private sector partnership. And what was really interesting about this insurance day was the fact that yes, the projects that are utilizing this were there, but so were the insurance companies, both the PPP insurance company on ag insurance and the member insurance companies that are part of that and the government.

The thing was opened by the secretary director from the minister of ag and the mission director. So high level interest. Sixty government private sector NGO and program reps were all there, and very engaged, very excited to kind of identify what are the constraints to really working with this, what are the opportunities. We had a really compelling presentation by one of the very dynamic leaders of a farmers' organization who talked about how important it is for her members to be able to use these tools I think in a way that I feel like I'm so passionate about this stuff that it's so exciting for me and so refreshing for me to just be able to sit back and listen to somebody in the field like that talk about why this stuff matters to her.

Right? So very exciting there. I think that's all I had to say. Oh, no, of course not. What presentation would be complete without saying again this stuff is hard? And it can be done poorly. I always try to say that at these presentations. I'm such a cheerleader for insurance, and yet I am also the first person to say, "Oh my gosh, you can really screw this up." You really can. Right? Richard also made this argument for we have to pay – we have to pay attention to how this stuff is designed. It is our job as development professionals to make sure that the development elements of this are still maintained.

Right? We can't do it without the private sector. The private sector is not the ones that are necessarily going to make sure that it has a development impact. So making sure that the quality of the contracts that are used have a lot of client value, very important. Richard talked about these same things, outreach and education. We need informed consumers. Insurance is expensive, and it's not always the best way to manage the risk. People need to understand what they're purchasing, otherwise it can be a disaster. The importance of integrating it into other distribution channels and other efforts, as I think R4 is a great example of.

And then finally, and a big part of what we're working on in this AIDP, is helping the public sector understand what a good role for the public sector

is. Because this tool will not become available unless you have a concerted effort between the private sector and the public sector I am convinced. And donors. All of us working together in a concerted way. So it's really important that the public sector understand what the right role is. That's a familiar story, right? We in development are familiar with that, that the public sector has an important role to play, but it needs to figure out what that role is and we can help in that way. That's what I have and I think that's it.

[End of Audio]

QUESTIONS AND ANSWERS

USAID Microlinks: We want to thank Lena and Richard for a great presentation today. We're going to go ahead and move into the Q&A portion of our seminar. Just so everyone knows, there are about 100 people online, and we have about 40 here in the room, so there's a lot of questions I'm sure coming in. We'll take – we'll start with one question in the room and then switch to the webinar. And for anyone who has to leave early, the presentation was recorded, and we will be sending out an e-mail within the next week with a link to that recording and the presentation slides and some additional resources.

So we'll start with here in the room, I'm going to ask that you say your name and your organization. Okay?

Audience: Hi, I'm Tom Shaw from CRS. I have two questions, one for each of you. For Lena, are you aware of the micro-insurance venture incubator that was launched in January and whether you would be interested in learning more about it? It brings together a lot of the players to get the back end side right for all of this. And to Richard, my question to you is do you actually have a curriculum around the finance education dealings specifically with the crop insurance that you're delivering now? And if so, is it available?

Lena: Richard and I were laughing or musing or whatever about the proliferation of platforms and whatnot to – on this topic. I mean we often try to attend these meetings and be involved in these things, and it's becoming somewhat burdensome. So no, I don't know about the micro-insurance incubator. If you have information, please send it on. There are increasing numbers of platforms and fora and whatever, and we're working to try to coordinate some of the major ones. So it would be good to – yeah. Let me just leave it there. Please forward that on.

Richard: Yeah, we've got different approaches in different countries. Happy to share what we have. Just if you give me your e-mail, Tom, afterwards. Then we can. Maybe just to add to Lena's comment, there's been an explosion of interest on micro-insurance, especially agricultural micro-insurance recently. And there's been a big focus on global level coordination and learning, and I think that's important. There's a couple things that I think are really key for us as a community to focus on.

The first is there's enough experience that's been generated over the last 10, 15 years on agricultural micro-insurance, especially on in index insurance, that we don't need to go and pilot it to see if it can be done. It can be done. What we really need to do is focus on innovation around the roadblocks to scale. So for example, we're doing a lot of work on trying to test remote sensing technologies for index insurance because there's not

enough rainfall stations out there, and in any case, rainfall stations have their problems. Nothing in this is easy. That's not easy, too. But there's an example of a block. The other thing I think we really need to somehow get our heads around is we've got – we have to focus constantly on pathways to scale.

