

**CENTER FOR
STRATEGIC AND INTERNATIONAL STUDIES (CSIS)
KNIGHT CENTER FOR INTERNATIONAL MEDIA,
UNIVERSITY OF MIAMI SCHOOL OF COMMUNICATIONS**

**“OUR GLOBAL CHALLENGES SERIES” DIALOGUE:
GOAL 1: ENDING POVERTY AND HUNGER**

WELCOME:

**H. ANDREW SCHWARTZ,
VICE PRESIDENT FOR EXTERNAL RELATIONS,
CSIS**

MODERATOR:

**MARIAM ATTASH NAWABI,
HOST, “PUL”,
AMERICA ABROAD MEDIA**

SPEAKERS:

**AMBASSADOR JOSETTE SHEERAN,
EXECUTIVE DIRECTOR,
UNITED NATIONS WORLD FOOD PROGRAMME**

**DANIEL BENETTI,
PROFESSOR AND DIRECTOR OF AQUACULTURE,
UNIVERSITY OF MIAMI**

**JOHANNA NESSETH TUTTLE,
VICE PRESIDENT FOR STRATEGIC PLANNING,
CO-DIRECTOR, TASKFORCE ON FOOD SECURITY,
CSIS**

**TUESDAY, NOVEMBER 24, 2009
10:00 A.M.
WASHINGTON, D.C.**

*Transcript by
Federal News Service
Washington, D.C.*

H. ANDREW SCHWARTZ: Good morning and welcome to the Center for Strategic and International Studies. My name is Andrew Schwartz and I'm vice president for external relations here at CSIS, and I welcome you all here this morning, and I wish you all a happy Thanksgiving coming up.

This is a terrific partnership that we have with the University of Miami Knight Center for International Media, which is in the school of communications at the University of Miami. We were able to, with Miami's support and partnership – and it's an intellectual partnership – start this wonderful series that's focused on the millennium development goals.

Of course, we're going to be talking about food security here today, and I'll turn it over to our moderator, Mariam Nawabi, in just a second, but I wanted to let you know that the podcast of this will be on iTunes – on iTunes University. It will also be on the CSIS Web site. And for the many of you who are watching this live in a virtual world, we welcome you, as well. With that, I'd like to turn it over to Mariam Nawabi, who's a moderator of the series. Thank you.

MARIAM ATASH NAWABI: Thank you, Andrew. I want to welcome everyone to CSIS and University of Miami's second series in The Global Challenges Series. This forum is focused on food security and I think this week, with Thanksgiving coming up, I think a lot of us are thinking about food and, you know, giving food to others. So I think this is a really timely discussion.

I'd like to briefly introduce each of the panelists, and then Ambassador Sheeran will provide some remarks. Then we'll go into a question – kind of discussion here with the panel and then there'll be a lot of time for question-and-answer with all of you. So as we are discussing anything, if you want to note any questions, please feel free to do so.

Ambassador Josette Sheeran is the 11th executive director of the World Food Programme. She was appointed in April of 2007. And I found it amazing that I think this year, the World Food Programme will be feeding about 90 million people in 80 countries. It's the world's largest humanitarian agency and it's really doing remarkable work around the world that relates directly to the U.N. Millennium Development goal number one, which is to eradicate poverty and hunger.

Before this, she was actually the undersecretary for economic, energy and agricultural affairs at the Department of State. I actually had the chance to work with her when I was at the Embassy of Afghanistan on how to better assist Afghanistan's economy at the time. And she was a big proponent of trying to find U.S. assistance programs for Afghanistan and Iraq.

She also worked on programs that helped Pakistan after the earthquake, Lebanon after the war of 2006, and, prior to that, she was the deputy U.S. trade representative. And she was really instrumental in promoting the African Growth and Opportunity Act – AGOA – which helps

African countries better absorb trade capacity building programs so they can compete in international markets. And she helped establish the first trade capacity building office in that agency.

She has 20 years of management experience. She was the managing director of Starpoint, a Wall Street technology firm. Prior to that, she was CEO of Empower America, a Washington, D.C., think tank. She's also been the editor of a major newspaper, has done news commentaries. So she has a diverse background and I think the World Food Programme is lucky to have her.

Johanna Nesseth Tuttle, sitting on my right, is the vice president for strategic planning here at CSIS. She really focuses on corporate and foundation relationships for the organization. She has over 10 years of experience working with nonprofits, voter education and other programs.

And she's also the taskforce director for the CSIS Food Security Taskforce, which just in 2008 released a report called, "A Call for U.S. Strategic Approach to a Global Food Crisis." And so that has been a major effort for CSIS in this area. So we're lucky to have her to share feedback on that report.

And sitting on our left is Dr. Daniel Benetti. He's a professor of aquaculture and marine sciences at the University of Miami. He's also a leading scientist for the Department of Commerce's program through the National Oceanic and Atmospheric Administration.

He's the director of the Aquaculture Center in the Florida Keys, and he also provides a lot of advice to governments around the world on how they can better incorporate aquaculture to improve food security. So we're lucky to have him here all the way from sunny Miami. (Chuckles.) Thank you for joining us. So with that, we'd like to turn to Ambassador Sheeran to share her remarks.

AMBASSADOR JOSETTE SHEERAN: Well, thank you so much, Mariam and Johanna and CSIS for hosting us, and it's a pleasure to be here today. We're discussing the first millennium development goal, which is about ending extreme hunger and poverty, and the target – specifically by 2015 – of cutting the proportion of hungry and those living in extreme poverty in half by the year 2015. It's a very important time to do this series because next year, the world will take stock of where we are on those millennium development goals.

Today, I'm just going to focus on the hunger portion of that MDG. Hunger is the most desperate and extreme face of poverty. And I'm going to start just by remarks – by focusing on this red cup.

