ONE COUNTRY, TWO MODELS: ADJUSTING FINANCIAL SERVICES TO FIT SMALLHOLDER INPUT SUPPLY SYSTEMS

AUDIO TRANSCRIPT

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PRESENTERS

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PRESENTATION

Kristin O'Planick: Good morning, everyone. We're going to go ahead and get started. Apologies, we gave everybody a – a little bit more time this morning given the Metro disaster and the fact that we're in a new location. It might be a little tricky to find. But thank you for – for making it here this morning, and thank you so much for those of us joining online. Welcome. A reminder to please silence your phone. So this morning, we have with us Jean-Michel Voisard who is the chief of party of the Senegal PCE Project, which in English, Economic Growth Project.

It's a Feed the Future initiative implemented by IRG/Engility, and it aims to boost the participation of small, small farmers in the country's rice, maize, and millet value chains. And Jean-Michel has been working with USAID and in development generally for the past 20 years playing a key role in design and implementation of value chain initiatives. Especially in West Africa. And the industry and business to farmer interventions he manages link the private sector with grass roots rural organizations to boost agronomic productivity, introduce high value products and technical innovation, streamline logistics and traceability systems, implement quality management and certification, scale up small business financing, and promote trade.

So we're very lucky that Jean-Michel offered to swing through DC on his way home for the holidays, so that we could take advantage of some of the things that they're learning in Senegal. I think PCE is achieving great results through a facilitation approach, and they've got so many interesting things to share. This morning, we're going to focus on the input supply system. USAID lately, if you haven't noticed, has really put a lot of emphasis on finding solutions to scale, and the PCE experience I think is important in this regard as it shows us there really is not one model to scale.

We won't achieve that through one solution. I think we all know that, but yet somehow we're still striving towards it. So this example is great because even in one project in one country, they have two models that are working really well in the input supply systems, and even those models themselves have had to evolve as they grow. And I have found that every time Jean-Michel and I have talked about this, he says something new and fascinating that I'm like, "That really needs to be shared." So here we have him to share. Thank you.

Jean-Michel: Okay, hello everyone. Glad to be here. I always start by saying that, you know, I'm a – okay, that's me, but okay. I'm actually, – I always come out with this little speech about being a Feed the Future convert. Okay?

Like I say, I use – I have a past of like hardcore economic growth work, okay, in agribusiness, which means that I work on export led growth, had actually pretty big success in West Africa getting, you know, mangos export going and things like that, working on really, you know, market led and making money and all that. Feed the Future came in with this notion that you had to work with actually very, very small farmers. I mean I used to work with small farmers, but not that small.

And that brings a completely different dimension. Working with food challenge producer – producers who barely produce what they're able to eat. Actually much less very often, working on very small acreage actually changes, you know, what you'd call economic growth dynamics. And so yet, to develop sustainable systems, I mean you have to get money throwing – flowing through the system and make it work, so how do you do that? How do you make it work? So it brings up a whole bunch of considerations, so that will pop up throughout the whole discussion we'll have here.

Here also what's interesting is that Kristin asked me to talk about inputs. Take the input angle, and usually we always work with the output part. Like the – with the market part, you know, the market drives the whole system, which asked me can you just tell me what you're doing on input. I said, "Well…" I started out talking about the market, and she says, "No, no, I want you to talk about how you're getting inputs to the farmers in a sustainable way."

So that's also the interesting part of this presentation is that I'm going to talk – be talking about the input angle. And so there's lots – it actually – I came up, you know, through it with some interesting insights, and I hope that you'll find those equally interesting. Okay, so what is PCE? Very quickly, it's Feed the Future Senegal's, you know, value chain project, and so of course, we – we go for scale, so we cover the north part of Senegal, which is dedicated to irrigated rice production, and the south of Senegal surrounding the Gambia, which is a rain-fed zone where they're doing corn, millet, and rain-fed rice.

Farm sizes are very small. Very often, people think that we work with like agribusiness sized firms. No, we work with about 45,000 farmers, and a large – most of them, 95 – more than 95 percent actually farmed less than two hectares, and a great proportion, especially women in the rain-fed zone, worked on even less than an acre. Okay? So that's the kind of population we're working with. Of course, we do work with some higher level agri-business, but our essential focus are these small farmers, and in the way we work, we always place ourselves in their position. It's not a lens. It's a standpoint. We really go there.

So from that standpoint, for example, side-selling takes a completely different meaning. Okay? What's the project about? We work with networks. We work with networks. We work with about 60 organizations throughout the country, grass roots organizations, organizations that are embedded in their community, in their catchment area. Okay, so we don't helicopter extension teams out there to train people and go out. We actually work with organizations that are on the ground, have a permanent presence. Some of them are commercial oriented, some of them are not, and we work on productivity training, quality control, grain consolidation, data management, supply chain skills, things like that.

We also work with the seed system, which is a less private sector driven operation because it has a linkage with seed regulation, seed laws, and things like that. There is a link with research, institutional research, so there is lots of PPP work being carried out linking small holder multiplication systems with institutional research and multiplication. And also very important financial services component where we work essentially on working capital systems.

Okay – and so, and we do lots of work on crop insurance. It's actually very interesting, and we will be debriefing with the R14 next March, and we've introduced with a lot of success, a leasing – the leasing approach to equipment acquisition with small farmers. That actually was a big hit. All through that, we focus on developing contract management skill, formalizing agreements, developing ways for small farmers to connect with upstream and downstream actors in the value chain to really structure their operation, and of course we do a little bit of policy work regulations, and also statistics support to the government so that this whole thing is monitored and grows. But our essential focus is not on the enabling environment.

