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# WHAT'S ALL THE FUSS ABOUT? HOW USAID IS EMBRACING SYSTEMS THINKING WITH SUPPORTING FRAMEWORKS AND TOOLS

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Q&A AUDIO TRANSCRIPT

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*Kristin O'Planick:* Okay, thank you to our presenters, and now we will move into trying to answer some of these questions. Please keep them coming in the chat pod, we'll do our best to get to what we can, and if we don't reach them all, we might be able to answer some in writing after, so don't hold back. All right, let's start with a question from Patrick Sommerville. Ben, you presented a ranking of the four tools' applicability to the project cycle. Were these conclusions reached on the basis of the pilot trials themselves? In these pilots, were the tools tested at discrete stages or longitudinally across multiple stages of the project?

*Ben Fowler:* Yes, it's a really great question, and I should actually thank Patrick because he also played an important role in providing us feedback throughout the development of our tool trial synthesis paper and also contributed his own insights in the application of Network Analysis from some of the projects that he works on. In terms of the trials, one of the things that is really important to note is that the trials were really only one component or source of the information that's presented in those tables and also in the synthesis paper itself, and that's very much for that exact reason that, you know, in our trials we knew we were only doing one trial of each tool, so it hardly can be representative of the tool on its own. Rather, that was just one of the inputs; we also looked at a range of other factors. In the tool trials themselves, we did it – we did a single application of each tool, so we were drawing from a single application and we looked at that at different points in the process. Now in some cases, like Outcome Harvesting, that's pretty common and that was done at the end. In other ones, like the SOBA case that we just heard from, that was conducted more towards the beginning of the project, so it depended in each of the tool trials where in the process the project was and the extent to which we did include a retrospective element to the application or not.

*Kristin O'Planick:* Thank you, Ben. Okay, next question from Michelle Jennings, a previous side mentioned the identification of negative impacts in addition to positive. What are those in some of the analysis undertaken and how are we learning from these and balancing tradeoffs? I know, Tjip, you have some input, we'll start there, and then if Ben or Kim have something to add, we can go to them as well.

*Tjip Walker:* I have lost everything. What was the question again?

*Kristin O'Planick:* The negative impacts in addition to positive.

*Tjip Walker:* That wasn't the one I was talking about. I have nothing, I don't have anything.

*Kristin O'Planick:* Okay. Ben, Kim, do you have a response to that in terms of identification of negative impacts in addition to positive and how we're learning from those?

*Ben Fowler:* Sure, yes, I can definitely take that on. Yeah, I mean I think one of the ones where that was really interesting and really surfaced was in the Outcome Harvesting trial, partly because that's explicitly an aspect of the tool. So actually part of the Outcome Harvesting process is that if you haven't found any negative outcomes, then you need to look a little bit harder because, you know, presumably there may be some. So yeah, in terms of the paper gets into more depth, we found some ones that the project would have never considered on its own, and not necessarily ones is was completely responsible for either, but for example, in part the dramatic increase in income being earned in the milk sector was one of the contributing factors to increases in house prices, for example, in the region. There was also issues around the concentration of retail within some of the local towns where the processors kind of also assumed other roles in the value chain such as offering goods on credit. So it was actually a really interesting aspect of that tool was its ability to capture some of those, and it's nicely structured in the way that it specifically points you to look for those.

*Kristin O'Planick:* Great, and a related question, and maybe Kim you have a comment on this, from David Tardif-Douglin, where did you make observations that were completely unexpected and that you did not already know from working in the system? He's curious about the surprises that arose during the network analysis.

*Kim Beevers:* Yeah, I think a lot of things. The picture I showed of Mohamed, that trader, we never would have found that guy. He didn't have an office, he sat in a market with

a pen and cell phone, he was a wheeler and dealer and he did a tremendous amount of turnover, such an important centrally-placed actor that had he not sort of followed up that stream, we never would have found. I think maybe conversely is we also learned if we only worked with those highly placed and highly central actors we would be missing some of the critical influence that we needed to have. So I think we intuitively thought that there might be a difference between communication networks and trade networks, but I don't think we realized how localized communication networks were, and so that influenced then how we thought about pushing out information on quality, quantity, price, and particularly from a gender aspect as opposed to – which I think is a knee-jerk reaction for programs with small teams is to work at a particularly high level and try to push information down. I think we realized and learned that we had to come at it from a different angle.

*Kristin O'Planick:*

Great. Question from Michelle Garred: I'm curious what other types of systems – sorry – what other types of systems are being analyzed in USAID using these systems approaches. So Tjip, maybe you can comment on this. For example, has USAID applied systems thinking to conflict analysis?

