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**What Will It Take To Transform African
Agriculture 2013-2030?**

Q & A Transcript

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Moderator: Great. We're going to have our Q&A now, and I think a lot of you have your cards where you can write your questions. We have a very large audience, so we want to be able to take the questions as in an organized way as fashion. So please write your questions down, pass them to the end of your row. I can see Wade already had his ready. But we're going to give the – inspiration of this whole seminar today was Jim Jasmine, so we're going to give him the first question. I have it. So I'm going to read the questions, actually.

Male: *[Inaudible comment]*

Moderator: *[Laughs]* So get ready, economists. So this is what Jim is asking. No economy can grow if families have to use 70 to 80 percent of their income to buy food, precluding purchase of growth promoting goods and services like better housing, education, health, et cetera. We know from previous MSU research that in many African countries farms sizes are now so small that even with the application of recommended production technology practices, et cetera, that families are net buyers for a large part of the year.

So Africa's rapidly growing urban families are food purchasers as well, for all of the year, and become a potent source of social and political instability. So the question is can smallholder agriculture, even at higher levels of productivity, meet the need for lower cost of the family food basket that would allow for growth-promoting non-food purchases and prevent social and political instability. Short and pithy, huh?

Male: All right.

Male: How do you want to do this?

Moderator: Well, why don't you start, Jerry, and then we'll go to Tom, David –

[Crosstalk]

Male: Go right ahead.

Male: So that's the \$64,000.00 question, and I think there's – well, that's not a lot of money. So there's a couple of points. One is there's a big separation between urban food markets and rural hinterlands and staple production. Africa has been importing food for a long time, and now imports a substantial amount of its food. So urban areas in Africa import wheat, and they import rice. They buy less and less of the stuff that's produced on farms in the hinterland. So those markets are disconnected, and the question is can they ever be reconnected and what does that mean.

The flip side of that is urban markets are demanding higher-quality food.

So to the extent that farmers can produce fruits and vegetables, dairy, and meat, chicken, and everything else, then they'll meet urban demands.

I think the second part of that question is, my guess is that it's going to be very hard to raise productivity of smallholder very small farms. The real need is to provide the linkages that allow people with very limited resources to find other sources of income. They do that anyhow. They work. They have small businesses. They send off a son to work in the city. They do lots of things to sort of put together enough income to survive.

And I think the policy question is how we can promote those linkages to increase the demand for labor, and to allow people to make choices that will enable them to first diversify, and eventually get out, because those folks are never going to be the productive – they're going to have to leave. And the question is the path of how they leave and how every other policy that we do affects that, and particular, if we're going to work at increasing the productivity of the larger farms, how does that increase the demand for labor and other goods that the smallholder – the smallest farmers can provide?

I'll leave the rest of that question to you.

Male:

Okay. Okay. So this question about food prices is crucial, and the solution as it has been Asia where poverty is reduced despite predominantly small farm structure is for wages to rise faster than food prices. So food prices may end up continuing to rise, and it's true that many of the poor are net buyers. So if wages are able to rise faster than food prices, that's part of the solution.

And, Jerry, has kind of talked about some of the processes that need to occur in order to bring that about. So for urban employment to grow – and their needs to be some urban engine of growth to absorb these people coming off of agriculture, so I think we're agreed that the bottom – those people in the marginal farm sector right now, they're probably not going to make it in the long run. Just like many family farms in the US didn't make it either, they ended up – my grandfather was a farmer, but I'm not, and education and higher wages were able to absorb people like me not the non-farm labor force. The same thing is going to happen in these countries, provided that there is some sort of growth that's going to pull them into non-farm.

Now what have we learned about how that happens? In South Asia, what was able to generate the demand for non-farm was broad-based agricultural growth. So who's providing the demand for non-farm? It's the rural sector. And you have this kind of virtuous cycle that can

hopefully occur. There's going to be a lot of challenges about whether Africa's going to be able to do that. Jerry's point about Africa's urban economy's being open as they are, means that for African industry and manufacturing to develop, they're going to be competing against a very competitive international market now. So the challenges are great.

Male: Can I just add two quick points? I'm sorry. _____ – I know. One is that increased mobility, one of the important investments is education. The more educated the people are in rural areas, the more able they will be to find jobs outside.

