

Meetings  
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An ODI Event

## The African Green Revolution and the Millennium Villages Project

*Speaker:* **Pedro Sanchez**, Director, Tropical Agriculture and Rural Environment Program Director, Millennium Villages Project, The Earth Institute at Columbia University

*Discussant:* **John Farrington**, Research Fellow, ODI

*Chair:* **Rachel Slater**, Research Fellow, ODI

**Thursday 2nd November - 1.00-2.30PM - ODI**

The Millennium Villages Project, based at the Earth Institute at Columbia University, is a "bottom-up" approach to lift developing country villages out of poverty. Earth Institute scientists and development experts in agriculture, nutrition and health, economics, energy, water, environment and information technology are working with local communities and governments to apply a proven holistic package of interventions. In 2005, work began in two Millennium Research Villages, Sauri, Kenya and Koraro, Ethiopia. Ten additional research villages are now underway in Ghana, Kenya, Malawi, Mali, Nigeria, Rwanda, Senegal, Tanzania, and Uganda, with a strategy in place to scale-up interventions to national and regional levels.

As a result of the project, 390,000 villagers are now receiving investments such as fertilizers, nitrogen-fixing trees and locally-adapted hybrids and varieties of staple crops. Virtually all villagers now sleep under long-lasting, insecticide-impregnated mosquito nets. Village clinics provide voluntary counselling and testing (VCT) for HIV/AIDS, and those living with HIV/AIDS are benefiting from free anti-retroviral drugs (ARVs) and improved nutrition. Children are being immunized at minimal cost and safe water points, access to electricity and the arrival of the internet are amongst other new facilities.

In turn, villagers are planning the necessary steps to ensure sustainability after the end of the project. This will be the key to their transformation from sub-subsistence farmers into small-scale entrepreneurs with diversified farming, as well as off-farm employment in agribusiness and internet services, a process which will take years. The immediate challenge however is to scale this work up to 100,000 villages located in designated 'hunger hotspots' in Africa, and to support practical investments at the national scale. This seminar will examine possible ways in which this might be achieved.

### Meeting Summary

**Rachel Slater**, in the chair, opened the meeting and introduced the speaker, **Pedro Sanchez**, as being instrumental in increasing agricultural research in Africa. The conception of the Millennium Villages Project (MVP) stemmed directly from his work on the UN Task Force on Hunger.

#### Audio

[Introduction - Rachel Slater](#)

[Slater](#)

[Pedro Sanchez - Part 1](#)

[Pedro Sanchez - Part 2](#)

[Pedro Sanchez - Part 3](#)

[John Farrington](#)

[Discussion - Part 1](#)

[Discussion - Part 2](#)

You'll need Windows Media Player to listen to these clips. You can download the correct version [here](#)



#### Powerpoint Presentations

[Pedro Sanchez](#)

[John Farrington](#)

**Pedro Sanchez** said he appreciated being invited to present at the ODI, and gave a brief background to the concept of the MVP project, based on village-level intervention aimed at the "Transformation from Sub-subsistence farmers into Small-Scale Entrepreneurs". It was seen to feed into a 21st century African Green Revolution, first presented by Kofi Annan, about 18 months ago. Mr Sanchez saw this revolution as parallel to the Asian Green Revolution, but with different start-up issues namely, soil quality and water availability. The African revolution incorporated human nutrition, access to markets, environmentally-friendly (particularly in contrast to Asia) policies and politics alongside agriculture.

He identified the [new ODI Natural Resource Perspectives \(NRP\) entitled "The Millennium Villages Project - a new approach to ending rural poverty in Africa"](#) as the first in-depth external analysis of the project, commending its points and the concerns it raised, although he stated that he did not agree with all of them. On the point of sequencing intervention, he proceeded to take us through the set-up of the MVP.

### **Simultaneous Steps**

- Community Level (this is the stage the MVP is just arriving at):
  - o Getting out of the hunger/disease trap first,
  - o Moving on to sell crop surpluses, enter the market and do the economic transformation,
- National and International scales (this aspect is yet to be devised fully):
  - o Fixing the market infrastructure
  - o Combating trade and food aid distortion.

Costing the MVP was based on the UN Millennium Project recommendations to achieve the Millennium Development Goals. A budget of \$110/capita/year broke down into funding sources as follows:

- Households: \$10
- Government: \$30
- Donors: \$70 (being those donating from rich countries, not specific donor agencies).