*Tjip Walker:*

Okay, sure, I'd be happy to. The short answer is yes on both questions, and there have been various efforts to apply systems thinking across a number of activities, including, for example, water and sanitation, also in the biodiversity area, and also in the health area, both in terms of overall national health system strengthening, but also more specifically at looking at applying systems models to understand health delivery at a community level. With respect to the conflict issue, that's actually the way I myself got involved in my interest in systems, and several years ago, our office of conflict management and mitigation did a number of assessments and so forth applying systems to conflicts, trying to understand conflict dynamics. We have a primer out that sort of covers that basics about how to apply systems thinking to conflict situations, and there's also a really – one of our collaborators during that period was a gentleman named Rob Ricigliano, who has also written a book-length treatment of this called Making Peace Last, which is essentially a full sort of treatment of systems thinking to conflict situations and how that's a useful tool to understand those underlying systems dynamics.

*Kristin O'Planick:* Great, thank you. And we have a question from Anna Garloch. Kim, interested to hear a bit more on the gender findings, and I know earlier somebody had asked if you could repeat, as we were losing you, the percentages that you had shared in that regard, and how that influenced project strategy and activities.

*Kim Beevers:* Yeah, sure. So we were able – because Network Analysis maps relationships, we were able to look at trade relationships and again communication relationships along gender lines. So we found that a lot of women, something like 60% of women exchanged price information with non-female trading partners. And then, you know, we found that some higher placed – so males were typically higher placed within the trade network, women were overwhelmingly constituted some very – the very end of the consumer \_\_\_\_\_ relationship as well as pulling from the farmer level, so highly placed women traded with men, but then women often traded with one another below the \_\_\_\_\_. So I think what we found was sort of the parallel communication networks and trade networks that broke down across gender lines, and then we found, you know, a particular preference for trading between – along gender lines. I think the findings were – I don't know that they were necessarily surprising, often females communicate and sort of – and males communicate in a parallel relationship and at times rarely interact with one another, and I think that sort of was solidified I think through the Network Analysis with our work, but it has influenced how we think about information \_\_\_\_\_. So trying to focus on, you know, more localized communication as opposed to, you know – I think, you know, best case scenario, you can embed information alongside a product or service or trade and hope that it will pass out through that network, and I think we learned that that wouldn't be the case. And so if we want to influence women who are perhaps trading with farmers, and we want to influence farmers and their practices, then we need to think along, you know, how you influence people along gender lines, so what types of communication is accessed by women opposed to men. So are women listening to the radio or are women communicating through mobile technology, for example. So it will definitely influence how we think about pushing out information, and so much of marketing work is about information.

*Kristin O'Planick:* Thank you, Kim. We have a question actually from here in the room. Curious about – and I think Ben, this one will go to you, and Kim you might have some

input as well, but curious about the LOE and resources and I would add time and cost to implement these tools. Can you comment on that?

*Ben Fowler:*

Certainly, and I'll maybe preface it, or maybe I think the most important point is that, you know, that table more talks about that question or the answer to that question in relative terms, so comparing the tools to each other, because as I'm sure you can imagine, the application of any of these tools in terms of how much it's going to require is so dependent on things like the size of the program, the type of questions you're trying to answer, the team you have in place and their capacity, you know, etc., etc., so how costly the context is to work in. So I think relatively, certainly SenseMaker and – you know, SenseMaker can be quite costly because there's a proprietary software system that you have to, you know, pay to have access to. The fact that it also seeks to achieve statistically significant sample means that often your sample sizes are quite large, particularly if you're trying to then compare it with non-treatment groups, and it requires a fair amount of, kind of, technical expertise. I'll leave out the network analysis for Kim to address. In contrast, Outcome Harvesting does not seek to achieve, you know, large sample sizes, and so for that reason, can be applied a lot more nimbly. And also the capacity requirements are less as well, so it's relatively straightforward to use it. And then, you know, standard tools really depends upon the complexity of the type of tools you're trying to use, you know, the nature of the questions you're trying to answer, the size of your sample which can be either very large or quite small depending on your method, so that one, you know, there's more variation when it comes to that one. But the synthesis paper does provide some suggestions of the approximate LOE for our specific – the four pilots that we conducted ourselves as well as some others where the information was available. But I would just caution to not take that as being written in stone, because it really does depend so much on the questions you have and how you want to apply the tool.