And the second is most African governments have awful labor policies which preclude the hiring of people, and that's been in place for a long time. It's going to be hard to change, but the more open the labor policies, the more employment will take place.

Male: Two seconds, three points.

[Laughter]

I really command to you a paper by written by Derrick Heady _____ a few years ago called "Agricultural Exit." It looks at this in the macro sense. I won't say anymore than that. But this issue of the exiting of small marginal farms from agriculture is really important. I agree with everything Jerry and Tom said, but I'd emphasize again, we don't want to force this, because sometimes those small marginal farms have no other opportunities for the moment. Their kids will, or their grandchildren will. And so that exist is a generational thing, also, the exit of small marginal farms from agriculture.

And, finally, a lot of the Feed the Future initiative is all about trying to make value chains work where we can work with small farmers to make them productive enough, lower cost enough, so that they can meet urban demands. We're seeing some really exciting success in some countries like Senegal. We're seeing some challenges in other countries like Liberia. But part of the challenge there is meeting the low food prices from imports which are a good thing for consumers. We have to remember that, low food prices are a good thing for consumers, but strength it in ways that gets the agricultural sector more productive and produces income and employment.

Female: Okay. Here's a question. It's, "Our FTF indicators as I understand them, " says Wade Channel, "are focused primarily on returns to land, yield per hector," in other words yield per hector. "Without adding returns to labor and capital, how likely are our policies to promote overall increased farmer welfare versus increased tonnage of staples?" Anybody?

Male: Not me.

[Laughter]

Male: I don't know. Is Wade still here?

Male: No, he left.

Male: Okay.

Male: Well, we don't have to –

[Crosstalk]

Male: Well, I think he's right. He's right. Returns to labor is going to be where it's at, and that's returns to labor are the most accurate indicator of wage rates, so I totally agree.

Female: _____ fairly successful and catalyzing governments to invest in agriculture. However, the blanket ten-percent goal has clearly not led to the right investments. Has there been any discussion of CADAP setting more prescriptive targets?

Male: Well, it's actually really _____ African union, but maybe I can offer one or two thoughts on this. CADAP is a consensual thing. The African union's a member-driven organization like the UN or the LAU or the Organization of American Unity. So they can only do what their member states agreed their members states agreed it would be a good thing to revitalize agriculture, increase investment in agriculture about a decade ago.

I believe that moving into 2014, which the African Union has declared the Year of Agriculture for Africa, which is a really big thing. It's not just a symbolic thing. It's a rethinking or strengthening or deepening of CADAP. There are several new emphasis in CADAP. One of them is on being much more mindful of the policy actions that have to accompany this ten-percent investment level.

So I think there will be a lot of dialogue around that issue without necessarily prescribing targets.

Male: The other thing about investment is it's not only what you invest in, it's how well you invest in them, and for a lot of governments, how well they invest – in fact, even our own government, is a problem. There are problems in procurement. There's problems in staffing up. There's problems in a whole range – maintenance. There's problems across the

board in making investments productive. So it's not just a number, but there's quality which is not so easy to get at.

Moderator: Okay. This next question kind of follows that. What is the role of the private sector in the transformation? Are there examples of effective collaboration between private and public sector to increase production and quality?

Male: Let me start out just talking about kind of where we are in the US government and with the Feed the Future initiative. Most of you have heard about the new alliance for food security and nutrition that was rolled out by President Obama a year ago when he was the chair of the G8, and which has been reinforced and deep in to the recent G8 meetings this month. That is primarily – not exclusively, but primarily focused on precisely this point, partnering better, both US government and G8 donors, but also African countries partnering better and more productively with the private sector on the part of donors that means, more consistency and focus in where we put our money on the part of the government, the African governments that are part of this. It means really being more mindful and more open and in dialogue about what the private sector really needs if they're going to invest in terms of regulatory changes and transparency and things like that.

And on the part of the positive sector, it means putting your money where a lot of rhetoric is through with some help from the world Economic Forum, and an organization called Grow Africa, and we saw a year ago at the G8 meeting, \$3.5 billion worth of private investment kind of committed to partnerships with the African governments and with G8 countries on public/private initiatives, precisely in agricultural to make value chains work better and to productivity of agriculture in Africa.

So we need a lot more experience. Nobody knows the best models and where that investments makes the most sense, but this is certainly a big thing, and the African government are probably even more excited about this than I think the G8 donors are right now. It's really gotten a lot of movement on this issue.