It's on getting the various systems to work. Okay. Now what did that slide mean? What it means it's just to give you an idea of how small farmers look at inputs. Okay? What are their issues with inputs? I mean I'm talking about small farmers who often can barely buy inputs or access them who are in remote areas. A lot of you guys know it, but let's just remember what it means. First, it's about access. Are there retail outlets? How are you going to get their inputs? Can they be part of a collective ordering system? Be part of a cooperative, be part of some kind of mechanism that helps them access inputs, order it wholesale. Are they eligible to a subsidy or not? All these things are elements a farmer will think about when he wants to access input, have access. That's his mean, and he's going to find strategies to be part of one of the other means to access inputs. Another important element for a farmer – it's not just to access inputs. It's to access it on time.

And if you're in remote and remote area of Casamance, you can order your inputs, but are you going to get it in time before the start of the rain season, before the start of the dry season harvest? Are you going to get it three months later, like happens for the subsidies? Which means that your inputs will be useless and you'll be paying for something that is of no validity. Where is the point of delivery? Also, are you going to be able to grow? Are you going to be able to expand? I mean when you get those inputs, are you going to get inputs, you know, in a one-off way?

Is it just a subsidy you're going to get and you're going to try it out, and the following year, you won't be able to access it anymore? So you know, small farmers will want continuity. They're not in there just to get a quick hit and not be able to carry on. So that's a concern. And also risk. That's the biggest element, especially cash risk. Am I buying hybrid seeds that cost a lot, investing in inputs? And then what happens when there is no rain? You know, and cash risk for a small farmer is the biggest risk. I mean you can say, "Hey, come on. You can have a gross margin. You can spread your risk and all that." No. A farmer that invests in hybrid seeds and inputs and gets hit by a drought is dead.

He won't be able to get back alone later on. He can't get back on the system, and then he just struggles along and tries to find a way to get out of it. So all those – these input decisions, I mean, are not the same as for a small agribusiness. This is where agribusiness does not – development does not connect with the small holder reality, and this is why you have to devise approach and adjust them to be able to address these points. Okay? So also another thing that people don't always recall, I mean I see some reports, things like that on inputs, and people don't necessarily always factor in the fact that, well access to inputs, the actual input supply line is one thing, but it's intrinsically connected with the financial sector because you've got to pay for those.

And what pays – and to pay for those inputs, you have to be able to market a surplus. Okay? And the problem is that they're not silos. They're interconnected. So ones – as you see, you know, to access inputs, yes, you have to develop requirements, get a contract with a supplier, and then get it delivered. That's true. But it's not a straightforward process. Get your requirements, apply for a loan, get the loan, sign the contract, sign the contract, get it delivered, get it delivered, process the payment, and then here, well grow the crop. Anything can happen.

And then harvest it, sell it, reimburse, see you next year. That's if you're able to close the whole system in one year. Okay? And so yes, every one of those steps is a risk. Every one of those steps means skills, coordination, management challenges. Financially, there's collateral issues, risk management constraints. It's a very complex interconnected

system that farmers are actually aware of. Okay? Even the smallest farmer understands the risk of it. This is why when you try to get them in, they're going to test the waters, and they're going to minimize their cash position on it. They will. That's why farmers in Senegal in the rain-fed zone always go for millet first because millet is a zero cash position crop. Okay? And even if they get a little input, very minimal, and they can go through it, something can go wrong.

But in the end, they'll farm it. Hybrid maize completely different. You have to go for a big loan, complicated procurement, okay, makes the loan application process difficult. Anything can go wrong, problem – very risk prone in terms of rainfall and things like that. So you've got big issues, and small farmers think about that. They know about that. They live it. Their life depends on it. Okay, so what do we do? Now this is just to scare you. I'm not going to be going through this. I just put there for fun. Seriously. But what do we do? You know, I just want to go back here. There's a little thing I didn't say. This thing here takes time. In Senegal for rain-fed rice, or rain-fed maize, this whole process starts in March and ends in March, a whole year.

In the irrigated zone, well we'll talk about it later. Takes about eight months. The problem is that the irrigated zone has the potential to do two crops a year. Eight plus eight equals 16 months, like the Québécois says in Quebec, we say *[speaking in French]*. Okay, *[speaking in French]*. [Meaning it] doesn't go through the door. The door is 12 months wide. Okay. Yet, producing the crop takes three months, three months, six months. I mean man, you've got six months to get your act together. What are you doing? Okay.

Yet, it doesn't go through the door. Okay? And you know, an additional crop in the Senegal River Valley means 400,000 tons of rice. That's the big kill, but what is it driven by? New varieties? No, it's the whole system. Okay? So here is a system. That's the right intro for this slide. *[Laughs]* So what we've got here is actually – I'm going to go through it very quickly, and you can go back and download it. This is actually a good system of input distribution. It was developed by SAED, a parastatal in Senegal. Very good to organize the delivery of high-value inputs. Okay? So you've got the bank. I mean farmers provide their requirements, they've got approved, you know, suppliers for seed, approved suppliers for a fertilizer and things like that.

I mean the bank doesn't lend you money if you're not buying certified seeds, and if you're not buying good inputs, and you know, it has to be delivered and proven, and you've gotten extension there, making sure that you're planting the right stuff, high quality stuff, great. And yes, it's had success. I mean in Senegal, the yields now are hitting like six tons, seven

tons per hectare, guys. High yields, peaks of ten tons in some areas. Seriously, I didn't believe it, but it's – yet. This whole system is really great.

The bank finances it. But then, when the farmers produce, nothing happens. The farmer is stuck with this grain. Then he has to sell it. Puts it in schools. Warehouses. Homes. Sells some to spot traders, keeps the money, puts it under his mattress, collects it. Oh, someone dies, you've got to pay off, things like that, get high price, low prices, under pressure to sell, price dips, accumulate your money, go to the bank. I made the payment, and then I make – I have to make an application for the next season. So of course you end up with high priced volatility at harvest. Okay, like big price crashes. Guys have to sell.