This is the cup the World Food Programme uses to reach over 20 million schoolchildren that maybe this is the only cup of food they'll get every day. It certainly is the only guaranteed access to food they'll have every day.

Today, a quarter of a billion children in the world – about a quarter of a billion – will not know whether or not they'll have even a cup of food. And in fact, today, one out of every six people on Earth will wake up and not be sure how to fill this cup – even one humble cup – with food. If you can imagine, it's about 250 million children. We could almost fill the entire United States with the number of children who aren't sure where to find even a humble cup of food.

One out of every six: I think this moves food security from being just a humanitarian concern from the realm of do-gooders to one that affects, really, the peace and stability of the planet. We know that if people do not have food, only one of three things happens: they migrate, they revolt or they die. I think we need a broader range of options to deal with this growing problem.

This is the most threatened MDG today and, in fact, the numbers have gone in reverse since the food crisis. Think about it: If you couldn't fill that cup for yourself each day, or your children, what would you do? And when you start thinking about the type – if we start here at the kind of basic core of food insecurity, we can see that it would drive the kinds of options and challenges that would be ones that should be considered at the highest levels of governance.

In fact, I often ask people to think back in their own life – either in their life or one or two generations back – and if there's anyone in the room that does not have a story of hunger in their own family or their own life; for me, my ancestors who fled Ireland during the famine just a couple generations ago; or in France after World War II, where my father collected food aid to send back to the village where his mother was from.

So hunger and this pursuit of food security is something that really binds humanity. So I think – I just want to present you a couple questions as the world challenges itself to reach this MDG – why should you care? All of us here have enough to eat. And even if we care, isn't this unfixable? Aren't we doomed to live with high levels of hunger in the world?

And just before I give you the good news – very quickly, I just want to start with a few thoughts. We were making good progress; since 1969, we've cut the proportion of hungry in half to 2004 – from '69 to 2004. The absolute numbers grew but the proportion was cut in half. The world was producing more food than ever before, at a lower price, until the food crisis started to hit. And then these three F's – the food, fuel and financial crisis hit – where we saw virtually a doubling of food prices overnight and breaks in supply around the world.

I am here to tell you that it is our conclusion that that was not a one-off deal, the food crisis, but a wakeup call because we saw fault lines revealed in access to food from the village level up to the national, regional and global levels, and that the long-term drivers of volatility and supply and price remain in place.

And I would list among those climactic changes we're seeing, for example, in the Horn of Africa what used to be the 7-year drought – the drought every 7 years – now may turn into the drought that lasted 7 years. And these types of more extreme weather – I just got back from the Philippines – typhoons at epic proportions never seen before in peoples' lifetimes – displacing 7 million people from access to food and clean water.

Energy prices connect very directly to the cost of food and access to food; water and land scarcity – I think we'll talk about that; policies and governance issues; and, of course, conflict and extreme poverty. So risk is the new normal when it comes to food, and so, now, let's get into the optimism.

Is this problem insoluble? Absolutely not. And imagine this – that the 1 billion people on Earth who have enough food click on the Internet and contribute 25 cents a day to reach the 1 billion people that don't. This is actually doable.

And in fact, during the World Food Summit, we called on citizens around the world to join us – for the billion people who have more than enough to eat to click on there and help the billion that don't have enough to eat. And we received enough money during the World Food Summit from citizens around the world to reach over 300,000 children with a cup of food.

So we're going to keep that campaign going, and we know how to reach them. We use boats and barges and elephants and donkeys and camels, but they can be reached for 25 cents a day. So imagine that – at wfp.org, you can click on the Billion for a Billion Campaign.

So citizens can do it, but don't we need our leaders? Well, I think we have them. This is the story of this year. President Obama has stepped up to the plate and made this his big issue at L'Aquila; Secretary of State Hillary Clinton – it is the business of foreign ministers now.

Why? Because these levels of hungry really are unacceptable for the types of stability and peace issues. So this is fabulous. The European Commission President Barroso last year put \$1 billion on the table to help small farmers and the hungry. Spain's prime minister, Zapatero, gathered world leaders together in Spain to discuss hunger last year; gave two times the amount they ever have to the World Food Programme.

Australia's Kevin Rudd is problem-solving, doing very innovative things; Canada's prime minister, Harper; the king of Saudi Arabia became the number-two donor to the World Food Programme last year.

I was just in Dubai; Sheikh Mohammed has created a humanitarian city. I just want to point out that there is leadership, including the secretary-general of the U.N., the head of the World Bank, Bill Gates.

But let's not forget the developing world. We are seeing leaders such as President Lula getting the hunger numbers down faster than any other nation on Earth right now with the zero-hunger initiative. We're seeing China's president, Hu Jintao – Helping Us Feed the Hungry was WFP's biggest program 20 years ago. In Africa, the leaders of Malawi, Tanzania, Uganda, Rwanda, Ghana, Zambia, Ethiopia determined to be the next generation of countries that defeat hunger.

In fact, at L'Aquila, \$20 billion was put on the table. So I would say the leadership is in place and we have to act to grab on that, and I appeal to the citizens of the world, university

students, write those leaders and encourage them. They need to hear from you; the parliaments, our Congress, our leaders, they need to hear how important this is – to say goodbye to hunger in our lifetime.

Now, you say, there's no real solutions, and I just want to give a couple just very quick ideas of the revolution taking place. Today, the World Food Programme, we used to reach children with a ration – that's great, it would save their lives. Today, we are doing things such as buying the salt for our rations in Senegal from 7,000 – mostly women – village producers. These women – now, let's talk about the win-win-win aspects of this.