Male: The main issue in private/public partnerships is for the public sector to have policies that incentivize private sector to invest in the right ways. And right now agricultural policy in a lot of countries is lagging behind where it needs to be and those investments and changing policy are likely to have the biggest impact on all of the stuff we're talking about.

Moderator: In the context of structural transformation, how does the question of diversification versus specialization of economic activities play out at the micro and the macro levels, or household versus market levels. For

example, at the household level, diversification is often a strategy, especially for the extreme poor, to smooth consumption and management risk. How does this play out at the market level, or macro level in terms of either promoting or stifling growth?

Male: It's a pattern over time. So especially the poor farmers the first thing that they need to do is diversify their sources of incomes so that they reduce risk and that they can take advantage of the other resources they have besides their land.

This process over time, will lead to specialization of the better farmers, or the larger farmers. So the larger farmers are going to specialize more and more because the size of the market increases specialization, Adam Smith, increases productivity. So large farms and as farms become more productive, they specialize. Small farms especially the poorest, diversify in order to maintain their income levels and reduce risk.

Over time, the larger farms will take a bigger share of the total ag sector, and the small families will become consolidated. So diversification is a medium-term strategy for people until they figure out to leave. It's not a strategy for the larger farms over the long run because the larger farms are going to specialize.

Male: I'd just like to add to that with one caveat, Jerry. Some of the risk management of small farmers in diversifications related to food markets not working very well, so to the extent that government policies and just the market volumes and other things lead to those markets working better and being more predictable. There are situations where small farmers can also specialize, probably never to the extent of larger farmers, but that part of risk represented by huge volatility and uncertainty in food markets, if you can manage that, that will reduce some of it. That will lead to some greater specialization to small farms, too.

Moderator: David talked about policy levers that are not fully understood. What does the panel think are the most important policy levers?

Male: Okay. I'll take a stab. Well, just harkening back to the work that the meta studies that IFPRI had done along with *The Economist*, what was driving the Asian Green Revolution. It was technologies and R&D and management practices that were appropriate for small farms and markets, infrastructure. Those were the ones that ranked the highest.

Remember that Asia's Green Revolution occurred with 85 percent of those farms being under 2 hectares. So that was a small-farm driven process. Eventually, as Jerry mentioned about this transformation process with larger farms, yes, there's farm consolidation happening in Asia, but I think

we need to keep in mind that the Green Revolution in South Asia was a small farm-driven process. So to the question, technologies and management practices that are appropriate for one- to two-hectare farms, needs to be part of that process along with a conducive policy environment that makes space for the private sector to come in.

Let me just give one anecdote that I think is – for me, anyway, it was very fascinating to find this out. In its efforts to support small farm incomes, many governments in the region are implementing marketing board practices where they're trying to set very high processes for food to put more income in farmers' pockets. Now one or two things that just immediately come to mind is that because many of these households are actually buyers of food, not sellers, efforts to raise food prices make them directly worse off. That's number one.

Number two is that these marketing boards pay after two or three months. They don't pay immediately on cash. And so many of the farmers who are in remote areas and needing somebody to come and transport their surplus to the towns, this is done by assembly traders, very small traders that maybe can grab five tons of maize one – from farmers and then they load it up. They go around from farm to farm, load it up, take it into the wholesale market in town, and they sell to a wholesaler.

So what's happened in some of these countries when the marketing board sets a very high price, is that the wholesalers can't compete against the board. They can't offer the same price. So they exit the market. The assembly traders who go out and collect product from the farms in the hinterland, they can't operate unless they're given credit from the wholesaler. And so when the wholesaler flexes up his tend, then the assembly trader who comes out to collect grain to the farmers, they can't operate, either.

So in many ways, the resurgence of grain marketing boards in this region has actually worsened the market access conditions for small farmers. So to the question, these are examples of unanticipated effects of policy that need to be more widely shared so that governments can understand what might be actually backfiring in their attempts to put more income in farmers' pockets. Thanks.

Male:

Let me just add to that from the perspective of the US Government Feed the Future initiative. That initiative spent the first two years really focused on developing projects and programs on the ground to move quickly, and over the past 18 months, we've really put a serious effort with all the multiple US Government agencies involved in FTF into thinking about the appropriate policy environment for the kinds of successes that Jerry and Tom and I have been talking about.