Not necessarily at harvest, but just before loan reimbursement. Ah, I've got to get my money. Traders are waiting for you. Okay. Slow loan turnaround, of course. One crop per year with this kind of system. Low quality of outputs. People just store whatever in very bad conditions, and yes, of course, like uncompetitive mills. Because if you've got bad quality rice and prices going all over the place, grain stored in schools, homes, wherever, I mean how do you organize the supply chain? Okay.

And, of course defaulting farmers, 75 percent repayment rates. Of course the government guarantees those loans, so who cares? But the whole thing is like stagnant because of that. Of course once you see that, you say, "Okay, I got it. It's very easy. Find them a buyer." Well yeah, the buyers are there. They're the mills. Okay? But the mills aren't able to buy. They're not able to buy because you're producing every six months, which means that to get your mill to run, you've got to buy six months' worth of rice to make sure you're okay. Now that's a lot of rice. That's a lot of money, and that's a lot of collateral.

There's a problem. Okay, and all of this – it seems like I'm talking about sales. I'm not talking about sales. Let's remember that. And that's where Kristin's angle was great. It's about inputs because for the farmers, his concern or her concern, okay, is to be able to repay the loan to have inputs for the following year. That's the farmer's priority and to be able to keep on selling. Okay? So he wants to sell, but he wants to sell to repay the loan because he doesn't want to be thrown off the truck and then be stuck in that other world where he has to go get loans with the traders. That's Neverland.

You don't want to go there. Okay? So what did we do? I didn't redo the supply line. That works well. We focused on the other part. On the market part to solve the input part. Okay? And so what it's about, it's – we're actually focused on developing a contract, but not a contract with a

buyer. A contract – a tripartite contracting thing between the bank, the miller, the producers, and we work with what was there. We're actually lucky in a way that some Senegalese investors actually invested in a mill out of nowhere. They just came in there and just built a mill. Brazilian investment, and – and they actually went around trying to buy rice here and there. And they had problems consolidating, and they asked – and they came and asked the project, they said, "Can you just help us structure this whole thing?"

You know? Because what they were looking at was not necessarily buying rice, but how to consolidate rice. And so we came up with a system that established this tripartite contract under which the bank and the millers – the miller and the producers would agree that loans would be reimbursed in kind at our warehouse, and so farmers would deliver at a set price, and that would offset their loan. And the miller would take up the, would take up, you know, the obligation. So farmers would be off the hook by delivering quality rice. Of course, it didn't happen just like that. The big issue was price, and what actually got the whole thing rolling is that the miller gave them a high price, and for them, outrageously high price. It's not that outrageous, but which factored in the fact that there were strong economies of consolidating rice at a specific point, which actually reduced the transport cost.

And so we focused on quality and – establishing like this matching collateral system, getting the norms and standards right, and also we put an ad on when they were structuring the loans, bringing in crop insurance in the loan as an input. Not as part of the financial cost. And so it actually secured the harvest part. I mean the climate risk part. So overall, this whole system generated very quick turnaround. It's actually evolving very fast now from an initial system with one miller, now it's actually diversifying. Like seven additional millers are coming in, and you know, are diversifying the bank's risks. New banks are coming in, adopting this inventory collateral kind of system.

And actually, some farmers, we did a survey on that, and 20 percent of farmers are actually not only reimbursing their loan. They're just selling all the rice, getting the payment, putting it in the bank, and going to the boutique to buy their own milled rice. I mean – and they're using the rest of the money to plant for whatever crops and planning to make those and doing a whole bunch of other stuff because it's easier, and they also get their input loans. And that's the other part is that the most efficient groups are actually double cropping now. They've got the 12-month turnaround going, so that is starting to pick up.

So all that is actually, you know, an interesting outcome. But let's understand that the underlying rationale for the farmers to do the double

turnaround, it's an input focused, you know, concern. Okay, another case. So what's the other model? Well in the rain-fed zone, it's a different situation. Actually, they weren't – market wasn't very structured. I mean people just produced cereals to survive and barely cover their needs, and yet, you know, they understand that there are productivity gains to be had when you bring in inputs and improve seeds. But how do you get it going?

We started out the project by using an existing model. You know, because at PCE, we don't like to invent a new model. We like to pick up what has already been done in the area that people can relate to, and then gradually morph it and transform it along the way. So in the south, one system that was working was the system that was being put in place by the cotton parastatal working there where the company actually manages the whole input supply chain and the marketing supply chain and provides, you know, tight extension services, and we tried to replicate the system where you have a buyer firm that connects with the downstream market, connects with the input suppliers and the banks and the producer groups and organizes the whole thing.

Yet in this system, the buyer doesn't lend money to the farmers. With a contract, the contract underwrites the farmer's loan. Okay, well that was all fine, but it's actually a very vulnerable system because what happened was yeah, okay, we did increase the value of input loans. We did increase the amount of the quality also of inputs they were getting. We got big boosts in yield. You know, farmers like doubled their yield, were able to sell to cover their food needs. That was all great, but at one point, there were like hiccups in the input supply line, and then the buyer firm tried to pass on inputs of dubious origins and dubious pricing and informing the farmers that the price had changed.

But once they'd actually applied the fertilizer – and farmers started to divert funds to divert sales. Side-selling, yikes. But what really caught my attention, they were side-selling to reimburse the loan. So they weren't side-selling to go home free. Uh-uh. They were ready to site sell, but they were ready to take their money and go to the bank and reimburse. Actually, the buyer was pressuring the bank not to accept the reimbursements because he wanted to keep them tied. So eventually, the whole thing blew up, and the farmers in the epic meeting where they were supposed to come up to us and say, "USAID must reimburse the unpaid part," you know, and we're going to tell them, "No way. You guys have to resolve it with them." But when we met them, they said something different.