These women no longer need food aid; they have a guaranteed income for the first time in their lives. Because they have to iodize the salt for us, they've got the equipment and they're iodizing it now for all the children that they sell salt to in the village, all the families, so the iodine deficiency epidemic is being addressed. They're helping contribute to solving the problem, and they're helping feed the hungry in their own country. This type of innovation is very awesome and we're doing that with the Bill Gates Foundation – Bill and Melinda Gates Foundation – Howard Buffett Foundation, and others.

Last year, World Food Programme bought \$1 billion worth of food in Africa alone from developing-world farmers; safety nets, the type of school lunch programs that America has always supported all over the world being replicated in best practices all over the world by the countries, themselves. So last year, Morocco and Jordan took over 100 percent of our school feeding program; Senegal; took over the program themselves.

I just want to mention this – innovations in nutrition: This has been called the world's first climate-change food – the World Food Programme invented this in Pakistan and in India. It's a chickpea mush, like sweet hummus, power-packed with nutrition.

And if children are caught in a drought or a flood and have no access to water, you can rip this package open – it doesn't need refrigeration – and squeeze that in a child's mouth, protect their brains and their bodies from the damage that even short-term malnutrition can do for young children. So this innovation is here and we're working with companies like Unilever, Heinz and Kraft and DSM in new partnerships.

In transportation, I just want to mention TNT's been a great leader; Selena Jackson (ph) is here from UPS. Companies are getting with us to help us get better at efficient delivery and establishing the pipeline. A huge proportion of global hunger is a transportation problem.

So to sum up, this is doable, we know how to defeat hunger and when it's done right sustainably, you start getting a win-win-win-win situation, as I pointed out. Leadership is in place; the innovations are unleashed; and I would just point out, Rajiv Shah, nominated to be the next AID director, one of the most innovative thinkers on food security and hunger; and innovative partnerships are in place.

So I want to thank all of you coming. It is a few days before Thanksgiving, as mentioned; a time when we remember those, when we thank for our own plenty and blessings,

and, just, it reminds me that hunger does bind us all. Ramadan also is to remember those who are most hungry in the world. So I think we're at a tipping point, I think it can be done and I think it's the right issue to be front-and-center for the world leaders. Thank you.

MS. NAWABI: Thank you, Ambassador. (Applause.)

MS. NAWABI: Ambassador, you recently stated that food security is not just a matter of humanitarian assistance but it's a matter of national security, peace and stability. In recent times, Oxfam and some other organizations came out with a report focused on Afghanistan saying that the people's concern there was not really the Taliban but it was food security issues and that's why some of them were, maybe, supporting the Taliban – in order to survive. Do you see food security as fueling conflict?

AMB. SHEERAN: Oh, absolutely. There's nothing more basic. If you read human history, it's the pursuit of food security. This has driven nations, it's driven people, it's driven your ancestors – guaranteed; just reach back a little bit.

In Afghanistan, I will tell you, our school meals program in Kandahar is having a remarkable effect of stabilizing the population. For the first time, if people are sure their children can get enough to eat, they can begin to think a little bit beyond crisis to the future.

And what we're asking in Afghanistan is, today, can we buy that wheat internally? Can we make those biscuits in small factories with women there? Can we look toward the day when we start transitioning this food to help power that local economy and rebuild that food economy?

So I think, very much so. We see if people cannot eat enough, they will move – and we saw the riots in 40 countries during the food crisis. It's quite a serious business.

MS. NAWABI: I want to touch on something that you mentioned – was the role of the private sector. I think, at times, people kind of think the solutions for these problems are for government to worry about, but, increasingly, we're seeing more public-private partnerships, and then, with the Billion for a Billion Campaign, individuals being part of the solution.

Do you see large international organizations like WFP increasingly working with the private sector to help solve these problems?

AMB. SHEERAN: Well, the World Food Programme works with over 1,000 NGOs. And, in fact, Friends of the World Food Programme, under Rick Leach and other leadership – Allan Jury here – put together a roadmap, which is a consortium of civil society actors and large, multilateral institutions like ours to say, how do we end hunger in partnership with the private sector?

I will just say hunger cannot be ended by governments alone, by the private sector alone or by civil society alone. You have to have all three at the table, and this is part of the revolution that's happening today – is linking up those in a more meaningful way.

MS. NAWABI: Johanna, I want to bring you into the conversation. This report that you helped lead for CSIS – you have Ambassador Sheeran sitting here – what were the major recommendations for the report, and which ones would you want her to particularly focus on?

JOHANNA NESSETH TUTTLE: Well, we've always appreciated the help that the World Food Programme has given us in thinking through our recommendations. And we had a great consortium of people who thought through, during the height of the food crisis last year, what the types of policy actions could be that we could recommend.

We looked at sort of a broad list of things. We looked at the need to increase emergency assistance and to provide increased financial support for emergency assistance; we looked at the need to focus on trade issues, especially at that point, moving forward of the Doha Round of trade talks; we looked at and recommended a food security coordinator for the U.S. government.

And as time has gone by – this report was out about a year ago – we've seen significant movement in a number of these areas. We've seen significant resources put forward. The administration has on the table a \$3.5 billion food security effort; there's legislation – the Lugar-Casey legislation and Congresswoman McCollum in the House has legislation on the table – that looks at billions and billions of dollars in commitments to food security, which is fantastic and it's something that we haven't seen for 30 years.

U.S. agricultural development assistance really dropped significantly over the past 30 years and it's great to see a commitment to rebuild that effort because agricultural development is at the very basic level of economic development.

I think it's going to take a serious commitment to move resources forward, especially during times of an economic crisis and domestic pressures, and even domestic hunger. And we also have to realize that resources won't do everything.

Without significant policy movement, you can't make the type of change that's really necessary, especially on the trade front and other structural issues where U.S. policies can really make a significant impact both sort of the intellectual and emotional impact of understanding that the U.S. policy is changing, and then, also, the types of education and training and opening of markets that can come with those policies.

