



## Agriculture Sector Council Day Break Seminar

# Poverty Reduction and Food Security Despite High Food Price Volatility

May 20, 2011

### **Participants**

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### **Sponsor**

United States Agency for International Development: Agriculture Office

*Male:*

Thanks a lot for being here. I'm really happy to be here. I'd like to thank Phil and Ann and Rob and Zach and everybody else who made this possible. Really happy to have the opportunity to speak to everyone here and the 80 or whatever that are listening remotely.

It's a fascinating topic. The topic is obviously very current and very topical. It's also fascinating because I think everybody pretty much agrees that we're in a new price environment, but we haven't been in it long enough to really know what it is and everybody's still really trying to figure it out.

So I'm not gonna have definitive answers about what that new environment is, but I'm gonna raise some questions and hopefully contribute to understanding here.

So I'll quickly give some background on the event since 2007, a few key observations on the recent world wide domestic behavior that we've seen. I'll be talking about research that's been done on the short term, two to three months, price transmission from world markets to domestic markets.

Also talking about internal as well as external drivers of volatility in developing country markets 'cause it's not just external. In fact, a lot of it, most of it I'll be saying later on is internal.

Then a major point that I'll be making here is that the issue is not just volatility and it may be less about volatility than it might be about potentially permanently higher price levels and that gets us into very different policy implications as well.

I'll talk about the concept of regime shift where you're moving from one long-term steady state to another long-term steady state to implications about those observations and then for what to do and what not to do.

We've all probably seen graphs like this, the red. It's an index of energy prices and we see the increase there starting earlier than engrained prices. The blue is an index again of grain prices with 2,000 for both of these being 100. So energy got up to almost 5 times its levels of 2,000. The index of grain prices went up about 3 ½ times and then came rapidly down.

The point being here this wasn't just the crude prices. It was a boom in a very wide array of commodities and energy was really at the center of a lot of it.

Very broad phenomenon. Food, energy and minerals. Causes are still very much debated, but most opinion is it's coalescing around as usual a set of explanations all of which contributed at the time.

Increased demand from the rapid economic growth that we know is going on in East Asia. Big increases demand for maize, for livestock feeding, for example, and for all the minerals and the energy that goes into producing these.

Increase in demand because of U.S. food policy. U.S. policy on bio-fuels and what that's doing to demand for maize. Also at that time we had the poor harvests in Australia and in Russia. So together with all of these other factors looks to have had a big impact.

Speculation. There's a lot of hot debate about the role of financialization of food commodities. So I'm not taking a definitive position here, but there is a lot of evidence that especially on a crop like rice that there was a lot of financial speculation going on. So most people would suggest, some will disagree that that's part of the explanation and probably a permanent aspect of the markets now that we have because of the financial instruments that are out there.

So what were some of the responses to this situation? First of all, reflexive closing of borders. Russia closed its borders to exports. A number of African countries closed their borders out of great fear about what was gonna happen to food prices internally and the political problems that this was gonna generate.

More broadly, there was just a broad assertion of the need for a much greater role for government in food markets and to be honest, a lot of return to some of the thinking that we saw back in the 1960s and the 1970s and the 1980s about holding of very large reserves, controls on trade and the need for government to really control the trade. So it was a little bit of déjà vue. If you started in this business back in the 70s and 80s you were starting to hear a lot of the same type of things after this event.

There was a big upsurge in civil unrest in a number of developing countries. Barrett's and Belmari in a paper recently tracked this on news reports on associating food and violence and unrest and riots and so on and so forth. You see a very, very big peak in that around 2008.

The owners responded by indicating that they were going to stop a long-term declining trend in funding to agriculture and put a much greater emphasis on it along that time 'cause the worldwide financial crisis, I think that's been delivered onto some extent, but not nearly to the extent that people were talking about in 2007-2008.

Missions were talking about how do we handle a tripling of our budget. Well not many missions have \_\_\_\_\_ a tripling of their budget unfortunately in agriculture.

So are we in a fundamentally new environment. What does that environment look like. So I'm gonna make four observations here. First observation and this is just based on a number of studies, quantitative econometric base studies that have been done; World Bank, \_\_\_\_\_ industry and others. Very consistent in showing, first of all, that the short term transmission from world prices.