They said, "Listen, we don't want to work with the buyer." It really happened like that. They said, "We don't want to work with the buyer

anymore, but if we don't work with the buyer, will you accept to work with us? Will you let us set up our extension system? That was really cool. Yeah, why not? That's how FEPROMAS was created. FEPROMAS, whose president is that little lady who got the Obama pictures, you know, shaking her hand. It's Nimna.

And so Nimna came up, this little president, and she said, "Okay, uh,-" and she – she was leading all these like local guys, you know, handling these little co-ops, and says, "We're going to get our act together and work it out," and they started their import – you know, input procurement system and negotiating with the banks and organizing the logistics, organizing the requirements, the whole thing. And they developed this system, strangely enough, based on side-selling. Not side-selling, selling to the market, to their market, and what they considered the best market, which was the local market. Yet they underwrote their loans with rain index insurance. Okay?

They underwrote their loan with a warehouse collateral system where they would place the loan reimbursements at a set price. We actually underwrote a credit system that enabled them then to sell that portion to industrial firms. But 90 percent of the production was actually sold locally. And loans are reimbursed 98 percent of loan reimbursement rates, and the two percent are – well, the proverbial black sheep that they actually manage themselves. You know. And that the quality – actually, the industrial firms are complaining that they're not getting the grain they want. You know, they want some more, but they're saying, "No, we're – we're selling on the local market because we're actually getting good price."

Price is stable. No price dip at harvest because everyone knows they have that alternative, and so the price is set at the maximum level and stays there. There's no more price fluctuation on maize in Senegal. There's none. No one talks about it anymore. That's the funny part. People like forget things, and when we arrived there, everyone was talking about the price dip in rice and in maize. Now strangely enough, nobody talks about it, but then nobody remembers that they used to talk about it. So but they complain about other things, but that's called progress. Isn't it?

So that's all fine. Now people are complaining that they don't have enough warehouses of the sufficient quality to do that kind of stuff. You know? And, there you go. So that's a different model. There are actually other models, okay, another one, but that will be for another day where you work with in rain-fed rice where farmers have no market and are actually starting to develop input procurement systems based on, you know, their own seed multiplication, community level like arrangements, and you know, very, very like low-level, but things that are actually

picking up. And that's actually a bit more challenging and complex. But that would have taken a little bit more time.

So what are the takeaways? So as Kristin says, it's like lots of pathways can lead to different models that meet basic principles. The basic principles I was talking about earlier, getting the inputs on time, getting quality inputs, having risk management systems and collateral systems that enable you to grow and to grow based on your capacity to produce. Okay, systems that enables you to stabilize prices in a certain way by providing value and actually building, you know, a higher quality product focusing on quality management skills, forecasting skills, things like that.

And an important thing. The core contract is not the buyer contract. The core contract is the support – is the input loan. That's the contract that matters for small farmers, and your whole strategy is to make sure that the farmers develop the skills and strategies and means to be able to reimburse that loan and make it to the following season in the best possible way. The buyer contract is an option for when the volumes reach a certain level.

Okay, when the surpluses reach a level that goes far beyond the farmer's own needs, and he's really in the cash crop business. And they actually become little businesses, and that's what's happening in the Senegal River Valley right now. Also, key crop insurance, but also output quality control is a key element for risk mitigation. Quality grain lasts a long time. I used to work in high value horticulture exports where, no, you can't store. Not very long. But in this case, if you get decent grain, decent, you know, corn, you can wait out the market if you have a good collateral lending system and stockpiling system.

Also, transactional tracking and documentation, key. Even for grain. You have to develop traceability system, data collection, forecasting. But the most important part of the whole approach is it has to be bottom up. So I think our lesson learned is getting the farmers and their farmer groups to do the extension and the tracking and the organization and the monitoring, managing that, and then connecting with the higher ups and interacting with the banks, interacting with the buyers, with the industries and all that, which means that they have to be able to do their crop forecast. They have to be able to track and prepare the loan applications. Okay?

FEPROMAS managed a loan application in – in – in the Saloum for about a half a million dollars, and they reimbursed everything. Okay. So – and they do it year in, year out, without project support. What we do is facilitate the next steps. Right now in the Senegal River Valley, we're focusing on making sure the banks actually have sound tracking mechanisms for the warehouses, the various warehouses that are being built, that they're ready for scaling. That's our focus. But right now, the

rest of the supply chain takes care of itself. Okay? And so that farmer empowerment part, super important, okay, and that was the area we did in the maize sector where we brought in this, you know, quality parastatal to hand – do the job for the farmers, calculate their requirements, and manage their – you know, do the legwork for them.

And the farmers came back to us and said, "We can do that. We don't need those guys to do that for us." And you know what? They did, and they're doing it very well. Okay? And when they come to us, they say, "No, we don't want you to do that for us. We want the next step. We want to manage tractor acquisition. We want to manage how to get leasing agreements for combine harvesters. We want to see, you know, how do we manage larger stockpiles and decentralized like stockpiling." And things like – that's what they're – Nimna, that's – you know, that's what they're asking, and so – well, that's it, guys. It works. Thank you.

QUESTIONS AND ANSWERS

USAID Microlinks: All right.

Jean-Michel: Okay.

USAID Microlinks: Thank you, Jean-Michel. We're going to now move into our Q&A portion of the event. We have about 35 people in the room. Feel free to just raise your hand, and we'll take a question. We also have about 75 people online with us. We'll – we'll take a question from online – a couple of questions from online as well.

Jean-Michel: Okay.

USAID Microlinks: So – and we have about 20, 25 minutes. So let's go ahead and start back here. I'm going to ask if you can say your name and your organization before asking your question, we'd really appreciate it. Thanks.