And while after were sort of considering investment a little separate, so a lot of the things Tom's talking about is how governments invest their money. But the USGA state department and US trade representative, the range of agencies involved in the Feed the Future initiative have identified seven priority areas for policy change and that are critical of good policy environment for this agricultural transformation to take place, that I'm going to just list right now in a couple seconds.

One is capacity building for policy, which is a huge gap. While we can be talking about this here in these microphones, the number of people involved in policy decisions in African governments don't have the level of staff, evidence, known, that they need to make good decisions, whatever the other political pressures and things they operate under are.

Then there are kind of three very sort of traditional economic policy areas, agricultural trade, domestic, regional, and international trade, agricultural input policies, some of which Tom talked about in his presentation and the overall business enabling environment which is part of the new Alliance for Food Security and Nutrition looking at the business enabling environment.

And then land and natural resource policies, both access and management aspects of that. Policies to promote resilience, especially resilience among the smallest, most marginal farmers facing serious climate or other risks, and finally, nutrition policy. So that's kind of the policy agenda that we have defined for FTF to be working on, and working with, with our host country partners.

Male: I'd like to just _____ maybe six things, depending on how things work out.

[Laughter]

One of the advantages of being as old as I am is that you're never surprised, and things that you think had changed for the better, changed back again, and so it's sort of like Whack-a-Mole. In the '80s, we thought we had sort of put these marketing boards to bed and that we'd move away governments and moved away – in fact, in West Africa where the marketing boards were mostly focused on exports of non-food crops, that has worked. But food crops is extremely political, and people are always worried about what happens with food prices and so on. And so every time you thought a marketing board was dead, it grew up, again. And so we're fighting the same battles that we used to fight around marketing boards.

The fact that Africa has been growing as fast as it has is likely linked at

least in the first instance to improved macro policies. Micro policies have not been as good as they need to be, and ag policies I think have regressed, especially when the food price spiked. So this is a never-ending battle of dealing with – freeing up markets and allowing private farmers and consumers and traders to work without the interference of government which not only distorts the market, it results in inefficiency, results in greater inequality, results in increased risk.

And so I think if you list the policies, and all those are great policies, the main policy at the beginning, the first thing, is to let the markets where it can get the prices right.

Moderator: Okay. Agricultural growth is predicated on non-renewable inputs, fertilizer, mechanization, technologies. Given the complex issues surrounding resources depletion, why are we pretending that it will be possible to feed 9 billion people? Shouldn't we be preserving subsistence, i.e., living without outside inputs, rather than trying to transform it?

Male: I can't answer that directly, but the experience of the world is that we've seen tremendous increase in population, and tremendous ability of agricultural systems to feed them. Now everybody's worried and have been worried since the '60s or the '50s about running out of resources and limits to growth and so on, the experience is that man's ingenuity and technology and change, specialization, a whole range, increased capitalization, using more information, all that has led to a ways of funding ways to increase productivity.

I don't expect that a smallholder system that's based on traditional inputs and traditional-size farms is ever going to be able to meet the question of a \$9 billion population. So it hasn't – there's no way that can work so it's got to be transformed and it's got to be intensified. At least I don't have strong opinions about – well, I have strong opinions about almost everything.

[Laughter]

So – anyhow.

Moderator: Okay. We –

[Crosstalk]

Male: There's one other important element of that question, though. Preserving subsistence isn't acceptable for any – it wouldn't have been acceptable in Asia 50 years ago, but in the era of everybody knowing how much money we make, those of us in this room make and the kind of lifestyle that we

lead, the kind of lifestyle that urban middle class Africans lead, the poorest person in Africa has access to a cell phone now, or almost the poorest person in Africa. And the sort of 50 years ago mantra about the revolution of rising expectations, that's so much more of a concern now even than it was then.

So if we're looking at world where subsistence is good enough, we're looking at a world where our political stability, our own political stability, let alone our African partners is seriously jeopardized in a world where this is just unacceptable to most Americans and most people in the sort of well-resourced world.

Male: Okay, all right. Thanks. I very much agree with both speakers, but the only caveat I guess is that wherever it's possible to move to renewable technologies, the question had an element of fact to it, which was that there are certain nonrenewable resources in this world, and are depleting 'em, so just to the extent that we can move to a more renewable system within the context of productivity growth.

