SESSION I: INTERNATIONAL PERSPECTIVES October 13, 2005 - 8:45 a.m. - Noon

International Experts - Hunger and Nutrition

DR. PEDRO SANCHEZ

Director of Tropical Agriculture, The Earth Institute, Columbia University Senior Science Advisor on Hunger, UN Millennium Project 2002 World Food Prize Laureate

In January 2005, the entire U.N. Millennium Project composed of ten task forces, of which hunger was one, presented its recommendations to the world. This was unusual because the job wasn't supposed to be finished until September 30th. But we did actually finish our report first, so we could have time for advocacy afterwards.

The summary volume is called "Investing in Development." And I think the word "investing" is very important because this is what this is – this is not a handout but an investment. We estimated an average recommended cost for making this happen in rural Africa. There are many other places that are important, but rural Africa is where hunger, poverty and disease requires most attention because Sub Saharan Africa is the only part of the world that is widely off track in meeting the MDGs.

What we recommended was an investment of \$110 U.S. dollars per capita per year over the next ten years. This is a large sum of money, of which the household will invest about \$10 per capita per year, mostly in labor. The government would invest about \$30, which is probably three times as much as they do, in services like health, agricultural extension, and so on. And the donors, the rest of us, the rich world, invest \$70 per capita per year. And we even made a recommended distribution of those \$70 - 15% of them are for agriculture and nutrition, 30% for health, 20% for infrastructure, 20% for education, and water sanitation environment, 15%.

Such investment is different in two dimensions. First, it is larger than previous investments, but it is in our judgment what is needed to accomplish the MDGs by 2015. Second, it is for ten years, not a two-year project or anything like that. So the scale is large to start with, and then it's long as well.

Right now those of us involved in the U.N. Millennium Project are working at three different scales – the global, the national and the community scale. At the global scale, we advocate the implementation of the U.N. Millennium Project recommendations and the Africa Green Revolution called forth by Kofi Anan in July 2004. This means science-based policy, particularly biophysical science-based policy. There are very few biophysical scientists in active in shaping international development policy. Hans Herren and I are some of the few that are involved. We bring a different perspective. We are also involved in public awareness and resource mobilization. Then at the national scale, we are working with those countries that are serious about meeting all the Millennium Development Goals. And there we have in Africa two MDG centers in Nairobi and Bamako that provide technical support to these countries. We also work

very closely with NEPAD, in national planning, enabling polices and scaling up. And then on the community scale, the Millennium Villages – a new approach based on an old paradigm—what happens is at the community scale. This is where things get done.

Global advocacy includes working with the United Nations and with leaders of governments, supporting the African Green Revolution, supporting the Blair Commission on Africa, supporting the Gleneagles G8 Summit, and very much the just-finished U.N. New York Summit concluded about three weeks ago.

That U.N. Summit, on September 16th, the General Assembly passed a resolution, approved by all member governments, stating that all countries recommit themselves to achieve the Millennium Development Goals. This is particularly important because President Bush, for the first time he said to the General Assembly and the world – "The U.N. is behind making these MDGs happen." And the actual words were used; they had not been before. So this is very reassuring.

All countries also support Kofi Anan's goal for an African Green Revolution. And in that declaration, all countries support specific interventions such as homegrown school feeding programs, and we will talk about that later, malaria bed nets and things of that... So this is a very important political breakthrough. Even the U.N. Summit didn't succeed in tackling issues of the Security Council, but it certainly succeeded in tackling issues of development.

Advocacy goes also in different ways. My colleague Jeffrey Sachs just starred with Actress Angelina Jolie on MTV, aimed at young people to make them aware of what's happening in the villages. And I was given the task to do that with AARP, so I didn't get the best part of that. Jeff Sachs is talking to the teenagers, and I'm talking to the geezers! They're both very important constituencies.

As I mentioned before, on July 5th, 2004, at a special meeting right before the African Union Summit, and that is last year, Secretary General Kofi Anan called for an African Green Revolution, saying that the old Green Revolution that helped so much Asia, Latin America and Middle East did not have a discernible impact in Africa, and Africa needed its own kind. And he called it a uniquely African Green Revolution for the 21st Century.

This uniquely African Green Revolution has several components. It has agriculture, increasing agricultural productivity, like the old Green Revolution, but putting special emphasis on replenishing soil health and improving water management at the entry points.

It involves human nutrition, and I must say Kofi Anan has made an impact in bringing agriculture and human nutrition together. In the Hunger Task Force it was a fantastic experience working with nutritionists like Abenaa, Patrick Webb and others, which made me realize how ignorant I, as an agriculturalist was, of human nutrition, and vice versa. Agriculture and nutrition must go together, and that's why I'm also very excited about the symposium here.

But it also involves markets, making markets for the poor. Markets do not work for the poor; they're not designed to do so, I've been told by economists. Also, all has to be done in environmentally positive ways, and we have learned a lot of lessons here and certainly pollution lessons we don't want to repeat in developing countries.