Dan Silverstein: Hi, thank you. That was excellent. My name is Dan Silverstein. I'm a private sector and capital markets advisor in agricultural development. I have two questions. One relates to the viability of the local market. The assumption has to be if they're going to sell in that the market is substantial enough to absorb all of the harvest X, the warehouse product. So if you could address that, please. And the second is, how do you provide risk insurance to such a small sample of small growers? I'm not a risk insurance expert, but it seems like it defies everything that I thought I knew about diversifying risk over a region and climate and that kind of a thing. So if you could address that, I'd appreciate that also, thanks.

Jean-Michel: Turning to the market, market size, in the case of rice, Senegal actually imports like 800,000 tons of white rice. So I mean you've got a deep market once you are competitive. The problem has been to date that the quality was not there, and the milling yields were very low, like below 60 percent, like 55 or things like that. So of course, you know, they came up with very high costs, and you know, the mills didn't have a coordinated supply chain. And – and were not able to provide rice on a continuing basis to cities. And once again, you know, the – the whole milling – the production capacity was based on a one-crop cycle.

So you know, the whole supply chain did not work. It did work very well on a proximity basis. I mean the regions where the rice is produced are self-sufficient, and they do not consume imported rice. So there's actually a deep local market. Urbanization for corn is actually pulling the market, the grain market strongly. I mean the – the millers in Dakar were providing poultry feed, you know, for a growing poultry market and egg

market in Dakar, are only part of the element because you've got regional towns that are growing very fast and are actually the ones pulling the corn from those areas.

But yes, there is the risk of over production, and that's where the whole stockpiling part is important. You know, we have to move away from just in time grain distribution. You want to have mechanisms to get the grain out of the backyards and out of, you know, schoolyards and things like that and get them into decent warehousing where the marketing can be done in an orderly way maintaining the – the grain quality and maintaining the productivity of the milling operations.

But once that is done, there's actually, you know, a fairly very robust market. What's great also about the storage part and these collateral storage operations is that they operate as some kind of we call it like vast communicum. It's like a siphon, you know? It – it shows you when the market is overloading, you know, and you have a way of capturing this overload that enables you to regulate, and they both farmers to adjust. So if you do it in a – in that kind of way, there's actually a – a very strong, you know, smoothing mechanism.

One thing I was worried about was what's going to happen with, you know, the US's recent bumper harvest of corn. You know, if you look at the – you know, Chicago Board of Trades, you know, the price for corn like was halved. I mean it used to be a while back at $8.00 a bushel, and it reached that level. Now it's at, what, 3.70 or something like – yeah, it's not very high. Yet in Senegal, the price is actually stable. Farmers, you know, didn't have to suffer such a big price dip and were able also to increase their yields and are able to make their payments and actually are very bullish about it.

Because that was the thing I was worried about. I was thinking, you know, when the grain price crashed, this is going to go all over the place. And no, it hasn't happened. And even now, you know, India is actually placing rice at a very low price. And you know, the – the milling rates have gone up. Now the milling rates in the Senegal River Valley are reaching 65, and some – some of those, you know, networks and firms are really improving their quality control and – and developing sliding scale pricing mechanisms, and are going slowly toward what they say 70. If they get 65, 66 on a continuous basis, it'll be good enough.

So yes, they're – you know, the market rationale is there, but yes, there is this optimization of the supply chain that's very, very important. What –

Dan Silverstein: Risk management.

Jean-Michel: Yeah, risk management, yes. Insurance is still at the nascent stage, but it's rain index insurance, and right now, and yet – and in the Saloum part, in the maize zone, we have supported the Météo Agency to set up automated rain gages in catchment areas that over about five kilometers. And so there is like this systematic collection that is set up, and farmers subscribe to the rain index insurance to cover their input loans. And the system is managed and reassured with Swiss rates, a system that's financed with them.

In the Senegal River Valley, you know, okay – I'm sorry. In the Saloum, number of farmers insured right now in maize, 2,000. You've got a few thousand from the peanut sector. A potential of 15, 20,000 farmers and loans covered. So you know, there is a certain critical mass. In the – in the Senegal River Valley, you're talking about, you know, input loans for a value of nearly a yearly value of nearly seven, eight million dollars, 15,000 farmers cover. So you know, you have a certain population. It's – it's not small, and it's also cash based. You know, this is not the – the other part, like the work for insurance kind of system.

These farmers pay their – pay their insurance premiums, you know? And actually, they have to pay it before they access the loan. So actually, you know, we've seen it this year. They take their own money, pay the insurance, make sure that they have their insurance coverage that is, you know, adapted to the amount they want to plan as part of their loan application, and that's a way of securing the loan without having a buyer contract. And that provides reasonable insurance to the banks. So yes, you know, it is building up steam, and as the commercial market develops, then you should – it should be working. Okay, yeah.

USAID Microlinks: I – let's go ahead and maybe take one question from the webinar, and then we'll go back and we'll get the person in the room.

Webinar Monitor: So I have a couple people asking about gender and your work, and so, Christian from Freedom from Hunger asked did PCE do anything to address gender bias issues, and Indra asked are female farmers treated as the same as their male counterparts, and if not what, what are steps being taken to create an equal environment?

Jean-Michel: Yes, and while you see it here on the screen, you have Nimna Diayté, who is the president of FEPROMAS actually welcoming in within FEPROMAS women who were working in millet and other sectors and who wanted to join the organization, to be part of it and access those loans and be able to access those inputs to increase their yield. So yes, there – but yes, there is a gender bias, especially for cash crops, serial cash crops, and in the maize sector, for example, only 15 percent of the farmers are women because they don't necessarily, you know, have access to the land

that is used to do that. So but as you see, you know, by focusing and getting women involved in it and opening up to them, and they actually, you know, can join the – the bandwagon.