So the world price of rice or the world price of wheat into the domestic price of rice in Bangladesh or the price of wheat in Zambia or Mozambique or wherever

it is, that first of all that transmission is low on average and highly variable across countries.

So it's quite high in a few countries and it's very low in a lot of countries. I'm gonna demonstrate this then just visually with some price graphs from Asia. So this focuses on rice.

This data is all from FAO so this is the Thai export price. So we'll call that the world price. We see just the enormous increase, a trend increase here and then over the course from late 2007 into early 2008, absolute explosion up to over \$1,200.00 per ton. So a tripling from late 2007 to early 2008.

Then a regime shift. This is the thing. The prices for 2 ½ years since they first came down have stayed up quite a lot higher than they were at this time. They're trending down somewhat, but they're still well above what they were certainly back here and practically double, 50 percent, 60 percent higher than what they were prior to the initial run up.

Let's look at some behavior in countries. This is Pakistan right now. So again, we had the world price in blue and then we have Pakistan right here. This is an exporter. They followed world prices obviously very, very closely. Major exporter that kept its borders open. In fact, increased its exports in '07-'08 and increased them again in '08-'09. Kept their borders open. Prices transmitted very clearly into their domestic market.

This is now India. Also a major exporter just like Pakistan. They closed their borders. Exports collapsed in '07-'08 and maybe came back up a bit in '08-'09. So we don't see any kind of price spike here in India. You see a slow upward trend. So an exporter here that closed their borders.

This is the Philippines. A major importer. One of the biggest importers in the world. Clearly they followed a policy. Here they're importing. Their prices are above world levels. They applied some subsidies but didn't fully absorb the cost of that run up. So you've got some pass through in the Philippines.

Then here is Bangladesh. Also an importer although a small amount of its consumption and you see very different behavior.

So we're seeing here different policies in different countries, which predictably then it has the effect of very different kinds of behavior, very different pass through from world market to the domestic market.

One of the things I wanna say here then is that if we just look at this period since and this is 2 ½ years now since the prices initially came down. What we do see is that domestic prices have all remained well above what they were before and it's not entirely clear and I'll come back to this with data from other crops, not necessarily clear that the prices are more volatile than they were prior to that time. Still very much an open question, but I'm putting this on the table.

Second key observation: that the drivers of volatility now domestically and I'm gonna focus especially on Africa, but I think we just saw it in what I showed you in Asia as well on rice, the drivers are much more internal than they are external.

So why? First of all, high cost of storage and trade. High cost of storage and trade. So it just creates a bigger range between export parity and import parity, a bigger range within which prices can fluctuate before trade is gonna take place and stabilize. So that's a basic explanation.

Also the rain fed production. Maize in eastern southern Africa is entirely rain fed. So you have big, inter-annual variations in that that then drive big changes in national production

Something that Tom and all of us have always emphasized is that even in the presence of this, which drives some greater variability than you would have, for example, in a place like South Africa that has much lower cost of storage and trade and has more irrigation.

Even with that you get more price unpredictability, more instability than you should because of unpredictable policy. I'll come to some examples from Southern Africa as I explain that point there.

Then as part of this, poor management of public stock. So record on management of buffer stocks. Certainly it's better in Asia. If Peter \_\_\_\_\_ was here he'd talk about the Indonesia experience. Extremely costly, relatively effective.

What you tend to find in Africa is extremely costly and not just ineffective, but actually exacerbates price instability in many instances. So demonstrating this now with maize in southern Africa.

These are prices now for Zambia. In the red we have import parity from South Africa. That's the red. Blue is the Lusaka price. What do we see? The key thing about all the events that I'm gonna show you here is that in Zambia and then later in Malawi there was a shortfall in that country in production, but the region in both of the instances I'll talk about had surpluses. The region had surpluses.

So there was enough maize in the region with efficient trade to be able to have stayed well within import parity. What happened in 01-02 in Zambia? It's a typical story of you see a poor harvest, you have good advance warning actually of that poor harvest coming, government takes a long time to decide what to do.

Then they say okay, well we're gonna import so much. They're saying this in August or September when they had the information in April or May. They say we're going to import and then the traders know that the tendency in Zambia is for the government to import that grain and then sell it at a subsidized rate to millers.