Donor contributions were further split into sectors - agriculture and nutrition; health; infrastructure; education; and water, sanitation and others. MVP had gathered enough resources to cover \$50, with a remaining \$20 sourced from other donors, such as those donating antiretroviral drugs.

**Mr Sanchez** opposed the idea of MVPs being a "top-down" approach. Indeed, the idea came to him whilst travelling in India, where communities had begun to use computers to determine market prices and saw that this could be applied in Africa. After approaching Jeffrey Sachs, and promoting the idea, they were offered \$5million to test out the idea prior to writing their project proposal. The project proposal very much focused around empowering African villages to achieve all MDGs, thus assuring us that it was not a top-down imposition.

MVP hand-picked all 12 villages, with the exception of one, from hunger hotspots, having populations of 5,000+, a school and some form of local government. **Mr Sanchez** described the range of villages chosen as "a good cross-check, but not a perfect one". With \$250,000 annually over 5 years, extra funding for research and data collection, allowed MVP to be supported by a group of science coordinators, who had to be postgraduate nationals of the host countries.

### **"First: The Fundamentals"**

Getting out of the hunger/disease trap was seen as the first step to be achieved through a drastic increase in food production, drastic improvements in health and the provision of safe drinking water. Community-led and science-based influences fed into the business plan enabling good decisions to be made. **Mr Sanchez** emphasised that this combination was vital when engaging with government to influence policy.

In Sauri, Kenya, community empowerment training was given to promote ownership and establishing sectoral village committees. MVP subsidised supplies (fertilisers, seeds, etc) from agro-dealers, on the condition that a percentage of the harvest was given to the school meals programs and subsidies would decrease to zero over five years.

The harvest in July 2005 saw a 3.5x yield increase in Sauri, Kenya and an 8.4x yield increase in Koraro, Ethiopia.

Koraro still had a relatively small yield, but a considerable increase and "an amazing transformation".

Through the local nutrition and home-grown feeding programs, villages saw an increase in:

- Balanced nutrition, which suited local tastes
- Increases in local food demand
- More effective than food aid
- Improved school attendance

- Increased girls' attendance at schools

After the first year, MVP saw an extra 120,000 people having enough to eat (with only 8% still facing food insecurity) and a potential increase to 500,000 after the next harvest. Villages in West Africa were progressing slower with large variations in yield across villages.

### **Drastic Improvement in Health**

This started with MVP providing building supplies for a clinic, labour coming from the village, medical supplies from donors and health workers from Ministry of Health. Using long-lasting, insecticide impregnated bed-nets; anti-retroviral drugs; emergency care and a village ambulance to take patients to nearby hospitals contributed to a decrease in malaria prevalence both in and around Sauri, and improved access to healthcare.

### **Enter the Market and get out of the Poverty Trap**

**Mr Sanchez** saw this step as being done via the following steps:

- Selling crop surpluses at good prices: cereal banks, storage systems
- Transport to market
- Shift to high-value products
- Micro-and meso finance
- Market information
- Crop insurance

These start to push the economic transformation, with farmers diversifying into livestock (including cattle) and other products. Social transformation has also started to happen with villagers negotiating directly with buyers, shifts in production patterns and government bringing electricity to the village. Community has initiated welfare support for the 44 poorest households and assistance is given to disabled farmers. Art is thriving as villagers start to draw, and have seen peaceful demonstrations from young people demanding jobs.

### **Work up the value chain: Business coalition against chronic hunger**

**Mr Sanchez** stated that the need to work at the district scale, which falls outside the remit of the MVP, was essential when moving to high-value products that link in with the private sector, and developing vital infrastructure. MVPs have a national co-ordinator in each host country that liaises with government at policy-making level. Access to the internet is also coming soon to these villages, allowing for access to market information and educational benefits for children.

The project is now at a tipping point with:

- Per-capita food production increasing in Africa
- Commitment from many African governments
- The 'Africa Fertilizer' summit
- Increasing awareness of world poverty globally
- MDGs providing a good "business" plan
- Philanthropic donations are leading the way, so that
- Donors and governments can devise effective scale-up plans

With regard to the future, **Mr Sanchez** saw the initial stages of the project setting the foundations, but villages are not yet sustainable. The success of the MVP would be determined by achieving sustainability of the transition to small-scale entrepreneurs and scaling up to national MDG-based budgets.