But to the biggest challenge, and yes, it is going to be a challenge, if we really, really want to bring the women population aboard, it's to – to work in those crops where they are present, and that's mainly rain-fed rice, and that was the supply chain system I was talking about, really working with women who work on food self-sufficiency crops and help them access inputs so that they can build a marketable surplus. That's one aspect. And the other part is working with women groups who are working in those, let's say food security crops and help them develop a cash crop activity.

To do that, you have to work with groups that are focused on that. Women-owned groups, and that's what we're doing. Right now in the Casamance, the female population we are working with to bring in those technologies represents like 60 percent of the beneficiary base in the rain-fed rice sector, and yes, the – the issue there is to get these women who are very, very risk averse, to take that step. Take that step of taking, a cash position on their crop to get that yield bump.

And that's a very, very gradual process. We don't want to speed it up, and you know, accelerate it because you know, you can end up with very, very counterproductive elements. Right now, we're working with these women groups to get them involved in certified seed production, which is an immediate and high value crop that they can actually, you know, control and master, and that they can actually market in their immediate proximity. Gradually, you know, the best seed farmers are actually moving onto higher valued cash crops, but it has to be a very progressive process.

You don't – you don't want to pump steroids into that. It's not a good idea. But it – you're right, it takes very deliberate approaches, and a very particular scaling strategy.

USAID Microlinks: All right, we'll take one in the room and then go back to webinar.

Peter White: My name is Peter White, and I work as an independent, consultant for a number of USAID projects, including the West African Trade Hub, which today is the Trade Hub Network, as well as with Next – or formerly with Next to Nigeria. I think the approach that you've taken, Jean-Michel, is – is really interesting looking at the input side. And inputs to the farmers. And you also mention the importance of, inputs to – to millers and the fact that they need to maintain months of inventory. Could you comment a bit on the financing of millers and how that is working, and if that is increasingly being taken up by the commercial banks?

Just a point of clarification, you mentioned that, if I understood correctly, that loans were a guarantee by the government. To what extent are they guaranteed by the government, and what impact is does this have on creating, a credit culture within the country? And I wasn't going to mention this, but you raised also an interesting point about this bumper crop of corn in the states, at a time when West Africa is trying to promote internal production. How will Senegal sort of deal with this price competitiveness and availability of corn coming in from North America?

Jean-Michel: Okay, concerning the stockpiling mechanism, as you say, you know, the big issue is getting the millers to take a position on six months' worth of supply. And so the way that it is being done is by working with warehouses, okay, that are available in the area, and there was an initial set of warehouses that had been built a few years back that were available but were used as like community level storages to do local selling. It was just to reconfigure existing warehouses and turning them into public storage points, okay, that are managed by the bank and the farmers and – and the millers.

And so turning those warehouses into these kind of bonded warehouse mechanisms, which means that so the loans are placed there. It's like a warehouse receipt system, but where the farmers – I mean don't go – every farmer is not going away with his own little receipt to do his own little speculation. That's an interesting aspect. What we see is that farmers are not really interested in keeping their certificate and playing around with it, or – you know.

They're interested in offloading the rice, and then getting inputs to do another run. Okay. And getting it off at a set price, a competitive – you know, a price that makes sense for them. So yes, it's a warehouse with receipt system, but where the whole ownership is transferred. Okay? Now that has its limitations because it's limited by the number of warehouses you have available, okay, but yet, that has spurred investments by the government in public warehousing. There's actually some private firms and millers who have invested in warehousing for their own needs.

What's also interesting is that this system is actually backed – the loans they get to procure this stockpiled rice is actually offset also by credit mechanisms that are backed by suppliers – not supplier, but client orders. I mean by wholesalers. Like wholesalers reserve stock, okay, and based on those like promissory notes, and you know, even prepayments. This actually secures the miller's collateral position. So it's really you have this like back-to-back financing system that goes right to the market that actually collateralizes the – the patty rice. It's not very different from rice imports.

You know? And that was actually the guiding principle when we designed that. Except the valley was at a disadvantage with rice imports because a rice importer can bring in 20,000 tons of rice in a bonded warehouse in Dakar. You know, with a letter of credit, and just put on the table barely five percent of the value of the whole thing. The rice itself was the collateral and actually finances the whole thing. In the old- you know, and formerly in the valley, if you wanted to buy 20,000 tons of patty rice, you had to guarantee it against your equity. Patty rice was not collateral, so that was a big breakthrough.

Turning patty rice, unmilled rice, into collateral. For that, you had to make sure that it had proper quality. But once you do that, a miller just with five percent of the value can put down basic collateral and be able to stockpile the same way that rice importers don't need as much cap equity to be able to stockpile important – so at one point, you were putting imports and local production at par in terms of financing mechanism. Okay? You were talking about, what did you ask?

Peter White: The credit culture and the guarantee –

Jean-Michel: Yeah, well you know, it – it's more a – it's not really specific loan guarantees. I mean it's really the – the government has this – it's really the ag bank, and the – and the government like protects the bank against important loan defaults and things like that, but farmers don't consider that the – you know, their loan are backed by an actionable guarantee mechanism. Actually, what I was saying about – you know, the bank doesn't hesitate to kick farmers off the roster and really is actually very rigid about bringing them back into the system. And so you have a lot of farmers who are actually stranded out there and have to go and resort to, you know, more informal mechanisms that are very detrimental to them.

USAID Microlinks: So, we have a question on the webinar.

Webinar Monitor: Yeah, we have, we have several questions from the webinar, but I'm going to pick one. Robert Navin asks what did PCE do to make sure that middlemen don't capture gains from increases in production, and what works in terms of strengthening former associations?

Jean-Michel: What did she say?