So this really sidelines the traders. They're not gonna import and pay full price and then have to sell into a market where subsidized grain is going to the millers. So it freezes the private sector and the behavior is that they don't import.

What happens? Government takes a long time to get the imports in. When they finally get the imports in it's December, it's January, it's February literally. I'm not exaggerating here. It's well into the hungry season and they don't even bring in as much as they said they were going to. So what you get is these big price spikes when there was enough maize in the region to have avoided that.

Same thing happened in 05-06. A repeat with a few little details changed, but the same story in 2005-2006.

2008, I didn't take this graph all the way out there, but prices went up about to this level, even though the harvest in South Africa wasn't so bad then.

Similar story in Malawi. Even worse in 01-02. They had a small reserve which they ended up selling prior to the price spike and then Malawi literally closed its borders and didn't even allow any private sector imports, tried to handle the imports itself and see what happened there in 01-02 and again in 05-06.

It's amazing. It's the same story essentially with a few wrinkles in both countries and it's the same story that's repeated year after year.

So internal drivers and policy drivers are really important in volatility. Neither of those 01-02, 05-06 had anything to do with international price instability.

Key observation number three: the issue in developing countries may be more about price levels than it is about the price volatility. This is an index of food prices. The dotted line is world index. So you see the big run up. You see a big reduction and then running up again. You see a lot of volatility in that price series.

Then we have South Asia, East Asia, Latin America, Caribbean, \_\_\_\_\_ Africa and I guess that's Central Europe. You see the run up. You see a little bit of a decline, but you see basically – basically what you see is a run up and then prices staying at a higher level in those countries. You don't see the kind of volatility you did in the world market.

Domestic prices are clearly higher in these cases. Are they actually more volatile?

So I now wanna take a really long view here. This shows index of grain prices from the World Bank from 1960; monthly grain prices from 1960 to I think it goes out to March of 2011. So very updated.

Pretty fascinating graph actually. 1960 to the first energy crisis in the 70s. Absolutely no trend what so ever. Flat, flat, flat prices. Very stable because it was a completely different policy environment in those days the way governments were acting in markets.

We had the energy crisis in the early 1970s. What do we see again? We see a higher level of volatility, yes. We see absolutely completely flat prices with, yes, a higher level of volatility up through then the start of this next period. We see higher prices there.

So we had 110 percent rise. This is what I'm talking about regime shifts. From one level 110 percent rise, very, very stable nominal prices and so far an 80 percent rise compared to the previous period.

What about fertilizer? These are now the fertilizer prices. Obviously very, very high correlation. Fertilizer have correlated with energy of course and then grain prices are highly correlated. You see very similar types of things. Very flat prices moving up to another level, moving up to another level. So bigger increases in the fertilizer prices than the grain prices.

This is interesting. If we compare the grain prices during this long period here to this admittedly shorter period right here and we calculate the coefficient of variation. So just a standard deviation, an absolute measure of variability divided by the means. So it's variability relative to the mean.

The coefficient of variation here so far compared to this long period is 20 percent higher. Not a lot higher despite the big price spike that we saw. The key thing I think is this. It's actually lower, the coefficient of variation here is lower than it was from 1971 to 1978. Why do I take 1971 to 1978? Because that was the first full cycle, the big increase and decrease. This is about what we've seen here, the first cycle.

So in the beginning of that earlier period and the beginning of when the energy crisis first struck you had really huge increase in volatility and then it stabilized a bit. Actually prices in this period were less stable as measured by the coefficient of variation than they have been in this latter period.

Same type of thing in fertilizer. This coefficient of variation right here compared to this long period on fertilizer is quite a bit higher, 50 percent higher, but again it's lower than the coefficient of variation during that period right there.

So I don't pretend to know what prices are gonna do exactly over the next 30 years, but it's not at all clear to me that we're in an era of permanently higher price volatility. It seems very likely with the cost of energy production on the rise and demand in many places that we are in a period of permanently higher nominal prices. So that's just summarizing the points I make.