And so it's great to innovate. It's great to pilot, as long as there's a clear pathway to scale. And if there isn't, we shouldn't be doing it. And scale takes time and patience. It's not a five-year project. It's not a one-year project certainly, and our friends at Swiss Re once told me that it took Switzerland – that's a fairly sophisticated insurance market with quite a bit of capacity – 18 years to put in place hail cover for farmers. So if it takes the Swiss 18 years to put in place a single product, I think we have to have a vision of how we test and develop products, how we innovate, and how we scale up that has a similar kind of view over the long term to build a market in places that don't have the infrastructure and capacity already.

And that's difficult. So I mean to give you a practical example, we've spent the last four years in Senegal trying to get it right. We have a five-year project in Senegal, so this is our last year, and we've just started to crack the code, but there's so much more work that we need to do on the technical side, on the operational side, on the policy and regulatory side, on the infrastructure side to get to the point where instead of 1,000 farmers in Senegal or in 30,000 that we'll have in Ethiopia, which is a big number, but it's not insurance market big. And insurance market big is a million farmers. So to get from here to there, we've got to really focus on how to do that.

Lena: And I should say R4 is not alone in that. For every one of these things, you know, every example, it takes more years than you'd imagine to actually get it off the ground.

USAID Microlinks 2: So we had quite an active conversation online, and I'd like to thank Fabio next to me for entertaining many a slew of questions that came our way. We did have over 140 people online, so I'm going to pick a couple questions that went together. This first one comes from Thomas Buck of SSG Advisors in Burlington, Vermont. He asks, "You're not mentioning the importance of consistent and effective regional climate data. Does R4 focus on improving climate data or working with partners who are?" And similarly, Rod of BRAC USA asks can you address whether there's a list of countries that are insurance ready based on the availability of weather data?

Richard: Okay, so two questions, are we using regional and consistent weather data and improving them, and then is there a list of data ready countries. I think the list of data ready countries would be very, very small, possibly

zero. Yeah, so we do a few things. First of all, in the initial design process, we do a lot of work looking at the relationship between current climate risk, trends in climatology, and climate change projections, and food security to determine what areas this kind of approach are most needed and likely to work in.

And there, if necessary, we do some work on improving climatology. So in Senegal, we had a big effort to improve their basic rainfall gridded data set. If there are any technical questions, we could talk about them afterwards. And that's a prerequisite in essence for doing insurance. And then we at the local level combine station data with remote sensing. And if there is no station data at least in the early components of the project, then we install an automatic weather station, so we can really start to calibrate the products. One of the things that's been really interesting in Ethiopia is working with Columbia University's international research institute for climate and society, the IRI.

We've been able to take places that have no rainfall station data and combine limited station data with remotely sensed data to reconstruct climatology so that we can start to understand the risk. Because otherwise, you can't construct an index correlating precipitation or something else with loss.

Lena:

Can I add something else to that? Because the last word there was key. So I think it's important to underscore that it's not just climate data. It's not just rainfall data. You also need really good loss data. If you're going to price these products and design these products, you need to map if you're using a climate or weather index, you need to map it to the losses you're trying to protect against. When we talk about design for impact, you really need to make sure that these things closely correlate to the loss you're trying to protect against.

And so you need good loss data. Some of the best products – I think what the community is trying to move towards in many ways or in many places, area yield products will provide much better cover for people. But you can't do area yield products without loss data. And it'll be years before you have the kind of loss data that you can effectively price against. Yes, we need to incentivize better data collection. And when we think about this long haul kind of development agenda that Richard is talking about, anything we've put in place needs to think about how it incentivizes better data collection for the long range because that's the only way we're going to bring the price down on these insurance products. Are we calling on people?

Richard:

No.

Audience: Miguel Robles from IFPRI. Thank you for the great presentations. A couple of questions for Richard. What's your experience in R4 project working directly with insurance companies, re-insurance companies, and if you already have experience on what – what fraction of the final premium is really paid by the farmers or the final client? And that's one. So to give us an idea of how much subsidies are needed, are we talking about we need to subsidize, what, 50 percent of the final premium, 90 percent, 10 percent? I think that's a key question to start gathering learning on that.