Webinar Monitor: To make sure that middlemen don't capture gains from increases in production.

Jean-Michel: You know, like I said, you know, middleman, middleman, middleman. You know, what's a middleman? You know, a middleman is – or a

middle woman, and there are lots of middle women out there, too, are just people who annoy very large firms who try to control their small holder base. I mean that's the whole side-selling thing. If I put myself in the small holders' shoes, a middleman is just – a maize buyer is just a rice buyer to me as long as he pays me. And the formal market is very often the one who actually takes my grain and doesn't pay me. So for me, the middleman is actually a real market, a cash market. I mean when I was asking Nimna, "Why are you selling to those middlemen?" She says, "They're not middlemen. They're paying quite well."

"Yeah, but you've got this order with this industrial form." Says, "Oh, come on. He's in Dakar. I mean yeah, I'll – I'll give him 500 tons. It's all right. Just for good measure, and who knows, maybe I'll need it one day, but we are selling our grain rice. You know, well. We will reimburse our loans." And they actually – actually did. You know, I said, "Nimna, what can I say?" You know, sell to the middleman. The middlemen are just local traders very often, and actually, the local traders were actually very happy to buy high quality grain. Like they could actually sell to those other middlemen, which are the informal poultry producers that are working in all those site towns and are not buying the Argentine chicken feed. You know, you know, Argentine corn ____ chicken feed and doing all these weird things. You know?

But feeding a whole nation, you know? So middlemen, as long as they pay a decent price on time and are great, the only problem, as I was saying, is that when you get kicked out of the formal lending system and then you get a middleman lending money to you, now the middleman or the middle woman then changes name. They become loan sharks. Now I agree to that. You don't want to get involved with loan sharks to finance your inputs. Okay? I agree with that. But a middleman who comes in with cold, hard cash, good price, he's got a good product, pays you right there on the spot, go for it. Go for it.

USAID Microlinks: Okay, we have about ten more minutes, so we'll take another question in the room. Just for anyone who has to leave either via webinar or in-person, the post-event resources will be posted on Microlinks in about a week, and that includes a recording of this session. So we'll take a question in the room.

Sarah Kozyn: Hi there, I'm Sarah Kozyn from Abt Associates. Thank you, Jean-Michel, that was a great presentation. You'd mentioned in the beginning that currently in Podor and Matam were pre-industrial. I was wondering if you could comment on the unique challenges of kind of bringing them up to the level that you see in Dagana.

Jean-Michel: Well that's it. Pre-industrial means, in terms of irrigated rice is farmers who are like settlers who are there, and – and their mindset was, you know, hey, you know, as long as I can farm for my own production, I'm okay. And usually, the parcels are designed for that. The land attribution has been designed for that. So they get actually smaller plots, not much smaller, but smaller enough. Like they'll get, you know, three quarters of a hectare. You know, very few will get one, one and a half, and that makes a big difference. Okay? Especially if you farm only one cycle because then you don't have that much surplus available, which means actually – you know, we did a study on poverty levels in the valley, you know, and really it was a random sample the whole thing, and we used – we didn't have like – we used statistical analysis to see if there were like clusters, and we found that there were three clusters. The ones that were in commercial farming in the delta, very different income profile, more let's say real little businesses. And then Group B was the – were the Podor people who are actually not bad off.

You know, there were like – I mean they were producing rice, decent yields, feeding their family, little bit to sell around. They were okay in a way. The people less well-off were actually the women in the delta that were like completely marginalized from the commercial production. And that we actually were talking about focusing on women. Then we actually had very specific programs for those women who were farming on marginal lands, but organizing local village level marketing of, you know, locally grown rice. And so they were like completely outside of the extensions, and yes, we focused on those women so that they also had access to certified seed, worked with microcredit institutions, not necessarily the National Rural Bank to set up their own systems mirroring business systems that are here.

And so yes, you know, they're like different populations. But Podor, if these farmers are able to double crop, that's the big deal. Okay, and that's what MCC wants to do. You know, MCC has made investments there, and one of their objective is to get these Podor farmers to do the double cropping. Because you know, with the yields they're getting, six, seven tons, small farmers on one hectare guy does a double crop, I'm sorry, even on half a hectare. He get pretty impressive windfall, and then he gets into the cash crop business, and you know, we – there are millers in the area, you know, who can start developing an industry. And so that's our main focus right now is to get them to develop, you know, the yield part, understanding the quality aspects also, you know, that are very important to get your millers to be competitive.

And then working on the financing to do that, you know, double cropping system, which is entirely driven by the logistics and financing cycle.

USAID Microlinks: All right, and one more question from the webinar, and I think we'll have time for a little more in the room.

Webinar Monitor: We have a couple questions on – related to quality in the system. Richard Tinsley from Colorado State University asks how important is certified seed versus making certain that there are reasonable quality seeds in the market seed system. And Aliou from Senegal asks is there a third party to improve the quality in the system.

Jean-Michel: Okay, so the importance of certified seed, I mean, is paramount. I mean it's – it's clear that is what has changed the game for rice in Senegal, and for maize. There is a nuance there. First of all, this is not like agri-dealer distributed seed. What we're seeing is that, once again, we're talking about grass roots empowerment. It's actually getting the farmers themselves to acquire the skills to be certified, to produce certified seed. We're talking about women, you know, in Casamance where these new varieties of rain-fed rice are coming in. We could have worked with agro-dealers or businesses to do the seed multiplication, and then sell those seeds to the women, developing market outlets.

You know, but we didn't do that. We actually work with the women groups so that they become certified seed producer and develop the skills to get it certified, get it controlled from the national certification body, okay, and then get it, you know, worked out. What's interesting is that what that system generates is actually a big production of quality seeds. Where the fields have been monitored, they've had access to quality foundation seed, but that they're not sending to the seed cleaning center. They're keeping it within the community because they don't want to truck it out and truck it back and – and bring it a nice little yellow branded bag. They don't care.