This issue of nominal versus real now is the next point I wanna focus on 'cause prices continue to fall relative to various measures of purchasing power. So I'm back to the same graph here. That's the nominal grain price index. Let's deflate this by world per capita GDP. Deflate it by world per capita GDP.

This is probably not surprising. Huge decreases in the cost of grains compared to average purchasing power in the world. Maybe not surprising. We've had huge economic growth during that time.

This next one might be a little surprising. That is deflated by Sub-Saharan Africa GDP. The red now. The red. So you can see that a little bit clearly. I'm just gonna now show that one.

So this is now the cost of grain deflated by Sub-Saharan Africa GDP. Very steady downward trend. The peak in 07-08 is well below the peak in 1996. This is not to say that there aren't poor people out there that are being hurt by these price increases.

As we know the averages hide tremendous amount of variation around those averages. So not everybody has participated in this growth. A lot of the poor have not participated in the growth. So it's an issue of income distribution and also rising expectations.

Poor people have cell phones. Poor people can get on the web. They can see what's going on around the world. Their expectations are rising. So this creates real problems despite the fact that what I just showed you. So it's a problem, but it's a different problem perhaps than we've been thinking about.

This is an obvious statement. Food policy is political, but it has big implications about what you can do and what you have to do. Peter Timmer says, "Citizens willingly go to the market to buy food price stability, but such a market does not exist. Food price stability is a public good; not a market good. Understandably then citizens turn to the political market instead."

We as policy analysts may not like the way policy gets made and so forth, but in the end all these decisions are political and we've gotta act in the political environment and try to get our views and our information expressed in that political environment without demoaning it 'cause it's just simply the way it's gonna be.

So, summarizing my key observations so far: short term price transmission from world developing markets has been low on average and highly variables across the countries, heavily driven by policy.

So that's the second point that the drivers of volatility have been very much more internal than external.

Third, price levels and the distribution of gains from growth may be a bigger issue than volatility per se.

Then the political nature inevitably and permanently political nature of food policy.

So who was hurt by volatility and who's hurt by high prices? They're different. Volatility per se primarily hurts the 5 – Tom talked about the 1.6 percent that accounts for 50 percent of the sales. If you wanna get 80 percent of the sales you might be talking about 5 or 10 percent of the population.

Volatility per se primarily in a direct and immediate way hurts those people. It hurts the better off small holder farmer. It doesn't immediately hurt the forest farmers 'cause they're not in the market.

Now there is a longer term issue that those farmers that are on the cusp of becoming commercialized, wanting to become commercialized, facing greater volatility, it's more difficult for them to become commercialized.

So there is a longer term issue here, but immediately and directly it's a better off small holders and a very small number of them that are hurt by volatility.

High price levels help these same commercially oriented farmers. Maize prices in 2008 in Monica Province, Central Mozambique were 2 to 3 times at the farm level what they had been in previous years. Farmers were overjoyed and believe me, a lot of them were wanting to commercialize, even if it was maybe more volatile 'cause they loved the prices that they were getting.

But it hurts consumers. Obviously urban consumers. I don't even have to explain that. There are lots of poor urban consumers that are heavily hurt by this at the source of the riots and also we're all net buyers.

We know that in numerically there are more net buyers of a crop like maize in Africa than there are net sellers actually among farming populations. So that's an important issue, but I will say that when we look at the values, the amounts purchased by these net buyers, they tend to be very, very small.

So, in a quantitative sense, yes, the net buyers are hurt in rural areas, but it's not a huge impact on their income. This is mostly a negative for urban consumers. I think it's mostly a positive for rural areas because of the higher price levels.

So distribution of gains from growth is a major issue. Summarizing what I said I guess about Africa and per capita GDP growth in Africa has exceeded worldwide average since 2000. I think that's likely to continue. Africa really is changing very rapidly now. Many of the poor are left behind and then rising –

So the fundamental problem is needing to reconcile. What do we do here? Needing to reconcile short term imperative with long-term imperative. Needing to reconcile the politics of all of this with the economics of all of this. Can't ignore the politics.

How we deal with the politics and how we let it in, lots of people are gonna disagree about that, but we can't ignore them.

So the first thing I wanna focus on maybe strange in a talk about price volatility and so forth, I wanna focus on the long run. Economic growth in the long run does what you saw in those previous graphs. It means that compared to worldwide purchasing power prices in 2008 were extremely low compared to what they were 10, 20, 30, 40 years ago.