*Kim Beevers:*

Yeah, I think in the case of the Network Analysis, it really depends. So the last presentation I found in Network Analysis was utilizing Twitter data as a proxy for looking at, you know, measuring change and mapping relationships, and I think that wouldn't be as cost-intensive as something that we did, which required getting on motor bikes and in vehicles and going out and commanding a line and mapping trade relationships. You know, we went out with a tablet and said, you know, tell

me everyone that you trade with and tell me some key characteristics, and then we went to those people, and so mapping that was really time consuming, it was expensive, and it was a huge effort, but I think it was also really informative. I think there's a lot of discussion now about, you know, about focusing in on the Network Analysis in cases like, you know, a place of Sierra Leone and thinking a lot more stringently about what we need to map, so did we need to map, you know, the entire vegetable trade network, and to be honest, we didn't map the entire vegetable trade network, we mapped a lot, or could we look at something a little bit more specific that wouldn't be as cost and time consuming. I mean I think for me the network analysis, really it depends on what it is that you're trying to find out, and in places like Sierra Leone where there isn't a lot of data and you have to go out and collect data, that can be more cost intensive than leveraging, you know, a big data set from online \_\_\_\_\_.

*Kristin O'Planick:*

Thanks. We have two questions that get at M&E a little bit, so I'll combine them, and it might be that all three of you have something to say about this. So the first was from James Schmitt, how did the analysis build into a monitoring and evaluation plan? And then also from Jessica Cagley, it looks like these exciting examples are useful tools for informing implementation learning and adaptive management in part because they are tailored to the specific context of the activity. If we think about systems measurement as a mechanism for accountability as opposed to learning, are there any measurement tools that show promise for measuring systems change across context but in a specific sector, for example, improving agriculture and food systems, and how is the Agency thinking about measuring systems change in the context of our standard monitoring processes? So kind of a big, big bucket of questions here. Tjip, do you maybe want to start?

*Tjip Walker:*

Sure, I'd be happy to, and I think I'm going to take the last question first about Agency thinking on this. I mean I think that, Jessica, you've hit one of the nails right on the head. There's no question that there is a bit of a tension between an emphasis on standardized indicators and relying almost exclusively on numerical indicators and what we're trying to advance and think is important in the systems space. But I think that what we've tried to do as a basis for sort of moving this forward is sort of an understanding, and I think this has come across in all three of the presentations, about the need of blending or blended portfolio approach, where



indicators are going to clearly be a part of the answer, and I think particularly, I would argue, focusing on what we would call the results aspect of it, so essentially what is this, what is the result you're trying to achieve and what is the system that you've identified that is sort of essential for achieving that objective. And so since a lot of the focus on these standardized indicators is on that results aspect, it seems to me that would be a good place to apply the indicator aspects of it, but that we will in fact need, for the reasons that I've identified about the importance of understanding the nature of these relationships, if we're going to get down and make the deeper systemic changes that are necessary. And I think we do have some work to do, and this is one of the reasons why I think more and more we need to move into the sort of the systems-centric projects so that we can actually design projects that have this kind of blended approach engaged in them, involved in them, but also we can demonstrate that there is the value add for applying these additional approaches to understand relationships and the nature of the way in which a system is evolving.

*Kristin O'Planick:* Thanks, Tjip. Kim, do you have any comments to make about the Social Network Analysis and how it linked up to your M&E in the project?

*Kim Beevers:* Sorry, can you say that one more time, Kristin?

*Kristin O'Planick:* Yeah, taking the results of the Social Network Analysis and how did or did it not and how did it impact your monitoring and evaluation?

*Kim Beevers:* Yeah, I think it gave us a few – it gave us a few points for actors that we could look to, so if we made a change or we worked on information in one particular area, was that information getting to specific actors, so I think that gave us a sense of change. Was it sufficient in terms of measuring systems change, I don't think so, but it's definitely an indication of whether the changes that we're working on were sort of rippling through which does reflect on relationships and collective change. There's a lot of tools out there looking at individual actor level change, but there's not a lot of tools looking at some of the broader sweeping, higher level, collective movement.

So yeah, I think it did give us both \_\_\_\_\_ points and specific indicators that were telling us whether or not the work that we're doing is having an impact or the ideas and practices are rippling through or, in our case, we're pushing out new products and services through our ag and \_\_\_\_\_ partners, are those getting to people further down the chain.

*Kristin O'Planick:* Great. Ben, anything to add, perhaps in particular I think your observations about the utility of Outcome Harvesting to design further evaluation that might be interesting to share?

*Ben Fowler:* Sure. I think, yeah, all of these tools can be helpful as part of your MRN plan. Obviously the indicator-based tools fit most obviously because that's how we're used to designing those things around specific indicators, whereas the narrative-based tools, where you're maybe less certain about what kind of information is going to come out, requires some more thinking or a different approach. But yeah, I think in reference, Kristin, to what you just asked, one of the things we did find was that these tools could be nice complements to each other, and so for example, the Outcome Harvesting tool could be a nice way to surface issues for example, key unexpected issues that then you could follow up on with a more intensive process, say a large survey or that kind of thing. But instead of spending all your resources on a survey where you're still uncertain about, you know, or maybe you're probing for some of those things, there's ways to combine the tools so that you're actually going to be more resource-efficient.