MS. NAWABI: I want to touch on that issue of U.S. policy. I mean, the United States is a pretty giving country – you know, gives large amounts of assistance. But some individuals say that, well, in terms of trade policy, we're still protecting a lot of our own markets.

And in a lot of these countries, the actual products that they can cultivate or make, then, we're kind of excepting that out and saying, well, we're not going to provide assistance. For example, if you grow cotton, even though that may be the most efficient thing to do. Do you see any shifts because of this report, perhaps, or because we realize that our policies sometimes are not as effective as they could be?

MS. TUTTLE: That's one of the toughest questions that, I think, that everyone is grappling with in terms of food security because it's a very tough domestic question in the U.S. So we're trying to put forward ideas that will provide space to move forward on trade policy in a way that's comfortable, that's positive and that really is focused on the developing world.

Josette, we were talking about this right before we came in, and I know you have a few thoughts about that, too. Maybe it would be helpful to hear some of your points on trade, aid for trade and, yeah.

MS. NAWABI: Well, the former – the deputy USTR?

AMB. SHEERAN: Well, I was just mentioning that one area that there's tremendous space to move forward on is on trade capacity building. And this is the capacity of nations to participate in food markets.

When I joined the World Food Programme, my first trip was to the commodity exchange in Ethiopia, which was eight people in a little room – the first time ever that those who have too much food in Ethiopia were meeting those who didn't have enough.

Creating that simple marketplace becomes extremely important, and then helping nations that are growing enough food, like Malawi, be able to export and be part of nations, and also, reducing regional trade barriers.

You cannot think about a food-secure world without working through some of these distortions in trade, including among the big players – this is what's on the table with Doha – but also within regional groupings.

I was in one country in Africa where there was no food. And right across the border – which I could see across – there was a pileup of fruits and vegetables and a 200-percent tariff to get it over the border. So those types of arrangements now are really being focused on and can move forward even as we try to deal with the big issues of the post-World War II regimes on food security, and whether or not they can be adjusted to help create a more ag-trade and more open-ag system.

MS. NAWABI: Dr. Benetti, you've talked about – you know, there's a lot of focus on agricultural development but not as much on aquaculture; you know, that most of the world is water and that countries are not really integrating aquaculture programs. Can you tell us more about that?

DANIEL BENETTI: Yes, coming from a different background, I could probably offer a different perspective from – it's quite impressive, everything that is being done and accomplished in terms of, you know, curbing the hunger. The more I hear, the more I read and recently, there's been so much about it in the news.

But when I look at the big picture from what I come from – the oceanic resources perspective – and you look for the competition of resources – land resources and water resources

and all that – you see that this is combining with human population growth in this competition for land and water. It's synergist in fueling the spiral of the world food hunger.

And considering that maybe 90 percent or so of the arable land has already been exploited, it looks like we have to take a closer look at the oceans and what it has to offer in just two-thirds of – 70 percent of the world – is water and I believe that we're not focusing too much on that.

MS. NAWABI: And what about the United States? How is the United States doing in terms of incorporating aquaculture into its own food security?

MR. BENETTI: Well, that's a good point, too. It may be a controversial issue but as we talk about world food security and safety and all that, the realities that we're – in the United States we have – it's not just the economics issues or environmental, it's a \$10 billion a year seafood trade deficit. But we import 80 percent of the seafood that we consume, of which two-thirds are farm.

We are creating – clearly, we are creating another war in dependence as we did with oil. And it's not just the United States; there's been shifts all over the world in economies and it looks like it – any thought both for agriculture or aquaculture that we can just see it and wait for other countries to produce so that we can buy what we need for the future, and that applies very much to agriculture, as well. It's idealistic; it may be romantic but it's not going to happen because if there is a crisis, the first thing that any producing country would do is to keep for their own.

And, in fact, there have been shifts already in this dynamic, as China – the economies of China; the per capita income has increased – they shift what they are exporting to the United States. So we must start producing our own food and become independent because we have 200 nautical miles in our economic-exclusion zone that is just not being exploited.

MS. NAWABI: You've traveled the world and you've provided advice to governments on what they could do better. Which countries have you seen who've been success stories in terms of incorporating the ocean resources into the – (inaudible, cross talk).

MR. BENETTI: There have been many success stories. Obviously, European countries have been successful in developing aquaculture; I could use the example of Greece. Greece, like, 15 years ago did not have any aquaculture in its coast, and now they produce more than all other European countries combined in terms of seafood.

Australia is another one; I'm working with the Australian government to assist in their development of open ocean aquaculture. And as a matter of fact, I'm traveling to Australia immediately after this conference.

MS. NAWABI: Ambassador, I want to ask about this whole issue – you mentioned this being procured locally. That is a shift because there's been criticism in the past that some assistance programs were exporting food from the U.S when it could have been bought right

there in a local market. Do you see a shift in terms of this policy? I know at the World Food Summit, the acting USAID director said that USAID would be making this a priority. Do you think that will assist in developing better food security for these least-developed countries?

AMB. SHEERAN: Well, I don't think these areas are competitive – we need both. There are many places where the World Food Programme is very active, such as Darfur, where we feed 4 million people a day who do not have access to food, and there isn't food to buy there, and we need to bring food in.

And we thank the United States for the contributions they give. The United States is feeding 70 percent of the people in Darfur who get a meal. So this is life-saving food. I can't procure everything locally; often, hunger is due to an absolute lack of food.

And so if you go to Afghanistan, there isn't enough being produced right now to be able to feed the population. In fact, last year, there was no wheat available on the shelves. We've had a good harvest now.

So we have to watch that, and we work very closely with commodity contributors to make sure we're bringing the food to places where there is an absolute lack of food so that it's not in competition with local markets when there is food, but people just can't afford it, and so it's not being bought or farmers can't get it off their farms, such as in DRC, the Democratic Republic of Congo, where we've tripled local purchase from farmers who are caught in the conflict and would be completely destitute if that food wasn't bought out.