You know, they're saying, "We know that this is good seed." There's been sensitization in the area. Demonstration sites that we support are actually seed multiplication points at the same time, so they know that that seed will be quality, and then the following year, you know, the networks acquire the foundation seed and develop their own foundation seed production process, and their certified seed production process, part of it is actually marketed with agro-dealers to sell in other areas.

So yes, certified seed production is very important, but once again, you have to push it right at the grass roots, understand that, you know, part of it will be marketed by middlemen or by farmers themselves. You know? But it will be quality seed. Second, third, fourth generation, good enough. And generating that element and generating revenue at a local level. One thing that's important, though, is the fact, you know, that we're talking about open pollinated seed multiplication versus hybrids. We're seeing –

we're seeing that the actual collection – you know, the penetration of hybrids, because of that, you know, cash management focus of sort of farmers in a survival position actually takes a long time to penetrate.

Farmers actually prefer going for sturdy open pollinated varieties for a certain time, and only farmers who have reached, you know, like Nimna, for example, at one point grew, and all these women, you know, went from one to two. Nimna now is very big, like she's at 15 or something like that or 20. And yes, part of it is hybrid. Some of these women go to two hectares of maize. They'll add and take a chance on a hectare of hybrids, but they really hedge their bets. So you know, thinking that oh, we're going to solve it, we're just going to get all those hybrids out there and get the farmers to do hybrids, they're just not going to take it when you're going to tell them how much fertilizer they have to put in to get that additional bump.

Okay? So that's a very important part. The second – the final part is like who does a certification. Right now in Senegal, the government has a heavy hand in there, and it's actually not very clear, and it's very – however, what's very clear is that the government won't be able to hire all the seed controllers that are required to do that. So right now, we're working on a private, you know, public private kind of arrangement where you can have, you know, certified seed controllers that are being monitored by the government, but go there and for a fee perform the work on behalf of the government without having to be hired as civil servant.

That's a challenge, but, you know, the government has no choice because basically, the government doesn't have that much money to spend on salaries.

USAID Microlinks: Okay, and one in the room. We'll get you a microphone.

Jennifer Bremer: Hi, Jennifer Bremer of SAIS. Thanks. It's a really interesting presentation. One thing that you didn't – didn't mention among, you know, I mean you covered a lot, but was the issue of transport and transport costs, particularly the linkages to the urban markets. And I'm – I'm wondering, you know, what's happening with that, and whether maybe being cut off makes the local markets stronger, or whether they would be better off if – if there were better transport links to the urban areas.

Jean-Michel: Transport is actually very important, and before we talk about transport of the finished product to the towns and cities, let's talk about the pooling of, raw materials to the mills. You know? And that's where actually the financing system and the contractual model solved that. That was the big windfall that actually enabled the mill to propose a much higher price,

which actually freaked out the middleman. You know, we had middlemen coming in and telling us that the mill was cutting them off from their supply, and we said, "Well, our heart bleeds for you. That's not our problem."

But why were they able to pay more? Because prior to that, they had to send their truck along and go and pick up rice here and there, coming in, say, "Oh, no, rice not there. Oh, I thought it was five tons, but hey, it was like two tons. You can go see my neighbor." Then what – at one point, you get tired of it and you just come back and say, "Well, I've got a half load boss, and I did five times the trails." And that's actually what the mill came up to us saying, "We're going crazy. We're spending a fortune, you know, on renting trucks, and it's just –" And so the financing system here just takes all the grain and sticks it in a warehouse, and you've got like 800 tons, 15 different points. The mill calls – you know, actually gets quotes from transport companies and tells them, "Okay, start by emptying that warehouse, then you do that one," and they're like at full load. You know?

And you see those trucks coming in and out and in and out. Transport costs go way down. Quality goes way up.

Jennifer Bremer: So the farmers are transporting to the collection –

Jean-Michel: Yeah, and they're the best coordinators for that. You know? I mean consolidation transport, farmers are great. I mean they'll get the best and the cheapest way to do it for premium, everything. Donkeys, carts, you know, whatever. They just focus on it, and it works. They do it very well. So you know, you don't want to get involved in that. They do it very well. You know? Then, like you say, transport to the cities. Right now, what's happening is that wholesalers are the ones coordinating the logistics. Okay? Now they're – they're tradesmen. They know how to deal with it. The problem is like who does the job. In this case, the wholesalers are the best place because they're based in Dakar, and for the – the rice mill, the big rice mill, what's happening is that you've got these trucks bringing, for example, wheat flour for the baguettes.

You know, I mean we are Senegal. We do eat baguettes, you know. But there are wheat trucks getting in there. There are cement trucks, whatever trucks, platform trucks going to the valley and coming back, and these traders all have their friends who are selling rebarbed wires and things like that. And they say, "Hey, tell me when you have a truck going." And when the truck goes, he says, "Okay, I'm charging the backlog," and so you've got the trucks going and waiting at the mill and just sitting there. Of course, the mill calls the wholesaler and says, "I'm not loading your

truck until I see the money in my bank account." The guy says, "Okay, it's in."

Then checks it on the internet because they – you know, this is like Senegal 2.0. And the guy checks in and says, "Yeah, okay, it's in. Okay, load the truck." They load the truck, truck goes back. So you see, it's – that's the solution. It's really this like supply chain optimization based on communication, based on who does the right work, which actor is tasked to do – but you're optimizing capacity, and that's how you make it work. Okay?

USAID Microlinks: Unfortunately, it's almost 10:30, so we thank you, Jean-Michel, again, for giving a great presentation today, and we thank all of our in-person attendees and those who had joined us online.