*Kristin O'Planick:* Great. We have another question from Anna for Tjip. Can you reflect a bit more on what a systems-centric project would look like, perhaps key components or intervention areas, etc.?

*Tjip Walker:* Well, the quick and perhaps somewhat flippant answer to that is look at our technical note, but I mean really, we've tried in that note to sort of spell out exactly what we have in mind. Essentially the approach we take is to say that there are sort of four elements of what we're calling systems practice. It's both the ideas and sort

of systems concepts that we apply, but it's also the way of working merged together. And what we essentially are asking people to do is to do a thorough job of trying to understand the system dynamics as they currently exist. Of course, you have to go through a process of identifying the system itself that's of interest, and that goes back to the point that Ben had made about establishing boundaries of your system and making sure that you've got the important pieces inside and perhaps somewhat of the lesser important pieces outside, but still recognizing that that environment is influential in terms of the system performance and sort of figuring out how to bind it, but we do it in a very sort of collaborative – the idea is to bring it into a collaborative way with local partners so that they sort of understand their role within that particular system and can help to shape what is actually going to – you know, what kinds of interventions make the most sense. So that's what we describe as sort of the as is system, as it currently exists, but we also try to apply the same sort of thinking to imagine the system that we want to sort of move to collectively that will be necessary for achieving this enhanced development objective that we're seeking, and so we go through this sort of process again and then look at this comparison process between the as is system and the to be system and think then about what kinds of interventions may be necessary, where do we want to target. And things like system visualization tools, social network analysis and so forth can identify critical hubs where we can make interventions that may very well have significant impact. But then, of course, you know, the point it makes is that beyond the design process and given that we're dealing with complex emerging systems, we not only need to listen to those systems and then engage with them, but we also expect to discover more about those dynamics as we're actually in the throes of implementing those activities, and so we then need to understand what's going on and whether or not that learning actually needs to result in making either changes into our approach and therefore adapting, so those four elements. But again, I'm just sort of hitting over the sort of little high points, but I would encourage anybody who is interested to take a look at that note because we've tried to sort of lay it out in a somewhat orderly and thoughtful process to sort of take you through the entire project design and implementation process.

*Kristin O'Planick:* Thanks, Tjip. And time for one last question. We actually had two people inquiring about the mapping tools used for Network Analysis, and Kim, maybe if you can mention again the open source one that you utilized, and I know that there are others, Ben, maybe your or Tjip can comment on. I don't think we'll be able to get

into them all, but there are a host available, so Kim can you reiterate which one you utilized?

*Kim Beevers:* Yeah, we used Cytoscape, which is an open source analytical software package, and I think some open source plug in tools to look at centrality measures. I think the link to Cytoscape and the discussion of some of those measurement tools is found within the full study.

*Kristin O’Planick:* Great. Ben, did you want to comment on other tool variation options?

*Ben Fowler:* I mean actually, you know, Cytoscape is the one that we like and typically use, so that was part of the reason for its selection in SOBA, but of course there are a range of different ones out there that vary significantly in their, you know, complexity and their cost as well, so we personally found that Cytoscape has some nice advantages in terms of both of its user friendliness and also its affordability.

*Kristin O’Planick:* Great. Tjip?

*Tjip Walker:* Well, the one point I just wanted to make is that as both Ben and Kim have described it, where the expense with the traditional way of doing Social Network Analysis comes in is through this process of going out and collecting the data, which requires actually going – usually requires going out and interviewing people, and then through a snowball effect, sort of identifying who they engage with and so forth. But there have been experiments, and I think successful experiments, done where you can rapidly shorten that process if you rely on cell phones and SMS technology, and an organization called Root Change, for example, has had a number of applications of Social Network Analysis, I know they’re in the process right now of doing a project, a USAID project in Nigeria where they’ve relied very heavily on this, and it drastically shortens up and reduces the cost of doing Social Network Analysis. So there are obviously potential limitations to it, but given a choice, you

know, at least their approach seems to be to say that it's worth it in terms of being able to get this data out and use it more readily.

*Kristin O'Planick:* Okay, great. Now, there obviously is a lot more that we have to learn in application of these tools in varying contexts and in varying sectors and development approaches, so as hopefully some of you start to apply them, please keep sharing your learning back so that we can enrich the whole community with what seems to work best where. And the event resources, there were many we understand, and have a lot of links shared and a lot of things in the resource pod, but they will also be shared in a week or so, including a recording of this webinar will come out, and please feel free to share with your colleagues. And just for your information, Microlinks will be taking a break for December for the holiday, but we will be back with our next event in January, and with that, we're going to close for today. Thank you so much for joining us.

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