**Mr Sanchez** extended an open invitation to organisations, such as DFID, to feed into the development of a fuller model through learning and a flexible approach. They would be useful in contributing to scaling up and strengthening links especially at the district-level. Pedro closed by saying that the "African Green Revolution" plane had taken off, in spite of difficulties. The pilot represented the African female farmer, with the government as the co-pilot. Flight engineers and attendants were made up by members of the MVP. The scaling up required better airplanes provided by government, with fuel from private donors, food through local production and participants as frequent flyers.

### **John Farrington**

**John Farrington** introduced himself as having a background in rural development and social protection, in Africa and in Asia. He commended the strengths of the MVP, for bringing attention back to rural development, its strong drive, clear vision, an integrated approach and largely sound diagnosis. He framed his commentary around five questions.

### **Q1 Big Push: "to surpass a threshold where growth will take off"**

He was concerned about the effect of the volume of aid on macroeconomic stability and unbalanced growth and the technocratic, prescriptive approach potentially undermining existing institutions, priorities and governance.

### **Q2 Blueprints and campaign methods**

John questioned whether interventions would lend themselves to local adaptations, the incorporation of strengthened voices of the poor, and indeed if, there were sufficient resources to support the proposed scaling up.

### **Q3: Linkages and Sequences with regards to Productive Sectors**

With the increased yield and proposed scaling up, there would need to be proper co-ordination and planned sequencing between public and private investment, in order to adequately support the scaling up with appropriate marketing, storage, processing and transporting. More flexibility may be needed as participants switch to non-farm activities.

### **Q4: How does MVP address well-known requirements for sustainable poverty reduction via agricultural development?**

John suggested a strategy based on the recent DFID strategy paper, which advises, a supportive framework, tackling market failures, land rights, effective public expenditure, improving financial services and reducing distortions in international markets, could address this.

### **Q5: Scaling-up and absorptive capacity**

John raised concerns that such high volumes of aid, would free up government resources to invest in wars; undermine society's ability to hold government accountable for service provision; and how an inadequacy of absorptive capacity of institutions could lead to corruption, leakage and wastage. He highlighted the idealised view of village politics and the risk of elite capture with reduced project presence.

### **Final thoughts**

How will the MVP allow for local adaptation, nuances and flexibility as it evolves and scales up? Is MVP seeking to sign on government at all levels from local through to international?

Was the MVP still "a new approach based on an old paradigm" with intervention happening at the village level?

### **Discussion**

**Environmental considerations & hybrids:** Commentators expressed concern over the excessive use of hybrids for achieving high productivity and the effects on the environment. **Mr Sanchez** replied that mineral fertilisers were the only ways to generate the big push, with nitrogen-fixing trees being planted in time for the next farming season. Organic fertilisers were not seen as a necessary experimentation. Hybrids were preferred for staple foods such as maize, whereas cross-pollination seeds were preferred for other products. There is now a guaranteed price agreed for produce and cereal banks are being used to reduce reliance on imports. Planning must be incorporated at every stage when aiming for increasing production. There was little consideration given to the effects of the use of hybrids against native strains.

**Family planning and sanitation:** There exists a very strong push for which is not strongly featured in the MDGs, and **Mr Sanchez** foresees a demographic transition, as a direct result of family-planning and improved health.

**Rainfall:** To counter potential damage caused by poor rainfall, there is ongoing work on providing crop insurance, but this is a complicated process, being developed in conjunction with the World Bank in Malawi.

**Demand-led technology:** Technologies are currently developed by experts in UN, but 5 years down the line, this should no longer be necessary. Villages do agree and disagree with the experts as to the choice of crops and as the project evolves, villagers become more engaged in the decision-making.

**Human capacity:** Government has an infrastructural problem rather than a human capacity issue. The Ethiopian government, for example, has funded the training of villages and MVP works with bringing existing human capacity up to speed with technology and new methodology.

**Recording costs of increasing productivity:** This is currently being done and assessments will be done on environmental and social impacts of these projects. At the moment, there is a ballpark figure of \$25billion from governments of rich countries, with variations depending on the starting points and the human capacity already available.

**African governments and ownership:** All governments welcomed the idea, however, now governments at the more local levels are budgeting their contributions and supporting the projects with the provision of services.

**Water management:** Guaranteeing clean, safe water is the most difficult component of MVP, and have now acquired funds dedicated to a water expert funded by the Gates Foundation.

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updated November 6, 2006