It means that prices in Africa relative to average purchasing power were a lot lower than they were 10 and 20 and 30 years ago. So economic growth first of all. We've gotta focus on the types of things that Tom was talking about and get that right first.

So big increase in price means the marginal value product of all inputs has risen dramatically. There's more incentive to use better seed. There's more incentive to use some insecticides and perhaps herbicides and to put more labor into these crops. Certainly the farmers that I talked to in Mozambique want to do that.

We need to learn the lessons and MSU's done a lot of research on this and about how to sustainability increase access to markets while building private input markets.

If you wanna subsidize, if you wanna deal with the vouchers, okay. You've gotta do it in a smart way that helps the private sector distribution system improve rather than substituting for it.

Varietal research, water control. I'm not gonna go through the long list here. There's all kinds of things that need to be done to exploit what I really think is an opportunity. The broad based economic growth that Tom talked about.

I'll go back. It has to do with everything that I talk about here although that's important. It also has to do with \_\_\_\_\_ ag. It has to do with education and health care and water and sanitation. So all of this stuff is key.

Closer to home in terms of the types of things that MSU tends to deal with: driving down the costs in the marketing system. We need to talk about productivity in the entire chain; not just farm level productivity. Productivity in the entire chain; not just at the farm level.

Reducing uncertainty with more rules based government policies. Tom talked about this. The research shows the economist anyway came down saying that policy reform had the number one payoff I think is what you were saying in a cost benefit framework. 'Cause the cost of policy change, monetary cost is very low. The gains can be absolutely enormous, especially when compounded over time.

Promoting regional trade. That's part of a different policy environment. Improving market information. There's increasing evidence, quantitative information about the positive impact of access to market information. We need to continue investing in that and it can't just be private systems. Private systems are not gonna provide all the marketing information that's needed. We do have to invest in the public side of this.

Promoting competitive trading systems, the financial systems and again, clear rules of the game.

Regional dialogue to keep borders open. This is a very tough thing, the first thing that everybody wanted to do and a lot of them did is close borders with major impacts.

India closed its borders. It helped India, at least in the short run. You saw that their prices didn't spike up for consumers like Pakistani prices spiked up, but it had a big impact on world rice markets. It was one of the contributors to the spikes in the world of rice markets.

We have to engage civil society. Policy analysts will cringe at some of the policy proposals that get put on the table when you've got civil society and farmers and so on and so forth in these forums, but there's gotta be this educational and

a commitment to this educational process so that slightly incrementally smarter policy can get made over time. We have no shortage of bad policy ideas in the U.S. either as we all know. So it's not just in the U.S.

Again, and I promise you, Tom and I didn't coordinate on this presentation, but I'm saying a lot of the same things. Build capacity to generate solid empirical information and inject that into the broader societal \_\_\_\_\_. The fact that this is a political process doesn't mean that information doesn't matter. It matters hugely, but it has its payoff over time and you've gotta be committed to generating local capacity to inject that into the policy, the messy policy political debate.

Okay. Short term. Finally we're getting to the short term. What do we do right now? Again, I'm borrowing a little bit from Timmer here. Safety nets. It may be that finding a way to deliver effective and efficient safety nets will be the key to allowing markets to deliver their long-term process.

I hope I don't have to convince anybody here that efficient markets in the long run are huge drivers of growth, but we've gotta do some things to allow them because this is a political situation, to allow them to deliver that long run promise as you called it.

So if so, designing and implementing them, safety nets becomes the essence of effective policy making.

Price stability. We really need to be aware of the very robust literature out there on the management and effect of buffered stocks; certainly in Africa. I'd like to distinguish between buffer stocks, which are explicitly to stabilize prices and therefore have to be large relative to consumption and emergency reserves, which are meant basically to buy you a bit of time and therefore can be a bit smaller.

Buffer stocks have an extremely poor record in Africa. They've been extremely expensive, used up lots of resources that could have gone into other things. In

most cases they have not stabilized prices. In some cases they've destabilized prices and negative payoff to them.