And the African Green Revolution also involves the very large role of polices, enabling policies, as well as politics.

So these are the six components of the African Green Revolution.

The overarching biophysical problem in Africa is not the lack of improved varieties. It's not the lack of biotechnology. It's not any other stuff. The first things first – the overwhelming problems are: Unhealthy soils, soils that have been depleted of nutrients and many times eroded out because of desperate farming practices; and untamed water, either too much or too little water.

So those are the entry points. After they are tackled, this is when you can take advantage of the enormous potential of genetic improvements. The Hunger Task Force supports crop biotechnology because it's scientifically correct, and we have said so very, very clearly.

Now, on nutrition, one of our main recommendations is homegrown feeding programs for schools and for infants and pregnant, lactating mothers, and those destitute people who are usually very, very sick or already affected by HIV-AIDS.

The advantage of this, as opposed to sending food from rich countries is that locally grown meals can provide balanced nutrition. This would include all the micronutrients, all the things that we've been talking about on fortification, supplementation, and biofortification. It also makes sense in terms that it suits local tastes.

And also, a study that IFPRI did commissioned by the Hunger Task Force showed that if half of the primary schools in Africa implement homegrown feeding programs, it would increase the local demand for basic crops such as maize by 25%. That's a big number, because the amount of maize that is imported right now into Africa is 14% of the total production.

And then – we don't have any data on this – but it would increase the demand for pulses like soybeans, livestock products, milk and meat, horticulture products, fruits and vegetables by orders of magnitude, because there would be a large market there. We feel this is a much more effective than food aid.

In the Hunger Task Force report we found that 90% of the hungry people in the world are chronically hungry people. They are the people that do not starve but die of malnutrition-related diseases, as Patrick Webb put it so well this morning. Only 10% are acutely hungry, in starvation situations caused by wars and natural disasters. They need food aid, no question about it, regardless. But for the 90% of the hungry, its homegrown feeding we need.

The basic philosophy we're advocating in the report of the Hunger Task Force is to invest in the front end of the food chain rather than the tail end of it. So you go from soil, water, inputs down to crops, harvested products, marketing, processing supermarkets, cooking, eating, utilization and so on. What we're saying is – Invest here and not on the tail end, which is food aid. Studies in Malawi by FAO show that investing in soils and improved seeds, are three to four times more cost effective than investing in food aid.

A couple days ago (October 11th) there was an Op-Ed article in the *New York Times* by Nicholas Kristoff, and I put some copies outside. It's titled, "Year After Year, Grave After Grave," and it addresses this issue. We try to keep food aid going for the chronically hungry for reasons other

than helping people feed themselves in Africa. And I think it's about that we really have to decide whether we're helping the people who are hungry, or helping preserve the status quo.

At the national scale: There has to be buy-in from the top. And you see some fancy meetings there with heads of states shown in the slides. This is something I learned from Norm Borlaug. He said, "You go to the top, and you put pressure on those people." And so we're doing that. We're working with ten countries in Africa that are reasonably well governed, countries like Ethiopia, Kenya, Ghana, Mali, Malawi, Nigeria, Rwanda, Senegal, Tanzania and Uganda. They're not perfect, they're not governed by Mother Teresa, but neither are we. So don't expect perfection, but these are reasonable governed countries. And there are more like The Gambia as well. These countries are reasonably committed to making the MDGs happen.

So there we have these two MDG centers that have a small group of specialists. They are located at international centers. The one in Nairobi is located at ICRAF, and the one in Bamako is located at ICRISAT. And the idea there is to provide some technical capacity so the governments can do their strategic budgeting, their PRSPs, things like that, make sure that they put in their budgets funding to achieve the MDGs.

And this is one great fallacy: paying lip-service to the Millennium Development Goals. I have heard time and time again, – "Here's our new strategic plan, Pedro", they tell me. On page 1 it describes all the Millennium Development Goals, saying we are committed, and this strategy will show you how we contribute to achieving the MDGs. At the end it says, "So you see we are contributing to the Millennium Development Goals." In the middle there's nothing, nothing explicit, nothing reflecting the investments that are needed in health and in agriculture and so on.

The Hunger Task Force recommended that the budget of the CGIAR be raised to one billion dollars a year for additional research, including human nutrition, additional research that would directly address many of the Millennium Development Goals. That offer stands – we're ready to start the political action on that, Per. But I would like to see explicitly how the CGIAR would do that and not just saying, "Well, we're going to help alleviate hunger and poverty alone."

The MDG Centers are also asking the government – What is your response to Kofi Anan's call for an African Green Revolution? In the case of Kenya, President Kibaki says, "Let's do it," and started a program called, Njaa Marufuku Kenya, which in Swahili means "banish hunger in Kenya." But they're also in Uganda, Tanzania, Mali and Ghana.