That's a win; that's a win. And so we really have a combination of both programs going, and, if carefully managed, it can always be a win if it's properly applied.

MS. NAWABI: Johanna, I want to pick up on what Dr. Benetti said about aquaculture. In CSIS's recommendations, was this aspect taken into consideration?

MS. TUTTLE: No, and we actually put our recommendations together last year. We were really focused on sort of the near-term emergency issues, so we didn't look at aquaculture as much, but we have talked about it some in this current phase, especially in terms of infrastructure, because you know, aquaculture is something that requires refrigeration and you need some type of infrastructure to move this very nutritious source of food in from the coastal areas.

So the Millennium Challenge Corp. has been doing work on aquaculture and recognizing what a great source of protein and nutrition this is, and I think you'll see more and more of that as countries ask for that type of infrastructure in the plans that they provide for the U.S. government.

MS. NAWABI: And CSIS is in phase two of this report, so this is an ongoing study. What are the current issues that are being focused on by the taskforce, and when should we expect to see a new report?

MS. TUTTLE: We're looking at three key issues. We're looking at how to raise agricultural productivity, especially through financing and inputs and small-holder farmers. We're looking at the ag research and development agenda. How do you move forward in this new world where the private sector does so much of the ag research?

And we need better public-private partnerships. And we're also looking at trade – the role of trade for development. Senators Lugar and Casey still are co-chairing the project, as is Congresswoman McCollum, and we anticipate rolling out our recommendations in January.

MS. NAWABI: Ambassador, there's the whole issue of trade and aid, but there's still this looming issue of sanctions that countries are using politically. Zimbabwe's president recently complained about this. And as the head of the World Food Programme and as a prior, you know, top official with the U.S. government, do you think that humanitarian concerns should overcome political ones and that sanctions should not be used, especially when it's affecting the food security for the population of that country?

MS. TUTTLE: Well, I don't really think I can comment on the intersection of these, but I will say that we apply our humanitarian programs, really, based on the principle of neutrality and need. And so the World Food Programme is very active today in Zimbabwe, where many people are suffering in the countryside without enough food. And we were very active in places like Iraq and other places when there was a breakdown in food supply for poor people.

So you know, for us, we have to be active in many of the world's most difficult places. Today we're reaching up to half the population of Somalia with food, and that's just the reality because what we really focus on are the women and children and others who get caught – the innocents who get caught in the middle of other issues. That's the role of the humanitarian, and we're in most of the most difficult places.

MS. NAWABI: But even though your agency has to take a neutral position, are there times when you can actually push a government to say, you might reconsider because of the impact that this is having on a humanitarian level?

MS. TUTTLE: Well, we think it's really important for humanitarians to really stay out of the political issues and really look at needs and how to best address those needs. And so it is what enables us to be able to operate in virtually every place in the world where people are trapped in hunger.

We don't get part of the larger political debate; we really go in there; we do our assessments. We never base them on who is allied with which cause; we base it on absolute need. And we never support any armed groups in any of these situations, but just those trapped in it. So this principle of neutrality becomes very key to the ability to protect people who are trapped, for whatever reason, without food wherever they are trapped.

MS. NAWABI: And Dr. Benetti, I mean, you know, we think of aquaculture and we think of countries who have access to some kind of sea or, you know, larger body of water. A lot of landlocked countries end up being very dependent on food resources, but some of them have

rivers and lakes; are you working with any governments of landlocked countries to kind of address their challenges?

MR. BENETTI: Yes, we are. As a matter of fact, when we go into any country, we go as a team, you know, with a diversity of backgrounds, from anthropology to economics and to everything. But then including others, you have to try to use it as much as possible, water resources. But what we have been finding out more and more is that the competition has increased and the water resources are extremely limited.

And you mentioned a landlocked country that comes to mind, it's quite interesting, seafood is no longer a luxury. We all understand it. It is mandatory. It is an essential nutrient, like Omega 3 and proteins and the animal protein. Austria – the country Austria is selling seafood at pharmacies now so that the people could have better access to buy, given the importance of it for one's health.

And that's basically – there are some issues, too, in which – that we have discussed previously – that actually goes deep into our souls, because besides the environmental economics and logistic issues of trying to curb hunger, there's a lot of tactics and moral issues that we have to face. And one of the – see, aquaculture in some cultures – let's use that as an example that most of us are familiar with – there's more and more data and information becoming available lately, and one of these findings is that it is the least impacting in the world not to produce animal protein, it's through aquaculture.

And indeed, it has been determined that it's a half of the environmental footprint that it takes to produce beef, pork or even chicken. And speaking of other animals, if we consider on the ethical and moral issues here – and again, it's very controversial – but if we consider simply the environmental footprint of us, humans, it's, on average, two hectares, or about five acres, per year to sustain each one of us. But it ranges broadly from .2 hectares in Africa to 9 hectares, which is our case here in the United States.

But when we consider, say, that our beloved pets – and don't get me wrong, because I love animals, particularly dogs and cats and all the pets – but a dog – a medium-sized dog has an environmental impact of two acres. That is twice that of an SUV driven 10,000 miles a year. That's quite impressive.

I mean, we speak about the big picture, but the environmental impact, which is called paw print, actually – (laughter) – is huge. And it's something to consider. They are making – a lot of the dogs in the developing world are eating way more and are taking much more of the world resources than people. That's something to consider.

MS. NAWABI: Some animal rights activists may not like to hear that, but maybe that's – (laughter).

MR. BENETTI: I am one of them, I am one of them. I love dogs and cats, don't get me wrong. (Chuckles.) But how are we going to deal with it? It's a different story.

MS. NAWABI: No, that definitely raises the issue that we have a planet with scarce resources and there's competition not only amongst human beings, but with animals themselves.