There's a lot of talk about regional buffer stocks. I think you should continue to talk about that. I think you should continue to push for regional collaboration. First of all, open regional trade. That's the first step. You can talk about regional buffer stocks. I think it's gonna be a long time before you have a functional governance structure to facilitate the kind of collaboration you need across these countries to effectively – if you can't manage it at the country level, are you gonna be able to manage it regionally?

Don't take it off the table. Talk about it. Don't think you're gonna get it tomorrow. Being prescriptive here. I suggest combining relatively small emergency reserves with robust safety net. A smaller emergency reserve that lets you buy time until you import. Okay, that wouldn't have helped necessarily that much in 07-08 because the price of maize went up, the price of wheat went up, the price of rice went up. Everything went up, but that was a perfect storm.

This time the price of rice didn't go up. It went up a little bit, but it didn't spike like the others. Number one. Number two: consumers have access to casaba, they have access to sweet potato, they have access to millet and sour gum. They can substitute in consumption and there's a lot more substitution in consumption that goes on than is widely appreciated.

You've gotta have safety nets. They need to be layered safety nets. Countries all over the world including in Africa are committed to developing national school feeding programs. That can be part of this. The ongoing kind of safety net. You target it properly. It can have a really important affect, as well as contributing to local demand if it's done in a homegrown school feeding type of approach.

Conditional cash transfers. Those are becoming much more common. There's a lot of study out there. When you start these types of programs they tend to be high cost, but as you work out the administrative aspects and so forth, the costs go down and they can be very effective. Conditional cash transfers.

Temporary food aid. That's not an exhaustive list. The point is we need a layered set of safety nets and we really have to pay attention to cost. I think Tom rightly would argue what's the opportunity cost of these things.

They will have an opportunity cost. If you can manage them efficiently, they're almost certainly given the political nature of the issues we're dealing with and the real human nature of the problems we're dealing with. There are almost \_\_\_\_\_ investment if they can be done properly and they're being done better and better over time.

Consumers can substitute in consumption. So there's a recent study that came out, very, very recent that took a new look at the poverty impacts of the big increase in world prices. The numbers that we're being given were 160 million people and more pushed into poverty.

The numbers coming out now based on things like substitution in consumption based on growing economies and so forth are that the numbers pushed into poverty were actually much lower. More were pushed into poverty, but many fewer than what was thought originally.

Again, I don't wanna say it's not a problem. It is, but it's important that we be clear about the dimensions of the problem.

What not to do and this is so much easier said than done. This is the political problem, but trade bans, heavily negative effect. India did it in a way that helped itself. Sub-Saharan African countries tend to do it in ways that hurt themselves. They tend to do it in ways that hurt themselves.

Large scale government procurement. Zambia this past season between buying high and selling low and then losing thousands of metric tons that were piled in bags under big tarpaulins during the rainy season lost \$300 million in a country of 10 million, 11 million people. \$150.00, \$160.00 per family in the country.

Huge, huge, huge cost that could have been put into, we think, a lot better investment.

Generalized input subsidies. I'm not gonna argue against input subsidies, especially if they can be done in ways that work through the private sector and can be targeted effectively. We just simply have to learn to do it better, but we need to avoid some of the broad based approaches that have been taken again because of the issue of opportunity costs.

I think that's all I have. Thank you. *[Applause]*

*Male:* Again, we're gonna have a question and answer. We'll take one question from in-person and then go to online and just one question, one answer. So first question.

*Male:* Hi. I'm Jack Breslow from the WAN Campaign. Going back to your graph on how different countries responded to the 2008 crisis, you were talking about India. How do you say to the people who are creating the policies in India that they shouldn't be closing their borders and closing their exports when it's pretty clear that they did manage to isolate their population from those price spikes. From their perspective that's successful policy, even from a global perspective. It's harming everyone else.

*Male:* That's an excellent question. I wish I had a good answer to it. One answer is that okay, and this would be particular to India because it's big enough to have affected the world market. By its action it affected world prices and increased and drove its cost of insulating itself from the market very high. So it had very high costs to be able to do that.

Again, it may be that in the short run that was the rational thing for the Indian government to do, but I think we first of all need to put cost numbers on this. What did it cost them to make up that difference and what could that money have been put into.