Now, the community scale: Millennium Villages. What does it take for a typical, impoverished African village of about 5,000 people to accomplish all the Millennium Development Goals in ten years? Using the budget that we proposed in the U.N. Millennium Project, two villages were started this year Sauri in Siaya District in Western Kenya and Koraro in Tigray Region, Ethiopia.

The work started with the villages assuming ownership and responsibility. When asked about the Millennium Development Goals, no-brainers – people understand it right away. What do you need? What would you do about it? And a lot of community action, a lot of capacity building courses. Villagers come in and say, "Oh, I didn't know I'm a stakeholder," and stuff like that, and they develop very good business plans, actually pretty good log-frames.

The villagers are organized by themselves into committees such as water, agriculture, health, electricity, energy, schools, just about everything. And right now the Kenyan village developed its own constitution, elected an executive committee with a woman as chair, a person who doesn't even speak English. I think that says a lot.

The Kenyan villagers basically asked for two things. "We need a clinic, and we need farm inputs." So we said, "Build a clinic," so they did. They built a clinic in about six weeks, starting from scratch. They made the bricks. The clinic was built according to specifications of the Ministry of Health. The donor (us) provided the roofing material, cement, paint and generator. The Ministry of Health has provided nurses and clinical officers.

The clinic now has a capacity to diagnose malaria, deliver anti-retroviral drugs after doctors were trained on that, and has distributed 3,000 long-lasting insecticide treated malaria bed nets so everybody in the village is now sleeping under a bednet. They were given free of charge, but if one accounts for the labor that these people have put in organizing themselves into the different committees and in physically building the clinic itself, I am sure it exceeds the \$5 cost of each bednet.

In February 2005 the Sauri Agricultural Committee decided to invest in fertilizers, hybrid maize seed and agroforestry seeds. The project procured enough fertilizer to give a shot of 90 kg of nitrogen per hectare and 50 kg of phosphorus (P, not P2O5) because this phosphorous-deficient area. And the best hybrid seed from a local company that CIMMYT recommended. The distribution was done by the villagers. The result was a fantastic maize crop, averaging 4.9 tons/ha (91 bushels/acre) crop, while outside of the village the average was closer to 1.2 tons/ha (22 bushel/acre). They're literally swimming in maize, and they had a very good harvest festival. You see some familiar faces there, like Ann Veneman, Executive Director of UNICEF there, and Health Minister Charity Ngilu. This has transformed the village. People look at you differently. You sense hope and empowerment. They feel that they can control their destiny, and they want to contribute.

Marketing of a surplus crop is a major challenge. So, with the help of the Rockefeller Foundation sponsored NGO-called SACRED Africa, a cereal bank has been created, where maize is safely stored and can be sold in bulk for a better price. And part of the deal was that farmers had to give 10% of their crop to the schools for school feeding programs. And what you see in the picture there is already the 10% that the farmers have delivered. They're put in a government depot, which is safe, just pay rent to the government, and there is enough food there, there is enough maize to feed the 1500 school kids for a whole year.

Then the villagers recognized that out of a thousand households, 40 of them were really destitute. They had a big harvest, but they couldn't store it in their crumbling, leaky homes right, so roofs were fixed by the villagers. The project provided roofing material

Next season. About 5.5 million nitrogen-fixing trees have been planted by the villagers, so they will depend on nitrogen fixation of agroforestry trees for most of the nitrogen, supplemented with fertilizers as needed, move to high-value crops.

Energy – moving into rechargeable lanterns that are much more effective than the kerosene burners.

Water and sanitation – trying to fix the watering holes in places like that is very difficult.

Environmental regeneration, especially in Ethiopia, where the topsoil is gone, is proceeding very rapidly.

And in education, the school feeding programs and good leadership has taken this school from being 380 and something out of 500 primary schools in terms of national examinations in the district to No. 2.

Also, Motorola Foundation announced a grant to provide wireless Internet to the first two villages. And what you see here is the first e-mail sent by schoolchildren from these villages to Secretary General Kofi Anan saying, "My name is Paul. I want to be a doctor." "My name is Nancy. I want to be an airline pilot." These kids now can do that.

Scaling up: We have obtained funding from the government of Japan for scaling up from these two villages to twelve in the different agroecological zones covering all the different agroecological zones in Subsahara in Africa, with the exception of commercial agriculture in South Africa, paddy rice in Madagascar. These villages are going on in ten countries right now, in Uganda, Mali, Ghana, Malawi, Tanzania, Nigeria, Senegal and Rwanda.

And there's so much interest in this that there's expansion to what we would call Millennium Villages Type II, which are not research villages, but to expand around the Millennium Villages Type I. A not-for-profit NGO has been created called MillenniumPromise.org to accept financial contributions from the private sector to fund these villages.

So to finish up, I'd like to update the old Confucius proverb: "Give people a fish and they will eat for a day" – that's dependency. That's what we do a lot with food aid for the chronically hungry. "Show them how to fish, and they will eat for a lifetime" – that's empowerment. To this I would like to add "And then they will buy fishing equipment" and that means trade and poverty elimination.