The second question is about once you – I don't know if you had the experience working with re-insurers. Once you work with the re-insurers, how expensive the products, you know, become? Especially I don't want to get too technical here, but if we take the actual ... price, how much above the actual ... price will you have to go? I'm thinking – this is related to Lena in terms of scaling up. So scale up, you know, really the larger scale. We will have to work with the insurance companies and re-insurance companies because the risk capital is going to be –

Lena: You're asking about the loading. Like what's a reasonable loading to expect.

Audience: Exactly.

Richard: Okay, I'm happy to –

Lena: That's a good question for Martin, too.

Richard: So okay, first working with a company with ... pricing. Separate questions. I mean working with local insurance companies is a variable experience in the sense that in some places, you have specialized agricultural insurance companies. Take Senegal. There's a state insurance company, Canath, that Lena mentioned. And so ag insurance is their business. They don't have the specialized capacity in index insurance, so we're working with them to build that capacity to develop products, and the government of Senegal subsidizes 50 percent of agricultural insurance premiums across the board in Senegal. And so that's a key policy issue for the government of Senegal, the effective use of that subsidy.

In Ethiopia, there are private sector insurance companies, and you'll find this – this is quite common in many countries is that there's an urban market for property life and casualty insurance. The local insurers have a small book, and they are not able to carry the risk of a large co-variant hazard like drought. So in other words, if I crash my car today and you're paying premiums and don't crash your car, the premiums can pay the payouts, and you can have a sustainable insurance business. If all 100,000

of your farmers are affected by a drought at the same time, you have to pay all of them on the same day, and that requires you to have a lot more money on hand.

So for them, okay, first they need re-insurance. They don't have the technical capacity, and although they may be interested in the business in the long run, it's a harder sell for them. And so we spend lots of time working with them on index design and capacity development. In a sense, it's a classic first mover problem. Until the market is big enough for them to really take it on, they're not going to take it on. The only way the market will get big enough is if we help push it there, but we want the private sector to push it there. So that – we've got to find the right synergy there. Re-insurers – well now more re-insurers are interested in this market.

They see it growing. They see potential. Asia is a big micro-insurance market because of government subsidies, but Africa is not. But it's growing. So for example, Swiss Re does about 50 agricultural micro-insurance transactions a year on the continent, and they're probably the biggest. In our experience, for example, with Swiss Re, who at the moment re-insures all of our projects, we get wholesale pricing from the re-insurer, so there's no load. There's no load from the re-insurer. There is an uncertainty load in the calculation of the risk based on poor data, climate change, and other factors.

So even if we do our very best to take all the data, come up with an actuarially fair price – because of the quality of the data and the uncertainty around it, there's an uncertainty load. And that's no different from us as a major commercially viable insurance program that has less than perfect data. So that's there. You do also see loading at the national level where the local insurers load. And that's fair, but actually, we do most of the work. So we do the index design, we do the data collection, we do the marketing. So there's a question about what's the appropriate load for a local insurer, and reflecting the fact that they're essentially writing paper. But also with the idea that you want them to get into the business as well, and not just write your paper.

So that's a dynamic there. The right level of subsidy there, that's a very difficult question. You know, agricultural insurance in the developed world is 80 percent subsidized, and that's a government policy decision. In Ethiopia, the price of the insurance is 100 percent commercially paid by the household. Either in labor or in cash. Ten to 20 percent of the farmers who buy insurance in Ethiopia in R4 are cash paying farmers who pay the full price, and it's expensive.

The community design process has man – that we have products that pay out let's say every five years. There's two options. One is a four and five, and one is a five and six payout. That's very frequent for an ag insurance product. Normally, you'd expect no more frequent than seven years, maybe ten would be an appropriate pricing level, so that's expensive. You know, they pay \$17.00 to \$20.00 on \$100.00 of cover. But that's what the farmers ask for. And they ask for a couple of reasons.