They might still decide that it was a good investment, but we need to put cost numbers on it and we need to talk about opportunity costs. Then they'll make the decisions they make.

*Male:*

Thank you. Could I just add to that response? If every country tried to do that the world rice market would be nowhere, especially if every country, especially China. China is now becoming a huge player in world markets and its behavior with regard to trying to export its own internal instability onto the world market could have just disastrous consequences for poor consumers all over the world.

So it's a kind of a bugger thy neighbor approach that I don't think that one would want to take that argument too far.

*Male:*

I think it's a social trap. What I do helps me, but it hurts everybody else. So you're absolutely right. It could have, will, especially in the larger countries, a big, negative impact. So we just have to keep trying to get the focus on more fundamental, longer term issues. How to deal with this stuff in the long run.

*Male:*

Hi. John Layer from \_\_\_\_\_ Associates. I noticed the speaker, obviously in your presentation was there any mention of post-harvest loss reduction on the \_\_\_\_\_? When I was at the bank we did a study of post-harvest loss reduction in cereals in Africa. We tried to draw attention to it. Didn't get much traction.

The best we got was some funding for FAOs post-harvest loss activities and to put in the next version of the comprehensive framework for action post-harvest loss reduction.

This past weekend the APEC meetings of food security that are occurring in Big Sky, there was a focus again on post-harvest loss reduction. So what role could it really play in solving the problems of volatility in food security and how could you really act on it? The lawyers would just say cancer that's so broad based across so many different value chains that it's \_\_\_\_\_.

*Male:*

Yeah. That's a very good point. Post-harvest losses can be very, very large in a lot of countries. There's a tendency to grab the high numbers and talk about post-harvest losses of 40, 50, 60 percent and I don't think they're that high. That doesn't mean that 20 percent or 30 percent if that's what it is is acceptable. So that is an important issue.

I think in Africa and that's where I know in the field much better than anywhere else, so much of the storage takes place at the farm level. So it's about getting better technologies that are cost effective, adopted by small holder farmers.

I haven't studied this systematically. So I don't wanna claim to know more than I do. We did a whole series, however, of focus group interviews in Mozambique in 2009 about the evolving maize market. One of the things we talked about was a new storage technology which a lot of people were excited about.

Apparently said to be low cost, very effective and so forth. Farmers didn't in that instance didn't rank post-harvest losses for themselves as their key problem. It was market access and other issues. They knew about this technology. They didn't seem to be rushing to adopt it.

So I don't wanna go beyond that because it's complicated, but it's very difficult to get the kind of broad based adoption of a technology like that that you would need to really drive down the post-harvest losses because they happen among millions of dispersed households.

*Female:*

Hi. Daria Gates from FINTRAC . Following up on the same questions that you guys were talking about earlier about this is what you should do, but how to convince. I don't know exactly how to address the India question in that particular example, but with Zambia and with that ticket number that you have, the \$300 million loss, that's quite a flashy number.

The only convincing that's ever going to happen in Zambia is coming from those rural voters. So how do you get that big ticket number and communicate it via radio programs, translate it into how many kilometers of road, translate it into that \$160.00 per household and really make it a political issue and who can play that role? Is it US AID or is it civil society within the country?

*Male:*

That's also a really good question. I would say that it's not \_\_\_\_\_, White guys, like Tom, Jayne and Dave Schirley who could be doing road campaigns in that way. It's gotta be the local analysts again. You've gotta have in this case Zambians, Zambian analysts understanding the issue and being outraged at how the money was spent and how it could be better used and it was spent for votes. It was fundamentally a political policy.

So yeah, you've gotta have Zambians understanding it and being outraged by it and having the resources to be able to go out and deliver that kind of message. I don't know if that's a complete answer.

*Male:*

My name's Bill Thiebig. I'm an independent consultant, Farming Systems Agronomist. I wanna make a comment more than a question. I'm not sure why this is called a special seminar.

Previous Feed the Future has been on innovations. The last one was we want innovation. We want these solutions, all this kind of stuff, like limited resource communities, households are not risk averse to something new.

What I like about this discussion is Tom talked about roads, you're talking about markets. It's the social economic cultural constraints to improving life that I think really needs to be the broad based discussions of how Feed the Future moves forward.