Ambassador, before we take audience questions, I kind of want to go back to the bigger picture – whether you see, as the head of one of the agencies really working to help the world achieve one of the major millennium development goals – the next assessment – do you see there having been progress and do you think by 2015, the world will have reached its goals?

AMB. SHEERAN: No, there won't have been progress. In fact, what we will see next year is that the hunger MDG is in reverse. The numbers of hungry are growing. Now, again, I think we have in place the global coalition and the leadership among nations to reverse this and get it back on track, but we cannot lose the momentum. I don't think there's much chance we will, because frankly, I think we will see some of these fault lines reappearing that appeared in the food crisis a couple of years ago.

It took one drought in Australia 2 years ago to contribute very much to disrupting global food supply. This year, we have a severe drought in India that will take out of global food supply a lot of food. The Philippines lost a million metric tons in the flooding. We're seeing this kind of impact be able to disrupt things, and we're going to have to get our act together. So I think that driver will continue to present itself, but my goal, really, is to make sure we continue the advocacy.

And I'm really calling on people throughout the world to let their government know it's important, to thank them for the emergency action. It's very important. We have less food aid now that we had for the past 20 years because the price of food is very high, and yet, we have more hungry. We need to keep that emergency action, and again, I thank the U.S. Congress and the administration for keeping up that commitment – it's very key – but also, the solutions. We have to keep driving on this and it can't get off the global agenda. But this will be a fairly bleak picture when we gather on the MDGs next year.

MS. NAWABI: I'd like to open it up for your participation and questions, so if you can come up to the mike and then introduce yourself, what organization, please don't have too long a commentary, and direct your questions to one of the panelists, or – thank you.

Q: Good morning. My name is Afimi Akibi (sp), and I'm with the African Development Center. I thank you for the – for being here. My question is, in Africa, the continent where I am from, water is the biggest issue. And so also, we realize that most of the wars in Africa are water wars.

The other part of it is that most of the agricultural products we use are mainly water content. Our research – we find a group of companies that has a new technology that turns air into water and we formed a partnership with them, because I think if we solved the water problem, the rest of the problem will be a little bit easier to solve. I wonder if any of the Millennium Challenge Corporations and the United Nations organizations are looking into this form of partnership that will turn air into water? Thank you.

MS. NAWABI: Ambassador, do you want to answer that?

AMB. SHEERAN: Well, first, you've hit on one of my key issues: We have a Google Earth but we don't have Google water and we don't have Google food. And so we need that because the interplay between food and water is very critical. Much of the world's untapped water resources are in Africa, but I don't think you can think about African food security country-by-country; it has to be a regional logic because many of the countries have more water than they need, many have too little water, and you have to look at that.

I didn't know you could turn air into water, but I think these types of technological advances will come. People are problem-solving species. And when we're hit with a problem, that's where the innovations come. And I think we're going to see a lot more of this that will help drive things. I love the technologies where you put a tablespoon of fertilizer on a seed or a drop of water, rather than fertilizing the whole field, but getting access of those technologies to the poorest farmers in the world is one of the big blocks right now.

Q: Thank you. Tom Callahan from Lockheed Martin. To Director Sheeran, could you talk a little bit about efforts to use technology and information-sharing among the World Food Programme early warning system, FUSENET – the challenge of pulling together the resources of information and where they reside to address some of the, you know, predictive analytics?

And to Professor Benetti, are you familiar with the Marine Resource Assessment Group's estimate of 10 to \$21 billion a year lost to illegal fishing, and has there been any work done in your field to address – use some of the marine maritime domain-awareness capabilities that are developed on the defense side to address some of the issues of illegal and unlicensed fishing? And if you would, is the new treaty on port state measures – not sure if you're familiar with that – a useful tool in that area? Thank you.

MS. NAWABI: Leave it to the Lockheed Martin guy to get very technical with us. (Laughter.) Thank you for those questions, though. Maybe we'll start with you and then come back.

MR. BENETTI: Yes, I'm not familiar with the second part of your question, but certainly, in our department at the university in marine affairs and policy, there are some of my colleagues working on the laws and regulations of the sea. But as far as illegal fishing, yeah, that, historically, has been considered at least 10 to 15 percent of the total global captures. It's underreported and it's illegal, it's basically illegal. And a lot of the seafood that we consume ourselves throughout the world, including the United States, is illegal, is underreported.

So I'm not sure if I answer to your question – what kind of effort is being done to curb this? I, frankly, cannot tell you. It's just part of the business, so to speak. It's just impossible to control what goes on in the open ocean, in the areas that are so remote. If we can't really stop piracy, you know, off Somalia, for instance, how could we think of curbing illegal fishing? It's a tough one.

MS. NAWABI: And the first question?

AMB. SHEERAN: Mm-hmm. He hit on the pirates, which, given our food supplies – humanitarian food supplies trouble. Excellent question. I mean, a lot of hunger is very technical – gaps in knowledge and understanding. And so the World Food Programme has a tool called the vulnerability mapping at the household level, what is causing the hunger – who’s hungry and how hungry and what are the nutrition gaps?

We have FUSENET, which is a fabulous famine early warning system, but there’s gaps in the knowledge. What we learned during the food crisis is the world actually doesn’t know exactly where all the food is. We didn’t know, for example, in much of Africa, where there was excess food and where there was no food. The tracking doesn’t happen down at that level, and some of the regional institutions in Africa, like COMESA, are putting in the first maize monitoring system. This is critical. We have to know where the food is.

The predictive analysis, I think, is going to be the key because there’s no way to really get at the broader hunger problem without engaging in a risk reduction revolution for poor farmers and the hungry. We have to be able to pool against drought and flood and catastrophic risk, and that’s going to require, really, understanding the patterns of weather and the changing patterns of weather and how they overlay over food insecurity areas and be able to predict out, not just on a, kind of, annual basis, but even 10 days at a time or six months ahead of time, for early warning.