One is because they have limited other ways of managing their risk, and the value to them of the protection goes way beyond the straight actuarially fair price. It's about access to credit and being able to repay your loan. It's about being able to keep your kids in school. It's about knowing that you can buy seeds and fertilizer without losing your investment. And so that's a really interesting dynamic we see in Ethiopia. The second reason is also that they can pay in labor. And so they don't just get the insurance policy. They get the asset that they build with the labor input. So they get a double benefit.

And for us as the institution with our donors paying those premiums, we get the double benefit. We get the asset. And for us, we're doing a cost benefit analysis, but this year, like we pay 350,000 in premiums in Ethiopia for about \$1.5 to \$2 million worth of coverage. If there was a major drought and a full payout, that would result in about \$4 to \$6 million of averted humanitarian response cost, \$4 to \$6 million in averted humanitarian response cost. So for \$350,000.00 in premiums that builds assets and helps people improve their food security, we potentially have over \$6 million of humanitarian response costs. So we figure that's a pretty good deal.

Lena: Because you're changing your risk exposure, basically.

Richard: Yeah.

Lena: Can I just say one thing? Because I thought that was a great answer. Price is a huge issue on these things in terms of their ability to go to scale. But it will vary depending on what kind of target population you're talking about, whether you're talking about more vulnerable populations and using this more as a safety net tool or you're talking about more commercially oriented. And there's a big – it's a continuum in between. But what I think is going to be the most interesting thing to watch in some of the places where we really will see a push towards scale, places like Kenya, is the complementarity between efforts to use insurance as a safety net and the development of the market for commercial products.

Because I think there's some inherent market development. Well, there's market development that will occur when they're used – when these tools

are used as a safety net product that will make them commercially available because it'll incentivize the offering of these products by the insurance.

Richard: Just to add there, one of the social protection function of insurance is I think really an important discussion. One of the things that we did in Senegal in our design on pricing is we did an analysis of essentially the cost to protect someone's food security and livelihood. Like how much money would you need to have paid out in a drought to protect basic food security and consumption and prevent negative coping from occurring versus how much would you need to pay out to do that, plus make sure that you had a viable agricultural season in the next season?

You could re-buy season tools and other inputs. And obviously, one is more expensive than the other. Since our focus was really on food security and social protection, and given the pricing difference, we chose that our base product would focus on protection and be cheaper than a more commercial model as well. And so that's the first time that I've ever seen an analysis to look at the cost and the options, and it gives you an interesting policy framework to think about how you spend your development dollars as a government or donor to get what impact and where you try to calibrate them.

Lena: Where the greatest return is.

Richard: Yeah, the instrument.

USAID Microlinks 2: So I'm going to group a couple questions together again. Electra asks –

Richard: Sorry, could you speak up a bit?

Lena: Yeah, I can't hear either.

USAID Microlinks 2: What ratio of weather station versus remote sensing do you use, and if remote sensing prevails, how do you deal with basis risk?

Richard: Basis risk?

USAID Microlinks 2: Basis risk.

Richard: I was waiting for that question.

USAID Microlinks 2: And there's another somewhat similar one around data. So what are the data issues in deciding index to use, and how difficult is it to convince farmers to pay for insurance, which is a new concept to most of them?

Lena: What was the last part of that question?

Richard: How difficult is it to convince farmers to pay for insurance, because it's a new concept to them?

Lena: I'll start with the data and –

Richard: Yeah, data and basis risk. Okay, data remote sensing. Yeah, I mean every place is a little different, so you really have to understand how the climate works in a place and how it relates to agriculture.

Lena: And how it relates to the losses you're trying to protect against.

Richard: Exactly, and what's possible operationally. So normally for ag micro-insurance, a rule of thumb outside West Africa is you need a weather station every 25 kilometers in order to be able to have a decent correlation between precipitation and loss. That depends on many factors, and there's still a great deal of basis risk in weather stations. In other words, the risk that the measure of the index does not actually reflect the real loss.

So you could see a real drought and a real loss and the weather station gets lots of rain one day. So people don't get paid. Or vice versa so that the rain gauge shows that there's been a drought, but there hasn't really been a drought and there's no loss, so people get a payout despite having no loss. So dealing with that is a major issue with weather stations and remote sensing. In West Africa, the spatial variability of rainfall means you need a weather station at least every ten kilometers, and even then it's not that good.