Male: Right, yeah.

Female: What constrains farms size in Sub-Saharan Africa? It doesn't seem to be a lack of arable land. Is the constraint something that we'll need to be directly addressed in order for average farms size to grow and farms to become more productive?

Male: Can you say the first part one more time?

Kathy Lively: What constrains farm size in Sub-Saharan Africa?

[Background talk]

Male: Okay. All right. This is – it seems like a contradiction that Africa is a place that has so much unexploited arable land, and yet many farmers are facing apparent land constraints. Why is that? So there's two or three reasons. If you look – fortunately, in recent years, the whole world has been geo referenced into one square kilometer pixels, and if you look at that data, you'll find that in a place like Nigeria, for example, the most populace country in Sub-Saharan Africa, there's clustering of populations.

So where the land is arable, where the length of the growing period is long, people have tended over time to cluster in these areas. And so chiefs and traditional authorities allocate land to their subjects. And so for with each generation a family may have two or three or four or five members that they subdivide to.

So you just kind of do that over a number of generations, and you're farm size goes from ten hectares in one generation to five the next, to one in the next, and that's exactly what we're seeing in many areas of Sub-Saharan Africa. A fact that I think is very interesting is that in the survey that we did in Kenya most recently, average farm size in the densely populated areas was about three-quarters of a hectare.

We asked them, "How much land did your father own?" and it was four hectares. So in one generation, they've gone from an average of about 4.5 hectares down to less than 1, and those families that we're interviewing, they also have two or three or four children who are going to want some piece of that land. That explains urbanization in Africa. That explains a lot of urbanization in Africa, that it's just not possible for that subdivision to keep going. So streaming into urban areas looking for jobs where's the urban engine of growth?

Male: Let me just – there's two kinds of Africa. There's an Africa where there's lots of population. Population density's very high. Most of Kenya, Rwanda, Malawi, down through the Great Lakes and other places. And there, you have this breaking up, and there's no primogeniture, so in Europe, the oldest son got it, and everybody else found another job, whether it be a priest or to be a knight or whatever. But in Africa, that's not the case. So it's the land's divided and subdivided.

Then there are places where there's lots of lands. The only problem is there's no people. And so there's possible lands for people – and they're arable. But there's no infrastructure and they're not necessarily the countries where there's population growth. So you can see people move – I think I'm right, Tom. There's plenty of places in Zambia, for instance, where there's land available.

Male: Yeah.

Male: And you can see people moving from more like Malawi or other places to want to get in there and there are these political issues about doing that, but there's no infrastructure.

Male: Can I just add one small point? And when we get into issues of kind of large scale land transactions in Africa, where a company wants to go to purchase land is not particularly the areas Jerry's talking about where there's abundant land, but no services, far away from markets, not much of a workforce, it tends to be in the areas where there's some land, but also a lot of population and demands on the land, so that's an issue that has to be very carefully managed over the next few years.

Male: Okay. Many African governments are adopting a larger farm policy, so, for example, Zambia is trying to allocate I think it's \$10 million hectares over the next five years to have a farm blocks, a large scale commercial schemes. They're laying down the electrification. They're laying down the irrigation, and the road infrastructure spending big bucks –

Male: They, the Government of Zambia?

Male: Government of Zambia, yeah. With trying to get private investors to come which, so far has not been happening. But, anyway, I think it's worth asking the question if all of that electrification, all of that infrastructure with road development, irrigation, were instead devoted to a medium – an existing farming areas where 85 percent of the rural population resides, what would be the costs and benefits of these two alternative approaches? I don't think any of you know for sure, but I think it's one of the questions that African governments are going to need to address, and hopefully, be informed by FTF and other initiatives.

Female: One final question, and thank you, everyone who's submitted questions. We've collected them, and we'll certainly turn them into learning products. So, Jean.

Moderator: How must the international development intervention system change its approaches to support positive ag transformation in Africa? _____.

Male: Uh-huh, go for it.

Male: I'll answer it by saying, I don't know.

[Laughter]

But what I do think is happening, and I just want to make the point is that the international aid system are changing, and African governments are going to find less the necessity of aid to be continually reduced, as they find other financial flows. There are new people in this business, including China and other emerging nations. They have different priorities. There's a whole set of foundations who have a different view on it. And the role of traditional donor like USAID is changing. And in ten years, it's going to be quite different from what it is now, both in terms of because it has less value as a provider of resource, 'cause there'll be other – and less value as a provider of information because there'll be other sources of information.