So this is where we’re putting a lot of effort. The World Food Programme has been working with the Rockefeller Foundation and we’ve been able to map out 30 years of data and experience on climatic impacts on food security and hunger against 30 years of prediction of where climate is going, and we’re now able to map in and predict – we’re getting very good – about 90 percent accurately, where we’re going. So this is now in beta stage, but it’s the kind of tool that will be the lifesaving tool of the future and allow us to get ahead of these risks. So he was on it. This is a very good question.

MS. NAWABI: Well, if people are interested in seeing that kind of data, can they access it from your Web site?

AMB. SHEERAN: Much of it, yes, but not this predictive analysis that’s taking into account the new climatic trends. And I will just say, in one of my wake-up calls 2 years ago, I went to the World Meteorological Organization after reading the IPCC, which predicts many of the most food-insecure areas are going to have half the yield by 2020. In my business, I need to know when is that going to hit so we can prepare.

When I went there, he said – the head of it, Michel Jarraud, fabulous scientist – said the problem with climatic changes is, we won’t know. The old patterns are being broken, and so you have to do a different kind of predictive analysis to understand where these impacts are going to happen. No one predicted the Philippines were going to be hit with, you know, two or three typhoons that were bigger than ever seen before, and disrupt 7 million people’s access to food. This type of thing, we have to get much better at, even though it’s plagued with this uncertainty in patterning.

MS. NAWABI: Any questions? Please come up to the mike, and then after that, you, sir.

Q: Hi, Joe Triester from the University of Miami. I was just wondering you could be a little more specific on the causes – main reasons – behind the world food crisis. Is the crisis over, secondly? And where are we heading, thirdly?

AMB. SHEERAN: Well, we're not out of the woods, and as I said in my opening remarks, the long-term drivers of the type of price and supply volatility are very much in place. So I think it was a wake-up call. There are many analyses on what happened, but I will just mention a few points.

We certainly know, if we look back now – and IFPRI did a very good job – the International Food Policy Research Institute, which was created after the '74 food crisis to help predict – in warning that we were seeing a reduction in emergency stocks, the world was drawing down on food supply quicker than it was replenishing it.

So the absolute number of calories available was enough to feed the world, but food was being drawn for other purposes. Remember, animals eat a lot of food. It's used for feeding for animals that we're raising and, with the high oil prices, food was being pulled to use for energy purposes all over the world. I was in villages in Africa where palm oil was now being bought to make biofuels. And this is just a reality. We now have the technology, all over the world, to be able to turn virtually anything into fuel.

So when fuel prices are very high, when the demand for food, such as meat and others, you have these other pulls on absolute supply. This all added up to, with – throw in a drought or a flood of big proportions – and the food supply was very tight. It's always a supply and demand problem. What compounded the crisis was when nations felt they couldn't get enough food, you saw over 35 nations put on export controls and you saw nations that are dependent on imports wake up and say, wow, I maybe can't buy enough food.

And so we were working very closely with the Philippines who, literally, could not, if you remember the story, buy enough rice to import. And Liberia and other countries that couldn't put enough cash on the table to compete in very tight global markets. So there's a lot of good thinking on how to deal with what we saw during the food crisis, but some of these drivers – the ability of a drought to affect absolutely supply – just the last thing I want to mention here is, in the majority of developing world nations, prices are higher today, for commodities, than they were a year ago.

And so the prices haven't come down for many of these countries and the pressure is very tight. Why? Because people and countries are trying to rebuild stocks and supplies, so you have a very tight supply situation still happening. Now, emergency reserves will be very key and ASEAN just set up an emergency reserve to ensure that the nations that are part of that grouping can draw on a stock if there are tight supplies. These kinds of solutions will be very critical.

MS. NAWABI: There was a question over here.

Q: Hi, my name is Daniel Ahmoud (sp) from the – (inaudible). And I've helped certain companies find access to financing, and working in some of the lesser developed countries, it's very easy to find financing, for example, for a cell phone company or if I want to put up a casino or someone wants to put up a casino. But if you try to find financing for agriculture to help the small farmer, it's just very, very difficult. So what can be done on a higher-level basis – on a policy basis – to make sure that financial resources are there for farming and agriculture?

MS. NAWABI: I think I'll let Johanna take that one.

MS. TUTTLE: Actually, Josette has this great story about Whole Foods that I think would be wonderful to hear about.

AMB. SHEERAN: Well, it connects to the salt story, which I was showing the salt and an executive with a major food company said oh, that's artisan salt. That's great salt. I mean, we could put that in our supply chain. And I said great, because what will happen with these women, once you get farmers organized and once they know how to produce on a regular basis, which they have to for us, why wouldn't they take a better contract from someone?

But if I could just say on this topic more broadly, banks will not invest in farmers. The most difficult part of microlending is farming. Why? Because the risk! Farmers won't invest in farming. I was so shocked when I went to Kenya during the food crisis and there was this initial rush of euphoria saying prices are high, poor farmers now will get richer and maybe we'll have a virtuous circle here of poverty being addressed for the 80 percent of the global developing world population that are farmers. And I was shocked when I went and talked to the farmers and they said, are you kidding? We're not taking part of this.

And I said, why? Well, because the inputs had gone up also. So fertilizer had gone up 400 percent; diesel had gone up 800 percent. And what they said to me is, if I invest in those inputs and then the price crashes, I'm not sure I'll be bust. So this is what banks see. There's no risk mitigation. This is why I think we need a risk-reduction revolution for poor farmers, where they can get the basic issues of drought insurance and flood insurance and catastrophic insurance.