So weather stations tend – even if you have them not to be great. So we've in almost all of our products relied on remotely sensed data. We – and that's one of the reasons why the continuous improvement in the index is really important. And we use weather stations really to validate the remote sensing to improve the quality of it. Because most remotely sensed data is actually a combination of station data and satellite data. So it's interpolated cloud cover rainfall data. Normally if it's rainfall. And that's why the remote sensing question is really important. With remotely sensed data, your basis risk is also a major, major issue because the resolution of the remotely sensed data is sometimes like 25 kilometer grids.

So if you are in a place that has a hill or a mountain, the cloud comes over, drops all the rain on one side and drops no rain on the other side. If your farm is on the side where it rains, you're pretty good. If your farm is on the other side, you've got a drought, and the data in the remotely sensed grid is averaged across. So dealing with that is a major issue. So we've

done things like combined in Ethiopia this year rainfall data and vegetation data as a check. So you have two things working in parallel to try and make sure you get a better answer.

We've started looking at things like double trigger policies and a number of colleagues in I4 projects have been testing that. So you use the remotely sensed data as a first trigger. So if it shows as a drought – and you can make that let's say a softer trigger and a bit more room for error. Then you do something else, like you actually go and do a yield assessment, or you use yield data at the local level. So you –

Lena: As a backup. As an audit to –

Richard: As a backup, so just to make sure there really was a loss. Obviously, explaining the complications of that technically to a farmer is a challenge. On the other hand, for us, I mean it's one lesson from this is that farmers are very, very good risk managers. That's their day in, day out business. They know their seasons, they know their patterns, and when you do – when you engage from the beginning with farmers in the design process, you know, we have community index insurance design teams that work with local farmers to develop the products.

You build a capacity, especially with the kind of lead farmers in a community to understand the product over time. They're involved in fine tuning it each year, reviewing the process each year. And so if you kind of apply what's good development practice community engagement with insurance design, you get a better dialogue. I think that's really important. That said, as we scale up, you're going to reach millions of farmers, then financial education, product education has to be part of it. And there's lots of interesting experiences there. For example, in Kenya, there's a very interesting livestock index insurance program supported by ILRI and USAID.

Lena: It started as an I4.

Richard: Started as an I4 project. And there they have all kinds of things, movies, cartoons, plays at the community level where people act out the insurance process. That sounds like an exciting play. I certainly would like to get – but that kind of more creative product education I think is a really interesting avenue.

Lena: Just again, like I'm so glad you're here. I don't have to do – you're much more articulate than I am on this. But I just want to add – so remotely sensed cloud cover estimations of rainfall are just one type of satellite data that are being used. People are really including your work in Senegal and looking at different indices and comparing them, a lot of people are doing

work to try to push the frontier on the types of indices that can be used. And especially in the area of satellite data.

So NDVI, I mean that insurance that Richard just mentioned, the livestock insurance product in Northern Kenya, is actually an NDVI product. People are working on evapo-transpiration and other kinds of data. There's lots of data out there, satellite data, that can be used. Again, I want to underscore the importance of picking the right type of index. It's not that NDVI is better than rainfall. In some places it will be, in other places it won't be. So it really is about picking the right index for the right context, and that means the topography, the soils. It's really about testing out the index against the losses you're trying to protect against.

And then the other thing is this idea of doing different types of design I think is critical, and in that area, I think we do have more work to do on really innovating on design.

USAID Microlinks: All right. Unfortunately, we are out of time for today's seminar. I know there were a lot of questions left, and really great conversation, so I want to thank Richard and Lena for joining us today and answering. They'll stick around a little more time in the room to hopefully talk to some of you, and for those online, we have your questions, so thank you. Just to let everyone know, we do have some upcoming events – our next Microlinks seminar is going to be on May 20 – May 19th, I apologize, and that is going to be SME development and impact evaluation. So we hope to see you there.

The next Ag Sector Council is going to be on May 20th, and that's on mycotoxins, and then we also have a special Seep webinar on May 14th. This is going to be from LEO, and they're going to look at evidence review on wage labor. All of that is going to be available on the Microlinks site and the Agrilinks site as a – advertised on those sites, so we look forward to seeing you all at those events. So thank you again.

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