And I think we need to invest over time, and particularly in our ability to be a provider of information and experience. We should be able to be pooling what we're learning from our experience in Bangladesh or

Afghanistan, in order to provide it to Uganda or Rwanda, because that's going to be the major role for an aid donor in the next 10 or 15 years, and we should be equipping ourselves to do that.

Male:

I can speak a little bit for the Feed the Future initiative. I think this is a new approach where we're focused much more on country ownership where the countries we're working with are focused much more on leveraging private investment than they had been before where we're focused far more than we have been in, in a number of years in the agriculture sector on doing this in a learning mode, where we're learning and documenting things and changing as we go along. We've always been a player in R&D and SNT and the G system. That system has grown considerably, and we're a much bigger player now than we were in the recent past, before FTF. And finally, tying small farmers into value chains to make all of this work.

So I think there have been – in the near term than Jerry's talking about, I think there have been some significant changes we've made through the FTD Intensive.

Moderator:

Eric Postel is going to close for us.

Male:

Hi. Yeah, okay. So I think the most important thing to do first is I hope you all will join me in thanking Jean, David, Tom, and Jerry for giving us the benefit of a lot of their research and their work and their thinking about these very complex topics, and to QED for hosting this. So please join me in thanking them.

[Applause]

I heard that while obviously the room is packed and I know that there are many people online and I'm really very thrilled to see that because I know that in the crush of our day-to-day jobs, we don't always have enough time to think about these questions, and to analyze the evidence, and we really need to keep doing that. We're really grateful to benefit from Tom's coming periodically, and the work that they are doing, and, of course, the work that people are doing with our many partners, the groups that we work with and support, and, of course, USAID's own staff.

So I think this obviously can just be part of the convention but hopefully, it enables people to get together, think thing about these things. Move the periscopes up and look at some of this stuff so that we can be purposeful about what we're doing, which is obviously really, really important.

I would say that if we're data driven and trying to analyze evidence, if you look at the stack of cards that went unanswered, that evidence would say

that there's a lot more to discuss and think through and this stuff.

One anecdote that actually supports a couple of the things that people said that might be of interest to people, remember about a year and a half ago, a little longer, there was the big conference of virtually all the people involved in development in Busan, and I was privileged enough to be there. The meeting opened with I think it was the Korean prime minister or one of the senior Korean leaders welcoming everybody, but the slides that they were showing sort of reflected Korea's evolution.

The first slides on the screen were USAID bags of food being offloaded in that very city barely 50 years ago. And then the next day, Administrator Shaw and I had a meeting with the head of the Korean aid agency, so Korea's now in the business of providing foreign assistance, and one of the things that the head of that agency, because they're still evolving and learning, wanted to talk to the administrator about is a challenge they were facing because an African country, the head of state had gone to them and was asking for Korea's assistance to be all basically in the manufacturing sector because they really wanted to evolve.

And the challenge that the Koreans were facing is that they felt the lesson of their evolution was that it was an agricultural lead process, that the Koreans described how they had raised _____ incomes by lots of people 'cause this is an anecdote that supports some of the things you were describing, enabling the parents maybe not to go off the farm, but to send their kids to be educated, and the kids to move onto other things. And the Koreans want to actually work with the Africans about agriculture and do some of the things that everybody's been talking about.

But so it was just interesting to hear that perspective of a group that's made the jump and now trying to help and work with us, among others, and these countries to evolve.

So thank you guys very, very much. I am always saying people look at E3 bureau and they see the first two words in the full name "Economic Growth," so lots of times they say, "Well we want the head of E3 to come and talk about economic growth," and I have – some experience in some parts of it, but I always start off reminding people that USAID's biggest single economic growth program is Feed the Future. And I'm totally fine and support and love of that, and so that's why I'm pleased to be here.

I'm pleased to see the three bureaus cooperating because it is a very integrated issue that requires a lot of things. And there's other topics we either didn't touch on, like gender, or we only briefly touched on, like the climate change aspect that was alluded to, so let's keep talking and then

let's integrate the lessons and in updating and revising our work, so thanks everybody for your interest.

[Applause]

[End of Audio]