The World Food Programme ran a program with USAID and the World Bank in Ethiopia – a drought insurance program for farmers that go bust if there's a drought. And they lose everything. And this is happening in Kenya today with the drought where people lose their only goat – that is their bank account.

And it proved market viability. If you get a large enough pool of farmers, something happens, then they can re-get their stock, based on an insurance pool. Now, this, of course, is available to virtually all rich farmers in the world, right – is an insurance pool where they pool their risk. This is an old methodology but it's not really available for most of the poor farmers in the world.

So I think this will be key, and in order to do that, we have to understand what the risk is and be able to project that, which gets back to the earlier question of being able to map out where we might see this impact on crops and really get more sophisticated about helping nations overcome this lack of investment.

MS. TUTTLE: And the administration has an important piece in the food security initiative looking at private partnerships. And there are a number of ways that the private sector and the government can connect that can be very beneficial. The private sector has tremendous on-the-ground capability, especially with companies that produce technology, companies that produce food and distribute food or beverages.

You've got supply chain abilities; you've got production capabilities and technologies; you've got the opportunity to provide jobs and training on the ground. There's a wealth of capacity in the private sector, but the private sector is going to be held back, in some ways, by concerns about liability, by concerns about intellectual property rights on the technology side, and just by concern on a return of investment.

You know, companies can't pour a lot of money into a market if they think there's really not going to be a return on investment. So there needs to be more dialogue about the capacities the private sector can build and ways that the government can interact that are beneficial to both and can really bring all these skills and these capabilities to developing countries.

MS. NAWABI: Just touching on that, Johanna, though, I think having worked a lot with the private sector, you see government programs that could, perhaps, take some of that risk, but then the private sector doesn't really know about them or know how to access them. As part of the recommendations, is there any effort to make the government programs perhaps a little bit more proactive in, you know, working more closely with the private sector?

MS. TUTTLE: I mean, I think that – yeah, I think there are a number of interactive programs, there are a number of dialogues, but certainly, that number should be increased, it should be enhanced and it should be – it just should move forward as robustly as possible.

MS. NAWABI: Great – question in the back?

Q: Thank you. My name is Janet Fleischman and I work on gender with the global health policy center here. And we'd be remiss if we didn't allow you the opportunity to speak a little bit more about the links between gender inequality and food insecurity. And what are the opportunities going forward, now, in terms of linking with the other MDGs, in terms of linking with the U.S. food initiative and opportunities to really make the important linkages between the drivers of some of the food insecurity, the lack of access that women farmers have to credit and insurance and all those issues, and to just let you speak a few words about those issues. Thank you.

AMB. SHEERAN: Well, hunger and food insecurity is a gender issue. She needs our help – 70 percent of the farmers in much of the developing world are women. And so this becomes very much an issue that is about women. Also, the vast majority of the hungry are

women and children in the world. And so you cannot get at this issue without getting at issues of gender and access to basic credit and skills.

Women produce over 50 percent of the food in the world and get less than 5 percent of the investment or the knowledge or the agriculture extension programs – all of that. And so it becomes – that gap is very critical. I will just offer praise to this administration and their team for putting women at the center of the discussion about the solution to food security and to the efforts that they're making, post-L'Aquila, to really build an action plan.

So I think there's a lot of understanding that this cannot be done. I will tell you, every time I travel to a developing world nation, I meet with women separately and I learn a lot about how to get at the hunger issue in their country. They have a lot of knowledge and a lot of caring. The women that we work with, with salt, we also work in Lesotho with 2,000 women conservation farmers who have learned to farm in dry land. This will be very important, because a lot of farmers are going to have to. What we were able to offer them is a guaranteed contract for that food, giving them security to keep investing and encouragement to keep going.

So we like to work with women in cooperatives and as part of the Purchasing for Progress program that the Bill and Melinda Gates Foundation and Howard Buffett Foundation are supporting, we have women as part of the central logic in ensuring we're reaching out to women's cooperatives. It has to happen across the board.

Women are also at the center of intergenerational hunger. And ensuring that women who are pregnant get access to power-packed nutritious food feeds into all the other MDGs. So we have to remember, also, that the lack of access to adequate nutrition for pregnant and lactating women and their young children feeds into virtually every other weakness in the MDG portfolio.

MS. NAWABI: Thank you. Last question: I think we'll kind of reflect on all of these partnerships. We've talked about public-private, and here, we also have academia. And Dr. Benetti, I want to ask you, as someone who was with the policy department and now, you're working, kind of, in an innovative section of the university, what role do you see universities having in terms of helping on the policy side, as well as on the innovation side?

MR. BENETTI: That's a good question. Well, it's like a cycle. I believe that the university and academia should play an important role, as it does already, in developing technology and doing the research and development of new technologies. And a lot of the companies do that, but in essence, we lead by experience – at least in my field, I can guarantee you that the R&D is funded by the government.

And then once we start developing a technology, that is where the private sector becomes more interested and they're the ones who come over and join forces and capitalize on the basic research. But I truly believe that the basic research for the development of new technologies, which are required to curb food hunger, should come from academics and research institutions.

MS. NAWABI: Well, I want to thank our panelists for their time, coming from Rome and Miami, as well as here in Washington, for their perspectives on the issue of food security, or

at times, insecurity, especially during this week, as we noted, where, here in the U.S., we're thinking more about our own food resources and sharing with others. I think they each provided interesting perspectives on policy, the academic role, as well as the multilateral agency role, and how that fits into the broader picture. And hopefully, we will see some more progress in helping the world meet the millennium development goal in this important area.

Just briefly, the next session for this series will be with January 19th with the Obama administration's top person working on HIV/AIDS. So if you're on the e-mail list, you'll receive the notification and we will continue to plan out more series that focus on the aid goals. And we appreciate your time and hope that you have a wonderful holiday week. Thank you. (Applause.)

(END)