That's my comment. I just really appreciate that we're looking beyond just what is production and productivity in improving livelihoods and what not in the discussion. This whole way forward has to be much more broad and much more holistic in our discussions. Thank you.

*Male:* Thank you.

*Male:* David Yagin from the Bureau of Food Security. I think both you and Tom Jayne focused on the ability of small holder power farmers to have improved access to capital assets, capital inputs, but could you perhaps particularly in the context of a rising global price for basic grains and other food stuffs, but in order to actually benefit from the prices and have a supply response, there's a need to get those capital assets to the farmers, but could you perhaps, both you and Tom if he wants, address a little more explicitly how to get the policies to improve access to capital assets and inputs?

*Male:* Thank you very much for that question. Tough question. Difficult to get these things done on the ground.

If we look back, however, at say the history of cotton in West Africa. This was a situation where you have a functioning supply chain with because of the nature of the market and how it was structured, farmers had a guaranteed market outlet.

So they were willing to take on some risks in the production of cotton and both the income that they earned from that and then the associated programs that government built in the cotton sector promoting access to especially animal traction and animal traction commitment equipment had a huge effect on animal traction ownership.

So you have very high rates of animal traction ownership, which doesn't just allow you to increase the area you plant, but because you can prepare your fields and do your weeding more quickly, you can do them in a more timely way as well and you can do other things on your farm in a much more timely way. So that had really huge impact. So that was piggybacking on one supply chain that had the right characteristics that farmers were willing to take on some risk and then you use that to drive growth.

Similar way, much less ambitious way. That's happening in Zambia right now where you have private ginning companies promoting cotton. Again it is a guaranteed market. They're providing some inputs and they're working with NGOs and various stoners to promote access to animal connection, number one. Number two, to setup some farmers with small factors selling factorization services.

So again, piggybacking and I talk about cotton 'cause I've studied cotton a lot and so I know that one, but piggybacking on a functioning supply chain that reduces risks for farmers and allows them to take on risk elsewhere in their portfolio.

I'm sure Tom wants to reply here. I was gonna talk about the access to inputs, but no. Let me let Tom talk about that 'cause he's more the expert on that issue than I am.

*Male:* Is this coming? Okay. David, I think that the question that you asked is basically synonymous with how to get broad based productivity growth because the asset base of farmers in rural households, in the millions of rural households, there's no other way for them to increase their asset holdings, except through agricultural productivity growth.

So I think that the question you're asking is synonymous with what should CATP and FTF do to promote broad based agriculture productivity growth. So there's no shortcut except for those same things that I think both of these presentations have tried to highlight.

*Male:* We have time for one last question from online

*Female:* We have a guy from Ethiopia who's coming on and off line. So I was gonna wait and see if there's one more question in the room or I could just go ahead and ask.

*Male:* Let's do one more question in the room and then the online question.

*Male:* Hi. This is Ian McNarren. I'm on the Belmont Project at Vintrack. David, you mentioned speculation earlier. I was at a forum a couple months ago where I think it was a treasury official that played down that in the price spikes of 2008 and 2010. Maybe you wanna address that a little bit more or Tom, the \_\_\_\_\_ speculation

*Male:* So again I'm not gonna call myself an expert on this. Probably the highest profile debunker of speculation as an explanation is Paul Krugman. He says, "Okay, these are physical commodities. If you're gonna speculate you have to have a physical position. So stocks need to have increased."

What he says is "Where is the evidence that stockholding went way up?" Well the fact is there's very little evidence on that because of the nature of how storage takes place and the nature of the data systems. You can't get good data on stockholding.

You look at the structure of the rice market. Timmer talked about this. There could have been small changes in behavior at the farm level, could have led to hundreds of thousands of tons of additional stockholding, if you wanna call it speculation at the farm level, whatever, but increased stockholding that contributed to this and lots of larger scale private stockholding could take place.

The data systems just don't exist actually to capture all of that. We talk about world stock to use ratios and so forth, but there's a big standard error on those numbers. So I think it's very difficult to get the data and a lot of very knowledgeable people who have context specific knowledge about these markets argue that there was big increases in speculative types of positions. That's all I can say –

*[End of Audio]*